

RUSSIAN JOURNAL OF AGRICULTURAL AND SOCIO- ECONOMIC SCIENCES

ISSN 2226-1184



#11(83)

November 2018

"RJOAS is an interdisciplinary open access journal of agriculture and socio-economic studies. The journal aims at establishing a bridge between theory and practice in the fields of agriculture and socio-economic research..."

www.rjoas.com

OPEN  **ACCESS**

TABLE OF CONTENT

Polukhin A.A.

ECONOMIC EVALUATION OF THE POTENTIAL OF RUSSIAN AGRICULTURAL ENGINEERING, PRODUCING MACHINERY AND EQUIPMENT FOR LIVESTOCK; pp. 3-7
Crossref DOI: 10.18551/rjoas.2018-11.01

Baihaqi M.

THE EFFECT OF BUSINESS STRATEGY AND ENVIRONMENTAL PERFORMANCE ON FIRM VALUE; pp. 8-16
Crossref DOI: 10.18551/rjoas.2018-11.02

Salle A., Maryen J.R., Falah S., Daat S.C.

THE ROLE OF POSITIVE PSYCHOLOGICAL CAPITAL MEDITATION ON THE RELATIONSHIP BETWEEN ORGANIZATIONAL CULTURE AND FRAUDULENT INTENT; pp. 17-21
Crossref DOI: 10.18551/rjoas.2018-11.03

Armadiyanti P.

THE EFFECT OF NON-FINANCIAL FACTORS ON ACCEPTANCE OF GOING CONCERN AUDIT OPINION IN MANUFACTURING COMPANIES LISTED IN INDONESIA STOCK EXCHANGE; pp. 22-33
Crossref DOI: 10.18551/rjoas.2018-11.04

Nurtrontong P., Suhadak, Rahayu S.M., Handayani S.R.

THE EFFECT OF CORPORATE GOVERNANCE AND CREDIT RISK TOWARD LIQUIDITY AND PROFITABILITY ON BANKING LISTED IN INDONESIA STOCK EXCHANGE IN 2012-2016; pp. 34-39
Crossref DOI: 10.18551/rjoas.2018-11.05

Putri C.P.

FACTORS AFFECTING THE INTEGRITY OF FINANCIAL STATEMENTS IN MANUFACTURING COMPANIES LISTED IN INDONESIA STOCK EXCHANGE; pp. 40-48
Crossref DOI: 10.18551/rjoas.2018-11.06

Purbasari R., Wijaya C., Rahayu N.

THE IMPACT OF THE ENTREPRENEURIAL ECOSYSTEM ON REGIONAL COMPETITIVE ADVANTAGE: A NETWORK THEORY PERSPECTIVE; pp. 49-63
Crossref DOI: 10.18551/rjoas.2018-11.07

Prasetya I G.A.N., Riana I G.

MOTIVATION EFFECT OF JOB SATISFACTION AND PERFORMANCE OF CIVIL SERVANTS IN FINANCE AND ASSET MANAGEMENT AGENCY OF BALI PROVINCE, INDONESIA; pp. 64-74
Crossref DOI: 10.18551/rjoas.2018-11.08

Paulus C.A., Pellokila M.R., Azmanajaya E.

LOCAL COMMUNITY INSTITUTIONS FOR SUSTAINABLE CREATIVE AND PRODUCTIVE ENTERPRISES IN THE BORDER REGION OF INDONESIA - TIMOR LESTE IN BELU DISTRICT; pp. 75-83
Crossref DOI: 10.18551/rjoas.2018-11.09

Mashudi, Sudirman I W., Murjana Yasa I G.W., Saskara I A N.

EFFECT OF GOVERNMENT ROLE, SOCIAL CAPITAL AND ORIENTATION OF SOCIAL ENTREPRENEURSHIP ON PERFORMANCE OF VILLAGE CREDIT INSTITUTION IN BALI PROVINCE, INDONESIA; pp. 84-102
Crossref DOI: 10.18551/rjoas.2018-11.10

Nangi I.Y.

IMPLEMENTATION OF TAM IN EXPLAINING THE INTENTION TO REPURCHASE THE INTERNET PACKAGE IN MYTELKOMSEL APPLICATION; pp. 103-108
Crossref DOI: 10.18551/rjoas.2018-11.11

Prasidya T.C.I.T.

EFFECT OF QUALITY OF SERVICE, QUALITY PRODUCTS, SECURITY AND SATISFACTION AS MODERATING VARIABLES TO LOYALTY ON E-BANKING; pp. 109-113
Crossref DOI: 10.18551/rjoas.2018-11.12

Cinintya B., Hubeis M., Pandjaitan N.K.

THE ROLE OF INCENTIVE, WORK SATISFACTION AND EMPLOYMENT MOTIVATION WITH IMPLICATIONS ON PERFORMANCE OF MARKETING EMPLOYEE AT BANK DKI; pp. 114-120
Crossref DOI: 10.18551/rjoas.2018-11.13

Ardhiani M.R., Soewarno N.

PARTICIPATION CUSTOMER ON E-COMMERCE: RELATIONSHIP PERCEIVED RISK, SECURITY, TRUST, AND CONSUMER PROTECTION; pp. 121-132
Crossref DOI: 10.18551/rjoas.2018-11.14

Dewi I.A.A.W., Supartha I W.G.

THE EFFECT OF ORGANIZATIONAL JUSTICE ON JOB SATISFACTION AND IMPACT ON TURNOVER INTENTION; pp. 133-139
Crossref DOI: 10.18551/rjoas.2018-11.15

Gosal D.L., Bernardus D.

THE EFFECT OF SERVICE QUALITY ON CUSTOMER LOYALTY THROUGH CUSTOMER SATISFACTION AT ONE DOZEN CAFÉ OF BATAM; pp. 140-150
Crossref DOI: 10.18551/rjoas.2018-11.16

Mardianto D., Ramdhani D.

THE ANALYSIS OF MARKETING STRATEGY AND PLAN OF PT. FOUR JAFFE INDONESIA; pp. 151-160
Crossref DOI: 10.18551/rjoas.2018-11.17

Sugeng R., Hardana, Eka A.

COMMUNICATION STRATEGY OF SRIDONORETNO ASSOCIATION IN RED PICK COFFEE PROGRAM; pp. 161-164
Crossref DOI: 10.18551/rjoas.2018-11.18

Kusumaraya D., Baga L.M., Sasongko H.

DEVELOPMENT STRATEGY OF KARYA NUGRAHA MULTIPURPOSE COOPERATIVE; pp. 165-171
Crossref DOI: 10.18551/rjoas.2018-11.19

Yasa I K.

THE ROLE OF BRAND IMAGE MEDIATING THE EFFECT OF PRODUCT QUALITY ON REPURCHASE INTENTION; pp. 172-180
Crossref DOI: 10.18551/rjoas.2018-11.20

Agustinawati V.

UNDERSTANDING «TRUST» IN THE PRACTICE OF AMIL ZAKAT ACCOUNTABILITY ORGANIZATION OF NURUL HAYAT; pp. 181-187
Crossref DOI: 10.18551/rjoas.2018-11.21

Triono, Kartini D.S., Sulaeman A.

THE DYNAMICS OF POLITICAL MARKETING IN THE WINNING STRATEGY OF POLITICAL PARTIES IN INDONESIA; pp. 188-194
Crossref DOI: 10.18551/rjoas.2018-11.22

Lambok R.S., Jasman J.

PROFIT SHIFTING DETERMINANTS AND TAX HAVEN UTILIZATION: EVIDENCE FROM INDONESIA; pp. 195-207
Crossref DOI: 10.18551/rjoas.2018-11.23

Moordiani R., Sumekar W., Gayatri S.

EMPOWERMENT PROGRAM THROUGH INCREASING CAPACITY OF ECONOMIC INSTITUTION IN MAGELANG REGENCY OF INDONESIA; pp. 208-213
Crossref DOI: 10.18551/rjoas.2018-11.24

Wahyudi D.A., Setyawan A.N.

COMPANY SIZE, CORPORATE PERFORMANCE AND CORPORATE SOCIAL IRRESPONSIBILITY LEVEL: EVIDENCE FROM MANUFACTURING COMPANY IN INDONESIA; pp. 214-220
Crossref DOI: 10.18551/rjoas.2018-11.25

Kustiwi I.A.

INFORMATION SYSTEMS SUCCESS DIMENSION IN INDONESIA ONLINE TRAVEL AGENCY INDUSTRY; pp. 221-228
Crossref DOI: 10.18551/rjoas.2018-11.26

Tajus I., Tantri Y.R.S.

PLANNING OF HUMAN RESOURCE STRATEGY IN HOSPITAL MANAGEMENT USING THE CONCEPT OF SOCIAL HEALTH INSURANCE SERVICES; pp. 229-239
Crossref DOI: 10.18551/rjoas.2018-11.27

Wirakusuma I N., Surya I.B.K.

CONTRIBUTION OF ORGANIZATIONAL JUSTICE AND ORGANIZATIONAL SUPPORT TO EMPLOYEE ENGAGEMENT AND ITS IMPACT ON EMPLOYEES PERFORMANCE; pp. 240-246
Crossref DOI: 10.18551/rjoas.2018-11.28

Manoppo V.P., Astuti E.S., Rahardjo K., Kusumawati A.

THE INFLUENCE OF SPIRITUAL INTELLIGENCE ON JOB STRESS AND TURNOVER INTENTION; pp. 247-253
Crossref DOI: 10.18551/rjoas.2018-11.29

Anggraini C., Kriyantono R.

CORPORATE SOCIAL RESPONSIBILITY IN PUBLIC RELATIONS: A STUDY OF STAKEHOLDERS' OPINIONS IN INDONESIA; pp. 254-269
Crossref DOI: 10.18551/rjoas.2018-11.30

Darmawan D.P., Arisena G.M.K., Utami N.W.F., Gunadi I G.A.

AREA MAPPING AND IMPLEMENTATION OF AGRICULTURE INSURANCE IN THE ORGANIZATION OF SUBAK IN BALI PROVINCE; pp. 270-277
Crossref DOI: 10.18551/rjoas.2018-11.31

Budhi M.K.S., Yasa I N.M.

RELATIONSHIP AMONG ECONOMIC DEVELOPMENT, POPULATION MIGRATION AND POPULATION DEVELOPMENT IN BALI PROVINCE OF INDONESIA; pp. 278-288
Crossref DOI: 10.18551/rjoas.2018-11.32

Maulana O., Agusssabti, Fajri

THE IMPLEMENTATION OF THE USE OF VILLAGE ALLOCATION FUNDS FOR THE AGRICULTURAL SECTOR IN SOUTHWEST ACEH REGENCY OF INDONESIA; pp. 289-299
Crossref DOI: 10.18551/rjoas.2018-11.33

Andriani R., Kasimin S., Bakar Y.A.

ECONOMIC EVALUATION OF BIOURIN LIQUID ORGANIC FERTILIZER IN THE VILLAGE OF PAYA TUNGEL OF CENTRAL ACEH REGENCY, INDONESIA; pp. 300-305
Crossref DOI: 10.18551/rjoas.2018-11.34

Fuqara F.A., Sofyan, Hakim L.

FEASIBILITY ANALYSIS OF WASTE RICE CULTIVATION (ORYZA SATIVA L.) ON OPTIMAL SUB LANDS OF WEST ACEH REGENCY, INDONESIA; pp. 306-311
Crossref DOI: 10.18551/rjoas.2018-11.35

Ikhsan S., Azis Y., Salawati U.

THE TECHNICAL EFFICIENCY ANALYSIS OF RICE FARMING IN DISTRICTS OF SOUTH BORNEO, INDONESIA; pp. 312-318
Crossref DOI: 10.18551/rjoas.2018-11.36

Hidayat H., Soemarno, Muhaimin A.W.

MULTIDIMENSION ASSESMENT OF OIL PALM SUSTAINABILITY ON PEATLAND: A CASE STUDY OF OIL PALM SMALLHOLDER IN RUPAT, RIAU PROVINCE OF INDONESIA; pp. 319-326
Crossref DOI: 10.18551/rjoas.2018-11.37

Istikhoroh S., Sukandani Y., Arianto B.

OYSTER MUSHROOM CULTIVATION AS A STRATEGY OF COMMUNITY EMPOWERMENT IN IMPROVING ECONOMIC GROWTH AND DISTRIBUTION OF RURAL AREAS IN INDONESIA; pp. 327-332
Crossref DOI: 10.18551/rjoas.2018-11.38

Hasan A.M., Halid A., Ahmad L., Hasdiana, Ilato R.

DEVELOPING THE ADDED VALUE OF CORN CHIPS AS WAY OF IMPROVING THE COMMUNITY ECONOMY IN GORONTALO PROVINCE OF INDONESIA; pp. 333-341
Crossref DOI: 10.18551/rjoas.2018-11.39

Mulyana E.

ANALYSIS OF THE AMOUNT OF PRODUCTION AND INCOME OF THE FARMERS OF PINEAPPLE INTERCROPPING PLANTS OF TANJUNG MEDANG VILLAGE, MUARA ENIM DISTRICT; pp. 342-345
Crossref DOI: 10.18551/rjoas.2018-11.40

Garfansa M.P., Sudiarmo, Suminarti N.E.

EFFECT OF POTASSIUM APPLICATION ON GROWTH AND YIELD OF SWEET POTATO VARIETIES (IPOMOEA BATATAS L.); pp. 346-352
Crossref DOI: 10.18551/rjoas.2018-11.41

Darmi, Hasbullah R., Jahroh S.

SEAWEED BUSINESS DEVELOPMENT STRATEGY IN BUTON REGENCY, SOUTHEAST SULAWESI OF INDONESIA; pp. 353-360
Crossref DOI: 10.18551/rjoas.2018-11.42

Asj'ari F., Subandowo M., Bagus I M.D.

THE APPLICATION OF GREEN ECONOMY TO ENHANCE PERFORMANCE OF CREATIVE INDUSTRIES THROUGH THE IMPLEMENTATION OF BLUE OCEAN STRATEGY: A CASE STUDY ON THE CREATIVE INDUSTRIES; pp. 361-368
Crossref DOI: 10.18551/rjoas.2018-11.43

Kiuk J.W., Rehatta B.M., Ninef J.S.R.

FRESH FISH MARKETING ANALYSIS OF SMALL-SCALE FISHERIES IN BELU, EAST NUSA TENGGARA OF INDONESIA; pp. 369-374
Crossref DOI: 10.18551/rjoas.2018-11.44

Rahim A., Hastuti D.R.D., Bustanul N.

ESTIMATION OF HOUSEHOLD CONSUMPTION EXPENDITURE OF SMALL-SCALE FISHERMEN IN INDONESIA; pp. 375-383
Crossref DOI: 10.18551/rjoas.2018-11.45

Mardika H.P.K., Herawati E.Y., Zakiyah U.

ERYTHROCYTE MICRONUCLEI DESCRIPTION OF TILAPIA FISH IN SUNGAI WANGI WATERS, INDONESIA; pp. 384-389
Crossref DOI: 10.18551/rjoas.2018-11.46

Matakupan H.

PELAGIC FISH RESOURCE MANAGEMENT REGIME IN AMBON CITY FISHING GROUND
BASED ON FISHERIES BIOECONOMICS; pp. 390-401
Crossref DOI: 10.18551/rjoas.2018-11.47

Pimenov N., Kolesnikova Y.

COMPARATIVE CHARACTERISTIC OF THE CAUSATIVE AGENTS OF CLOSTRIDIOSIS IN
CATTLE; pp. 402-406
Crossref DOI: 10.18551/rjoas.2018-11.48

Sholikhah N., Patguri M., Yekti A.P.A., Kuswati, Wahjuningsih S., Susilawati T.

THE EFFECT OF SEXUAL DUE TO THE PRODUCTION OF SEMEN ON ONGOLE
CROSSBRED; pp. 407-413
Crossref DOI: 10.18551/rjoas.2018-11.49

DOI <https://doi.org/10.18551/rjoas.2018-11.01>

ECONOMIC EVALUATION OF THE POTENTIAL OF RUSSIAN AGRICULTURAL ENGINEERING, PRODUCING MACHINERY AND EQUIPMENT FOR LIVESTOCK

Polukhin A.A., Doctor of Economics, Professor of RAS

Federal Research Center of Agrarian Economic and Social Development of Rural Area,
Moscow, Russia

E-mail: polukhinogac@yandex.ru

ABSTRACT

The results of the research of agricultural engineering industry potential in the Russian Federation are given below, producing machinery and equipment for livestock. The analysis of the agricultural machinery market is provided in the article. The economic substance of material and technical support of agriculture is justified. The economic analysis of potential of agricultural engineering industry development in Russia is given in the article, taking into consideration a policy of import substitution and export potential extension. The main directions of the branch development are justified; the dynamic development assessment is given. The segmentation of agricultural machinery market is made from the point of view of its mastering by Russian producers. The forecast of the development of the agricultural engineering industry and the export potential is offered. The main directions of the development of the agricultural machinery market as a key element of the organizational and economic mechanism of technical modernization of the branch are determined.

KEY WORDS

Agricultural economics, equipment and material support, agricultural engineering, industry.

The modern economic situation makes it possible to state dynamic development of the Russian agricultural engineering industry in a number of market segments. First of all it is a production of energy-saturated tractors and production of the self-propelled forage combine harvesters. In this regard we consider it useful to justify export potential realization indicators of the Russian agricultural machinery producers, because modern reality dictates the need for more intensive development of the international market.

The equipment and material maintenance of agriculture is an initial link of all macro - and micrologistic chains, which influence the final agricultural indicators and the efficiency of all the production and economic activities of an enterprise or an organization. Taking the above mentioned information into consideration, we have conducted the research directed at justification of the export orientation of agricultural engineering industry.

The purpose of the research is to prove the directions of agricultural engineering industry development in the Russian Federation, to estimate the export potential of the branch.

Tasks of research:

- To estimate the growth prospects of the agricultural machinery realization volume of the Russian Federation;
- To analyze the target indicators of the implementation of the Strategy of agricultural engineering industry development in Russia till 2030;
- To study the export orientation of producers of different types of agricultural machinery;
- To develop and prove target indicators of the export orientation of agricultural mechanical industry.

MATERIALS AND METHODS OF RESEARCH

The research was carried out in the context of combined researches and scientists' coordination from the Federal State Funded Research Institution of the Federal Research

Center of All-Russian Scientific Research Institute of Agricultural Economics and the thematic plan of FASO of the Russian Federation 0569-2015-0013 "Improving the organizational and economic mechanism of equipment and material maintenance of livestock branches under the conditions of import substitution in the resource markets".

The export potential of agricultural engineering industry in the Russian Federation was the object of the research. The sources of the empirical information were the data of the official statistics and data of the All-Russian agricultural census of 2016 and data of the Ministry of Agriculture.

Mathematical and statistical data processing was carried out by means of the standard techniques of the economic analysis. The monographic method, methods of expert assessment, analysis and synthesis were used for the justification of the development directions.

RESULTS OF STUDY

Both Russian and import agricultural machinery have a number of competitive advantages when developing the market. So, for example, the main competitive advantages of the domestic agricultural machinery are low prices, service availability, possibility of self-independent repair, protectionist policy of the state; competitive advantages of the foreign equipment are reliability and productivity. In the market of agricultural machinery the Belarusian equipment due to its low price and protectionist policy of the government of Republic of Belarus has a dominant position in the sales structure.

The forecast of updating the level of the main machinery park for 2013 - 2020 developed by us in 2014 is presented in the table 1. Unfortunately judging by the volumes of acquisition of the new machinery the inertial scenario comes true. Speaking about the updating level we mean the number of the acquired new agricultural machinery. This forecast considers the existing tendencies, target indicators and mechanisms of the state stimulation of the machinery park modernization. However under the inertial scenario of the development we understand the variant, which doesn't presume the state correction of the level and mechanisms of the support, they will remain at the planned level. Speaking about the target scenario we mean the stepwise creation of the conditions on intensive updating of the park.

Table 1 – The volume growth prospects of the agricultural machinery realization in the Russian Federation

n/n	Actual data ¹			Expected scenarios of the agricultural machinery market development in the Russian Federation (worked out by employees of the All-Russian Scientific Research Institute of Agriculture Economy, published in 2014) ²				Expected indicators by the realization of the Strategy of Russian agricultural machinery development industry until 2030 ³		
	2014	2015	2016	2017	2018	2019	2020	2021	2025	2030
Forecast option										
Tractors										
Inertial	8595	7907	8082	9811	9929	10047	10166	12500	13370	14220
Target				14020	14840	15345	16250			
Forage combine harvesters										
Inertial	686	575	666	815	802	789	777	1060	1510	1890
Target				1298	1370	1445	1515			
Milking parlors and aggregates										
Inertial	990	1040	749	1213	1227	1240	1253
Target				1492	1524	1585	1602			

¹ Availability of agricultural machinery and power capacities in agricultural organizations in Russian Federation in 2016. Statistics digest – Moscow: 2017.

² Polukhin A.A. Organizational and economic bases of technical reequipment of agriculture. A. Polukhin. - Orel: Kartush, 2014. - 330 pages.

³ Strategy of export development in of agricultural mechanical engineering branches until 2025. – Approved in a government directive of the Russian Federation on 8/31/2017 No. 1879- r

The Strategy of the development of the Russian agricultural machinery industry until 2030 is developed. It is approved by the order of the Government of the Russian Federation on July 7, 2017 No. 1455-r. Target indicators of this document are presented in the table 2.

Table 2 – The target indicators of the Strategy of the development of the Russian agricultural engineering industry until 2030

Indicators	2017	1 stage 2021	2 stage 2025	3 stage 2030
Share of the Russian agricultural machinery production in the domestic market in a total amount of agricultural mechanical machinery production, %	56	80	Not less than 80	Not less than 80
Ratio of export and shipments of the agricultural machinery production in a domestic market, %	12	25	50	Not less than 50
Index of the agricultural machinery production, %	115	112	112	106
Share of expenses volume for carrying out the research and development in the total amount of the enterprises revenue in agricultural machinery industry	0,7	1,5	3	3,2
Number of the designers working at the enterprises of agricultural engineering, %	750	1000	1700	2100
Share of foreign components and materials in the general prime cost of the production of agricultural engineering, %	35	20	15	10

The realization of the Strategy will allow creating the base for agricultural engineering industry for the efficient production under the competitive conditions on the internal and external markets. In this mechanism the main elements are agricultural producers, scientific and educational institutions, public authorities, financial institutions and the organizations of agricultural engineering industry.

The forecast for the export orientation of the agricultural engineering industry is made with the expert way, taking into account the branch development dynamics, requirements of the domestic market, the implemented mechanisms of the state support, the analysis of the market niches, indicators of the Strategy of the export development in the branches of agricultural engineering industry until 2025.

Table 3 – Number of built and modernized farms for livestock production from 2013 to 2017*

Producers	2013	2014	2015	2016	2017	Total for the entire period
Cattle to the slaughter						
introduced a new	41	39	60	41	68	249
reconstructed and modernized	24	26	47	20	17	134
Dairy farm						
introduced a new	140	112	120	117	161	650
reconstructed and modernized	131	94	99	119	70	513
Pigs for slaughter						
introduced a new	31	31	28	32	29	151
reconstructed and modernized	8	6	2	6	11	33
Bird for slaughter						
introduced a new	10	19	13	14	18	74
reconstructed and modernized	21	11	13	6	14	65

* Data of the Ministry of Agricultural of the Russian Federation.

As can be seen from the data presented in table 1, in the Russian Federation, during the implementation of stimulating activities of the State program for the development of agriculture and regulation of markets for agricultural products, raw materials and food for 2013-2020, a significant number of new livestock facilities were built and existing ones were modernized.

In the segment “combine harvesters” “Rostselmash Combine Plant, LLC” takes the leading positions both in the Russian Federation and in the world. In this regard it is expedient to expect growth of the export orientation of its production.

Table 4 – Increase in production of livestock products due to the introduction of new facilities, reconstruction and modernization of facilities, thousand tons*

Producers	2013	2014	2015	2016	2017	Total for the entire period
Total production of cattle for slaughter (live weight), obtained through the introduction of new facilities, reconstruction and modernization of facilities, thousand tons	3,5	8,3	46,2	6,8	4,8	69,6
The total volume of milk production obtained through the introduction of new facilities, reconstruction and modernization of facilities, thousand tons	179,6	162,1	234	232,1	159,4	967,2
Total production of pigs for slaughter (live), obtained through the introduction of new, reconstruction and modernization of existing facilities, thousand tons	143,4	148,8	79,9	138,4	45,4	555,9
Total poultry production for slaughter (in live weight), obtained through the introduction of new and reconstruction and modernization of existing facilities, thousand tons	154,2	194,6	232	251,5	319,3	1151,6

*Data of the Ministry of Agricultural of the Russian Federation.

Table 5 – Assessment of the export orientation of forage combine harvester producers*

Producers	2015	2016	2016 as % over 2015
Production			
Russian models	509	805	158,2
Including "Rostselmash Combine Plant, LLC"	261	313	119,9
«Klever» company	229	383	167,2
Belorussian models (assembling in the Russian Federation)	110	183	166,4
Including CJSC JV «Bryanskselemash»	110	183	166,4
Total production of forage combine harvesters	619	988	159,6
Export			
Export of new forage combine harvesters	162	163	100,6
- including Russian models	126	141	111,9
Total export share, %	26,7	16,5	-10,2 percentage points
Export share of Russian models, %	24,8	17,5	-7,3 percentage points

*Data of the Ministry of Industry and Trade of the Russian Federation.

On the territory of the Russian Federation forage harvesters of foreign developments aren't produced (except for the Belarusian). Target indicators correspond to strategic criteria of the export development.

Table 6 – Target indicators of the export orientation of agricultural machinery industry (export share in total production), %

Type of machinery	Actual data		Target indicator	
	2015	2016	2020	2025
Tractors	6,4	7,1	10,0	25,0
Grain harvesters	17,3	12,2	25,0	40,0
Forage combine harvesters	24,8	17,5	25,0	40,0

The problem is that economic sanctions and anti-sanctions measures concern agricultural production and providing agrobusiness with the means of production both directly and indirectly through the change of exchange rates. Therefore the agricultural machinery production, both the Russian and foreign models with high rate of localization can be considered as one of the ways to solve the problem of the export-oriented agricultural engineering industry formation.

The offered target reference points are real and expedient proceeding from dynamics of the branch development, demand and competitive advantages of the Russian machinery in the domestic and foreign markets.

DISCUSSION OF RESULTS

The current state of the agricultural engineering industry, level and the implemented mechanisms of the state support, strategic indicators of the branch development indicate rather a high growth potential. This growth allows to rely on the essential export orientation of the enterprise. We should note, that 31,3 thousand people are employed in the branch of agricultural engineering industry in the Russian Federation. We point out that the utilization capacity level in the agricultural engineering industry varies from 40% to 70%, depending on the machinery type that presumes the high increasing potential of the production.

According to the data of 2016 the export of agricultural machinery in value terms was 7,7 billion rubles that is 163% more than in 2012. We point out, that the Russian agricultural engineering industry has potential for export growth in the following segments of the market: combine harvesters, tractors with power more than 300 hp, soil-cultivating machinery, sowing machinery (including sowing complexes), complexes for storage and cleaning of grain, the forage towed machinery (mowers, baler, etc.).

CONCLUSION

Special attention must be paid to the realization of the principles of the foreign markets development. Tractors, combine harvesters, forage, soil-cultivating and sowing machinery produces produced by JSC Peterburgsky Tractorny Zavod, Rostselmash Combine Plant, LLC, Concern "Tractor Plants" and others can increase the production of the relevant machinery.

The realized measures of the state agricultural mechanical engineering support stimulate machinery producers to invest into the development of new models. At the same time the volumes of the investment into research and development aren't sufficient for new sales markets development therefore the growth of the state support volumes of agricultural mechanical engineering is necessary.

REFERENCES

1. Butov A.M. Market of agricultural machinery: National Research University Higher School of Economics. – 2016. p. 9-11
2. Korchevoy E.A. State and prospects of agricultural engineering development: report presentation. – Ministry of Industry and Trade of the Russian Federation. February, 2017.
3. Availability of agricultural machinery and power capacities in agricultural organizations in Russian Federation in 2016. Statistics digest – Moscow: 2017.
4. Polukhin A.A. Organizational and economic bases of technical reequipment of agriculture. A. Polukhin. - Orel: Kartush, 2014. - 330 pages.
5. Strategy of export development in of agricultural mechanical engineering branches until 2025. – Approved in a government directive of the Russian Federation on 8/31/2017 No. 1879g
6. Strategies of agricultural machinery development in Russia until 2030. – Approved in a government directive of the Russian Federation of July 7, 2017 No. 1455-r

DOI <https://doi.org/10.18551/rjoas.2018-11.02>

THE EFFECT OF BUSINESS STRATEGY AND ENVIRONMENTAL PERFORMANCE ON FIRM VALUE

Baihaqi Muchammad

Department of Accounting, Faculty of Economics and Business,
University of Airlangga, Surabaya, Indonesia
E-mail: gqibaihaqi@outlook.com

ABSTRACT

The purpose of this research is to know how the influence of business strategy and environmental performance to company value. Data from this research is obtained from PROPER assessment report listed on Indonesia Stock Exchange period 2015-2017. Data analysis using SPSS program. The results of this study found that business strategy has no effect on firm value and environmental performance have an effect on firm value. Limitations This study uses only 3 observation periods so that it is less able to generalize the findings.

KEY WORDS

Business strategy, environmental performance, firm value.

Competitive business conditions, demanding companies to develop competitive advantage strategies. Basically competitive advantage evolves from the value that the company is able to create for its buyers. Competitive advantages include positioning efforts to maximize the value of ability that differentiates it from competitors. Competitive advantage is defined as the excellence achieved continuously by implementing a strategy of achieving unique values that competitors do not have. It further said that the company has a competitive advantage if the company is able to create value that at the moment is not being done by either competitors or potential competitors and other companies are not able to imitate the advantages of this strategy (Ferdinand, 2003).

The higher the level of competition, the increasing complexity of the market and consumers who are becoming critical of the market, resulting in the company's operational activities need to be done professionally and aggressively. A competing strategy is a combination of goals that a company strives for with the wisdom or tool in which the company strives to achieve its goals. Competitive strategy aims to find a profitable position and can be maintained as well as possible against the pressure of competition. The choice of competitive strategy is based on competitive advantage that can be developed by the company. Competitive advantage will arise by having something that other competitors do not have. Hitt, et al. (2001) states to achieve strategic competitiveness and generate above-average earnings, a firm analyzes its external environment, identifies opportunities within it, determines competent resources, and chooses an appropriate strategy to implement it to produce an output (output) is good.

Miles and Snow (1978) divide four typologies of corporate strategy, namely prospector, defender, analyzer and reaction. Both interpret the prospector and defender as extreme different strategies. Prospector is a strategy that identifies and develops new products and exploits market opportunities, whereas defender is a strategy that tends to maintain market achieved and stable products with low cost leadership. Determination of strategy policy run by company either prospect strategy or defender will impact to company value in the future

Firm Value is the ability of a company to generate free cash flow at this time and in the future (Brigham and Ehrhardt, 2011). The value of the firm is also defined as the price that would be paid by the prospective buyer if the company is sold (Husnan, 2001) and can be reflected through the stock price of the company in the capital market. High Firm Value indicates that shareholder wealth is also high. The indicators of a good company one of them is having a high firm value.

Companies that implement prospector strategies are companies that constantly do product development, create new products through research and development efforts, and expand market share of new products created (Amelia and Sudaryati, 2015). Companies that implement prospector strategies are constantly expanding market share by creating new products resulting from research and development conducted by all components of the company. The new product created is the result of management to absorb consumer preferences, so that new products can be well received by consumers.

Companies that implement prospector strategies have the advantage of experiencing an increase in profits from the opportunity to increase the sales price of new products created due to the lack of existing competitors in similar products. The existence of high sales price levels and the lack of existing competitors, then companies that implement prospector strategies will have an opportunity to increase their company's profit (Aulia, 2010). The possibility of obtaining higher profits compared to competitors will have an impact on the increasing perceptions of capital market investors on companies that implement prospector strategies. Increased perceptions of capital market investors on companies that implement prospector strategy is shown from the increase in stock price of the company. The increase in stock price of the company, will be continued by the increase of company value.

In addition, companies that implement defender strategies are companies that keep their market niche (Habbe and Hartono, 2001). In addition, companies that implement defender strategies will strive to perform a minimum cost strategy to improve the company's earnings performance. Companies that are able to minimize production costs will have an impact on the increase in corporate profits. The strategy of minimizing costs is done by firms when firms are unable to execute extensification strategies and intensify their products.

The opportunity to create an increase in corporate profits will be appreciated positively by capital market investors by purchasing large amounts of shares in companies that implement defender strategies. Investors will invest heavily in companies with defender strategies in hopes of gaining higher capital gain through the efforts of defender companies to continue to provide dividends to investors. A positive appreciation from investors will have an impact on the rising Firm Value of the perception of capital market investors.

In addition to business strategy, companies must be able to create a strategy that comes from the needs of external stakeholders. An environment-based strategy is one of the needs that companies must run to meet the expectations of stakeholders (Gray et al., 1997). To create an appropriate environmental strategy, the company can perform a good environmental performance, so the opportunity to get a positive appreciation from stakeholders can be maintained. The large number of investors who care about environmental conditions encourage companies to constantly improve their environmental performance in order to attract investors or stakeholders to invest their shares so as to increase the value of the company. Mementingkan role of an organization (company) with the surrounding community and must gain trust in the eyes of stakeholders by conducting high environmental activities. It is believed that a company with high environmental performance will influence the surrounding community and investors in accordance with the theory of legitimacy.

Based on the theory of triple bottom line that was discovered by Elkington (1970), the company is not merely oriented to seek profit (profit) alone. However, companies must be able to meet the 3P elements as the company's goal, namely: profit, people, and the planet. Elements of the planet according to Elkington (1970) is an effort to maintain the company's environmental sustainability, so it can provide sustainable benefits for the company in the future. The company's efforts to preserve the environment are an effort to defend the resources of companies that are sourced from nature

LITERATURE REVIEW

The Theory of Triple Bottom Line (TBL or 3BL). Or also 3P - People, Planet and Profit. In short, the three are pillars that measure the value of a company's success with three criteria: economic, environmental, and social (Elkington, 1988). In fact, this approach has

been widely used since the beginning of 2007 as the development of a full cost accounting approach that is widely used by public sector companies. In private sector companies, the implementation of Social Responsibility (CSR) is one form of TBL implementation. The concept of TBL implies that the company should prioritize the interests of stakeholders (all parties involved and affected by the activities of the company) rather than the interests of shareholders.

People emphasize the importance of a company's business practices that support the interests of the workforce. More specifically this concept protects the interests of labor by opposing explorations that employ minors, reasonable wage payments, safe working environments and tolerable working hours. Not only that, the concept also asks the company to pay attention to health and education for the workforce. Planet means managing well the use of energy especially on non-renewable natural resources. Reducing waste products and recycling into safe waste for the environment, reducing CO₂ emissions or energy use, is a common practice by companies that have adopted this concept.

Introduction to the concept of an organization's growing corporate environment in line with the development of a systems approach in management, has changed the way managers and management theorists view organizations, especially about how a company's organization can achieve its goals effectively. The occurrence of an orientation shift in the business world from shareholders to stakeholders has been cited as the cause of the emergence of corporate social responsibility issues. Stakeholders are people or groups of people who can influence or be influenced by various decisions, policies, or company operations. According to Jones in Solihin (2009) explains that the shareholders are divided into two categories:

a. *Inside stakeholders*, consists of persons who have interests and demands on company resources and are within the organization of the company. Parties included in the category of internal stakeholders are shareholders, managers and employees.

b. *Outside stakeholders*, consisting of persons or parties who are not the owners of the company, not the corporate leaders, nor the employees of the company, but have an interest in the company and are influenced by decisions and actions taken by the company. The parties included in the category of outside stakeholders are customers, suppliers, government, local communities, and society in general.

Stakeholder theory provides a firm view as an nexus of contract by incorporating investors and investors as corporate stakeholders. This stakeholder theory proposed by Cornell and Shapiro (1987) supplemented the findings of Titman (1984) in Hatta (2002). Meanwhile, according to Freeman et al. (2004) in Wibowo (2008) argued that the theory of stakeholders began with the assumption of value (value) explicitly and undeniably is part of business activities.

The stakeholder approach enables the organization to choose to respond to the many demands made by stakeholders, that is, any group within the external environment of the organization that is affected by the organization's actions and decisions. According to this approach, an organization will strive to meet the environmental demands of groups such as employees, suppliers, and investors and society (Robbins and Coulter, 1999) in Januarti and Apriyanti (2005).

Strategy is a competing tool that needs to be owned by companies where in its application requires planning, coordination, supervision and evaluation of a strong and accurate so as to create competitive advantage for the company. Application of strategy especially at business level is a job that require big challenge because often the implementation of this business strategy is not able to balance the achievement of expected target. Implementation of business strategy is an important task for managerial in achieving organizational success. Managerial duties in implementing and implementing these strategy choices require assessments that will develop the needs of organizational capability and targeted target achievement (Thompson and Strickland, 2003).

The right strategy choice will create superior performance for the organization. This choice of strategy becomes a necessary part of creating value for consumers and generating competitive advantage for the company (Porter, 1980). The strategy applied must be in

accordance with the core competencies that are owned and the external conditions of the company. Porter explains that there are three strategies that can create competitive advantage for the company that is the overall low cost leadership, differentiation and focus. Balsam et al. (2011) states that the strategy measurement uses four indicators: General Expens / Net Sales, Net Sales / Cost of Goods Sold, Net Sales / Capital Expense, and Total Assets/Number of Employees.

Environmental performance is measured from company achievement following PROPER program. The program is one of the efforts made by the Ministry of Environment (KLH) to encourage corporate governance in environmental management through information instruments (Rakhiemah and Agustia, 2009).

Firm Value is the valuation or price given by market participants on the overall performance of the company. Firm Value can show the performance of management in managing the company's assets (Amanti and Venusita, 2012). The value of the company can be seen from the stock price of the company that is willing to be purchased by investors / potential investors. Maximizing the value of the company is one of the goals of the establishment of a company (Agustina, 2013, Amanti and Venusita, 2012). Increased Firm Value will be seen from the increase of stock price of the company. Increased share price will then improve the welfare of the company's stakeholders (Nurlela, 2008). This study uses Tobin's Q ratio to calculate the company's value.

MODEL AND HYPOTHESES DEVELOPMENT

Business strategy determines the success of an organization. Strategies are created with the aim of enhancing Firm Value and creating competitive advantage. Companies that implement one strategy have specific ways to increase the value of the company. Companies that implement prospector strategies have the advantage of experiencing an increase in profits from the opportunity to increase the sales price of new products created due to the lack of existing competitors in similar products. The existence of high sales price levels and the lack of existing competitors, then companies that implement prospector strategy will have an opportunity to increase their company's profit.

The existence of these strategies has the effect of hope for prospective companies to increase the value of the company. Companies that are able to minimize production costs will have an impact on the increase in corporate profits. The strategy of minimizing costs is done by firms when firms are unable to execute extensification strategies and intensify their products. The opportunity to create an increase in corporate profits will be appreciated positively by capital market investors by purchasing large amounts of shares in companies that implement defender strategies. Based on the explanation, the first hypothesis can be formulated as follows:

H1: The company's business strategy affects the firm's value.

To create an appropriate environmental strategy, the company can perform a good environmental performance, so the opportunity to get a positive appreciation from stakeholders can be maintained. The large number of investors who care about environmental conditions encourage companies to constantly improve their environmental performance in order to attract investors or stakeholders to invest their shares so as to increase the value of the company. Mementingkan role of an organization (company) with the surrounding community and must gain trust in the eyes of stakeholders by conducting high environmental activities. Capital market investors believe that companies that have good environmental performance will convey information related to environmental management as well.

This will be useful for investors to explore information related to the activities undertaken by the company. The widespread in the delivery of such information will have an impact on the lower costs incurred by investors to seek additional information related to the company's operational activities. The decrease in the cost incurred by capital market investors will encourage capital market investors to accumulate more shares of the company,

thus increasing the company's stock price. An increase in stock price will have an impact on the company's rising value.

Based on the explanation, the second hypothesis can be formulated as follows:

H2: Environmental performance affects the firm's value.

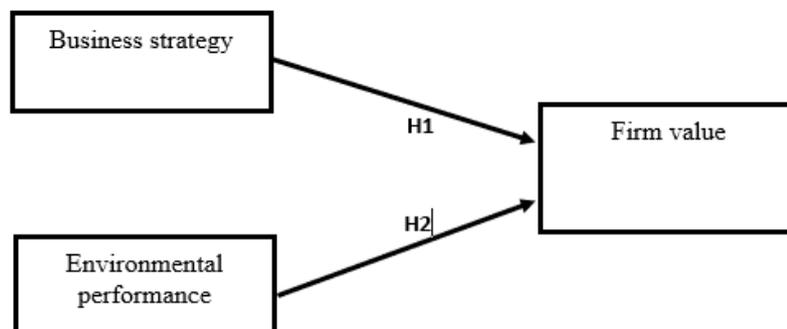


Figure 1 – Research Model

METHODS OF RESEARCH

Sample selection was obtained by selecting 177 companies. With years of research in 2015, 2016 and 2017. Population in this study are companies listed on the Indonesia Stock Exchange and PROPER. The sample of this research is taken by using purposive sampling technique which is manufacturing company, mine and plantation which listed in Indonesia Stock Exchange and that follow Program of Rating of Company Performance in Environmental Management (PROPER) in 2015-2017 and have published annual report. Sample selection is done by using purposive sampling technique with judgment sampling, that is a technique of determining sample by using certain consideration (Anshori and Iswati, 2009: 105).

Research conducted by Asdemir and Tripathy (2013) suggests that the market places a positive value on companies that successfully pursue either cost leadership or differentiation strategies; In addition the market places a higher value on firms that pursue differentiation strategies compared to cost leadership strategies. This study uses Tobin Q as a measure of market perception. With Tobin's retreat on relevant control variables and proxies for differentiation and cost leadership strategies, this paper evaluates the relationship between market perception and corporate strategy.

Al-Najjar and Anfimiadou (2012) examine environmental policies and firm values. Object research company in the UK with observation years 1999 to 2008. With the results of research Acceptance of environmental efficiency award has a relationship between environmental efficiency and value of the company provide evidence to investors that an environmentally efficient company can generate higher future profits. In addition, environmental standards with the company's business processes is one of the company's key business strategies involved in environmental strategy. Thus, these companies are in a position to improve efficiency and effectiveness as their processes operate in line with changes in environmental conditions. As mentioned earlier, by optimizing their systems, businesses will save time, cost and reduce risk and therefore increase the value of the company.

Operational Definition and Variable Measurement

Independent Variables. The business strategy in this study follows the opinion of Ballsam et al, 2011 using the following indicators:

$$BS\ 1 = \frac{General\ Expense}{Net\ Sales} \quad BS\ 2 = \frac{Net\ Sales}{COGS} \quad BS\ 3 = \frac{General\ Expense}{Cost\ of\ Capital} \quad BS\ 4 = \frac{Total\ Asset}{Number\ of\ Employees}$$

Whereas environmental performance using the PROPER rating system includes a company rating in five colors: Gold: Very Very Good Skor = 5, Green: Very Good Skor = 4, Blue: Good Skor = 3, Red: Bad Skor = 2, Black: Very Bad Skor = 1.

Table 1 – Ranking Description

Ranking	Description
Gold	It has consistently demonstrated environmental excellence in the production process and / or services, conducting ethical and accountable business;
Green	Has been managing the environment more than required under the rules (beyond compliance) through the implementation of environmental management system, efficient utilization of resources through 4R efforts (Reduce, Reuse, Recycle and Recovery)
Blue	Has undertaken the required environmental management efforts in accordance with the provisions and or laws and regulations;
Red	Environmental management does not comply with the requirements as regulated in the legislation;
Black	Deliberate committing acts or omissions resulting in pollution and / or environmental damage and violation of statutory or non-administrative sanctions.

Source: Proper Report, 2017.

Dependent Variables. In this study the measurement of firm value using the ratio of Tobin's Q to calculate the value of the company. Tobin's Q ratio can reflect the value of the firm, because it incorporates the company's debt and equity in the calculation (Agustina, 2013).

$$Q = \frac{MVE+D}{BVE+D}$$

Where: Q = Firm value; MVE = *Market Value Equity*; BVE = *Book Value Equity*; D = The book value of total debt.

If a firm has a Tobin's Q ratio of more than 1, the profits generated by the company's assets exceed the value of the investment issued to acquire the asset (Agustina, 2013; Amanti and Venusita, 2012).

RESULTS AND DISCUSSION

The result of analysis from the influence of business strategy and environmental performance to company value is presented in the following table.

Table 2 – Variables Description

Variable	N	Minimum	Maximum	Mean	Std. Deviation
NP	177	.338528	2.053086	1.06924654	.321154080
SB	177	0	1	.1	.303
KL	177	2	5	3.10	.441

Table 2 explained the total data obtained for the period 2015-2017 obtained 177 observation data.

Based on the table it is known that the Company Value (NP) has the lowest value of 0.338528 at PT Indospring Tbk and the highest value of 2.053086 at PT Semen Gresik TBK Average value of the company owned by all sample companies of 1.06924654 standard deviation of 0, 321154080. This shows the level of data spread of the company value has a variation rate of 30.04%. Due to the level of variation <100% it can be concluded that the data is homogeneous, which means the characteristics of sample data each company has a relatively equal amount.

Business Strategy (SB) has the lowest value of 0 at PT BUDI Strach and the highest value of 1 in PT Kabelindo Murni TBK Average business strategy owned by all sample companies of 0.1 with standard deviation of 0.303. This shows the level of data distribution business strategy has a variation rate of 303%. Due to the level of variation > 100% it can be concluded that the data is heterogeneous, which means the sample data characteristics of each company has a relatively different amount. Based on the table it is known that

Environmental Performance (KL) has the lowest value of 2 on PT Indofood Sukses Makmur TBK and PT Cable Wire TBK while the highest value of 5 in PT Aneka Tambang TBK and PT Bukit Asam TBK Average environmental performance owned by all companies sample of 3.10 with standard deviation of 0.441. This shows the level of data distribution of environmental performance has a level of variation of 14.22% means that the existing data is homogeneous or has the characteristics of sample data that tend to be the same for all companies.

Table 3 – Pearson Correlation

	NP	SB	KL
NP	1		
SB	-1.07	1	
KL	0.198 (0.674)	-1.63 (0,120)	1

Table 4 – Variables

Variable	Model – 1 Conf	P-Value
SB	0.80	0.311
KL	0.55	0.14
Consant	0.173	-

Based on the results of research shown in table 3 it can be concluded that the variable, business strategy (SB) does not affect the company value (NP) this can be seen based on the value p-values sebesar 0.311 where the value <0.05 . It can be concluded that the results are not in line with the hypothesis 1 (one) ie business strategy variables affect the value of the company.

While for the environmental performance (KL) variable has a positive effect on Company Value (NP) this is indicated from the p-value value of 0.014 where the value is <0.5 . It can be concluded that the hypothesis 2 (one) namely the variable of Environmental Performance has an effect on the firm value.

CONCLUSION

The result of hypothesis testing 1 states that business strategy has no effect on firm value. The results show that the strategy run by the company is not able to encourage capital market investors to be more oriented in investing. The capital market investor considers that the forms of strategy undertaken by the company have their own advantages for capital market investors, where companies will look for tactical ways of improving corporate earnings performance. This resulted in the lack of attention of capital market investors in viewing the company's business strategy as a step in making investments. The results of this study are in line with Henderson and Hughes (2010). Hypothesis 2 states that environmental performance has an effect on the value of the company, where to create an appropriate environmental strategy, the company can run a good environmental performance, so the opportunity to get positive appreciation from stakeholders can be maintained. Many investors who care about environmental conditions encourage companies to constantly improving its environmental performance in order to attract investors or stakeholders to invest their shares so as to increase the value of the company. Mementingkan role of an organization (company) with the surrounding community and must gain trust in the eyes of stakeholders by conducting high environmental activities. Capital market investors believe that companies that have good environmental performance will convey information related to environmental management as well.

This will be useful for investors to explore information related to the activities undertaken by the company. The widespread in the delivery of such information will have an impact on the lower costs incurred by investors to seek additional information related to the company's operational activities. The decrease in the cost incurred by capital market

investors will encourage capital market investors to accumulate more shares of the company, so that the stock price increases. The increase in stock price will have an impact on the increase of company value. This research is in line with research conducted Asdemir et al (2013).

This study aims to find out how the business strategy and environmental performance can affect the value of the company. In this study we found out that business strategy has no effect on firm value. This is because corporate strategy can not describe the value of the company as a whole. While for our environmental research performance resulted in an influence on firm value. Our findings show that the company's environmental performance can reflect the full value of the company.

Limitations in this study were to use only three periods of company observation as research samples, thus less bias generalize the results of these findings. Therefore, further research can use more than three-year observation periods to make the results more relevant.

REFERENCES

1. Abebe, M., & Cha, W. (2018). The effect of firm strategic orientation on corporate philanthropic engagement. *Management Decision*, 56(3), 515-533.
2. Amo-Yartey, C., & Abor, J. (2013). Corporate financial policies in emerging markets: the role of financial market development. *American Journal of Business*, 28(2), 123-146.
3. Anwar, J., & Hasnu, S. A. F. (2017). Strategic patterns and firm performance: comparing consistent, flexible and reactor strategies. *Journal of Organizational Change Management*, 30(7), 1015-1029.
4. Asdemir, O., Fernando, G. D., & Tripathy, A. (2013). Market perception of firm strategy. *Managerial finance*, 39(2), 90-115.
5. Boamah, N. A. (2017). The global financial market integration of selected emerging markets. *International Journal of Emerging Markets*, 12(4), 683-707.
6. Canavan, D., Sharkey Scott, P., & Mangematin, V. (2013). Creative professional service firms: aligning strategy and talent. *Journal of Business Strategy*, 34(3), 24-32.
7. Castellano, N. G., & Del Gobbo, R. (2018). Strategic mapping: relationships that count. *Management Decision*, 56(4), 908-921.
8. Chatmi, A., & Elasri, K. (2017). Competition among vortex firms: Marketing, R&D or pricing strategy. *The Journal of High Technology Management Research*, 28(1), 29-46.
9. Chuang, Y. T., Dahlin, K. B., Thomson, K., Lai, Y. C., & Yang, C. C. (2015). Multimarket contact, strategic alliances, and firm performance. *Journal of Management*.
10. Chuang, Y. T., & Thomson, K. (2017). Maneuvering multimarket competition: The effects of multimarket contact and strategic alliances on performance of single-market firms. *Strategic Organization*, 15(3), 390-409.
11. Chung, H. F., & Kuo, T. (2018). When and how managerial ties matter in international competitive strategy, export financial and strategic performance framework: A standardized or customized approach?. *European Journal of Marketing*, 52(1/2), 260-278.
12. Cuevas-Rodriguez, G., Guerrero-Villegas, J., & Valle-Cabrera, R. (2016). Corporate governance changes, firm strategy and compensation mechanisms in a privatization context. *Journal of Organizational Change Management*, 29(2), 199-221.
13. Currim, I. S., Lim, J., & Zhang, Y. (2016). Commitment to marketing spending through recessions: Better or worse stock market returns?. *European Journal of Marketing*, 50(12), 2134-2161.
14. Fernando, G. D., Schneible Jr, R. A., & Tripathy, A. (2016). Firm strategy and market reaction to earnings. *Advances in Accounting*, 33, 20-34.
15. Filatotchev, I., Bell, R. G., & Rasheed, A. A. (2016). Globalization of Capital Markets: Implications for Firm Strategies. *Journal of International Management*, 22(3), 211-221.

16. Gomes, R. M. D. A. B., Paula, F. D. O., & Macedo-Soares, T. D. L. V. A. D. (2017). Strategic alliances of shopping centers in Brazil: network perspective. *Management Research: Journal of the Iberoamerican Academy of Management*, 15(2), 167-186.
17. Gossé, J. B., & Plihon, D. (2014). The future of financial markets and regulation: what strategy for Europe?. *Foresight*, 16(2), 95-108.
18. Gyan, A. K., Brahmna, R., & Bakri, A. K. (2017). Diversification strategy, efficiency, and firm performance: Insight from emerging market. *Research in International Business and Finance*, 42, 1103-1114.
19. Hao, S., & Song, M. (2016). Technology-driven strategy and firm performance: Are strategic capabilities missing links?. *Journal of Business Research*, 69(2), 751-759.
20. Kindström, D., Ottosson, M., & Carlborg, P. (2017). Unraveling firm-level activities for shaping markets. *Industrial Marketing Management*.
21. Lee, C. C. (2013). Business service market share, international operation strategy and performance. *Baltic Journal of Management*, 8(4), 463-485.
22. Leitner, K. H. (2014). Strategy formation in the innovation and market domain: emergent or deliberate?. *Journal of Strategy and Management*, 7(4), 354-375.
23. Luo, Y., & Bu, J. (2017). Contextualizing international strategy by emerging market firms: A composition-based approach. *Journal of World Business*.
24. Mallon, M. R. (2017). Getting buy-in: financial stakeholders' commitment to strategic transformation. *Management Research: Journal of the Iberoamerican Academy of Management*, 15(2), 227-243.
25. Martynov, A. (2015). Alliance Portfolios And Firm Performance: The Moderating Role Of Firm Strategy And Resources. In *Academy of Management Proceedings* (Vol. 2015, No. 1, p. 11253). Briarcliff Manor, NY 10510: Academy of Management.
26. Navarro, A., Sicilia, M., & Delgado-Ballester, E. (2009). Integrated marketing communications: Effects of advertising-sponsorship strategic consistency. *EuroMed Journal of Business*, 4(3), 223-236.
27. Pan, Y. (2017). Strategic motives, institutional environments, and firm's FDI ownership. *Multinational Business Review*, 25(4), 307-327.
28. Rodríguez-Escobar, J. A., & González-Benito, J. (2017). The effect of strategic alignment on purchasing management. *Management Research Review*, 40(11), 1175-1200.
29. Sibony, O., Lovallo, D., & Powell, T. C. (2017). Behavioral strategy and the strategic decision architecture of the firm. *California Management Review*, 59(3), 5-21.
30. Yarbrough Jr, E., Abebe, M., & Dadanlar, H. (2017). Board political experience and firm internationalization strategy: A resource dependence perspective. *Journal of Strategy and Management*, 10(4), 401-416.
31. Yi, Y., Gu, M., & Wei, Z. (2017). Bottom-up learning, strategic flexibility and strategic change. *Journal of Organizational Change Management*, 30(2), 161-183.
32. Yoon, J., & Moon, J. (2017). The moderating effect of buyer purchasing strategy on the relationship between supplier transaction-specific investment and supplier firm performance. *Journal of Business Research*.
33. W. Ridge, J., Kern, D., & A. White, M. (2014). The influence of managerial myopia on firm strategy. *Management Decision*, 52(3), 602-623.

DOI <https://doi.org/10.18551/rjoas.2018-11.03>

THE ROLE OF POSITIVE PSYCHOLOGICAL CAPITAL MEDITATION ON THE RELATIONSHIP BETWEEN ORGANIZATIONAL CULTURE AND FRAUDULENT INTENT

Salle Agustinus*, Maryen Jean Renzky, Falah Syaikhul, Daat Sylvia C.

University of Cenderawasih, Papua, Indonesia

*E-mail: salleagustinus1@gmail.com

ABSTRACT

The aim of the study was to prove empirically the role of positive psychological capital mediating the ethical culture of the organization against fraud prevention. Research data was collected from a number of medical personnel who worked in hospitals. Data analysis in this study uses the Structural Equation Model (SEM) approach. Research hypothesis testing used Partial Least Square (PLS). All hypotheses prove significant influence on fraud prevention. Likewise, the influence of mediation positive psychological capital also has a significant effect.

KEY WORDS

Positive psychological capital, organizational ethical culture, fraud prevention, capital.

The fraud that occurs in the hospital is no longer a common thing. Types of fraud that occur in the public sector in the health sector are generally in the form of corruption, other forms of fraud such as asset misuse and financial statement fraud. According to Indonesia Corruption Watch (ICW) Health Corruption Trends for the Period 2010-2015, health sector corruption cases experienced a significant increase in the period 2013 to 2015.

The hospital organization that is happening at this time not only provides pure service but he also thinks of himself how to survive. According to Lu (2011) hospital management faces tighter pressure from health insurance institutions caused by increased medical costs and medical services. The implementation of the National Health Insurance System causes financial pressure and medical resources, according to (Chatterji 2009) and (Bhuiyan, Menguc, and Bell 2005). Financial pressure is one of the factors that cause fraud or fraud. Cheating or fraud is a mistake made intentionally (Mustika, Hastuti, and Heriningsih 2016). In a book entitled Fraud Examination, (Albrecht et al. 2012) said that there were 3 things that caused someone to commit fraud, namely: 1. Pressure / Pressure, 2. Opportunity, 3. Rational.

Hospital organizations that are under the auspices of the government need a leadership figure which is a reflection of the ethical culture of the leaders who are used as role models. High and low organizational culture can be seen from the level of commitment of hospital members to values and beliefs from the leadership to all levels of employees. According to (Douglas, Davidson, and Schwartz 2001) and (Falah 2010) organizational culture is essentially a system of general values. The personal values began to be developed at the beginning of life, as well as trust in general, arranged in a hierarchical system with characteristics that can be explained and measured, and the consequences of observable behavior. Perceptions of organizational culture are based on the conditions experienced by someone in the organization, such as appreciation, support, and behavior expected to be obtained in the organization. Organizational ethical culture which is a reflection of the leadership will build positive character from individuals in the organization, called psychological capital.

Psychological capital is defined as "a state of positive psychological development that is characterized by (1) having self-efficacy to take and succeed in challenging tasks, (2) make positive attribution (optimism) about the success of the present and the future, (3) diligently towards the goal, and if necessary, direct it back to the goal (hope) to succeed;

and (4) when hit by problems and difficulties, able to rise again and even more resilient to achieve success (Luthans 2012) and (Luthans and Youssef-Morgan 2017).

Research questions:

- Does the ethical culture of the organization affect fraud prevention?
- Does the ethical culture of the organization affect positive psychological capital?
- Does positive psychological capital affect fraud prevention?

LITERATURE REVIEW

Organizational culture can be seen from the level of commitment of hospital members to values and beliefs from leaders to all levels of employees. A good cultural climate will create good behavior for everyone in the organization (Najahningrum 2013). Organizations with good and right behavior can encourage people not to commit fraud, by establishing a code of conduct of the right behavior to assess integrity, encourage open and honest communication. Likewise, research conducted by (Sabău, Șendroiu, and Sgârdea 2013) namely by creating a culture of strong ethics and integrity throughout the organization is the first step in developing an effective system to prevent fraud in organizations. (Francis and Armstrong 2003) explained that the lack of absorbing ethics culture within the organization led to the emergence of fraud that occurred, this also led to the collapse of large companies such as Enron. In an institution if the values have been implanted, that a fraud is an act that is not good and is detrimental to many parties, then employees will tend not to commit fraud.

H1: organizational ethical culture of fraud prevention.

High and low organizational culture can be seen from the level of commitment of hospital members to values and beliefs from leaders to all levels of employees. Leadership can lead to positive characteristics, ethical behavior that is instilled in the organization so that it can become a role model. (Pamela R. Murphy; Clinton Free; Carmel Branston 2011) the results provide good and significant support for the proposed hypothesis, where employees from various organizations with psychological capital will influence work performance assessed by superiors and job satisfaction and can eliminate the intention to move.

Ethical behavior within the organization will bring a person into self-efficacy having the confidence or confidence in carrying out various tasks, as well as the hope / hope, and ethical culture in the organization will provide lessons on how the values instilled in individuals can have a positive influence with have a sense of optimism in facing all problems and able to rise again from the downturn experienced and become better resilience.

In line with research conducted by (Dent, Higgins, and Wharff 2005) spirituality in the workplace is aligned with cultural values within the organization which have proven to be significant in providing self-motivation, motivating and controlling feelings in emotional situations (self-control).

H2: organizational ethical culture affects positive psychological capital.

(Luthans et al. 2008) psychological capital has a significant influence on positive emotions, attitudes, and behavior of employees so that the tendency of crime will be controlled. Having a high psychological capital will make a person feel confident and able to do positive things in the organization, this attitude will make the individual suppress all forms of fraudulent intentions that occur in the hospital.

H3: positive psychological capital affects fraud prevention.

Honest and high ethical culture is the most effective way to prevent and deter fraud. Organizational ethical culture will create a positive work environment, from research conducted it appears that violations occur less frequently when employees have positive feelings about their superiors (Zelmiyanti and Anita 2015). There are positive changes, both ethics, attitudes, behaviors and individual perspectives, which develops into the character of individual groups (from superiors to subordinates) so that it will form a positive change in new work culture, based on the explanation above, the hypothesis can be taken as follows.

H4: positive psychological capital mediates the ethical culture of the organization against fraud prevention.

METHODS OF RESEARCH

Data collection in this study was obtained by distributing questionnaires to respondents by visiting the sampling location directly. Instrument to measure Psychological Capital which consists of four aspects: self-efficacy, optimism, hope, resilience, consisting of 12 items of questions adapted from (Venkatesh & Blaskovich, 2012) in (Soleha et al., 2014). Measurement of organizational ethical culture was carried out using an instrument developed by Hunt et al. (1989). In an effort to prevent fraud, it also starts from internal control, instilling awareness of fraud awareness.

The instrument used to measure fraud prevention consists of 13 question items (Thabi, 2017). Measurement of this variable using a Likert scale 1 strongly disagrees to 5 strongly agrees that the highest value shown is the prevention of fraud is more effective.

Table 1 – Latent Variable Coefficients

	BEO	PSY	PF
R-squared		0.289	0.307
Adj. R – squared		0.272	0.271
Composite reliab.	0.791	0.868	0.906
Cronbach's alpha	0.668	0.827	0.887
Avg. Var. extract	0.437	0.436	0.431
Full Collin VIF	1.385	1.362	1.243
Q-squared		0.307	0.322

Source: Primary data processed, 2018.

The output of the table above shows that all three constructs have not met the convergent validity criteria because BEO has AVE 0.437 <0.50, PSY has AVE values 0.493 <0.50 and PF has AVE values of 0.476 <0.50. so it can be concluded that the three variables do not meet the convergent validity criteria.

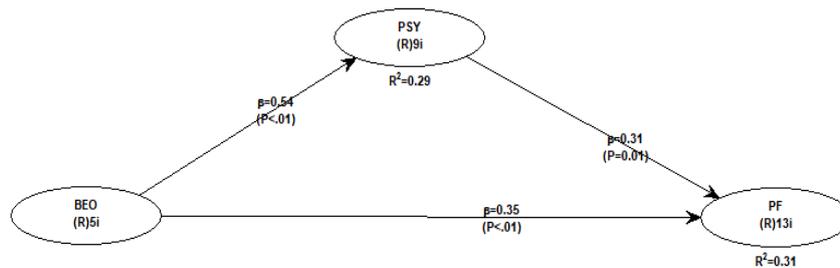


Figure 1 – Statistical Test Results

The results of statistical testing of ethical cultural hypotheses against fraud prevention show p-value <0.05 that is equal to 0.01. This means that the hypothesis of the influence of the organization's ethical culture on preventing fraud is accepted. An ethical culture of the organization proved to be influential in preventing fraud in hospitals. Ethical culture that is a reflection of leadership that instills good ethical values and becomes a role model from the boss to the ranks below it. In hospitals in the city of Singapore, employees/staff tend not to commit fraud, good ethical values seem to make employees/staff reluctant to their leaders who are used as role models so they do not commit fraud.

Research is in line with research conducted by (Najahningrum 2013) which shows empirical evidence that a good cultural climate can create good behavior in the organization so that it reduces the level of fraud. Likewise, opinion (Sabău, Şendroiu, and Sgârdea 2013) that is by creating a culture of strong ethics and integrity throughout the organization is the first step in developing an effective system to prevent fraud in the organization. So the more ethical the behavior of employees/staff in hospitals in the city of Jayapura with their leadership as role models, then the tendency to commit fraud can be overcome.

The second hypothesis test shows that the p-value <0.05 is equal to 0.01. This means that the hypothesis of the influence of organizational ethical culture on positive psychological capital is accepted. Organizational ethical culture seen from leadership has proven to be able to build positive psychological capital within hospital organizations. Leadership or leaders in hospital organizations instill ethical behavior so that employees or staff follows what their leadership does. The ability to do everything, have a sense of optimism and hope and able to rise again to achieve organizational goals.

So, a positive feeling that is built from his leadership makes employees or staff in the hospital do everything with confidence and optimism that whatever is done can run according to goals or expectations, and when failure occurs the employee or staff does not despair quickly but can rise again or activity again and focus again on the goal.

Statistical test results show that the p-value <0.05 is equal to 0.01. This means that the positive influence hypothesis of psychological capital on fraud prevention is accepted. Positive psychological capital is proven to have a significant effect on preventing fraud that occurs in hospitals. A positive development pattern of a person consisting of four elements, namely self-efficacy, hope, optimism, and resilience makes employees feel confident and able to do positive things; this positive attitude can suppress or prevent fraud.

In line with research conducted by (Pamela R. Murphy; Clinton Free; Carmel Branston 2011) where psychological capital has a significant influence on positive emotions, employee attitudes and behavior so that the tendency of crime can be controlled. So, the positive attitude of psychological capital of employees/hospital staff in the city of Jayapura makes a person's tendency to commit fraud can be prevented.

CONCLUSION

Organizational ethical culture has a significant effect on fraud prevention. This shows that good ethical values that are attached to the leadership become one of the factors preventing fraud. Similarly, the positive influence of psychological capital in preventing fraud shows a significant role. Conditions explained that with a sense of confidence, optimism, hope and able to rise again in achieving its goals, this is one that is needed by every employee. The negative influence of employees can be minimized with a strong ethical culture and psychological capital. Research on positive psychological capital in mediating the organization's ethical culture against fraud prevention is a new research in accounting, so research needs to be done on the same aspects to find out the consistency of the results. Further research needs to consider other variables that affect the organization's ethical culture against fraud prevention

REFERENCES

1. Albrecht, W. Steve, Chad O. Albrecht, Conan C. Albrecht, and Mark F. Zimbelman. 2012. *Fraud Examination*. South-Western Cengage Learning. <https://doi.org/10.1017/CBO9781107415324.004>.
2. Bhuian, Shahid N., Bulent Menguc, and Simon J. Bell. 2005. "Just Entrepreneurial Enough: The Moderating Effect of Entrepreneurship on the Relationship between Market Orientation and Performance." *Journal of Business Research*. [https://doi.org/10.1016/S0148-2963\(03\)00074-2](https://doi.org/10.1016/S0148-2963(03)00074-2).
3. Chatterji, Aaron K. 2009. "Spawned with a Silver Spoon? Entrepreneurial Performance and Innovation in the Medical Device Industry." *Strategic Management Journal*. <https://doi.org/10.1002/smj.729>.
4. Dent, Eric B., M. Eileen Higgins, and Deborah M. Wharff. 2005. "Spirituality and Leadership: An Empirical Review of Definitions, Distinctions, and Embedded Assumptions." *Leadership Quarterly*. <https://doi.org/10.1016/j.leaqua.2005.07.002>.
5. Douglas, Patricia Casey, Ronald A. Davidson, and Bill N. Schwartz. 2001. "The Effect of Organizational Culture and Ethical Orientation on Accountants' Ethical Judgments." *Journal of Business Ethics*. <https://doi.org/10.1023/A:1012261900281>.

6. Falah, Syaikhul. 2010. "Pengaruh Budaya Etis Organisasi Dan Orientasi Etika Terhadap Sensitivitas Etika (Studi Empiris Tentang Pemeriksa Intern BAWASDA)." *Jurnal Akuntansi Dan Bisnis Kontemporer* 1 (2): 41–58.
7. Francis, Ronald, and Anona Armstrong. 2003. "Ethics as a Risk Management Strategy: The Australian Experience." *Journal of Business Ethics*. <https://doi.org/10.1023/A:1024163831371>.
8. Lu, Cheng-Tsung. 2011. "Relationships among Budgeting Control System, Budgetary Perceptions, and Performance: A Study of Public Hospitals." *African Journal of Business Management*. <https://doi.org/10.5897/AJBM10.270>.
9. Luthans, Fred. 2012. *Organizational Behavior an Evidence-Based Approach 12th Edition. Organizational Behavior: An Edivence-Based Approach*.
10. Luthans, Fred, Steven M. Normann, Bruce J. Avolio, and James B. Avey. 2008. "The Mediating Role of Psychological Capital in the Supportive Organizational Climate—employee Performance Relationship." *Journal of Organizational Behavior*. <https://doi.org/10.1002/j>.
11. Luthans, Fred, and Carolyn M. Youssef-Morgan. 2017. "Psychological Capital: An Evidence-Based Positive Approach." SSRN. <https://doi.org/10.1146/annurev-orgpsych-032516-113324>.
12. Mustika, D, S Hastuti, and S Heriningsih. 2016. "Analisis Faktor-Faktor Yang Mempengaruhi Kecenderungan Kecurangan (Fraud): Persepsi Pegawai Dinas Kabupaten Way Kanan Lampung." *Simposium Nasional Akuntansi XIX, Lampung*.
13. Najahningrum, Fatun Anik. 2013. "Faktor-Faktor Yang Mempengaruhi Kecenderungan Kecurangan (Fraud)."
14. Pamela R. Murphy; Clinton Free; Carmel Branston. 2011. "Organizational Culture as a Predictor of Fraud." *Prevention*.
15. Sabău, Elena Monica, Cleopatra Şendroi, and Florinel Marian Sgârdea. 2013. "Corporate Antifraud Strategies – Ethics Culture and Occupational Integrity." *Cross-Cultural Management Journal*.
16. Zelmianti, Riri, and Lili Anita. 2015. "Pengaruh Budaya Organisasi Dan Peran Auditor Internal Terhadap Pencegahan Kecurangan Dengan Pelaksanaan Sistem Pengendalian Internal Sebagai Variabel Intervening." *Jurnal Akuntansi Keuangan Dan Blsnis*.

DOI <https://doi.org/10.18551/rjoas.2018-11.04>

**THE EFFECT OF NON-FINANCIAL FACTORS ON ACCEPTANCE
OF GOING CONCERN AUDIT OPINION IN MANUFACTURING COMPANIES LISTED
IN INDONESIA STOCK EXCHANGE**

Armadiyanti Putri

Department of Accounting, University of Airlangga, Surabaya, Indonesia

E-mail: putriarmadiyanti92@gmail.com

ABSTRACT

The going concern audit opinion is issued by the auditor to ascertain whether the company can maintain its survival. Expenditures of going concern audit opinion is very useful for users of financial statements to make the right decisions in investing, because when an investor will make an investment it is necessary for them to know the company's financial condition, especially concerning the survival of the company. This study aims to analyze the non-financial factors that influence the acceptance of going concern audit opinion on manufacturing companies listed on the Indonesia Stock Exchange (IDX) in 2013-2016. The variables used in this study are the level of disclosure, the length of audit time (audit lag), and the previous year's audit opinion. This type of research is quantitative research with data analysis using logistic regression. In this study, the method used was purposive sampling and obtained a total sample of 176 companies that met the sample criteria. The results of the study show that the previous year's audit opinion variable affects the acceptance of going concern audit opinion. While disclosure and audit lag do not affect the acceptance of going concern audit opinion. This research contributes as (1) empirical evidence and material consideration for the auditor in carrying out its audit process, especially in terms of providing a going concern audit opinion in Indonesia; and (2) empirical evidence for investors and potential investors regarding going concern (business continuity of a company) so that they can make the right decision in making an investment. The independent variables used in this study only explain 14.4% of the dependent variable while the remaining 85.6% is explained by other variables.

KEY WORDS

Going concern, audit opinion, disclosure, audit lag, previous year's audit opinion.

According to the Financial Accounting Standards Guidelines (PSAK) No. 1, the purpose of the financial statements is to provide information about the financial position, financial performance, and cash flow of the entity that is beneficial for most users of the report in making economic decisions (IAI, 2009). Because financial statements are intended for parties who have an interest in the media in seeing the condition of the company, the role of an independent party is the auditor is needed in assessing the fairness and reliability of the company's financial statements. The auditor will provide opinions on the results of the assessment of the company's financial statements.

Aside from being an intermediary between the interests of investors, potential investors, and the interests of the company, auditors also have an important role in predicting company failures. One of the hopes of investors and other users of financial statements is an early warning for companies that experience financial distress delivered through audit opinions (Geiger et al, 1995). The American Institute of Certified Public Accountants (AICPA) requires that auditors must disclose explicitly whether a client company can maintain its survival until a year later after reporting (Januarti & Fitrianasari, 2008). According to the Auditing Standards Guidelines (PSA) No.30 of the Public Accountants Professional Standards (SPAP) Section 341 of 2011, the auditor is responsible for giving consideration and giving opinions as to whether there are doubts about the company in maintaining its survival within a period of not more than one year from the date reports being audited (IAI, 2011).

An independent auditor will provide an opinion in accordance with the actual conditions of the company. Non going concern audit opinion is given if the auditor in the process of identifying information about the condition of the company does not find any major doubts about the company's ability to maintain its survival, whereas the going concern opinion is given to companies whose auditors are doubtful in maintaining the continuity of the company's business. According to the Auditing Standards Guidelines (PSA) No.30 of Public Accountant Professional Standards (SPAP) Section 341 in 2011, going concern audit opinions are opinions issued by the auditor to ascertain whether the company can maintain its survival (IAI, 2011). Expenditures of going concern audit opinion is very useful for users of financial statements to make the right decisions in investing, because when an investor will make an investment it is necessary for them to know the company's financial condition, especially concerning the survival of the company (Hani et. Al ., 2003). It can be concluded that the goal of issuing a going concern audit opinion is to predict the bankruptcy of a company.

This study aims to analyze non-financial factors that influence the acceptance of going-concern audit opinions, namely: the level of disclosure, the length of audit time (audit lag), and the previous year's audit opinion. Transparency of information disclosure through disclosure of financial statements that facilitates the auditor's task in providing opinions is something that management needs to pay attention to. Haron et al. (2009); Junaidi & Hartono (2010); Zulfikar & Syafruddin (2013) found that disclosure has a significant effect on going concern opinion. The greater the extent of financial information disclosed by companies experiencing poor financial conditions, the auditor will find it easier to find evidence in assessing the business continuity of the company (Junaidi & Hartono, 2010).

Companies that disclose less accounting information tend to receive unqualified opinions from external auditors (Gaganis & Pasiouras, 2007). Astuti & Darsono (2012) research reveals that a high level of disclosure does not cause a company to avoid receiving the going concern opinion by the auditor. This can happen because the higher the level of disclosure made by the company, it can create an unfavorable impression and is considered an excessive presentation. In addition, the presentation is too detailed and not important can actually obscure significant information that makes financial statements difficult to interpret (Astuti and Darsono (2012).

The violation of the principle of disclosure in Indonesia was once carried out by PT Perusahaan Gas Negara (Persero) Tbk (PGAS). In this case there has been an irregularity in the stock price which has decreased by 31.8% and then a decline of 23.26%. The Capital Market Supervisory Agency (Bapepam-LK) or now the Financial Services Authority (OJK) has found indications of violations in the disclosure principle and the practice of insider trading. In the case of disclosure, the violations committed by PGAS were the delay in notifying the public about the delay of the South Sumatra-West Java pipeline project which was carried out by PGAS for 35 days and did not convey information on the reduction in gas volume and gas in-formation to the public so that PT Perusahaan Gas Negara (Persero) Tbk has violated Article 86 paragraph (2) of Law No. 5/1995 jo (Kementerian Badan Usaha Milik Negara, 2007). Based on these cases, it can be concluded that the importance of disclosure is intended not to harm investors, potential investors, and auditors in assessing the condition of the company.

Research shows that auditors often provide going concern audit opinions when audit reports are delayed longer (McKeown et al, 1991). The auditor delays the issuance of audit reports in the hope that the company can solve its financial problems and avoid going concern opinions. Astuti & Darsono (2012) research results; Lennox (2000); Praptitorini & Januarti (2007); indicates that audit lag affects the acceptance of going concern audit opinion. However, Januarti's research (2009) shows that the length of audit time shows insignificant results and does not affect the provision of going concern opinion. Based on the decision of the Chairman of Bapepam and LK Number 346 / BL / 2011 concerning Submission of Periodic Financial Statements of Issuers or Public Companies, in Attachment to Regulation Number X.K.2, it is stated that the annual financial statements must be accompanied by an accountant's report in the context of auditing the financial statements.

The annual financial report must be submitted to Bapepam and LK and announced to the public no later than the end of the third month after the date of the annual financial report (Bapepam LK, 2011). The delay in the publication of financial statements may indicate a problem in the issuer's financial statements. This can be used as a guideline by auditors and public company management that the maximum time limit for audit lag is 90 days (3 months).

Furthermore Rahayu's research (2007); Ramadhany (2004); Zulfikar & Syafruddin (2013) found evidence of a going concern audit opinion received the previous year with a going concern audit opinion for the current year. There is a significant positive relationship between the previous year's going concern audit opinion and the going concern audit opinion for the current year. Mutchler (1985) examined the effect of public information availability on the predicted going-concern audit opinion, using discriminant analysis which included the previous year's audit opinion type with the highest predictive accuracy, which was 89.9%.

This study uses objects of manufacturing companies listed on the Indonesia Stock Exchange (IDX) vulnerable research time starting in 2013-2016. Manufacturing companies are chosen because manufacturing companies are good pilot companies that have complete cost details and tend to be responsive to environmental conditions. In addition, going concern audit opinions are more often issued by auditors in manufacturing companies (Ramadhany, 2004).

THEORY AND HYPOTHESES DEVELOPMENT

Agency Theory. This study uses agency theory as a theoretical basis. Agency relations are described as a contract under one or more principals that involves agents to carry out several services for them by delegating decision-making authority to agents (Jensen & Meckling, 1976). Agency problems arise because of a conflict of interest between the principal and the agent. Each party, both principal and agent, seeks to maximize personal interests. The principal has a desire to increase the value of investment in the company and get the maximum profit for his investment. In addition, the agent has a personal interest that is receiving adequate compensation for the performance and obligations that he has done.

Agents are tasked with running the company and producing financial reports and other company information as a form of management accountability. The financial statements will describe the financial condition of the company which will be used by the principal as a basis for decision making. Agencies (management) do not always act according to the wishes of shareholders, in part due to moral hazard (Praptitorini & Januarti, 2007). Agents as parties that produce financial reports and other company information have a desire to optimize their interests, so that agents may manipulate data on the condition of the company. Agents are parties who are more aware of internal information and prospects of the company in the future compared to principals (shareholders), it can lead to information inequality (information asymmetry) because the financial statements presented by management do not reflect the actual condition of the company. Information asymmetry will influence decision making by users

Audit Opinion. According to the Public Accountants Professional Standards (SPAP) Section 110 Audit Standard, the purpose of auditing financial statements by independent auditors in general is to express opinions about fairness in all material matters, financial position, results of operations, changes in equity, and cash flow in accordance with the principle accounting that is generally accepted in Indonesia (IAI, 2011). The auditor is responsible for planning and carrying out the audit to obtain adequate assurance about whether the financial statements are free from material misstatement, whether caused by errors or fraud. Audit opinion is given by the auditor through several stages of audit so that the auditor can provide conclusions on the opinions that must be given on the financial statements being audited (Rahman & Siregar, 2012). According to the Public Accountant Professional Standards (Audit Standards Guide 29 Section 508), there are five types of audit opinions, namely:

- Unqualified Opinion;
- Unqualified Opinion with Explanatory Language;

- Qualified Opinion;
- Adverse Opinion;
- Disclaimer of Opinion.

Going Concern Audit Opinion. The going concern audit opinion is an audit opinion which in the auditor's judgment there is an inability or significant uncertainty over the survival of the company in carrying out its operations within a reasonable period of time, not more than one year from the date of the financial statement being audited (IAI, 2011). The auditor determines the receipt of a going concern audit opinion if in the audit process there are conditions and events that lead to doubt about the survival of the company. With the management plan, effectiveness of the management plan, and sufficient disclosure of information, an entity is considered able to maintain its business continuity in the long term and will not be liquidated within a period of less than 1 year.

Auditing Standard 341 Section, Audit Standard Guidelines No. 30 states that in carrying out the audit process, auditors are required not only to look at the things revealed in the financial statements but also to be more aware of potential things that can interfere with the going concern of a company. This is the reason that the auditor is also responsible for the survival of a business unit (IAI, 2011). Some conditions that may affect the auditor in issuing a going concern audit opinion (Audit Standard 341.3 Section, Audit Standard Guidelines No. 30 paragraph 6, SPAP 2011) include:

- Negative trends (financial management ratio, business growth ratio, and leverage);
- Other instructions about possible financial difficulties;
- Internal problems (level of compliance with regulations and policies);
- External problems that have occurred (litigation indicators).

Effect of Disclosure on Going Concern Audit Opinions. Haron et al. (2009); Junaidi & Hartono (2010); Zulfikar & Syafruddin (2013) found that disclosure affects the going concern opinion. The higher the level of company disclosure, the higher the probability of the company receiving a going concern audit opinion. Astuti & Darsono (2012) research reveals that a high level of disclosure does not cause the company to avoid going concern audit opinion by the auditor. This can happen because the higher the level of disclosure made by the company, it can create an unfavorable impression and is considered an excessive presentation. Then the hypothesis formulated is as follows:

H₀: Disclosure does not affect the going concern audit opinion;

H₁: Disclosure affects the going concern audit opinion.

Effect of Audit Lag on Going Concern Audit Opinions. Auditors more often give going concern opinions when audit reports are late (McKeown et al, 1991). The aim of the auditor is to delay the issuance of audit reports so that the company can solve its financial problems and avoid going concern opinions. Astuti & Darsono (2012) research results; Lennox (2000); Praptitorini & Januarti (2007) shows that audit lag affects the going concern audit opinion. However, Januarti's research (2009) shows that the length of audit time shows the results do not affect the provision of going concern opinion. Then the hypothesis formulated is as follows:

H₀: Audit lag does not affect the going concern audit opinion;

H₂: Audit lag affects the going concern audit opinion.

Effect of Previous Year's Audit Opinion on Going Concern Audit Opinions. The going concern audit opinion that has been received by the auditee in the previous year will be an important consideration factor for the auditor in issuing a going concern audit opinion in the current year if the auditee's financial condition does not show signs of improvement or absence of a management plan that can be realized to improve the condition of the company. Nogler (1995) found evidence that after the auditor issues a going-concern audit opinion, the company must show a significant financial increase to obtain a net opinion in the following year, if there is no increase in finance, the going-concern audit opinion will be given again. Rahayu's Research (2007); Ramadhany (2004); Zulfikar & Syafruddin (2013) strengthen the evidence that there is a positive relationship between the previous year's going concern audit opinion and the going concern audit opinion for the current year. If in the

previous year the auditor had issued a going concern audit opinion, it would be more likely that the auditor would republish the going concern audit opinion the following year. Then the hypothesis formulated is as follows:

H₀: Previous year's audit opinion does not affect the going concern audit opinion;

H₃: The previous year's audit opinion affects the going-concern audit opinion.

The research framework that underlies this research can be described as follows:

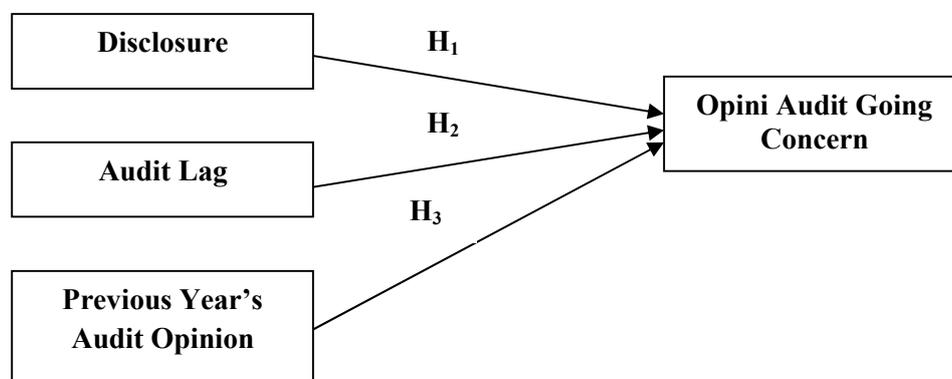


Figure 1 – Conceptual framework

METHODS OF RESEARCH

This study uses a quantitative approach, namely research that focuses on testing hypotheses that explain the relationship between variables (Indriantoro & Supomo, 2012: 27). In this study describes the relationship between the independent and dependent variables associated with the acceptance of going concern opinion. The independent variables used in this study are disclosure, audit lag, and previous year's audit opinion. The dependent variable used in this study is going concern opinion.

Population and Research Sample. The population in this study were all manufacturing companies listed on the Indonesia Stock Exchange (IDX) for the 2013-2016 period. The manufacturing industry was chosen to avoid the existence of industrial effects, namely different industrial risks between one industrial sector to another. The research sample was selected using a purposive sampling approach. Based on the sample selection process that has been carried out, obtained a total sample of 176 manufacturing companies on the Indonesia Stock Exchange (IDX).

Going Concern Audit Opinion (GC). The going concern audit opinion is an audit opinion which in the auditor's judgment there is an inability or significant uncertainty over the survival of the company in carrying out its operations within a reasonable period of time, not more than one year from the date of the financial statement being audited (IAI, 2011). This variable is measured using a dummy variable. Auditees who receive a going concern audit opinion are given code 1 while the auditee who receives a non going concern audit opinion is given a code 0. Audit opinion included in the going concern opinion is unqualified with explanatory language. While non-going concern audit opinions include unqualified opinions, qualified opinions, adverse opinions and disclaimer opinions in accordance with the explanation of Section 508 Audit Standard, PSA No. 29 (IAI, 2011).

Disclosure (DL). Disclosure is the level of disclosure of information provided as financial attachments in the form of footnotes or additions (Tanor, 2009). This variable is measured using an index, where the determination of the index is done by using the disclosure score revealed by a company. If the company discloses information items in its financial statements and annual reports, then a score of 1 will be given. After scoring, disclosure level can be determined by the following formula (Ardiani, et al, 2012; Nanda, 2015):

$$\text{Disclosure Level} = \frac{\text{Total number of disclosure scores fulfilled}}{\text{Maximum score amount}}$$

The level of disclosure presented by the company is measured by disclosure items. The disclosure items table is as follows:

Table 1 – Disclosure Items

No.	Explanation
1.	Summary of Important Financial Data
2.	The highest, lowest, and closing share price information, as well as the number of shares traded for each quarterly period in the last 2 (two) financial years (if any).
3.	Board of Commissioners report regarding the assessment of the performance of the board of directors regarding the management of the company.
4.	Board of Commissioners report regarding the views on the prospects of the company's business prepared by the directors
5.	Directors report regarding company performance
6.	Report of the board of directors regarding the description of business prospects
7.	Directors report regarding the implementation of corporate governance that has been carried out by the Company
8.	Company name and address
9.	Company brief history
10.	Fields and business activities of the company include the types of products and or services produced
11.	Organizational structure in the form of a chart
12.	Vision and mission of the company
13.	Name, position and brief curriculum vitae of members of the board of commissioners
14.	Name, position and brief curriculum vitae of members of the board of directors
15.	Number of employees and description of competency development (for example: aspects of employee education and training that have been and will be carried out);
16.	Description of the name of the shareholder and percentage of ownership
17.	The names of subsidiaries and associated companies, percentage of share ownership, line of business, and operating status of these changes
18.	Chronology of the listing of shares and changes in the number of shares from the beginning of recording up to the end of the financial year and the name of the stock exchange where the company's shares are listed
19.	Name and address of capital market supporting institutions and or professions
20.	Awards and certifications received by companies both nationally and internationally.
21.	Name and address of subsidiaries and or branch offices or representative offices.
22.	Overview of operations per business segment
23.	Analysis of financial performance which includes a comparison between the financial performance of the year concerned and the previous year
24.	Business prospects of the company in connection with industry, the economy in general and the international market and can be accompanied by quantitative supporting data if there are reliable data sources
25.	Marketing aspects of company products and services include: marketing strategies and market share.
26.	Dividend policy and date and amount of dividends
27.	Corporate Governance
28.	Responsibility of directors for financial statements
29.	Audited annual financial statements
30.	Signatures of directors and board members
31.	Information about social and environmental responsibility
32.	Summary of financial statistics for 3-5 years
33.	Information about research and development

Source: Bapepam Lk, 2012 (KEP-431/BL/2012).

Audit lag (ALAG). Audit lag is the number of calendars between the date of the compilation of financial statements and the date of completion of field work (Januarti, 2009). Based on the decision of Bapepam and LK No. 346 / BL / 2011 concerning the Submission of Periodic Financial Statements of Issuers or Public Companies, in Attachment to Regulation Number X.K.2, it is stated that the annual financial statements must be accompanied by an Accountant's report in order to audit financial statements (Bapepam, 2011). The annual financial report must be submitted to Bapepam and LK and announced to the public no later than the end of the third month after the date of the annual financial report. The criteria in this variable are divided into 2 groups of criteria, namely:

- The audit lag is less or equal to 90 days ($ALAG \leq 90$ Days), which indicates that the company can publish its annual financial statements on time;
- An audit lag of more than 90 days ($ALAG > 90$ days), which indicates that the company cannot publish its annual financial statements on time in the sense of delays in publication of the annual report.

The audit lag variable is measured by calculating the number of days from the closing date of the company's book to the date stated in the independent auditor's report.

Previous Year's Audit Opinion (PRIOR). The previous year's audit opinion is an audit opinion received by the auditee in the previous year or 1 year before the research year. The previous year's audit opinion was grouped into 2, namely auditee with going concern audit opinion and non going concern audit opinion. This variable is measured using a dummy variable, if the previous year's audit opinion is a going-concern opinion, it is given code 1 and if the non-going concern audit opinion is given code 0.

Data Analysis Techniques and Research Models. The analytical tool used in this study is logistic regression analysis. In this study can be analyzed by logistic regression because there is no need for the assumption of normality in the independent variable data. Logistic regression analysis was performed using the Statistical Package for Social Science (SPSS) 16.0 for Windows program. The logistic regression model equation used in this study is as follows:

$$\ln \frac{GC}{1-GC} = \alpha + \beta_1 DL + \beta_2 ALAG + \beta_3 PRIOR + \epsilon. \quad (1)$$

Where:

$\ln \frac{GC}{1-GC}$ = probability of receiving a going concern audit opinion;

α = constant;

β = regression coefficient;

DL = Disclosure Level;

ALAG = Audit Lag;

PRIOR = Previous Year Audit Opinion;

ϵ = Residual.

RESULTS AND DISCUSSION

Descriptive Statistics Test Results. Based on Table 2, the audit opinion variable (Y) which consists of going concern audit opinion and non going concern has a minimum value of 0 which is owned by several sample companies including Aneka Kemasindo Utama Tbk. (renamed Alam Karya Unggul Tbk.), Suparma Tbk., Hanjaya Mandala Sampoerna Tbk., Darya Varia Laboratoria Tbk., etc., while the maximum value of 1 is owned by a number of sample companies including Holcim Indonesia Tbk., Mulia Industrindo Tbk., Nusantara Inti Corpora Tbk., Apac Citra Centertex Tbk., Jemblo Cable Company Tbk., And so forth. The minimum value indicates that the sample company receives a non going concern audit opinion, whereas the maximum value indicates that the sample company receives a going concern audit opinion.

Tabel 2 – Descriptive Statistics

Variable	N	Minimum	Maximum	Mean	Std. Deviation
OPINI AUDIT	176	0	1	0,45	0,499
DL	176	0,454545	1,000000	0,85227287	0,096515367
ALAG	176	31	151	73,52	15,635
PRIOR	176	0	1	0,39	0,490

Source: Data Processed (2017).

The average value of 0.45 (45%) indicates that of the 176 sample companies studied, there were 79 sample companies receiving a going concern audit opinion (GC), and 97

sample companies received non going concern (NGC) audit opinions. So it can be said that the majority of sample companies (55% of the total sample companies studied) obtain an audit opinion non going concern (NGC) which indicates that the company has a good financial condition so that it can maintain its business activities (going concern) or can be said to be far from the direction liquidation. The standard deviation value that is greater than the average (mean) indicates the occurrence of variation or a relatively large difference in the audit opinion (Y) studied. This indicates that audit opinion on manufacturing companies in Indonesia in 2013-2016 is 45%.

The variable level of disclosure (disclosure) has a minimum value of 0.454545 owned by Darya Varia Laboratoria Tbk and a maximum value of 1.000000 is owned by Semen Gresik Tbk with an average value of 0.85227287 and a standard deviation value of 0.096515367. A standard deviation value that is smaller than the average value (mean) shows good results, because the standard deviation reflects the variation or difference in data is smaller than the average value (mean). This indicates that the level of disclosure of information for manufacturing companies in Indonesia in 2013-2016 is 85.23%, which means that the average research sample almost presents the disclosure perfectly in accordance with the disclosure item.

The audit lag variable (ALAG) has a minimum value of 31 days owned by Holcim Indonesia Tbk. and a maximum value of 151 days owned by Davomas Abadi Tbk. with an average value (mean) of 73.52 and a standard deviation value of 15.635. A standard deviation value that is smaller than the average value (mean) shows good results, because the standard deviation reflects the variation or difference in data is smaller than the average value (mean). This indicates that the audit lag for manufacturing companies in Indonesia in 2013-2016 is 73.52 days which means that the average company publishes its annual financial report in 74 days. This indicates that the company can publish its annual financial statements on time because audit lag criteria are less or equal to 90 days ($ALAG \leq 90$ Days).

The previous year's audit opinion variable (PRIOR) has a minimum value of 0 and a maximum value of 1 with an average value of 0.39 and a standard deviation value of 0.490. The standard deviation value that is greater than the average (mean) value indicates that there is a relatively large variation or difference in the previous year's audit opinion variable. The average value of 0.39 indicates that the previous year's audit opinion with code 1 was more accepted by the company compared to those in the previous year did not receive a going concern opinion. On average 69 companies that receive going concern opinion, in the previous year also received going concern opinion, and 107 companies that received going concern opinion in the previous year did not receive a going concern opinion.

Determination Coefficient Test Results:

Table 3 – Determination Coefficient

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	222.123	.108	.144

Source: Data Processed (2017).

Based on table 3 above, Nagelkerke R Square value is 14.4%, which means the dependent variable can be explained by an independent variable of 14.4%, while the remaining 85.6% is explained by other variables outside the research model such as opinion shopping, debt defaults, company financial conditions, and other financial ratios such as research conducted by other researchers.

Results of the Regression Model Feasibility Test. The feasibility of the regression model was assessed using Hosmer and Lemeshow's Goodness of Fit Test. Table 4 shows the results of the Hosmer and Lemeshow's Goodness of Fit Test. Based on the table, it can be seen that the significance value is 0.248. The significant value obtained is above 0.05, which means that hypothesis 0 (H_0) cannot be rejected (accepted). This means that the model is able to predict the value of its observations or the model can be accepted because it matches the observational data so that this model can be used for further analysis.

Table 4 – Hosmer and Lemeshow's Goodness of Fit Test

Step	Chi-square	Df	Sig.
1	10,246	8	0,248

Source: Data Processed (2017).

Logistic Regression Model Test Results. Based on the estimated parameter values in the Variables in The Equation, the regression model is formed, namely:

$$\ln \frac{GC}{1 - GC} = \alpha + \beta_1 DL + \beta_2 ALAG + \beta_3 PRIOR + \varepsilon$$

$$\ln \frac{GC}{1 - GC} = -2,447 + 0,379DL + 0,019ALAG + 1,307 PRIOR + \varepsilon$$

Table 5 – Logistic Regression Coefficient Test Results

Variable	Coefficient Regression	Standard Error	t Count	Sig.
Constant	-2,447	1,644	0,087	0,136
Disclosure Level (DL)	0,379	1,699	1,460	0,824
Audit Lag (ALAG)	0,019	0,010	1,019	0,068
Previous year's audit opinion (PRIOR)	1,307	0,329	3,694	0,000

Source: Data Processed (2017).

Based on the results of table 5, the information disclosure level variable (DL) shows a positive regression coefficient of 0.379 with a significance level (p) of 0.824, greater than $\alpha = 5\%$. Because the significance level is greater than $\alpha = 5\%$ then H1 which states that disclosure affects the going concern audit opinion is not successfully supported. This study failed to prove that the level of information disclosure (DL) affects the going concern opinion.

Audit lag variable (ALAG) in table 5 shows a positive regression coefficient of 0.019 with a significance level (p) of 0.068, greater than $\alpha = 5\%$. Because the level of significance is greater than $\alpha = 5\%$ then H2 which states that audit lag affects the going concern audit opinion is not successfully supported. This study failed to prove that audit lag affects the going concern opinion.

The previous year's audit opinion variable (PRIOR) shows a positive regression coefficient of 1.307 with a significance level (p) of 0.000, smaller than $\alpha = 5\%$. Because the significance level is smaller than $\alpha = 5\%$, H3 which states that the previous year's audit opinion has an effect on the going concern audit opinion successfully supported. This study succeeded in proving that the previous year's audit opinion affected the going concern opinion.

Effect of Disclosure Level on Going Concern Audit Opinions. The level of disclosure of information is the provision of information by companies both positive and negative which can affect investment decisions. Users of financial statements require disclosure to better understand the information contained in the financial statements. Based on table 5, it can be concluded that the level of disclosure does not affect the going concern audit opinion because the significance value is 0.824 which is greater than the predetermined significance level of 0.05. The results of this study support the results of previous research conducted by Astuti & Darsono (2012) which revealed that the high level of information disclosure does not cause the company to avoid the acceptance of the going concern audit opinion by the auditor. This can happen because the higher the level of disclosure made by the company, it can create an unfavorable impression and is considered an excessive presentation. In the process of entering the data level of disclosure of information, it is widely known that companies that have an index value close to 1 and have a value of 1 also receive a going concern audit opinion.

Effect of Audit Lag on Going Concern Audit Opinions. Audit lag is the number of calendars between the date of the compilation of financial statements and the date of

completion of field work (Januarti, 2009). According to Kartika (2009), audit delay is the length of the audit completion period measured from the closing date of the financial year to the date of issuance of the audit report. Audit lag is also called audit delay.

Based on table 5, it can be concluded that audit lag does not affect the acceptance of going concern audit opinion because the significance value is 0.068 which is greater than the predetermined significance level of 0.05. The results of this study support the results of previous research conducted by Januarti (2009) which revealed that the length of audit (audit lag) does not cause the company to avoid going concern audit opinion by the auditor.

The longer the audit lag is estimated that the auditee will be problematic and cause the acceptance of going concern audit opinion. However, in this study, in reality the auditor does not provide a going concern audit opinion. This is made possible by auditors who audit auditees for long periods of time who have conducted long-term audit engagements. This is evidenced by Januarti (2009) that during the observation, many auditors made audit engagements with the auditee for 10 years without change. This can cause the auditor to lose its independence. Some other causes are possible because the auditor must conduct many tests, so that managers' conduct negotiations related to business continuity uncertainty or the auditor expects to solve problems faced with the auditee to avoid issuing a going concern audit opinion without doing anything contrary.

Effect of Previous Year's Audit Opinions on Going Concern Audit Opinions. Mutchler (1985) examined the effect of public information availability on the predicted going-concern audit opinion, using discriminant analysis which included the previous year's audit opinion type with the highest predictive accuracy, which was 89.9%. If the auditor issues a going-concern audit opinion in the previous year, it is more likely that the company will receive a going concern audit opinion in the current year (Santosa & Wedari, 2007).

Based on table 5, it can be concluded that the previous year's audit opinion affects the going-concern audit opinion because the significance value is 0,000 which is smaller than the predetermined significance level of 0.05. The results of this study support the results of previous studies conducted by Rahayu (2007); Ramadhany (2004); Zulfikar & Syafruddin (2013) which states that there is a significant positive relationship between the going-concern audit opinion of the previous year and the acceptance of the going concern audit opinion for the current year.

The going concern audit opinion that has been received by the auditee in the previous year will be an important consideration factor for the auditor in issuing a going concern audit opinion in the current year if the auditee's financial condition does not show signs of improvement or absence of a management plan that can be realized to improve the condition of the company. Nogler (1995) found evidence that after the auditor issues a going-concern audit opinion, the company must show a significant financial increase to obtain a net opinion in the following year, if there is no increase in finance, the going-concern audit opinion will be given again. Rahayu (2007); Ramadhany (2004); Zulfikar & Syafruddin (2013) reinforce the evidence that there is a significant positive relationship between the previous year's going concern audit opinion and the going concern audit opinion for the current year.

CONCLUSION, LIMITATION AND SUGGESTIONS

This study aims to analyze the effect of variable levels of disclosure (audit disclosure), length of audit time (audit lag), and previous year's audit opinion on going concern audit opinions on manufacturing companies during 2013-2016. The results of logistic regression research indicate that the variable level of disclosure and audit lag does not affect the going-concern audit opinion, whereas the previous year's audit opinion affects the going-concern audit opinion.

Limitations in this study are (1) researchers only use non-financial variables, namely disclosure, audit lag, and previous year's audit opinion; (2) the research period used is only 4 years, so to see the negative trends in the company is still lacking; (3) the independent variable used in this study only explained 14.4% of the dependent variable while the remaining 85.6% was explained by other variables. Based on the limitations of the results of

the above research, the suggestion that the researcher can give is that the researcher is expected to be able to add independent variables and increase the influence of the independent variables that are greater than this research such as the implementation of management strategies listed on the disclosure of the company's annual report, mechanism of Corporate Governance, opinion shopping and other financial factors. Then, further research is expected to increase the period of research to see the negative trends that exist in the company.

REFERENCES

1. Ardiani, Nurul, et al. (2012). Pengaruh Audit Tenure, Disclosure, Ukuran Kap, Debt Default, Opinion Shopping, Dan Kondisi Keuangan Terhadap Penerimaan Opini Audit Going Concern Pada Perusahaan Real Estate Dan Property Di Bursa Efek Indonesia. *Jurnal Ekonomi*, 20 (4).
2. Ashton, R. H., Willingham, J. J., & Elliott, R. K. (1987). An empirical analysis of audit delay. *Journal of Accounting Research*, 275-292.
3. Astuti, Irtani R. & Darsono. (2012). Pengaruh Faktor Keuangan dan Non Keuangan Terhadap Penerimaan Opini Audit Going Concern. *Diponegoro Journal of Accounting*, 1(2), 1-10.
4. Badan Pengawas Pasar Modal dan Lembaga Keuangan. (2011). Keputusan Nomor: KEP-346/BL/2011 Peraturan Nomor X.K.2 tentang Penyampaian Laporan Keuangan Berkala Emiten atau Perusahaan Publik.
5. Badan Pengawas Pasar Modal dan Lembaga Keuangan. (2008). Keputusan Nomor: KEP-310/BL/2008: Independensi Akuntan yang Memberikan Jasa di Pasar Modal.
6. Badan Pengawas Pasar Modal dan Lembaga Keuangan. (2012). Keputusan Nomor : KEP-431/BL/2012 Peraturan Nomor X.K.6 tentang Penyampaian Laporan Tahunan Emiten atau Perusahaan Publik
7. Elder, R. J., Beasley, M. S., Arens, A. A., & Jusuf, A. A. (2011). *Jasa audit dan assurance*. Salemba Empat, Jakarta.
8. Gaganis, C., & Pasiouras, F. (2007). A multivariate analysis of the determinants of auditors' opinions on Asian banks. *Managerial Auditing Journal*, 22(3), 268-287.
9. Geiger, M. A., Raghunandan, K., & Rama, D. V. (1995). Reporting on going concern before and after SAS No. 59. *The CPA Journal*, 65(8), 52.
10. Ghozali, I. (2011). *Aplikasi Analisis Multivariate dengan Program SPSS*. Semarang: Badan Penerbit Universitas Diponegoro.
11. Hani., Clearly, & Mukhlisin. (2003). Going Concern dan Opini Audit: Suatu Studi Pada Perusahaan Perbankan di BEJ. *Simposium Nasional Akuntansi VI*. 1221 - 1233.
12. Haron, H., Hartadi, B., Ansari, M., & Ismail, I. (2009). Factors influencing auditor's going concern opinion. *Asian Academy of Management Journal*, 14(1), 1-19.
13. Indonesia Stock Exchange. www.idx.co.id
14. Ikatan Akuntan Indonesia. (2009). *Standar Akuntansi Keuangan*. Jakarta: Salemba Empat.
15. Ikatan Akuntan Indonesia. (2011). *Standar Profesional Akuntan Publik*. Jakarta: Salemba Empat.
16. Indriantoro, Nur & Bambang Supomo. (2012). *Metodologi Penelitian Bisnis Untuk Akuntansi dan Manajemen*. Yogyakarta: BPFE.
17. Januarti, Indira. (2009). Analisis Pengaruh Faktor Perusahaan, Kualitas Auditor, Kepemilikan Perusahaan Terhadap Penerimaan Opini Audit Going Concern (Perusahaan Manufaktur Yang Terdaftar di Bursa Efek Indonesia). *Jurnal Universitas Diponegoro*.
18. Januarti, I. & Fitrianasari, E. (2008). Analisis Rasio Keuangan dan Rasio Non Keuangan yang Mempengaruhi Auditor dalam Memberikan Opini Audit Going Concern pada Auditee (Studi Empiris pada Perusahaan Manufaktur yang terdaftar di BEJ tahun 2000-2005). *Jurnal MAKSI* (8)1: 43-58.
19. Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of financial economics*, 3(4), 305-360.

20. Junaidi & Hartono, Jogiyanto. (2010). Faktor Non Keuangan Pada Opini Going Concern. Simposium Nasional Akuntansi XIII.
21. Kartika, A. (2009). Faktor-faktor yang mempengaruhi audit delay di Indonesia (Studi Empiris pada perusahaan-perusahaan LQ 45 yang terdaftar di Bursa Efek Jakarta). *Jurnal Bisnis dan Ekonomi*, 16(01).
22. Kementerian Badan Usaha Milik Negara. (2007). KPK Curigai Indikasi Korupsi di Kasus Saham PGN. Retrieved from <http://www.bumn.go.id/17435/publikasi/berita/kpk-curigai-indikasi-korupsi-di-kasus-saham-pgn/>.
23. Kementerian Keuangan Republik Indonesia. (2008). Peraturan Menteri Keuangan Nomor: 17/PMK.01/2008 tentang jasa akuntan publik.
24. Lennox, C. (2000). Do companies successfully engage in opinion-shopping? Evidence from the UK. *Journal of accounting and economics*, 29(3), 321-337.
25. Lennox, C. S. (2000). Going-concern opinions in failing companies: Auditor dependence and opinion shopping.
26. McKeown, J. C., Mutchler, J. F., & Hopwood, W. (1991). Towards an explanation of auditor failure to modify the audit opinions of bankrupt companies. *Auditing-a Journal Of Practice & Theory*, 10, 1-13.
27. Mutchler, J. F. (1985). A multivariate analysis of the auditor's going-concern opinion decision. *Journal of Accounting research*, 668-682.
28. Nanda, F. R. (2015). Pengaruh Audit Tenure, Disclosure, Ukuran KAP, Debt Default, Opinion Shopping dan Kondisi Keuangan Terhadap Penerimaan Opini Audit Going Concern. *Jurnal Ekonomi KIAM*, 24(1), 41-64.
29. Nogler, G. E. (1995). The resolution of auditor going concern opinions. *Auditing*, 14(2), 54.
30. Praptitorini, M. D. & Januarti, Indira. (2007). Analisis Pengaruh Kualitas Audit, Debt Default dan Opinion Shopping Terhadap Penerimaan Opini Going Concern. Simposium Nasional Akuntansi X 2007.
31. Rahayu, Puji. (2007). Assessing Going Concern Opinion: A Study Based On Financial And Non-Financial Informations. Simposium Nasional Akuntansi X Makassar.
32. Rahman, A., & Siregar, B. (2012). Faktor-faktor yang mempengaruhi kecenderungan penerimaan opini audit going concern pada perusahaan manufaktur yang terdaftar di bursa efek Indonesia. *Jurnal Akuntansi. Sekolah Tinggi Ilmu Ekonomi YKPN Yogyakarta*.
33. Ramadhany, Alexander. (2004). Analisis Faktor-Faktor Yang Mempengaruhi Penerimaan Opini Going Concern Pada Perusahaan Manufaktur Yang Mengalami Financial Distress Di Bursa Efek Jakarta. *Jurnal MAKSI*, 4, 146-160.
34. Santosa, A. F., & Wedari, L. K. (2007). Analisis Faktor-Faktor yang Mempengaruhi Kecenderungan Penerimaan Opini Audit Going Concern. *Jurnal Akuntansi dan Auditing Indonesia*, 11(2), 141-158.
35. Susanto, Y. K. (2009). Faktor-faktor yang mempengaruhi penerimaan opini audit going concern pada perusahaan publik sektor manufaktur. *Jurnal bisnis dan Akuntansi*, 11(3), 156-174.
36. Tanor, L. A. (2009). Pentingnya Pengungkapan (Disclosure) Laporan Keuangan dalam Meminimalisasi Asimetri Informasi. *Jurnal formas*, 2(4), 287-294.
37. Venuti, E. K. (2004). The going-concern assumption revisited: Assessing a company's future viability. *The CPA journal*, 74(5), 40.
38. Zulfikar, M., & Syafruddin, M. (2013). Pengaruh Faktor Non Keuangan Terhadap Penerimaan Opini Audit Going Concern. *Diponegoro Journal of Accounting* 2(3), 1-13.

DOI <https://doi.org/10.18551/rjoas.2018-11.05>

THE EFFECT OF CORPORATE GOVERNANCE AND CREDIT RISK TOWARD LIQUIDITY AND PROFITABILITY ON BANKING LISTED IN INDONESIA STOCK EXCHANGE IN 2012-2016

Nurtrontong Pitoyo, Suhadak, Rahayu Sri Mangesti, Handayani Siti Ragil

Faculty of Administrative Science, University of Brawijaya, Malang, Indonesia

*E-mail: abu.nabilasalsa@gmail.com

ABSTRACT

The purpose of this research is to study and explain the effect of corporate governance and credit risk on liquidity and profitability on banking in Indonesia. This study used Generalized Structured Component Analysis (GSCA) to measure the effect of corporate governance and credit risk towards liquidity and profitability. The result of this research showed that the corporate governance has an effect towards liquidity and profitability, the credit risk has an effect towards liquidity and profitability, and the last, the liquidity has an effect on profitability

KEY WORDS

Corporate governance, credit risk, liquidity, profitability, conventional banking.

The Asian Development Bank identified the origins of the economic crisis in Asia, including Indonesia were the lack of implementation of corporate governance, including banking governance (Zhuang, et.al, 2001). This forced many banks to be liquidated. As a follow up, Bank Indonesia regulated the banking governance in Indonesia by passing the regulation regard Corporate Governance and Risk Management (PBI no.4/8/PBI/2006 dan PBI no.5/8/PBI/2003) by creating a sound and strong banking system. However, does the existence of these regulations are able to realize the achievement of sound and strong banking? This compels further investigation in Indonesian banks for both the conventional and sharia systems. This question initiated researcher to examine the effect of Corporate Governance and Credit Risk toward Liquidity and Profitability on the conventional banking after the enactment of these regulations. Previous researchers have shown different results, such as the research by Florinita (2014), Abogun *et al.* (2014), Inam and Mukhtar (2014), which showed that corporate governance has a positive effect on Liquidity, in contrast other researchs show different results, such as Delis *et al.* (2009) and Rajangan *et al.* (2014). Corporate governance has a positive affect on profitability as was exposed by other researchers such as Aggarwal (2013), Ghaffar (2014), and Todorovic (2013), however other studies show differing results, such as Omoniyi *et al.* (2013), and Rashid *et al.* (2010).

Credit risk affects negatively on liquidity as had been revealed by researchers such as Gautam (2016), Megeid (2013), and Alzoubi (2017), while different research showed by Murage and Muiru (2016) and Vodova (2012). Moreover, credit risk affects negatively on profitability as revealed by researchers such as Poudel (2012), Lata (2014), and Kodithuwakku (2015), while the different results showed by Olausi dan Abiola (2014) and Sutrisno (2016). Liquidity has a positive effect on profitability as was showed by Khan dan Ali (2016), Oluwasegun dan Samuel (2015), Ibrahim (2017), while different research as revealed by Nimer et al. (2015 and Dahiyat et al. (2016).

The debate on the result of previous studies about the effect of corporate governance on liquidity and profitability, the effect of credit risk on liquidity on profitability, and the effect of liquidity on profitability also motivated researcher to reexamine the arguments about the impat of corporate governance and credit risk toward liquidity and profitability.

LITERATURE REVIEW

Cadbury Committe (1992) defines corporate governance as the system by which companies are directed and controlled. OECD (2015, 2004) defines corporate governance as

system which involves a set of relationships between a company's management, its board, its shareholders and other stakeholders. Corporate governance also provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined. Through Corporate Governance, the performance of bank is expected to be achieved. Some researchers showed that Corporate Governance can affect on performance. Todorovic, (2013) stated that companies with higher level of implementation of principles of corporate governance and better practice of corporate governance are more profitable and have better performance. Inam and Mukhtar, (2014) stated that Corporate governance is positively associated with profitability and liquidity. Adi *et al.* (20120) stated that the better corporate governance will improve financial performance.

Credit risk is the exposure faced by banks when a borrower (customer) defaults in honouring debt obligations on due date or at maturity (Kolapo, *et al.* 2012). In line with Kolapo's opinion, Brown and Moles, (2014) stated that credit risk can be defined as the potential that a contractual party will fail to meet its obligations in accordance with the agreed terms. Credit failures in banks is not new or a rare occurrence, they affect their liquidity position as well as cash flows and profits (Adeusi *et al.*, 2013). In line with Adeusi's opinion Megeid (2013) stated that liquidity performance tends to decrease with the increase in credit risk levels. Related with profitability, that any increase in the volume of non-performing loans would reduce profitability of banks (Etale *et al.*, 2016). Even, Alalade *et al.*, 2014 state that bank with high credit risk has high bankruptcy risk.

Based on the explanation above, that credit risk is faced by bank can cause to decrease the bank's liquidity and profitability.

Liquidity is a key issue in the business of banking. Just as the air is fundamental to the existence of man, so also is liquidity to the survival of banks. (Abogun, 2014). Lartey *et al.*, 2013 stated that the liquidity of a commercial bank is its ability to fund all contractual obligations as they fall due. In line with lartey's opinion, Rasul, (2013), stated that Liquidity implies availability of cash that how bank rapidly may convert its assets into cash to meet the need of short term. It is considered as life of the banks. Delis *et al.*, 2009 stated that banks hold liquid assets for two main reasons. First, to satisfy the demand for new loans without having to recall existing loans or realize term investments such as bond holdings and, second, to meet both daily and seasonal swings in deposits so that withdrawals can be met in a timely and orderly fashion. Based on Delis's opinion, liquidity can support profit achievement through satisfying the demand for new loan. Khan and Ali, (2016) stated that there is significant positive relationship between liquidity with profitability of the banks.

Based on the explanation in the above paragraph, the liquidity is important for banks to support the achievement of profit.

Ghaffar (2014) stated that the fundamental feature which should be present in any entity to call it a business is that it should have an intention to earn profit, include banking, so that bank performance is often measured by the level of profits earned by the bank (Sutrisno, 2016). Profitability has essential means for long-term survival of banking business, because the profitability of the business showed good prospects in the future (muthaher, 2014).

The profitability of banking does not occur suddenly but through business processes run by banks, so that profitability was predicted produced from liquidity, credit risk and corporate governance.

Hypothesis:

H₁: Corporate governance (X1) has influence on liquidity (Y1);

H₂: Corporate governance (X1) has influence on profitability (Y2);

H₃: Credit risk (X2) has influence on liquidity (Y1);

H₄: Credit risk (X2) has influence on profitability (Y2);

H₅: Liquidity (Y1) has influence on profitability (Y2).

METHODS OF RESEARCH

This research used explanatory research which describes the influence of the variable exogen to endogen by means of hypothesis testing and was be implemented at the banking

sector in Indonesia with period 2012-2106. The population of this study are the conventional banks only listed in Indonesia Stock Exchange (BEI). Selection process of sample was using purposive sampling method with the number of sample are 30 conventional banks listed on BEI in 2012-2016. The data analysis was performed using Generalized Structured Component Analysis (GSCA). There are four variabels which be used in this research, namely Corporate Governance, Credit Risk, Liquidity, and Profitability.

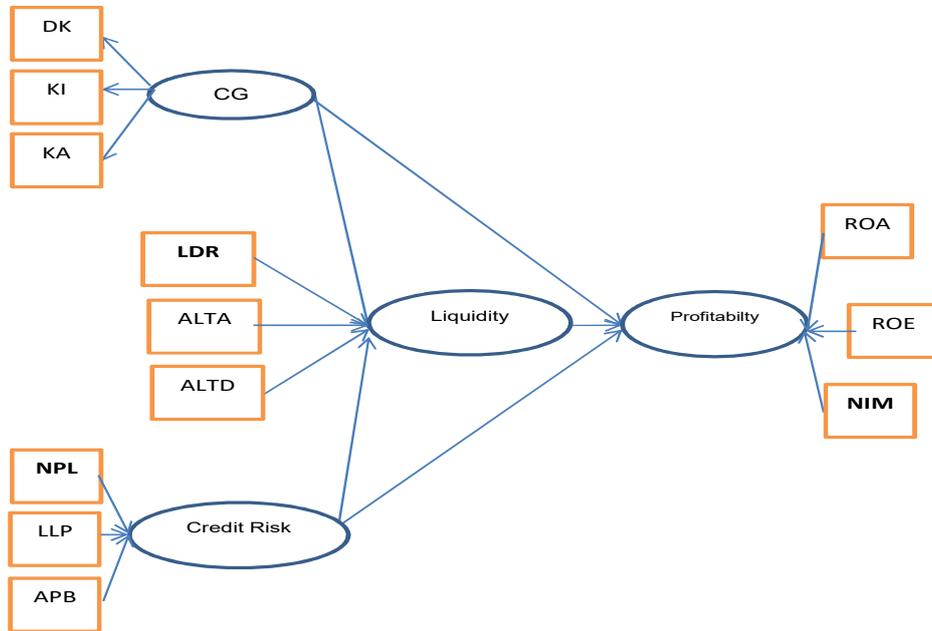


Figure 1 – Research Model

Table 1 – Variable Classification of Research Model

No	Research Variable		Indicator		
	Variable	Notation	Indicator Name		Label
1	Corporate Governance	X1	X1.1	Dewan Komisaris (Board of Commissioners)	DK
			X1.2	Komisaris Independen (Independent Commissioners)	KI
			X1.3	Komite Audit (Audit Committee)	KA
2	Credit Risk	X2	X2.1	Non Performing Loan	NPL
			X2.2	Loan Loss Provision	LLP
			X2.3	Aktiva Produktif Bermasalah (Adversely Classified Asset)	APB
3	Liquidity	Y1	Y1.1	Loan to Deposit Ratio	LDR
			Y1.2	Aset Likuid to Total Aset	ALTA
			Y1.3	Aset Likuid to Total Deposit	ALTD
4	Profitability	Y2	Y2.1	Return on Asset	ROA
			Y2.2	Return on Equity	ROE
			Y2.3	Net Interest Margin	NIM

RESULTS AND DISCUSSION

Based on the output of GSCA software, the results for FIT and AFIT values can be seen in Table 1.

Table 1 – Identification Goodness of FIT

Model Fit		
BUK	FIT	0.345
	AFIT	0.342

The analysis result for BUK provide FIT value 0.345, it means that phenomenon on the model can be described by the variables that are used (34.5%), while the remainder 65.5% is explained by another variable that is not included in the model.

The results of identification of path coefficient of each variable can be seen in Table 2.

Table 2 – Estimation Result and P value of path coefficient

Path Coefficients					
Influence	Estimate	SE	CR	P	Description
X1->Y1	0.626	0.052	12.04*	0.000	Significant
X1->Y2	0.360	0.101	3.57*	0.000	Significant
X2->Y1	0.285	0.054	5.32*	0.000	Significant
X2->Y2	-0.367	0.065	5.66*	0.000	Significant
Y1->Y2	0.132	0.062	2.12*	0.036	Significant

The effect of corporate governance (X1) on liquidity (Y1). GSCA analysis results obtained an estimate value 0,626 and CR value 12,04* and P value 0.000 with significant level of 0.05, so hypothesis 1 which states that corporate governance has influence on liquidity is accepted. The direction of the effect is positive, it means that the more the corporate governance, the better the liquidity.

This outcome confirms previous research such as Florinita (2014), Abogun et al. (2014), Inam and Mukhtar (2014) and also supports the Agency Theory.

The effect of corporate governance (X1) on profitability (Y2). GSCA analysis results obtained an estimate value 0,360 and CR value 3,57* and P value 0.000 with significant level of 0.05, so hypothesis 2 which states that corporate governance has influence of profitability is accepted. The direction of the effect is positive, it means that the more the corporate governance, the better the profitability.

This outcome confirms previous research such as Aggarwal (2013), Ghaffar (2014), and Todorovic (2013) and also supports the Agency Theory.

The effect of credit risk (X2) on liquidity (Y1). GSCA analysis results obtained an estimate value 0,285 and CR value 5,32* and P value 0.000 with significant level of 0.05, so hypothesis 3 which states that credit risk has influence on liquidity is accepted. The direction of the effect is positive. It is an important result in this research that credit risk has a positive effect on liquidity. Credit risk should tend to decrease liquidity. This outcome doesn't confirm previous research such as Gautam (2016), Megeid (2013), and Alzoubi (2017), but confirms the findings of Murage and Muriu (2016).

The effect of credit risk (X2) on profitability (Y2). GSCA analysis results obtained an estimate value -0,367 and CR value 5,66* and P value 0.000 with significant level of 0.05, so hypothesis 4 which states that credit risk has influence on profitability is accepted. The direction of the effect is negative, it means that the more the credit risk, the lower the profitability.

This outcome confirms previous research such as Lata (2014), Kodithuwakku (2015), Etale *et al.*, (2016) and Poudel (2012).

The effect of liquidity (Y1) on profitability (Y2). GSCA analysis results obtained an estimate value 0,132 and CR value 2,12* and P value 0.036 with significant level of 0.05, so hypothesis 5 which states that liquidity has influence on profitability is accepted. The direction of the effect is positive, it means that the more the liquidity, the better the profitability.

This outcome confirms previous research such as Lata (2014), Kodithuwakku (2015), Etale *et al.*, (2016) and Poudel (2012).

CONCLUSION

The results of the study indicate that corporate governance in the conventional banking has an effect on the performance of liquidity and profitability. The corporate governance mechanism can improve supervision of the performance of the Board of Directors in terms of achieving profitability. This result shows that PBI regarding GCG has been able to influence on banking performance.

The results of the study show that credit risk in the conventional banking has an effect on profitability, the better the management of credit risk will affect the increase in profitability. This result shows that PBI regarding risk management has been able to influence on banking performance.

The results of the study show that liquidity has an effect on profitability. Management must be able to optimize its liquidity to support the achievement of profitability.

SUGGESTIONS

Based on result from this research, FIT values for BUK and BUS provide FIT are 0.345. It shows that phenomenon on the model can be described by the variables that are used (34.5%), while the remainder 65.5% is explained by another variable that is not included in the model. It means there is opportunity to add another variable in order to increase possibility for obtaining the higher FIT values.

REFERENCES

1. Abogun, Segun, Temitope Olamide Fagbemi, and Bolanle Rashidat Balogun. (2014). Corporate Governance and Bank Liquidity: Evidence From Selected Banks in Nigeria. *Centrepont Journal (Humanities Edition)*, 16 (2).
2. Adeusi, Stephen Oluwafemi., Niyi Israel Akeke, Obawale Simeon Adebisi, Olawale Oladunjoye. (2014). Risk Management and Financial Performance of Banks in Nigeria" *European Journal Of Business and Management*, 6 (31).
3. Adi, Tri Wahyu Adi, Suhadak, Siti Ragil Handayani, Sri Mangesti Rahayu (2013), The Influence of Corporate Governance and Capital Structure on Risk, Financial Performance and Firm Value: A Study on the Mining Company Listed in Indonesia Stock Exchange in 2009- 2012 *European Journal of Business and Management Vol.5, No.29, 2013*
4. Brown, Ken, and Peter Moles. (2012). *Credit Risk Management*. Edinburgh Business School, Heriot-Watt University. UK.
5. Etale, Lydnon M., Peter Ego Ayunku, and E. Etale. (2016). The Impact of Non-Performing Loans and Bank Performance in Nigeria. *International Journal of Humanities and Social Science Invention*, 5 (4): 1-
6. Ghaffar, Aimen. (2014). Relationship of Islamic Bank's Profitability with Corporate Governance Practices." *European Journal of Business and Management*, 7 (17): 1-10.
7. Inam, Hifza, and Aqeel Mukhtar. (2014). Corporate Governance and Its Impact on Performance of Banking Sector in Pakistan. *International Journal of Academic Research in Applied Science*, 3 (2): 26-36.
8. Khan, Rizwan Ali, and Mutahhar Ali. (2016). Impact of Liquidity on Profitability of Commercial Banks in Pakistan: An Analysis on Banking Sector in Pakistan. *Global Journal of Management and Business Research*.
9. Kolapo, T. Funso, R. Kolade Ayeni, and M. Ojo Oke. (2012). Credit Risk and Commercial Banks Performance in Nigeria: A Panel Model Approach. *Australian Journal of Business and Management Research*, 2 (2): 31.
10. Lartey, Victor Curtis, Samuel Antwi, and Eric Kofi Boadi. (2013). The Relationship Between Liquidity and Profitability of Listed Bank in Ghana. *International Journal of Business and Social Science*, 4 (3).
11. Murage, Caroline Wambui, and Monica Wanjiru Muiru. (2016). The Effect of Credit Risk on Corporate Liquidity of Deposit Taking Microfinance Institutions. *International Journal Of Business And Social Science* 7 (4):

12. Muthaher, Osmad. (2014). Analyze on The Influence of Financing Risk and Capital Adequacy to Profitability Islamic Bank in Indonesia. *Journal Of Contemporary Management Sciences - JCMS Publication*, 4 (1): 55 – 72.
13. Oluwasegun, A. J., Samuel , A. (2015). The Impact of Liquidity on Nigerian Bank Performance: A Dynamic Panel Approach.” *Journal Of African Macroeconomic Review*. 5 (2): 318 - 324.
14. Sutrisno. (2016). The Effects Of Financing And Risks On The Performance Of Islamic Bank: Empirical Evidence From Indonesian Islamic Bank. *Business and Management Research Journal* 6 (3): 29 - 36.
15. Todorovic, Igor. (2013). Impact of Corporate Governance on Performance of Companies. *Montenegrin Journal Of Economics*, 9 (2): 47-
16. Zhuang, Juzhong, David Edwards, and Ma Virginita A. Capulong. (2001). *Corporate Governance and Finance in East Asia: a Study of Indonesia, Republic of Korea, Malaysia, Philippines and Thailand*, Asian Development Bank.

DOI <https://doi.org/10.18551/rjoas.2018-11.06>

FACTORS AFFECTING THE INTEGRITY OF FINANCIAL STATEMENTS IN MANUFACTURING COMPANIES LISTED IN INDONESIA STOCK EXCHANGE

Putri Cintamy Prananti

Department of Accounting, University of Airlangga, Surabaya, Indonesia

E-mail: cintamyp@gmail.com

ABSTRACT

Good financial statements are the financial statements which have integrity of the information contained. Integrity of the financial statements is the extent to which the financial statements present financial information fairly, honestly and unbiased. Integrity of the financial statements is very important for the users, especially external parties that have lower information to make decisions. The phenomenon of financial scandals that still occur in Indonesia indicates a failure to form the integrity of financial statements to meet the information needs of users of financial statements. This research aims obtain empirical evidence about the influence of internal and external companies for integrity of the financial statements of companies listed in Indonesia Stock Exchange (IDX) in 2012-2016. Factors of companies, among others, institutional ownership by financial institutions, independent commissioners, audit committee, audit quality and audit tenure. This study is a quantitative study aimed to examine the effect of independent variables independent variable. The statistical method used was multiple linear regression analysis using SPSS 20. The method use purposive sampling and there are 39 samples that fulfill sample criteria. The results of this research indicate that institutional ownership by financial institutions and independent commissioner does not affect to integrity of the financial statements, while the audit committee a positive effect to integrity of the financial statements. Audit quality and audit tenure obtain results that audit quality does not affect to integrity of the financial statements and audit tenure positive effect to integrity of the financial statements.

KEY WORDS

Integrity, financial statements, institutional ownership, financial institutions, independent commissioners, audit committee, audit quality, audit tenure.

The financial statements also show the results of management's accountability for the use of resources entrusted to them. The report provides information that can be used by internal parties such as commissioners, directors, managers and employees as well as external parties such as investors, creditors and suppliers to make decisions. Quality financial statements must be able to provide relevant and useful information in economic decision making and investment decisions for its users. Accounting information must fulfill three qualitative characteristics of accounting information, namely relevance, objectivity, and reliability. According to Hardiningsih (2010) information is said to be relevance if it can influence the decisions of users of financial statements by strengthening or changing the expectations of users of financial statements. Information is said to be reliable if it can be trusted and causes users of financial statements to depend on that information. While said objective if the information is free from the influence of other things that can affect the independence of information. Financial report integrity can be achieved if the financial statements are able to provide information that has these characteristics.

Financial report integrity is the extent to which financial statements present information that is true, honest, accurate and free from actions or activities undertaken and intentional by the management of the company in manipulating the accounting numbers contained in the report to mislead the users of financial statements in assessing their company (Mayangsari&Wilopo, 2002). External users are in the condition of the greatest uncertainty that requires financial statements as to determine the company's performance (Okpala, 2012). Financial report integrity is very important for users, especially external parties who

have lower information than internal parties, namely management to make decisions. However, in Indonesia there are currently many legal cases involving accounting manipulation. The phenomenon of financial scandal that still occurs shows a form of failure of the integrity of financial statements to meet the information needs of users of financial statements. Based on the results of the examination of Bapepam-LK, found evidence that the presentation of financial statements of PT. Indofarma Tbk. too high in the 2001 financial year. In addition, during 2012 until 2016, Bapepam-LK still handled approximately 70 cases of alleged violations of laws and regulations in the capital market sector.

The company's internal factors that will be used in this study consist of institutional ownership by financial institutions, independent commissioners, and audit committees which are part of corporate governance. Elements of corporate governance are contained in financial statements which are a series of processes, habits, policies, rules and institutions that influence the direction, management, and control of a company or corporation. The external factors of the company are seen from external auditors that are proxied by audit quality and audit tenure. The quality of Public Accountant Office in this study refers to Public Accountant Office name or audit brand name which is reflected in the collaboration with the Foreign Public Accountant Office. In addition to audit quality measured by looking at the Public Accountant Office included in the big four or not, audit tenure can affect the assessment of the integrity of financial statements based on the audit engagement period between the auditor and the client and the audit experience that is owned.

There are many differences to the results of research conducted by previous researchers making research on financial integrity is still important to be re-examined. Departing from the contradiction of the results of research conducted by Arvida (2013), Putra & Muid (2012), Gayatri & Suputra (2013), and Nicolin & Sabeni (2013) who found that institutional ownership with a percentage of institutional shares was divided by the number of outstanding shares affect the integrity of financial statements. However, research by Efrianti (2012) and Wulandari & Budiarta (2014) states that institutional ownership with proxy for the percentage of institutional shares divided by the number of outstanding shares has an influence on the integrity of financial statements. Researchers suspect that differences in the results of research on institutional ownership due to the proxy previously used share ownership of all institutions both financial and non-financial institutions. So the researchers want to propose an institutional ownership proxy by only calculating the percentage of share ownership by financial institutions. This proxy submission is due to institutional ownership by financial institutions having better financial knowledge than other institutions. Financial institutions usually hand over responsibility to the investment division (investment manager) who has the knowledge and information to analyze and manage the company's investment.

THEORY AND HYPOTHESES DEVELOPMENT

Agency Theory. Eisenhardt (1989) says that agency theory is based on several assumptions which are divided into three, namely assumptions about human nature, organizational assumptions, and information assumptions. The assumption of human nature emphasizes that humans have self-interest, have limited rationality and do not like risk aversion. Agency relations are described as a contract under one or more principals that involves agents to carry out several services for them by delegating decision-making authority to agents (Jensen & Meckling, 1976). Agency problems arise because of the principal between the principal and the agent. Each party, both principal and agent, are like to maximize personal interests. The principal has the desire to increase the value of investment in the company and get the maximum profit for his investment. In addition, the agent has a personal interest that is adequate compensation for the performance and obligations that he has done.

Integrity of Financial Statements. Financial statements with integrity according to Mayangsari & Wilopo (2002), can be assessed by using the principle of conservatism and the use of earnings management because the information in the financial statements will be more reliable if the financial statements are conservative and the financial statements are not

overstated so that no party is harmed due to information in the financial statements. Conservatism is a precautionary principle in recognizing assets and profits because of economic and business activities that are surrounded by uncertainty (Wawo, 2013).

Effect of Institutional Ownership on the Integrity of Financial Statements. Financial institutions usually hand over responsibilities to certain divisions that have the knowledge and information in the financial sector to analyze and manage company investments. Institutional investors by financial institutions are assumed to be able to analyze properly so that they can avoid management manipulation in the issuance of financial statements.

H₁: Institutional ownership by financial institutions has a positive effect on the integrity of financial statements.

Effect of the Independent Commissioner on the Integrity of Financial Statements. The existence of an independent commissioner in a company can affect the integrity of financial statements produced by management. If the company has an independent commissioner, the financial statements presented by management tend to be more integrity, because there are bodies that supervise and protect rights outside the company (Fitrawansyah & Syahnifah, 2018).

H₂: Independent commissioners have a positive effect on the integrity of financial statements.

Effect of the Audit Committee on the Integrity of Financial Statements. The audit committee in the company can be one of the efforts in reducing fraud in the presentation of financial statements so that the audit committee is expected to improve supervision of management actions that allow manipulation of financial statements that affect the integrity of financial statements (Priharta, 2017).

H₃: The audit committee has a positive effect on the integrity of the financial statements.

Effect of Audit Quality on the Integrity of Financial Statements. Public Accountant Office big four has a good reputation in the eyes of users of financial statements. So that to maintain that Public Accountant Office big four will try not to betray public trust by assessing the fairness of the financial statements in truth.

H₄: Audit quality has a positive effect on the integrity of financial statements.

Effect of Audit Tenure on Integrity of Financial Statements. Knapp (1991) shows that the length of the relationship between auditee and auditor can disrupt the independence and accuracy of the auditor to carry out auditing duties. In the auditor-client relationship there is a tendency that over time, the auditor gradually adjusts to various management desires and then does not act fully independently.

H₅: Audit Tenure has a negative effect on the integrity of financial statements.

The research framework that underlies this research can be described as follows:

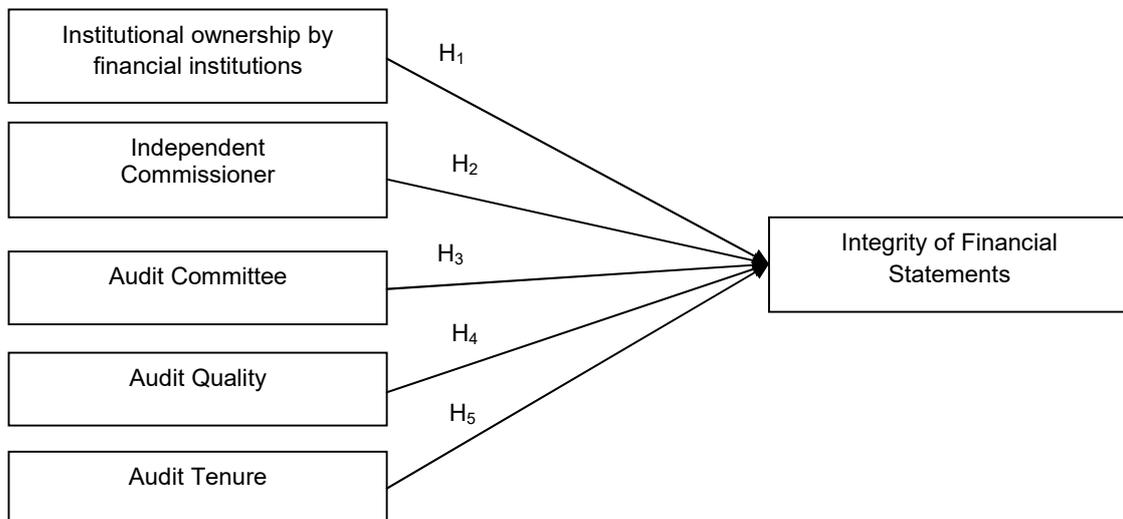


Figure 1 – Conceptual framework

METHODS OF RESEARCH

This study uses a quantitative approach, namely research that focuses on testing hypotheses that explain the relationship between variables. Quantitative research aims to examine the influence of internal factors (institutional ownership, independent commissioners, and audit committee) and external factors (audit quality and audit tenure). The population used in this study is manufacturing companies listed on the Indonesia Stock Exchange (IDX) for 5 consecutive years in 2012-2016. Sampling in this study uses purposive sampling method.

Mayangsari & Wilopo (2002) defines the integrity of financial statements as the extent to which the financial statements presented can show true and honest information. In this study the integrity of financial statements is measured using conservatism. Conservatism is proxied by using accrual (earning / accrual measures), namely the difference between net income and cash flow. Conservatism with accrual measures is calculated by the formula below as used by Givoly and Hayn (2000):

$$\text{CONACCit} = \text{NIit} - \text{CFOit}$$

Where: CONACCit = the level of conservatism of the company i in year t; NIit = Net income before extraordinary items are added with depreciation and amortization; CFOit = Cash flow from activities.

Institutional ownership is the percentage of voting rights held by an institution (Beiner et al., 2003). Institutional ownership by financial institutions can oversee management performance because financial institutions have better financial knowledge than other institutions. In addition, financial institutions are considered as sophisticated investors so that they are not easily deceived by manager's actions.

$$\text{INSTK} = \frac{\text{the proportion of shares held by financial institutions}}{\text{total number of shares outstanding}}$$

Independent commissioners are non-affiliated commissioners with other controlling shareholders, directors and boards of commissioners, and the company itself both in the form of business and family relationships.

$$\text{INSTK} = \frac{\text{member of the independent commissioner}}{\text{total number of board members}}$$

According to Rachmawati and Hanung (2007) the audit committee has a very important and strategic role in terms of maintaining the credibility of the financial report preparation process as well as maintaining the creation of an adequate corporate supervision system and the implementation of good corporate governance. The audit committee is assessed by the number of audit committee scores based on two criteria then divided by the maximum number of scores from these criteria. The criteria used by the researcher for audit committee variables are (1) formal audit committee education with educational background in business or economics, and (2) audit committee experience.

The size of Public Accountant Office in this study is the size of the Public Accountant Office which is divided into two groups, namely Public Accountant Office affiliated with the big four and Public Accountant Office that are not affiliated with the big four (Choi et al., 2010) and measured using a dummy variable where number 1 is given if the auditor who audits the company is the auditor of the big four Public Accountant Office and 0 if it turns out the company is audited by a non big four Public Accountant Office.

Audit tenure is a period of audit engagement from a Public Accountant Office in providing audit services to its clients. Calculation of the number of years of engagement carried out by counting backwards, starting from 2012, then traced to where the client moves to another auditor (Boone et al., 2008)

Data analysis method used in this study using multiple regression analysis with the help of SPSS 20.0 statistical program. This classic assumption test is done so that in this study the results of data analysis that meet the testing requirements are obtained, then the research is carried out by testing the classical assumptions for statistical testing. The multiple regression model used in this study is stated in the following equation:

$$Y = \alpha + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + e$$

Where: Y = Financial Report Integrity (KONS); α = Constants; b_1 - b_5 = Regression Coefficient; X_1 = Institutional Ownership by financial institutions (INSTK); X_2 = Independent Commissioner (IND); X_3 = Audit Committee (KOM); X_4 = Audit Quality (KA); X_5 = Audit Tenure (TENURE); e = Estimated error.

RESULTS AND DISCUSSION

Descriptive Statistics Test Results. Table 4.1 shows the description of the independent variable and the dependent variable of the study statistically by the number of observations (N) is 39. Institutional ownership by financial institutions (INSTK) has an average (mean) of 0.1515 with a standard deviation of 0.25680. The minimum value of institutional ownership by a financial institution is 0.00 or does not have share ownership (0%). The maximum value of INSTK is 0.87 or 87% at PT. Indospring Tbk.

Table 1 – Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
INSTK	39	.00	.87	.1515	.25680
IND	39	.00	.67	.4034	.12857
KOM	39	.33	1.00	.6156	.16771
KA	39	.00	1.00	.3077	.46757
TENURE	39	1.00	6.00	3.0256	1.49538
CONACC	39	-30.05	-.62	-5.2454	6.53361
Valid N (listwise)	39				

Source: Data Processed (2017).

The average value of independent commissioners (IND) in the table above is 0.4034 and the standard deviation is 0.12857. PT. Kertas Basuki Rachmat Indonesia Tbk has a minimum value of 0.00 where in that year the company did not have an independent commissioner. The maximum value of IND is 0.67 at PT. Jembo Cable Company Tbk with 3 commissioners and 2 independent commissioners.

The audit committee (KOM) has a minimum value of 0.33 and a maximum value of 1.00 or 100%. The maximum value of KOM is found in PT. Indomobil Sukses Internasional Tbk where all audit committees have educational background and experience in the economic field. The results of descriptive statistics show the average value of the audit committee is 0.6156 with a standard deviation of 0.16771.

Audit quality (KA) shows an average value of 0.3077 and a standard deviation of 0.46757. The lowest value of audit quality is 0.00 and the highest is 1.00 at PT. Bantoel Internasional Investama Tbk, PT. Unitex Tbk, and PT. Delta Jakarta Tbk.

The average audit tenure (TENURE) value from 2008-2012 was 3.0256 with a standard deviation of 0.46757. The minimum audit tenure value is 1.00 and the maximum value is 6.00 where the maximum value is PT. Pyridam Farma Tbk.

Financial report integrity has the lowest value of -30.05 and the maximum value is -0.62. The lowest value of conservatism measurement was obtained by PT. Alumindo Light Metal Industry Tbk. PT. Indomobil Sukses Internasional Tbk obtained the maximum value with the most conservative financial statements of all research samples.

Determination Coefficient Test Results. Based on the output of the summary model shown in table 2, the adjusted R-Square value is 0.455, this means that 45.5% of the integrity of financial statements can be explained by variations of the five independent

variables. While the remaining 55.5% is explained by other reasons outside the research model.

Table 2 – Determination Coefficient

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.727 ^a	.528	.455	5.12544	1.848

a. Predictors: (Constant), TENURE, KA, IND, KOM, INSTK

b. Dependent Variable: CONACC

Source: Data Processed (2017).

Results of the Regression Model. T test is conducted to determine whether the independent variables in the regression model affect individually the dependent variable. The hypothesis is accepted if the significant value is less than 0.05 and is rejected if the significance value is more than 0.05.

Table 3 – Statistical T Test Results

Coefficients ^a	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	-32.907	5.838		-5.637	.000
INSTK	-5.232	3.337	-.213	-1.568	.127
IND	11.980	6.569	.227	1.824	.078
KOM	17.658	4.715	.503	3.745	.001
KA	1.297	1.627	.106	.797	.431
TENURE	1.546	.557	.356	2.776	.009

a. Dependent Variable: CONACC.

Testing the first hypothesis in table 3 obtained a significance probability of 0.127, this indicates that the probability is more than 0.05. Therefore it can be concluded that institutional ownership by financial institutions does not affect the integrity of financial statements, so the first hypothesis is rejected. Independent commissioners have a significance probability of 0.078, thus showing a significance of more than 0.05. This means that the independent commissioner does not affect the integrity of the financial statements and hypothesis 2 is rejected. The audit committee has a positive influence on the integrity of financial statements. This result is indicated by the probability of audit committee significance of 0.001 and t is 3.745, so hypothesis 3 is accepted.

Probability of significance of audit quality is 0.431. This shows that a significant probability is greater than 0.05, so that audit quality does not affect the integrity of the financial statements hypothesis 4 is rejected.

The results shown in table 3 show that audit tenure has a significance level of less than 0.05, that is 0.009, so that it can be concluded that hypothesis 5 is rejected, audit tenure has a positive effect on the integrity of financial statements.

Effect of Institutional Ownership on the Integrity of Financial Statements. The results of regression analysis indicate that institutional ownership by financial institutions does not affect the integrity of financial statements. The high or low percentage of the company's shareholdings owned by the financial institutions do not have an influence on the integrity of the financial statements. These results are contrary to the research hypothesis proposed by the researchers.

Effect of the Independent Commissioner on the Integrity of Financial Statements. The researcher obtained the results that each company held a meeting with different frequencies even though the percentage of independent commissioners was not different. It showed that independent commissioners still did not perform the function of good corporate governance to the maximum extent possible. In addition, researchers assume that independent

commissioners do not have an influence on the integrity of financial statements due to the role of independent commissioners, namely to balance decision making and protection of minority shareholders so that the supervision carried out is not fully directly related to accounting numbers.

Effect of the Audit Committee on the Integrity of Financial Statements. The test results have proven that the audit committee has a positive effect on the integrity of the financial statements with a significance value that is much smaller than 0.05. The entire sample company has complied with Bapepam regulations which require each company to have a minimum of three audit committees. This shows that the existence of an audit committee that has a formal education background in economics and business as well as experience in various activities, can make the integrity of financial statements higher or conservative.

Effect of Audit Quality on the Integrity of Financial Statements. The results show that audit quality measured by a dummy for big four and non-big four Public Accountant Office does not affect the integrity of financial statements. This explains that in companies that use the services of big four or non-big four Public Accountant Office do not have an influence on the high and low application of accounting conservatism in the financial statements. This shows that even though the Public Accountant Office in the research sample is not a big four Public Accountant Office, the Public Accountant Office is affiliated with Foreign Public Accountant Office so the quality, the credibility and reputation of the Public Accountant Office are also at the international level (world class).

Effect of Audit Tenure on Integrity of Financial Statements. The results of this study prove that the length of relationship between auditee and Public Accountant Office can increase the independence and accuracy of Public Accountant Office to carry out auditing tasks so that the longer the engagement period between Public Accountant Office and the client company, the higher the conservative level of the report. The existence of a positive influence from audit tenure that reflects the independence of Public Accountant Office on the integrity of financial statements shows that the company does not view the longer period of Public Accountant Office engagement as the basis for presenting financial statements to be not conservative. This is due to the consideration that changes from conservative accounting to optimism will be avoided by companies to reduce investor suspicions or other users of financial statements.

CONCLUSION AND SUGGESTIONS

This research prove that institutional ownership by financial institutions and independent commissioner does not affect to integrity of the financial statements, while the audit committee a positive effect to integrity of the financial statements. Audit quality and audit tenure obtain results that audit quality does not affect to integrity of the financial statements and audit tenure positive effect to integrity of the financial statements. The audit committee and audit tenure have an effect on the integrity of the financial statements so that it can be taken into consideration for investors to make investment decisions by looking at the educational background and experience of the audit committee of a company and the period of the company's engagement with the relevant Public Accountant Office. The appointment of audit committees within the company is better for individuals who have educational background and experience in the field of economics or business, thus creating good corporate governance and improving the integrity of the company's financial statements.

Limitations in this research are (1) the research period used is only 5 years, so to see the negative trends in the company is still lacking; (2) the independent variable used in this study only explained 45.5% of the dependent variable while the remaining 55.5% was explained by other variables. Based on the limitations of the results of the above research, the suggestion that the researcher can give is that the researcher is expected to be able to add independent variables and increase the influence of the independent variables that are greater than this research. Then, further research is expected to increase the period of research to see the negative trends that exist in the company.

REFERENCES

1. Ahmed, A. S., Billings, B. K., Morton, R. M., & Stanford-Harris, M. (2002). The role of accounting conservatism in mitigating bondholder-shareholder conflicts over dividend policy and in reducing debt costs. *The Accounting Review*, 77(4), 867-890.
2. Al-dhamari, R., & Ku Ismail, K. N. I. (2015). Cash holdings, political connections, and earnings quality: Some evidence from Malaysia. *International Journal of Managerial Finance*, 11(2), 215-231.
3. Arvida, L. (2013). Pengaruh Mekanisme Corporate Governance, Kualitas Kantor Akuntan Publik dan Audit Tenure Terhadap Integritas Laporan Keuangan (Studi Empiris pada Perusahaan Manufaktur yang terdaftar di BEI).
4. Beiner, S., Drobetz, W., Schmid, F., & Zimmermann, H. (2004). Is board size an independent corporate governance mechanism?. *Kyklos*, 57(3), 327-356.
5. Belkaoui, A. Riahi (2006). *Accounting Theory*.
6. Brigham, E. F., & Houston, J. F. (2006). *Dasar-dasar manajemen keuangan*. Jakarta: Salemba Empat.
7. Brilianti, D. P. (2013). Faktor-faktor yang Mempengaruhi Penerapan Konservatisme Akuntansi Perusahaan. *Accounting Analysis Journal*, 2(3).
8. Boone, Louis E. Kurtz, dan David L. (2008). *Contemporary Business = Pengantar Bisnis Kontemporer*. Buku 1. Jakarta: Salemba Empat.
9. Choi, J. H., Kim, C., Kim, J. B., & Zang, Y. (2010). Audit office size, audit quality, and audit pricing. *Auditing: A Journal of practice & theory*, 29(1), 73-97.
10. Efrianti, D. (2012). Pengaruh Kepemilikan Institusional, Komisaris Independen Dan Komite Audit Terhadap Integritas Informasi Laporan Keuangan. *Jurnal Ilmiah Ranggagading (JIR)*, 12(2), halaman-119.
11. Eisenhardt, K. M. (1989). Agency theory: An assessment and review. *Academy of management review*, 14(1), 57-74.
12. Emirzon, J. (2007). *Prinsip-prinsip good corporate governance: paradigma baru dalam praktik bisnis Indonesia*. Genta Press.
13. Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control. *The journal of law and Economics*, 26(2), 301-325.
14. Fitrawansyah, F., & Syahnifah, M. (2018). Pengaruh Independensi Auditor Terhadap Integritas Laporan Keuangan (Studi Empiris pada Perusahaan Manufaktur yang Terdaftar di Bursa Efek Indonesia Periode 2013-2015)". *Akuntabilitas*, 11(2), 245-256.
15. Francis, J., LaFond, R., Olsson, P., & Schipper, K. (2005). The market pricing of accruals quality. *Journal of accounting and economics*, 39(2), 295-327.
16. Gayatri, I. A. S., & Suputra, I. D. G. D. (2013). Pengaruh Corporate Governance, Ukuran Perusahaan dan Leverage Terhadap Integritas Laporan Keuangan. *E-Jurnal Akuntansi*, 5(2), 345-360.
17. Givoly, D., & Hayn, C. (2000). The changing time-series properties of earnings, cash flows and accruals: Has financial reporting become more conservative?. *Journal of accounting and economics*, 29(3), 287-320.
18. Guna, W. I., & Herawaty, A. (2010). Pengaruh Mekanisme Good Corporate Governance, Independensi Auditor, Kualitas Audit dan Faktor Lainnya Terhadap Manajemen Laba. *Jurnal bisnis dan akuntansi*, 12(1), 53-68
19. Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (1998). *Multivariate data analysis* (Vol. 5, No. 3, pp. 207-219). Upper Saddle River, NJ: Prentice hall.
20. Hardiningsih, P. (2010). Pengaruh independensi, corporate governance, dan kualitas audit terhadap integritas laporan keuangan. *Jurnal Ilmiah Kajian Akuntansi*, 2(1).
21. Irfan, A. (2002). Pelaporan Keuangan dan Asimetri Informasi dalam Hubungan Agensi. *Lintasan Ekonomi*, 19(2), 9-10.
22. Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of financial economics*, 3(4), 305-360.

23. Knapp, M. C. (1991). Factors that audit committee members use as surrogates for audit quality. *Auditing-A Journal Of Practice & Theory*, 10(1), 35-52.
24. Kootanaee, A. J., Seyyedi, J., Nedaei, M., & Kootanaee, M. J. (2013). Accounting conservatism and corporate governance's mechanisms: Evidence from Tehran stock exchange. *International Journal of Economics, Business and Finance*, 1(10), 301-319.
25. Louwers, T. J. (1998). The relation between going-concern opinions and the auditor's loss function. *Journal of Accounting research*, 36(1), 143-156.
26. Mayangsari, S., & Wilopo, W. (2002). Konservatisme Akuntansi, Value Relevancy dan Discretionary Accruals: Implikasi Empiris Model Feltham-Ohlon (1996). *The Indonesian Journal of Accounting Research*, 5(3).
27. Nicolin, O., & Sabeni, A. (2013). Pengaruh struktur corporate governance, audit tenure, dan spesialisasi industri auditor terhadap integritas laporan keuangan. *Diponegoro Journal of Accounting*, 2(3), 1-12.
28. Okpala, K. E. (2012). Audit committee and integrity of financial statements: a preventive mechanism for corporate failure. *Australian journal of business and management research*, 2(8), 32-40.
29. Priharta, A. (2017). Pengaruh Corporate Governance Terhadap Integritas Laporan Keuangan. *JABE (Journal of Applied Business and Economic)*, 3(4), 234-250.
30. Putra, Daniel dan Dul Muid. (2012). Pengaruh Independensi, Mekanisme Corporate Governance, Kualitas Audit, Dan Manajemen Laba Terhadap Integritas Laporan Keuangan. *Diponegoro Journal Of Accounting Volume 1, Nomor 2, Tahun 2012*
31. Rachmawati, A., & Triatmoko, H. (2007). Analisis faktor-faktor yang mempengaruhi kualitas laba dan nilai perusahaan. *Simposium Nasional Akuntansi X*, 1-26.
32. Ridwan, M., & Gunardi, A. (2017). Peran Mekanisme Corporate Governance sebagai Pemoderasi Praktik Earning Management terhadap Nilai Perusahaan. *Trikonomika*, 12(1), 49-60.
33. Wawo, A. (2013). Pengaruh corporate governance dan konsentrasi kepemilikan terhadap daya informasi akuntansi. *AKMEN Jurnal Ilmiah*, 10(2).
34. Wolk, H. I., & Tearney, M. G. (1997). *Accounting theory: A conceptual and institutional approach*. Thomson South-Western.
35. Wulandari, N. P., & Budiarta, I. K. (2014). Pengaruh Struktur Kepemilikan, Komite Audit, Komisaris Independen dan Dewan Direksi Terhadap Integritas Laporan Keuangan. *E-Jurnal Akuntansi*, 7(3), 574-586.

DOI <https://doi.org/10.18551/rjoas.2018-11.07>

THE IMPACT OF THE ENTREPRENEURIAL ECOSYSTEM ON REGIONAL COMPETITIVE ADVANTAGE: A NETWORK THEORY PERSPECTIVE

Purbasari Ratih*, Wijaya Chandra

Faculty of Administration Science, Department of Business Administration,
University of Indonesia, Depok, West Java, Indonesia

Rahayu Ning

Faculty of Administration Science, Department of Fiscal (Tax) Administration,
University of Indonesia, Depok, West Java, Indonesia

*E-mail: ketik.ratih@gmail.com.

ORCID: 0000-0003-0947-7617

ABSTRACT

Regional competitive advantage is pivotal in supporting global competitiveness. An entrepreneurial ecosystem is believed to promote competitive advantage; however, the process of how it helps build regional conditions favorable to a specific economic activity remains unexplained. Some experts have generated models of entrepreneurial ecosystems, but these exemplars do not describe the interaction and associations between the elements within the ecosystem. This study aims to formulate a few basic theoretical statements pertaining to the impact of the entrepreneurial ecosystem on the competitive advantage of a region. This study also aims to create a conceptual model of how entrepreneurial ecosystems may be linked to regional competitive advantage. This paper proposes a theory and presents a review of extant literature to develop the concept of pertinent variables. The network theory perspective is employed as an analytical approach to determine the working of the mechanism within an entrepreneurial ecosystem that subsequently affects a region's competitiveness. The entrepreneurial ecosystem model posited in this paper indicates the unique and differentiated conditions of entrepreneurial ecosystems that grow in particular locations. It is theorized that the entrepreneurial ecosystem will influence regional competitive advantage through mechanisms such as knowledge transfer, productive entrepreneurship, and innovation. The entrepreneurial ecosystem model mooted by this paper can be used to formulate regional economic development policy.

KEY WORDS

Entrepreneurial ecosystem, regional competitive advantage, network, network theory, competitive advantage, entrepreneurship.

Policy makers, NGOs, and business enterprises have discussed competitiveness and entrepreneurship for a long time (Rodriguez, E Soto, 2015). Porter (1990) states that entrepreneurship is "at the heart of national advantage" (Carree MA & Thurik AR, 2010). In addition, entrepreneurship is regarded as the process of recognizing, building, and pursuing opportunities to create value through innovation (Churchill, 1992; Roudy, 2017). It is also viewed as a fundamental component of emerging economies (Acs, Desai, & Hessels, 2008; Wong, Ho, & Autio, 2005; Roudy, 2017) that drives fiscal growth, development, and prosperity (e.g., Acs et al., 2008; Roundy, 2017). Entrepreneurship activities increase labor market fluidity (Evans, 1989; Roudy, 2017), and they are also associated with job creation (Folster, 2000; Roudy, 2017) and the introduction of innovative products and services (Schumpeter, 1934; Roudy, 2017). In all these courses of action, entrepreneurship results from the interaction between individual attributes and the surrounding environment (Stam, E & Bosma, N, 2015; Acs., ZJ, Stam, E., Audretsch, DB, & O'Connor, A, 2017).

The entrepreneurial ecosystem comprises both cooperation and competition among companies, sectors, industries, linking organizations, technologies, consumers, and products

(Anggraeni, Den Hartigh, & Zegveld, 2007; Adao Flores, Elsa Pereira, & Henrique Graca, 2017). This network of relationships involves varied actors and their exchanges as they contribute to the productive performance of a community or territory (Spilling, 1996), providing opportunities for new businesses, illustrating the limits of commercial achievement (Thornton, Ribeiro-Soriano, & Urbano, 2011; Welter, 2011), and facilitating the sustainability of the entrepreneurial environment itself (Cohen, 2006; Adao Flores, Elsa Pereira, & Henrique Graca, 2017).

Furthermore, the entrepreneurial ecosystem is composed of a network arrangement that is useful for the development of policies that support competition (Isenberg, 2010). This approach encompasses the potential to “replace” or even provide the requisite initial conditions for cluster strategies, innovation systems, knowledge-based economies, and national competitiveness policies (Isenberg, D, 2011). Several empirical studies have demonstrated the ways in which superior entrepreneurial ecosystems enable the creation of enterprise quality and the development of competitive values at the regional level (Fritsch, 2013; Tsvetkova, 2015).

The current guidelines for SME and entrepreneurship development emphasize the increase in competition, job creation, and fiscal growth, while public policy highlights creativity, innovation, and economic progress (Storey & Stevenson, 2005; Rodriguez, E Soto, 2015). The entrepreneurial ecosystem approach can be employed to support such efforts because the environment consists of various actor networks, and the collaborative roles played by these actors can bolster competitive advantage both on the global or local scale. Barney (2001) argues that continuous competitive advantage attained by the application of a strategy to achieve unique values will contribute to competitive success in a dynamic industry environment. In the process of the realization of competitive advantage, the emphasis has shifted to small local-based producers acting collaboratively on long-term growth, as well as on the upgrading of sustainable standards. The economic success and viability of an industry or a region is now seen to stem from policymaking that is aimed at developing networks among producers in order to enhance competitiveness and to inculcate local economic activities (Mike Raco, 1999). Thus, competitive advantage can be vested at firm, regional, and even national levels by escalating the direct and indirect capabilities of a company, area, or nation to produce intensive knowledge, improve productivity, increase innovation, and to build corporate entities that integrate local and global value chains (Cooke, P, 2016).

However, scholarly activity on entrepreneurial ecosystems is still lacking in certain respects. The absence of previous theories and research on the impact of the entrepreneurial ecosystem vis-à-vis the superiority of a region's competitiveness is a case in point: no explanation exists on the manner in which an entrepreneurial ecosystem can build a regional competitive edge. Models of the entrepreneurial ecosystem generated by a few experts lack the causal path, do not describe the interaction or associations between the elements of the ecosystem, and are unclear in the analysis of the entrepreneurial ecosystem methodology (Isenberg, 2011; Mason & Brown, 2014; Stam, 2015; Jennen Tina et al., 2016). Moreover, extant scholarship pertaining both to the ecosystem strategy and to regional development primarily spotlights the role of entrepreneurs in creating value (Pitelis, 2012; Stam & Spigel, 2016). Stam and Spiegel (2016) assert that the notion of entrepreneurial ecosystems represents a shift from entrepreneurship policies (quantity) to entrepreneurial economics (quality). Employing the ecosystem approach to improve the quality of entrepreneurship is expected to address the challenges of regional economic development, as well as increase local competitiveness. Thus, it is necessary to devise a concept that delineates the role of entrepreneurship and the manner in which its interaction with other actors within the entrepreneurial ecosystem affects regional competitiveness.

This study aims to formulate a few basic theoretical statements pertaining to the impact of the entrepreneurial ecosystem on the competitive advantage of a region. It also attempts to establish a conceptual model of entrepreneurial ecosystems. The network theory perspective is employed as an analytical approach to determine the working of the mechanism within an entrepreneurial ecosystem that subsequently affects a region's competitiveness. The network theory helps to elucidate the interactions between actors and

factors that occur within the entrepreneurial ecosystem in the context of knowledge transfer, productive entrepreneurship, and innovation.

Entrepreneurial Ecosystem. The concept of an ecosystem originates in biology. The term refers to the natural environment and its elements, including the living organisms (biotic factors) in an area as well as the physical environment (abiotic factors), which function together as a unit. Roy Clapham (1930) originally coined the word to demonstrate the physical and biological components of an environment that formed a unified whole (Nicotra, M, et al., 2017). This notion of ecosystems has been adopted into the perspective of the business environment (Moore, 1993), with specific reference to entrepreneurial networks. To succeed in the current competitive environment, companies must become components of an ecosystem where they jointly develop skills, innovate, and evolve. In this sense, ecosystems are slowly transforming in both business and natural terms from a confused collection to systems with structured elements. Moore (1993) affirms that ecosystems symbolize a response to the need for the promotion of innovation and creativity in the process of determining answers to economic and social issues. The concept of an ecosystem as it is applied to entrepreneurship goes beyond the development of an inter-entrepreneur network structure. The notion encompasses the capacity of a region to create an actor and infrastructure arrangement that supports the construction and development of pioneering business activities (Nicotra, M, et al., 2017).

Acs et al. (2017) explain that the entrepreneurial ecosystem approach contains two dominant directions: strategic scholarship and regional development research. Both branches are conceptually rooted in the notion of the ecological system, and both stem from the interdependence of actors within a particular community to create new values. In the literature that emphasizes strategy, emerging perspectives conceive of the business ecosystem as a form of economic coordination in which a company's ability to create decent value depends on the various groups of actors who produce complementary products or services (Iansiti & Levien, 2004; Adner & Kapoor, 2010; Williamson & De Meyer, 2012; Acs et al., 2017). The business ecosystem refers to a set of partners who must be aligned in a manner that aids the materialization of value bidding in the market (Adner, 2017). Alternatively, research articles accentuating regional development highlight area-specific ecosystems in accordance with the distinctive socioeconomic performance of each territory. This literature comprises concepts such as industrial clusters, provincial industrial zones, and regional innovation systems (Stam & Spigel, 2017; Terjesen et al., 2017; Acs et al., 2017). The cluster approach focuses on the geographical concentrations of interconnected firms, specialized suppliers, service providers, companies in related industries, and related institutions in specific areas that compete against each other but also work together (Porter, 1990). The regional industrial area methodology emphasizes the local industrial workforce (Marshall, 1920) and the interactions between human agencies and corporate entities within a specific socio-territorial community (Becattini, 1990) given the objective of succeeding in international markets. The regional innovation system method refers to networks and institutions that link knowledge centers, such as universities and public research laboratories, with innovative companies within a region (Acs et al., 2017).

Therefore, the entrepreneurial ecosystem may be regarded as a set of interdependent factors that are coordinated in a manner that encourages the emergence of entrepreneurship. These factors are related to the availability of actual and potential knowledge, the presence of investors, human resources, culture, infrastructure, institutions, regulations and fiscal conditions, social and environmental quality, and the ability to generate innovation (Nicotra, M, et al., 2017). Mason and Brown (2014) describe the entrepreneurial ecosystem as a set of relationships among entrepreneurs, entrepreneurial organizations, entrepreneurial institutions, and entities that formally and informally merge to interconnect, mediate, and regulate entrepreneurial performance within the local entrepreneurial environment. The entrepreneurial ecosystem is thus dynamic and systemic, involving many actors, institutions, and processes. Alternately, Erik Stam (2015) defines an entrepreneurial ecosystem as a set of actors combined with related and coordinated factors that together produce productive entrepreneurship.

Isenberg (2011) identifies six elements of the entrepreneurial ecosystem: policy, finance, culture, support, human, and market resources. The key to sustainable entrepreneurship lies in the specific arrangement of elements in the entrepreneurial ecosystem (Isenberg, 2010; 2011). Mack and Mayer (2016) confirm that the concept of entrepreneurial ecosystems is essential to the formation of new companies and for the support of local entrepreneurial activities. Thus, entrepreneurial ecosystems can understandably bolster regional competitive advantages gained through knowledge and innovation by increasing value creation through local commercial activities.

Competitive Advantage. Gaining a global advantage over rivals in particular specializations is the main economic goal of governments across the world (Porter, 1990). This worldwide competitiveness is influenced by many factors; however, innovation in scientific discovery and the creation of new technologies have been commonly recognized as two of its main drivers (Cameron, 1996; Hall & Jones, 1999; Freeman, 2002; Rosenberg, 2004; Wang et al., 2007; Gibson & Naquin, 2011; Krammer & Sorin M. S., 2017). This argument aligns with Porter's viewpoint (1990) that competitiveness is a function of dynamic progression, innovation, and the ability to change and increase value. Porter (1990) further explains that the only meaningful concept of competitiveness pertains to productivity in utilizing a country's resources. A nation's standard of living is determined by its economic productivity as measured by the value of goods and services produced per unit of human resources, capital, and non-human assets. In this sense, competitive advantage is created and maintained through a highly local process (Porter, 1990, p. 19; Kitson et al., 2005; Castilla-Polo et al., 2017).

In today's global economy, the region is increasingly considered an important source of economic and organizational development (Scott, 1995; Cooke, 1997; Amin, 1999; Werker & Athreye, 2004; Malecki, 2007). Cellini and Soci (2002) contend that the idea of regional competitive advantage is encased in macroeconomic (national) or microeconomic (corporate-based) (Kitson et al., 2005; F. Castilla-Polo et al., 2017) contexts. Regional competitiveness refers to conditions that enable companies to compete in their chosen markets, and the value-generation that is contributed to a region by such enterprises (Begg, 1999; Huggins, 2003; Kitson et al., 2005; F. Castilla-Polo et al., 2017). The entrepreneur's role of administering a company that can create value then becomes vital. Regions that can claim institutions and cultures that are conducive to entrepreneurship can enhance their competitive advantages by attracting investments, skills, and talent (Turok, 2004; Robert Huggins & Nick Williams, 2011). Culture shapes the phenomena viewed by individuals as opportunities; therefore, entrepreneurial attention is drawn by the judgment, creativity, and interpretation of business opportunities (Hofstede, 1991; Lavoie, 1991; Verheul et al. 2001; Sautet & Kirzner, 2006; Huggins, Robert and Williams, Nick, 2011). Areas invested with a strong entrepreneurial culture gain a competitive advantage if they are able to develop this pioneering mindset and generate novel concepts from time to time (Audretsch & Fritsch, 2002; Parker, 2004; Mueller, 2006; Huggins, Robert and Williams, Nick, 2011). As a valuable part of entrepreneurial capital, culture refers to the capacity of a society to generate and to build on its entrepreneurial activities to create a positive impact on regional economic performance (Audretsch & Keilbach, 2004; Huggins, Robert and Williams, Nick, 2011).

Network Theory. Networks frequently express a pattern of "co-opetition," reflecting a specific balance between cooperation and competition. Intra-network and internetwork relations are founded on a mix of collaboration and opposition (Carayannis E.G. & Campbell D.F.J., 2011). A network consists of a set of actors or shared nodes in an array of certain types of bonding such as friendship or business (Boggati & Halgin, 2011).

An ecosystem consists of discrete elements that interact with different network configurations. According to Letaifa (2013, p. 88; Letaifa et al., 2016), "ecosystems are an extension of network theory." Network theory may be utilized to describe relationships between organizations that have common or complementary features that facilitate access to resources and information or to define the structures of social interaction among organizations. Jack (2010) considers that network theory has become a key element of entrepreneurial research. The network approach and strategic thinking are suitable means of

exploring the relationships and interdependence of ecosystem actors for value creation (Kapoor & Lee, 2013; Zahra & Nambisan, 2011; 2012).

The relational structure among different stakeholders in the entrepreneurial ecosystem is an aspect that is implicit in the network theory perspective, which explores the levels of connectivity between employers, government agencies, incubators, or members of accelerator organizations and investors or members of higher education organizations that influence social network connectivity (Xaver Neumeier & Susana C Santos, 2017). The basic measures to be employed include (Hanneman, Robert, A., & Mark Riddle, 2005; Fritsch, Michael, Kauffeld-Monz, Martina, 2008; Xaver Neumeier & Susana C. Santos., 2017):

a. Network Size. The size of the network imposes restrictions on the structure of social relationships because of the limited resources and capacity of each actor to build and maintain relationships.

b. Cohesion. The proportion of all the bonds found in the network is computed using concepts such as density, attainability, and connectivity.

c. Centrality. This term refers to the nature of a social structure. The analysis of centrality in a social network can provide knowledge of the role played by an individual component in its environment. The implication of a central actor signifies a performer who has the strong ability to connect other players in the network.

d. Heterogeneity. The diversity of competencies/resources in a network is evidenced by the presence of varied partners within the structure having complementary sets of abilities.

e. Frequency of interaction. The intensity of the participants in an interaction is characterized by how often they interact with other actors within the network.

The Impact of an Entrepreneurial Ecosystem on Competitive Advantage. Entrepreneurial ecosystem scholars contend that regional advancements can be improved through the development of ecosystems; however, this effect may be moderated by entrepreneurial output. Certain conceptions of entrepreneurship reflect the multi-faceted nature of private enterprise (Acs et al., 2014; Wennekers & Thurik, 1999; Szerb, Laszlo, Lafuente, Esteban, Horvath, Krisztina, Pager, & Balazs, 2017). This requirement of versatility stems from the definition of entrepreneurship that emphasizes the utilization of opportunities through the creation of new ventures. In this sense, entrepreneurial activity pertains to the process of recognizing and exploiting valuable business opportunities (Kirzner, 1997; Shane, 2009; Vivarelli, 2013; Szerb, Laszlo, Lafuente, Esteban, Horvath, Krisztina, Pager, & Balazs, 2017). Identifying and exploiting these business opportunities requires entrepreneurial knowledge and ability and is further related to the culture that shapes what the individual regards to be an opportunity. Hence, entrepreneurial attention is constantly related to the judgment, the creativity, and the ability of the entrepreneur to interpret business opportunity (Hofstede, 1991; Lavoie, 1991; Verheul et al., 2001; Sautet & Kirzner, 2006; Huggins, Robert and Williams, Nick, 2011).

This study aims to use the network theory perspective to build a conceptual model of entrepreneurial ecosystems, particularly in relation to the notion of local competitive advantage. It has been proposed that entrepreneurial ecosystems impact the regional competitive advantage through mechanisms such as knowledge transfer, entrepreneurship productivity, and innovation. Figure 1 illustrates the associations established by Huggins (2013) between knowledge, innovation, and competitive advantage in a business enterprise. The figure explains that an enterprise must adapt and update its knowledge to maintain its competitive advantage (Redenmaker, 2005; Caiazza et al., 2015; Liao et al., 2016). This concept is reinforced by the definition that competitiveness is equivalent to a "high road of regional competition," where a specific territory can compete by seeking to achieve high levels of innovation, improvement, and growth (Malecki 2004; Huggins, Robert and Williams, Nick, 2011). Competitive advantage is increasingly concerned with creativity, knowledge, and environmental conditions, rather than purely on the basis of accumulated wealth (Huggins, 2003; 2013), and Drucker (1985) adds that in reality, businesses must consider knowledge to be the only source of commercial competitiveness (Liao et al., 2016).

Transfer of Knowledge between Actors in the Entrepreneurial Ecosystem. In the current business environment, public policy tends to encourage the creation of an entrepreneurial ecosystem because it is believed to be a tool for the promotion of local development. This process requires information transfer because knowledge promotes innovation and economic growth (Adao Flores, Elsa Pereira, & Henrique Graca, 2017). Davenport and Prusak (2000, p. 5) define the term knowledge as a “fluid mix of framed experience, values, contextual information, and expert insights that provide a framework for evaluating and incorporating new experiences and information.” Additionally, Hall and Andriani (2002) describe knowledge as a combination of factors that possesses the potential to influence human thinking and behavior. Nonaka and Takeuchi (1995) introduce the concepts of explicit and tacit knowledge, analyzing the processes of comprehension in terms of interactions and influences between individual/group and organizational knowledge (Adao Flores, Elsa Pereira, & Henrique Graca, 2017).

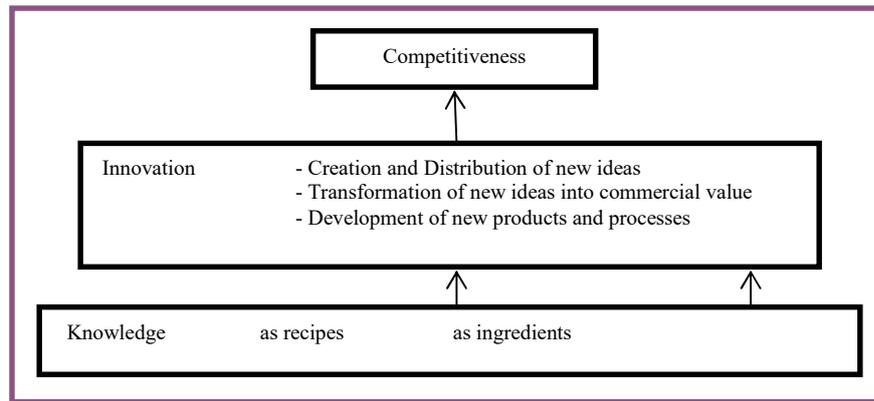


Figure 1 – The relationships between knowledge, innovation, and competitiveness in a business enterprise (Source: Huggins, Robert; 2013)

As a network, an entrepreneurial ecosystem is the product of a long evolutionary process that defines the relationships between industry players. This complex provides companies with resources, alliance partners, and important information regarding market conditions. Competing within an ecosystem requires the exigencies and adjustments of strategic thinking and free enterprise, and this process can create new knowledge to support further entrepreneurial activities and increased tactical thought (Iansiti & Levien, 2004; Nambisan & Sawhney, 2007a; Zahra, SA & Nambisan, S, 2012). Established companies and new ventures often play different, but complementary roles in an ecosystem. These functions require them to exploit certain areas of the ecosystem (Livingston, 2007) and this course further encourages fruitful co-productivity, which in turn enriches various other entrepreneurial activities within the ecosystem. Outputs and outcomes can be collapsed into the concept of productive entrepreneurship (Acs, Z.J., Stam, E., Audretsch, D.B., & O'Connor, A, 2017).

Productive entrepreneurship is characterized by the creation and expansion of enterprises that embody elevated probabilities of success in the advancement of business and community life (Auerswald, Philip E, 2015). The notion of productive entrepreneurship (Baumol, 1990) leads to the definition of an entrepreneurial ecosystem as a set of actors and factors that are interconnected and coordinated in a manner that enables the creation of productive entrepreneurship within a specific area (Stam & Spigel, 2017; Acs, ZJ, Stam, E., Audretsch, DB, & O'Connor, A., 2017).

This argument suggests the following proposition:

P1. Knowledge transfers between actors in the entrepreneurial ecosystem can create productive entrepreneurship.

The Productive Entrepreneur and Innovation Systems. Entrepreneurship is pivotal to the innovation of the knowledge gained through its productivity. Productive entrepreneurship is manifested through entrepreneurial action to transform potential knowledge investments

into other valuable forms (Hitt et al., 2001; Agarwal, Audretsch, & Sarkar, 2007; R. Agarwal, D. Audretsch, & M. Sarkar, 2010). Entrepreneurial action is a key element of the entrepreneurial process (Acs, Autio & Sczerb, 2014) because it commonly produces innovation (Bird, Schjoedt, & Baum, 2012; Diego Gazaro dos Santos, Aurora Carneiro Zen, & Vitor Klein Schmidt, 2017). In addition, both the ecosystem strategy and regional development literatures recognize the functionality of entrepreneurs in creating value (Pitelis, 2012; Stam & Spigel, 2017; Acs, ZJ, Stam, E., Audretsch, DB, & O'Connor, A., 2017).

In value creation (and in the innovation process), entrepreneurship requires tasks to be performed by other actors within ecosystem. The ecosystem must consider the creation of a differentiated value proposition to attract not only the final consumer, but also the necessary partners. These actors may include several groups of stakeholder companies such as component suppliers, rival companies, auxiliaries, buyers, user communities, and universities. The need to manage the interactions and interdependencies among stakeholders thus arises (Uzunca et al., 2016; Acs, ZJ, Stam, E., Audretsch, DB, & O'Connor, A, 2017). Given the need and existence of several actors involved in its processes, (universities, research institutes, business enterprises, government organizations, etc.), innovation should be regarded as an interactive progression, a network, and a collaboration (Zhang, 2013; Dubina, Igor N., et al., 2017).

Carayannis & Campbell (2011) state that an innovation ecosystem that brings the perspective of the natural environment (social ecology) emphasizes the importance of diverse agencies, actors, and organizations, including universities. This innovation ecosystem consists of innovation arrangements that are part of the entrepreneurial ecosystem. According to Isenberg (2011), entrepreneurial ecosystems are potentially "prerequisites" for the successful implementation of the cluster strategy, the innovation system, the knowledge economy, or a national competitiveness policy (Isenberg, 2011).

This line of reasoning suggests the following proposition:

P2. The productive entrepreneur will encourage the ability to produce innovative goods and services. Eventually, the productive entrepreneur will contribute to the formation of the innovation structure within the entrepreneurial ecosystem.

Entrepreneurial Ecosystem and Competitive Advantage. The effects of increasing resource scarcity and competitive rivalry are being experienced by both developed and developing countries. Nearly all the areas of the world are connected in this era of information economy and the challenges of globalization are becoming increasingly real. Competitiveness is the key to success and survival in the given context. The ability to prevail over like rivals is not exhibited merely in the form of landing products in many homes, but also in terms of ameliorating quality. A superior product may be obtained by imaging or creating innovative merchandize that distinguishes itself from the goods manufactured in other regions (Salman, 2010; Nasir & Yuslinaini, 2017). Carayannis and Campbell (2011) confirm that the key determinants of the efficacy and quantity of entrepreneurship and innovation unlock enterprise in the form of private, public, or hybrid goods. Qualified entrepreneurs are able to generate relatively high levels of job creation and productivity growth, and can competently produce and commercialize high-quality innovations (CM van Praag & PH Versloot, 2007; Akbas, MI, Gunaratne, C., Garibay, OO, Garibay, I., & O'Neal, T, 2015).

Pertinently, global value chains are becoming increasingly embedded in local value chains or clusters. Competitive advantages progressively invest in companies, regions, and countries that are adaptable to this new reality. Accordingly, this ability to adjust intensifies their direct and indirect capabilities to intensively produce knowledge, as well as to increase productivity, innovation, and the formation of new companies that accompany the integration of local and global value chains (Cooke, P, 2016). Audretsch and Pena-Legazkue (2012) assert that while innovation drives competitiveness and wealth, a prosperous region must also encompass a large number of local actors who support the transformation of innovative projects into phenomena of economic and social value through business creation. To a certain extent, the scale and quality of entrepreneurial capital depends on the policies designed and implemented by local governments that shape local commercial activities. The

capacity of a region to derive positive benefits from entrepreneurship depends on its ability to transform knowledge into local growth through the creation and dissemination of information within its bounds (Audretsch & Keilbach 2004; Huggins, Robert & Williams, Nick, 2011).

To become capable of prevailing over its rivals and to inculcate a pioneering commercial culture, a nation requires public policy that capitalizes on the pillars of competitiveness and on the formation of an entrepreneurial ecosystem (Rodriguez, E Soto, 2015). Governments and business environments have acknowledged ecosystems as conceptual constructs that help enhance entrepreneurship and innovation (Acs, ZJ, Stam, E., Audretsch, DB, & O'Connor, A, 2017). In addition, most of the results obtained from entrepreneurial ecosystem research are aligned to systemic literature on innovation systems (Borissenko & Boschma, 2016). This affiliation applies particularly to aspects that highlight the relational elements between multi-actor networks within a governing region's entrepreneurship and its knowledge creation (Mason & Brown, 2017). An ecosystem may be defined as a network of interconnected organizations connected to a focal firm or platform. This complex incorporates production and the use of side participants to create and appropriate new value through innovation (Autio & Thomas, 2014; JJ Yun et al., 2017). By contrast, the term innovation system signifies related processes that underlie the development and transfer of knowledge (Freeman, 1995; Lundvall, 2010; Brown Ross & Mason Colin, 2017).

The above rationale evokes the following proposition:

P3. The productive entrepreneur and the innovation structure of an entrepreneurial ecosystem can influence regional competitive advantage.

This proposition is supported by Fritsch (2013), who cites several empirical studies that have demonstrated the manner in which superior entrepreneurial ecosystems enable the creation of enterprise quality and the construction of competitive values at the regional level (Fritsch, 2013; Tsvetkova, 2015).

An Entrepreneurial Ecosystem Model for Developing Local Competitive Advantage based on the Network Theory Perspective. The entrepreneurial ecosystem consists of elements that interact with extreme complexity and independence (Isenberg, D, 2011). The entrepreneurial ecosystem is a dynamic economic model that can be used for the strategic planning process, for the provision of a framework for mutual relationships among participating stakeholders, and for the definition of customer needs. In the future, this exemplar can ensure in the enhancement of value propositions (Inga Erina, Vladimir Shatrevich, & Elina Gaile-Sarkane, 2017).

The main study model of entrepreneurial ecosystems is the one proposed by Isenberg (2011; 2013). It features six interrelated areas that describe the functions of the network components (Diego Alex Gazaro dos Santos, Aurora Carneiro Zen, & Vitor Klein Schmidt, 2017). These domains are outlined below.

1. Policy: The government's role in removing barriers and in providing ideal preconditions for the development of entrepreneurship must be emphasized (Isenberg, 2011; Mason & Brown, 2014). This precondition relates to reforms in the legal framework, the bureaucracy, and the regulations pertaining to the business environment (Cohen, 2006; Isenberg, 2010).

2. Access to finance: Entrepreneurs see this factor as one of three key aspects of the entrepreneurial ecosystem, the other two being markets and human resources (WEF, 2013). Financial resources, whether public or private, should be made available, visible, and accessible to all segments and sectors of the ecosystem (Stam, 2015).

3. Culture: This domain refers to the strengthening of informal institutions for employers and also contributes significantly to the evolution of ecosystems. Successful entrepreneurs are often those who have failed one or more times before flourishing (Isenberg, 2010; 2011).

4. Supporting services: This area is divided into the three principal categories of infrastructure, non-governmental organizations, and supporting professions. Non-governmental organizations include accelerators, hubs, and incubators (Arruda et al., 2015). Supporting professions include services such as assistance in business legalization,

corporate lawyers, accountants, consultants, suppliers, and funding agencies (Isenberg, 2011).

5. Human capital: Companies that want to succeed require skilled workers. In the absence of readily available human capital, entrepreneurship education can provide the necessary support for training people in the requisite skill sets (Isenberg, 2013).

6. Markets: Two elements make a considerable contribution to the capacity of new businesses in accessing the opportunities offered by the market. The first constituent is a large company that provides the necessary resources, space, and commercial opportunities in the form of the first contract or the initial customer. The second ingredient is the network, which represents a major source of information, resources, and access to domestic and international markets (Zahra, Wright, & Abdelgawad, 2014).

How, then, do these components of the entrepreneurial ecosystem interact? The entrepreneurial ecosystem is dynamic; an understanding of it can allow for the exploitation of the potential of the system (and system theory) and demonstrate how the design of the system can be aligned with other available concepts that affect competitive advantage, such as innovation networks and knowledge groups. As an arrangement that is rich in information and knowledge, the entrepreneurial ecosystem contains “connecting assets” that serve to link people, ideas, and resources (Napier & Hansen, 2011). These connecting assets may be clearly defined as extensively networked and experienced business people who command the skills, knowledge, and associations with people and resources to support the new company. By sharing expertise, information, and resources and by connecting start-ups with appropriate individuals and organizations (e.g., customers, service providers, and talents), these connecting assets can help new companies realize their growth potential. The connector may be an entrepreneur, an investor, or a service provider (Mason & Brown, 2014).

This paper utilizes network theory to observe the relationships and interactions of the actors and the factors that form the networks within the entrepreneurial ecosystem. The conceptual framework and entrepreneurial ecosystem model developed by the present research initiative is informed by previous models introduced by Isenberg (2011), Mason and Brown (2014), and Erik Stam (2015). The theoretical grounding for model development rests in the viewpoint that the entrepreneurial ecosystem represents a set of interrelated and informally coordinated actors that interconnect, mediate, and manage entrepreneurial performance within the local entrepreneurial environment. The aim of the proposed model is to assist entrepreneurial success through all stages of the process, to aid the creation of new businesses, and to help the development of existing enterprises. Ultimately, the objective of the posited model is to generate productive entrepreneurship and to improve the competitive advantage of a company, a region, or a nation (Isenberg, 2011; Clarysse et al., 2014, Mason & Brown, 2014; Stam, 2015). The existing actors and the components of the systemic factors are embodied in several variables in the entrepreneurial ecosystem. At least six genres of actors and five systemic factors are involved in the conceptual framework of the entrepreneurial ecosystem model. The variables of competitive advantage comprise four indicators: valuable, rare, difficult to replicate, and organization (Barney, 2001).

The relational structure between different stakeholders in the entrepreneurial ecosystem is implicit in the perspective of network theory. Social network connectivity is influenced by the levels of relatedness between employers, government agencies, incubators, or members of accelerator organizations, and investors or constituents of higher education organizations (Xaver Neumeyer & Susana C. Santos, 2017). The associations are interrelated to achieve the common goal of forming a path that indirectly connects the unconnected or directly bound actors/factors. The bond pattern of the network produces a certain structure, and the actor/factor occupies a position within this structure. Most analyses using network theory assess the characteristics of a network structure and its actor/factor positions (centrality). In doing so, they attempt to relate the centrality or the positioning of individual actors/factors and/or grouped components to the achievements and outputs generated by them (Boggati & Halgin, 2011).

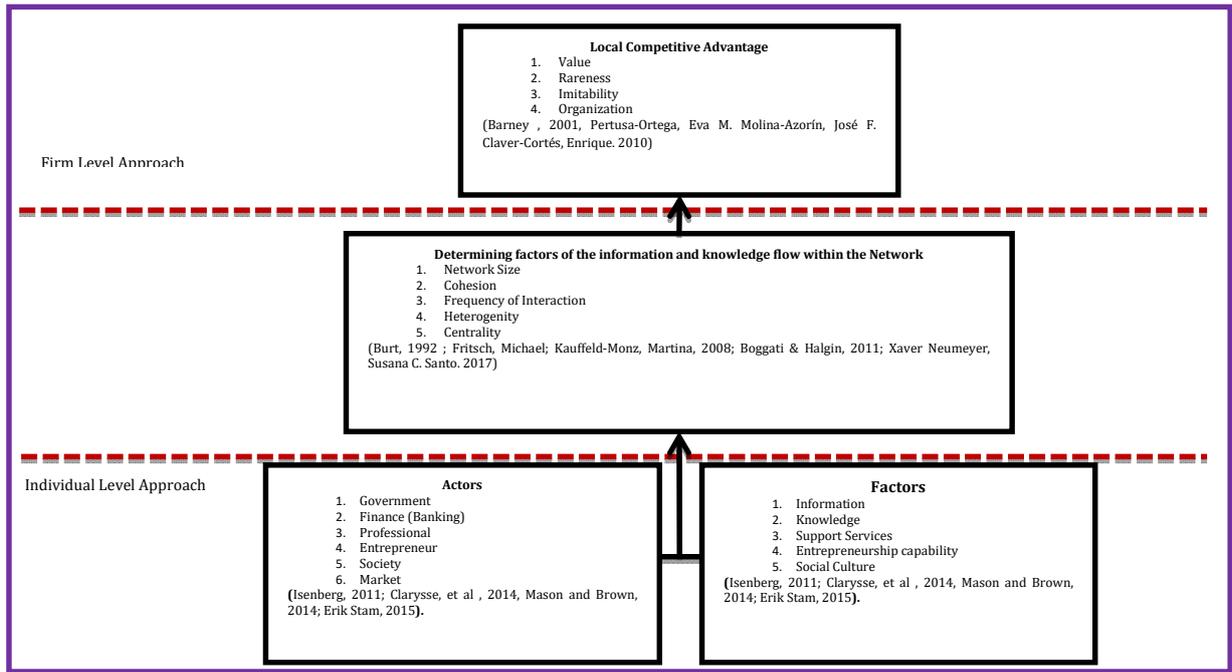


Figure 2 – Conceptual Framework of Entrepreneurship Ecosystems Based on the Network Theory Perspective (Sources: Modified by the author based on Xaver Neumeyer, Susana C. Santo, 2017)

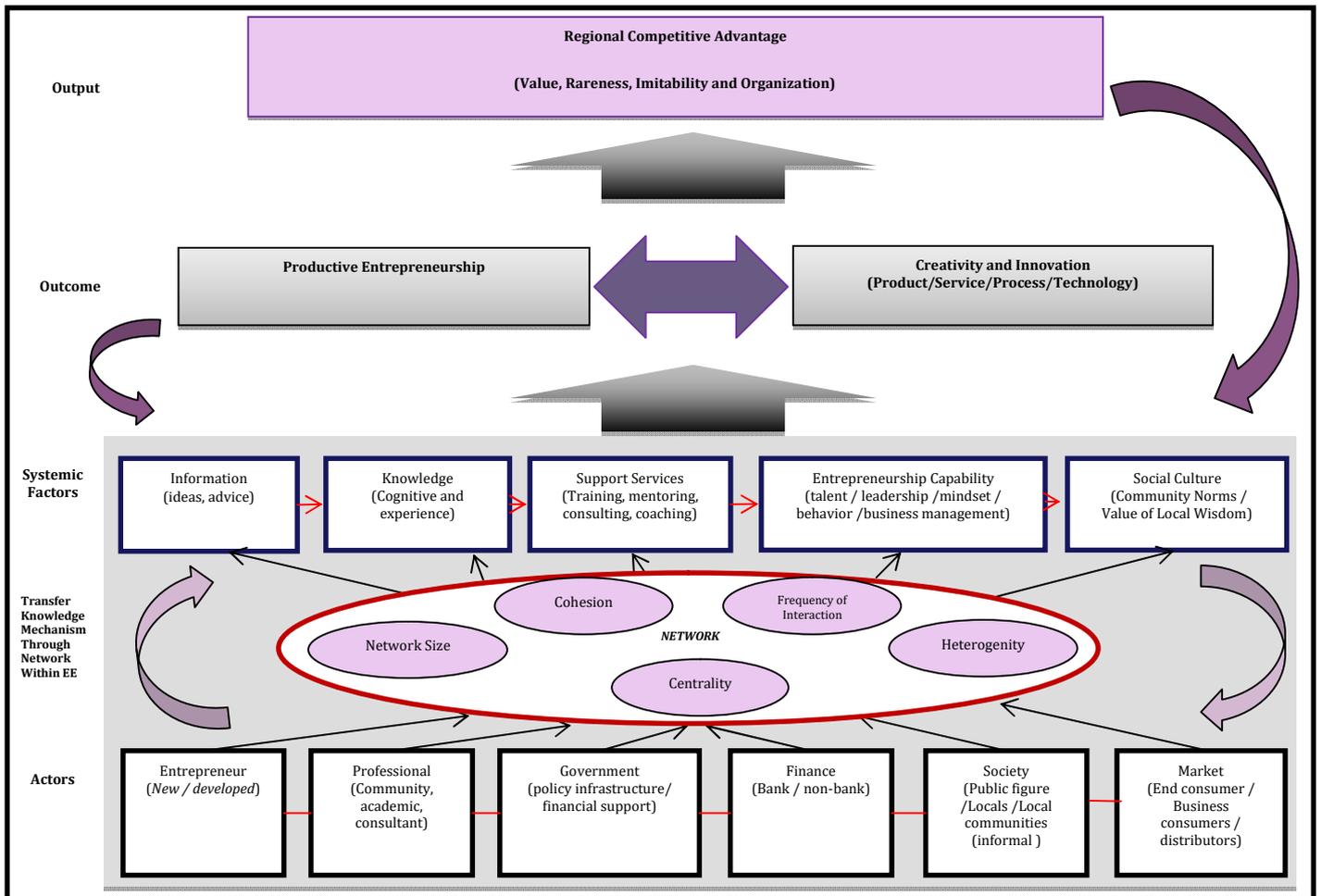


Figure 3 – Entrepreneurial Ecosystems Model (Source: Modified by the author based on Burt, 2001; Isenberg, 2011; Clarysse, et al, 2014.; Mason and Brown, 2014; Erik Stam, 2015)

This article refers to the Flow Model based Structural Holes Theory (Burt, 1992), which was later modified to include the indicators of network size, cohesion, heterogeneity, frequency of interaction, and centrality (Hanneman, Robert, A. & Mark Riddle, 2005; Fritsch, Michael, Kauffeld-Monz, & Martina, 2008; Xaver Neumeyer & Susana C. Santos., 2017).

The conceptual framework and model describing the impact of an entrepreneurial ecosystem on regional competitive advantage is outlined in Figure 2.

Figure 3 illustrates the interactions in the context of knowledge transfer between all the elements that exist within the entrepreneurial ecosystem. On the basis of network theory, this model of the entrepreneurial ecosystem can exhibit the ways in which each component of the entrepreneurial ecosystem interacts through a framework that can show the size of the network, its cohesion, its heterogeneity, the frequency of the interactions, and centrality of all the actors within the entrepreneurial ecosystem. Using this measure, an analysis can be performed on the relationships and functions of each actor or factor, the network density, the frequency of interactions, the strengths or weaknesses of the actors/factors or their relationships, the most dominant actors/factors, the connecting actors/ factors, and the diversity of the actors/factors within the entrepreneurial ecosystem. In the context of knowledge transfer, the results of the analysis of these indicators will assist in the designing of policies and strategies related to the formulation of training programs, business coaching, financial plans, marketing schemes, and other aspects. Such policies and strategies may further be directed at increasing productive entrepreneurship to produce innovative, creative, and value-added new products/services that will positively influence the region's competitive advantage. The associations between discrete domain specializations can be established through the network and these connections are dependent on the interactions of social capital and the knowledge transfers between key stakeholders (Hayter, 2013; Adao Flores, Elsa Pereira, & Henrique Graca, 2017).

According to Chesbrough (2003), a company is geared toward an open innovation paradigm to tackle increasingly complex and uncertain environmental challenges. Hence, valuable ideas can come from within or from outside the organizational boundaries and then proceed to the market from within or from outside the company. In this context, entrepreneurial ecosystems are environments that encourage open innovation (Diego Alex Gazaro dos Santos, Aurora Carneiro Zen, & Vitor Klein Schmidt, 2017), which usually occurs through entrepreneurial action via a set of interacting elements. An entrepreneurial ecosystem is the outcome of the interactions between actors who evolve together and who reinforce each other (Isenberg, 2011; Diego Alex Gazaro dos Santos, Aurora Carneiro Zen, & Vitor Klein Schmidt, 2017). The entrepreneurial ecosystem seeks to create conditions that are ideal for the success and the sustainability of entrepreneurship. When it is well developed, this environment stimulates the growth of new companies and is essential for the formation and the expansion of innovative enterprises (Autio et al., 2014). More, the entrepreneurial ecosystem approach underlines the relationships between entrepreneurs and the environment within which they function (Diego Alex Gazaro dos Santos, Aurora Carneiro Zen, & Vitor Klein Schmidt, 2017).

The vast and rich interfaces and interconnections between stakeholders working together in every emerging regional economy are signifiers of a complex and dynamic economic ecosystem. A successful ecosystem is presaged by the identification of the specific competencies of each stakeholder. The best aptitude sets are those that can create the highest value for other stakeholders (Krueger, N., 2012). Notably, the ability to encourage every actor in the environment is evidenced by the willingness of members to perform actions that can optimize value for the entire entrepreneurial ecosystem. Porter (p. 40, PA Consulting Group, 1990) argues that competitiveness is a function of dynamic progression, innovation, the capability to change, and the ability to increase value. An entrepreneurial ecosystem that can enliven innovation provides additional worth that creates further impact on competitive advantage and that can ultimately lead to the sustainability of the entrepreneurial ecosystem. This phenomenon holds because regional competitive advantage may be gained from knowledge and innovation (Porter, 2001; Carayannis and Campbell, 2011).

Conclusion:

Growing scholarly attention is currently being attracted to the concepts of entrepreneurial ecosystems and competitive advantage. This paper has presented theories and arguments along with the proposition that the entrepreneurial ecosystem can play a critical role in the creation of competitive advantage for a particular region. In addition, the paper posits a conceptual model to demonstrate that entrepreneurial ecosystems can influence regional competitive advantage through mechanisms such as knowledge transfer, productive entrepreneurship, and innovation systems.

Implications for Policy Makers and Practitioners. Gaining an understanding of the unique and differentiated conditions of entrepreneurial ecosystems that grow in particular locations will aid policy makers and practitioners in making effective and efficient policies and strategies. Voelker (2012) argues that regardless of the economic and cultural characteristics of a particular local system, the entrepreneurial ecosystem must be designed in a manner that is aligned with local political and policy situations, incorporating actions in the key identified areas of culture, human resources, markets, finance, and support. Policy makers, entrepreneurial supporters, and business owners should take into account the nature of the locally structured entrepreneurial network. It would thus be effective to communicate with entrepreneurs within the local scope (Motoyama, Y., Konczal, J., Bell-Masterson, & Jand Morelix, A, 2014). One of the objectives of good policy is to redesign the institution in such a way that it can attract entrepreneurial activity to progress in a favorable direction (W. J. Baumol & R. J. Strom, 2007; Akbas, M.I., Gunaratne, C., Garibay, O.O., Garibay, I., and O'Neal, T, 2015). The outcomes of this research initiative will help policy makers and entrepreneurs advance toward constructive paths that will aid in the strengthening of networks, especially with regard to access to capital and markets, which represent the principal problems of entrepreneurship.

Directions for Future Research. Future research opportunities are indicated for empirical research to validate the model of entrepreneurial ecosystem proposed by this investigation. The nonlinear nature of many of the projected effects may pose a challenge to the testing of the posited relationships. The employment of dynamic system methods may be considered for the examination of causal relationships between the discrete elements that comprise the entrepreneurial ecosystem.

Alternatively, qualitative methods can also be utilized to scrutinize the relationships in terms of the characteristics discussed above. Qualitative data are also useful in describing the interactions between the actors and the factors within the entrepreneurial ecosystem. Finally, further research may be conducted to develop the model proposed in this paper, either with regard to the variables or with respect to other industrial sectors.

REFERENCES

1. Acs, Z.J., Estrin, S., Mickiewicz, T., and Szerb, L. (2017), "Institutions, entrepreneurship and growth: the role of national entrepreneurial ecosystems," papers.ssrn.com.
2. Acs, Z.J., Stam, E., Audretsch, D.B., and O'Connor, A. (2017), "The lineages of the entrepreneurial ecosystem approach," *Small Business Economics*, 49(1), 1-10.
3. Flores A., Pereira E., and Graca H., (2017), "Entrepreneurial Ecosystems" In *Knowledge Transfer to and within Tourism*, Emerald Publishing Limited, 8, pp. 97-111.
4. Adner, R., and Kapoor, R. (2010), "Value creation in innovation ecosystems: How the structure of technological interdependence affects firm performance in new technology generations," *Strategic Management Journal*, 31(3), 306-333.
5. Akbas, M.I., Gunaratne, C., Garibay, O.O., Garibay, I., and O'Neal, T. (2015), "Role of Entrepreneurial Support for Networking in Innovation Ecosystems: An Agent Based Approach," *Proceedings of the 2015 Winter Simulation Conference*.
6. Alberti, F.G., Giusti, J.D. and Pizzurno, E. (2016) "The role of institutions for collaboration in setting a competitive cluster ecosystem: the case of the French omega-3 cluster," *Int. J. Competitiveness*, 1(1), 4-32.

7. Arina Romarina, (2016), "Economic Resilience Pada Industri Kreatif Guna Menghadapi Globalisasi Dalam Rangka Ketahanan nasional," *Jurnal Ilmu Sosial*, 15(1), 35-52.
8. Arruda, C., Nogueira, V. S., and Costa, V. (2013), "The Brazilian Entrepreneurial Ecosystem of Startups: an analysis of entrepreneurship determinants in Brazil as seen from the OECD pillars," *Journal of Entrepreneurship and Innovation Management*, 2(3), 17-57
9. Audretsch, D.B. and Pena-Legazkue, I. (2012), "Entrepreneurial activity and regional competitiveness: an introduction to the special issue," *Small Business Economics*, 39(3), 531-537.
10. Auerswald, Philip E. (2015), "Enabling Entrepreneurial Ecosystems: Insights from Ecology to Inform Effective Entrepreneurship Policy."
11. Autio, E., Kenney, M., Mustar, P., Siegel, D. and Wright, M. (2014), "Entrepreneurial innovation: The importance of context," *Res Policy*, 43(7), 1097-1108.
12. Barney, Jay, (2001), "Is the resource based "view" a useful perspective for strategic management research? Yes," *Academy of Management Review*, 26(1), 41-56.
13. Boggati, Stephen P & Halgi, Daniel S. (2011), "on Network Theory," *Organization Science*, 22(5), 1168-1181.
14. Burt, R. S. (1992), "Structural Holes: The Social Structure of Competition," Harvard University Press.
15. Brown and Mason, (2017), "Looking inside the spiky bits: a critical review and conceptualisation of entrepreneurial ecosystems," *Small Business Economics*, 49(1), 11-30.
16. Carayannis E.G., and Campbell D.F.J. (2011), "Open Innovation Diplomacy and a 21st Century Fractal Research, Education and Innovation (FREIE) Ecosystem: Building on the Quadruple and Quintuple Helix Innovation Concepts and the 'Mode 3' Knowledge Production System," *J Knowl Econ*, 2:327-372.
17. Clarysse, Bart, Wright, M., Bruneel, J. and Mahajan, A., (2014), "Creating Value In Ecosystems: Crossing The Chasm Between Knowledge and Business Ecosystems," *Research Policy*, 43(7), 1164-1176.
18. Carree M.A., Thurik A.R. (2010), *The Impact of Entrepreneurship on Economic Growth*. In: Acs Z., Audretsch D. (eds) *Handbook of Entrepreneurship Research*. International Handbook Series on Entrepreneurship, vol 5. Springer, New York, NY.
19. Cooke, P. (2016), "The virtues of variety in regional innovation systems and entrepreneurial ecosystems," *Journal of Open Innovation: Technology, Market, and Complexity*, 2(1):13.
20. Diego Alex Gazaro dos Santos, Aurora Carneiro Zen, and Vitor Klein Schmidt. (2017), "Entrepreneurship Ecosystems and the Stimulus to the Creation of Innovative Business: A Case in the App Industry in Brazil," *Journal of Research in Business, Economics and Management*, 8(5).
21. Dubina, I. N., Gallardo-Vázquez, D., Sánchez-Hernández, M.I. and del Consuelo Ruiz-Rodríguez, M.,. (2017), "The Balanced Development of the Spatial Innovation and Entrepreneurial Ecosystem Based on Principles of the Systems Compromise: A Conceptual Framework," *J Knowl Eco*, 8(2), 438-455.
22. F. Castilla-Polo, Gallardo-Vázquez, D., Sánchez-Hernández, M.I. and del Consuelo Ruiz-Rodríguez, M.,, (2017), "Cooperatives as Responsible and Innovative Entrepreneurial Ecosystems in Smart Territories: The Olive Oil Industry in the South of Spain," *Handbook of Research on Entrepreneurial Development and Innovation Within Smart Cities*, pp. 459-490.
23. Michael. F., Martina K. M. (2008), "The impact of network structure on knowledge transfer: an application of social network analysis in the context of regional innovation networks," *Jena economic research papers*, No. 2008,036
24. Gonzalez-Pernia, J.L., Pena-Legazkue, I., and Vendrell-Herrero, F. (2012), "Innovation, entrepreneurial activity and competitiveness at a sub-national level," *Small Business Economics*, 39(3), 561-574

25. Guerrero, M., Urbano, D., and Fayolle, A. (2014), "Entrepreneurial activity and regional competitiveness: evidence from European entrepreneurial universities," *J Technol Transf.* 41(1), 105-131.
26. Hanneman, Robert A. and Mark Riddle. (2005), "Introduction to social network methods. Riverside," CA: University of California, Riverside, January 2005.
27. Huggins, Robert. (2013), "Regional Competitiveness: Theories and Methodologies for Empirical Analysis," *JCC: The Business and Economics Research Journal*, 6(2), 155-172
28. Iansiti, M., & Levien, R. (2004), "The keystone advantage: what the new dynamics of business ecosystems mean for strategy, innovation, and sustainability." Cambridge: Harvard Business Press.
29. Inga Erina, Vladimir Shatrevich and Elina Gaile-Sarkane, (2017), "Impact of stakeholder groups on development of a regional entrepreneurial ecosystem," *European Planning Studies*, 25(5) 755-771.
30. Isenberg, Daniel. (2010), "The Big Idea: How to Start an Entrepreneurial Revolution," *Harvard Business Review*. 88(6), 40.
31. Isenberg, D. (2011), "The entrepreneurship ecosystem strategy as a new paradigm for economic policy: principles for cultivating entrepreneurship," Institute of International European Affairs, Dublin.
32. Jennen, Tina. (2016), "Stakeholder Engagement in the Creation of an Entrepreneurial Ecosystem," *Journal of Asia Entrepreneurship and Sustainability*, 12(1).
33. JinHyo Joseph Yun, DongKyu Won, KyungBae Park, JeongHo Yang and Xiaofei Zhao, (2017), "Growth of a platform business model as an entrepreneurial ecosystem and its effects on regional development," *European Planning Studies*, 25(5), 805-826.
34. Krammer, Sorin M. S. (2017), "Science, technology, and innovation for economic competitiveness: The role of smart specialization in less-developed countries," *Technological Forecasting and Social Change*, <https://www.sciencedirect.com/science/article/pii/S0040162517308582>
35. Krueger, N. (2012), "Bridging town and gown: best practice? An essay on growing the local entrepreneurial ecosystem," *Int. J. Business and Globalisation*, 9(4), 347-358.
36. Letaifa et al., (2016), "The role of social platforms in transforming service ecosystems," *Journal of Business Research*, 69, 1933-1938
37. Liao, Shu-Hsien et al. (2016), "Developing a Sustainable Competitive Advantage: Absorptive Capacity, Knowledge Transfer and Organizational Learning," Springer Science Business Media New York.
38. Mack, E. and Mayer, H. (2016), "The evolutionary dynamics of entrepreneurial ecosystems," *Urban Studies*, 53(10), 118-2133.
39. Malecki, E.J. (2011), "Connecting local entrepreneurial ecosystems to global innovation networks: open innovation, double networks and knowledge integration," *International Journal Entrepreneurship and Innovation Management*, 14(1), 36-59.
40. Mason and Brown. (2014), "Entrepreneurial ecosystems and growth oriented entrepreneurship," Background paper prepared for the workshop organised by the OECD LEED Programme and the Dutch Ministry of Economic Affairs on Entrepreneurial Ecosystems and Growth Oriented Entrepreneurship, The Hague, Netherlands.
41. Mike Raco. (1999), "Competition, Collaboration and the New Industrial Districts: Examining the Institutional Turn in Local Economic Development," *Urban Studies*, Vol. 36, Nos 5± 6, 951± 968, 1999
42. M. Kabbaj, et al. (2016), "A study of the social entrepreneurship ecosystem: The case of Morocco," *Journal of Developmental Entrepreneurship*. 21(4).
43. M. Teresa Fernandez Fernandez, Francisco J. Blanco Jimenez and Juan R. Cuadrado Roura, (2015), "Business incubation: innovative services in an entrepreneurship ecosystem," *The Service Industries Journal*, 35:14.
44. Moore, J.F. (1993), "Predators and prey: a new ecology of competition," *Harvard Business Review*, 71(3), 75-83
45. Motoyama, Y., et al (2014), "Think Locally, Act Locally: Building a Robust Entrepreneurial Ecosystem," The Ewing Marion Kauffman Foundation.

46. Nasir and Yuslinaini, (2017), "Analisis Pemetaan Industri Kreatif Subsektor Kerajinan Serta Dampak Peningkatan Kesejahteraan Masyarakat di Kabupaten Aceh Besar," *Jurnal Ekonomi and Manajemen Teknologi*, 1(1), 11-17
47. Napier, G and Hansen, C. "(2011) Ecosystems for Young Scaleable Firms," FORA Group.
48. Nicotra M., Romano M., Del Giudice M., Schillaci E. C. (2017), "The causal relation between entrepreneurial ecosystem and productive entrepreneurship: a measurement framework," *J Technol Transf.*
49. Pertusa-Ortega, Eva M. Molina-Azorin, Jose F. Claver-Cortes, Enrique. (2010), "Competitive strategy, structure and firm performance A comparison of the resource-based view and the contingency approach," *Management Decision*, 48(8), 1282-1303
50. Pitelis, C. (2012), "Clusters, entrepreneurial ecosystem co-creation, and appropriability: a conceptual framework," *Industrial and Corporate Change*, 21 (6)1359-1388.
51. Porter, M. (1990), "The Competitive Advantage of Nations," Basingstoke, Macmillan, U.S.A
52. R. Agarwal, D. Audretsch, and M. Sarkar, (2010), "Knowledge Spillovers and Strategic Entrepreneurship," *Strat. Entrepreneurship J.*, 4: 271-283.
53. Rodriguez, E Soto. (2015), "Entrepreneurial ecosystems as a pathway towards competitiveness: The case of puerto rico," *JCS*, 23 (1&2), 2015.
54. Huggins, Robert and Williams, Nick, (2011), "Entrepreneurship and regional competitiveness: The role and progression of policy," *Entrepreneurship & Regional Development: An International Journal*, 23:9-10, 907-932
55. Roundy, Philip T. (2017) "Social entrepreneurship and entrepreneurial ecosystems: Complementary or disjoint phenomena?," *International Journal of Social Economics*, 44(9)1252-1267
56. Stam, E and Bosma, N. (2015), "Growing entrepreneurial economies: Entrepreneurship and regional development," *The Routledge Companion to Entrepreneurship*, Baker, T. & Welter, F. (eds)..
57. Stam. (2015), "Entrepreneurial ecosystems and regional policy: A sympathetic critique," Discussion Paper Series 15-07. Utrecht School of Economics. Tjalling C. Koopmans Research Institute
58. Starr, M.A. (2014), "Qualitative and mixed-methods research in economics: surprising growth, promising future," *Journal of Economic Surveys*, 28(2) 238-264.
59. Szerb, Laszlo., Lafuente, Esteban., Horvath, Krisztina., and Pager, Balazs. (2017), "The relevance of quantity and quality entrepreneurship for regional performance: The moderating role of the entrepreneurial ecosystem," *SSRN Electronic Journal*
60. Terjesen, S., Acs, Z. J., Audretsch, D. B., Hechavarria, D., Stam, E., and White, R. (2017) *Entrepreneurial ecosystems: the search for performance*, University of Tampa, unpublished.
61. T. Sadek, Kleiman R., Loutfy R. (2015), "The role of technology transfer offices in growing new entrepreneurial ecosystems around mid-sized universities," *International Journal Innovation and Regional Development*, 6(1).
62. Tsvetkova, A. (2015), "Innovation, entrepreneurship, and metropolitan economic performance: Empirical test of recent theoretical propositions," *Economic Development Quarterly* 29(4):299-316
63. Voelker, Troy A. (2012), "Entrepreneurial ecosystems: evolutionary paths or differentiated systems?," *Business Studies Journal*, 4(2).
64. Xaver Neumeyer, Susana C. Santo. (2017), "Sustainable business models, venture typologies, and entrepreneurial ecosystems: A social network perspective," *Journal of Cleaner Production*.
65. Yagoub, Entezari. (2015), "Building Knowledge- Based Entrepreneurship Ecosystems: Case of Iran," *Procedia - Social and Behavioral Sciences*, 195, 1206 – 1215
66. Zahra, S.A. and Nambisan, S. (2012), "Entrepreneurship and strategic thinking in business ecosystems," *Business Horizons*, 55(3), 219-229.

DOI <https://doi.org/10.18551/rjoas.2018-11.08>

**MOTIVATION EFFECT OF JOB SATISFACTION AND PERFORMANCE
OF CIVIL SERVANTS IN FINANCE AND ASSET MANAGEMENT AGENCY
OF BALI PROVINCE, INDONESIA**

Prasetya I Gusti Agung Natha*, Riana I Gede

Faculty of Economic and Business, University of Udayana, Bali, Indonesia

*E-mail: gungbim@gmail.com

ABSTRACT

Law No. 5 of 2014 on the State Civil Apparatus, civil servants are every Indonesian citizen who meets the requirements prescribed, appointed by the competent authority and entrusted with the task in a country office, or entrusted with the task of other countries, and are paid based on the legislation in force. But reality is happening in the field, the performance of civil servants is still less visible than the target performance, workload and performance. Target Government Agencies which are still dominated by the value lack of motivation given Stakeholder each institution. The purpose of this study is motivation on Job Satisfaction and Performance of Civil Servants. This study used a sample of 60 civil servants finance and asset management agency Bali Provincial with simple random sampling method. The collected data were analyzed using descriptive analysis and PLS. Motivation studies have found positive and significant effects on job satisfaction. Then Motivation is positive and significant impact on performance. Furthermore, Job Satisfaction is positive and significant impact. The implications of this study indicate that management should ensure that the work as a stimulant and useful is that employees are motivated to work and do it harder and better. McClelland Achievement theory suggests that individuals have a reserve of potential energy, how this energy is released and developed based on the strengths of individuals and situations and opportunities that are available.

KEY WORDS

Motivation, performance, job, satisfaction, civil servants.

Article 1 letter (a) of Law No.43 of 1999 concerning the Principles of Employment, what is meant by Civil Servants is that they or someone who has fulfilled the conditions stipulated in the prevailing laws and regulations, appointed by an authorized official and assigned duties in public office or entrusted with other state duties that are stipulated under a statutory regulation and paid according to applicable regulations. Law No. 5 of 2014 concerning the State Civil Apparatus, explained that civil servants are every Indonesian citizen who has fulfilled the specified requirements, appointed by an authorized official and entrusted with duties in a public office, or assigned other state duties, and paid based on applicable laws and regulations. However, the reality that occurred in the field according to the Minister of Empowerment of the Bureaucratic Reform Apparatus, the performance of civil servants is still very lacking in terms of performance targets, workloads and Performance Goals of Government Agencies that are still dominated by C values (Finance Detik.com, 2017).

Bali Province Regional Financial and Asset Management Agency as Regional Device Organization in the Environment of the Provincial Government of Bali was formed based on the Bali Regional Regulation Number 10 of 2016 concerning the Establishment and Composition of Regional Devices, located in the Central Government Office of the Governor of Bali with a total of 1 66 employees. Civil Servants in the Regional Finance and Asset Management Agency of the Province of Bali have the main duties and functions of supporting the Regional Government in the areas of Finance and Asset of Regions which are regional authorities in accordance with Governor Regulation No. 96 of 2016 concerning Position, Organizational Structure, Duties and Functions, and Governance Work of the Regional Finance and Asset Management Agency of the Province of Bali (2016 Bali Provincial News Number 96).

Governor Regulation No. 114 of 2016 concerning Formation, Organizational Structure and Details of Main Tasks of Technical Implementation Units in the Regional Financial and Asset Management Agency of the Province of Bali, 2 Technical Implementation Units (UPT) were established support carrying out operational activities and / or supporting technical activities. K eg operational iatan Financial Management Board and Asset stipulated in the Budget Implementation List. In 2017 the Regional Finance and Asset Management Agency of the Province of Bali was given a direct expenditure budget of Rp.16,682,256,665. B erdasarkan results of interviews with the Head of Finance and Assets Management Agency Bali Provincial as Authorized Budget and Authorized Goods annually submit financial realization does not always hit the target. The cause of not achieving financial targets is a decrease in performance and job satisfaction of human resources. Budget absorption is one of the benchmarks of government performance in driving the economy and is one of the performance evaluation indicators contained in the Regulation of the Minister of Finance PMK No. 249 / PMK.02 / 2011 article 4 paragraph 2, namely the evaluation of performance aspects of implementation carried out in order to produce performance information regarding the implementation of activities and achievement of outputs.

Governor Regulation No. 96 Year 2016 on Position, Organizational Structure, Duties and Functions, as well as the working procedures of the Financial Management Board and Asset Bali Province, has the task: implementing the supporting function of governmental affairs at the provincial regional authority financial sector, financial and asset sub-management, as well as carrying out deconcentration tasks until the Governor's Secretariat is established as the Central Government Representative and carrying out co-administration duties in accordance with their duties. Preliminary observations were made to determine the performance of the Civil Servants in the Bali Provincial Finance and Asset Management Agency by interviewing officials of the employee work unit (Secretary of the Regional Financial and Asset Management Agency). Assessed in terms of quantity, the performance of employees has not been maximized which is shown not to achieve the target and percentage of work, examined from problems in strategic issues in accordance with the Bali Provincial Financial Management Agency's Strategic Plan for 2017, namely (1) Absorption of Budget SKPD that have not met the target, (2) Not yet optimal publication of Financial documents on the Bali Provincial Government Website, (3) Not yet optimal physical asset security and administration and (4) the lack of optimal duties and human resources and competency is still low so that if the problem is not followed up, it will affect the Reports of the Examination of the Bali Provincial Audit Board in 2017.

In connection with the problems above, the Regional Financial and Asset Management Agency strives to always pay attention to the welfare of its employees, by providing additional benefits to stimulate motivation and employee performance so that job satisfaction will grow. Job satisfaction is a driving factor in improving employee performance which in turn will contribute to improving organizational performance (Gorda, 2004). Job satisfaction and dissatisfaction not only depends on the nature of the work but also depends on the expectations, what can be given work to employees (Al-Hussami, 2008). In Robbins (2015: 170) it is stated that job satisfaction is a general attitude towards one's work as a difference between the amount of rewards received by workers and the amount of rewards believed to be received. Job satisfaction is an important thing that individuals have at work.

Job satisfaction will be obtained if there is a match between workers' expectations and the reality they will get at the workplace. An employee will feel satisfied if the work done with what is obtained in accordance with the wishes of the employee, then will affect the loyalty, creativity and dedication of employees so that it will reduce employee rotation. These conditions will have an effect on improving organizational performance (Ghorda, 2004).

Hayes et al. (2010) in his research suggested that job satisfaction is a complex and multifactorial phenomenon, where collaboration between individual employees, superiors and others is important to increase employee satisfaction with their work. The same study conducted by Pushpakumari (2009) found that there was a significant impact between job satisfaction on employee performance and employees who were satisfied would have a high commitment to work.

Job satisfaction and motivation have a very important role in employee performance, because motivation loss in the workplace affects employee satisfaction and has a negative impact on employee performance. Like the research conducted by Pandjaitan and Kuswanto (2017) entitled *The Effect of Job Satisfaction and Motivation on Employee Performance Delivery XYZ* states that there is a positive and significant correlation between job satisfaction and motivation on employee performance. This states that better job satisfaction and motivation of employees, higher employee performance and on the other hand, if job satisfaction and motivation are at the lowest level, it will cause a decrease in employee performance so that the work will not be completed properly.

Hasibuan, (2014: 203) states that job satisfaction is an employee's attitude towards the task obtained. If an employee has a high level of satisfaction with his job, then the employee will have good work productivity. Research conducted by Yanidrawati (2012) found that the relationship between job satisfaction and positive performance, meaning to improve performance, it is necessary to increase work satisfaction. Good performance is the goal to be achieved by the entire organization, organizational performance cannot be separated from the performance of each employee in carrying out the main tasks and functions and responsibilities. Thus the good and bad of an organization is largely determined by the quality and quality of its employees and the facilities and infrastructure that support it. Suntoro (Tika, 2006) states that performance is the result of work that can be achieved by a person or group of people in an organization in order to achieve organizational goals within a certain period of time. According to Simamora (2004), performance refers to the level of achievement of tasks that form an employee's job. Employee performance is said to be good and more quality if able to complete the responsibilities given in accordance with Prabu's organizational goals, (2006: 67). Supporting factors for good performance are supported by adequate facilities and infrastructure Maillina Jut, (2015).

According to Cong and Nguyen's research (2013) in his research entitled " Effects of Motivation on Employees' Performance at Petrovietnam Nghe An Construction Joint Stock Corporation" namely a Construction Joint Stock Company (PVNC) states that the purpose of each motivation program is to motivate organizational employees to work effectively. However, motivating employees is not what easy things motivate different employees among people. Bonuses and Promotions are the most important motivational factors followed by working conditions. This study revealed that these two factors were not the only factors needed to motivate PVNC employees. Other factors, including interesting work and promotion and growth in the organization, are equally important depending on the type of motivation theory adopted. Finally learning emphasizes avoidance of salary / reward differences among staff with the same rank as a strategy to motivate and retain high-quality staff in PVNC. This research raises a red flag that warns management to be extra careful in their efforts to motivate PVNC staff to be effective.

On the one hand it is said that job satisfaction causes an increase in performance so that workers who feel satisfied will be more productive, on the other hand there can also be job satisfaction caused by performance or work performance so that more productive workers will get satisfaction. Someone who feels satisfaction in work, of course he will try optimally with all the capabilities he has to complete his work assignments so that the work results and work productivity of employees will increase optimally. In line with previous research Funmilola *et al.* (2013) states that the dimensions of job satisfaction (payment, supervision, promotion, work itself and working conditions) have a significant influence on employee performance. Another thing that affects performance is motivation. Motivation is a desire or desire that arises from within the employee that creates enthusiasm and encouragement to work optimally to achieve the goal.

According to According Robbins and Judge (2008: 222), motivation (*motivation*) as a process that explains the intensity, direction and perseverance of an individual to achieve his goals. This matter will to be high spirit for employee for increase its performance, so problem to How increasemotivation employee to be attention serious for organization.

Motivation from within the employee can come from the need for money, appreciation, power, and recognition. Motivation from outside can come from family, co-workers or

superiors. The same thing also expressed by EK and Mukuru (2013) that there is a strong relationship between motivation and employee performance. Motivation for civil servants is one aspect that plays an important role in realizing employee job satisfaction. Employees who feel satisfaction will be able to improve their performance so that it will affect service delivery (Sarwar and Abugre, 2013) to the community in accordance with their respective main tasks and departmental functions. The performance of civil servants can be demonstrated by their efforts in carrying out and producing outputs related to their duties and work in an effort to provide services to the community.

LITERATURE REVIEW

According to Astuti and Dharmadiaksa (2014) performance is the level of success achieved by a person in carrying out tasks that are compared to work standards or criteria that have been determined and agreed upon in advance. Furthermore Robbins (2006: 67), states there is three group influencing variables performance and behavior namely: (1) variables individual, which includes ability and skill, physical, mental, background back, experience and demography, age and type genitals, origin proposal.

Handoko (2005: 193) states that job satisfaction is a pleasant or unpleasant emotional state by which employees view their work. According to Wibowo (2011: 501) job satisfaction as a thought, feeling, and tendency of one's actions which is a person's attitude towards work. Gibson (2000: 106) job satisfaction as an attitude that workers have about their work. This is the result of their perception of work. Motivation in work is very important for the high and low productivity of an organization. Without the motivation of employees to work, the company goals that have been set will not be achieved. Cong and Van (2013) define motivation as a set of factors that cause a person or employee to perform their duties in a special way.

Hypotheses:

H1: Motivation has a positive and significant influence on job satisfaction;

H2: Motivation Has a Positive and Significant Effect on Employee Performance;

H3: Job Satisfaction Has a Positive and Significant Effect on Employee Performance;

H4: Job satisfaction has a role in mediating the influence of motivation on employee performance.

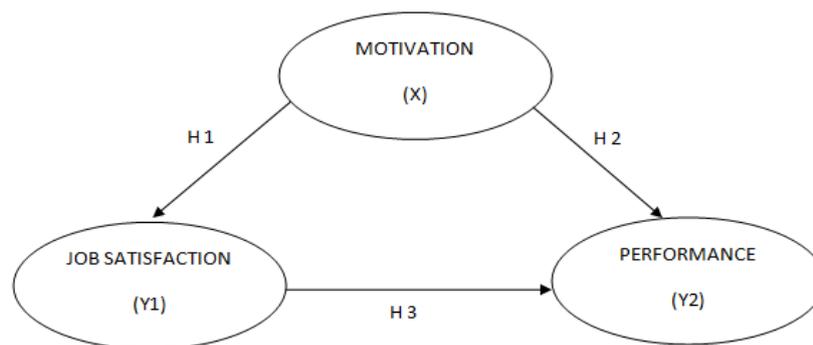


Figure 1 – Research Concept Framework

METHODS OF RESEARCH

Based on the hypothesis that has been compiled, the research variables can be determined. In this study, the independent variable is motivation, the dependent variable is job satisfaction and employee performance. After determining the sample, it will be continued with data collection through observation, interviews and questionnaires to respondents. Based on the data that has been collected, first tested the validity and reliability then data analysis will be carried out. The results of data analysis will be interpreted which will then be drawn a conclusion and suggestion. This study took place in the Regional Financial and

Asset Management Agency of the Province of Bali with the scope of the study limited to motivation, job satisfaction and performance of civil servants in order to know the influence of motivation on job satisfaction and employee performance.

Population and research sample. Population is an area of generalization consisting of objects / subjects that have certain qualities and characteristics set by researchers to be studied and then drawn conclusions (Sugiyono, 2013: 61). The population in this study were all PNS of the Financial and Asset Management Agency of the Province of Bali, amounting to 166 people.

Table 1 – Population of the Bali Provincial Financial and Asset Management Agency

No.	Work unit	Total population	Number of Samples
1	Secretariat	36	10
2	Budget Area	20	10
3	Reporting Accounting Office	46	10
4	Asset Management Sector	24	10
5	UPT. Facilitating Regional Transfer and Financing Evaluation	20	10
6	UPT. Asset Utilization and Security	15	10

Source: Personnel Data in 2017.

According to Sugiyono (2013: 62), the sample is part of the number and characteristics of the population. Because the sample part of the population, what is learned from the sample, the conclusion will be applicable to the population. For that sample taken from the population must be truly representative (represent). The sample was taken by *simple random sampling technique*, because the population was considered to have the same *probability* to be sampled in this study. To determine the number of samples to be examined in this study using the Slovin method with the formula:

$$n = \frac{N}{1 + N (\text{moe})^2}$$

The study population as many as 166 employees, number of samples to be taken are as many as 60 respondents to be analyzed.

Research Instruments. Data collection instruments in this study used a questionnaire. The questionnaire will be distributed to respondents, namely civil servants in the Bali Provincial Financial and Asset Management Agency who have met the criteria to get answers to the questions asked. This research instrument is a questionnaire that is, by preparing a list of questions and formed directly to the respondent. The scale used is a Likert scale using 5 categories of "strongly agree" given a value of 5, "agree" given a value of 4, "neutral" given a value of 3, "disagree" rated 2, "strongly disagree" rated 1.

The research instrument begins by testing the validity and reliability. The respondent's submissiveness in answering questions is an important matter, so as to obtain valid and reliable research results. Valid and reliable instruments are absolute requirements.

Descriptive Analysis. Descriptive analysis serves to describe or give an overview of the object under study through sample data or population as they are, without analyzing and making conclusions that apply to the public (Sugiyono, 2012). Descriptive analysis is intended to determine the characteristics and responses of respondents to question items on the questionnaire. Descriptive analysis also describes the variables in the study such as motivation, job satisfaction and employee performance.

Inferential analysis. To test the hypothesis and produce a suitable model (*fit*), this study uses *Structural Equation Modeling (SEM)* with a *variance based* or *component based* approach with *Partial Least Square (PLS)*. When the structural model to be analyzed meets the recursive model and the latent variable has indicators that are formative, reflexive or mixed, the most appropriate approach to use is *PLS*.

Partial Least Square (PLS), is a more appropriate approach for predictive purposes, especially in conditions where indicators are formative. With the latent variable in the form of a linear combination of indicators, the prediction of the value of the latent variable can be easily obtained, so that the prediction of the latent variables that are affected can also be easily done. In *PLS* the structural model of the relationship between latent variables is called the *inner model*, while the measurement model (reflexive or formative) is called the *outer model*.

RESULTS OF STUDY

Based on the characteristics of respondents based on age shows the dominance of respondents aged 31-40 years by 40 percent. based on age indicates that civil servants in the Regional Finance and Asset Management Agency of the Province of Bali have a majority of employees who are of productive age and have a number of young employees who are equal to the number of employees who are approaching retirement. Based on the latest education owned by the majority of respondents at the Tier I (S1) level, which is as much as 36.7 percent. This information provides an overview of the level of education requirements for civil servants in the Bali Provincial Financial and Asset Management Agency. The characteristics of the respondents based on their working period showed that the most respondents were working periods of 6-10 years. This information indicated that the work experience of employees in the Regional Financial and Asset Management Agency of the Province of Bali had a very long working period.

Evaluate the Goodness of Fit Model. Data processing techniques using PLS-based SEM methods require 2 stages in assessing the Fit Model from a Ghazali (2008) research model. These stages are as follows:

Assess the Outer Model. There are three criteria in using data analysis techniques with Smart PLS to assess the outer model, namely *Convergent Validity*, *Discriminant Validity*, and *Composite Reliability*. Based on the convergent validity criteria the *outer model* value or the correlation between variables with variables has fulfilled the convergent validity because all have a *loading factor* value above 0.50. Based on the third criterion *discriminant validity* variable has a AVE value above 0.50 and all variables have a root value of AVE higher than the correlation coefficient between one variable with other variables so that it can be said that the data has good *discriminant validity*. Based on the *composite reliability* criteria all variables meet *composite reliability* because the value is above the recommended number, which is above 0.70 which has fulfilled the realistic criteria. Based on the overall evaluation results, both *convergent*, *discriminant validity*, *composite reliability*, which has been described above, it can be concluded that *the indicators* as a measure of the latent variable is a *valid and reliable gauge*.

Structural Model Testing (Inner Model). Inner model testing or structural model is done to see the relationship between variables, significance values and R-square of the research model. R-square value of variable 0.289 job satisfaction and 0.382 performance. The higher the R-square value, the greater the ability of the exogenous variable can be explained by the endogenous variables so that the structural better. For the variable job satisfaction has a R square value of 0.289 which means 28.9% variance motivation can be explained by the variable job satisfaction while the rest is explained by other variables outside the research model. The performance variable has a R-square value of 0.382 which means that 38.2% of variance motivation is able to be explained by the performance variable while the rest is explained by other variables outside the research model.

In addition to using R-square, the goodness of fit model is also measured by using Q-Square *predictive relevance* for structural models, measuring how well the observation value is generated by the model and its parameter estimation. Q-square value > 0 indicates the model has predictive relevance; on the contrary if the Q-Square value ≤ 0 shows the model lacks predictive relevance. Q-Square calculation is done by the formula:

$$Q^2 = 1 - \{ (1 - R1^2) (1 - R2^2) \}$$

Where: $Rx1^2$, $R2^2$ is the R-square endogenous variable.

Q^2 magnitude has a value with a range of $0 < Q^2 < 1$, where getting closer to 1 means the model is getting better. The magnitude of Q^2 is equivalent to the coefficient of total determination in path analysis, 57 percent relate the performance variables explained by motivation and job satisfaction variables, while the remaining 43 percent are explained by variables that are not included in the model.

Hypothesis testing:

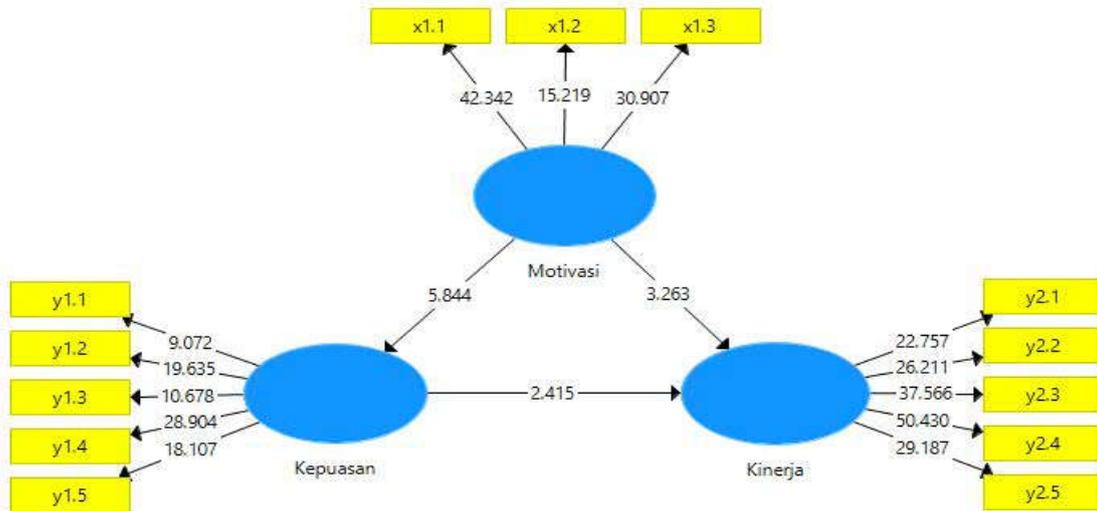


Figure 2 – PLS Output Results

Bootstrapping. The results of testing hypotheses with the *Partial Least Square* structural equation model are shown in Figure 2 below.

The significance of the estimated parameters provides very useful information about the relationship between research variables. The basis used in testing hypotheses is the value contained in the *output path coefficient*. Table 5.7 provides estimated outputs for model testing structural.

Table 2 – Path Coefficient

Variable	Original Sample	Sample mean	Standard Deviationx	T statistics	Conclusion
Motivation → Satisfaction	0.537	0,546	0.092	5,844	Be accepted
Motivation → Performance	0.406	0.410	0.124	3,263	Be accepted
Satisfaction → Performance	0.297	0.295	0.123	2,415	Be accepted

Source: processed data, 2018.

DISCUSSION OF RESULTS

Based on the results of PLS analysis, this section will discuss the results of the calculations that have been made. This study aims to determine the Effect of Motivation on Job Satisfaction and Performance of Civil Servants (PNS) in the Bali Provincial Financial and Asset Management Agency. Testing is shown through the existing hypothesis so that it can find out how the influence of each variable on the other variable.

The Effect of Motivation on Job Satisfaction. The results of data analysis show that motivation has a positive and significant effect on job satisfaction. Motivation with the need theory (McClelland) is the *Need of Achievement*, *Need of Power* and *Need of Affiliation* have a positive and significant effect on job satisfaction. This shows the hypothesis is accepted. The way of motivation applied by the Bali Provincial Financial and Asset Management Agency is seen from the direct benefits perceived by civil servants having a positive and significant impact on job satisfaction. This means that the better and increased motivation given to employees, the employee job satisfaction will increase.

This research is in line with research conducted by Rizwan Saleem (2010), Ahmed *et al.* (2010), Job and Rafif (2011), Saeed *et al.* (2013), Collie *et al.* (2012). Based on this research can be explained that work motivation is really needed by an employee to be able to achieve a high job satisfaction even though according to its nature job satisfaction itself is very relative or different from one person to another.

The Effect of Motivation on Performance. The results of data analysis show that motivation has a positive and significant effect on performance. Motivation with the need theory (McClelland) is Need of Achievement (award), Need of Power(work authority) and Need of Affiliation (friendly) positive and significant effect on performance. This gives an indication that the hypothesis is accepted. The method of motivation carried out by the Regional Financial and Asset Management Agency as seen from the direct benefits felt by employees has a positive and significant impact on performance, the better the motivation given by officials to employees, the better the performance produced by employees.

The results of this study are in line with the research conducted, among others, Musriha (2011), Anyim *et al.* (2012), Gungor (2011), Muogbo (2013), EK and Mukuru (2013), Abdulsalam and Mawoli (2012), Pamesti *et al.* (2014), Rizwan *et al.* (2014), Zameer *et al.* (2014) prove that motivation has a positive and significant effect on employee performance.

Based on this research it can be explained that work motivation is really needed by an employee to achieve high performance output and achieve one predicate that has been determined by the institution.

Effect of Job Satisfaction on Performance. The results of data analysis showed that job satisfaction measured through five indicators of payment, promotion, supervision, work itself and working conditions had a positive and significant effect on performance. This implies that the increased job satisfaction of an employee will also increase the performance of an employee.

This research is in line with research conducted by several previous researchers including: Pushpakumari (2008), Prasanga and Aruna (2012), Perera *et al.* (2014), Dizgah *et al.* (2012), Suwedana (2013) and Funmilola *et al.* (2013), Gibson *et al.* (2000) which states that job satisfaction has a positive effect on employee performance.

Based on this research it can be explained that job satisfaction is really needed by an employee in improving the performance of each individual even though according to their nature job satisfaction itself is very *relative* or different from one person to another.

Job satisfaction mediates the influence of motivation on performance. The results of testing hypotheses prove that motivation has a significant effect on job satisfaction, motivation has a significant effect on performance, and job satisfaction has a significant effect on performance, it can be explained that job satisfaction as *partial mediation* between the influence of motivation on performance. This shows that motivation and performance is an important factor in determining job satisfaction in an organization. Through collaborative efforts to increase job satisfaction with motivation and performance based on moral values and justice, the tendency to decrease motivation and performance can be minimized.

This result is a new finding and is a development of several results of previous research studies that examine the direct effect of each variable. The research conducted by Nitasari (2012) found that job satisfaction has been shown to have a mediating role in the relationship between motivation and performance.

Research Implications. The previous literature review implies that management must focus on ensuring adequate *hygiene* factors to avoid employee dissatisfaction. Management must ensure that work is stimulating and beneficial so employees are motivated to work and do it harder and better. McClelland's *Achievement* Theory suggests that individuals have potential energy reserves, how this energy is released and developed depends on the strength or drive of the individual's motivation and the situation and opportunities available. This motivation model is found in various organizational lines, both staff and managers. Some employees have characters that are a combination of these motivational models.

This study provides guidelines for agencies in managing employee performance. Job satisfaction of an employee is influenced by demographic factors, such as age, gender,

educational background, and experience which will also affect a person's performance, because each employee within the government agency has different needs and interests.

CONCLUSION AND SUGESTIONS

Motivation has a positive and significant effect on job satisfaction and performance. Job satisfaction has a positive and significant impact on performance. Job satisfaction is proven as *partial mediation* between the influence of motivation on performance. Looking at the average results of the Motivation Variable indicator, it is found that the *Need* indicator of sub-indicators is working hard to improve performance to get low results. This is very important to be considered by Regional Device Organizations to pay more attention to the performance of employees because with high performance will help regional device organizations in achieving their vision and mission. The Satisfaction variable with the Enjoy Job indicator gets a low average result, this is very important because if the work is monotonous it will have an impact on job satisfaction from employees. It is recommended that Regional Device Organizations every year need to carry out *rolling jobs* to provide new enlightenment to employees on routine work in order to increase job satisfaction. In the world of work, everyone is required to be sensitive to the surroundings of their work environment, helping each other and respecting their superiors so as to foster a sense of togetherness and improve performance. In this study, researchers found in the variable performance on indicators ready to help superiors get the lowest score this is due to lack of attention given by the leadership to subordinates so that it will affect employee performance. So this needs to be corrected with the boss always paying attention and monitoring the work of subordinates so that subordinates will feel that their work is always considered and corrected.

REFERENCES

1. Abdulsalam, Dauda, Mohammed Abubakar Mawoli. 2013. Motivation and Job Performance of Academic Staff of State Universities in Nigeria: The Case of Ibrahim Badamasi Babangida University, Lapai, Niger State. *International Journal of Business and Management*. Vol.7, No. 14. Pp. 142-148.
2. Ahmed, Ishfaq, et all. (2010). Effect of Motivational Factors on Employees Job Satisfaction a Case Study of University of the Punjab, Pakistan. *International Journal of Business and Management* Volume 5 No. 3, Maret 2010.
3. Anyim, F. C., Chidi, O. C., & Badejo, A. E. (2012). Motivation and Employees' Performance in the Public and Private Sectors in Nigeria. *International Journal of Business Administration*, 31-40.
4. Al-Hussami, M., (2008). "A Study of Nurses' Job Satisfaction: The Relationship to Organizational Commitment, Perceived Organizational Support, Transactional Leadership, Transformational Leadership, and Level of Education", *European Journal of Scientific Research*, Vol.22 No.2, pp.286-295.
5. Ayub, N dan Rafif, S. (2011). The Relationship Between Work Motivation and Job Satisfaction. *Departement of Management: College of Business Management Karachi. Journal of Pakistan Business*, Vol. 2.
6. Dizgah, Morad Rezaei, Mehrad Goodarzzvand Chegini, Roghayeh Bisokhan. 2012. Relationship between Job Satisfaction and Employee Job Performance in Guilan Public Sector. *Journal of Basic and Applied Scientific Research*. Vol. 2, No. 2. pp.1735-1741.
7. Funmilola, Oyebamiji Florence, Kareem Thompson Sola, Ayeni Gabriel Olusola. 2013. Impact of Job Satisfaction dimensions on Job Performance in a small and medium Enterprise in Ibadan, South Western, Nigeria. *Interdisciplinary Journal of Contemporary Research in Business*. Vol 4, No 11. pp. 509-521.
8. Ghozali, I., 2008. *Structural Equation Modeling : Metode Alternatif Dengan Partial Least Square*. Badan Penerbit Universitas Diponegoro, Semarang.

9. Gungor, Pinar. 2011. The Relationship between Reward Management System and Employee Performance with the Mediating Role of Motivation: A Quantitative Study on Global Bank. *Procedia Social and Behavioral Sciences*. Vol. 24. pp.1510-1520
10. Gorda. 2004. *Manajemen Sumber Daya Manusia*. Denpasar : Widya Kriya
11. Gematama
12. Gibson, James John M, Ivancevich, James H, Donnelly, Jr. 2000. *Organisasi: Perilaku, Struktur, Proses*, jilid 2, edisi 8 alih bahasa Ir. Nunuk Adiarni, MM, Jakarta : Binarupa Aksara.
13. Hayes B., Bonner A., Pryor J. 2010. Factors Contributing to Nurse Job Satisfaction in The Acute Hospital Setting: a Review of Recent Literature. *Journal of Nursing Management*. Vol. 18. pp.804–814.
14. Handoko, T. Hani, 2005, *Manajemen Personalia dan Sumber Daya Manusia*, B.P.F.E UGM, Yogyakarta
15. Hasibuan, Malayu. S.P 2014. *Manajemen Sumber Daya Manusia (EdisiRevisi)*. BumiAksara. Jakarta
16. Musriha, Influence of Teamwork, Environment on Job Satisfaction and Job Performance of the Cigarette Rollers at Clove Cigarette Factories in East Java, Indonesia, Volume 3, No,2, 2013
17. Nitasari, Rizki Afrisalia. 2012. "Analisis pengaruh motivasi kerja terhadap kinerja karyawan dengan kepuasan kerja sebagai variabel intervening pada PT. Bank Central Asia Tbk. cabang kudu". Skripsi. Semarang: Fakultas Ekonomi dan Bisnis, Universitas Diponegoro.
18. Pamesti, Rahemas, Handoyo Djoko, Sari Listyorini. 2014. Pengaruh Motivasi, Disiplin, Lingkungan dan Kemampuan Terhadap Kinerja Karyawan. *Diponegoro Journal of Social*. pp 1-10.
19. Pandjaitan dan Kuswanto. 2017. Effect of Job Satisfaction and Motivation towards Employee's Performance in XYZ Shipping Company. *Journal of Education and Practice*, v8 n8 p72-79 2017.
20. Perera, G.D.N., Khatibi, A., Navaratna, N., dan Chinna, K. 2014. Job Satisfaction And Job Performance Among Factory Employees In Apparel Sector. *Asian Journal Of Management Sciences & Education*, Vol. 3, No. 1, pp. 96-104.
21. Peraturan Daerah Bali Nomor 10 Tahun 2016 tentang Pembentukan dan Susunan Perangkat Daerah
22. Peraturan Gubernur Nomor 96 Tahun 2016 tentang Kedudukan, Susunan Organisasi, Tugas dan Fungsi, Serta Tata Kerja Badan Pengelola Keuangan dan Aset Daerah Provinsi Bali (Berita Daerah Provinsi Bali Tahun 2016 Nomor 96
23. Peraturan Gubernur Nomor 114 Tahun 2016 tentang Pembentukan, Susunan Organisasi dan Rincian Tugas Pokok Unit Pelaksana Teknis di Lingkungan Badan Pengelola Keuangan dan Aset Daerah Provinsi Bali
24. Pushpakumari, M. D. 2009. The Impact of Job Satisfaction on Job Performance: An Empirical Analysis. India: University of India <http://wwwbiz.meijo-u.ac.jp/SEBM/file/ronso/2009.html>,
25. Robbins P. Stephen, 2003, *Teori Organisasi Struktur, Desain & Aplikasi*, Edisi 3, Penerbit Arcan, Jakarta.
26. Robbins, Stephen, 2006, "Perilaku Organisasi", Prentice Hall, edisi kesepuluh
27. Robbins, S.P dan Judge T.A. 2015. *Perilaku Organisasi*. Jakarta: Salemba Empat.
28. Sabardini, 2006, "Peningkatan Kinerja Melalui Perilaku Kerja Berdasarkan Kecerdasan Emosional", *Telaah Bisnis*, Vol.7, No.1.
28. Sarwar, Shagufta, James Abugre. 2013. The Influence of Rewards and Job Satisfaction on Employees in the Service Industry. *The Business & Management Review*, Vol.3, No. 2. pp. 22-32.
29. Stephen Robbins, 2001, "Perilaku Organisasi", Jilid 1 Edisi 8, PT Prenhalindo, Jakarta
30. Sugiyono. 2013. *Metode Penelitian Pendidikan Pendekatan Kuantitatif, Kualitatif, dan R&D*. Bandung: Alfabeta.

31. Suwedana. 2013. Kontribusi Kepemimpinan Kepala Sekolah, Motivasi Berprestasi, dan Kepuasan Kerja Terhadap Kinerja Guru (Studi Tentang Persepsi Para Guru SMK Negeri 1 Bangli). e-Journal Program Pascasarjana Universitas Pendidikan Ganesha, Vol. 4, No.1. pp. 1-7.
32. Tika, P. 2006. Budaya Organisasi Dan Peningkatan Kinerja Perusahaan. PT Bumi Aksara. Jakarta.
33. Pandjaitan, Octaviannand, Ramona, Nurmala K, Kuswanto, Sadikin. 2017. Effect of Job Satisfaction and Motivation towards Employee's Performance in XYZ Shipping Company. Journal of Education and Practice, v8 n8 p72-79
34. Undang-Undang Republik Indonesia Nomor 5 Tahun 2014 tentang Aparatur Sipil Negara.
35. Wibowo. 2011. Manajemen Kinerja. Jakarta: Raja Grafindo Persada.
36. Zameer Hashim, Shehzad Ali, Waqar Nizar, Muhammad Amir. 2014. The Impact of the Motivation on the Employee's Performance in Beverage Industry of Pakistan. International Journal of Academic Research in Accounting, Finance and Management Sciences, Vol. 4, No.1. pp. 293–298.

DOI <https://doi.org/10.18551/rjoas.2018-11.09>

LOCAL COMMUNITY INSTITUTIONS FOR SUSTAINABLE CREATIVE AND PRODUCTIVE ENTERPRISES IN THE BORDER REGION OF INDONESIA - TIMOR LESTE IN BELU DISTRICT

Paulus C.A.

Department of Aquatic Resource Management, Faculty of Marine Science and Fisheries, Nusa Cendana University, Indonesia

Pellokila M.R.

Faculty of Agriculture, Nusa Cendana University, Indonesia

Azmanajaya E.

Polytechnic State of Balikpapan, Indonesia

*E-mail: chatepaulus@staf.undana.ac.id

ABSTRACT

Belu is one of the border districts in East Nusa Tenggara, generally the border area of the Republic of Indonesia is still categorized as underdeveloped area, the condition covers a very wide area with the potential of untapped natural resources optimally. Institutions are major components in local economic development, especially in developing creative and productive economic activities in the border region. This study aims to map the role of institutions in such activities in Belu using interpretative structural modeling. The results indicate that universities/polytechnics will play a major role in the first phase of development, followed by the community cooperative, community enterprises and non-governmental organizations (NGOs). If this policy strategy well implemented, then the creative and productive business development for coastal communities in the Belu district will also be likely to be succeeding.

KEY WORDS

Local community, sustainable enterprises, border region, Belu.

One of the key elements in rural development, especially in coastal areas, is the capacity of local institution to develop creative and productive economic activities. This is a challenging issue since the capacity human resources in coastal villages are lacking. Hence, in order to assist local institution to enhance their capacity, a set of systematic policy framework is needed. Such a policy framework could then be used to develop creative and productive activities by identifying key enabling conditions for such activities.



Figure 1 – Map of Belu district (Source: Modified from Google map, 2018 and Bappeda Belu, 2016)

Developing a systematic policy framework, however, is not a “one directional” process, rather it is two ways process involving all stakeholders of coastal communities. Therefore, an analysis of developing such a framework is needed. This study aims to address the lack of systematic approach in identifying key elements of creative and productive economic activities in Belu district, East Nusa Tenggara. The ISM or Interpretative Structural Modeling was used in this study to determine key elements for creative and productive activities.

Urgency of this research is carried out on the border region between the Republic of Indonesia and the Republic Democratic of Timor Leste, where through the current government policy to encourage the development of border areas in accordance with one of the nine priority programs (Nawacita), namely "building Indonesia from the periphery". Therefore, to support the implementation of the policy, it would require more comprehensive research related to all aspects of society in the state border, thus providing direction to determine measurable development programs and have an impact on improving the welfare of border communities.

METHODS OF RESEARCH

The study is carried out using both primary and secondary data. Primary data were obtained from discussions, questionnaires, interviews, and field surveys by respondents, experts and communities in the study area, while secondary data obtained from several sources of literature and documents from several institutions associated with the research.

Interpretative Structural Modeling (ISM). This research uses system approach with Interpretative Structural Modeling (ISM) method. This method can be used to assist a group, in identifying the contextual relationships between sub elements of each element that make up a system based on ideas / determinants in a complex problem (Saxena et al., 1992).

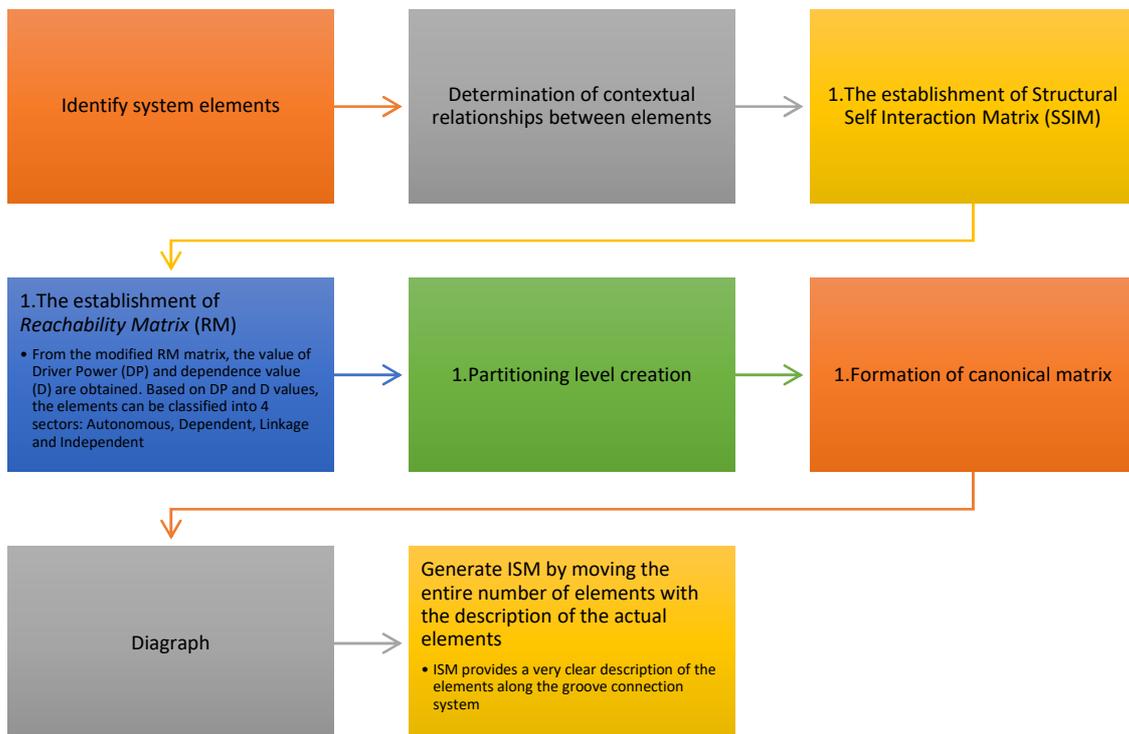


Figure 2 – Identification Steps of Relationships between Sub-elements in ISM Analysis (Marimin, 2004)

Several categories of structures and categories of ideas that reflect contextual relationships between elements can be developed using ISM, such as influence structures (eg "sub elements E_i affect the appearance of sub elements E_j "), priority structures (eg "sub elements E_i more priority than sub elements E_j "), or category of ideas (eg sub elements E_i

has the same category as sub elements E_j) (Kanungo and Bhatnagar, 2002). This matrix is the result of expert perceptions to the contextual relationship between the elements or between the sub-elements. Four kinds of symbols to present the type of relationship are: symbols "V", "A", "X", and "O":

- The V symbol expresses a predetermined contextual relationship between the elements E_i to E_j , but not vice versa;
- Symbol A to express a contextual relationship that has been set between the elements E_j to the element E_i , but not vice versa;
- Symbol X to state the contextual relationship that has been set in reciprocity between elements E_i with elements E_j ;
- The O symbol denotes the absence of a predefined contextual relationship between the elements E_i and E_j .

The identification steps of relationships between sub elements in a complex system with ISM method are presented in Figure 2.

RESULTS AND DISCUSSION

Local Community Institutions for Sustainable Creative and Productive Enterprises in Belu District. Paulus *et al.*, 2017b stated that 12 institutions are influential in productive and creative enterprises in outer island of Rote namely regency government, related agencies, banking, university, foreign investor, company partner, village government, related ministry, and markets. The similarity between Rote and Belu is the same as the border region of Indonesia with other countries, but in its development has an institutional model that is different from one another. Belu border areas not only directly adjacent to the land but also in water (Figure 1).

According to the Belu regional planning and development agency (Bappeda Belu, 2016), the model of economic development in the border region focuses on four local economic areas centered on the livestock, agriculture, ecotourism and capture fisheries sectors as the economic strengthening of the border communities in Belu. Based on discussions with key informants in the field, there are 10 institutions involved in the development of sustainable creative and productive enterprises in Belu. The ten institutions stated by the opinion of experts have an important role in the economic development of the border in Belu currently. Table 1 presents their respective institutions and roles in the economic development of the border in Belu.

Table 1 – Institutional and its role in economic development in Belu district

No	Institutions	Roles
11	Universities / Polytechnics	developing innovation and appropriate technology finding an economic model based on border communities pioneered the business incubator business based on a tested economic model conduct training and assistance for the community
12	Community cooperatives	providing the production facilities and capital
13	Community enterprises	entrepreneurial drive among the community and serves as a forum for gathering the producers accommodate the meeting of prospective buyers and sellers in exchanging information about expected product quality cooperating with universities or other partners in knowledge management, innovation of product quality, technological developments during the industrial revolution 4.0, as well as variations in product and market segmentation
14	NGO's	assist regional governments in realizing regional work programs supervise the public interest carry out assistance to the community according to their authority
15	Related agencies	function in marketing that is to bring market access closer to the community helping the community to fulfill raw material access disseminate and facilitate information and technological knowledge to the public improving product competitiveness supporting and participating village government implement the work program

16	Village government	planning and implementing programs targeted rural village development establishing village-owned enterprises or known as BUMDes to accommodate village funds from the central government empowering the community to increase output / production, such as: improving the quality and frequency of counseling, mentoring activities, information dissemination, community institution empowerment carry out the supervisory function of the program from the central and district governments
17	Company partners	establish mutually beneficial and sustainable cooperation invest business capital ensure price stability of goods produced by the community
18	Markets	play a role in marketing the production of the community in a sustainable manner guarantee the certainty of the price of the goods produced open export opportunities to neighboring countries support community activities from the secondary sector such as service and processing industries
19	District government of Belu	planning, implementation and operational control in accordance with the spatial planning district / provincial / national increase the capacity of border communities carrying out activities in accordance border economic management authority
110	Related ministry	formulating general policy related to local economic development in border facilitating the development of infrastructure expansion of information and telecommunications networks developing cooperation with neighboring countries

The contextual relationships of the institutional elements in table 1 are assessed and compiled into structural self-interactional matrix (SSIM). Revised results from SSIM according to transitivity rules resulted from reachability matrix ratings. The interpretation of results reachability matrix element load institutions DP-D (driver power-dependence) relationship. Contextual relations of each institution are presented in reachability matrix form in Table 2.

Table 2 – Reachability matrix based on contextual relationships from each institution

Sub-Element ei	Sub-Element ej										Driver Power	Rank
	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10		
I1	1	1	1	1	1	1	1	1	1	1	10	1
I2	0	1	1	0	1	1	1	1	1	1	8	2
I3	0	1	1	1	1	1	1	1	1	0	8	2
I4	1	1	0	1	1	1	0	1	1	1	8	2
I5	0	1	1	0	1	1	0	1	1	0	6	3
I6	0	1	1	0	0	1	1	1	1	0	6	3
I7	0	1	1	0	1	1	1	0	0	0	5	4
I8	0	1	1	0	0	1	0	1	1	0	5	4
I9	0	1	1	0	0	1	0	0	1	0	4	5
I10	0	1	0	1	0	0	0	0	0	1	3	6
Dependency	2	10	8	4	6	9	5	7	8	4	63	

Table 2 shows that the highest power driver or key element that is the actor who plays a major role in encouraging the running of sustainable creative and productive enterprises in the Belu border area are universities /polytechnics (I1). The sub-element of actors with great thrust at number two is community cooperatives (I2), community enterprises (I3), and non-governmental organizations (I4).

Belu stores a lot of natural resources such as fisheries, agriculture, plantations, livestock, and tourism. However, the utilization of the potential of this area by the community is not optimal due to the condition of the community does not have the skills, experience, knowledge, and motivation in exploring the potential of the region. This situation happened a long time but there is no good business in private, public, and government to change the behavior pattern with a willingness to exploit the potential of the region optimally (Siregar, 2014).

Existence of innovation in the technology incubator is crucial, because it affects the development and perpetuation. The touch of innovation aims to increase the added value and competitiveness of a product. Jamaran (2009) states that innovation is one of four factors that determine the success of developing an incubator in addition to the readiness of incubators, capital, and technological understanding (know-how). Budiharsono (2010) also stated that the development of agribusiness-based technology incubators urgently needed appropriate innovation support. Rogers and Shoemaker (1971) interprets innovation as an idea, practice, or object that can be perceived as something new by an individual or the targeted community outreach activities. This understanding is in line with the definition put forward by Osu (1996) which states that innovation can be defined as behavior, thoughts or new things because it is qualitatively different from the forms that have existed before. Hanafi (1987) mentions that innovation is an idea, action or goods that are considered new by a person with the novelty value of a degree of subjectivity, while according to van den Ban and Hawkins (1999) innovation is an idea, method, or object that is considered to be new although not always the result of the latest research. Lestari et al. (2001) defines innovation as an idea, practice, or object that is considered new by an individual or other unit of the user. Rajalahti (2009) emphasizes that innovation refers to the process of creating and placing something into a combination of the use of knowledge from various sources, which may be new but usually comes from a combination of previously existing knowledge.

Finally, technology-based business incubators can be used as media for universities/polytechnics to accelerate the transfer process to users and broader use of innovation by users. The user referred to in this case is the Belu community both in the form of community cooperatives and community enterprises. NGOs are expected to act as facilitators or extension agents in strengthening community capacity in the formed business incubators.

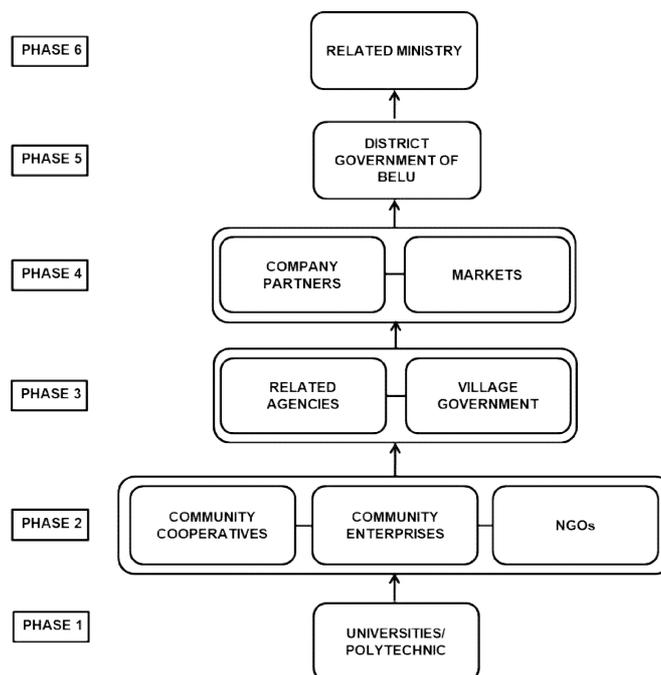


Figure 3 – Hierarchy structure elements of the sustainable creative and productive enterprises in Belu district

Structuring the actor element in Figure 3 shows that the universities/ polytechnics are at the highest level, phase 1, which means that the ongoing productive and creative business in the border region of Indonesia - Timor Leste is largely determined by the presence of universities/polytechnics that facilitate and encourage all actors in business institutions. In phase 2, the three actors namely community cooperatives, community enterprises and

NGO's gave the sense that the technology-based business incubator that has been set up in phase 1 can continue with the willingness of cooperation of the three actors in phase 2.

In phase 3 there are related agencies and village government, this means that the involvement of these two actors in encouraging the running of the business will influence other communities to participate in the pattern of developing business incubators pioneered in phase 1. Phase 4 is the marketing phase, the actors in this phase are the company partners and the market. Both of these actors are responsible for cooperation and marketing at the regional, national and even international levels. This phase is very important for the development of business in Belu.

The final phase, phase 5 and phase 6, is a policy-making phase at the national and international levels and is responsible for the economic development of the border with neighboring countries and competition for export-quality products. Both district government of Belu and related ministries in the central government will collaborate in developing business incubators into a large and highly competitive industry.

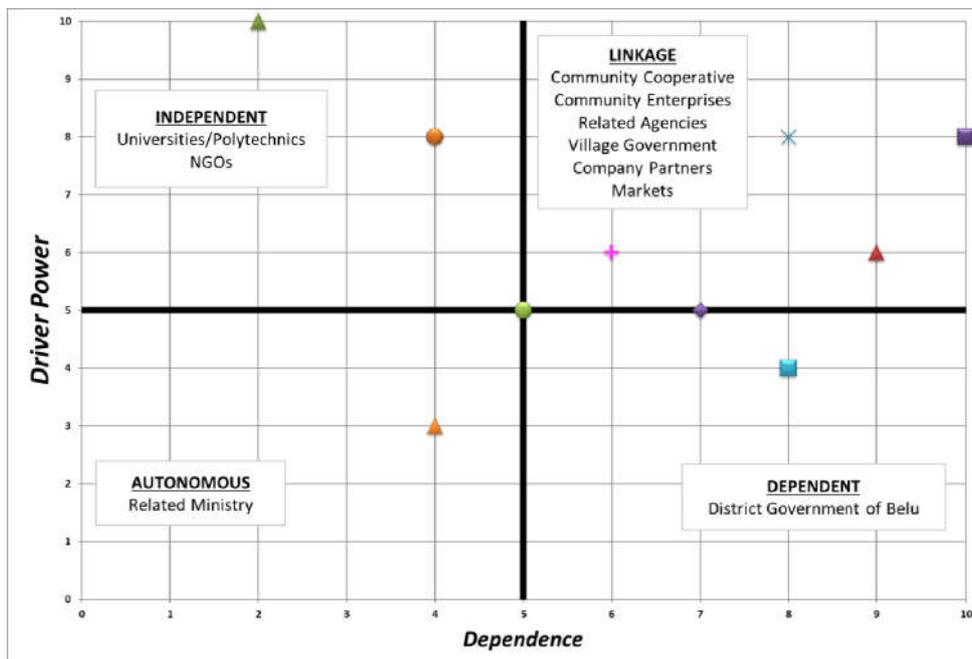


Figure 4 – Institutions Matrix of Driver Power - Dependence in Belu district

Figure 4 presents a map of the sector classification based on the contextual relationships in the reachability matrix table. Autonomous sector has the characteristics of weak sectors and weak power driver dependent variables. Related ministry is the only actor present in this sector. The low dependence on other institutions reflected in this sector indicates that the ministry's position cannot touch directly on the preparation of rural business incubators; this is corroborated by the low power drivers of the ministry to other institutions.

There are 21 ministries involved in economic development efforts of the border region of Belu: (1) Ministry of National Development Planning/Bappenas, (2) Coordinating Ministry for Maritime Affairs, (3) Ministry of Transportation, (4) Ministry of Maritime Affairs and Fisheries, (5) Ministry of Tourism, (6) Ministry of Internal Affairs, (7) Ministry of Foreign Affairs, (8) Coordinating Ministry for Economic Affairs, (9) Ministry of Finance, (10) Ministry of State-Owned Enterprises, (11) Ministry of cooperatives and SMEs, (12) Ministry of Industry, (13) Ministry of Trade, (14) Ministry of Agriculture, (15) Ministry of Labor, (16) Ministry for Public Works and Human Settlements, (17) Ministry of Environment and Forestry, (18) Ministry of Agrarian and Spatial Planning, (19) Coordinating Ministry of Human Development and Culture, (20) Ministry of Technology Research and Higher Education, and (21) Ministry of Rural, Rural Development and Transmigration. Efforts to involve many parties, in the process will not be easy. Coordination and synchronization between parties especially with

other ministries is an important key to realizing well, including convincing local governments to provide supporting policies. Coordination and synchronization concerns not only the program but also support funding, so it does not overlap. Solutions that can be offered include, among others, the design of cooperation must involve various parties.

The ministry's work focus is acceleration of economic development of border regions should be done as soon as possible, so that the economic gap with the neighboring countries can be reduced. Acceleration is done through convenience instruments or customs incentives, infrastructure development in the broadest sense; so that investment more easily entered. The government needs to immediately establish a special economic zone (KEK) against the border area. The focus of ministry work that is no less important is improving the quality of social and cultural life of border communities through entrepreneurship learning process of all human resources (government, community and private sector) so that they can participate in development towards the formation of civil society and carry out the functions of good governance.

The district government of Belu is in the dependent sector, this means that the driver power of this institution are very low in realizing sustainable creative and productive enterprises in Belu, even relying heavily on the involvement of other actors.

Universities / Polytechnics and NGOs are in the independent sector. both of these actors have high power drivers towards sustainable creative and productive enterprises with a low level of dependence on other actors in carrying out these activities. Their great mobility and a low dependency on the system, the involvement of these two actors will encourage the involvement of other actors in creating sustainable creative and productive in Belu. The role of university is very important, especially in the *tridharma* (tripe duties of University) aspect of teaching, research and community service in the development process and can affect changes in society. In its implementation, the participation of universities with experience in the field of community empowerment and development of resource potentials, is needed as facilitator and mediator for development of access and cooperation in developing coastal and coastal potential for community welfare (Paulus *et al.*, 2017b).

Six sub-elements of actors in the linkage sector are community cooperatives, community enterprises, related agencies, village governments, company partners, and markets. The sub elements in this sector have great driver power over the success of the program but have a great dependence on other institutions. These actors together depend heavily on involvement with one another which means that if other actors have involved themselves in encouraging the running of sustainable creative and productive enterprises, the district government of Belu will involve itself. Siagian (2003:108), "Rural development is the whole process of a series of efforts undertaken within the village environment with the aim of improving the living standards of rural communities and enhancing the welfare of the village". Paulus *et al.*, 2017a stated the three main elements that need attention for the success of village development are:

- Community participation in development;
- The emergence of new ideas within the community regarding the future of their lives;
- Applied appropriate technology and labor intensive.

However, any action against the institution's sub elements will affect the success of the sustainability creative and productive enterprises development program and vice versa if the sub-element is getting less attention, it can affect the failure of this program.

CONCLUSION

Institutions that play a key role in encouraging success from Sustainable Creative and Productive Enterprises in the Border Region of Indonesia - Timor Leste are universities / polytechnics. Universities / polytechnics together with NGO's play a very important role in encouraging the running of this program in phase 1 with very strong driver power and a low level of dependence on the system. The other actors who also have a high driving force to encourage the running of sustainable creative and productive enterprises in a row are community cooperatives and community enterprises. Community cooperatives and

community enterprises are in the linkage sector together depending on the system and the involvement of other institutions such as, related agencies, village governments, company partners, and markets. The participation of the six actors in the linkage sector will encourage the involvement of the dictatorship of Belu in the sustainable creative and productive enterprises program by itself. Thus, cooperation is the key to the success of this program, therefore it is expected that all parties involved can provide sharing, not only program and policy support but also funding in accordance with the duties and functions of each institution.

ACKNOWLEDGEMENTS

The authors wish to acknowledge the Ministry of Research, Technology and Higher Education for providing the funding for this research through the 2018 national strategic research scheme.

REFERENCES

1. Bappeda Belu. 2016. Potret Perekonomian Perbatasan Kabupaten Belu. Manuscript presentation. Disampaikan pada kegiatan studi banding pemerintah daerah Bengkayang ke Belu. Badan Perencanaan dan Pembangunan Daerah Kabupaten Belu. 32p. Atambua.
2. Budiharsono, S. 2010. Inkubator Agribisnis Perdesaan: Pengkajian, Penelitian dan Diseminasi. Disampaikan pada Seminar Nasional Hasil Kegiatan Pengkajian dan Diseminasi Mendukung Program Strategis Kementerian Pertanian. Bogor, 11 Desember 2010. Balai Besar Pengkajian dan Pengembangan Teknologi Pertanian.
3. Hanafi, A. 1987. Memasyarakatkan Ide-Ide Baru. Usaha Nasional, Bogor.
4. Jamaran, I. 2009. Studi Awal Pengembangan Jaringan Inkubator Teknologi dan Bisnis Pada Institusi Pendidikan Tinggi di Indonesia. Jurnal Matematika, Sains, dan Teknologi. Vol. 9 (1): 47-53. Maret 2009.
5. Kanungo, S and V.V.Bhatnagar. 2002. Beyond Generic Models for Information System Quality: The Use of Interpretive Structural Modeling (ISM). System Research and Behavioral Science. Syst. Res. 19, 531-549.
6. Komunikasi Penyuluhan. Yogyakarta: Penyuluhan dan Komunikasi Pertanian. Universitas Gajah Mada.
7. Lestari, S.B., S. Mindarti, M. Ratnada, J. Hardi, D. Sidu, K.L. Ramija, L.M Gufroni. 2001. Manajemen dan Komunikasi Penyuluhan. Yogyakarta: Penyuluhan dan Komunikasi Pertanian. Universitas Gajah Mada.
8. Marimin. 2004. Teknik dan Aplikasi Pengambilan Keputusan Kriteria Majemuk. Grasindo. Jakarta.
9. Osu, M.G. 1996. Agricultural Innovation and Problems of Diffusion: A Case Study of Gumla District of Chotanagpur Plateau. Ursulines of Ranchi. The University of Michigan. 253 p.
10. Paulus, C. A. 2016. The Development of Sustainable Livelihoods for Peasant-Fisher in Rote Island East Nusa Tenggara. International Conference on Technology, Innovation, and Society (ICTIS) 2016. ITP PRESS. DOI 10.21063/ICTIS.2016.1021. 123p. Padang.
11. Paulus, C. A., Yohanis U.L. Sobang and Marthen R. Pellokila. 2017a. Coastal communities for creative and productive enterprises in Nemberala Village. Prosiding Seminar Nasional Kelautan dan Perikanan IV. Fakultas Kelautan dan Perikanan. Universitas Nusa Cendana. Vol. IV(1): 130-134. Oktober 2017. Kupang.
12. Paulus, C. A., Yohanis U.L. Sobang and Marthen R. Pellokila. 2017b. Strategi Percepatan Ekonomi Wilayah dan Masyarakat Nelayan Tradisional Pulau Terluar Berbasis Optimasi Keunggulan Lokal Di Kabupaten Rote Ndao. Laporan Akhir MP3EI Tahun III. Lembaga Penelitian. Universitas Nusa Cendana. Kupang.

13. Rajalahti, R. 2009. Promoting Agricultural Innovation Systems Approach: The Way Forward. Observatory on Science, Technology and Information for ACP Agricultural and Rural Development. Articles on Agriculture and Rural Development, the World Bank.
14. Rogers, E.M. dan F.F. Shoemaker. 1971. Communication of Innovation. London: The Free Press, New York Collier Macmillan Ltd.
15. Saxena, J. P. 1992. Hierarchy and Classification of Program Plan Element Using Interpretative Structural Modelling. Systems Practice, Vol. 12 (6), P 651:670.
16. Siagian, Sondang P. 2003. Manajemen Sumber Daya Manusia. Penerbit: Bumi Aksara. Jakarta.
17. Siregar, C. N. 2014. Membangun Perilaku Masyarakat Atambua Melalui Pemanfaatan Potensi Daerah Dan Keamanan Perbatasan Republik Indonesia Dengan Republik Demokratik Timor Leste. Jurnal Sositologi Volume 13, Agustus 2014:147-159.
18. Van den Ban, A.W. dan H.S. Hawkins. 1999. Penyuluhan Pertanian. Kanisius, Yogyakarta.

DOI <https://doi.org/10.18551/rjoas.2018-11.10>

EFFECT OF GOVERNMENT ROLE, SOCIAL CAPITAL AND ORIENTATION OF SOCIAL ENTREPRENEURSHIP ON PERFORMANCE OF VILLAGE CREDIT INSTITUTION IN BALI PROVINCE, INDONESIA

Mashudi*, Sudirman I W., Murjana Yasa I G.W., Saskara I A N.

Economics and Business Faculty, University of Udayana, Bali, Indonesia

*E-mail: hudibali@gmail.com

ABSTRACT

Village Credit Institutions (LPD) in the province of Bali has a huge role for Bali's economic development. In this case, the contribution of the LPD is as a provider of employment, a pillar of Balinese economic activity. LPD, in addition to being a village-based economic empowerment business institution, is recognized as an institution where the community works in developing the idea of social entrepreneurship. The Regional Government has carried out various LPD empowerment programs, but the optimization of social capital and social entrepreneurship is not optimal. This study aims to improve the role of government, social capital, social entrepreneurship, orientation in improving LPD performance, with social entrepreneurship orientation as a mediating variable in improving LPD performance. This study surveyed 95 LPD administrators, and by using data analysis techniques guided by the Smart PLS-30 software, found: The role of the Government and Social Capital significantly influences the Social Entrepreneurship Orientation in LPDs; The Role of Government, Social Capital and Social Entrepreneurial Orientation significantly influenced LPD performance. The Orientation of Social Entrepreneurship partially mediates the role of the Government and Social Capital on LPD Performance. This study found the role of government, social capital and social entrepreneurship oriented influence the improvement of LPD performance. However, the Social Entrepreneurship Orientation is only partially mediated by the Role of the Government and Social Capital in improving LPD performance. This study recommends that maximize the role of government, optimize social capital and social entrepreneurship orientation to improve LPD performance.

KEY WORDS

Government role, social capital, social entrepreneurship, orientation, LPD performance.

At present in Indonesia the type of microfinance is very diverse. Formal microfinance is part of the banking industry such as Teras BRI (Mi Kro BRI unit), Danamon Simpan Pinjam, the Bank Mandiri Micro-banking Unit, and the Rural Bank (BPR). And part of the non-banks such as Credit Unions (KSP), Rural Credit Agency (BKD), the District Credit Agency (BKK), and Village Credit Institutions (LPD). The existence of the microfinance system has not touched the entire community and micro-entrepreneurs.

The Village Credit Institution or LPD in Bali is a financial institution owned by a traditional village, the same as the LPN in West Sumatra. This institution was established in 1985, and in 2016 the number reached 1,443 LPDs. Village Credit Institutions in Bali are the most successful microfinance institutions in Indonesia. The success of this program is due to the full support of the Bali Provincial Government and the strength of the indigenous peoples in Bali. The history of the LPD itself began in 1985, with the launch of a *pilot project* with a period of three years, from March 1985 to March 1988. At that time as a first step, the Bali Provincial Government established 161 LPDs with an initial capital of IDR 2 million. In 1986 the provincial government issued regulations relating to villages which gave customary villages the authority to manage assets through their own organizations. Bank Indonesia's efforts to encourage LPDs to turn into BPRs were denied by the people in Bali, besides that BI also considered the large number of LPDs that had to be monitored, so that BI finally gave its approval by deciding that the LPD was a non - bank financial institution specifically operating in Bali. In Act No. 1 of 2013 concerning MFIs, the existence of the LPD is

recognized as financial institution, so that it is not included as an MFI regulated in the regulation. At present the regulations governing LPD are Bali Provincial Regulation No. 4 of 2012. LPD management is fully carried out by traditional villages, with guidance and supervision carried out by the provincial government and BPD.

In a village area in Bali Province there are two different government systems and sometimes overlapping. The formal government in the structure is the official village headed by a village head and traditional village headed by a custom "*bendesa*" assisted by "*prajuru*". Each type of device has its own this government, which "*bendesa*" custom selected by "*Paruman*" village which is a village-level meetings. *Bendesa* as a *chairman* in managing the LPD usually appoints a LPD head or manager through village meetings, with an organization separate from the management of "*bendesa*", but directly responsible to the adat *paruman*. "*B Endesa*" serves as an internal supervisor in the management of LPD. LPD deposits and loans are only permitted to traditional village members. The amount of deposits both savings and time deposits is not limited, but usually the loan amount is adjusted to LPD liquidity and *collateral* or collateral. Funds raised by the LPD may be derived from another financial institution but the number is limited. The LPD since it was initiated in November 1984 by the Governor of Bali, which at that time was held by Ida Bagus Mantra (Alm), the LPD has assumed a function to encourage the economic development of the community through targeted savings and effective channeling of capital. Besides that, LPDs are also expected to eradicate debt bondage systems and black pledges which at that time often occur in the community. Other functions also carried by the LPD are creating equity and employment opportunities for rural communities, both those who usually work directly at LPDs and those that can be accommodated by businesses. Productive communities funded by LPDs, creating purchasing power, and expediting payment and exchange traffic in villages are also the main tasks of the LPD.

The existence of LPD as one of the microfinance institutions has the following businesses: 1) Receive / collect funds from the village *Krama* in the form of savings and deposits. 2) Providing loans only to *Krama* villages. 3) Receive loans from financial institutions to a maximum of 100 percent of the total capital, including reserves and retained earnings, except for other limitations in the amount of loans or capital support / assistance. 3) Save excess liquidity with BPD Bali in return for competitive interest and adequate services.

LPD is a business entity engaged in the economy has the purpose of gaining profit, where profits are allocated to: capital of 60 percent, the village development fund customary 20 percent, production services 10 percent, the fund coaching, supervision and protection of 5 percent, and social funds as much as 5 percent.

The description of the number of LPDs, assets and profits of the Village Credit Institution in Bali in 2016 is fully presented in the table 1.

Based on the table above, it can be seen from the number of LPDs owned by regencies in Bali Province that the largest number of LPDs in Tabanan district were 307 LPDs while LPDs in Denpasar City were only 35 LPDs. LPD from the asset side, Badung regency has the highest total assets of 4.2 trillion later by 3.3 trillion Gianyar regency, Buleleng regency and Denpasar, each of 1.8 trillion and 1.6 trillion in assets, while the lowest in the county LPD amounted Jemberan 0.480 trillion. From the average profit obtained by LPDs in each district, the highest profit was obtained by LPDs in Denpasar City by an average of 2 billion followed by Badung regency of 1.1 billion, Buleleng regency district at 384,798 million, Gianyar regency at 382,180 million, Jemberana Regency amounted to 307,190 million, Klungkung regency amounted to 262,111 million, Bangli regency amounted to 215,224 million, Karangasem regency amounted to 184,888 million and the lowest was Tabanan regency at 149,119 million.

From this description, it is explained that LPDs in Tabanan regency, Karangasem regency and Bangli district are still very low profit compared to LPDs in other districts. Whereas in these 3 districts, there were 656 LPD units, each in Tabanan district, 307 LPD, Karangasem district, 190 LPD and Bangli regency, 159 LPDs, or about 45.77% of the total

LPD in Bali province. While the percentage of profits from LPDs in the 3 districts is very small, only 18.53 % of the total profits of the Bali Province LPDs.

Table 1 – Number, Assets and Profit of LPD in Bali in 2016

County town	Number of LPDs	Assets (Thousands)	Flat Asset Score	Profit	Percentage of Profit	Average Profit
Denpasar	35	1,625,610,986	46,446,028	70,217,525	13.01%	2,006,215
Badung	122	4,192,183,809	34,362,162	136,001,473	25.19%	1,114,766
Buleleng	169	1,772,883,196	10,490,433	65,030,828	12.05%	384,798
Jembrana	64	480,650,310	7,510,161	19,660,173	3.64%	307,190
Tabanan	307	1,284,687,193	4,184,649	45,779,553	8.48%	149,119
Gianyar	270	3,286,120,615	12,170,817	103,188,535	19.11%	382,180
Bangli	159	759,271,535	4,775,293	34,220,565	6.34%	215,224
Klungkung	117	626,241,734	5,352,493	30,667,003	5.68%	262,111
Karangasem	190	1,042,893,544	5,488,913	35,128,814	6.51%	184,888
total	1,433	15,070,542,922	10,516,778	539,894,469	100.00%	376,758,178

Source: LP LPD Bali Province in 2017.

This low LPD profitability gives one sufficient picture that the LPD shows less than optimal performance. In general, LPD health is strongly influenced by many factors. One that is used as a benchmark that is the object of LPD examination conducted by LPD supervisors. *CAMEL* consists of five criteria, namely capital, assets, management, income and liquidity. Further described briefly about *CAMEL*, as a method for measuring LPD health as follows:

1) *Capita I*, for the capital adequacy ratio. Assessment of capital factors includes an assessment of the following components: a. adequacy, composition, and projections (forward trends) of capital and LPD capital capacity in covering problem assets, b. the ability of LPDs to maintain the need for additional capital derived from profits, LPD capital plans to support business growth, access to capital sources, and financial performance of shareholders to increase LPD capital.

2) *Assets*, for asset quality ratio. Assessment of asset quality factors includes an assessment of the following components: a. quality of earning assets, concentration of credit risk exposures, development of problematic earning assets, and adequacy of earning assets losses (PPAP), b. adequacy of virtue and procedures, internal review system, documentation system, and problematic handling of productive assets.

3) Management, to assess the quality of management. Assessment of management factors includes an assessment of the following components:

- a. General management quality and risk management implementation,
- b. LPD compliance with applicable provisions.

4) *Earning*, for LPD profitability ratios. Assessment of profitability factors includes an assessment of the following components: a. achievement of *return on assets (ROA)*, *return on equity*.

Based on data from the Lembaga Pemberdayaan LPD Bali Province in 2017, obtained a description of where the health LPD as in Table 2.

From the table, it can be seen that most LPDs are classified as healthy, however, there are still many LPDs that are classified as healthy, unhealthy and even congested. Regarding the health level of LPDs, based on the biplot analysis, it is known that LPDs that are in a healthy and quite healthy category are influenced by management aspects and relatively high liquidity, while the *CAR* and *LDR* values are in the average LPD value (BI, 2016). This fact shows the importance of management aspects that are supported by relatively high liquidity to keep LPD in a healthy condition. Meanwhile LPD which is categorized as unhealthy is caused by the high value of *BOPO* and *LDR*. This fact shows that the LPD with high operating costs, coupled with the high value of *the LDR* would have the risk of becoming unwell. Meanwhile, unhealthy LPDs are affected due to the high *KAP* value, even though the *CAR* value is high. This means that even though LPD has good capital adequacy, if the quality of its productivity assets (*KAP*) is high, it will have the opportunity to make the LPD

less healthy. Even though LPD is the main choice of the community. From the results of a survey of people's preferences for financial institutions when there are several options for financial institutions to save funds, it is seen that 88% of the public will choose LPDs if there are only LPDs in the area, while if there are other financial institutions such as banks Public, Cooperatives, Regional Development Banks and Rural Banks, the people's choice of LPDs is still quite large, with more than 70% of the public still prioritizing LPDs (BI, 2016). So it's a pity that there are many LPDs the problem is that in general the health problems of LPDs in Bali are caused by the number of bad loans. This is because LPD management is not professional in managing.

Table 2 – Health Classification of LPD in Bali Tabun 2017

No.	Year	Healthy	C. Healthy	K. Healthy	T. Healthy	Jam	Total
1	2008	1,000	141	49	96	70	1,356
2	2009	1,012	147	57	91	72	1,379
3	2010	-	-	-	-	-	-
4	2011	1,011	124	108	43	132	1,418
5	2012	982	145	106	47	138	1,418
6	2013	1,014	116	90	64	138	1,422
7	2014	994	133	79	216	-	1,422
8	2015	956	189	93	18	177	1,433
9	2016	972	164	118	31	148	1,433
10	2017	864	249	130	44	146	1,433

Source: LP LPD Bali Province in 2017.

Non-performing loans can be caused by management that does not carry out procedures in granting credit, which is based on 5 C: *character, capacity, capital, colateral, and condition*. In addition to these factors, bad credit can be caused by the type of credit that is channeled more on consumer credit. Because consumer credit has a higher risk of traffic compared to business loans so that the provision of consumer credit must be more guided by the 5C principle. The finding of the factor analysis results shows that the factors that influence bad credit at the Village Credit Institution in East Denpasar Subdistrict are internal factors and external factors, while the most dominant factors affecting non-performing loans at Village Credit Institutions in East Denpasar District in 2010-2012 are from internal factors, namely lack of credit supervision with varimax rotation value of 0.866. (KT Windartini, et al., 2014).

To be able to improve the performance of the LPD, management must be able to establish a business strategy in accordance with the objectives of the LPD organization. The business strategy is expected to serve as a step to improve performance in order to achieve LPD goals. The role of the government in developing the LPD is very significant, besides that the management who is professional in managing LPDs is something that must be owned by management and employees. Professional management can only be done by people who have the capacity / social capital that is sufficient and has the soul of a high social entrepreneurship orientation. With adequate social capital, individuals who have a high social entrepreneurial orientation, enable LPD management to optimally utilize existing opportunities with creativity and innovation and use of available resources.

The role according to Cohen (2009) is a behavior that is expected by others from someone who occupies a certain status. According to Thoha (2002), role is a series of behaviors that are expected to be done by someone. Such an award is a norm that can lead to a role. In organizational language, roles are derived from job descriptions. The job description is a written document that contains the requirements and responsibilities for a job. Because the essence of the role is the embodiment of the interaction between people in the organization. So much can be done by him to plan interventions towards change, improvement and improvement of the organization.

According Suhady in Riawan (2005), the government (*government*) in terms of understanding is *the authoritative direction and administration of the affairs of men / women in a nation state, city, etc.* Government can also be interpreted as *the governing body of a*

nation, state, city, etc. that is an institution or agency that organizes a state, state, or city government and so on. The definition of government is seen from its nature, namely the government in a broad sense includes all power, namely the legislative power, executive power, and judicial power. The government in a narrow sense only covers the branch of executive power (Riawan, 2005).

According to Sumarni (2013), the need for the role and function of the government in the economy is as follows:

1) Economic development in many countries generally occurs due to government intervention both directly and indirectly. Required government intervention in the economy to reduce the failure of the market (*market failure*) as monopoly price stickiness and the negative impact of private business activity eg environmental pollution.

2) The market mechanism cannot function without the existence of rules made by the government. This rule provides a basis for the application of the rules of the game, including the imposition of sanctions for economic actors who break them.

The role of the government is more important because the market mechanism alone cannot solve all economic problems. To ensure efficiency, equity and economic stability, the role and function of government is absolutely necessary in the economy as a controller of market mechanisms. The failure of the market (*market failure*) is a term given to the market failure in achieving the allocation or distribution of optimum resource. This can especially occur if the market is dominated by suppliers of monopoly of production or consumption and a product results in a side effect (externality), such as damage to the environmental ecosystem.

In the development of an effective and optimal government role LPD is realized as a facilitator, regulator and catalyst. 1) The role of the government as a facilitator, as a facilitator, the government has a role in facilitating LPDs to achieve business development goals owned by LPDs. 2) The role of the government as a regulator, is to make policies that make it easier for LPD businesses to develop their businesses. As a regulator, the government functions to maintain the condition of the business environment remains conducive to making investments made by making policies on business competition rules. The government is the party that is able to apply the rules so that life can run well and dynamically. 3) The role of the government as a catalyst, which is to help accelerate the process of developing LPDs.

Social entrepreneurship orientation refers to the processes, practices and decision-making that led to the new input and has four aspects, namely entrepreneur (*entrepreneur*), the idea / notion (*idea*), opportunities (*opportunity*), and organization (*organization*). The entrepreneurial dimension refers to an attitude of someone who has talent or talent, is creative, and has great motivation. Ideas / ideas are translated as orientations to reduce / overcome problems and have ideas for carrying out social activities. Meanwhile, opportunities are understood as being persistent, sensitive to the surrounding environment and the desire to change towards a better one. While the organization is defined as clever set a strategy, implement activities ma shifts and take bold decisions (*self-determination*).

The orientation of social entrepreneurship is the main driver of profit so that organizations with a high social entrepreneurship orientation have greater opportunities to bring up opportunities and take benefits that ultimately affect business performance. Social capital is a concept that arises from the results of interaction in society with a long process. Even though interactions occur for various reasons, people interact, communicate, and then collaborate are basically influenced by desires in various ways to achieve common goals that are often different from their own goals. This kind of interaction gives birth to social capital in the form of an emotional bond that unites people to achieve a common goal, which then fosters the trust created by the relationship.

With the existence of social capital in an LPD, it will be able to build a network to achieve the objectives of the institution. The strength of this collaboration will be maximal if it is supported by a proactive spirit to make the relationship above the principles of a participatory attitude, mutual attention, giving and receiving, trusting, and reinforced by the values and norms that support it. The LPD as the teacher of the village economy is strongly

influenced by the adequacy of social capital owned by the local community. This research is based on the models obtained from the phenomena in the field that are formed based on separate theories between models, so that from some of the supporting theories obtained a form of model, the theory and model used in this research is the performance of the institution. With various considerations already stated above, the title of this research is the influence of government roles, social capital and social entrepreneurship orientation on the performance of the Village Credit Institutions (LPD) in the province of Bali.

LITERATURE REVIEW

Economic growth means the development of economic activity that causes the existing goods and services in society to increase from one period to another and the prosperity of the community increases. The problem of economic growth can be seen as a problem in the macro economy for the long term. In addition, economic growth is influenced by increased investment, developing technology, and increased employment opportunities (Laili, 2007).

The economic growth theory that is relevant to this research is Schumpeter's theory of economic growth known as the Schumpeter Theory. According to Sukirno (2006), this theory emphasizes innovation carried out by entrepreneurs and says that technological progress is largely determined by the entrepreneurial spirit in a society that is able to see opportunities and dare to take the risk of opening a new business, as well as expanding existing businesses. With the opening of new businesses and business expansion, additional employment is available to absorb the growing workforce each year.

According to Arsyad (2010), this Schumpeter theory was first proposed by Joseph Alois Schumpeter in his German-language book in 1911 which was later published in English in 1934 under the title *The Theory of Economic Development*. Then it was further examined in theory about the development process and the main factors that determine development in his book published in 1939 under the title *Business Cycle*. One of Schumpeter's opinions that became the foundation of his development theory was the belief that the capitalism stem was the best system for creating rapid economic development. However, Schumpeter predicted that in the long run the capitalism system would stagnate. This opinion is the same as the opinion of the classics.

Understanding Roles according to Cohen (2009) is a behavior that is expected by others from someone who occupies a certain status. According to Thoha (2002), role is a series of behaviors that are expected to be done by someone. Such an award is a norm that can lead to a role. In organizational language, roles are derived from job descriptions. The job description is a written document that contains the requirements and responsibilities for a job.

According to Suhady in Riawan (2005), the government (*government*) in terms of understanding is *the authoritative direction and administration of the affairs of men / women in a nation state, city, etc.* Government can also be interpreted as *the governing body of a nation, state, city, etc.* that is an institution or agency that organizes a state, state, or city government and so on. The definition of government is seen from its nature, namely the government in a broad sense includes all power, namely the legislative power, executive power, and judicial power. The government in a narrow sense only covers the branch of executive power (Riawan, 2005).

The beginnings of the thoughts of economists on social capital, had begun in the 18th century, when Adam Smith raised the concept of social capital as a 'social contract' of civil society which would determine the progress of economic development. An important element of this social contract is among others what they refer to as; characteristics of social networks, reciprocal patterns and mutual obligations. Of these group thoughts too, various studies and a modern concept of social capital in the next century, have a strong theoretical basis. Coleman (1998) defines that social capital is an aspect of social structure that facilitates the actions of individuals or corporate / institutional actors in the social structure. Furthermore it is said that social capital is not a single entity, but is a plural entity with two fundamental elements namely; 1) social capital covers several aspects of social structure,

and 2) social capital facilitates certain actions of actors (actors) as individuals and institutions within the structure. In this case it means; similar to other types of capital, social capital is also productive, which makes the achievement of individual or institutional goals will not materialize without the existence of social capital. Furthermore, Putnam (1993) defines that social capital is the appearance of social organizations, such as wealth, reciprocity, networks that can improve the efficiency of society by facilitating coordination and cooperation for mutual benefits.

The Social Capital Indicator is very broad in scope. In this study, collaborating indicators of social capital put forward by Hasbullah (2006) called it the main elements of social capital. Furthermore, it is said that the study of social capital lies in how the ability of the community in a group entity to participate in building a network to achieve a common goal. The collaboration is characterized by a mutually beneficial reciprocal interaction pattern, and is built on trust that is supported by positive and strong social norms and values. While Ridell in Ayu Wimba (2015), said there are three parameters of social capital, namely: (1) networks, (2) trust, and (3) norms.

By combining the concept of the two experts at the top, and with emphasis on compliance with the conditions in research then expressed as an indicator in the study i ni is; 1) participation in the network, 2) exchanging goodness, 3) trust, 4) norms, 5) values and 6) proactive actions.

Hasbullah (2006) distinguishes the typology of social capital into two things, namely 'binding' social capital and 'bridging' social capital. Social capital is binding, tends to be exclusive. What is the basic characteristic inherent in this typology, is at the same time expressed as a characteristic. That is, in the context of ideas, relations and attention appear to be more oriented into groups, when compared to being oriented outside the group.

Entering a knowledge-based economic era, the world including Indonesia will face more competitive job competition. The world also needs entrepreneurs who care spiritually, humanism, and social aspects of human life to bridge the gap between strong and weak, rich and poor, and provide a harmonious balance between life and nature. Complex problems such as global warming, corruption, poverty, global economic problems and so on are homework for every citizen in the world. As the world needs entrepreneurship, social entrepreneurship is also needed as a balance between a competitive world and a harmonious life.

The main purpose of social entrepreneurship is to improve social life and a better environment. Although social entrepreneurship is often non-profit, it also does not conflict with business that is profitable. Social entrepreneurship is more than making profit, by using a mixture of business model values that combine with income-generating businesses with structures or components that create social value. Entrepreneurship has not only become a driving force for the growth of the business sector, but has also been the driving force behind the expansion of the social sector. Social entrepreneurship, or entrepreneurial activities with social goals have increased in recent decades. One indicator of this surge is expressed by the rapid growth in the number of non-profit organizations. The definition of social entrepreneurship definition can be expanded or narrowed down. Based on a narrow definition, social entrepreneurship refers to the phenomenon of applying market-based business skills and skills to the nonprofit sector by developing innovative approaches to earning income (Reis, 1999; Thompson, 2002).

One of the benchmarks for achieving or not the purpose of the LPD is the assessment of the performance of the institution. LPD is an institution whose management is identical like managing an institution. Therefore in measuring the performance of the institution it is almost the same in measuring the performance of the institution. All agency activities are mobilized to achieve their objectives. That is, the purpose of the institution is the end result that is pursued through the existence and all operations of the institution, in this case for example; continuity or continuity, profitability, efficiency, employee satisfaction and coaching, product quality or service to consumers, social responsibility, market leadership and others (Gluck & Jauch 1988). Thus all the efforts of the institution to achieve its objectives are usually measured through an assessment of the performance of the institution.

Keats & Hitt, (1988) states that the assessment of institutional performance has important value because, in addition to being used as a measure of the success of an institution in a certain period. The performance assessment can also be used as feedback for improvement or improved performance in the future will come. Therefore, an assessment of the performance of an institution must be carried out, because the results of this assessment can be used as a basis for information to improve business performance for the future. Beal (2000) states that "There is still controversy regarding the right approach to conceptualization and measurement of institutional performance."

In essence LPDs have very specific characteristics. Its flexible, highly dynamic nature including limitations and weaknesses attached to it, such as the quality of management that is still very low, the limitations of human resources, causing the assessment of its performance must use a separate pattern. In this study, business performance will be directly analyzed based on the *balanced scorecard* perspective, so that as a business performance indicator are: financial performance, customer performance, internal business process performance and growth and learning performance.

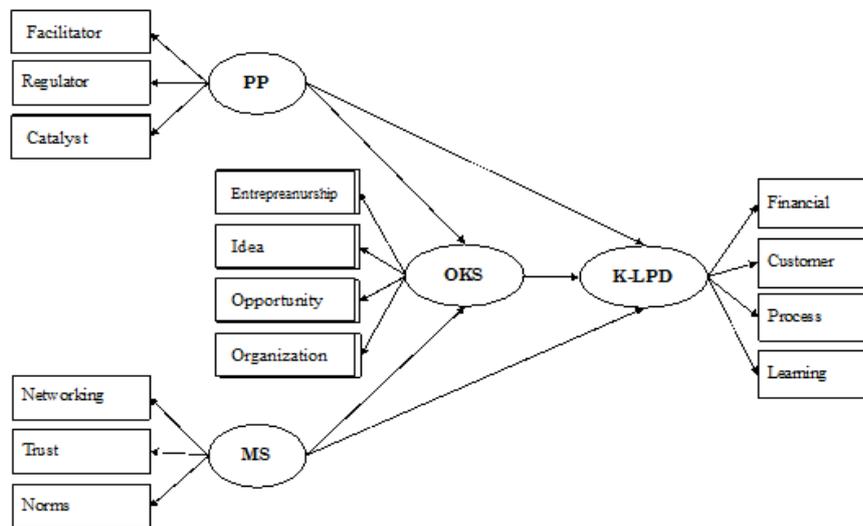


Figure 1 – Conceptual Framework

Note: PP - The Role of Government; MS - Social Capital; OKS - Social Entrepreneurial Orientation; K-LPD - LPD Performance.

Based on the review of the theory and empirical studies, in this study 7 (seven) hypotheses are proposed which the truth will be tested through the research process:

- The role of the Government influences the Social Entrepreneurship Orientation and LPD Performance at LPDs in Bali Province;
- Social Capital influences the Social Entrepreneurship Orientation and LPD Performance at LPDs in Bali Province;
- Social Entrepreneurship Orientation influences the performance of LPDs in Bali Province;
- Social Entrepreneurship Orientation mediates the Role of Government and Social Media on the Performance of LPDs in Bali Province.

METHODS OF RESEARCH

Considering that this research is still explorative and to harmonize with data analysis techniques used, the error rate is set at 10 (ten) percent. The sampling technique must, of course, be adjusted to the number of LPDs in each district / city in the province of Bali. Due to the number of different populations is different for each district / town, and then the appropriate sampling technique is a technique *Proportional Random Sampling*. As a basis for

the argumentation, the technique of determining this sample is *proportional* because the number of population in each district / city is different; while *random* is to provide an opportunity equal to every member of the population to be sampled. A description of the method and technique for determining the sample is presented in Table 3.

Table 3 – Population Distribution and Research Samples at LPDs in the province of Bali in 2016

No.	Regency / City	Total population	Calculation of Stratified Samples
1	Denpasar	35	2
2	Badung	122	8
3	Gianyar	270	18
4	Tabanan	307	20
5	Jembrana	64	4
6	Buleleng	169	11
7	Karangasem	190	12
8	Bangli	159	10
9	Klungkung	117	8
		1,433	93

Source: LPLPD Bali Province 2016 (processed).

In data collection in this study used indirect communication techniques. The indirect communication media are questionnaires or questionnaires to obtain data from respondents. The questionnaire is a list of written questions that have been prepared previously. This questionnaire is expected to collect research data, namely quantitative data with ordinal scale.

A study, whether conducted by an inductive approach or a deductive approach still requires testing the validity and reliability of the research instrument used. This validity and reliability test is carried out with the aim of ensuring the accuracy and consistency of the data needed.

RESULTS OF STUDY

Based on the research conducted, it was obtained a description that most respondents had ages between 40 to 49 years, amounting to 29 people or 30.53 percent. Then in the second place, are respondents who have the age between 50 to 59 years, namely a number of 27 people or 28.42 percent. In the third place, are respondents who have the age between 30 to 39 years, amounting to 21 people or 22.11 percent. While at least that is in the fifth place is the respondent who has more than 59 years of age, namely 5 people or 5.26 percent. Thus it can be stated that the majority of respondents are in the productive age, namely from the age of 20 to 49 years which is 66.32 percent.

Respondents has a high school education level of 67 people or 70.53 percent. Followed by a Bachelor / Diploma education level of 26 people or 27, 37 percent. While those who have Postgraduate education only 2 people or 2, 11 percent. The respondent's work time is quite varied, some are only one year until there are more than 12 years. Most respondents have a work period of 1 - 8 years. Most respondents have a working period of 5-8 years, namely 41 people or 43, 16 percent. Followed with a work period of 1 - 4 years as many as 33 people or 34, 74 percent. Whereas those who have a work period of more than 12 years h 8 people or 8, 42 percent. The sex of the respondents is dominated by men. Seen as many as 60 people or 63, 16 percent of respondents were male. Followed by as many as 35 people or 36, 84 percent female.

Research requires valid and reliable data. In the context of this urgency, the questionnaire before being used as a primary research data collector must first be tested. This test is carried out to obtain evidence of the accuracy and accuracy of the measuring instrument in the form of a question / statement item in performing its measuring function. Testing instrument research includes validity and reliability. Based on the results of the tests that have been carried out, all variable statement items are valid. Thus, all items of the variable statement are valid to measure all variables, so that they are included in further

analysis. A list of questions can be said to be reliable if it has a Cronbach's value > 0.60. From processing SPSS for Windows version 24.0, the *Cronbach's Alpha* coefficient is > 0.60. This means that the list of statements (questionnaires) of all variables is reliable.

The results of this analysis, it was confirmed 4 (four) latent constructs with supporters of each indicator are: variable Role of Government, Social Capital, Social Entrepreneurship Orientation and Performance LPD there were no indicators that the value of *outer loading* of less than 0.5. Thus it can be stated that, all latent constructs with reflective indicators have met convergent validity requirements.

The results of the primary data analysis show the *R Square* coefficient index as presented in Table 5.19. While to determine the suitability of the model (*Goodness of Fit Model Test*) is to use the predetermined Q2 formula (Ghozali, 2011), as shown below. The calculation of the suitability of the model in this study is calculated based on the *R Square* value in Table 5.

Table 5 – *R Square* The Role of Government, Social Capital, Social Entrepreneurship Orientation and LPD Performance in Bali Province

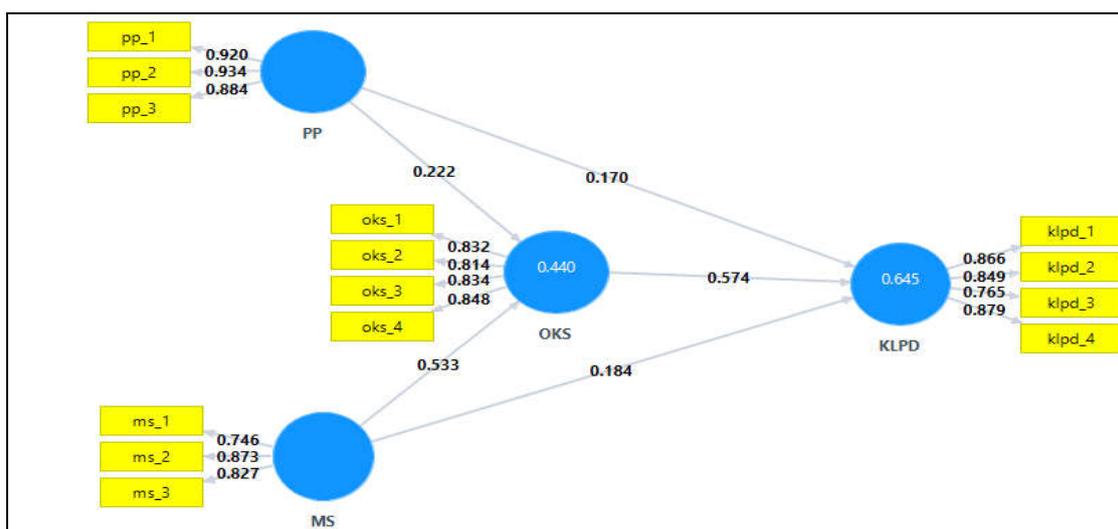
	<i>Original Sample (O)</i>	<i>Sample Mean (M)</i>	<i>Standard Error (STERR)</i>	<i>T Statistics (O / STERR)</i>	<i>P Values</i>
KLPD	0.645	0.657	0.063	10,227	0,000
OK S	0.440	0.449	0.079	5,570	0,000

Source: Results of Primary Data Analysis.

Based on the R^2 values shown in Table 5.29, the Q^2 values can be calculated:

$$Q^2 = 0,8012$$

The *predictive relevance value* of $Q^2 = 0.8012$ is interpreted that the model is good enough, which is able to explain the phenomenon of the influence of Government Role and Social Capital on Social Entrepreneurship Orientation and LPD Performance in Bali Province. That is, optimization of 80.12 percent LPD performance is able to be explained by the latent variables Role of Government, Social Capital and Social Entrepreneurship Orientation, while the remaining 19.88 percent is explained by other variables not included in the model. To be able to provide more in- depth clarity about the results of the analysis, the following is presented by the full results of the structural model of the study. More can be seen in Figure 2.



Note: PP - The Role of Government; MS - Social Capital; OKS - Social Entrepreneurial Orientation; KLPD - LPD Performance.

Figure 2 – Structural Model of the Influence of the Role of Government, Social Capital and Social Entrepreneurship Orientation to Improve LPD Performance in Bali Province

Based on Figure 2, there are several things that must be observed and get a deeper understanding, namely about indicators that show the largest *loading*, and its meaning on the existence of these indicators. In more detail, the meaning is explained as follows. In the Government Role variable, the largest loading value is on the regulator indicator, with a coefficient index of 0.934. case indicates that the policy or rules relating to the operational LPD is still needed and got a high appreciation of the LPD staff. Regional regulations are made to provide certainty of business processes that occur.

For the Social Capital variable, among the three indicators that construct latent variables, the confidence indicator has the largest loading value, with *outer loading* 0.873. This empirical fact proves that trust / mutual trust is the key to successful LPD development. The biggest *loading* factor on the latent variable Social Entrepreneurship Orientation is the organization, the ability to manage strategy and dare to make decisions, with a coefficient index of 0.848. Latent variable LPD performance, which in this case is supported by four indicators, turns out the most dominant is growth and learning performance, with the *outer weight* coefficient index of 0.879. The response of LPD administrators is also very good with this indicator.

Research Hypothesis Testing. Testing the hypothesis in this study, based on the significance value shown in each path between the latent constructs in the research model. In general, the significance value of probability (*p-values*) below 0.05 ($p < 0.05$) provides instructions for stating that the effect is stated to be significant, both directly and indirectly. The relationship between latent constructs in this study is shown by 7 (seven) forms of research hypotheses. To test the hypothesis used to seven structural model equations by applying a *PLS*, with software (*software*) SmartPLS version 3.0 In detail, the influence between the latent constructs to test the hypothesis presented in Table 6.

Table 6 – *Final Results Path Coefficients* Role of Government, Social Capital, Social Entrepreneurship Orientation and LPD performance in Bali Province

	<i>Original Sample (O)</i>	<i>Sample Mean (M)</i>	<i>Standard Error (STERR)</i>	<i>T Statistics (O / STERR)</i>	<i>P Values</i>	<i>Decision Hypothesis testing</i>
MS -> KLPD	0.184	0.185	0.094	1,967	0.025	Significant
MS -> OKS	0.533	0.530	0.085	6,285	0,000	Significant
OKS -> KLPD	0.574	0.574	0.106	5,426	0,000	Significant
PP -> KLPD	0.170	0.172	0.075	2,280	0.012	Significant
PP -> OKS	0.222	0.224	0.081	2,753	0.003	Significant

Source: Results of 2018 Primary Data Analysis

Based on the presentation in Table 6 it can be explained that: The latent construct of social capital has a positive and significant effect on LPD performance with 0.184 *path coefficients*; *t-statistics* 1.967 and *probability value* 0.025; the latent construct of Social Capital has a positive and significant effect on the latent construct of Social Entrepreneurship Orientation with *path coefficients* 0.533; *t-statistics* 6,285 and *value probability* 0,000. Likewise, the latent construct of the Social Entrepreneurship Orientation also has a positive and significant effect on LPD performance with 0.574 *path coefficients*; *t-statistics* 5.426. and *value probability* 0,000.

Similarly, the latent construct of the Government's Role also has a positive and significant effect on the latent construct of LPD Performance with 0.170 *path coefficients*; *t-statistics* 2,280 and *value probability* 0,000. Likewise, the latent construct of the Role of the Government influences positively and significantly on the latent construct of Social Entrepreneurship Orientation with the *path coefficients* 0.222; *t-statistics* 2.753. and *value probability* 0.003. While the influence between latent constructs is positive and significant because it has *t-statistics* more than 1.96 and *probability values* less than 0.04 (Ferdinand, 2012).

DISCUSSION OF RESULTS

The results of testing the hypothesis prove that the role of government has a positive and significant influence on social entrepreneurial orientation. This finding indicates that the maximum role of the government will be able to improve the quality of social entrepreneurial orientation of LPD managers in Bali Province. In this connection it can be understood that the meaning of government support is in the form of facilities, regional regulations and capital support. This was supported by the results of an interview with the Tabanan Regency LPLPD head, namely I Dewa Nyoman Alit Astina, SE. Alit Astina said:

That the government's role so far has been very good in supporting the existence of LPD, between the role of government has done that work together in to guide the LPD board in the form of mentoring and training. With this routine guidance, it is possible for LPD administrators to gain new knowledge which will increase the power of creativity and innovation in developing institutions. Thus the quality of LPD human resources (HR) will continue to increase.

Therefore, the guidance made by the government is very important because it can improve the creativity and innovation of LPD administrators, which in turn will be able to improve LPD performance.

The results of testing the hypothesis prove that social capital has a positive and significant influence on social entrepreneurship activities. This finding indicates that the good functioning of social capital will improve the quality of social entrepreneurial orientation of LPD managers in Bali Province. In this connection it can be understood that how meaningful togetherness is imbued by active participation to carry out networking activities, trust among staff, and adhere to norms imposed in one community. In an interview, I Gede Saniara, SE (Former Head of the LPD in Buleleng) said that:

Why is the LPD trusted by the community, because the LPD management has a high commitment to help the public's integrity. If the community / LPD members have financial problems, the LPD is ready to help provide loans, both of which have a small to large nominal value. The level of *trust of* LPD administrators to customers / members is very high, because besides they are villagers, also generally LPD administrators know exactly the profile / condition of the village community. In addition, LPD officials also always uphold the norms that apply in the village.

With the formation of networks, mutual trust between LPD officials and customers is increasing which will then broaden the horizons of social entrepreneurship orientation.

Hypothesis test results of this study indicate that social entrepreneurial orientation has a positive and significant effect on LPD performance. The positive relationship between social entrepreneurial orientation and LPD performance, indicates a mutually supportive relationship between measurable indicators of social entrepreneurship orientation and measurable indicators of LPD performance. The higher the perceptions given to assess indicators of social entrepreneurship orientation, the higher the assessment given to LPD performance. I Nyoman Arnaya, SE (Chair of the LPLPD of Bali Province) said that:

At present a breakthrough is needed from the LPD, because currently there are many LPDs that are excess money where many LPD members save money, the LPD board must think creatively and innovatively, make efforts / encourage the community to open a business / business where the LPD collaborates with the community. The LPD funds the business / business carried out by its members. Thus there will be mutually beneficial cooperation between LPDs and members / customers.

The demand for many creative ideas / ideas to develop LPD is very necessary. Continuous development of local wisdom will enrich LPD thinking. The strong creative ideas and oriented solutions to the problems contained in the social entrepreneurship orientation allow LPD administrators to produce the best work to develop their institutions.

The training obtained by LPD staff, the certainty of business rules created by the local government and the provision of capital assistance will greatly assist the LPD manager to develop his business. So far the local government has always provided guidance to LPD LPDs by appointing BPD as a government partner to foster LPDs, so that it can be said that

government support for LPD performance improvement is very significant, explained Ni Wayan Ersi, Chair of Jero Kuta LPD, Gianyar). This was corroborated by I Nyoman Arnaya, SE who also served as Chairman of the Bali Province LPLPD. Arnaya said:

"The role of local governments in supporting the existence / existence and development of LPDs is in line with what is expected. The form of government support through the BPD, both in the form of helping to save LPD money and in the form of providing technical guidance to the existing LPD management, by holding vocational training training. Arnaya added that why LPD needs to be supported, because the LPD is a financial institution at the village level, which is expected to be the driving force of the local village economy. Moreover, this has been in accordance with the presidential program Nawacita program, Jokowi that we build a nation starting from the countryside and populist based ".

Ni Wayan Ersi and I Nyoman Arnaya's views were strengthened by the opinion of I Ketut Giri Arta, S.Pd., MM the head of Pecatu Badung LPD that the role of the government had been good, facilitating, protecting and supporting the LPD program.

Testing the hypothesis in this study proves that social capital has a positive and significant effect on LPD performance. The positive relationship between social capital and LPD performance indicates a mutually supportive link between measurable indicators of social capital and measurable indicators of LPD performance. Social capital which in this case is measured by active participation in the network, mutual trust, running a business in accordance with norms can provide a convincing increase in LPD performance as measured by financial performance, customer performance, internal business process performance and growth and learning performance.

The results of the research data analysis legitimize, that the Social Entrepreneurship Orientation mediates *partially mediated* the Government's Role on the performance of LPDs in Bali Province. The results of this study prove that the Social Entrepreneurship Orientation is not strong enough to mediate the role of government in LPD performance.

The findings of this study indicate that based on the mediation model, social entrepreneurial orientation mediates *partially mediated* on the relationship between the role of government and LPD performance. However, convincingly social entrepreneurship orientation can improve LPD performance. This means that the implementation of social entrepreneurship orientation that is getting better in business activities carried out through entrepreneurial attitudes, rich in ideas / ideas, good at finding opportunities and able to find solutions will direct the institution to improve its performance. I Ketut Giri Arta, S.Pd., MM the head of Pecatu Badung LPD said:

The development of village credit institutions (LPD) is very rapid today because it utilizes local wisdom (*local genius*). In addition, further Giri Arta hopes that in order to win the competition in business in the future, the LPD must apply modern management, using information technology (IT), besides that LPD *stake holders* cannot be left behind.

Ideas / ideas become one of the most valuable investments in developing LPDs. As with the current developments, there is a phenomenon of creative economy, which is based on creative and innovative ideas / thoughts in developing the economy.

The results of the study found that the Social Entrepreneurship Orientation *mediated partially mediated* Social Capital towards LPD Performance. In this mediation model, the Social Entrepreneurship Orientation mediates part of the influence of Social Capital on LPD Performance. This is shown by the influence of Social Capital on Social Entrepreneurship Orientation and the influence of Social Entrepreneurship Orientation on LPD Performance is significant. Solimun (2004) recommends that based on the mediation model, the Social Entrepreneurship Orientation can be referred to as *partially mediate* in the relationship of Social Capital to LPD Performance.

Some of the things stated as the main findings of this study are as follows:

First finding: the role of government is formal, in the form of making laws or local regulations governing LPD governance, providing legal certainty which ultimately makes LPD managers work optimally. Especially the role of the government in facilitating (facilitators) LPD is very important where as an element of the government's role that gets the most appreciation from the LPD administrators. This is reinforced by the results of the analysis that

shows the facilitator indicator has the largest loading factor, namely: 91, 8 as a measurable component of the aspect of the government's role.

Second finding: social entrepreneurship orientation mediates (*partially mediated*) the influence of government roles and social capital on LPD performance. This indicates that the role of social entrepreneurship orientation in facilitating the role of government and social capital to be able to improve the performance of LPD is there even though it is imperfect / maximal.

Third finding: Empirical facts which are also the findings of this study are the LPD managers in Bali Province, placing the aspect of social capital 'trust' as an element of social capital that is most appreciated by the LPD officials in Bali Province. This is reinforced by the results of the analysis that shows the confidence indicator has the largest loading factor, namely: 92.20 as a measurable component of the aspect of social capital. This means that the LPD administrators in Bali Province greatly appreciate this behavior, as personal capital and social glue that must be owned, to maintain the sustainability of social entrepreneurial orientation that will guarantee the development of LPDs.

Fourth finding: This study also found that for social entrepreneurship orientation variables, the most appreciated is 'ideas / ideas to improve welfare in the surrounding environment' with a perception level: 86.52 percent. This finding indicates that LPD managers perceive that the idea / idea to improve welfare in the surrounding environment is the most important thing, compared to other elements of social entrepreneurial orientation.

Fifth Findings: This study also found, for the measured variables of LPD performance, the biggest response as a form of respondent's main concern was 'customer performance' with a perception level: 87.80 percent. Continuously maintaining customer loyalty will be able to build product reputation, which ultimately impacts the reputation of the institution. And so on, sales increase, profits increase significantly, the sustainability of the institution's life can be maintained.

CONCLUSION AND SUGESTIONS

Based on the results and discussion in this study can be concluded things like the following:

1. The role of the Government and Social Capital has a positive and significant effect on the Social Entrepreneurship Orientation. Where Social Capital plays a greater role in enhancing the LPD Social Entrepreneurship Orientation in Bali Province.

2. The Role of Government, Social Capital and Social Entrepreneurship Orientation positively and significantly influences the performance of LPDs in Bali Province. Where, the Social Entrepreneurship Orientation is the most dominant influence on improving LPD Performance.

3. The orientation of Social Entrepreneurship mediates *partially mediated*, the Role of Government and Social Capital in improving the Performance of LPDs in Bali Province.

Some suggestions can be given in accordance with the results of the study, namely:

- It is suggested to LPD officials that they always coordinate with the government in operating their institutions, the role of the government as a facilitator, regulator and catalyst for LPD so far can work well.
- As a result of the research, the role of the government as a facilitator is very significant to help improve LPD performance. Therefore it is recommended that the Government continues to seek support in order to empower the LPD, by giving full support to the LPD indirectly it will also improve the economic welfare of the community because essentially the LPD is one of the central economic of the people in the lowest level of society, namely in the banjar and the village in the province of Bali.

REFERENCES

1. Abidin, Said Zaenal, 2012, Kebijakan Publik, Jakarta: Salemba Humanika.
2. Adisasmita, Rahardjo. 2013. Teori-Teori Pembangunan Ekonomi. Yogyakarta: Graha Ilmu.
3. Agung Aricahya, A. A. Gde., dkk. 2015. Analisis Kinerja Badan Pemberdayaan Masyarakat Dan Pemerintahan Desa Kota Denpasar Dalam Pengelolaan Bantuan Kelurahan. ISSN: 2337-3067 E-Jurnal Ekonomi dan Bisnis Universitas Udayana 4.11 (2015): 759-772
4. Ahmad Erani Yustika et. al. 2008. Krisis Ekonomi, Kontestasi Politik, dan Proyeksi Ekonomi 2000. Jakarta: INDEF
5. Alvarez, Sharon A & Busenitz, Lowell W. 2001. The Entrepreneurship of Resource Based Theory, *Journal Management*, 27, pp,755-775
6. Amirin, T., 2011. Populasi Dan Sampel Penelitian 4: Ukuran Sampel Rumus Slovin. Jakarta: Erlangga
7. Anthony, Atkinson, et al., 1995. Management Accounting, International Edition, New Jersey, Englewood Cliffs: Prantice-Hall International Inc.
8. Arikunto, Suharsimi. 1998. Prosedur Penelitian Suatu Pendekatan Praktek. Jakarta: PT. Rineka Cipta.
9. Arikunto, Suharsimi. 2000. Manajemen Penelitian. Jakarta: Rineka Cipta.
10. Arsyad, Lincoln. 2010. Ekonomi Pembangunan. Yogyakarta: UPP STIM YKPN
11. Atmaja, Ananta Wikrama Tungga. 2011. Penyertaan Modal Sosial Dalam Struktur Pengendalian Intern Lembaga Perkreditan Desa (LPD) (Studi Kasus pada LPD Desa Pakraman Penglatan, Kecamatan Buleleng, Kabupaten Buleleng, Provinsi Bali). *Ejournal undiksha Jurnal Ilmiah Akuntansi Dan Humanika*. Vol 1, No 1: Edisi Desember 2011
12. Augusty, Ferdinand. 2012. Metode Penelitian Manajemen: Pedoman Penelitian untuk skripsi, Tesis dan Disertai Ilmu Manajemen. Semarang: Universitas Diponegoro.
13. Austin et al., 2004. J.E. Austin, H. Leonard, E. Reficco, J. Wei-Skillern. Corporate Social Entrepreneurship: A New Vision of CSR. Boston: Harvard Business School Working Paper No. 05-021.
14. Ayu Wimba, I Gusti. 2015. Pengaruh Modal Sosial Terhadap Orientasi Kewirausahaan dan Biaya Transaksi untuk Meningkatkan Kinerja Usaha pada UKM Kerajinan Kayu di Provinsi Bali. Disertasi. Denpasar: Universitas Udayana
15. Badan Pusat Statistik (BPS) Provinsi Bali. 2017. Statistik Provinsi Bali 2016: Bali Dalam Angka.
16. Baker W. 2001. Achieving Success Through Social Capital. San Francisco, CA: Jersey Bass
17. Bank Indonesia. 2016. Peranan Lembaga Perkreditan Desa (LPD) dalam Mendukung Perekonomian Bali. Hasil Penelitian. Bali: Kantor Perwakilan Bank Indonesia Denpasar. Tidak Dipublikasikan
18. Beal, Reginald M., 2000. Competing Effectivity Environmental Scanning Competitive Strategy and Organizational Performance the Small Manufacturing Firm, *Journal of Small Business Management*, Vol. 22. pp.27- 45
19. Bhuono, Agung Nugroho, 2005. Strategi Jitu Memilih Metode Statistik Penelitian dengan SPSS. Yogyakarta: Penerbit Abdi
20. Bornstein, D. 2004. How to Change the World: Social Entrepreneurs and the Power of New Ideas? Oxford: Oxford University Press
21. 2006. How to change the world? Socio entrepreneurs and the power of new ideas. Oxford: Oxford University Press
22. Light, Paul Charles. 2004. Sustaining Nonprofit Performance: the Case for Capacity Building and the Evidence to Support it. Washington, D.C: Brookings Institution Press.
23. 2006. Reshaping Social Entrepreneurship. *Stanford Social Innovation Review*

24. Carton, Robert B & Hofer, Charles W. 2006. *Measuring Organizational Performance Matric for Entrepreneurship and Strategic Management Research*. Glensanda House, United Kingdom: Published by Edward Elgar Publishing Limited
25. Casson M, Godley A. 2000. *Cultural Factors in Economic Growth*. Germany. Springer-Verlag Berlin-Heidelberg.
26. Casson, Mark. 2012. *Entrepreneurship (Teori, Jejaring, Sejarah)*. Jakarta: PT. Raja Grafindo Persada
27. Chin, W. W., Gopal, A. and Salinsbury, W.D. 1997. *Advancing the Theory of Adaptive Structuration: The development of a Scale to Measure Faithfulness of Appropriation*. *Information System research*, 8: 342-367.
28. Cohen Bruce J. 2009. *Peranan, Sosiologi Suatu Pengantar*. Jakarta: Rineka Cipta
29. Cohen, D & Prusak, L. (2001). *In Good Company: How Social Capital Makes Organization Work*. London: Harvard Business Press
30. Coleman, J.S. 1988. *Foundations of Social Theory*. Cambridge: Harvard University Press
31. 1998. *Social Capital in the Creation of Human Capital*, *American Journal of Sociology*, 94, Supplement. S95-S120
32. Colletta, NJ. Dan Michelle L. Cullen. 2000. *Violent Conflict and The Transformation of Social Capital, Lesson from Cambodia, Ruanda, and Somalia*. Washington: The World Bank, pp. 1-16.
33. Cooper, D. R and P. S. Schindler. 2006. *Business Research Methods*. 9th ed. New York: Mc Graw Hill Companies, Inc
34. Covin, J.G, & Slevin, D.P. 1989. *Strategic Management of Small Firms in Hostile and Benign Environments*. *Strategic Management Journal*, 10, 75-8
35. 1991. *A Conceptual Model of Entrepreneurship as Firm Behaviour*, *Entrepreneurship Theory and Practice*, 16 (1), 7-25
36. Cox Eva, 1995, *A Truly Civil Society*. Sydney: ABC Books.
37. Crossan, M.M. and Berdrov, I. 2003, "Organizational learning and strategic renewal". *Strategic Management Journal*, Vol. 24 No. 11, pp. 1087-105
38. Dart, R. 2004. "The legitimacy of social enterprise", *Nonprofit Management & Leadership*, 14:4, 411-424
39. Dasgupta P, Serageldin I. 2002. *Social Capital: A Multi-Faceted Perspective*. Washington DC: World Bank
40. Dees, J. G. 1998. *The Meaning of "Social Entrepreneurship"*. Graduate School of Business, Stanford University.
41. Dees, J. G. & Elias, J. 1998. "The challenges of combining social and commercial enterprise". *Business Ethics Quarterly*, 8:1, 165-178.
42. Fukuyama, Francis. 1995. *Trust: Kebajikan Sosial dan Penciptaan Kemakmuran*. Yogyakarta: Penerbit Qalam.
43. 1999. *Social Capital and Civil Society*. The Institute of Public Policy, George Mason University.
44. 2001. *Social Capital: Civil Society and Development*. *Third World Quarterly*, Vol 22.
45. 2008. *Trust, Kebijakan-kebijakan Sosial*. Yogyakarta: Penerbit Qolam.
46. Ghozali, Imam. 2005. *Aplikasi Analisis Multivariate dengan Program SPSS*. Semarang: BP Universitas Diponegoro
47. 2008. *Structural Equation Modelling, Edisi II*. Semarang: Universitas Diponegoro
48. 2011. *Structural Equation. Modeling, Metode Alternatif Dengan Partial Least Square PLS, Edisi 3*. Semarang: BP. Universitas Diponegoro.
49. 2014. *Structural Equation Modeling, Metode Alternatif dengan Partial Least Square (PLS). Edisi 4*. Semarang: BP. Universitas Diponegoro
50. Glueck, William F. & Jauch Laurence R. 1988. *Business Policy and Strategic Management*. New York: Mc Graw Hill
51. Gregory G. Dess and Donald W. Beard. 1984. *Dimensions of Organizational Task Environments*. *Administrative Science Quarterly*. Vol. 29, No. 1 (Mar., 1984), pp. 52-73.

- Sage Publications, Inc. on behalf of the Johnson Graduate School of Management, Cornell University
52. Hair, J. F., Black, W. C., Babin, B. J.; and Anderson, R. E. 2010. *Multivariate Data Analysis*, 7th ed. New Jersey: Pearson Prentice Hall
 53. Hartono, Jogiyanto. 2011. *Metodologi Penelitian Bisnis: Salah Kaprah dan Pengalaman-pengalaman*. Yogyakarta: BPFE
 54. Hasbullah, Jousairi. 2006. *Social Capital (Menuju Keunggulan Budaya Manusia Indonesia)*. Jakarta: MR United Press.
 55. Hatch, E., & Farhady, H. 1981. *Research Design & Statistics for Applied Linguistics*. Tehran: Rahnama Publications.
 56. Inayah. 2012. Peranan Modal Sosial dalam Pembangunan, *Ragam Jurnal Pembangunan Humaniora*, Vol 12. No 1. April 2012
 57. J. Gregory Dees. 1998. *The Meaning of "Social Entrepreneurship"*. Stanford University.
 58. Jhingan, M.L. 2000. *Ekonomi Pembangunan dan Perencanaan*. Jakarta: PT Raja Grafindo Persada
 59. Jürgen G. Backhaus. 2003. *Joseph Alois Schumpeter: Entrepreneurship, Style and Vision*. Springer Science+. New York: Business Media
 60. K. T. Windartini, dkk., 2014. Analisis Faktor-Faktor Yang Mempengaruhi Kredit Macet Pada Lembaga Perkreditan Desa (Lpd) Kecamatan Denpasar Timur. Periode 2010 sampai dengan 2012. *e-Journal S1 Akuntansi Universitas Pendidikan Ganesha Jurusan Akuntansi S1 (Volume 2 No: 1 Tahun 2014)*.
 61. Kane, Hillary., Ragsdell, Gillian., and Oppenheim, Charles. 2006. *Knowledge Management Methodologies*. *Electronic Journal on Knowledge Management*, vol 4, issue 2 (2006), p 141 - 152. Retrieved April 19, 2011, from www.ejkm.com.
 62. Kanter, R.M. and Summers, D.V. 1987. *Doing Well, While Doing Good: Dilemmas of Performance Measurement in Non-Profit Organizations and the Need for a Multi-Constituency Approach*. *The Non-Profit Sector: A Research Handbook*. W. W. Powell. Yale: Yale University Press
 63. Keats, Barbara W. & Hitt, Michael A. 1988. A Causal Model of Linkages Among Environmental Dimensions, Macro-Organizational Characteristics, and Performance, *Academy of Management Journal*, 31, 570-596
 64. Kerlinger. 2006. *Asas-Asas Penelitian Behavioral*. Yogyakarta: Gadjah Mada University Press.
 65. Laili, Nelly Nur. 2007. Analisis Faktor-Faktor yang Mempengaruhi Pertumbuhan Ekonomi DIY tahun 1990-2004, Skripsi, FE UII, tidak dipublikasikan, Yogyakarta.
 66. Leksono, S. 2009. *Runtuhnya Modal Sosial, Pasar Tradisional, Perspektif Emik Kualitatif*. Malang: CV. Citra Malang
 67. Lynn Barendsen and Howard Gardner. 2004. Is the social entrepreneur a new type of leader. *Leader to Leader: Frances Hesselbein Leadership Forum*. Volume 2004, Issue 34, Pages 43-50
 68. Margono. 2010. *Metodologi Penelitian Pendidikan*. Jakarta: Rineka Cipta
 69. Mort, G. S., Weerawardena, J. & Carnegie, K. 2003. "Social entrepreneurship: Towards conceptualization", *International Journal of Nonprofit & Voluntary Sector Marketing*, 8, 1, pp. 76.
 70. Nelson, R.; Krashinsky, M, 1973. Two major issues of public policy: Public policy and organization of supply. In: R. Nelson & D. Young (Eds), *Public subsidy for day care of young children* (pp. 47- 69). Lexington, MA: DC Heath & Co. *The new nonprofit almanac & desk reference*. (2002). San Francisco: Jossey-Bass.
 71. Nelson, Richard and Michael Krashinky. 1973. "Two Major Issues of Policy: Public Subsidy and Organization of Supply," in *Public Policy for Day Care of Young Children*. D. Young and R. Nelson (Eds), Lexington, Mass: D.C. Heath, 9 – 21
 72. Nicholls, A. 2006. Playing the Field: A New Approach to the Meaning of Social Entrepreneurship. *Social Enterprise Journal*, 2.1, pp. 1–5
 73. Norton, David, P., and Kaplan, Robert. S. 1992. *The Balanced Scorecard – Measures that Drive Performance*. Boston: Harvard Business Review, Reprint 92105

74. Onyx, J,1996, "The Measure of Social Capital" paper presented to Australian and New Zealand Third Sector Research Conference on Social Cohesion, Justice and Citizenship: The Role of Voluntary Sector. Wellington: Victoria University
75. Penrose, Edith T. 1959. The Theory of the Growth of the Firm. Oxford: Blackwell
76. Peraturan Daerah Nomor 06 Tahun 1986 Tentang Kedudukan, Fungsi dan Peranan Desa Adat sebagai Kesatuan Masyarakat Hukum Adat dalam Propinsi daerah Tingkat I Bali
77. Peraturan Daerah Nomor 2 Tahun 1988 Tentang Lembaga Perkreditan Desa^[1]
78. Peraturan Daerah Nomor 3 Tahun 2001 Tentang Desa Pekraman^[1]
79. Peraturan Daerah Nomor 8 Tahun 2002 Tentang Lembaga Perkreditan Desa
80. Peraturan Daerah Nomor 3 Tahun 2003 tentang Lembaga Perkreditan Desa
81. Peraturan Daerah Nomor 12 Tahun 2003 tentang Prinsip Kehati-hatian dalam Mengelola Lembaga Perkreditan Desa (LPD) Bali.
82. Peraturan Daerah Nomor 4 tahun 2012 tentang Perubahan Kedua Atas Peraturan Daerah Provinsi Bali Nomor 8 Tahun 2002 Tentang Lembaga Perkreditan Desa
83. Peraturan Daerah Nomor 11 Tahun 2013 tentang Petunjuk Pelaksanaan Peraturan Daerah Provinsi Bali Nomor 8 Tahun 2002 tentang Lembaga Perkreditan Desa Peraturan Daerah Nomor 12 Tahun 2003 tentang Prinsip Kehati-hatian dalam Mengelola Lembaga Perkreditan Desa (LPD) Bali.
84. Peraturan Daerah Nomor 3 Tahun 2017 Tentang Lembaga Perkreditan Desa
85. Peraturan Daerah Nomor 44 Tahun 2017 Tentang Peraturan Pelaksanaan
86. Peraturan Daerah Provinsi Bali Nomor 3 Tahun 2017 Tentang Lembaga Perkreditan Desa
87. Putnam R D. 1993. "The Prosperous Community: Social Capital and Public Life, The American of Prospect, Vol 13, pp 35-42
88. Rasmien Adi, I Nyoman, dkk. 2017. The Role of Government in Community Based Tourism and Sustainable Tourism Development at Penglipuran Traditional Village – Bali. IOSR Journal of Humanities and Social Science (IOSR-JHSS) Volume 22, Issue 6, Ver.13 (June. 2017) PP 15-20^[1]e-ISSN: 2279-0837, p-ISSN: 2279-0845. www.iosrjournals.org
89. Reis, Tom. 1999. Unleashing the New Resources and Entrepreneurship for the Common Good: A Scan, Synthesis and Scenario for Action. Battle Creek, MI: W.K. Kellogg Foundation. pp 27
90. Riawan, Tjandra dkk. 2005. Peningkatan Kapasitas Pemerintah Daerah Dalam Pelayanan Publik. Yogyakarta: PT. Pembaharuan
91. Santoso, Singgih. 2005. Menguasai Statistik di Era Informasi Dengan SPSS 12. Jakarta: PT. Elex Media Komputindo
92. Sarah H. Alvord, L. David Brown, Christine W. Letts,. 2004. Social Entrepreneurship and Societal Transformation, An Exploratory Study. First Published
93. Schumpeter, Joseph. 1951. "Change and the Entrepreneur" in Essays of J.A.
94. Sekaran, Uma. 2003. Metodologi Penelitian Untuk Bisnis. Jakarta: Salemba Empat
95. 2009. Research Methods for Business: Metodologi Penelitian untuk Bisnis. Edisi 4. Buku 1. Jakarta: Salemba Empat
96. Solimun, MS. 2004. Pemodelan Statistika: Structural Equal Modelling (SEM) Aplikasi Amos. Pekanbaru: Diklatpada Universitas.
97. Sugiyono. 2001. Metode Penelitian Administrasi. Bandung: CV. Alfabeta
98. 2009. Metode Penelitian Kuantitatif, Kualitatif dan R&D. Bandung: CV. Alfabeta.
99. 2011. Metode penelitian Kombinasi (Mix Methods). Bandung: CV. Alfabeta
100. Suharto. 2007. Pekerjaan Sosial di Dunia Industri: Memperkuat Tanggungjawab Sosial Perusahaan (Corporate Social Responsibility)". Bandung: Refika Aditama.
101. Sukirno, S. 2006. Pengantar Bisnis. Jakarta: Penerbit Kencana
102. Sumarni. 2013. Intervensi Pemerintah, Antara Kebutuhan Dan Penolakan Di Bidang Ekonomi. *ECONOMICA. Journal of Economic and Economic Education* Vol.1 No.2 (183-194)

103. Tan, Wee-Ling., Williams, John., dan Tan, Teck-Meng. (2005). 'Defining the 'Sosial' in 'Sosial Entrepreneurship': Altruism and Entrepreneurship'. *International Entrepreneurship and Management Journal* 1, pp 353-365
104. Thoha, Miftah. 2002. *Perilaku Organisasi*. Jakarta: Raja Grafindo Persada
105. Thompson, L. John. 2002. *The World of the Social Entrepreneur*. *International Journal of Public Sector Management*, Vol. 15 Issue: 5, pp. 412-431.
106. Undang-Undang Republik Indonesia Nomor 1 Tahun 2013 Tentang Lembaga Keuangan Mikro
107. Weisbrod, B. A. 1977. *The Voluntary Nonprofit Sector: An Economic Analysis*. Lexington, MA: Lexington Books.
108. Wellman, Barry and Berkowitz, S.D. (eds.), 1988/1997. *Social Structure: A Network Approach*. Greenwich, Conn. JAI Press
109. Wiklund Johan. 1999. *The Sustainability of the Entrepreneurial Orientation-Performance Relationship*, *Entrepreneurship Theory and Practice*, Baylor University.
110. Woolcock, M. 1998. *Social Capital and Economic Development: Toward o Theoretical Synthesis and Policy Framework*. *Theory and Society*, 27 (2): 151 – 208.
111. Zadek, Simon and Stephen, Thake. 1997. "Send in the Social Entrepreneurs" in *New Statesman*, June 20, Vol. 26, Issue 7339, P. 31
112. Zulfanef. 2006. *Pemodelan Persamaan Struktur dan Aplikasinya menggunakan AMOS 5*. Bandung: Pustaka

DOI <https://doi.org/10.18551/rjoas.2018-11.11>

IMPLEMENTATION OF TAM IN EXPLAINING THE INTENTION TO REPURCHASE THE INTERNET PACKAGE IN MYTELKOMSEL APPLICATION

Nangi Iman Yosafat

University of Udayana, Bali, Indonesia

E-mail: imanyosafat00@gmail.com

ABSTRACT

This study aimed to explain the effect of usability on the attitude of repurchase the internet package, to explain the effect of ease of use on the attitude of repurchase the internet package, to explain the effect of usability on the intention to repurchase an internet package and to explain the effect of ease of use on the intention to repurchase an internet package. The number of samples used was 60 respondents who repurchased the internet package through MyTelkomsel live in Denpasar City with the sampling technique using purposive sampling method. This research use PLS (Partial Least Square) analysis technique. The results showed that (1) usability has positive and significant effect on attitude, (2) ease of use has positive and significant effect on attitude, (3) usability negatively affects the intention to repurchase, (4) ease of use has positive and significant effect on the intention to repurchase, (5) attitude has positive and significant effect on the intention to repurchase. Based on the results of mediation of usability testing has a positive and significant effect on the intention to repurchase through the full mediation attitude and ease of use has positive and significant effect on the intention to repurchase through the partial attitudes (partial mediation). The implication of the results of this study is usability can be improved by paying attention to the dimensions of improving job performance thus the intention to repurchase the internet package in MyTelkomsel is getting increase, ease of use can be increased by taking into account the easy to get the system to do what he / she wants to do intention to buy again. Internet package in MyTelkomsel is getting increase, attitudes can be increased by paying attention to the dimensions of the cognitive components thus the intention to repurchase the internet package in MyTelkomsel is getting increase, the last intention to repurchase can be increased by paying attention to the dimensions of explorative interest.

KEY WORDS

Usability, ease of use, attitude, intention to repurchase.

The rapid development of the internet requires provider companies to provide the best and quality services in order to attract customers to use the services offered through the product of the provider company. In January 2016, the number of active internet users in Indonesia reached 88.1 million and 79.0 million for active social media users. The data was obtained from the We Are Social survey results; Global survey institutions related to digital data, social, trends and statistics of 2016.

Telkomsel operator has the largest network coverage in Indonesia, which provides network coverage that reaches more than 95% of Indonesia's population and Telkomsel is claimed to be the only Indonesian operator covering all countries, provinces and districts, both sub-districts from Sumatra to Papua. PT. Telkomsel has a slogan "*begitu dekat begitu nyata*". Through this slogan, it is hoped that Telkomsel will become the most mobile telecommunications service company with the highest number of customers and always prioritize the highest quality and availability of network capacity in providing the best service to its customers.

Behind its big name, Telkomsel also has various problems that become complaints of its customers, such as related to internet packages, telephone packages and internet networks or telephone. Related to internet packages, Telkomsel has launched one of its applications, named *MyTelkomsel*. Based on a preliminary survey conducted on 100 customers, 65 customers complained that they were confused about the number of internet

packages they had. Some even don't understand that the facilities provided by Telkomsel can be used by the customers themselves.

MyTelkomsel is a versatile application that comes with a new design and better user experience for Telkomsel services. One of the feature that can be use by the Telkomsel customers is to purchase credit or internet packages. But behind the big names and features of *MyTelkomsel* itself, it turns out there are still many customers who are reluctant to buy internet package at *MyTelkomsel*, and some even do not know what *MyTelkomsel* is and its uses. Therefore, the researcher wants to know how the influence or effect of TAM towards the intention of customers to purchase internet package through *MyTelkomsel* application.

Technology Acceptance Model (TAM) is used as the basis of various Rucker technology information system studies (2009). Ratuolivia (2012) explained that TAM is an information system theory that makes models about how users want to accept and use technology. According to Piriyaikul et al. (2015) perceptions of usability also play a role in purchasing Telkomsel internet packages. Usability perception is defined as "the degree to which a person believes that using a particular system will improve his job performance". In Kamelia's study (2012), stated that the usability perception has positive and significant effect on attitude. In Lutfi et al study. (2013) stated that the ease perception of use has positive and significant effect on attitude. In Rendy and Santika study (2014) stated that the perception of usability has positive and significant effect on intention. Habibi and Zaki (2012) stated that the perception of usability has positive and significant effect on intention. However, different results come from Khakim and Kharisma Nur study (2012) stated that the perception of usability has negative and insignificant effect on intention. In Wahyuningtyas and Widiastuti study (2015) stated that the perceived ease of use had positive and significant effect on intention. This research was conducted based on two reasons: (1) the existence of research problems found in the field, and (2) there is a research gap that has been disclosed in the previous paragraph. The object of this research is *MyTelkomsel* Application as a versatile application that comes with new designs and better user experience for Telkomsel services.

LITERATURE REVIEW

Technology Acceptance Model (TAM) defines two perceptions of technology users who have an impact on their acceptance. TAM emphasizes user perceptions of "how is the system works for me" and "how easy is this system used" are two strong factors that influence the acceptance of technology and is a fundamental determinant of user acceptance. The purpose of TAM is "to provide an explanation of computer acceptance determination which is generally able to explain user behavior in various end-user computing technologies and user populations".

According to Azwar (2010), attitude is a person's closed response to a stimulus or a particular object, which involves some factors such as opinion and emotion concerned (happy-unhappy, agree-disagree, good-bad and so forth).

The usability perception is a level where a person believes that a particular use of technology will improve the work performance of that person (Rucker, 2009). Basgoze and Ozer (2012) define the usability perception as a construct of one's trust that the use of a particular technology will be able to improve their performance.

The ease perception of use is a level where a person believes that technology is easy to understand. Basgoze and Ozer (2012) state that the ease perception of use of a technology is defined as a measure in which a person believes that the technology can be easily understood and used. According Jogiyanto (2009) ease perception of use is defined as the extent to which a person believes that using a technology will be free from business.

Repurchase Intention is the intention to repurchase a product twice or more, both for the same and different products (Zeng *et al*, 2009). This repurchase includes 2 characteristics; intention and behavior. According to Regina et al. (2015) repurchase intention is a decision making process carried out by consumers after making a purchase of the product offered or needed by the consumer, when a consumer receives a positive

response to previous actions, there will be reinforcement, with positive thinking on what they receive allows individuals to make repeated purchases.

Research Hypothesis:

- H₁: Usability perception has significant positive effect on attitude;
- H₂: Ease perception of use has significant positive effect on attitude;
- H₃: Usability perception has significant positive effect on the intention to repurchase;
- H₄: Ease perception of use has significant positive effect on the intention to repurchase;
- H₅: Attitude has significant positive effect on the intention to repurchase.

METHODS OF RESEARCH

The population in this study is all the Telkomsel customers who repurchase internet package in *MyTelkomsel* application. As a material consideration in determining the decision of at least one to three times the purchase, and is in the age range of 17 to 56 years and above, thus the population cannot be determined infinite. The criteria for determining the sample related to education is minimum high school or equivalent.

The number of samples in this study were 60 respondents from the entire area of Denpasar city, this was based on a good number of samples, that is 1 - 5 x the number of parameters estimated (Ferdinand, 2016:44). The criteria adjusted to this study resulted in a range of (1 - 5) x 15 = 15 to 75. The sample determination technique used in this study was *purposive sampling* technique. This means that anyone who is met by chance and meets the criteria can be used as a sample. The criteria referred to the respondents who live in Denpasar City and the respondents who use *MyTelkomsel* application and repurchase internet packages through *MyTelkomsel* for consideration in determining a decision at least one to three times.

RESULTS AND DISCUSSION

In this structural model, there are four endogenous (dependent) variables include: attitude (Y₁) and intention to repurchase (Y₂). The coefficient of determination (R²) of each dependent variable presented in Table 1.

Table 1 – Evaluation Result of Goodness of Fit

No	Dependent variabel	R-square
1	Attitude (Y ₁)	0,796
2	Intention to repurchase (Y ₂)	0,968

Calculation: $Q^2 = 1 - [(1 - R_1^2) (1 - R_2^2)] = 0,988$

Source: Smart PLS 2.0 processed data, 2017.

Based on Table 1 above, the evaluation results of the structural model obtained the value of Q² is 0.988. Thus, the results of this evaluation prove that the structural model has a goodness of fit model. This result can be interpreted that the information contained in the data is 98.8 percent can be explained by the model, while the remaining 1.2 percent is explained by errors and other variables that are not in the model.

Validation test results of the path coefficients on each path for direct effect and effect can be presented in the following Table 2.

Table 2 – Direct Effect Testing Results

No	Construct	Correlation coefficient	t Statistics	Status
1	Usability (X ₁) → Attitude (Y ₁)	0,590	5,966	Accepted
2	Ease of Use (X ₂) → Attitude (Y ₁)	0,357	3,061	Accepted
3	Usability (X ₁) → Intention to repurchase (Y ₂)	-0,029	0,560	Rejected
4	Ease of Use (X ₂) → Intention to repurchase (Y ₂)	0,115	2,415	Accepted
5	Attitude (Y ₁) → Intention to repurchase (Y ₂)	0,914	15,054	Accepted

Source: Data processed by Smart PLS 2.0.

Usability (X_1) proved has positive and significant effect on attitude (Y_1). This result is shown by the path coefficient that has positive value of 0.590 with t -statistic= 5,966 (t -statistic > 1.96), thus the hypothesis-1 (H_1): usability has positive and significant effect on attitude can be proven. The ease of use (X_2) has a positive and significant effect on attitude (Y_1). This result is shown by the path coefficient that has positive value of 0,357 with t -statistic= 3,061 (t -statistic > 1.96). This result indicates that hypothesis-2 (H_2): the ease of use has positive and significant effect on attitude proven empirically. Usability (X_1) has positive and significant effect on the positive intention to repurchase (Y_2). This result is shown by the path coefficient that has positive value of -0,029 with t -statistic= 0,560 (t -statistic < 1.96). This result indicates that hypothesis-3 (H_3): Usability has negative and significant effect on intention to repurchase cannot be proven. The ease of use (X_2) has positive and significant effect on the positive intention to repurchase (Y_2). This result is shown by the path coefficient that has positive value of 0,115 with t -statistic= 2,415 (t -statistic > 1.96). This result indicates that hypothesis-4 (H_4): the ease of use has positive and significant effect on intention to repurchase. Attitude (Y_1) has positive and significant effect on the positive intention to repurchase (Y_2). This result is shown by the path coefficient that has positive value of 0,914 with t -statistic= 15,054 (t -statistic > 1.96). This result indicates that hypothesis-5 (H_5): has positive and significant effect on intention to repurchase can be proven.

In testing the following hypothesis, the mediating role of attitude variable will be examined (Y_1) on the indirect effect of usability (X_1) and the ease of use (X_2) on the intention to repurchase (Y_2). The results of hypothesis testing of indirect effect in this study then were presented in the following Table 3.

Table 3 – Recapitulation of Test Results for Mediation Variables

No	Mediation of Attitude Variable (Y_1) on:	Effect				Status
		(a)	(b)	(c)	(d)	
1	Usability (X_1) → intention to repurchase (Y_2)	-0,029 (NoSig.)	0,530 (Sig.)	0,590 (Sig.)	0,914 (Sig.)	Full Mediation
2	The ease of use (X_2) → intention to repurchase (Y_2)	0,115 (Sig.)	0,422 (Sig.)	0,357 (Sig.)	0,914 (Sig.)	Partial Mediation

status: Significant (Sig.) = t -statistic > 1.96 on α : 5%

Attitude (Y_1) able to mediate significantly on the indirect effect of usability (X_1) towards the intention to repurchase (Y_2). This result is shown if the effect of independent variable on mediating variable (c) and the influence of mediating variable on the dependent variable (d) is significant, the direct influence of the independent variable on the dependent variable on the model involves the mediating variable (a) non-significant, the direct influence of the independent variable on the dependent variable without involving the mediating variable (b) is significant, it is called as *complete/full mediation*. The results of this test determine that usability (X_1) can affect the intention to repurchase (Y_2) through attitude (Y_1) which can be proven empirically. Based on these results, the more respondents understand the usability of *MyTelkomsel* application and they have good attitude toward this application, hence, the intention to purchase an internet package is getting increase. Other information that can be conveyed is the mediating effect of attitude variables (Y_1) on the indirect effect of usability (X_1) towards the intention of repurchase (Y_2) is *full mediation*. This finding shows that the attitude variable (Y_1) is a determining variable on the effect of usability (X_1) towards the intention of repurchase (Y_2).

Attitude (Y_1) is able to mediate significantly on the indirect effect of ease of use (X_2) towards the intention to repurchase (Y_2). This result is shown if the influence of independent variable on mediating variable (c) and the influence of mediating variable on the dependent variable (d) is significant, the direct influence of the independent variable on the dependent variable on the model involving the mediating variable (a) is significant, and the direct influence of the independent variable on the dependent variable without involving the mediating variable (b) is significant, it is said to be a *partial mediation* variable. The results of this test determine that ease of use (X_2) can affect the intention to repurchase (Y_2) through attitude (Y_1) able to be proven empirically. Based on these results can be interpreted, the

more respondents understand the ease of use of *MyTelkomsel* application and respondents have a good attitude towards *MyTelkomsel* application, then the intention to repurchase the internet package is increasing. Other information is the mediating effect of attitude variable (Y_1) on the indirect effect of ease of use (X_2) towards the intention to repurchase (Y_2) is partial (*parsial mediation*). This finding shows that the attitude variable (Y_1) is not a determinant variable on the effect of ease of use (X_1) towards the intention to repurchase (Y_2).

In order to determine the overall effect for each relationship between the variables under study, a summary of the direct, indirect and total effects were presented in the following Table 4.

Table 4 – Calculation of Direct, Indirect and Total effects

No	Variable Relationship	Direct Effect	Indirect Effect	Total Effect
1	Usability (X_1) → Attitude (Y_1)	0,590 ^S	-	0,590
2	Ease of use (X_2) → Attitude (Y_1)	0,357 ^S	-	0,322
3	Usability (X_1) → intention to repurchase (Y_2)	-0,029 ^{NS}	0,539 (0,590* 0,914)	0,510
4	Ease of use (X_2) → intention to repurchase (Y_2)	0,115 ^S	0,326 (0,357* 0,914)	0,441
5	Attitude (Y_1) → intention to repurchase (Y_2)	0,914 ^S	-	0,914

Source: Data processed by Smart PLS.

The information obtained from Table 5.18 above is the mediating effect of attitude variable (Y_1) on the indirect effect of usability (X_1) towards the positive intention to repurchase (Y_2) more, is with a path coefficient of 0.539, compared to the indirect effect of ease of use (X_2) towards the positive intention to repurchase (Y_2) with the resulting path coefficient of 0.326. Therefore overall the path of use (X_1) → attitude (Y_1) → intention to repurchase (Y_2) larger with a total effect obtained is 0.510, compared to the path of ease of use (X_2) → attitude (Y_1) → intention to repurchase (Y_2) with a total effect of 0.441. This finding shows a better use of making respondents feel satisfied with *MyTelkomsel* application thus it can increase the intention to repurchase the internet package in *MyTelkomsel* application.

CONCLUSION AND SUGGESTIONS

Usability has a positive and significant effect on attitude. This result means that the higher use of respondents to *MyTelkomsel*, attitude of respondents towards *MyTelkomsel* is getting better. Ease of use has a positive and significant effect on attitude. This result means that the higher ease of use of *MyTelkomsel*, attitude of respondents towards *MyTelkomsel* is getting better.

Usability has a negative and significant effect on repurchase intention. This result means that usability cannot affecting the intention to repurchase, the better use of respondents to *MyTelkomsel* is not necessarily to increase the intention to repurchase *MyTelkomsel* internet package. The findings of this study illustrate that usability is not a key determinant variable in increasing the intention to repurchase internet packages.

Ease of use has a positive and significant effect on the intention to repurchase. This result means that the higher ease of use of *MyTelkomsel*, attitude of respondents towards *MyTelkomsel* is getting better. The findings of this study illustrate that ease of use tends to be "clear and understandable, does not require a lot of mental effort, is easy to use, and easy to get the system to do what he / she wants to do" can increase the intentions to repurchase reflected in referential, explorative, transactional, and preferential interests.

Attitude has positive and significant effect on the intentions to repurchase. This result means that the better attitude of respondents towards *MyTelkomsel*, the intention to purchase *MyTelkomsel* internet package by the respondents is getting increase. The findings of this study illustrate that attitude which is reflected in cognitive, affective, and conative component can increase the intentions to repurchase reflected in referential, explorative, transactional, and preferential interests.

The scope of the research is only limited to Grapari Telkomsel Denpasar City, thus the results may have differences regarding to the perception or level of interpretation of each respondent in other regions. This study uses a cross-sectional time design or at a certain time point, but on the other hand this study observes the dynamics of the conditions that each period changes. Therefore, this research is important to be re-examined in the future.

REFERENCES

1. Azwar, S. 2010. Sikap Manusia Teori and Pengukurannya. Yogyakarta: Pustaka Pelajar.
2. Alfin Lutfi., Heru Susilo., and Mochhamad Al Musadieq. 2013 Pengaruh Kemudahan Penggunaan Terhadap Kemanfaatan Pada Sikap Pengguna E-Learning. *Jurnal Administrasi and Bisnis (JAB)* Vol.6 No 2. pp 269-286.
3. Basgoze., Ozer Leyla., and Pinar. 2012, Effects Of Brand Credibility On Technology Acceptance Model: Adaption Of The Model To The Purchase Intention, *International Journal Humanities And Social Science*, Vol. 2 No 20. pp. 126-141
4. Ferdinand Augusty. 2016. Metode Penelitian Manajemen: Pedoman Penelitian untuk skripsi, Tesis and Disertai Ilmu Manajemen. Semarang: Universitas Diponegoro.
5. Habib Hanafi., Hadi., and Heru. 2013. Pengaruh Persepsi Kemanfaatan and Persepsi Kemudahan Website Ub Terhadap Sikap Pengguna Dengan Pendekatan TAM (Survei Pada Anggota Website www.Ub.Ac.Id Mahasiswa FIA Bisnis and Publik TA 2011-2012 Universitas Brawijaya Malang). *Jurnal Ilmu Administrasi. Universitas Brawijaya Malang*. Vol.9 No 1. pp 81-100
6. Ibna Kamelia. 2012. Pengaruh Manfaat and Kegunaan Yang Dirasakan Terhadap Sikap and Niat Pembelian Ulang Online Pada Phee Boutiq Jember (Studi Kasus pada Phee Boutiq Jember). *Jurnal Akuntansi. FE Universitas Muhammadiyah Jember*. Vol. 39. No. 12. pp 899-929
7. Jogiyanto, 2009. Sistem Informasi Keperilaku. Edisi Revisi. Yogyakarta: Andi Offset.
8. Khakim. dan Kharisma Nur. 2012. Analisis Faktor-Faktor Yang Mempengaruhi Penerimaan and Niat Penggunaan Software Akuntansi MYOB Dengan Menggunakan Pendekatan Technology Acceptance Model (TAM). *Jurnal Fakultas Ekonomi. Universitas Diponegoro Semarang*. Vol. 36. No.11. pp.919-940
9. Made Rendy. dan Wayan Santika. 2014. Pengaruh Persepsi Kemudahan Penggunaan, Kegunaan Yang Dirasakan, and Tingkat Pendidikan Terhadap Niat Berbelanja Kembali Pada Situs Tokobagus.Com. *E-Jurnal Ekonomi and Bisnis. Universitas Udayana* Vol. 5 No. 9. Pp.2815-2833
10. Piriyaikul, M., R. Piriyaikul., O. Chuachareon., M. Boonyoung., P. Piriyaikul., I. Piriyaikul. 2015. "Effects of Trust, Satisfaction and Factors Corresponding to TAM on Intention to Reuse Internet Business Transaction" *International Review of Management and Business Research*. Vol. 4 No. 3. pp. 344-358
11. Ratu olivia. 2012. Faktor - faktor yang Mempengaruhi Minat Penggunam E-Commerce dengan Menggunakan Technology Acceptance Model (TAM). Surabaya: Sekolah Tinggi Ilmu Ekonomi Perbanas. Vol. 17. No. 2. pp 96-113
12. Regina., Andini., and Ayu. 2015. Implementasi Program Posyandu Menggunakan Technology Acceptance Model (TAM). *Jurnal Fisip Unpar*. Vol. 2. No. 3. pp. 1-8
13. Rocker, C. (2009). Perceived Usefulness And Perceived Easy-Of-Use Of Ambient Intelligence Applications In Office Environments. In: M, Kuroso (Ed.): Human-Centered Design, HCII 2009, LNCS 5619. Springer Verlag, Heidelberg, Germany, Pp. 1052-1061.
14. Saputro. dan Sukirno. 2013. Pengaruh Persepsi Kemudahan Penggunaan, Kepercayaan, Kecemasan Berkomputer and Kualitas Layanan Terhadap Niat Menggunakan Internet. *Jurnal Manajemen Ekonomi and Bisnis*. Vol. 16. No. 1. pp. 44-52
15. Wahyuningtyas., and Widiastuti. 2015. Analisis Pengaruh Persepsi Risiko, Kemudahan and Manfaat Terhadap Niat Pembelian Secara Online (Studi Kasus Pada Konsumen Barang Fashion Di Facebook). *Jurnal Kajian Bisnis*, Vol. 23, No. 2. pp. 34-45

DOI <https://doi.org/10.18551/rjoas.2018-11.12>

EFFECT OF QUALITY OF SERVICE, QUALITY PRODUCTS, SECURITY AND SATISFACTION AS MODERATING VARIABLES TO LOYALTY ON E-BANKING

Prasidya Tusta Citta Ihtisan Tri, Student of Master Accounting
Faculty of Economy and Business, University of Airlangga, East Java, Indonesia
E-mail: tustacitta@gmail.com

ABSTRACT

Decades until now, manufacturing or service industry to invest in the improvement of the technology sector. This industrial behavior is also carried out massively by the banking industry sector. Technology development in the banking sector is expected to increase efficiency and effectiveness. Satisfaction is the main thing in the service sector. The results of this study indicate that the quality of the products, and the quality of e-banking services have a positive effect on customer satisfaction. Other results show that e-banking security has no effect, and moderating variable satisfaction has no influence on e-banking user loyalty.

KEY WORDS

E-banking service, customer behavioral, system, technologies.

Several business sectors in this time have reacted or responded to competitive business by implementing *E-Business* as part of their business strategy (Ooi, Lin & Tan, 2010). Progress in Information Technology becomes a very important factor for the development of financial services in the future especially in the banking industry (Kanabiran and Narayan, 2005).

One significant area in using technology is banking marketing where this technology can make customers transact and interact with the bank without going through or going to the bank (Hughes, 2003). Approach to customer is needed in improving good relationship between bank and customer, so in development or implementation of information technology based on customer side company to know requirement from customer. The use of technology in banking such as *Automated Teller Machines*, *telebanking* and *E-banking* can reduce operational costs and on the other hand "pamper" the customers.

Social psychology research and marketing indicate individual customer differences, Clark and Mills (1993) conclude that some of these individuals prefer a simpler, more personalized form, some of the other individuals want value from the efficiency of the service and prefer impersonal. The increasing growth of internet users in the past is believed to increase internet banking or e-banking users. In Indonesia the increase of e-banking users increased by 270%, from 13.6 million customers in 2012 to 50.4 million customers by the end of 2016 and this is also supported by the increasing frequency of e-banking transactions that have an increase of 169% from 150.8 million transactions in 2012 to 405, 4 million transactions in 2016 (infobanknews.com). In Sohail and Shanungham (2003) study age and income levels are not significant with e-banking or conventional use in Malaysia.

Oruc and Tatar (2017) classifies the factors that make customers shift from conventional to user is the importance of E-banking needs, conformance, convenience, communication and e-banking customer adaptation. Agarwal et al. (2009) research resulted that in addition to convenience, users and the bank must pay attention to the security of data or customer / user information without eliminating the efficiency of e-banking.

The global business environment will affect the regional business environment. In the sense that when the global business environment is improving in terms of IT (Information Technology) innovation, the regional business in this case Indonesia will experience the same with the global business environment.

LITERATURE REVIEW

In the twentieth century, global business has increased towards the significant use of technology towards primarily e-commerce businesses, exchanges or transactions on products and services using the Internet and telecommunication networks (Kalakota and Winston, 1997). Social Cognitive Theory (SCT) is one of the strong theories that exist in Human Behavior (Bandura, 1986). SCT (Social Cognitive Theory) means that individual behavior will be influenced from the external environment. When linking e-banking customers with SCT is that the influence of external (Quality of Service, Product Quality and security) will affect consumer satisfaction on the use of e-banking.

Research Boateng et al (2016) found that e-banking system user satisfaction will be greatly influenced by web design (quality of service) and product quality and safety. Satisfaction is believed to increase the loyalty of e-banking users.

In the next section, we will explain further how the relationship of service quality, product quality and security to satisfaction and relationship satisfaction with e-banking user loyalty.

In line with SCT theory, we argue that users of e-banking system technology are influenced by the individual social environment and individual experience as users of this system, trust in the system, and the motivation of what benefits can be derived from this e-banking technology system.

In the previous section we argue that user satisfaction will be affected by service quality, product quality and security. Satisfaction or satisfaction variable becomes mediation of service quality variable, product quality and security to loyalty from users of this e-banking technology system.

Hypotheses Development. Product quality can be divided into 2 (two) elements ie visible (physical) and invisible (intangibles) (Toivonen, 2012). On product quality e-banking web design, platform design and integration between applications. Web design, platform design and integration into product quality factors can provide satisfaction to e-banking users.

H1a: Quality of e-banking products positively affects the satisfaction / satisfaction of e-banking users.

E-banking products such as internet banking, mobile banking, sms banking and other services related to electronic banking transactions. Quality of service according to Zavareh et al, (2012) mendimensikan service quality to 5 that is; efficient and reliable service, fulfillment, Security, aesthetic site, responsive and ease of use. On that basis we believe that the quality of the product will affect from the satisfaction of the users / satisfaction.

H1b: Quality of E-banking services positively affects the satisfaction / satisfaction of e-banking users.

The term of security has many perspectives. Cheung and Lee (2006) and Yousafzai et al (2009) identify the 3 being: (1) social psychological perspective (2) The personality Theories (3) sociological and economical perspectives. The research model of Bhattacharjee (2012), the model used is the psychological social model because it is believed that this model is more suitable or competent and focus on transaction and contextual with how individu is influenced from interaction with situation. In Miguenz and Gonzales (2017) studies E-trust becomes the antecedent variable of e-satisfaction towards loyalty. In this case security becomes one of the factors of this e-trust. Therefore we believe that security will affect satisfaction or satisfaction.

H1c: E-banking security positively affects the satisfaction / satisfaction of e-banking users.

The satisfaction / satisfaction of e-banking users in other literature satisfaction is grouped into 2 (two) classifications, namely (1) cognitive approach (2) emotional or affective approach (Miguenz & Gonzalez, 2017). According to Oliver (2010) said consumer satisfaction is the average assessment of the customer that the product or service available is a level of enjoyment with regard to the fulfillment of consumption. There are two assessments of consumer satisfaction namely average satisfaction and cumulative satisfaction. Heat research et al (2005) that the average consumer satisfaction directly affects repurchase.

H2: consumer satisfaction will affect the loyalty of e-banking users.

METHODS OF RESEARCH

Target of the population are individuals aged 16-60 years, East Java and e-banking users. The sampling procedure uses snowball. Data using questionnaires that are distributed online or directly. There are 2 (two) types of questions: (1) Questions about the profile of the correspondent and (2) questions about variables related to e-banking.

RESULTS OF STUDY

The result of regression test yield R^2 is 17,6%, this explains that simultaneously variable of product quality, service quality and security have influence to satisfaction equal to 17,6% while 82,4% influenced by other variable. We suspect this condition occurs because to measure the satisfaction is not simple as of our model. this is in accordance with research in bandura (1991) where in SCT will be greatly influenced by the social environment. According Narayan (2013), social environment is closely related to the virtual world. Website features are important in eliminating the use of the website.

Another variable that is not less important in e-banking satisfaction is trust. Social relationships are an important part of the social environment in SCT (Bandura, 1991). Todd's (1998) study found that one of the important keys of internet users is trust to service providers and trusts to the internet service itself. Trust is a vital concept in internet banking adoption (Lee et al, 2011; Bhashir & Madhaviah, 2015).

Ease of use or ease of use is key to e-banking satisfaction. The function of infrastructure is an important element of social environment elements (Barnett & Casper, 2001). In the case of e-banking platform can be said one of the key elements. Based on the Technology Acceptance Model, several studies or studies have found ease of you as a human predictor in adopting technology (Jaruwachiratthanakul & Fink, 2005; Yu Balaji & Khong, 2015)

Some characteristics of the website may affect the adoption of the use of technology and may affect the use of e-banking (Liang & Chen, 2009; Aldas Manzano et al., 2011; Alhudaity & Kitchen, 2009). Based on research Aladwani & Palvia (2002) and Chang & Chen (2008) recognize the uncertainty in conceptual framework. Research Fernandez et al (2006), found empirical evidence of web quality.

Partially, the quality of service has a significant effect on satisfaction. Blut et al (2015) states the same thing and is proved by a conceptual framework that consumer satisfaction results from an assessment of service quality. Product quality has a significant effect on customer satisfaction. But security has no significant effect because of the large alpha leib of 0.05%. this is in accordance with the research of Miguenz & gonzales (2017) who found that trusts in which there is security have an influence on satisfaction. Based on the above we found that H1a is accepted, H1b is accepted and H1c is not accepted.

Satisfaction has no effect on loyalty, this is not compatible with most of the studies of satisfaction with loyalty. This can happen we suspect because the data we get less. We also suspect that the variable satisfaction here is less explained by questions from the questionnaire.

CONCLUSION

In the end we come to the conclusion, this study shows that Quality of service, product quality and security simultaneously have significant to satisfaction. Then it was found that the satisfaction level of significance was greater than 0.05.

In this study concluded that satisfaction cannot be a liaison or moderator variable of service quality, product quality and security to Loyalty. This result is not in accordance with research from previous studies. Ribbink (2004) research resulted in the relation of e-quality, e-trust, e-satisfaction and e-loyalty, this model yielded 53.6% variation. In another study, based on our research, Chang & Chen (2008) produced Switching Barriers, Customer

Interface quality and satisfaction, this model resulted in 66% variation of e-loyalty in the context of online banking.

Limitation in this study is the satisfaction as an intervening to loyalty is not significant. This result occurs because we suspect the lack of correspondence so that we cannot explain the relationship of satisfaction to loyalty.

REFERENCES

1. Chong, A. Y. L., Ooi, K. B., Lin, B., & Tan, B. I. (2010). Online banking adoption: An empirical analysis. *International Journal of Bank Marketing*, 28(4), 267e287.
2. Kannabiran, G., Narayan, P. C., 2005. Deploying internet banking and e-commerce - case study of a private-sector bank in India. *Information Technology for Development* 11(4), 363–379
3. Hughes, Tim, 2003. Marketing challenges in e-Banking: standalone or integrated? *Journal of Marketing Management* 19, 1067–1085.
4. Kalakota, R., Whinston, A. B., 1997. *Electronic Commerce: A Manager's Guide*. Addison-Wesley, Reading, MA.
5. M. S. Clark, J. Mills, The difference between communal and exchange relationships, *Personality and Social Psychology Bulletin* 19 (1993) 684–691.
6. www.Infobanknews.com, 2017. "Peningkatan Terhadap E-banking". di unduh pada 1 November 2017
7. Ozlem Ege Oruç , Çigdem Tatar. 2017. An investigation of factors that affect internet banking usage based on structural equation modeling. *Computers in Human Behavior*. 66, 232-235.
8. M. Sadiq Sohail, Balachandran Shanmugham. 2003. E-banking and customer preferences in Malaysia: An empirical investigation. *Information Sciences Journal*. 150, 207-217.
9. Reeti, Agarwal, Sanjay, Rastogi, dan Ankit Mehrotra. 2009. Customers' perspectives regarding e-banking in an emerging economy. *Journal of Retailing and Consumer Service*. 16, 340-351.
10. Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall, Inc.
11. Bandura, A. (1989). Human agency in social cognitive theory. *The American Psychologist*, 44(9), 1175e1184.
12. Bandura, A. (1991). Social cognitive theory of moral thought and action. *Handbook of moral behavior and development*, 1, 45e103.
13. enry Boateng, Diyawu Rahman Adam, Abednego Feehi Okoe and Thomas Anning-Dorson. 2016. Assessing the determinants of internet banking adoption intentions: A social cognitive theory perspective. *Computer in Human Behavior*. 65, 468-478.
14. Ritva Marketta Toivonen. 2012. Product quality and value from consumer perspective—An application to wooden products. *Journal of Forest Economics*. 18, 157-173.
15. Farnaz Beheshti Zavareh, Mohd Shoki Md Ariff, Ahmad Jusoh, Norhayati, Zakuan, and Ahamad Zaidi Bahari. 2012. E-Service Quality Dimensions and Their Effects on E-Customer Satisfaction in Internet Banking Services
16. Cheung, C. M., & Lee, M. K. (2006). Understanding consumer trust in internet shopping: A multidisciplinary approach. *Journal of the American Society for Information Science and Technology*, 57(4), 479e492.
17. Yousafzai, S., Pallister, J., & Foxall, G. (2009). Multi-dimensional role of trust in Internet banking adoption. *The Service Industries Journal*, 29(5), 591e605.
18. Bhattacharjee, A. (2001). An empirical analysis of the antecedents of electronic commerce service continuance. *Decision Support Systems*, 32(2), 201e214.
19. M, Jesús Lopez-Miguens and Encarnacion, Gonzalez Vazquez. 2017. An integral model of e-loyalty from the consumer's perspective. *Computers in Human Behavior*. 72, 397-411.

20. Oliver, Richard L. (2010), *Satisfaction: A Behavioral Perspective on the Consumer*, Armonk, NY: M.E. Sharpe.
21. Parasuraman, A., Valarie A. Zeithaml and Arvind Malhotra (2005), "E-S-QUAL: A Multiple-Item Scale for Assessing Electronic Service Quality," *Journal of Service Research*, 7 (3), 213–33.
22. Narayan, B. (2013). Social media use and civil society: From everyday information behaviours to clickable solidarity. *Cosmopolitan Civil Societies: An Inter disciplinary Journal*, 5(3), 32e53.
23. Todd, R. J. (1998). From Net surfers to Net seekers: TheWWW, critical literacies and learning outcomes. In *International association of School librarianship. Selected papers from the annual conference* (p. 231). International Association of School Librarianship.
24. Lee, K. W., Tsai, M. T., & Lanting, M. C. L. (2011). From marketplace to marketpace: Investigating the consumer switch to online banking. *Electronic Commerce Research and Applications*, 10(1), 115e125.
25. Bashir, I., & Madhavaiah, C. (2015). Consumer attitude and behavioral intention towards Internet banking adoption in India. *Journal of Indian Business Research*, 7(1), 67e102.
26. Bernett, H. (2000). *E-Commerce, customer service, and the web-enabled call center* (Unpublished Manuscript).
27. Jaruwachirathanakul, B., & Fink, D. (2005). Internet banking adoption strategies for a developing country: The case of Thailand. *Internet Research*, 15(3), 295e311.
28. Yu, P. L., Balaji, M. S., & Khong, K. W. (2015). Building trust in internet banking: A trustworthiness perspective. *Industrial Management & Data Systems*, 115(2), 235e252.
29. Liang, C. J., & Chen, H. J. (2009). A study of the impacts of website quality on customer relationship performance. *Total Quality Management*, 20(9), 971e988.
30. Aldas-Manzano, J., Ruiz-Mafe, C., Sanz-Blas, S., & Lassala-Navarre, C. (2011). Internet banking loyalty: Evaluating the role of trust, satisfaction, perceived risk and frequency of use. *The Service Industries Journal*, 31(7), 1165e1190.
31. Alhudaithy, A. I., & Kitchen, P. J. (2009). Rethinking models of technology adoption for internet banking: The role of website features. *Journal of Financial Services Marketing*, 14(1), 56e69.
32. Chang, H. H., & Chen, S. W. (2008). The impact of customer interface quality, satisfaction and switching costs on e-loyalty: Internet experience as a moderator. *Computers in Human Behavior*, 24(6), 2927e2944.
33. Ribbink, D., Van Riel, A. C., Liljander, V., & Streukens, S. (2004). Comfort your online customer: Quality, trust and loyalty on the internet. *Managing Service Quality*, 14(6), 446e456.

DOI <https://doi.org/10.18551/rjoas.2018-11.13>

THE ROLE OF INCENTIVE, WORK SATISFACTION AND EMPLOYMENT MOTIVATION WITH IMPLICATIONS ON PERFORMANCE OF MARKETING EMPLOYEE AT BANK DKI

Cinintya Bintang*, Hubeis Musa, Pandjaitan Nurmala K.
School of Business, Bogor Agricultural University, Indonesia
*E-mail: b.cinintya@gmail.com

ABSTRACT

Bank DKI is ranked 4th out of a total of 27 Regional Development Banks in Indonesia. Bank DKI also recorded a decrease in lending and financing by 3.19%. Achieving satisfactory performance of a bank is inseparable from the marketing performance of the bank. One of the factors affecting employee marketing performance is incentives. This study analyzes the role of incentives, job satisfaction and work motivation that have implications on the performance of marketing employees of Bank DKI. The number of respondents studied are 142 marketing employees with purposive sampling method. Data analysis was done by using Structural Equation Modeling (SEM) and LISREL programme. The results of this study indicates that there are significant and positive relationships between incentives, job satisfaction and work motivation on the performance of marketing employees at Bank DKI. Some actions that can be made by the management of Bank DKI to improve performance such as, develop an optimal incentive system, carry out activities that can bring employees closer to each other, such as gathering and outing events, and also, conduct some useful trainings for the career development of Bank DKI marketing employees.

KEY WORDS

Bank, company performance, employee, incentives, motivation, satisfaction.

Banking is one of the financial sectors that is highly expected to play an active role in national and regional economic development. The bank has occupied a central position in the modern economy. According to Law No.10 of 1998, banks are business entities that collect funds from the public in the form of deposits and also channel them to the public in the form of credit or other forms in order to improve the standard of living of the people. Economic development in Indonesia starts from regions to the center.

The role of the Regional Development Bank is worked as a regional economic developer and driver to improve the standard of living of the community as well as provide financial development financing in the region, raise funds and implement and store regional cash (holders of regional cash storage) in addition to running banking business activities (Hasan et al 2010). The type of commercial bank that is very strategic to create economic development in the region is the Regional Development Bank (BPD). BPD works as the development and driving force of regional economies to improve the standard of living of the community, providing financing for development finance in the region. BPD has a real role and function in the context of regional economic development because BPD is able to open service networks in areas that are not economically possible for banks private. According to Bank Indonesia data there are 27 BPD in Indonesia, on average each province has one BPD and one of them is DKI Bank.

Bank DKI has a vision and mission "Being a modern and high-value regional bank that maintains a balance between profit and development in Jakarta" realizes that to achieve these objectives, it requires integrity, competent, highly dedicated and productive Human Resources (HR). Improving employee performance will bring progress to the company to be able to increase the company's profitability. The performance of a company, especially BPD is influenced by assets owned. In the Indonesian Banking Statistics data of June 2016, data was obtained that Bank DKI was ranked 4th out of a total of 27 BPD in Indonesia. The largest total assets held by Bank BJB are as much as Bank Jateng and Bank Jatim. In addition, the capital of DKI Jakarta province as the center of government and economy in

Indonesia with the highest business field growth (11.61%), should be one of the potential of Bank DKI to cover various stakeholders.

One of management's challenge is to improve employee's performance, because the success of achieving the goals and survival of the company depends on the quality of the performance of human resources. A bank's satisfactory performance achievement cannot be separated from the performance of bank marketing. According to Kasmir (2005) bank marketing is a process of creating and exchanging bank products and services aimed at meeting the needs and desires of customers by providing satisfaction. Within professional bank marketing management, hoped that it will bring customer satisfaction, so that customers are interested in the bank's products and services offered and have an impact on the bank's progress itself.

One of the bank's marketing activities is the provision of credit and financing. DKI Bank recorded credit and financing provision of Rp. 24.87 trillion or decreased by 3.19% compared to 2015 which was recorded at Rp. 25.69 trillion. The decline in lending and financing was mainly influenced by declining credit demand. Marketing employees as credit and financing drivers must be able to meet credit achievement targets by increasing performance. One of the important things of a company to improve employee marketing performance is the ability to provide an attractive compensation system and generate job satisfaction, so as to increase employee motivation and optimize its performance. One form of compensation that is interesting to study is incentives

Provision of the right incentives will make employees feel valued according to their abilities and performance. Incentives can also increase employee morale so that performance can be achieved optimally. (Darmawan, 2005). This research is needed to analyze the role of incentives, job satisfaction and work motivation on the performance of marketing employees at Bank DKI.

LITERATURE REVIEW

Incentive. Incentives are a way to motivates in the form of material, which is given as a stimulus or intentional given to the workers so that there is a great enthusiasm to increase the productivity of their work in the organization (Gorda, 2014). According to Cascio (1995), "An incentive is variable reward, granded to individuals on groups, that recognizing differences in achieving results. They are designed to stimulate greater employee effort on productivity." This means that incentives are a variable of reward given to individuals in a group, which is known based on differences in achieving work. It is designed to stimulate or motivate employees to try to improve their work productivity.

Work Satisfaction. Robbins (1996) states that job satisfaction is a general attitude of workers about their work, because generally when people discuss about employee attitudes, they meant job satisfaction. The satisfaction that an employee has for a job he is experiencing, will make the employee always do his best to do his job.

Work Motivation. Its familliar that the word motivation comes from the Latin word *movere*, which means encouragement or driving force. As we know according to KBBI, motivation is an impulse that arises in a person consciously or unconsciously to do an action with a specific purpose or efforts that can cause a person or group of people to move to do something because they want to achieve the goals they want or get satisfaction for their actions . Motivational theory is divided into two section, the theory that focuses on the process and motivation theory focuses on needs. This study uses motivational theory that focuses on needs and one of the motivational theories used is the Existence Relatedness Growth (ERG) theory.

ERG theory is almost the same as Maslow's hierarchical theory, but what distinguishes Maslow's theory with Alderfer's ERG theory is classifies needs in three groups. One's needs do not have to be fulfilled at a low level before going up to the next level or not having to be hierarchical and an individual can focus on all three simultaneous needs category (Alderfer 1989).

Employee's Performance. Performance is work achievement, a comparison between the results of work and the standards set. Performance is the result of work both in quality and quantity achieved by someone in carrying out tasks according to the responsibilities given (Mangkunegara and Anwar 2002). In the behavioral approach to management, performance is defined as the quality produced or services provided by someone who does the work (Luthans 2005). Performance is the result or level of success of a person as a whole during a certain period in carrying out tasks compared to various possibilities, such as work standards, targets or goals or predetermined criteria that have been mutually agreed (Rivai et al. 2005).

METHODS OF RESEARCH

Research was conducted on marketing employees in several Bank DKI offices, including Juanda branch office, South Jakarta branch office, and Depok branch office. Data collection was conducted in November and December 2017. The method used in determining this respondent was purposive sampling. The number of respondents in this study was 142 people. The data used in this study are primary data and secondary data. Primary data is data taken from the first source, namely from the results of face-to-face interviews with respondents. Whereas secondary data in this study came from literature, and other print media and literature relevant to research.

CONCEPTUAL FRAMEWORK

Research activities consist of identifying the role of incentives, job satisfaction, motivation on employee performance, especially employees in several marketing divisions of Bank DKI. The description of the sequence of conceptual thinking framework is as follows:

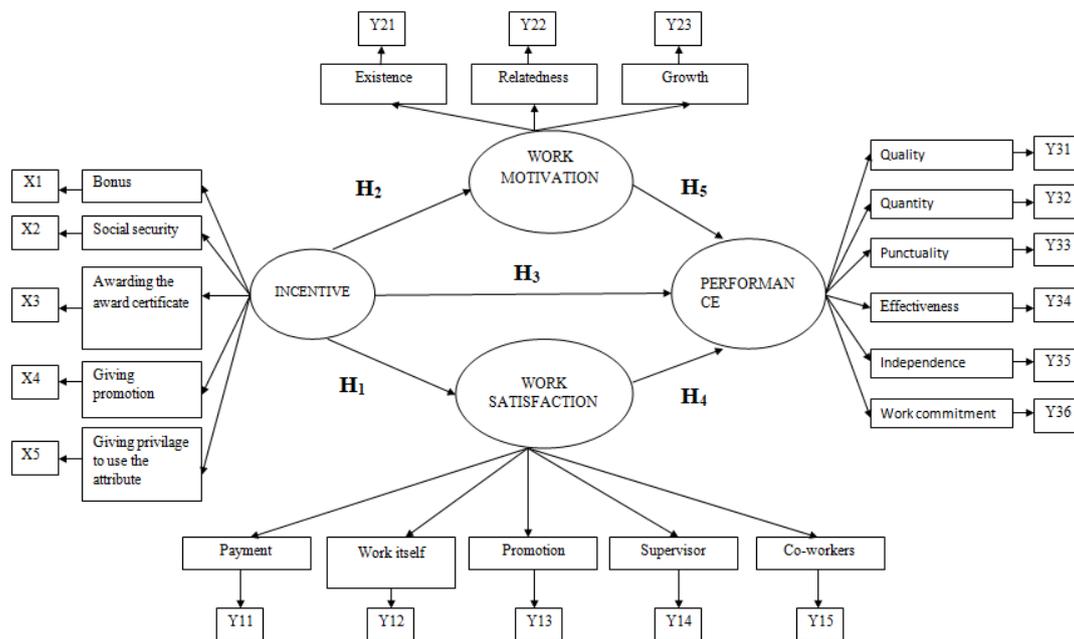


Figure 1 – Conceptual Framework of the Research

Based on the conceptual framework above, the proposed research hypotheses are:
 H1: Incentive has a positive and significant effect on work satisfaction;
 H2: Incentive has a positive and significant effect on work motivation;
 H3: Incentive has a positive and significant effect on employee performance;
 H4: Work satisfaction has a positive and significant effect on employee performance;
 H5: Work motivation has a positive and significant effect on employee performance.

RESULTS AND DISCUSSION

Respondent characteristics of this research consisted of age, work period and last educational degree. The majority of respondents of this research were female employees aged 21-30 years with the last educational level of S1, had worked for 1-5 years.

Table 3 – Analysis of Goodness of fit Model

Goodness-of-Fit	Cutt-off-Value	Hasil	Kesimpulan
RMSEA	≤ 0.08	0.061	Good Fit
GFI	> 0.90	0.97	
AGFI	> 0.90	0.95	
IFI	> 0.90	0.99	
CFI	> 0.90	0.99	
NFI	> 0.90	0.96	

As seen in Table 3, the RMSEA criteria produces a value of $0.061 \leq 0.08$ which means that the resulting model is good fit. The use of other goodness of fit criteria, namely GFI, AGFI, IFI, NFI and CFI produces a value of > 0.90 , which means that the resulting model meets the criteria of goodness of fit. The results of the conclusions show several dimensions to conclude the goodness of fit model, so hypothesis testing can be done. Here is a picture of the overall model of the results of Structural Equation Modeling.

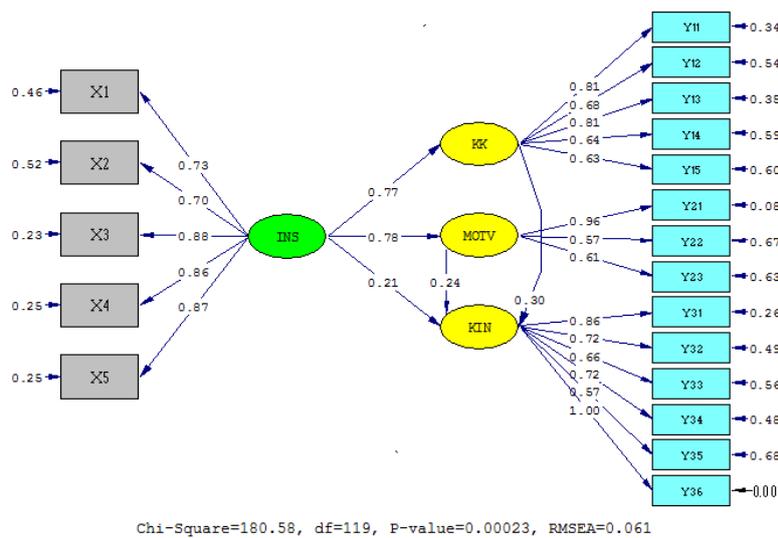


Figure 2 – The overall model of the results of Structural Equalization Modeling

Incentive correlation with indicators. The results incentive variable shows that the aspects of bonuses, social security, awarding awards, giving promotion and granting the rights to use attributes have a t-value greater than 1.96 so that the five dimensions have a real relationship to the latent variables. The dimensions of the awarding charter have the highest load factor coefficient (SLF) (0.88), followed by the right to use attributes and the dimensions of giving promotion that have SLF values almost as large as 0.87 and 0.86. The bonus dimensions and social security dimensions each have SLF values of 0.73 and 0.70. This explains the biggest incentive variables characterized by the dimensions of giving awards or incentives in the form of non-material incentives. It shows that giving non-material incentives is the most influential factor in measuring incentives.

Work satisfaction correlation with indicators. The results of work satisfaction variables obtained aspects of payment, work, promotion, supervisors, and coworkers, have a t-value greater than 1.96, so the five dimensions have a real relationship to the latent variables. The dimensions of payment satisfaction and dimensions of promotion satisfaction have the highest value factor, which is 0.81. Job satisfaction dimension itself has the second highest

load factor value of 0.68. The dimensions of supervisors and coworkers have a load factor coefficient (SLF) not too much different or only 0.01, which is 0.64 and 0.63, respectively, so they have almost the same effect. This means that the greatest variable of job satisfaction is characterized by dimensions of payment satisfaction and dimensions of promotion satisfaction. This value indicates that the role of promotion and career level is clearly the most influential factor in measuring respondents' job satisfaction.

Work motivation correlation with indicators. The results of the work motivation variable obtained aspects of Existence, Relatedness and Growth have a t-value greater than 1.96 so that the three dimensions have a real relationship to the latent variables. The dimensions of relatedness and growth have almost as strong influence values as 0.57 and 0.61 respectively. The existence dimension has the highest load factor coefficient (SLF) compared to the other two dimensions, which is 0.96. It shows that the need for existence includes physiological needs and the need for security in the company become the most influential factor in measuring employee motivation.

Work Performance correlation with indicators. Independent dimension has the lowest load factor coefficient (SLF) that is equal to 0.57 followed by the timeliness dimension which is 0.66. The quantity and effectiveness dimensions have the same charge factor coefficient (SLF) that is 0.72 so that it has the same strong influence. Judging from the value of the load factor, the dimension of work commitment is the most influential dimension to performance, which is 1.00 then followed by the quality dimension of 0.86. It shows that a strong desire to remain as an employee of the company and the desire to strive according to company's goals, as well as certain beliefs and acceptance of the company's values and goals are the main factors that concern the DKI Bank marketing employees in their work.

Hypothesis. Data processing with SEM shows the results of the path diagram which is the result of testing the hypothesis summarized in Table 4.

Table 4 – Test Hypothesis

Variabel	Loading Factors	t-Table ($\alpha=5\%$)	Path Coefficient	Conclusion
Incentive → Work Satisfaction	21,84	1,96	0,77	H1 Accepted
Incentive → Motivation	13,93	1,96	0,78	H2 Accepted
Incentive → Work Performance	2,85	1,96	0,21	H3 Accepted
Work Satisfaction → Work Performance	2,00	1,96	0,30	H4 Accepted
Motivation → Work Performance	2,59	1,96	0,24	H5 Accepted

The results of hypothesis testing show incentives have a positive and significant effect on job satisfaction of 0.77, meaning that the better the incentive, the more job satisfaction of employees. This is in line and strengthens some of the results of previous studies such as Astuti et al. (2009) and Apsari et al (2017) which state that incentives have a strong relationship with job satisfaction.

Incentives have a positive and significant effect on motivation of 0.78, meaning that the better the incentives, the more motivated employees of Bank DKI marketing. This is in line and strengthens the results of Indrawati's (2015) and Grahayudha (2014) research which states that incentives have significant and positive effects on motivation.

Incentives have a positive and significant impact on employee performance of 0.21, meaning that the higher the incentives provided by the company, the more it improves employee performance. The results of this study are in line and support the research results of Dhermawan (2012), Posuma (2013) and Dito (2010) which state that incentives have a strong and positive relationship to performance.

Job satisfaction has a positive and significant effect on employee performance of 0.30, meaning that the higher the job satisfaction, the more it will improve employee performance. The results of this study are in line and support the results of research by Sanuddin et al (2013), Umar (2011) and Pushpakumari (2008) which state that job satisfaction has a strong and positive relationship with employee performance.

Work motivation has a positive and significant effect on employee performance of 0.36, meaning that the higher the work motivation, the more it improves employee performance.

This is in line and strengthens the results of several previous studies. Anggriawan's research (2015), Fauziah (2012) and Asim (2013) show that work motivation has a strong and positive relationship to employee performance.

The coefficient of determination (R^2) model of job satisfaction of 60% means that the diversity of job satisfaction can be explained by incentives while the remaining 40% is explained by other factors not observed in this study. The coefficient of determination (R^2) of the motivation model of 61% means that the diversity of work motivation can be explained by incentives while the remaining 39% is explained by other factors not observed in this study. The coefficient of determination (R^2) of the Performance model of 68% means that performance diversity can be explained by job satisfaction, motivation and incentives by 68% while the remaining 32% is explained by other factors outside the model.

MANAGERIAL IMPLICATIONS

The efforts that can be made by Bank DKI's management to improve performance are by increasing incentives, job satisfaction and work motivation, first, develop a more optimal incentive system, so that it can produce better work output. Second, periodically carry out activities to bring supervisors closer to their subordinates and also among colleagues, so that they are better involved with group activities. Managers or supervisors must maintain communication, as well as good relations with their subordinates and facilitate a healthy environment for harmonious interactions between employees. Last, provide training to improve employee marketing competencies that are useful to increase productivity and creativity in marketing bank products.

CONCLUSION

Performance is influenced by incentives, job satisfaction and motivation. Incentive conditions have a significant and positive effect on job satisfaction with a path coefficient value of 0,77. Incentive conditions also have a significant and positive effect on work motivation with a path coefficient value of 0,78. Job satisfaction has a significant and positive effect on performance with a path coefficient value of 0,30. Work motivation has a significant and positive effect on performance with a path coefficient value of 0,24. The coefficient of determination (R^2) model of job satisfaction of 60% means that the diversity of job satisfaction can be explained by incentives while the remaining 40% is explained by other factors not observed in this study. The coefficient of determination (R^2) of the motivation model of 61% means that the diversity of work motivation can be explained by incentives while the remaining 39% is explained by other factors not observed in this study. The coefficient of determination (R^2) of the Performance model of 68% means that performance diversity can be explained by job satisfaction, motivation and incentives by 68% while the remaining 32% is explained by other factors outside the model. Incentives, job satisfaction and work motivation have a significant and positive effect on employee performance. On the other hand incentives have an effect on performance with work motivation and job satisfaction as an intervening variable.

RECOMMENDATIONS

Based on the results of the study, suggestions that can be used for further research material are, management of Bank DKI is expected to conduct a review of the performance appraisal system that is currently applied periodically, so that employees get an openness regarding the income received with the workload they received. The problem of job satisfaction at Bank DKI employees can be overcome by carrying out activities that can increase interaction and communication between Bank DKI marketing employees to get to know each other more and be involved with group activities through morning coffee, morning prayer and outing events outside the office. Add factors that influence other performance research, such as work commitment and work culture.

REFERENCES

1. Alderfer C. 1989. Theories reflecting my personal experience and life dent. *The Journal of Applied Behavioral Science*. 25(4):351-351.
2. Anggriawan KH, Hamid D, Mukzam MD. 2015. Pengaruh Insentif dan Motivasi Terhadap Kinerja Karyawan (Studi pada Karyawan CV Suka Alam (Kaliwatu Rafting) Kota Batu, Jawa Timur). *Jurnal Administrasi Bisnis (JAB)*. 29(1): 50-55.
3. Apsari NMM, Riana IG. 2017. Pengaruh Insentif Finansial, Insentif Non Finansial dan Motivasi Kerja terhadap Kepuasan Kerja. *E-Jurnal Manajemen Unud*. 6(3):1592-1616.
4. Asim M. 2013. Impact of motivation on employee performance with effect of training: specific to education sector Pakistan. *International Journal of Scientific and Research Publications*. 9(3): 255-261.
5. Astuti NKAJ, Sudharma IN. 2009. I Nyoman. Pengaruh Kompensasi Dan Motivasi Terhadap Kepuasan Dan Kinerja Karyawan Pada Hotel Bakung's Beach Cottages Kuta-Bali. *E-Jurnal Manajemen Universitas Udayana*. 2(11):1585-1594.
6. Bank DKI. 2017. Informasi Keuangan Laporan Tahunan. [internet] [diakses pada tanggal 4 Maret 2017]. Tersedia pada: <http://www.bankdki.co.id/id/investor-relations/informasi-keuangan/laporan-tahunan>
7. Cascio, Wayne F. 1995. *Managing Human Resources, Productivity, Quality Of Work Life Profit*. Singapur:Mc Grawhill Book Co.
8. Darmawan. 2005. Pengaruh Finansial Insentif, Kepemimpinan dan Komunikasi terhadap Semangat Kerja Karyawan pada Perusahaan Kusen Kayu CV. Merta Nadi di Badung.
9. Dhermawan AANB, Sudibya IGA, Utama IWM. 2012. Pengaruh Motivasi, Lingkungan Kerja, Kompetensi dan Kompensasi Terhadap Kepuasan Kerja dan Kinerja Pegawai di Lingkungan Kantor Dinas Pekerjaan Umum Provinsi Bali. *Jurnal Manajemen, Strategi Bisnis dan Kewirausahaan*. 6(2): 173-184.
10. Dito AH. 2010. Pengaruh Kompensasi terhadap Kinerja Karyawan PT Slamet Langgeng Purbalingga dengan Motivasi Kerja sebagai Variabel Intervening. [Tesis]. Semarang (ID): Universitas Diponegoro.
11. Fauziah H. 2012. Pengaruh Insentif Dan Motivasi Kerja Terhadap Kinerja Karyawan Pada Kantor Dinas Bina Marga Balai Besar Pelaksanaan Jalan Nasional III Satker Pelaksanaan Jalan Nasional Wilayah I Bandar Lampung. *Jurnal Organisasi dan Manajemen*. 2(1):54-66.
12. Gorda IGN. 2014. *Manajemen SDM*. Jakarta (ID): STIE Satya Dharma Singaraja.
13. Grahayudha RG, Almusadieg M, Mukzam MD. 2014. Pengaruh Insentif terhadap Motivasi Kerja (Studi pada Karyawan PT Axa Financial Indonesia Sales Office Cabang Malang). *Jurnal Administrasi Bisnis*. 8(1): 1-7.
14. Hasan A, Anuar K, Ismail G. 2010. Studi Pengaruh Makro Ekonomi, Capital dan Liquidity terhadap Financial Performance pada Bank Pembangunan Daerah di Indonesia Sebelum dan Setelah Otonomi Daerah. [Tesis]. Riau (ID): Universitas Riau.
15. Indrawati R. 2015. Efektivitas Sistem Insentif terhadap Motivasi dalam Upaya Meningkatkan Penjualan Kartu Kredit pada Bank DKI. [Tesis]. Bogor (ID): Institut Pertanian Bogor.
16. Kasmir. 2005. *Pemasaran Bank*. Jakarta (ID): Kencana.
17. Luthans F. 2005. *Organizational Behavior*. New York (US): Mcgraw-Hill.
18. Pushpakumari, M. D. 2008. The Impact of Job Satisfaction on Job Performance: An Empirical Analysis. *Forum City Sri Langka*. 9(1): 89-105.
19. Rivai, Vethzal, Basri. 2005. *Performance Appraisal: Sistem yang Tepat untuk Menilai Kinerja Karyawan dan Meningkatkan Daya Saing Perusahaan*. Jakarta (ID): PT Raja Grafindo Persada.
20. Sanuddin FDP, Widjojo AMR. 2013. Pengaruh kepuasan kerja dan motivasi kerja terhadap kinerja karyawan PT Semen Tonasa. *ISSN*. 25(2):217-231.
21. Umar H. 2000. *Metodologi Penelitian*. Jakarta (ID): Gramedia Pustaka Umum.

DOI <https://doi.org/10.18551/rjoas.2018-11.14>

PARTICIPATION CUSTOMER ON E-COMMERCE: RELATIONSHIP PERCEIVED RISK, SECURITY, TRUST, AND CONSUMER PROTECTION

Ardhiani Mutiara Rachma*, Soewarno Noorlailie

Faculty of Economics and Business, University of Airlangga, Indonesia

*E-mail: mutiara.rachmaardhiani@gmail.com

ABSTRACT

The purpose of this study is to determine the effect of risk perception, security, and trust on e-commerce customer participation in Indonesia. This research also wants to know whether with the role of state law in Indonesia, through Consumer Protection Act (CPA), able to moderate risk perception and trust to e-commerce customer participation. This research was conducted in Indonesia with 184 respondents e-commerce customers. Testing was done using Moderated Regression Analysis and SPSS 23 program. The result of this research shows that security and influence variables influence customer participation. While the perception of risk does not affect the customer's participation. Another result of this research is the interaction of moderation variable of consumer protection on risk perception and trust does not give influence to customer participation.

KEY WORDS

Consumer protection, business, marketing, transaction system, Indonesia.

The Internet is a tool that can be used for various activities such as business, communications, and other electronically. With the Internet, anyone can connect, including businessmen and even the company, resulting in a change in the system, either directly or indirectly, such as trading systems, marketing systems, and transaction systems. Various kinds of new things with the development of the Internet is increasingly widespread, one of which is an online marketplace. The use of the internet and the web for the purpose of business transactions called Electronic Commerce (e-commerce) (Laudon & Laudon, 2014).

The process of transactions through e-commerce involves two parties to exchange goods, services, or information with the Internet as the main media. Transactions on e-commerce in practice can occur between business organizations with fellow business organizations (B2B) and between business organizations and consumers (B2C) (Laudon & Laudon, 2014; O'Brien & Marakas, 2007). There are several ways to classify e-commerce trading transactions. One way is to see who the participants are in the transaction. There are three major categories of e-commerce, business-to-consumer (B2C), business-to-business (B2B), and consumer-to-consumer (C2C).

The number of internet users in Indonesia in 2016 is 132.7 million or about 51.5% of the total population of Indonesia (256.2 million people) (APJII, 2016). Most Internet users are on the island of Java with a total of 86,339,350 users or about 65% of total internet users. When compared to 2014, which was only 88.1 million users, there was an increase of 44.6 million within 2 years (APJII, 2017). These conditions can be a driving force for growing e-commerce in Indonesia. The growing number of internet users, it will affect the behavior of people in making purchases, from previously conventional purchasing switch to purchase via e-commerce. E-Commerce much preferred because of the convenience and ease of making transactions. Transactions in e-commerce can be through electronic media such as telephone, fax, ATM, mobile phone, SMS, ATM phone banking, internet banking that is specifically connected to the Internet.

Doing transactions online is certainly riskier when compared to offline transactions. Research conducted by Suresh & Shashikala (2011) found that a higher perception of consumer risk occurred in online purchase transactions than buying through stores. If the level of risk is high, then it will make the consumer uncomfortable in using e-commerce so

that e-commerce will be lack of enthusiasts. Perception of risk then affects consumers in conducting transactions through e-commerce.

Business transactions conducted through the internet does not mean to avoid the evil of others. The process in e-commerce should also be supported by secure access between parties in e-commerce transactions by authenticating users, authorizing access, and enforcing security features (O'Brien & Marakas, 2007). Potential crimes of fraud, password theft, credit card hijacking, illegal transfer of funds from certain accounts, and the like are great if the e-commerce security system is weak. Therefore, security in e-commerce is a matter of concern for e-commerce site providers.

Shopping via e-commerce requires accurate information about the items being sold. The more information you get, the more interested customers will buy. With the increasing number of buyers, then the participation of customers will also increase. There are many factors that cause a person to shop through e-commerce. Starting from the low cost, the quality of goods type, trust, the facility of ease of transaction, up to several other factors. A very important factor for influencing the interest of online purchasing is the trust factor (Pavlou & Gefen, 2002). The trust factor is a key factor in every online transaction. High efforts must be made by the seller to increase consumer confidence because trust has a big influence on the intention of consumers to conduct transactions online or not do it. Therefore if there is no trust between seller and buyer then there will be no transaction in e-commerce.

Research result by Corbitt, Thanasankit, & Yi (2003) resulting in increased consumer participation in e-commerce is directly related to the web experience, market orientation, and trust. The results of the study are also supported by research from Mukherjee & Nath (2003) who found that consumer commitment in using e-commerce is directly related to shared values (ethics, security, and privacy) and trust. Risks in e-commerce can be reduced by establishing good communication between the two parties who transact, including through the presentation of relevant information.

E-commerce transactions create a more practical business transaction system, paperless and do not need to meet directly with the transacting party, so e-commerce has the potential to become a new driver for the economy. In addition to these advantages, the negative aspect of this development is related to security issues in transactions using e-commerce media. There is a bad possibility that will appear as a form of fraud that tends to harm consumers and cause various legal problems in conducting transactions.

On buying and selling through the internet, often find a fraudulent. Such frauds may occur with respect to the existence of business actors, purchased goods, prices of goods, and payments by consumers. Such a fraud concerns the seller, such as the place of business (virtual store) is a fictitious shop. Regarding goods sent by the seller, for example, the goods are not delivered to the consumer or there is a prolonged delay in delivery, there is damage to the goods delivered or the goods delivered defects, and others.

Regarding the order and payment by consumers who are denied the truth by businesses. For example, the seller only recognizes that the amount of goods ordered is less than that stated in the purchase are sent electronically or price per unit of goods ordered by the consumer is said to be higher than the price listed in the purchase. Can also occur entrepreneurs claimed to have received payment from consumers, when in fact the consumer is sent a payment for the whole price of the goods. With bad possibilities that can arise through e-commerce as it is the rights of consumers need to be protected.

Indonesia has a Consumer Protection Act (CPA) which protect consumers right. In CPA No. 8 Article 1 Paragraph 2 of 1999 about Consumer Protection, defines consumers as users of goods and/or services, either for themselves or others and not for sale. of the definition, then the consumer is the end user of the transaction. According to the Act, there are basic rights of consumers to be protected, one of which is the rule of law. Legal security guarantees for consumer e-commerce is necessary to protect consumers from the negative effects they might experience, and grow their confidence that through e-commerce transactions is increasing.

The purpose of this study was to determine the effect of the perception of risk, security, and confidence in e-commerce customer participation in Indonesia. This study also wanted

to know whether the role of state law in Indonesia, through the Consumer Protection Act (CPA), able to moderate perceived risk and confidence in e-commerce customer participation. This research was conducted in Indonesia with 184 respondents e-commerce customers.

LITERATURE REVIEW

Customer Participation. Participation is a person's involvement in an activity. Customer participation has been widely studied in the business-to-consumer (B2C) context, and the participation of business customers who have been largely scrutinized (Mustak, Jaakkola, & Halinen, 2013). In the context of e-commerce, the measurement of participation by looking at the number of consumers in making transactions (Kim, Lee, Lee, Ferrin, & Rao, 2003). Customer participation in e-commerce requires customer decisions in environments that have opposite factors (eg, perceptions of risk and trust) (Gurung & Raja, 2016). Customer participation can also be defined as the extent to which customers provide information, follow suggestions, and engage in joint decision making (Gallan, Jarvis, Brown, & Bitner, 2013). Customer participation determines the extent to which customers place their efforts and resources into the production process so as to take part in consuming and producing value (Chih-cheng, Chen, & Chen, 2017).

Customers will increase their participation if they believe in partners, media, or anything else involved in an activity. Such trust can not be built simply. Each customer has a perception of each risk. So it is necessary for the seller to provide very clear information so that customers feel safe and lower their negative perceptions. The security of their personal information also needs to be maintained. Customers will be more comfortable in the transaction if the seller guarantees their personal data. Therefore, it is important for the seller to pay attention to the risks, security, and consumer confidence that they wish to participate in e-commerce activities (Gurung & Raja, 2016).

Perceived Risk. The risk is a state of uncertainty that consumers consider to decide whether to make transactions online or not. One would really consider distance, impersonal mood during online transactions, and support infrastructure that contains many elements of risk. The risk is defined as a subjective estimate of the consumer in which they will suffer harm for the intended purpose (Pavlou & Gefen, 2002). When consumers have little information about a product or a seller, the risks will be higher. Perceived risk can be defined as a consumer's perception of the uncertainty and avoidance of the consequences that he may receive from the transaction (Chang & Tseng, 2011). As the internet grows, consumers' attention to risks is high. This perception prevents consumers from engaging in an online transaction. Perceived risks in this study are the consumers' negative perceptions of a number of activities based on the presence of negative outcomes and possible adverse events that may occur when conducting online transactions.

Security. Consumers may have concerns about the flow of information between online consumers and websites, as well as how their personal data is managed by the website (Gurung & Raja, 2016). Therefore, security is a matter of concern for e-commerce site providers. Security in the context of e-commerce can be defined as e-commerce capability in controlling and maintaining the security of transaction data and personal data of the customer. Security guarantees play an important role in the establishment of a sense of security by reducing consumer concerns about the misuse of personal data and transactions. If the consumer assumes that the website of the online seller offers security, such as security policy, secure shopping warranty, and other protection mechanisms, then the consumer will conclude that the seller provides security guarantees during online transactions (Chellappa & Pavlou, 2006). When the security guarantee is acceptable and in accordance with consumer expectations, then the consumer will probably be willing to disclose personal information and will buy with a sense of security. The more customers feel secure against the security of e-commerce sites, then the customer will judge the site reliably (Kim, Ferrin, & Rao, 2008)

Trust. Trust plays an important role in e-commerce (Gefen, 2002). A business transaction will not happen if the two or more parties do not trust each other. This belief is not

simply to be acknowledged by other parties/business partners, but must be built from the beginning and can be proven. Trust is a major challenge for the rapid development of online transactions, but a factor that affects e-commerce success because it is a factor that is the main consideration of consumers to establish whether or not to transact via e-commerce (Limbu, Wolf, & Lunsford, 2012). Some literature has defined trust in various approaches (Mukherjee & Nath, 2003). Kim, Ferrin, & Rao (2008) define trust as the subjective belief of consumers regarding online sellers who will fulfill their transactional obligations. Pavlou & Gefen (2002) define trust is the assessment of one's relationship with another person who will perform certain transactions according to the believer's expectations in an uncertain environment. In other words, trust is a form of confidence of a particular party against another party in a transaction, which he considers will meet all obligations as expected.

Consumer Protection. The emergence of the concept of consumer rights protection is the Caveat Venditor theory (beware the seller) (Balleisen, 2017). This theory emphasizes that the seller must be good faith and responsible in selling the product. The seller must also provide protection and provide clear and honest product information. Consumers who do not have enough information about the product being offered can be wrong in determining the choice. So often we know the word "be careful before buying" because there is the possibility of dishonest and unfair sellers in transactions. This is important because when consumers find items that are purchased defective or not as promised, they will find it difficult to ask for compensation. The seller will ask the consumer to prove that the damage was not due to a deliberate mistake made by the consumer so that the consumer can get compensation. To protect consumer rights in Indonesia, the Indonesian government passed Consumer Protection Act (CPA) No. 8 of 1999 on Consumer Protection which became effective on April 20, 2000. CPA pretty much regulates the behavior of business actors. This is understandable given the loss consumers suffer from the goods or services they buy, which is the result of dishonest behavior of the seller.

The definition of consumer protection contained in Article 1 (1) on CPA is any effort that ensures the existence of legal certainty to provide protection to consumers. The definition of consumer protection definition contained in Article 1 (1) is sufficient. With the enforcement of these regulations, it is expected to be a protector for consumers of any harmful actions they may receive from the seller. Legal certainty to provide protection to the consumer, among others, is to improve the consumer's dignity and also to open access to information about goods and/or services for him, and to foster an honest and responsible business actor attitude.

Hypothesis. As described in the previous section, participation is measured by the number of consumers making transactions. There are various factors that can influence consumer desire to transact, one of which is perceived risk. Perceived risk is a state of uncertainty that a person considers to decide to make an online transaction. The risk is defined as the subjective estimate of the individual in which he will suffer a loss in receiving the desired result (Pavlou, 2003). In the context of online transactions, individuals tend to perceive risks when uncertainty arises over possible outcomes of transactions made. There are two forms of uncertainty in online transactions, namely the uncertainty of behavior and environmental uncertainty. Research conducted Alalwan, Dwivedi, Rana, & Williams (2016) shows that intentions and behaviors in e-commerce transactions are strongly influenced by usability perceptions, perceptions of ease of use, and perceptions of risk. Along with the research, the research from Kim, Ferrin, & Rao (2008) perceived risks have a strong influence on purchasing decisions over the internet. Based on this matter then researcher concludes that the smaller the perceived risk, the more secure the customers will be, increasing their participation in e-commerce transactions, and proposed the following hypothesis:

H1. Perceived risk affects customer participation. Security is the ability of e-commerce in controlling and maintaining security of data transactions (Park & Kim, 2006). Security guarantees play an important role in the formation of consumer confidence by reducing their concern about the misuse of personal data and corrupt transaction data. When the level of security assurance is acceptable and in line with consumer expectations, a consumer may

be willing to provide his personal information and will purchase with a feeling of security. Research Raman & Annamalai (2011) through a study conducted on online consumers in Malaysia, found that security factors have a positive and significant relationship in influencing purchasing decisions online. Consumers will not make purchases without security guarantees. Because without adequate security guarantees it will certainly cause concern to consumers, which ultimately prevents them from making a purchase. And conversely when the webstore able to improve security and provide assurance to consumers then consumer confidence in shopping will increase. From the explanation, the researcher proposed the following hypothesis:

H2. Security affects customer participation. In e-commerce, buyers and sellers do not meet directly during the transaction process so trust is the key to the transaction. Corbitt, Thanasankit, & Yi (2003) examines customer participation in e-commerce in terms of the direct influence of perceived trust, experience of internet usage (user's web experience), and understanding of market orientation (perceived market orientation). The result of the study is that people with higher site quality perceptions have a higher level of perception on market orientation and trust in e-commerce. Furthermore, people with high levels of trust are more likely to participate in e-commerce. Positive "Word of mouth", money back guarantee and partnership with renowned business partners, are strategies that can effectively risk exposure. In addition, Gurung & Raja (2016) examines how the effects of privacy, security, trust, perceived risks, attitudes, and subjective norms on the intentions of consumer transactions on online companies. From the results of these studies, confidence becomes the biggest effect in determining consumer attitudes. The results stress that trust plays an important role in shaping consumer attitudes. The research from Ponte, Carvajal-Trujillo, & Escobar-Rodríguez (2015) also gave similar results, where the intention of buying online is influenced by the perception of value and trust. Therefore, when the seller is able to maintain consumer confidence with both, the consumer will be happy to continue to transact and increase the intensity of the transaction. Maybe in a certain circumstance, consumers will recommend to other consumers to make purchases via e-commerce sites. From the exposure, it can be taken as follows hypothesis:

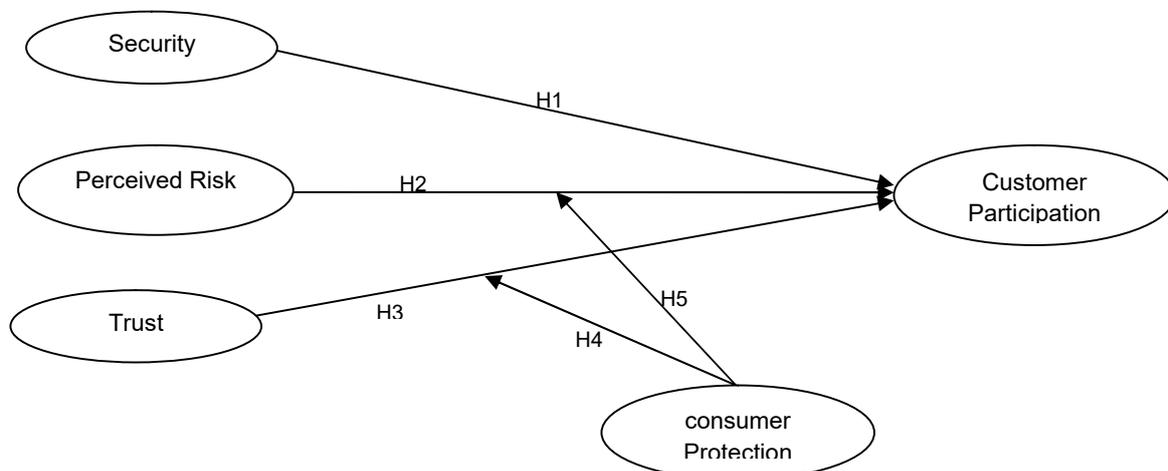


Figure 1 – Conceptual Framework

H3. Trust affects customer participation. The use of global internet computer networks for commercial activity is increasing rapidly and the growing uncertainty is also greater (Jawahitha, 2005). Transactions through e-commerce certainly also have risks. Customers will assess what risks they may receive when transacting through the medium. The higher the risks, the higher the reluctance of consumers to transact on e-commerce. Customers are also increasingly unwilling to trade through e-commerce if their confidence level to sellers is low. Trust in e-commerce transactions is the key to making transactions work, and many studies have proven it (Corbitt, et.al., 2003; Gurung & Raja, 2016; Ponte, et. al., 2015). Belief does not appear out of nowhere, but must be built from scratch and can be verified.

However, a variety of cases involving e-commerce make reduced consumer confidence. A country must have special rules aimed at the interests of consumers, such as Indonesia with CPA No. 8 of 1999 about Consumer Protection. With the absence of legal protection, are expected to positively affect customer confidence and perceptions of risk. Of the exposure, the researchers proposed a hypothesis:

H4. Moderation consumer protection affect consumer perceived risks toward customer participation.

H5. Moderation consumer protection affect consumer confidence in customer participation.

METHODS OF RESEARCH

Collecting data using closed-ended questionnaires distributed offline and online via Google Form. There are as many as 184 respondents in this study. Pengukuran scale adopted some prior research and make a few changes to suit the context of e-commerce. Perceived Risk (PR) using 4 items adopted from Gurung & Raja (2016), Security using seven items adopted from Ponte et al. (2015) and Singh, Srivastava and Sinha (2016), Trust consists of eight items were adopted from Gurung & Raja (2016) and Mou, Shin, & Cohen (2016), Consumer protection consists of nine items that are based on the Corodeanu (2015) and adapted to CPA No. 8 of 1999. Participation of customers using the 3 items adopted from Tung, Tan, Chia, Koh, & Yeo (2001), Corbitt, Thanasankit, & Yi (2003), and Ratnasingham & Kumar (2004).

Measurements using Likert scale with 1-strongly disagree to 5-strongly agree. Specifically on the perceived risk variable used Likert scale measurements in reverse, 5-strongly disagree to 1-strongly agree. This is because the proposed statement is negative. Furthermore, the data were analyzed with Moderated Regression Analysis through SPSS 23.

Regression formulas:

$$CPrt = \alpha + b_1 \text{ Security} + b_2 PR + b_3 \text{ Trust} + e_1$$

$$CPrt = \alpha + b_1 \text{ Security} + b_2 PR + b_3 \text{ Trust} + b_4 \text{ Risk} * CPo + b_5 \text{ Trust} * CPo + e_2$$

RESULTS OF STUDY

The number of respondents in this study was 184 respondents. By gender, the respondents consisted of 71 men (38.6%) and 113 females (61.4%). If grouped by age, most respondents were 21-25 years old (114 respondents or 62%), followed by 31-35 years old as 24 respondents (13%), 26-30 years as many as 23 respondents (12.5%), below 20 years as many as 14 respondents (7.6%), and over 35 years as many as 9 respondents (4.9%). In qualification, most respondents are Bachelor qualification, that is 133 respondents (72,3%). Furthermore, the respondents with High School and Master qualifications are the same, each of which is 23 respondents (12.5%). Respondents with Diploma qualification as many as 5 respondents (2.7%). And in this study there were no respondents with a Ph.D. qualification.

Table 2 shows the test results between variables partially prior to the interaction of the moderating variables. From the table obtained the result that the PR has no effect on Customer Participation with t-value 1.564 and sig. 0.120 (> 0.05), then H1 is rejected. While for Security and Trust is significant at 0.000 (<0,05) and has t-value respectively of 6,503 and 5,200. By looking at these results, then H2 and H3 are accepted.

PR has no effect because customers may not care about risk so in this study the risk is not influenced by their participation in using e-commerce. Security and Trust significantly influence Customer Participation. This shows the more secure an e-commerce, the higher their participation. Likewise with Trusts, customers believe in sellers and e-commerce systems so the more customers believe in e-commerce, the higher is their participation.

Table 3 above shows a significant influence between independent variables with dependent variable. ANOVA test showed $F = 37,222$ and significant at 0.000 (< 0,05). This

shows that the variables PR, Security, and Trust simultaneously affect Customer Participation.

Table 1 – Demographic profile of respondents

Demographic Profile	Number (N)	Percent
<i>Gender</i>		
Male	71	38,6
Female	113	61,4
<i>Age</i>		
Under 20 years	14	7,6
21-25 years	114	62,0
26-30 years	23	12,5
31-35 years	24	13,0
Above 35 years	9	4,9
<i>Qualification</i>		
High School	23	12,5
Diploma	5	2,7
Bachelor	133	72,3
Master	23	12,5
Ph.D	0	0

Table 2 – Testing Perceived Risk, Security, and Trust variables on Customer Participation

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	,753	,289		2,608	,010
1 Risk	,067	,043	,092	1,564	,120
Security	,353	,054	,406	6,503	,000
Trust	,350	,067	,327	5,200	,000

a. Dependent Variable: CPrt

Table 3 – One-way analysis of variance (ANOVA) relationships between variables before being interacted by moderating variables

ANOVA ^a						
Model	Sum of Squares	df	Mean Square	F	Sig.	
1 Regression	22,712	3	7,571	37,222	,000b	
Residual	36,610	180	,203			
Total	59,322	183				

a. Dependent Variable: CPrt

b. Predictors: (Constant), Trust, Risk, Security

Table 4 – Testing with the interaction of moderation variables (Customer Protection) on PR and Trust

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	,357	,093		3,837	,000
Ln_Risk	,054	,035	,091	1,560	,121
1 Ln_Security	,275	,046	,379	6,022	,000
Ln_Trust	,228	,105	,216	2,178	,031
Ln_Mod_TrustCPo	,078	,047	,166	1,669	,097

a. Dependent Variable: Ln_CPrt

Table 5 – Excluded Variables

Excluded Variables ^a							
Model	Beta In	t	Sig.	Partial Correlation	Collinearity Statistics		
					Tolerance	VIF	Minimum Tolerance
1Ln_Mod_RiskCPo	-24,065b	-,820	,413	-,061	3,931E-6	254370,499	3,931E-6

a. Dependent Variable: Ln_CPrt

b. Predictors in the Model: (Constant), Ln_Mod_TrustCPo, Ln_Risk, Ln_Security, Ln_Trust

During testing by interpreting Customer Protection (CPO) moderation variables in PR and Trust, there are multicollinearity symptoms (see Appendix II). After re-test, the cause of the multicollinearity is CPO interaction with PR (t -value = -0.820 and significance of 0.413) so that CPO*PR interaction is excluded from the calculation (Table V). Results after retesting (Table IV) show that there is no interaction of the moderating variables. From the test results, then H4 and H5 are rejected.

The absence of interaction from CPO with Trust (CPO*Trust) is due to customers already believing in e-commerce sites. This can be seen from the Trust significance value of 0,000 (< 0.05) indicating the strong influence of this variable on customer participation. Therefore, the existence of legal protection for them is not necessary. Likewise with CPO interaction with PR (CPO*PR). In the first test, there is no influence of PR on customer participation, so in this case consumer protection becomes unnecessary.

Table 6 – One-way analysis of variance (ANOVA) relationships between variables after being interacted by moderating variables

ANOVA ^a						
	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23,374	5	4,675	23,149	,000b
	Residual	35,947	178	,202		
	Total	59,322	183			

a. Dependent Variable: CPrt

b. Predictors: (Constant), Mod_TrustCPO, Risk, Security, Trust, Mod_RiskCPO

Table 6 above shows a significant influence between independent variables with dependent variable. ANOVA test showed $F = 23,149$ and significant at 0,000 ($< 0,05$). This shows that the variables PR, Security, Trust, interaction PR*CPO, and interaction Trust*CPO simultaneously affect Customer Participation.

DISCUSSION OF RESULTS

Customers have a willingness to buy from e-commerce as a medium to transact. Based on the results of this study, perceived risks have no effect on customer participation in Indonesia. The results of this study contradict Alalwan, Dwivedi, Rana, & Williams (2016) and Kim, Ferrin, & Rao (2008) where their research results prove that perceived risk affects intentions, behavior, and purchasing decisions via e-commerce. The results of this study indicate that customers do not consider the risks they will receive. This may be because the customer already has experience, whether it's personal experience or other people's experience, about transaction activity on e-commerce site (Chang & Tseng, 2011). Previous experiences in online purchases help them to decide whether they are willing to make a purchase or not (Alharbi, Zyngier, & Hodkinson, 2013). The study by Gurung & Raja (2016) also proves that there is no significant influence on the perception of risk to online purchase intentions. In addition, Zhang, Tan, Xu, & Tan (2012) studies show that not all perceived risk dimensions consist of perception of health risk, perception of quality risk, perception of privacy risk, perceptions of economic risk, perceptions of time risk, social perceived risk, perception delivery risk, and perceived risk after sales, affecting consumer e-commerce buying behavior. Perceptions of privacy risks, perceptions of economic risk, and perceptions of social risks are irrelevant to e-commerce customers. Similarly, Beneke, Greene, Lok, & Mallett (2012) found that financial, physical, psychological, and social risks had no effect on purchase intentions.

Furthermore, the results of this study indicate that the security effect on customer participation. This result is in line with Raman & Annamalai (2011) where the study proves that security has a positive effect on online purchasing decisions. One way for customers to be satisfied and loyal is to understand customer value. These values can be defined as anything related to security (Encio, 2014). E-commerce managers must ensure their systems are supported by adequate security and hacker-free levels so that their personal data can be

stored securely, and keep their servers and software as up-to-date operating systems. E-commerce providers have more responsibility to protect their customers' privacy information because customers provide information that may be highly personal, such as credit cards, addresses, and phone numbers, free of charge for their transactions. E-commerce sites not only have to have a strong security infrastructure but must also describe themselves to consumers to make them more comfortable and confident so as to keep them going on the e-commerce activity.

Trust plays a very important role in transactions through e-commerce. In this study, the test results show that trust has a strong influence on customer participation. The results of this study are in line with Al-Debei, Akroush, & Ashouri (2015) which states that consumer attitudes toward online shopping are determined by trust and perceived benefits. They also emphasize on his research that trust and perception of benefits are key predictors of consumer attitudes. These findings support research conducted by Corbitt, Thanasankit, & Yi (2003) where trust has a positive and significant influence on the participation of e-commerce customers. Customers with high levels of trust are more likely to participate in e-commerce. In addition, research conducted Gurung & Raja (2016) also gives the result that trust becomes the biggest effect in determining consumer attitudes. The results of the study from Ponte, Carvajal-Trujillo, & Escobar-Rodríguez (2015) also do not produce many different results, where the research results that the intention of buying online is influenced by trust.

In this study indicates that consumer protection variables can not moderate, both on the perception of risk and trust. The logical discussion that can be derived from these findings is that when customers do not take into account the risks of their transactions on e-commerce sites, the legal protections protecting their rights will also be useless. Research conducted by Corodeanu (2015) shows that Generation Y (between 1980 and 2000) has the potential to solve crisis situations such as trust, freedom, and more flexibility. They will know how to react well and professionally in situations where rights violations occur. If you look at the average age of respondents in this research data, it can be said that the majority of respondents are in the category of Generation Y. So research from Corodeanu (2015) relevant to this test results. Furthermore, in the variable of trust, consumer protection also can not moderate the influence of these variables on customer participation. When viewed from the test results, trust has p -value = 0,000, which signifies the strong influence of this variable on customer participation. When the customer has a very trustworthy e-commerce site, then the consumer protection is also unnecessary.

CONCLUSION

This study aims to determine the effect of perceived risk, security, and trust on e-commerce customer participation in Indonesia. This study also examines the role of state law in Indonesia, through the Consumer Protection Act (CPA), in moderating the perception of risk and trust towards the participation of e-commerce customers. The result of this research is security and trust influence to e-commerce customer participation. While the perception of risk does not affect the participation of e-commerce customers. This means that e-commerce customers in Indonesia do not take into account the risks they will receive from their activities in e-commerce. In this study, consumer protection is not able to moderate, both on the perception of risk and trust.

For e-commerce users in Indonesia, based on the results of research variables that affect the participation of customers is security and trust. While the perception of risk, the interaction of the moderation variable on the perception of risk and trust have no effect. Therefore, it is important for e-commerce site providers and other online businesses to always try to maximize what customers expect, to provide honest information to customers and nothing to hide, to maintain a reputation as a provider of e-commerce sites, to provide convenience (both in terms of data security and service) to customers in transactions so that customers can be satisfied, and responsible for transactions made with customers.

For e-commerce customers, although in this study the perception of risk does not affect the participation of customers, it is better if in transacting through e-commerce still take into

account the risks that may arise. It is not enough to just learn from previous customer experiences because what they experience will not necessarily be the same. And for the regulator, despite the existence of legal protection efforts, but in this study, consumer protection law does not play a role in reducing negative perceptions and increase e-commerce customer confidence. Consumer protection laws should be more socialized to e-commerce users so they realize that their rights are legally protected.

Appendix – Questionnaire

Variable	Description	Source
Perceived Risk	There will be risks when I provide personal data information to an e-commerce site.	(Gurung & Raja, 2016)
	There will be a high potential loss when I provide information to e-commerce sites.	
	By providing information on e-commerce sites, it is possible for me to face many unexpected problems.	
	There will be too many uncertainties associated with giving my personal information to e-commerce sites.	
Security	I feel secure with electronic payment systems from e-commerce sites.	(Ponte, Carvajal-Trujillo, & Escobar-Rodríguez, 2015)
	I feel safe in doing transactions on e-commerce sites.	(Singh, Srivastava, & Sinha, 2016)
	My personal data and bank are guaranteed on ecommerce site	
	My ID and password are not visible to anyone	
	E-commerce sites can be accessed from anywhere and safe to use	
	I believe my personal information is stored in a secure and encrypted database	
I'm sure my personal information is not exposed to unauthorized third parties		
Trust	E-commerce sites have the skills and expertise to make transactions in the expected way	(Gurung & Raja, 2016; Mou, Shin, & Cohen, 2016)
	E-commerce sites have access to the information needed to handle transactions appropriately	
	The e-commerce site is fair in conducting customer transactions.	
	The e-commerce site is fair in its customer service policy after making a transaction.	
	The e-commerce site is open and accepts customer needs.	
	E-commerce sites always pay attention to the interests of their customers during most transactions.	
	The e-commerce site strives to address most customer issues.	
	Overall, e-commerce sites can be trusted.	
Customer Protection	When I am going to transact through an e-commerce site, the seller provides complete information on the product.	(Corodeanu, 2015) adjusted to UUPK No. 8 of 1999
	When I am going to transact through an e-commerce site for food, cosmetic and drug products, the seller provides information on the composition of the product.	
	On an e-commerce site, I get information about the impacts arising from the product from the seller	
	On an e-commerce site, I get the expiry date information on the product from the seller	
	On an e-commerce site, I get information about the guides on the use of the products it sells	
	The product I order online, when it comes to the buyer has been in accordance with the order and agreement when ordering and has been in accordance with product specifications and information.	
	The products I purchased on e-commerce sites are warranted.	
	When I have a problem, the complaint is well responded by the seller	
There is compensation for the complaints of goods I bought through e-commerce sites.		
Customer Participation	I will continue to trade through e-commerce media.	(Corbitt, Thanasankit, & Yi, 2003)
	I will increase the frequency of transacting through e-commerce media.	(Corbitt, Thanasankit, & Yi, 2003; Tung, Tan, Chia, Koh, & Yeo, 2001)
	I would recommend to others to transact via e-commerce media.	(Ratnasingham & Kumar, 2004; Tung, Tan, Chia, Koh, & Yeo, 2001)

REFERENCES

1. Al-Debei, M. M., Akroush, M. N., & Ashouri, M. I. (2015). Consumer attitudes towards online shopping: The effects of trust, perceived benefits, and perceived web quality. *Internet Research*, 25(5), 707–733.
2. Alalwan, A. A., Dwivedi, Y. K., Rana, N. P., & Williams, M. D. (2016). Consumer adoption of mobile banking in Jordan: Examining the role of usefulness, ease of use, perceived risk and self-efficacy. *Journal of Enterprise Information Management*, 29(1), 118–139.
3. Alharbi, I. M., Zyngier, S., & Hodkinson, C. (2013). Privacy by design and customers' perceived privacy and security concerns in the success of. *Journal of Enterprise Information Management*, 26(6), 702–718.
4. Asosiasi Penyelenggara Jasa Internet Indonesia (APJII). 2016. Accessed through www.apjii.or.id
5. Balleisen, E. J. (2017). American Better Business Bureaus , the Truth-in-Advertising Movement , and the Complexities of Legitimizing Business Self-Regulation over the Long Term. *Politics and Governance*, 5(1), 42–53.
6. Beneke, J., Greene, A., Lok, I., & Mallett, K. (2012). The influence of perceived risk on purchase intent – the case of premium grocery private label brands in South Africa. *Journal of Product & Brand Management*, 21(1), 4–14.
7. Chang, E., & Tseng, Y. (2011). Research note: E-store image , perceived value and perceived risk. *Journal of Business Research*, 1–7.
8. Chellappa, R. K., & Pavlou, P. A. (2006). Perceived information security , financial liability and consumer trust in electronic commerce transactions. *Logistics Information Management*, 15(5/6), 358–368.
9. Chih-cheng, Chen, V., & Chen, C. (2017). The Role of Customer Participation for Enhancing Repurchase Intention. *Management Decision*, 55(3).
10. Corbitt, B. J., Thanasankit, T., & Yi, H. (2003). Trust and e-commerce: a study of consumer perceptions. *Electronic Commerce Research and Applications*, 2, 203–215.
11. Corodeanu, D. A. (2015). Consumer ' s protection from the generation Y ' s perspective . A research based on scenarios. *Procedia Economics and Finance*, 20(15), 8–18.
12. Encio, H. A. (2014). Consumers ' Perceptions on Privacy and Security in Ecommerce. *Journal of Information Engineering and Applications*, 4(4), 14–20.
13. Gallan, A. S., Jarvis, C. B., Brown, S. W., & Bitner, M. J. (2013). Customer positivity and participation in services: an empirical test in a health care context. *Journal of the Academic Marketing Science*, 41, 338–356.
14. Gefen, D. (2002). Reflections on the Dimensions of Trust and Trustworthiness among Online Consumers. *ACM SIGMIS Database*, 33(3), 38–53.
15. Gurung, A., & Raja, M. K. (2016). Online privacy and security concerns of consumers. *Information & Computer Security*, 24(4).
16. Jawahitha, S. (2005). Cyberjurisdiction and consumer protection in e-commerce. *Computer Law and Security Report*, 21(2), 153–161.
17. Kim, D. J., Ferrin, D. L., & Rao, H. R. (2008). A trust-based consumer decision-making model in electronic commerce: The role of trust , perceived risk , and their antecedents. *Decision Support Systems*, 44(2), 544–564.
18. Kim, D., Lee, K.-Y., Lee, D., Ferrin, D., & Rao, R. (2003). Trust, Risk and Benefit in Electronic Commerce: What Are the Relationships? In *Americas Conference on Information Systems* (pp. 168–174).
19. Laudon, K. C., & Laudon, J. P. (2014). *Management Information Systems (Thirteenth)*. Pearson.
20. Limbu, Y. B., Wolf, M., & Lunsford, D. (2012). Perceived ethics of online retailers and consumer behavioral intentions. *Journal of Research in Interactive Marketing*, 6(2), 133–154.
21. Lui, H. K., & Jamieson, R. (2003). Integrating Trust and Risk Perceptions in Business-to-Consumer Electronic Commerce with the Technology Acceptance Model. In *European Conference on Information Systems 2003*. Naples.

22. Mou, J., Shin, D., & Cohen, J. (2016). Understanding trust and perceived usefulness in the consumer acceptance of an e-service: a longitudinal investigation. *Behaviour & Information Technology*, 1–15.
23. Mukherjee, A., & Nath, P. (2003). A Model of Trust in Online Relationship Banking. *International Journal of Bank Marketing*, 21(1), 5–15.
24. Mustak, M., Jaakkola, E., & Halinen, A. (2013). Customer participation and value creation: a systematic review and research implications. *Managing Service Quality*, 23(4), 341–359.
25. O'Brien, J. A., & Marakas, G. M. (2007). *Management Information System (Tenth)*. New York: McGraw-Hill/Irwin.
26. Park, C.-H., & Kim, Y.-G. (2006). The Effect of Information Satisfaction and Relational Benefit on Consumers' Online Shopping Site Commitments. *Journal of Electronic Commerce in Organizations*, 4(1), 70–90.
27. Pavlou, P. A. (2003). International Journal of Consumer Acceptance of Electronic Commerce: Integrating Trust and Risk with the Technology Acceptance Model. *International Journal of Electronic Commerce*, 7(3), 101–134.
28. Pavlou, P. A., & Gefen, D. (2002). Building effective online marketplaces with institution-based trust. In *International Conference on Information Systems (Vol. 15(1))*, pp. 667–675).
29. Ponte, E. B., Carvajal-Trujillo, E., & Escobar-Rodríguez, T. (2015). Influence of trust and perceived value on the intention to purchase travel online: Integrating the effects of assurance on trust antecedents. *Tourism Management*, 47, 286–302.
30. Raman, A., & Annamalai, V. (2011). Web Services and e-Shopping Decisions: A Study on Malaysian e-Consumer. *International Journal of Computer Applications*, 54–60.
31. Ratnasingham, P., & Kumar, K. (2004). Trading Partner Trust In Electronic Commerce Participation. In *Proceedings of Tenth Americas Conference on Information Systems* (pp. 544–552).
32. Singh, N., Srivastava, S., & Sinha, N. (2016). Consumer preference and satisfaction of M-Wallets: a study on North Indian consumers. *International Journal of Bank Marketing*.
33. Suresh, A. M., & Shashikala, R. (2011). Identifying Factors of Consumer Perceived Risk towards Online Shopping in India. In *3rd International Conference on Information and Financial Engineering IPEDR (Vol. 12)*, pp. 366–341).
34. Tsai, Y. C., & Yeh, J. C. (2010). Perceived risk of information security and privacy in online shopping: A study of environmentally sustainable products. *African Journal of Business Management*, 4(18), 4057–4066.
35. Tung, L., Tan, P., Chia, P., Koh, Y., & Yeo, H.-L. (2001). An Empirical Investigation of Virtual Communities and Trust. In *Twenty-Second International Conference on Information Systems* (pp. 307–320).
36. Undang-Undang Republik Indonesia Nomor 8 Tahun 1999 Tentang Perlindungan Konsumen. (Customer Protection Act No. 8 of 1999)
37. Zhang, L., Tan, W., Xu, Y., & Tan, G. (2012). Dimensions of Consumers' Perceived Risk and Their Influences on Online Consumers' Purchasing Behavior. *Communications in Information Science and Management Engineering*, 2(7), 8–14.

DOI <https://doi.org/10.18551/rjoas.2018-11.15>

THE EFFECT OF ORGANIZATIONAL JUSTICE ON JOB SATISFACTION AND IMPACT ON TURNOVER INTENTION

Dewi Ida Ayu Anggia Wedya*, Supartha I Wayan Gede
Management Program, University of Udayana, Bali, Indonesia
E-mail: anggiawedyadewi@yahoo.co.id

ABSTRACT

This study was conducted to determine the effect of distributive justice, procedural justice, and interactional justice on employee job satisfaction and turnover intention at Batan Waru Restaurants Lippo Mall Kuta. The study was conducted on employees Batan Waru by the number of respondents as many as 42 employees. The test results distributive justice positive and significant impact on employee satisfaction, procedural fairness positive and significant impact on employee satisfaction, interactional fairness positive and significant effect on employee satisfaction. Distributive justice negative and significant impact on turnover intention, procedural fairness negative and significant impact on turnover intention, interactional fairness negative and impact on turnover intention, employee satisfaction negative and significant impact on turnover intention. The limitation of this study is the location of this research will be in the scope of the restaurant industry in Batan Waru Lippo Mall, Kuta, so the results of this study cannot explain the circumstances of the other restaurants besides restaurants Batan Waru Lippo Mall, Kuta.

KEY WORDS

Distributive justice, procedural justice, interactional justice, job satisfaction, turnover intention.

Turnover intention can be interpreted as an employee's intention to leave the organization, either in the form of resignation or dismissal. With high turnover, it can cause an organization to be less effective because of the loss of experienced employees (Andini, 2006). Previous research from Yucel (2012) on 250 manufacturing company employees in Turkey stated that if job satisfaction is high and turnover intention is lower, then there is a negative influence on job satisfaction on turnover intention. The same thing was stated by Alniacik et al. (2011) and Syahronica et al (2015) that job satisfaction has a negative relationship to turnover intention. Therefore a company is required to be able to retain its employees, such as being able to provide high remuneration and understand things that are able to make its employees comfortable and enthusiastic in working.

Job satisfaction is one of the employees' attitudes that has become a lot of research material that is associated with organizational justice. The biggest challenge faced by companies is how to retain competent employees. Job satisfaction is needed to produce functional employee behavior in the company. For companies, employee job satisfaction means they are motivated and committed to achieving high performance. Job satisfaction is an evaluation that describes a person feeling happy or unhappy, satisfied or dissatisfied at work (Rivai and Jauvani, 2009).

Cropanzo et al. (2002) stated that organizational justice is a key factor in understanding employee attitudes and behavior in an organization. Job satisfaction is one of the variables most often used in organizational behavior (Arti et al., 2009). Some studies have found results that organizational justice influences job satisfaction. Al'zubi (2010) conducted research with objects on employees of the Electrical Industrial Companies and the result was distributive justice, procedural justice, and interactional justice had a positive and significant effect on job satisfaction. In line with the research, Elamin and Alomaim (2011) also obtained the same results when conducting research on local employees and outside employees working in different organizations in Saudi Arabia, that organizational justice has a positive effect on job satisfaction. In line with the study, Bakhshi et al. (2009), Memarzadeh and

Mahmoudi (2010), and Al-Zu'bi (2010) also obtained the same results when conducting research with these variables.

Cropanzano et al. (2007) states that there are three main reasons why employees care about this justice problem. First, long-term benefits, employees prefer consistent justice, because with that justice employees can predict the results that will be obtained in the future. Employees also want to receive unfavorable rewards as long as the payment process they feel fair and get dignified treatment. Second, social considerations, everyone expects to be accepted and appreciated by their superiors not in a rude and unexploited manner. Third, ethical considerations, people believe that justice is a morally appropriate way to treat someone.

LITERATURE REVIEW

Justice Theory. This theory suggests that a person will feel satisfied and dissatisfied, depending on the presence or absence of justice (Equity) in a situation especially the work situation. The justice theory has been successfully used in explaining various forms of attitudes and behaviors at various levels in an organization. There are three main dimensions in organizational justice, namely distributive justice, procedural justice and interactional justice (Colquitt, 2001: 390). The first dimension is distributive justice related to the distribution of resource allocation and decision outcomes, for example about salary provision, incentives and rewards. The second dimension, procedural justice focuses on the process used to determine the outcome of decisions, such as promotion procedures, collecting information before making decisions, and terminating employment. The three interactional justice focuses on employees' perceptions of interpersonal treatment from leaders conducted during the representation of procedures and decisions, for example leaders can provide explanations.

Distributive Justice. Distributive justice is related to the perception of fairness about organizational allocation and outcomes (Saunders et al., 2002). Distributive justice is a perception of fairness in the ratio of the results of contributions to employees and comparison of ratios with other members of the organization (Adams, 1965). Distributive justice refers to perceived justice from the results received by individuals from the organization (Al'zubi, 2010). Distributive justice involves a comparison of salaries, benefits, promotions, power, rewards, and satisfaction (Rai, 2013).

Procedural Justice. Procedural justice is related to the perception of fairness in the use of processes, procedures and methods in making decisions (Thibaut and Walker, 1975). According to Robbin and Judge (2008) procedural justice is perceived justice from the process used to determine the distribution of benefits. According to Noe et al. (2011) procedural justice is a justice concept that focuses on the methods used to determine the rewards received. This mechanism is considered reasonable to the extent that they are consistent, accurate, correct, and ethical (Leventhal, 1980). Procedural justice is an embodiment of accepted normative principles such as consistency of procedures for offering compensation, consistency of regulations, avoiding personal interests in the distribution process, timeliness, and ethics (Badawi, 2012).

Interactional Justice. Interactional justice is defined as the interpersonal quality that people receive when procedures are applied and results are distributed (Bies and Moag, 1986). According to Robbins and Judge (2008), interactional justice is defined as an individual's perception of the degree to which an employee is treated with dignity, attention and respect. Interactional justice focuses on the individual on interpersonal treatment received from the leader, two important elements of the perception of interactional justice, namely whether the reasons underlying the resource allocation decision are clear and honest and can provide an explanation to the affected individuals (Kadaruddin et al., 2012). The same treatment in the workplace is considered as one of the most fundamental rights of employees (Svensson and Genugten, 2013).

Job satisfaction. McShane and Von Glinow (2008) stated that job satisfaction is an individual's evaluation of the task and the context of his work. According to Martoyo (2007:

156) job satisfaction is an emotional state of employees where there is no meeting point between employee compensation from a company or organization and the level of return for services that is indeed desired by the employee concerned. According to Ardana et al. (2009: 23) Job satisfaction is the difference from something that should exist with something that is actually there (factual), the smaller the difference in conditions that should exist with the actual conditions (factual) someone tends to feel more satisfied. Bakhshi, et al. (2009) stated that job satisfaction is one of the variables most widely used in organizational justice research.

Turnover Intention. Behavioral and behavioral intentions such as absenteeism, exit, and rejection are often grouped into withdrawal. Tett and Meyer (1993) state that intention to exit is conscious awareness and desire to leave the organization. It can be described as a psychological response to the particular conditions of the organization that move along the continuum rather than just imagining going out of the organization until it actually physically leaves the organization. Hom and Griffeth (1991) define intention as the possibility that the employee predicts that he has consciousness and intentionally wants to permanently leave the organization at some time. Jaros (1997) states that exit intention is seen as an employee's affective commitment to the organization. Employees who are not committed and not bound by their work prefer to leave the organization. This is an important factor to determine the quality of individual contributions, and especially its productivity.

Hypotheses:

- H₁: Distributive justice has a positive and significant effect on job satisfaction;
- H₂: Procedural justice has a positive and significant effect on job satisfaction;
- H₃: interactional justice has a positive and significant effect on job satisfaction;
- H₄: Distributive justice has a negative and significant effect on turnover intention;
- H₅: Procedural justice has a negative and significant effect on turnover intention;
- H₆: Interactional justice has a negative and significant effect on turnover intention;
- H₇: Job satisfaction has a negative and significant effect on turnover intention.

METHODS OF RESEARCH

The population in this study was 42 Batan Waru Lippo Mall Restaurant employees. The sampling technique uses a census method that involves all members of the population. Census methods may be used because the population is relatively small and the data obtained is more complete because it reflects the nature of the whole population. The number of questionnaires sent is 42 to all employees, with a return rate of 100% or return entirely. . Saturated or census sample method is used if all populations are used as respondents. The sample used is the entire population that is used as a sample so that the number of samples in this study was 42 people. Data analysis in this study used Partial Least Square (PLS) approach. PLS is an equation model for Structural Equation Modeling (SEM) based on components or variants. PLS is almost like a regression but more than that, it simultaneously combines the Structural Path model (the theoretical relationship between latent variables) while measuring the path (the relationship between the latent variable and the indicator).

RESULTS AND DISCUSSION

Model valuation with PLS begins by looking at R-square for each dependent latent variable. Changes in R-square values can be used to assess the effect of certain exogenous latent variables on endogenous latent variables that have substantive influence. Table 5.10 shows the results of R-square estimation using Smart PLS.

Table 1 – R-Square

Variable	R Square
Job satisfaction	0,864
<i>Turnover Intention</i>	0,937

Primary Data, 2018.

Table 1 shows the R-square construct value of employee job satisfaction of 0.864 in Table 5.9 can be interpreted that 86.40% construct variability of employee job satisfaction is explained by the construct of distributive justice, procedural justice and interactional justice, while 13.60% is explained by variables outside model. Likewise, the turnover intention construct with R square value of 0.937 means that 93.70% of the variability is explained by distributive justice, procedural justice, interactional justice, and job satisfaction, while 6.30% is explained by variables outside the model.

The basis used in testing hypotheses is the value found in the output for inner weight. Table 2 provides estimated outputs for structural model testing.

Table 2 – Result for Inner Weight

Hypotheses	Original Sample (O)	T Statistics (O/STERR)	P Values	Description
H1	0.373	3.382	0.001	Accepted
H2	0.317	2.952	0.003	Accepted
H3	0.295	2.720	0.007	Accepted
H4	-0.172	1.988	0.047	Accepted
H5	-0.183	2.558	0.011	Accepted
H6	-0.325	4.190	0.000	Accepted
H7	-0.341	3.049	0.002	Accepted

Source: Primary data, 2018.

The effect of Distributive Justice on Job Satisfaction. The results of testing the first hypothesis shows that distributive justice influence on satisfaction shows the path coefficient value of 0.373 with a P Value of 0.001 significance value or P Value of 0.001 is much smaller than 0.05 indicating that there is a positive and significant influence between the variables of distributive justice and satisfaction. The path coefficient shows that distributive justice has a positive and significant effect on satisfaction, meaning that the better the distributive justice perceived by the employee, the job satisfaction will increase.

The effect of procedural justice on job satisfaction. The results of the third hypothesis testing show that the influence of procedural fairness on satisfaction shows the path coefficient value of 0.317 with a P Value of 0.003. The significance value or P value of 0.003 is much smaller than 0.05, indicating that there is a positive and significant influence between procedural justice variables on satisfaction. The path coefficient shows that procedural justice has a positive and significant influence on satisfaction, meaning that the better procedural justice perceived by employees, the more job satisfaction will increase.

The effect of Interactional Justice on Job Satisfaction. The fifth hypothesis testing results show that the effect of interactional justice on satisfaction shows the path coefficient value of 0.295 with a P Value of 0.007. significance value or P Value of 0.007 far smaller than 0.05 indicates that there is a positive and significant influence between the variables of interactional justice on satisfaction. The path coefficient shows that interactional justice has a positive and significant influence on satisfaction, meaning that the better interactional justice perceived by employees, the more job satisfaction will increase.

The effect of Distributive Justice on Turnover Intention. The results of the second hypothesis testing show that the effect of distributive justice on turnover intention shows the path coefficient value of -0.172 with a P Value of 0.047. significance value or P Value of 0.047 smaller than 0.05 indicates that there is a negative and significant influence between distributive justice and turnover intention variables, meaning that as good as the distributive justice perceived by employees, the lower the intention of the employee to leave the company.

The effect of Procedural Justice on Turnover Intention. The fourth hypothesis test results show that the influence of procedural justice on turnover intention shows the path coefficient value of -0.183 with a P Value of 0.011. Significance value or P Value of 0.011 is much smaller than 0.05 indicating that there is a negative and significant influence between procedural justice variables on turnover intention. The path coefficient shows that procedural justice has a negative and significant effect on turnover intention, meaning that the better the

distributive justice perceived by the employee, the smaller the intention of the employee to leave the company.

The effect of Interactional Justice on Turnover Intention. The test results of the sixth hypothesis show that the effect of interactional justice on turnover intention shows the path coefficient value of -0.325 with a P Value of 0.000. the significance value or P Value of 0.000 is much smaller than 0.05 indicating that there is a negative and significant influence between the variables of interactional justice on turnover intention. The path coefficient shows that interactional justice has a negative and significant influence on satisfaction, meaning that the better interactional justice perceived by employees, the smaller the intention of the employee to leave the company.

The effect of Satisfaction on Turnover Intention. The results of testing the intended hypothesis indicate that the effect of satisfaction on turnover intention shows the path coefficient value of -0.341 with a P Value of 0.002. significance value or P Value of 0.002 is much smaller than 0.05 indicating that there is a negative and significant influence between satisfaction variables on turnover intention. The path coefficient shows that satisfaction has a negative and significant influence on turnover intention, meaning that the more employees feel satisfied, the smaller and the intention of the employee to leave the company.

CONCLUSION AND SUGGESTIONS

Based on the results of the analysis of the research conducted in CHAPTER V, the conclusions are obtained as follows:

- Distributive justice has a positive and significant effect on the job satisfaction of Batan Waru Lippo Mall restaurant employees. This influence means that the better the distributive justice felt by employees, the better the job satisfaction felt by Batan Waru Lippo Mall restaurant employees;
- Procedural justice has a positive and significant effect on the job satisfaction of Batan Waru Lippo Mall restaurant employees. This means that the better procedural fairness felt by employees, the better the job satisfaction felt by Batan Waru Lippo Mall restaurant employees;
- Interactional justice has a positive and significant effect on the job satisfaction of Batan Waru Lippo Mall restaurant employees. This means that the better interactional justice that employees feel, the better the job satisfaction felt by Batan Waru Lippo Mall restaurant employees;
- Distributive justice has a negative and significant effect on Batan Waru Lippo Mall restaurant staff turnover intention. This influence means that the higher the level of distributive justice perceived by employees, the lower the desire of employees to leave the company;
- Procedural justice has a negative and significant effect on Batan Waru Lippo Mall restaurant employee turnover intention. This influence means that the higher the level of procedural fairness, the lower the desire of employees to leave the company;
- Interactional justice has a negative and significant effect on Batan Waru Lippo Mall restaurant employee turnover intention. This influence means that the higher the level of interactional justice, the lower the desire of employees to leave the company;
- Job satisfaction has a negative effect on turnover intention. This means that the higher the employee feels job satisfaction, the lower their desire to leave the company.

Based on the results of the study, here are some suggestions that can be used as a consideration for the management of Batan Waru Restaurant in determining future policies, especially those relating to distributive justice, procedural justice, interactional justice, job satisfaction, and turnover intention.

Organizations must pay more attention to distributive factors, the allocation of contributions to employees, such as paying attention to the benefits received by employees must reflect the effort given by employees in their work. Referring to respondents'

perceptions of procedural fairness, namely fairness in the use of processes, procedures, and methods in making decisions, management is expected to pay attention to matters such as allowing employee unions to oversee the application of regulations in the company.

Referring to respondents' perceptions of interactional justice that is about the degree to which an employee is treated with dignity, attention and respect. It is hoped that management will pay more attention to matters such as procedures for treating employees with dignity so that each employee can feel valued in his workplace. Referring to respondents' perceptions of job satisfaction, it is suggested that management can improve job satisfaction through providing rewards that are in accordance with the contributions that have been given by employees to the company, giving employees the opportunity to express their opinions, treating employees with dignity and management so refrain from saying inappropriate to employees so that it can improve employee job satisfaction.

Referring to employees' perceptions of turnover intention, the management was suggested to be able to overcome and provide solutions to the level of employee desire to quit their job and find another job. As for if the management is able to overcome and resolve problems - problems faced by employees will have an impact on increasing employee job satisfaction and automatic turnover intention will be lower.

Subsequent research is suggested to enrich the findings of the study to examine the role of other variables that influence job satisfaction and are influenced by job satisfaction. In the research location, researchers only researched in restaurants located in Kuta, so it was suggested that further research could expand the orientation in the scope of a larger organization or wider population.

Research Limitations:

- This study uses respondents who are in the restaurant service industry, so it is important for future research to complement and enrich empirical studies related to this topic by conducting research on other service companies;
- This study was only carried out in one restaurant so that the results of this study might not be applied in other restaurants that have the same problems or the results of this study cannot be generalized to similar service sector companies or other sectors;
- The scope of research is limited to the Kuta area, so the results of this study cannot be generalized to research outside the Kuta area.

REFERENCES

1. Adams, S. J. (1965). "Inequity in Social Exchange". in *Advances in Experimental Social Psychology*, pp: 269-297
2. Alniacik, Umit. Ersan Cigerim. Kultigin Akcin. Orkun Bayram .(2011). Independent and joint effects of perceived corporate reputation, affective commitment and job satisfaction on turnover intentions. *Procedia Social and Behavioral Sciences* 24.1177–1189.
3. Andini, Rita. 2006. Analisis Pengaruh Kepuasan Gaji, Kepuasan Kerja, Komitmen Organisasional Terhadap Turnover Intention (Studi Kasus Pada Rumah Sakit Roemani Muhammadiyah Semarang). Tesis. Program Studi Magister Manajemen Universitas Diponegoro.
4. Badawi. (2012). Peran Emosi Memediasi Keadilan Distributif, Keadilan Prosedural, and Interaksional Terhadap Kepuasan Pemulihan Layanan. *Jurnal Manajemen and Akuntansi*. Vol. 1(1), h: 13-26
5. Bakhshi, A., Kumar, K., & Rani, E. 2009. Organizational Justice Perceptions as Predictor Of Job Satisfaction And Organization Commitment. *International Journal of Business and Management*, Vol. 4, No. 9, pp. 145-154.
6. Bies, R.J. (2005). Are Procedural Justice & Interactional Justice Conceptually Distinct?, *Handbook Of Organizational Justice*. Lawrence Erlbaum Associates, Inc.
7. Bakotic, Danica; and Babic, Tomislav. 2013. Relationship between Working Condition and Job Satisfaction: The Case of Croatian Shipbuilding Company. *International Journal of Business and Social Science*. 4(2), pp: 206-212.

8. Chen, Zhen Xiong., and Anne Marie Francesco. (2000). Employee Demography, Organizational Commitment, and Turnover Intentions in China: Do Cultural Difference Matter?. *Human Relations* Vol. 53 No. 6: 869-887.
9. Colquitt, J.A. (2001). On The Dimensionality Of Organizational Justice: A Construct Validation Of Measure. *Journal of Applied Psychology*, Vol. 86 (3), pp. 386-400.
10. Cropanzo, R., Bowen, D. E., & Gilliland, S. W. (2007). The management of organizational justice. *The Academy of Management Perspectives*, 21(4), 34-48.
11. Cropanzano, Russell, Cynthia A. Prehar and Peter Y. Chen. (2002). Using Social Exchange Theory to Distinguish Procedural from Interactional Justice. *Group & Organizational Management*. Vol. 27 (3), pp: 324-351.
12. Elamin, Abdallah M. and Alomaim Nasser (2011). Does Organizational Justice Influence Job Satisfaction and Self-Perceived Performance in Saudi Arabia Work Environment? *International Management Review*, Vol. 7(1)
13. Hom, P.W. et al, 1984. The Validity of Mobby's (1977) Model of Employee Turnover. *Organizational Behavior & Human Performance*, Vol. 34, pp. 141 – 174
14. Hom, P.W. & Griffeth, R.W. 1991. Structural Equation Modelling Test of a Turnover Theory: Cross-Sectional & Longitudinal Analysis. *Journal of Applied Psychology*, Vol. 76, No. 3, pp. 350-366.
15. Jaros, S.J. 1997. An Assessment of Meyer and Allen's (1991) Three-Component Model Of Organizational Commitment Turnover Intentions. *Journal Of Vocational Behavior*, Vol. 51, pp. 319 – 337
16. Kumar, R., Charles, R., and Peter Y. 2011. A Study on Turnover Intention in Fast Food Industry: Employees' Fit to the Organizational Culture and the Important of their Commitment. *International Journal of Academic Research in Business and Social Sciences*, 2 (5), pp: 9-42
17. Martoyo, Susilo. 2007. *Manajemen Sumber Daya Manusia*. Edisi Kelima. BPFYogyakarta.
18. McShane, S.L. & Von Glinow, M.A. 2008. *Organizational Behavior: Emerging Realities for The Workplace Revolution*, 4th Edition, McGrawHill/Irwin.
19. Nadiri, Halil., and Tanova, Cem. 2010. An Investigation Of The Role Of Justice In Turnover Intentions, Job Satisfaction, And Organizational Citizenship Behavior In Hospitality Industry. *International Journal Of Hospitality Management*. 29, pp: 33-41
20. Noe, R.A., Hollenbeck, J.R., Gerhart, B., & Wright, P.M. (2011). *Manajemen Sumber Daya Manusia: Mencapai Keunggulan Bersaing*, Edisi 6. Penerbit Salemba Empat.
21. Rai, G. S. (2013). Impact of organizational justice on satisfaction, commitment and turnover intention: Can fair treatment by organizations make a difference in their workers' attitudes and behaviors? *International Journal of Human Sciences*, 10(2), 260-284
22. Robbins, S.P. (2008). *Perilaku Organisasi*, Edisi 2. Penerbit Salemba Empat.
23. Saunders, M. N. K., Thornhill, A., & Lewis, P. (2002). Understanding employees' reactions to the management of change: an exploration through an organizational justice framework. *Irish Journal of Management*, 23(1), 85-108
24. Svensson, Jorgen and Marieke van Genugten. (2013). Retaliation Against Reporters of Unequal Treatment: Failing Employee Protection In The Netherlands. *Equality, Diversity and Inclusion An International Journal*. Vol. 32 (2), pp: 129-143.
25. Tett, R.P. & Meyer, J.P. 1993. Job Satisfaction, Organizational Commitment, Turnover Intention, & Turnover: Path Analyses Based On Meta – Analytic Findings. *Personnel Psychology*, Vol. 46, pp. 259 – 293.
26. Thibaut, J. W. & Walker, L. (1975). *Procedural justice: A psychological analysis*. Hillsdale, NJ: Lawrence Erlbaum Associates.
27. Yucel, Ilhami. 2012. Examining the Relationship among Job Satisfaction, Organizational Commitment, and Turnover Intention: An Empirical Study. *International Journal of Business and Management*, 7(20), pp: 44-58.

DOI <https://doi.org/10.18551/rjoas.2018-11.16>

THE EFFECT OF SERVICE QUALITY ON CUSTOMER LOYALTY THROUGH CUSTOMER SATISFACTION AT ONE DOZEN CAFÉ OF BATAM

Gosal Diana Lestari, Bernardus Denny

University of Ciputra, Indonesia

*E-mail: diana_lestgo@yahoo.com

ORCID: 0000-0002-5477-6061

ABSTRACT

One Dozen Café (ODC) is the first pioneer of the local café in Batam City in which previously there were only coffee shops and cafés that could only be found inside the mall. ODC is a café that serves Indonesian cuisine by presenting a modern atmosphere in the midst of the Batam people's lifestyles which are full of Malay culture. The ODC's market target is young people, families and business people. The objectives of this research include: (1) Does service quality affect customer satisfaction in One Dozen Café of Batam? (2) Does customer satisfaction affect customer loyalty in One Dozen Café of Batam? (3) Does service quality affect customer loyalty in One Dozen Café of Batam? The research method used is the Partial Least Square (PLS) analysis approach which is part of the Structural Equation Modeling (SEM). This study applied quantitative method by distributing questionnaires to 100 respondents who became the research samples in which they were selected by using purposive sampling technique with criteria that they had made a minimum visit of three times. The findings showed that service quality and customer satisfaction affect customer loyalty. Service quality affects customer loyalty by 55.4% and the rest is affected by other factors.

KEY WORDS

Service quality, customer, satisfaction, customer loyalty.

Changes in society's lifestyles, which are now becoming more consumptive, are accompanied by the emergence of many businesses, especially in the fields of hotels, restaurants and cafés. There are many restaurants and cafés that currently do not only aim to meet the need for hunger, but they become part of the lifestyle or personal image (brand image) of someone. The existence of these changes and the new demands that exist in the society can be an opportunity and business growth especially in the hotel, restaurants and café industry group.

Restaurants and cafés experience a growth of around 50-500 new units that are established every year in Indonesia. This growth rate can be a sign of market demand for this industry. However, another thing to note is that this growth also leads to tight market competition. Business owners need to compete tightly to attract customers' attention or attempt to maintain customer loyalty. According to Kotler and Keller (2016), customers have new capabilities in which they can empower technological development. In addition to technology empowerment, customers will also move to other brands if they think that they are not treated properly or it does not meet their expectation. It is concluded that currently customers can easily move the choice of products or services when they feel dissatisfied with the services provided.

According to Nainggolan and Pradhanawati (2016), service quality is focused on efforts to meet customer needs and desires as well as the accuracy of delivery to offset customer expectations. Jimanto (2014) defines the quality of service as a measure of how well the level of service provided can be in accordance with customer expectations. Therefore, it can be concluded that the quality of service is our effort to meet customer expectations for the products or services we offer. Therefore, service quality is one of the factors that need to be considered in the sustainability of a business. When customers' expectations can be fulfilled properly, the expected result is that customers will be satisfied with what we offer. Broadly speaking, there are attributes that need to be considered to assess customer satisfaction, i.e.

conformity of expectations, interest in revisiting, and willingness to recommend (Tjiptono, 2004). Moreover, in assessing customer loyalty there are also indicators that are similar to customer satisfaction. It was explained by Kotler and Keller (2016) that it has three indicators i.e. repurchase, retention, and referrals. This is what is often mentioned that customer satisfaction will go hand in hand with customer loyalty to a product or service.

One Dozen Café (ODC) is the first pioneer of the local café in Batam City in which previously there were only coffee shops and cafés that could only be found inside the mall. It was established in September 2015, ODC was established by PT Sukses Sabar Sentosa consisting of 12 shareholders. They are a group of businessmen who gather in the café every month to discuss and share stories about business. Skill in seeing business opportunities becomes one of the basics to the establishment of ODC.

ODC is a café that serves Indonesian cuisine by presenting a modern atmosphere in the midst of the Batam people's lifestyles which are full of Malay culture and kopitiam. The ODC's market target is young people, families and business people. Since its establishment, ODC was well received by Batam people and tourists coming from Singapore and Malaysia. As many as 70% of the customers who come to ODC are the repeaters. Along with the time development, the area around ODC began to develop and rivals around the ODC location began to appear with a distance of less than 500 meters. Tre Cipolle and Chemistree is a new café that was established around the ODC area precisely in mid-2016. Tre Cipolle is a café whose interior is identical for young people and the menu is more western-oriented; as well as Chemistree. The attraction of this place is the concept of nature and interior design, in which there is a very large giant tree that rises out of the building in the center part of the café.

Based on data collected through customer reviews using Google Review and TripAdvisor from 2017 to the early 2018, the quality of the product (taste and appearance) and prices received good reviews from the customers. However, places and services/facilities are also often discussed. A comparison between positive and negative ratings has a very close difference. So far, the services provided by ODC have been based on standard services such as opening the doors for the customers, greeting, and delivering them to seats, taking orders until orders are delivered to them. This has attracted the attention of researchers to discuss whether service quality has an effect to the decline in turnover which also causes a decrease in customer visits. In fact, the previous discussion mentions that most ODC customers are repeaters. According to Nainggolan and Pradhanawati, (2016) service quality affects customer satisfaction; the higher the quality of service, the higher the level of customer satisfaction. It is stated that the higher the availability of facilities provided, it will increase customer satisfaction and the desire to revisit. However, according to Jimanto (2014), service quality does not have a positive effect to customer loyalty in retail cinemas of the premiere. This happened because of the lack of unique value obtained by customers, where customers feel able to get the same service at a more affordable price.

Based on the above background, the formulation of the research problems includes:

- Does service quality affect customer satisfaction in One Dozen Café of Batam?
- Does customer satisfaction affect customer loyalty in One Dozen Café of Batam?
- Does service quality of affect customer loyalty in One Dozen Café of Batam?

Based on the formulation of the above problems, the research objectives include:

- Determining and analyzing the effect of service quality to customer satisfaction in One Dozen Café of Batam;
- Determining and analyzing the effect of customer satisfaction to customer loyalty in One Dozen Café of Batam;
- Determining and analyzing the effect of service quality to customer loyalty in One Dozen Café of Batam.

Hypotheses. Based on the above analysis model, the following hypotheses will be tested in this research that include:

- Service quality has positive effect to customer satisfaction in One Dozen Café of Batam;
- Customer satisfaction has positive effect to customer loyalty in One Dozen Café of Batam;
- Service quality has positive effect to customer loyalty in One Dozen Café of Batam.

METHODS OF RESEARCH

This research applies a quantitative approach. Quantitative research, according to Sugiyono (2015), is a method that uses several samples and numerical data. This research aims to determine the effect of service quality to customer loyalty through customer satisfaction.

The research method used is the Partial Least Square (PLS) analysis approach which is part of the Structural Equation Modeling (SEM). This Partial Least Square Analysis aims to describe the correlation between variables in which customer satisfaction is the intervening variable. In addition, it can test the direct or indirect correlation between variables in the model (Ghozali, 2015) which later will be processed using the SmartPLS 2.0 program. The PLS method was chosen for this research due to limited information and the small number of samples used. It also does not require normally distributed data, is able to model many exogenous and endogenous variables (complex models), and results remain robust even though there are abnormal and missing data; in addition, it can be used in reflective and formative constructs (Abdillah and Jogiyanto, 2009).

The population of this research are customers of One Dozen Café in unknown or infinite amounts. Based on the unknown population and the limited access of the researcher to calculate the population with certainty, this research will use the Lemeshow (1997) formula to determine the number of samples. This research establishes 100 samples which are the customers of One Dozen Café, which will later be selected using probability sampling method with purposive sampling technique based on predetermined criteria; they have visited One Dozen Café for at least three times (Hosmer et al, 1997).

This step is to design a structural model of the correlation between latent variables based on the formulation of the research problems and the theory-based research hypothesis. The PLS method will allow for exploration of the correlation between latent variables (inner models) (Jaya and Sumertajaya, 2008).

The design stage of the measurement model (outer model) is very important because it is related to determining whether the indicators of each latent variable are reflective or formative (Jaya and Sumertajaya, 2008) in which it is determined based on the theory, previous research and or rationality. In this research, the variables are reflective.

After doing the first and second steps, the results of the design of the inner model and the outer model will be presented in the form of path diagram so that the results are more easily understood (Jaya and Sumertajaya, 2008).

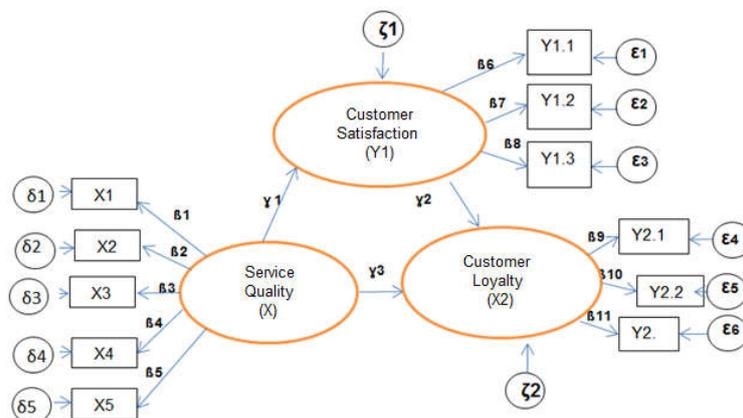


Figure 1 – Construction of Path Diagram

The hypotheses are tested by using the bootstrap resampling method which allows data to be freely distributed, do not require the assumption of a normal distribution, and do not need large samples. The test is conducted by t-test in which the effect between variables in the research is significant if the t-statistic value $>$ t-table (1.96) with a significance value of 0.05. If the measurement results in the outer model are significant (t-statistics $>$ 1.96), then the indicator can be used as an instrument of the latent variables. If the measurement results in the inner model are significant (t-statistic $>$ 1.96) then there is a significant effect of exogenous latent variables to endogenous latent variables.

Mediation variables or intervening variables are mediating variables of the correlation between exogenous variables and endogenous variables. This research also tests the mediating effect to find out the type of mediation of the latent variable of customer satisfaction. Determination of the mediation type uses the mediation type chart as follows:

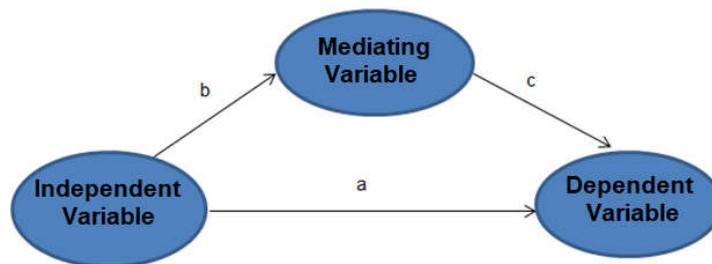


Figure 2 – Structural Model with the Mediation Variable (Source: Zhou et al, 2010)

The explanation in the above diagram is: if the direct effect value (a) is bigger than the indirect effect value ($b \times c$), then the mediator variable has no effect. Meanwhile, if the direct variable value (a) is smaller than the indirect effect ($b \times c$), the mediator variable has an effect.

RESULTS OF STUDY

Partial Least Square Analysis. In this research, Partial Least Square (PLS) analysis research is applied to test the research hypotheses using the SmartPLS program. The following is the figure of the PLS model:

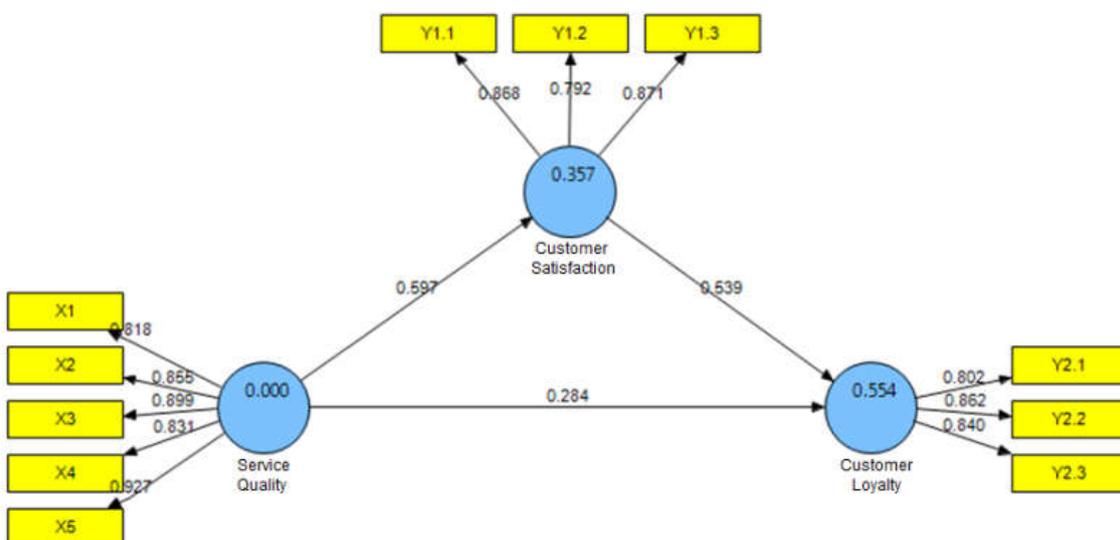


Figure 3 – Estimation Results of the PLS Model

Testing the indicator reliability is carried out by looking at the outer loading value. An indicator meets the reliability indicator if it has the value of outer loading > 0.7 . the following is the outer loading value of each indicator:

Table 1 – Outer Loading Values

Variables	Indicators	Outer Loading
Service Quality	X1	0.818
	X2	0.855
	X3	0.899
	X4	0.831
	X5	0.927
Customer Satisfaction	Y1.1	0.868
	Y1.2	0.792
	Y1.3	0.871
Customer Loyalty	Y2.1	0.802
	Y2.2	0.862
	Y2.3	0.840

Based on Table 1, it is found that all indicators used to measure variables have the outer loading value > 0.7 . Based on these results, it can be concluded that the evaluation on indicator reliability has met the requirements.

The discriminant validity test is carried out by looking at the cross-loading values and Fornell-Larcker. An indicator is considered to meet discriminant validity if the value of cross-loading indicator in the variable is the biggest compared to other variables. The following is the cross-loading value of each indicator:

Table 2 – Cross Loading Values

Indicators	Variables			Evaluation
	X Service Quality	Y1 Customer Satisfaction	Y2 Customer Loyalty	
X1	0.818	0.599	0.573	Valid
X2	0.855	0.455	0.516	Valid
X3	0.899	0.513	0.513	Valid
X4	0.831	0.444	0.450	Valid
X5	0.927	0.551	0.555	Valid
Y1.1	0.545	0.868	0.657	Valid
Y1.2	0.447	0.792	0.488	Valid
Y1.3	0.514	0.871	0.633	Valid
Y2.1	0.493	0.578	0.802	Valid
Y2.2	0.510	0.574	0.862	Valid
Y2.3	0.514	0.621	0.840	Valid

Based on Table 2, each indicator has the largest cross-loading value on the variable that they form compared to other variables. Thus, it can be concluded that the indicators used in this research have good discriminant validity in compiling their respective variables. Meanwhile, the assessment using Fornell-Larcker is carried out by comparing the value of the AVE roots of each variable with the correlation between variables. If the value of the root AVE is bigger than the correlations then the variable has good discriminant validity. The following are the results of discriminant validity test using the Fornell-Larcker method:

Table 3 – AVE Root Value and Correlation between the Variables (Fornell-Larcker)

Variables	AVE	$\sqrt{\text{AVE}}$	X	Y1	Y2
X – Service Quality	0.752	0.876	0.867		
Y1- Customer Satisfaction	0.713	0.844	0.597	0.844	
Y2 – Customer Loyalty	0.697	0.835	0.606	0.709	0.835

Table 3 shows that all correlation values are smaller than the root value of AVE. These results indicate that each variable in this research has good discriminant validity.

Internal Consistency. A variable meets construct reliability if it has a composite reliability value > 0.7 . the following is the composite reliability value of each variable:

Table 4 – Composite Reliability Values

Variables	Composite Reliability	Rule of Thumb	Evaluation
Service Quality	0.938	> 0.70	Reliable
Customer Satisfaction	0.881		Reliable
Customer Loyalty	0.873		Reliable

Table 4 shows that the composite reliability value of each variable > 0.7 . Thus, in this research model, each variable has fulfilled the construct reliability.

Table 5 – Cronbach Alpha Values

Variables	Cronbach Alpha	Rule of Thumb	Evaluation
Service Quality	0.917	> 0.70	Reliable
Customer Satisfaction	0.799		Reliable
Customer Loyalty	0.782		Reliable

Table 5, regarding the results of Cronbach's Alpha, shows that the Cronbach's Alpha value for the three latent variables of service quality, customer satisfaction and customer loyalty have values greater than 0.7. Therefore, it can be considered that the three latent and measuring variables used in this research are reliable.

Convergent Validity. Convergent validity test is carried out by using the AVE value. The conditions used are the AVE values must be bigger than 0.5 so that it can meet the convergent validity. The following is the AVE value of each latent variable:

Table 6 – AVE (Average Variance Extracted) Values

Variables	AVE	Rule of Thumb	Evaluation
Service Quality	0.752	> 0.5	Valid
Customer Satisfaction	0.713		Valid
Customer Loyalty	0.697		Valid

Table 6, concerning the AVE results, shows that the AVE value for each latent variable of service quality, customer satisfaction and customer loyalty have values of more than 0.5. Therefore, it can be considered that all three latent variables are valid and do not have convergent validity problems.

The data processing using PLS produces the R-Square values as follows:

Table 7 – R² Values

Endogen Variables	Nilai R-Square
Customer Satisfaction	0.357
Customer Loyalty	0.554

Based on Table 7, it is known that the R-Square value for customer satisfaction is 0.357, which means that the percentage of customer satisfaction that can be explained by the quality of service is 35.7%. Meanwhile, the value of R-Square for customer loyalty is 0.554 which means that the percentage of customer loyalty that can be explained by service quality and customer satisfaction is 55.4%.

Based on the data processing by using PLS, the Q-Square values are as follows:

Table 8 – Q² Values

Endogenous Variables	Q-Square Values
Customer Satisfaction	0.418
Customer Loyalty	0.363

Based on Table 8, it is known that the Q-Square value is greater than 0, which means that the model has good predictive relevance. The variable value of customer satisfaction is 0.418 and the value of the variable customer loyalty is 0.36; both are considered to have values greater than 0 so they are good. In the PLS model, the assessment of goodness of fit is known from the Q-Square value which can be seen in the above table. The value of Q-Square has the same meaning as the coefficient of determination (R-Square) in the regression analysis; the higher the R-Square, the model will be more fit with the data. From the R-Square value generated by PLS program, the Q-Square value can be calculated as the following:

$$\text{Q-Square Value} = 1 - [(1 - 0.357) \times (1 - 0.554)] = 0.713$$

From the results of calculations, it is known that the Q-Square value is 0.713. It means that the diversity of research data that can be explained by the research model is 71.3%, while the remaining 28.7% is explained by other factors outside the model. Based on these results, the model in the research has appropriate goodness of fit.

Based on data processing by using PLS, it produces the R-Square values as the following:

Table 9 – f^2 Values

	Customer Satisfaction	Service Quality	Customer Loyalty
Service Quality	0.555	-	0.116
Customer Satisfaction	-	-	0.420
Customer Loyalty	-	-	-

Based on Table 9, it is found that the f-Square value for service quality and customer satisfaction is 0.555 which has big effect, the f-square value of service quality and customer loyalty is 0.116 which has medium effect and f-square value customer satisfaction and customer loyalty is 0.420 which has big effect. Overall, most of the f-square values have big effect.

The hypothesis test is carried out by looking at the coefficient of the effect and the t-statistics generated by the structural model (inner model) in PLS. The hypothesis can be accepted if the coefficient of the effect is positive and t-statistics > 1.96.

The following are the coefficients and t-statistics on the outer model and inner model produced by the structural model (inner model):

Table 10 – Hypothesis Test on the Outer Model of Service Quality

n/n	Original Sample (O)	T Statistics (O/STERR)
X1 <- Service Quality (X)	0.818336	18.082204
X2 <- Service Quality (X)	0.855345	20.716553
X3 <- Service Quality (X)	0.899252	30.878546
X4 <- Service Quality (X)	0.831460	18.149153
X5 <- Service Quality (X)	0.927110	50.738788

Based on Table 10, regarding the results of the outer loading of service quality variable, it shows that the t-statistic value for each indicator is more than 1.96. It can be seen based on the following equation:

$$X1 = \beta1.X + \delta1 = (0.818 \times 0.000) + 0.05 = 0.5$$

$$X2 = \beta2.X + \delta2 = (0.855 \times 0.000) + 0.05 = 0.5$$

$$X3 = \beta3.X + \delta3 = (0.899 \times 0.000) + 0.05 = 0.5$$

$$X4 = \beta4.X + \delta4 = (0.831 \times 0.000) + 0.05 = 0.5$$

$$X5 = \beta5.X + \delta5 = (0.927 \times 0000) + 0.05 = 0.5$$

Based on these results, it is found that the five indicators on service quality variable have a positive value and can be used as a measure of service quality variable.

Table 11 – Hypothesis Test on Outer Model of Customer Satisfaction

n/n	Original Sample (O)	T Statistics (O/STERR)
Y1.1 <- Customer Satisfaction (Y1)	0.867611	28.021881
Y1.2 <- Customer Satisfaction (Y1)	0.791780	15.316411
Y1.3 <- Customer Satisfaction (Y1)	0.870770	26.881924

Based on Table 11, regarding the results of the outer loading of customer satisfaction variable, it shows that the t-statistic value for each indicator has value more than 1.96. It can be seen based on the following equation:

$$Y1.1 = \beta6.Y1 + \varepsilon1 = (0.868 \times 0.357) + 0.05 = 0.375$$

$$Y1.2 = \beta7.Y1 + \varepsilon2 = (0.792 \times 0.357) + 0.05 = 0.333$$

$$Y1.3 = \beta8.Y1 + \varepsilon3 = (0.871 \times 0.357) + 0.05 = 0.342$$

Based on these results, it is found that the three indicators on the customer satisfaction variable have positive values and can be used as a measure of the customer satisfaction variable.

Table 12 – Hypothesis Test on Outer Model of Customer Loyalty

	Original Sample (O)	T Statistics (O/STERR)
Y2.1 <- Customer Loyalty (Y2)	0.801511	18.387566
Y2.2 <- Customer Loyalty (Y2)	0.862256	23.994681
Y2.3 <- Customer Loyalty (Y2)	0.839705	23.196834

Based on Table 12, regarding the results of the outer loading of customer loyalty variable, it shows that the t-statistic value for each indicator has a value of more than 1.96. It can be seen based on the following equation:

$$Y2.1 = \beta9.Y2 + \varepsilon4 = (0.802 \times 0.554) + 0.05 = 0.494$$

$$Y2.2 = \beta10.Y2 + \varepsilon5 = (0.864 \times 0.554) + 0.05 = 0.529$$

$$Y2.3 = \beta11.Y2 + \varepsilon6 = (0.840 \times 0.554) + 0.05 = 0.515$$

Based on these results, it is found that all three indicators on customer loyalty variable have positive values and can be used as a measure of customer loyalty variable.

Table 13 – Hypothesis Test of Inner Model

Hypotheses	Effect	Coefficient	Standard Error	t-statistics
H1	Service Quality → Customer Satisfaction	0.597	0.092	6.461
H2	Customer Satisfaction → Customer Loyalty	0.539	0.101	5.352
H3	Service Quality → Customer Loyalty	0.284	0.109	2.597

The coefficient of effect on the service quality to customer satisfaction is 0.597 with a t-statistic of 6.461 > 1.96. It shows that there is a significant positive effect between the correlation of service quality and customer satisfaction in One Dozen Café of Batam. In other words, if the service quality provided to customers is getting better, it will significantly increase customer satisfaction. The equation is $Y1 = \gamma1 \times x + \zeta1 = (0.597 \times 0.000) + 0.05 = 0.05$. Based on these results, H1, which assumes that service quality has positive effect to customer satisfaction, is accepted.

The coefficient of effect on the customer satisfaction to customer loyalty is 0.539 with a t-statistic of 5.352 > 1.96. It shows that there is a significant positive effect between the correlation of customer satisfaction and customer loyalty in One Dozen Café of Batam. In other words, if customer satisfaction is getting better, it will significantly increase customer loyalty. The equation is $Y2 = \gamma3 \times x + \gamma2 \times Y1 + \zeta2 = (0.284 \times 0.000) + (0.539 \times 0.357) + 0.05 =$

0.242. Based on these results, H2, which assumes that customer satisfaction has positive effect to customer loyalty, is accepted.

The coefficient of effect on the service quality to customer loyalty is 0.284 with a t-statistic of $2.597 > 1.96$. It shows that there is a significant positive effect between the correlation of service quality and customer loyalty in One Dozen Café of Batam. In other words, if the quality of services provided to customers is getting better, it will significantly increase customer loyalty. The equation is $Y_2 = \gamma_3 x + \gamma_2 Y_1 + \zeta_2 = (0,284 \times 0,000) + (0,539 \times 0,357) + 0,05 = 0,242$. Based on these results, H3, which assumes that service quality has positive effect to customer loyalty, is accepted.

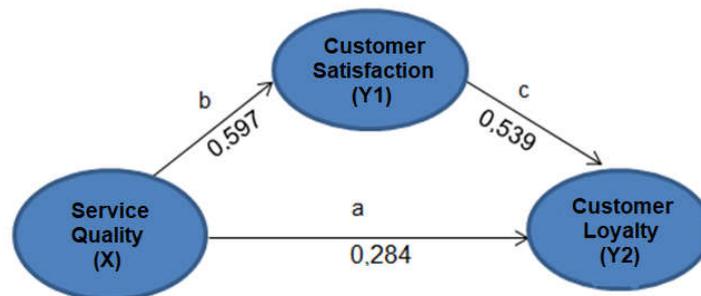


Figure 4 – Structural Models with Mediating Variable

Based on Figure 4, it seems that service quality has a direct effect to customer loyalty (path a) of 0.284, direct effect to customer satisfaction of 0.597 (path b), and the direct effect of customer satisfaction to customer loyalty of 0.539 (path c). In the Figure 4, we can see the indirect effect of service quality to customer loyalty through customer satisfaction which is $0.597 \times 0.539 = 0.321$. In this case the direct (a) 0.284 variable value is smaller ($<$) than the indirect variable ($b \times c$) 0.321, so the customer satisfaction variable has a mediating effect on the service quality to customer loyalty.

DISCUSSION OF RESULTS

Effect of Service Quality to Customer Satisfaction. Based on the analysis results of the hypothesis test, it is found that the t-statistic value of each service quality indicator is > 1.96 . So, the results show that the first hypothesis is accepted which describes that service quality has positive effect to customer satisfaction in One Dozen Café. These results explain that the more quality or the better the service quality provided, it will affect the increase in customer satisfaction and vice versa; if customers feel that the service quality provided is less quality, it will lead to customer dissatisfaction. The research findings are supported by Nainggolan, et al, (2016) who stated that service quality affects customer satisfaction. It is also supported in the research conducted by Subagiyo and Adlan (2017).

Lewis and Boom, in Jimanto (2014) defined service quality as a measure of how well the level of service provided can meet customer expectations. In this research, related to service quality, there are five indicators consisting of reliability, responsiveness, assurance, empathy, and tangible, each of which is represented by a statement responded by the respondent. Based on the results of respondents' answers, it was found that the lowest mean is in the responsiveness indicator with a mean value of 3.94 and the highest standard deviation of 0.963 in the statement of understanding customers in One Dozen Café. It means that the respondents' answers have a far range, in which there are customers who do not agree with the ability of One Dozen Café specifically in understanding customer needs. Based on the lowest mean value in the responsiveness indicator, it is necessary to try to improve service quality. Responsiveness consists of staff preparedness in receiving orders, responsive in serving customers, and understanding customer needs. Efforts that can be made are evaluating and training the employees such as making a list of mandatory questions given to guests to answer customer needs; for example, if the customer bring

babies they will be offered baby seats, if customers order dessert menus they will be asked about the menu that will be served before or after main course. In terms of receiving orders, self-order innovation can be implemented and make call buttons when customers need something.

Effect of Customer Satisfaction to Customer Loyalty. Based on data analysis that has been conducted previously, the findings found that the second hypothesis is accepted which shows that customer satisfaction has positive effect to customer loyalty in One Dozen Café. The research findings are in line with the research conducted by Adji and Subagio (2013) and Palit, et al, (2016) who stated that customer satisfaction affects customer loyalty.

In customer satisfaction, there are three indicators consisting of: (1) services given by ODC meet my expectations (received 50 agreed responses from the customer); (2) I am interested in having revisit because I am satisfied with the services provided (received 45 agreed responses; and (3) I would recommend ODC to my colleagues because the services provided met my expectations (received the most agreed responses from 55 people).

These results explain that when the customers feel satisfied with the services provided which meet their expectations, then they will come back, and will recommend ODC to their colleagues. It will have an effect to customer loyalty of One Dozen Café. All these satisfaction variables have an average mean value of 4.11, which means that the respondents agree that satisfaction affects loyalty. However, in the Y.1.2 indicator of "I am interested in revisiting again because the services provided meet my expectations" has a high standard deviation value of 0.821, which means that the respondents' answers have a far enough range and there are customers who disagree to this. In this case, there are various other factors affecting customers to revisit ODC, i.e. product, price, promotion and location factors (Gage in Khusaini, 2016). Further research is required in this regard. However, in this case efforts can be made by establishing relationships with customers to be able to identify customer needs to improve and maintain their satisfaction. This effort can be made by creating social media platforms that can make customers easily obtain information about ODC. In addition, ODC can also follow the developments from their customers and the staffs can establish direct relationships during customer visits. This effort is in line with Tjiptono (2015) that the creation of customer satisfaction will provide several benefits, including: more harmonious relationships between companies and customers, a good basis for repurchase and loyalty, and form recommendation of positive influence that will be profitable for the company.

Effect of Service Quality to Customer Loyalty. Based on data analysis that has been carried out previously, it is obtained that the third hypothesis is accepted which showed that service quality has direct effect to customer loyalty with a significant value of 0.284. This is in line with a research conducted by Laemonta and Padmalia (2016) which explained that service quality affects customer loyalty.

In customer loyalty, there are three indicators consisting of: (1) I will come back because I am satisfied with the services (received 50 agreed responses from the customers; (2) contra to negative issues about ODC and will still make revisit (received 57 agreed responses); and (3) always recommend ODC to other people (received the most agreed responses from 59 people). This overall variable has a total mean value of 3.86 which means that the average respondent agrees with the statements. However, on the Y.2.1 indicator with the statement "I came back because I am satisfied with the services of One Dozen Café" has a high standard deviation value of 0.935 which means that the respondents' answers have far range and there are some customers who disagree. It is the same as customer satisfaction that there are other factors that can affect why customers do not come back despite being satisfied with the services provided such as the product quality and the menu offered. According to the research findings of Jimanto (2014), it was found that customers are not loyal even though the service quality provided is good. The satisfied feeling is influenced by customers' feel that the benefits they obtain are not much more profitable when they are compared to offers with lower prices. In this case, ODC also needs to continue to pay attention to the quality of the product in which the price offered is offset by the quality of the services. In this research, based on the lowest standard deviation of 0.66, it means that

the average customer answer agrees to “always recommend One Dozen Café” that may support that there are other factors affecting this matter since it is assessed as a form of customer loyalty, as stated also in Palit, et al, (2016).

Mediation Effects. Based on the research findings, it is found that customer satisfaction proved to play a significant mediation between service quality and customer loyalty. Although customer satisfaction does not mediate the correlation between service quality and customer loyalty in full, customer satisfaction contributes partially as a mediating variable. It shows that some service quality variables to customer loyalty are mediated partially through customer satisfaction.

CONCLUSION

Based on the results of the analysis and discussion presented above, the conclusions of this research include: 1) service quality has positive effect to customer satisfaction in One Dozen Café of Batam. The first hypothesis is accepted, 2) the increasing service quality provided, the more customer satisfaction increased. Customer satisfaction has positive effect to customer loyalty in One Dozen Café of Batam. The second hypothesis is accepted. Increasing customer satisfaction is also increasing customer loyalty, 3) Service quality has positive effect to customer loyalty in One Dozen Café of Batam. The third hypothesis is accepted. The increasing the service quality provided, the more customer loyalty increases.

REFERENCES

1. Abdillah, W. & Jogiyanto, H. M.,(2009). Konsep Dan Aplikasi PLS (Partial Least Square) Untuk Penelitian Empiris. Badan Penerbit Fakultas Ekonomi Dan Bisnis UGM, Yogyakarta.
2. Adji. P., & Subagio, H (2013). Pengaruh retail mix terhadap keputusan pembelian mahasiswa uk petra di circle k siwalankerto sub. Jurnal Manajemen Petra.
3. Ghozali, I. (2015). Aplikasi Analisis Multivariate dengan Program IBM SPSS 23. Semarang : Badan Penerbit Universitas Diponegoro.
4. Hosmer, D. W. (1997). A comparison of goodness-of-fit tests for the logistic regression model. *Statistics in medicine*, 16(9), 965-980.
5. Jaya, I. G. N. M., & Sumertajaya, I. M. (2008). Pemodelan persamaan struktural dengan partial least square. *Semnas Matematika dan Pendidikan Matematika*, 1, 118-132.
6. Jimanto, R. B. (2014). Pengaruh Service Quality Terhadap Loyalitas Pelanggan Dengan Customer Satisfaction Sebagai Variabel Intervening Pada Ritel Bioskop the Premiere Surabaya. *Jurnal Strategi Pemasaran*, 2(1), 1-7.
7. Kotler, P. (2016). *Marketing Management*. England. Pearson Education Limited.
8. Laemonta, J. H., & Padmalia, M. (2017). Pengaruh Inovasi dan Kualitas Layanan terhadap Loyalitas Konsumen Terang Bulan–Martabak 93. *Journal of Entrepreneur and Entrepreneurship*, 5(2), 73-80.
9. Nainggolan, L. P., & Pradhanawati, A. (2016). Pengaruh Kualitas Pelayanan, Keragaman Produk dan Lokasi Terhadap Kepuasan Pelanggan (Studi Kasus Pada Pelanggan Stove Syndicate Cafe di Semarang). *Jurnal Ilmu Administrasi Bisnis*, 5(4), 531-541.
10. Palit, H. C., Kristanti, M., Aysia, D. A. Y., & Priskila, A. (2016). The Effect of Service Quality and Customer Satisfaction on Customer Loyalty of Small Scale Indonesian (Doctoral dissertation, Petra Christian University).
11. Subagiyo, R. (2017). Pengaruh Service Quality, Marketing Mix dan Kepuasan Mahasiswa terhadap Customer Loyalty. *Jurnal Ekonomi Modernisasi*, 13(1), 1-15.
12. Sugiyono. (2015). *Metode penelitian dan pendidikan pendekatan kuantitas, kualitatif, dan R & D*. Bandung. Alfabeta.
13. Tjiptono Fandy dan Anastasia Diana. (2015). *Pelanggan Puas ? Tak Cukup !*. Andi. Yogyakarta.
14. Tjiptono, Fandy (2004), *Manajemen Jasa*. Undi.Jogja.

DOI <https://doi.org/10.18551/rjoas.2018-11.17>

THE ANALYSIS OF MARKETING STRATEGY AND PLAN OF PT. FOUR JAFFE INDONESIA

Mardianto Daniel

Master of Management Program Economics and Business,
University of Esa Unggul, Indonesia

Ramdhani Dadan

Faculty of Economics and Business, University of Sultan Agung Tirtayasa, Indonesia

*E-mail: danielmardianto@yahoo.co.id

ABSTRACT

As a manufacturing company of effervescent tablet coffee Kopita, it requires the right marketing strategy to get into the target market. To ensure the proper implementation of marketing strategies in marketing products owned by PT. Four Jafe Indonesia, marketing framework or the process of preparing marketing plan and strategy must first be made. A good marketing plan and strategy will achieve the marketing objectives so that there is a balance between the product and the target market. Products, to be sold to the market, show an increase in sales volume, provide customer satisfaction, and achieve optimal profitability based on the expectations of the company. The aims of this analysis were to know marketing plan and strategy performed by PT Four Jaffe Indonesia. Based on the results of the analysis, the plans performed by the company included the determination of: marketing goals and objectives, market research, market situation analysis, market attractiveness analysis, and six market domain analysis. The strategies performed in running the company were segmenting, targeting, positioning, marketing tactics, marketing mix, customer relationship management, blueprint sales, customer results, company results, marketing budgeting, and sales estimates.

KEY WORDS

Marketing, strategy, coffee, sales, customer.

Indonesia is one of the largest coffee producing countries in the world, after Brazil and Columbia. Most of the coffee production goes into export trade whose export destinations include the United States, Germany, Japan and Singapore. Indonesian coffee plantation in 2016 was 1,233,294 ha and Indonesian coffee production was 667,655 tons. Most of the production is robusta coffee. Robusta coffee production reached 492,333 tons (87.1%) of total Indonesian coffee production (Director General of Plantation, 2016).

Coffee is a refreshing drink consumed by some people while relaxing or during breaks at seminars and meetings (as a coffee break). Most people who consume coffee aim to extend the waking time by stimulating the central nervous system. In addition, consuming coffee can increase the power of thought and memory, increase alertness, increase the rate of reading, make the body not easily tired or sleepy and make the body become more passionate. This effect is produced by caffeine compounds in the coffee, (Van Dam and Hu, 2005). In the world of medicine, caffeine is used as a mixture of drugs including the medicine of cold, headache, fever, and stimulant.

In the early stages of starting the business world, prospective entrepreneurs should understand well about the ins and outs of marketing in a comprehensive and systematic way. The company will continue to grow, excel and become larger by taking strategic steps, including put the customer as the key of the company's success in improving extension and competitive advantage so that the product will be accepted and marketable (Barney, 2014). Presenting the quality of service and continuous achievement must be performed to be useful, superior to the customers and can compete with other competitors.

Moreover, the business environment conditions are constantly changing due to the interest rate and the level of competition with other companies in grabbing a tight and highly competitive market share (hypercompetition) (D'aveni, 2010). Efforts in creating demand and marketing the product is one of the key successes of an organization in business matters. Marketing activities can be a source of company failure or it could be a waste if it is not properly planned. Many middle-scale entrepreneurs often have difficulty in formulating a formal marketing program, so that the resulting product is not able to match the expected target market, (Oh and Jeong, 1996).

From the above brief description, it can be concluded that the importance of marketing plans and strategies are mature, detailed and measurable. A good marketing plan and strategy will achieve the marketing objectives so that there is a balance between the product and the target market. Products, to be sold to the market, show an increase in sales volume, provide customer satisfaction, and achieve optimal profitability based on the expectations of the company.

As a manufacturing company of effervescent tablet coffee Kopita, it requires the right marketing strategy to get into the target market. To ensure the proper implementation of marketing strategies in marketing products owned by PT. Four Jafe Indonesia, marketing framework or the process of preparing marketing plan and strategy must first be made. The process of developing such marketing plans and strategies relates to the analysis of the business environment. The implementation process of marketing strategy of PT. Four Jafe Indonesia is related to the operational and financial strategies of the company which is supported by the proper management of human resources in achieving the company's goals.

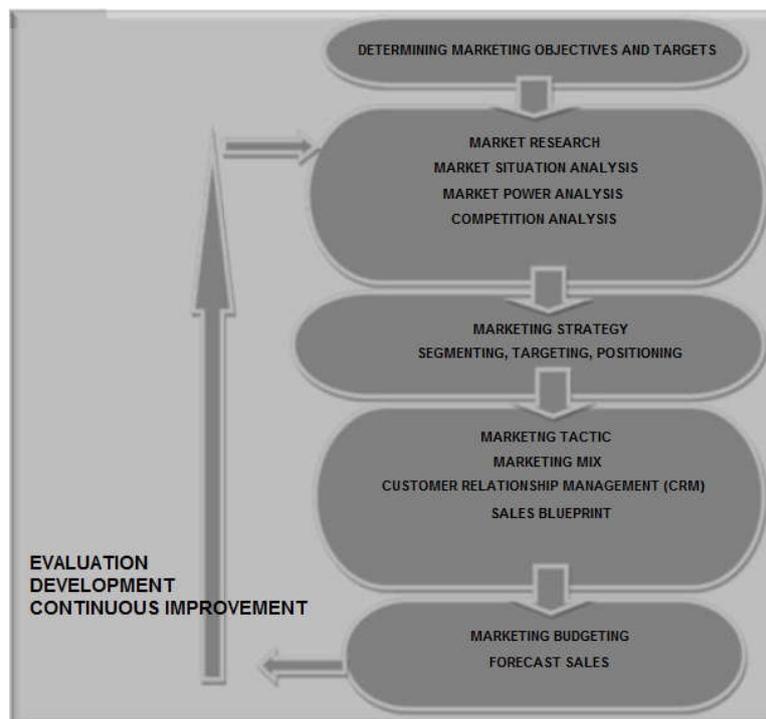


Figure 1 – The Marketing Framework of PT. Four Jaffe Indonesia

Framework or Marketing Framework of PT. Four Jaffe Indonesia as set forth in Figure 1 above aims to facilitate the marketing department in implementing work projects to achieve the goals of the company.

Determining the Objectives. The first marketing strategy is to determine the company's marketing objectives. The general purpose of marketing of a company is to strengthen brand loyalty, build brand awareness in the minds of customers, foster and build sustainable relationships with customers by providing excellent service in order to create loyalty to the company that eventually achieved sales targets. Marketing objectives, to be achieved by

sales and marketing departments for effervescent tablet coffee Kopita products of PT. Four Jaffe Indonesia should be synergistic with the vision, mission and strategy set by the company. The first objective of the next 5 years is to become a market leader for coffee products that have competitive advantages both in the presentation and taste with market penetration which is prioritizing promotions, spreading initial sales in Jakarta, Bogor, Depok, Tangerang and Bekasi (Jabodetabek). In addition, it is to have a strong distribution channels and build strong brand awareness and create brand loyalty. The marketing objectives of PT. Four Jaffe Indonesia consist of short-term, medium-term and long-term goals.

The marketing target of PT. Four Jaffe Indonesia is to get 75% brand awareness for business to business and 70% for business to consumer in the 3rd year, to reach 5% of market share in 3rd year and 10% in 10th year, to reach target sales growth in line with the target; 3rd year by 29%, the 4th year by 20% and the 5th year by 25% with an average growth of 20% each year and to achieve market retention by 80%.

Market research is very important in which it is performed by gathering information about the market and analyzing the marketing context of the product; such as providing a description of the market, monitoring how the market is changing, determining the actions to be taken by the company and analyzing the results of those activities (Subagio, 2010).

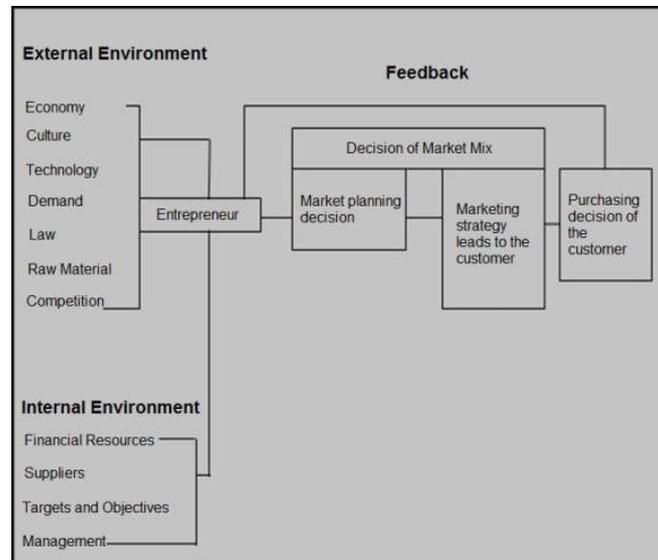


Figure 2 – Market Research inside and outside the Company

Before the company penetrates and implements marketing strategy, the company initially analyzes the market situation by mapping the market area, market potential and market picture. Then, the company analyzes the market attractiveness and ultimately conducts a competitive analysis to find out the market share and competitor's strength. PT Four Jaffe Indonesia must know and understand the marketing environment of the products offered by ensuring that the products are acceptable to the market (customers). The marketing environment consists of two factors of force: the internal force factor of the company (the instant coffee business) and the external force factor of the company (powers outside marketing) that affect the marketing management's ability to develop and sustain successful transactions on its target customers.

The most important thing in determining the right and strategic marketing strategy for PT Four Jaffe Indonesia is an analysis of market attractiveness and analysis of competitive advantage. This strategic marketing strategy will be the main thing before the company chooses the right marketing activity. Therefore, it can be more focused and targeted in maximizing marketing activities to the customers.

There are three dimensions that affect the attractiveness of the market forces, competitive intensity, and market access (Best, 2005). Analysis of market attractiveness is useful to see how attractive the market that will be targeted by PT Four Jaffe Indonesia. The

following is the analysis of the three dimensions that affect the market attractiveness of manufacturing industry effervescent coffee Kopita.

To help the organization of PT Four Jaffe Indonesia (PT.FJI) to study the key stakeholders and the market domains, the authors add an analysis of 6 market models (Six Market Domain Analysis) taken from the literature (Lindgreen, 2004). It mentions that if an organization wants to grow and survive, it must maintain its relationship with the internal and external environment. Through analysis of all 6 markets, the managers may prefer critical markets and opportunities in every market. To visualize and understand the interests of each market, Payne and Holt (2001) provide 6 market models: Customer Markets, Influence Markets, Referral Markets, Supplier Markets, Recruitment Markets, and internal Markets.

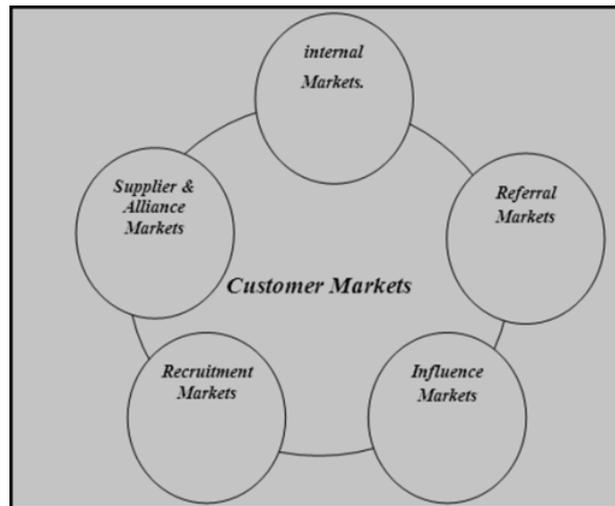


Figure 4 – The Six Market Domains (Source: Payne and Holt, 2001)

Marketing Strategy. In order to optimize the sales of effervescent coffee Kopita, to grow and meet the company’s target, PT Four Jaffe Indonesia must implement an appropriate and good marketing strategy in the expectation of optimizing its marketing resources in order to achieve sales according to the established growth and target and to achieve sustainable competitive advantage.



Figure 6 – Stages of Marketing Strategy

For the next step, the marketing strategy is segmentation, targeting, and positioning the product in the position based on the company’s preference (positioning). Product positioning step is very important as the act of designing the offer and the image of the company in order to reach a special and unique place in the mind of the target market. Thus, it is expected to be a sustainable competitive advantage over competitors who eventually became market leader of instant coffee. After that, it performs a marketing tactic based on Marketing Mix (Marketing Mix) which is applied with Networking, Interaction, Common Interest, Experience (NICE Marketing). PT Four Jaffe implements 30% of Business to Business (B2B) market

share and 70% on Business to Customer (B2C) market share. So, the application of marketing mix will be applied with NICE marketing tactics (Networking, Interaction, Common, Interest, Experience). The next marketing strategy is building marketing relationship that focuses on customer relations management (CRM) as a way of customer marketing that enhances the company’s long-term growth and is an approach that emphasizes the effort of attracting and retaining customers through enhanced company relationships with its customers.

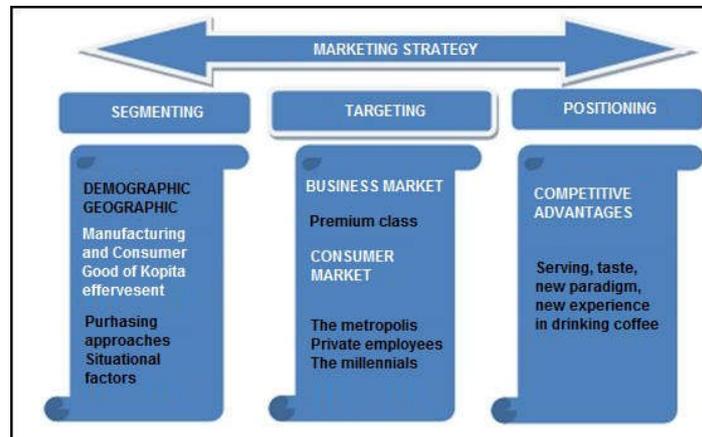


Figure 7: Marketing Strategy of PT FJI

Market segmentation is an attempt to segregate markets in heterogeneous purchasing groups in terms of interests, purchasing power, geography, buying behavior and lifestyles (Kotler, 2007). In addition, market segmentation, according to Kotler, Bowen & Makens (1999) should meet criteria that can be measurable, accessible, large enough (substantial), differentiable and actionable. Market segmentation can be intended as a heterogeneous market division into homogeneous market groups, where each group can be targeted to market a product according to the needs, desires, or characteristics of consumers in the market. The target market is the business market so that segmentation is done using the criteria of business market segmentation. Business market segmentation is divided into five variables: demographic variables, operating variables, purchasing approaches, situational factors and personal characteristics (Kotler & Keller, 2003). Business market segmentation criteria which are selected by PT Four Jaffe Indonesia use demographic variables, operating variables, purchasing approaches, situational factors and personal characteristics.

Targeting is the process of evaluating and selecting one or more of the most appealing market segments to be served with a company-specific marketing program. According to Kotler & Armstrong (1997), targeting is a group of buyers who have the same needs or characteristics of the sales objectives. Targeting is a very important process because it will determine who will buy the product from the company. Targeting is to target the selected market in market segmentation analysis. PT FJI plans short-term sales targets (1st year to 3rd year) by estimating sales according to the initial forecast of 188,400 bottles per month or IDR 3,768,000 000 in rupiah and will be increased according to the expected growth (Table of Sales Plan of Tablet Coffee Kopita).

Table 1 – Target Determination of Business Market

Description	Target segmentation of the business market	
Industry	Retail (B2C) Modern Market	Distributor and wholesaler (B2B)
Location	JABODETABEK Serang City Cilegon City	JABODETABEK Serang City Cilegon City
Purchasing Approaches	Serving, taste and price	Quality and service Excellent

Source: Analyzed data for the research (2018).

Positioning is an action or steps from the manufacturer to design a corporate image and offer value where consumers within a particular segment understand and appreciate what a particular segment does as well as understand and appreciate what a company does; compared to its competitors. To be different by the customer, the products must have point of differences (POD). POD of effervescent Coffee Kopita produced by PT Four Jaffe Indonesia will be a competitive advantage to its competitors in effervescent factor which has the advantages in the speed of serving in various conditions of water temperature (heat, cold and normal water), reaction properties acid bases that improve the taste to become more delicious, and a new paradigm for coffee connoisseurs. Determination of marketing strategies is advantageous in enhancing competitive advantage to a sustainable and seize market share according to the target. Therefore, effervescent tablet coffee Kopita products can compete and be accepted by the market by the determination of segmentation, target, and measurable and achievable product position, and certainly profitable for the company (Profit Oriented) according to the mission and vision of the Company.

Marketing tactics based on the marketing mix will be implemented with Networking, Interaction, Common Interest, Experience (NICE Marketing) stages. PT Four Jaffe implements 30% of Business to Business (B2B) market share and 70% on Business to Customer (B2C) market share. Thus, the application of marketing mix will be applied with NICE marketing tactics (Networking, Interaction, Common, Interest, Experience). The next marketing strategy will build marketing relationship that focuses on customer relations management (CRM) as a customer marketing effort which will enhance the company's long-term growth and is an approach that emphasizes the effort to attract and retain customers through enhanced company relationships with its customers.

After implementing the marketing strategy through Segmentation, Targeting, and Positioning stages, the next step is to perform a more specific step; marketing mix. Marketing mix is a set of operational decisions regarding product decisions, price decisions, promotional decisions, and place decisions. According to Philip Kotler, marketing mix is a marketing tip that companies use to achieve marketing goals in the target market. PT Four Jaffe Indonesia, which has the largest market share in B2B, marketing tactics of 4P will be synergized with NICE marketing tactics: Networking (Place), Interaction (Promotion), Common Interest (Price), and Experience (Product). PT Four Jaffe Indonesia emphasizes the gradual growth achievement in line with the increasing demand of each marketing area of 3rd year sales by 15%, 4th year sales by 20% and 5th year by 25%. With average growth, it is expected to achieve a minimum value of 20% each year which requires effective and appropriate marketing tactics for marketing management.

The application of NICE's marketing tactics focuses on building good relationships with customers based on networking (place) strategy in which marketing strategy builds marketing network with customers, for example creating customer data base to facilitate companies in the distribution of Kopita.

Interaction strategy (promotion) is to conduct product promotion activities to customers by using promotion tools that are able to influence customer loyalty and also promote product brand so that the end users will be curious to find the sales place of Kopita effervescent product. The common interest (price) strategy is having competition and cheaper pricing than other competitors so that there is mutual benefits between suppliers and customers. In addition, experience strategy (product) is to offer effervescent coffee products practically in the serving, the sensation of good taste due to the influence of acid base from the effervescent so that customer loyalty is maintained and customer satisfaction is created. PT Four Jaffe Indonesia Marketing Mix strategy is needed in maintaining cooperation with stakeholders that support the sales and is in accordance with the target company that is determined the achievement of product targets (determination of the right product), price (product pricing), promotion (promoting activity to the right market target) and place (distribution system that supports market segmentation). Penetration market of PT Four Jaffe Indonesia was conducted in 2 segments; that is market penetration for direct sales to outlets (modern market store, Alfamart, Infomart) called Business to Customer (B2C) and market penetration by establishing partnership for product distribution and wholesalers who have

their own sales force called Business to Business (B2B). The components of marketing mix strategy for business to customer are 4P (product, price, place, promotion). PT Four Jaffe Indonesia with the largest B2B market share, its 4P marketing tactics will be combined with NICE's marketing tactics of Networking (Place), Interaction (Promotion), Common Interest (Price), and Experience (product).

CRM is a process of acquiring, maintaining and improving profitable customers. The marketing approach, by building relationships with customers, has the potential to affect the customer's feelings toward the company's products and also in doing business with the company. In managing true customer relationships, PT FJI requires long-term strategies and processes that create long-lasting customer satisfaction, not solely because of low cost and low price, but because customers feel more comfortable in doing business with the company and also feel comfortable about the product the company. CRM aims to create customer value so that customers feel satisfied and can maximize profits for the company. In addition, he also gained a competitive advantage (comparative advantage) by paying attention to product quality in order to provide excellent satisfaction for customers. CRM marketing strategy is intended to create customer loyalty.

The implementation of CRM that is made by marketing management to business market customers through continuity marketing, one to one marketing and partnering (co-marketing) can be seen in building a solid long-term relationship with customers which requires a concentrated effort from all employees and management to find out what satisfies customers and customers value.

Customer Relationship Marketing (CRM) performed by PT FJI focuses on customer relations, product orientation, high emphasis on service, high commitment from customers to the products offered by the company, and the attention of management and all employees on the quality of instant coffee products in satisfying the desires of the customers. Transaction relationships between wholesalers, sub-distributors, distributors and customers are sustainable and do not end once the sale is completed. In other words, it is a long-term partnership with customers and on an ongoing basis so it is expected to make a repeat business.

With a hyper competition and ever-changing business competition and an ever-expanding marketing strategy, PT FJI requires determining the right marketing strategies in the face of rapidly changing business competition. To perform this, PT FJI must prepare a solid, productive, and innovative team in adapting the development of marketing. To achieve success in the sale of coffee tablet effervescent Kopita, the management department of marketing and sales of PT FJI will build a design for the success of the sales force (blueprint for building a winning sales force). With the design for success, sales management are expected to bring the marketing team of PT FJI in creating sales success in accordance with the expected target.

Success in sales requires a solid, strong and synergistic team in the company's vision and mission. The leadership factor in the organization of PT FJI also has a strong influence and must be able to mobilize the spirit, motivation and assist sales force in doing sales activities. The success of sales force in the sales activity of coffee tablet effervescent Kopita should prioritize excellent service so that customers are loyal to Kopita products. The dimensions that drive success in sales are structure and roles of sales force, sales people, activities, customer results, company results.

As a leader must be able to know the scope of strong information (customer research, customer determination, data, tools, and customer relationship management or CRM), goal setting and forecasting, improve management performance, and understand design and market area for market development.

The key to success in placing products in target markets is the ability to maintain quality and product leadership in accordance with customer expectations. Sales activities cannot be separated from emotional control or feelings. Therefore, great sales people are sales people who can be expert or master in managing and controlling emotions. Important points that need to be owned by sales people in sales activity of effervescent tablet coffee Kopita is first the assertiveness; the characteristic that enables sales people to move the

sales situation forward without offending or frustrating the customer. This position of assertiveness can be passive in terms of patient service and aggressive in terms of encouraging customers to have an interest in being a loyal customer.

Next, the second is self-awareness that the sales people must be able to identify their emotions in the sales activity. Ease of utilizing these emotions helps in building strong customer relationships. The ability to control emotions will be able to influence the effectiveness of effervescent tablet coffee Kopita based on experience that has been done and expand the positive emotions that can help sales people in sales activities.

The third is empathy which includes the behavior of sales people to the mood and emotion of the customer which starts from listening and observing what is perceived by the customer. Sales people must be able to build customer trust by continuous communication where it can motivate customers to be more confident in the product of Kopita that can provide benefits for the customer themselves.

To achieve success in selling the product, customer response needs to be considered. To get a good response from the customers, marketing management of PT FJI needs to build deep customer relationships and customer trust. Building relationships with customers has the potential to build customer feelings and beliefs about products and companies, creating sustainable relationships and long-term relationships.

High customer retention minimizes customers from moving to competitors (high customer retention and low defection). Efforts made to avoid customers moving to competing products are timely product distribution, ensuring the supply of the product is always there, and maintaining the quality of the product. Customer loyalty (a loyal customer base) is obtained when customers get their wish and get good service from PT FJI.

In building a business, the main note of the marketing management is the result that will be achieved by the company. In achieving the results that is determined by the company, the concern is the sales target, the market share and profitability in the first year (Y0), which then the sales growth of 20% will be projected annually. To achieve the sales target, marketing management seeks 5% market share in the first year (Y0) and seeks to increase market share every year. It is to support the company's sales growth. Sales targets created by the company will generate a margin of revenue (profitability) of 25% of total net sales. In achieving company results at PT FJI, the company's management will build a firm and strong sales team so that they are able to compete with competitors. The achievement of sales activities requires some cost in which marketing management should make marketing budget.

The strategy of determining the amount of costs for marketing activities greatly affects the success of marketing. Budgets are considered to be effective if they have predictive predefined characteristics, communication channels, clear authority and responsibilities, timely and accurate information, overall compliance, clarity of information, and support within the organization of all related parties.

In making sales estimates, the company makes most-likely scenarios, either in the form of sales projection or net marketing contribution. To start the most-likely scenario the company must first determine the total market share in the market to be addressed. The following is the total market share of the market target:

Table 2 – Sales Estimate

No	Outlet	The number of the outlet		Product/ Outlet (bottle)	Total/ Outlet (bottle)	Selling out (IDR)	Description
		Java	Outside Java				
1	Alfamart	6,600	4,400	12	79,200	1,584,000,000	-
2	Indomaret	6,600	4,400	12	79,200	1,584,000,000	-
3	Spreading promotion	-	-	-	30,000	600,000,000	Spreading Promotion was conducted by MD, SPR, and SPV
Total		-	-	-	188,400	3,768,000,000	-

The sales projection is based on the total demand projection of coffee effervescent Kopita with the projection of market share of 5% in the first year and 7.4% in the fifth year. The market will grow by 20% based on the average retail growth. Price is based on customer price that has been set before.

Table 3 – Sales Target of Most-likely Scenario

Year	Market Share	Sales Target	Projected Sales (IDR)
Y0	5%	1,130,400	18,086,000,000
Y1	5.6%	2,260,800	36,173,000,000
Y2	6.1%	2,599,920	46,799,000,000
Y3	6.8%	3,119,904	56,158,000,000
Y4	7.4%	3,899,880	70,198,000,000
Y5	8.2%	4,679,856	93,597,000,000
Y6	9.0%	5,147,842	102,957,000,000
Y7	9.9%	5,611,147	112,223,000,000

Source: Analyzed data for the research (2018).

CONCLUSION

The marketing objective of PT Four Jaffe Indonesia consists of short-term goals, medium-term goals and long-term goals. The marketing environment consists of two factors of force: the company's internal force factor (the instant coffee business) and the external force factor of the company (forces outside marketing) which affect marketing management's ability to develop and sustain successful transactions with its target consumers.

There are three dimensions that affect the market appeal including market forces, competitive intensity, and market access. Based on an analysis of all 6 markets, managers may prefer critical markets and opportunities in every market. To visualize and understand the interests of each market, Payne & Holt (2001) provides 6 market models: Customer Markets, Influence Markets, Referral Markets, Supplier Markets, Recruitment Markets, and Internal Markets. To have effervescent coffee sales Kopita be right on the target, grow and meet the target company, PT Four Jaffe Indonesia must implement appropriate and good marketing strategies in order to optimize its marketing resources and achieve sales based on the established growth and targets and achieve sustainable competitive advantages.

After that, the company must do marketing tactics based on Marketing Mix which will be applied with Networking, Interaction, Common Interest, Experience (NICE Marketing). PT Four Jaffe implements 30% of Business to Business (B2B) market share and 70% of Business to Customer (B2C) market share. Therefore, the application of Marketing mix will be applied using NICE marketing tactics (Networking, Interaction, Common, Interest, Experience).

The business market segmentation criteria chosen by PT Four Jaffe Indonesia is using demographic variables, operating variables, purchasing approaches, situational factors and personal characteristics. PT FJI plans short-term sales targets (1st through 3rd year) by estimating sales for initial sales forecast of 188,400 bottles per month or IDR 3,768,000,000 and will be raised according to the expected growth (Table - Sales Plan of Tablet Coffee Kopita).

Effervescent tablet coffee kopita products can compete and be accepted by the market with the determination of segmentation, targets, measurable and achievable product position and profitable for the company (Profit Oriented) which is based on the mission and vision of the company. Test marketing tactics based on Marketing Mix will be applied with Networking, Interaction, Common Interest, Experience (NICE Marketing) stages. PT Four Jaffe Indonesia applies the largest B2B market share so the 4P marketing tactics will be combined with NICE marketing tactics: Networking (Place), Interaction (Promotion), Common Interest (Price), and Experience (Product).

Customer Relationship Marketing (CRM) conducted by PT FJI focuses on customer relations, orientation to product benefits, high emphasis on service, high commitment from

customers to the products offered by the company, and the attention of management and all employees to the quality of instant coffee products in satisfying customer desires. The dimensions that drive the success in sales are sales force, structure and roles, sales people, activities, customer results, company results.

An important point that sales people need to have in sales activity of effervescent tablet coffee Kopita is assertiveness, which is the characteristic that enables sales people to move the sales situation forward without offending or frustrating the customers. This position of assertiveness can be passive which means to patiently serve the customer, and the aggressive characteristic in terms of encouraging the customer so that they have an interest to be a loyal customer.

High customer retention will prevent the customers not to move to other competitors (high customer retention and low defection). Efforts that can be performed are timely distribution of products and ensure the supply of products is always there, and maintain the quality of the product. It is one way to avoid customers from moving to competing products. Customer loyalty is obtained when they get their expectation and get good service from PT FJI.

In achieving company results of PT FJI, the company's management will build a strong and firm sales team to compete with other competitors. The achievement of sales activities requires some cost then marketing management must create a marketing budget. The strategy of determining the amount of fees for marketing activities greatly affects the success of marketing. The budget is considered to be effective if it has characteristics including predictive capabilities, clear communication channels of authority and responsibility, timely and accurate information, overall compliance, clarity of information, and support within the organization of all related parties.

Projected sales, based on the projected total demand for effervescent tablet coffee Kopita with projected market share in the first year is 5% and 7.4% in the fifth year. The market will grow by 20% based on the average retail growth. Price is based on customer price that has been set before.

REFERENCES

1. Barney, J. B. (2014). *Gaining and sustaining competitive advantage*. Pearson higher ed.
2. Best, R.J. 2005. *Market-based management: strategies for growing customer value and profitability* - 4th ed. Upper Saddle River, N.J.: Pearson/Prentice Hall.
3. D'aveni, R. A. (2010). *Hypercompetition*. Simon and Schuster.
4. Direktorat Jendral Perkebunan, 2016, *Statistik Perkebunan Indonesia Kopi 2014-2017*, Jakarta
5. Kotler, P. & Armstrong, G. 1997. *Dasar – Dasar Pemasaran*. Jilid 1. Jakarta: Prenhalindo.
6. Kotler, P. & Keller, K. L. 2003. *Membangun Minat Beli*. Indeks.
7. Kotler, P. 2007. *Manajemen Pemasaran*. Jakarta: PT. Indeks.
8. Kotler, P., Bowen, J., & Makens, J. 1999. *Marketing for Hospitality and Tourism*. Second Edition. Prentice Hall Inc. Upper Saddle River, New Jersey.
9. Lindgreen, A. 2004. The design, implementation and monitoring of a CRM programme: a case study. *Marketing Intelligence & Planning*, Vol. 22 Issue 2, pp.160-186.
10. Oh, H., & Jeong, M. (1996). Improving marketers' predictive power of customer satisfaction on expectation-based target market levels. *Hospitality Research Journal*, 19(4), 65-85.
11. Payne, A., & Holt, S. 2001. Diagnosing Customer Value: Integrating the Value Process and Relationship Marketing. *British Journal of Management*, Vol.12, 159–182.
12. Subagio, A. 2010. *Marketing In Business*. Jakarta: Mitra Wacana Media.
13. Van Dam, R. M., & Hu, F. B. (2005). Coffee consumption and risk of type 2 diabetes: a systematic review. *Jama*, 294(1), 97-104.

DOI <https://doi.org/10.18551/rjoas.2018-11.18>

COMMUNICATION STRATEGY OF SRIDONORETNO ASSOCIATION IN RED PICK COFFEE PROGRAM

Sugeng Riyanto*, Hardana, Eka Andrean

Faculty of Agriculture, University of Brawijaya, Malang, Indonesia

*E-mail: suksesbyallah@gmail.com

ABSTRACT

The aim of the research is to describe the sridonoretno association communication strategy in the red picking coffee harvesting program. Qualitative research approach that uses data collection techniques ranging from in-depth interviews (indepth interviews), participatory observation, and documentation. Determination of the sample with simple random sampling technique to the srinoretno association is a combination of 16 farmer groups in the three villages namely Srimulyo, Baturetno, and Sukonodo Village, Dampit District, Malang Regency. Based on the research activities that have been carried out namely for farmers who cultivate coffee participate in training activities that provide education related to the criteria for quality coffee in the red picking program. In addition, farmers follow the practice of harvesting coffee about how to harvest coffee according to the procedure.

KEY WORDS

Red cherry coffee, empowerment, communication, strategy.

Dampit is known as the number one coffee producer in East Java but the amount of coffee production each year shows a declining trend. This decline was caused by the declining coffee prices. Malang is also a district that has the highest production potential in the province of East Java, which is 7,703 tons annually(BPS Jatim, 2014). Although coffee has the highest production rate in the Dampit region, it has not been able to provide welfare to farmers living in the area. This is because farmers do not get a decent price so farmers switch to other commodities. In 2006 coffee production continued to rise from 9255 tons and at its peak in 2010 with a total production of 10028 tons. There was a very drastic decline in 2011, because of the drop in coffee prices at that time, from being able to sell IDR. 20,000 per kg, it was only valued at IDR. 13-14 thousand per kg or slumping to IDR. 7,000 per kg so that it was not comparable to operational costs.

The imbalance of production costs with coffee yields can be overcome by finding new markets at better prices. The target of the new market in question is the market for "Premium" coffee or good quality coffee so that it can provide a bargain price of coffee that is higher than the usual market price. The market automatically only receives good quality coffee so it demands coffee farmers to increase their coffee production. Coffee quality improvement cannot be achieved in just one process stage, but can only be achieved by improving a series of efficient processes from processing coffee from the garden, harvesting patterns, and post-harvest coffee. And this improvement must be carried out consistently so that the market is confident of the quality of the coffee produced by farmers. To produce coffee with good quality, a number of programs are needed, one of which is the red picking program in order to improve the quality of coffee on the post-harvest side. The red picking program is required by a strategy in inviting quotes to make improvements to the penennya pattern. Strategies related to how to treat the program to farmers.

METHODS OF RESEARCH

This study uses a qualitative approach, namely the process of extracting data to understand social phenomena based on holistic research, shaped by words, and obtained from natural situations. Determination of the sample with simple random sampling technique to the srinoretno association is a combination of 16 farmer groups in the three villages

namely Srimulyo, Baturetno, and Sukonodo Village, Dampit District, Malang Regency. In applying this qualitative approach, it is used to understand the phenomena of the dynamics of social capital in marketing vegetables in Tawangargo Village

RESULTS AND DISCUSSION

Strategy for Conducting Red Picking Program Socialization. At present the group has carried out the red picking process for some of its members and coffee is still processed with technology that is almost the same as *belusrandart* harvesting technology where it is still dried like dried coffee is needed improvements in the processing sub-section. At present there is no co-formation yet, so marketing is still managed by the association and assisted by partners who buy coffee, which is the parade wall shop and the Malang store association.

The targets that will be achieved for the 2016 pre-period are pre-coprac mature and ready to be used as a copration. Ready in terms of organization and also ready in terms of management. Then the target related to the coffee produced from the management of coprasi is the achievement of coffee results on the medium standard to be marketed in the market. Activities carried out by the Association to support and succeed in the red boarding activities are as follows

Conduct trainings. Post-penen training basically has 2 main points, the first is the red picking harvesting process and the second is the correct processing, starting from pulper, drying, slipping into greenbean, and slaughtering. At the stage of the 2015 harvest season we have done the socialization of the red picking press with 95% red and 5% red yellow, while the green and black ones should not be available. Then at the harvest stage in 2016 the process of understanding red picking was repeated again at the level of the group leader, why only the group leader, with consideration that you were repeated to the members was very ineffective, and when told to the group leader would be more effective because the group leader would be the quality controller which will control each member who will red pick.

At the *kelopak* chair level, understanding and learning related to the process of collecting coffee correctly with various processes as follows

1. The first natural process;
2. Honey process;
3. Wet Process.

Understanding the process is intended so that the group leaders of all groups, especially the groups to be established by UPH, will understand and become leaders in the process to be carried out at UPH. Why do not the members make a revision, because the strategy used is an understanding of the members when the members deposit red coffee at UPH. Members will learn directly the process desired by the market. In addition to speeding up the separation, there were also distributions of videos that showed the correct process of collecting coffee. These videos were disseminated through existing group chairmen.

Red picking and processing practices. Market demand is very urgent so it was decided to provide an understanding of the *sridonoretno* association management. Knowledge of the quality of red pickings is owned by the management since a long time ago. And when this program runs we only re-emphasize the understanding that they have had through a discussion and also the practice in the garden about what red pick knowledge is like. An example of that knowledge is; 1. Coffee must be cerry red-colored, 2. There should not be black or even dry, 3. Yellow color is a maximum of 5% 4. There should be no green 6. Coffee must be fress and should not be stored more than 24 hours, 7. storage may not be in a sack but let it be touched. We deepen that knowledge through discussion and also get input and direction and PTNN 12 farm gardens.

Make processing units in each group. Here it hasn't arrived at what is called processing, but it's still just a collection and control of red quotes. Where each group is given the obligation to collect red coffee from each member to be sold to partner companies. In the future, we hope that each group will have its own processing unit. To realize that dream, the group always has a dialogue with related agencies to get the help of processing equipment.

Make a feasibility study. The feasibility study made for this joint marketing activity is still very simple where a feasibility study is used to compare the profits obtained from farmers when conducting a selling partnership in red compared to selling dry rice.

CONCLUSION

Based on the results of research and data analysis that has been done, the following conclusions are obtained. In conducting program extension to the community, it requires a number of strategies to enable the community to conduct a red picking program to improve the quality of the coffee harvest. The first one is done by training that educates farmers about the quality of coffee. The second is the practice of red ptik to provide farmers with skills that are good for coffee. The three production processing units are formed in each group to facilitate members to access the red picking program while providing continuous education. Finally, no less important is the business analysis activity, meaning that it is comparing whether the quality of the coffee is better than the management of coffee with carelessness.

REFERENCES

1. Adena, Rikyanto; Najib, Husain; Harnina, Ridwan. (2012). Communication Strategy of the Southeast Sulawesi Provincial Forestry Service in Relocating Communities Around the Tahura Nipa-Nipa Forest Area in Kendari City.
2. B. N. Rasila and M. J. Mudau.(2012). Effective communication as a strategic tool for rural development: A model to take South African Government beyond mobilization and consultation through public participation. *Journal of Media and Communication Studies* Vol. 4(7), pp. 134-141.
3. Burger, K. Kameo, D. & Sandee, H. (2001). Clustering of Small Agro-Processing Firms in Indonesia. *International Food and Agribusiness Management Review*, 2(3/4): 289–299.
4. Cangara Hafied. (2013). *Communication Planning and Strategy*. Jakarta: Rajawali Pers.
5. Caporale, G. M. & Sova, R. (2015). Trade Flows And Trade Specialisation: The Case Of China. Working Paper No. 15-07.
6. Churmen, Imam .(2001). *Save sugar industry in Indonesia*. Millenium Publisher. Jakarta.
7. Delroy Anthony Armstrong.(2004). *The Potential Impact of Trade Policychanges On Caribbean Sugar*. B.S., Louisiana State University.
8. Effendy, O U. (1990). *Communication Studies. Theory and Practice*. Bandung: PT Remaja Rosdakarya.
9. Creswell, John W. (2013). *Research Design: Qualitative, Quantitative, and Mixed Third Edition approaches*. Yogyakarta: Pustaka Pelajar.
10. Haroon Sseguya, Robert Mazur\$, Eric Abbott\$\$ And Frank Matsiko.(2012). Information and Communication for Rural Innovation and Development: Context, Quality and Priorities in Southeast Uganda. *Journal of Agricultural Education and Extension*. Vol. 18, No. 1, 5570.
11. Haley, Stephen.2013. *World Raw Sugar Prices The Influence of Brazilian Costs of Production and World Surplus/ Deficit Measures*. United States Department of Agriculture
12. Indriyanto. (2010). *Forest Ecology*. Jakarta: PT Bumi Aksara.
13. Matsumura, Kanichiro.(2010). Demand and Supply Structure for Food in Asia. *Sustainability* 2011, 3, 363-395; doi:10.3390/su3020363.
14. McConnell, Michael; Erik Dohlman; Stephen Haley. (2010). *World Sugar Price Volatility Intensified by Market and Policy Factors*.
15. McCormick, A. J. Watt, D. A. and Cramer, M. D.(2009). Supply and demand: sink regulation of sugar accumulation in sugarcane. *Journal of Experimental Botany*, Vol. 60, No. 2, pp. 357–364.
16. Mulyana, Deddy. (2001). *An Introduction to Communication Studies*. Penerbit PT Remaja Rosdakarya. Bandung.
17. Peter Walton, Dr Gashaw Kebede.(2012). *Information and Communication Management Strategy Development*.

18. Ricardo Ramírez and Wendy Quarry (2004). Communication Strategies In The Age Of Decentralisation And Privatisation Of Rural Services: Lessons From Two African Experiences. Agricultural Research & Extension Network.
19. Rumánková, Lenka and Smutka, Luboš. (2013). Global Sugar Market – The Analysis Of Factors Influencing Supply and Demand. Volume LXI. No. 2, pp. 463–471.
20. Sa'diyah, C. (2014). Factors that influence of economic performance for crystal sugar in Indonesia. (Thesis). Faculty of Agriculture. University of Brawijaya. Malang.
21. Sinaga, N. (2006). Model Econometric Application. IPB Post Graduate. Bogor.
22. Sugiyono, (2014). Mixed Methods, Bandung: Alfabeta.
23. Susila, Wayan.R dan Bonar M. Sinaga. (2005). Analysis of Sugar Industry Policy in Indonesia. Jurnal Agro – Ekonomi Volume 23 No. 1, page 30-53.
24. Xue Xu and Hailong Xia.(2014). Analysis and Outlook of China's Sugar Industry Development. Proceedings of Selected Articles of 2013 World Agricultural Outlook.

DOI <https://doi.org/10.18551/rjoas.2018-11.19>

DEVELOPMENT STRATEGY OF KARYA NUGRAHA MULTIPURPOSE COOPERATIVE

Kusumaraya Deny*, Baga Lukman M., Sasongko Hendro

School of Business, Bogor Agricultural University, Indonesia

*E-mail: deny_kusumaraya@yahoo.co.id

ABSTRACT

The main objective of this research is to map the nine elements of Business Canvas Model owned by the Karya Nugraha Multipurpose Cooperative located in Cigugur Sub-District, Kuningan District, West Java Province. Next, it draws conclusions on business development based on the results of the analysis. The nine elements mapped in this research are 1) customer segments, 2) value propositions, 3) channels, 4) customer relationships, 5) revenue streams, 6) key resources, 7) key activities, 8) key partnerships, and 9) cost structures. The analysis results showed that Karya Nugraha Multipurpose Cooperative needs to develop a market that originally had only one main customer and was at risk of unstable income. In addition, Karya Nugraha Multipurpose Cooperative needs to develop the channel to reach the existing customers and get new customers. Further findings from this research showed that the risk of income instability obtained by Karya Nugraha Multipurpose Cooperative has only one income stream, i.e. the sale of pure milk. Based on this research, it is necessary to provide added value from pure milk products so that it can provide additional income.

KEY WORDS

Business model canvas, cooperatives, pure milk, animal husbandry.

The livestock sector is one of the agricultural sub-sectors that has a high strategic value, among others in meeting the needs of non-carbohydrate food which continues to increase due to the increase in population, an increase in the average population income, and job vacancy. The characteristics of geographical, ecological and land fertility conditions in several parts of Indonesia are suitable for the development of cow milk agribusiness. On the demand side, domestic milk production only supplies no more than 30 percent of the total demand whereas around 70 percent comes from imports. It shows that the opportunity to empower dairy cattle business to increase national milk production in an effort to reduce milk imports is still high.

Dairy cattle business faces challenges in its development. These challenges are triggered by the problems faced by dairy cattle, including it has limited capital, the business scale has not reached economies of scale, it is still traditional, livestock productivity is still low, the technology has not been implemented in an integrated manner and global competition with neighboring countries that market their products in Indonesia (Rahardi, 2003). To deal with these challenges, a place that can accommodate dairy farmers is required in order to increase business scale and be able to apply more modern technology to increase productivity of dairy cattle farms. One of the places to accommodate cow dairy farmers to increase the scale of their business is cooperatives.

One area that has cooperatives incorporated in the Indonesian Milk Cooperative Association (IMCA) is Kuningan District. Kuningan is a district in West Java Province which has a dairy cattle business that is quite developed supported by the availability of cooperatives and the milk processing industry. Dairy cooperatives are the place for members to run businesses as milk containers, concentrate feed providers, medical and animal health services. To optimize the production of cow's milk, a cooperative is made as a means to accommodate capital in order to increase the scale of production and also apply more modern technology. One of the cow milk cooperatives in Kuningan District is Karya Nugraha Multipurpose Cooperative.

As a dairy cow cooperative, Karya Nugraha is a cooperative located in Cigugur Sub-District of Kuningan District. Karya Nugraha is one of the cooperatives that have joined IMCA. This cooperative is engaged in the absorption and distribution of dairy cow milk and

has a main business unit; i.e. the sale of dairy cow milk. In 2016, this cooperative had 785 members and was the dairy cooperative with the most members in Kuningan District.

Karya Nugraha Multipurpose Cooperative's daily production of pure milk reaches 29,262 tons per day. Compared with several cooperatives that have a fairly similar production scale, Karya Nugraha Multipurpose Cooperative still sells pure milk products only to one partner; PT Ultra Jaya. This poses a high risk because once PT Ultra Jaya stops or reduces milk receipts from Karya Nugraha Multipurpose Cooperative, the revenue stream obtained by the Multipurpose Cooperative will be lost. Besides, Karya Nugraha Multipurpose Cooperative has not yet processed its pure milk so that it has not received optimal added value from the results of its main business.

Innovation and independence are part of the work of Karya Nugraha Multipurpose Cooperative which encourages the Multipurpose Cooperative to diversify its business. By optimizing their potential and seeing possible business opportunities, it is expected that the Multipurpose Cooperative can achieve its mission towards independence. To achieve the missions, it needs to be supported by the concept of the right business model by considering the opportunities and threats that will be faced as well as the strengths and weaknesses of Karya Nugraha Multipurpose Cooperative. Professional governance and setting goals that target profit and welfare of members have not been patterned. Therefore, in its implementation it is still based on the willingness of the cooperative members to manage it. The Multipurpose Cooperative needs to map out who will be served, what values will be offered to its customers, how can these values be distributed to customers, how to maintain relationships with customers, what resources are needed to produce these values, what activities are carried out and anyone who can help Karya Nugraha Multipurpose Cooperative so that the business model can run well as well as can consider the costs and revenues generated by the Multipurpose Cooperative.

Business development for Karya Nugraha Multipurpose Cooperative can be carried out effectively if the Multipurpose Cooperative managerial first knows how the business model is run in order to make the predetermined improvements to develop the main business units, i.e. the sale of pure milk and the development of pure dairy businesses in the future. Business model mapping is currently required by the Multipurpose Cooperative to improve the existing business models and develop new businesses to provide added value. This research applies a business model canvas developed by Osterwalder and Pigneur. Business model canvas is chosen because it can not only be used by profit-oriented companies but also for non-profit organizations. Through the nine elements of this model, improvements to existing business models and new business model prototype planning can be carried out. By making improvements to the existing business models, as well as innovating in new business models, it is expected that Karya Nugraha Multipurpose Cooperative can be a better organization in serving its members and competing with large companies both in productivity and in technology and efficiency.

Cooperatives have an important role in the development of the livestock sector in Indonesia. Similarly, Karya Nugraha Multipurpose Cooperative, as one of the cooperatives engaged in animal husbandry, nursery, collection and sale of pure cow's milk, needs to develop organizationally and functionally. Mapping the right business patterns and appropriate business development are needed by Karya Nugraha Multipurpose Cooperative in order to create profit as a basis for the distribution of the remaining business results for the welfare of its members. Currently, Karya Nugraha Multipurpose Cooperative is in a saturated position which is indicated by a decrease in the price of pure cow milk and the cost of production. If this condition continues, Multipurpose Cooperative will face financial problems. To anticipate these problems, Multipurpose Cooperative needs to do business development. Good business development can be arranged if Multipurpose Cooperative has known the current business model by looking at the organization's internal environment and business activities by using a business model canvas.

LITERATURE REVIEW

Business Model. There are various kinds of definitions of business models according to experts. Fuller and Morgan (2010) stated that the business model is an income formula,

business system, and enterprise learning system. According to Wheelen and Hunger (2010), a business model is a method used to make money from a business environment where the company operates. Another understanding of business model is the method used to run a business so that companies can survive. Supriyadi (2006) explained that a business model is a concept that describes various business elements and their logical relationship in generating profitable and sustainable revenue streams. If it is viewed from its components, the business model consists of product components, benefits and income, customers, assets, knowledge, structure, and governance.

Business Model Canvas. Osterwalder and Pigneur (2010) explained that BMC is a business model framework in the form of a canvas and consists of nine boxes which are important elements that describe how organizations create and benefit for and from the customers. These nine elements are the development of 4 main areas in a business, namely customers, supply, infrastructure, and financial sustainability. The nine elements are: 1) customer segments, 2) value propositions, 3) channels, 4) customer relationships, 5) revenue streams, 6) key resources, 7) key activities, 8) key partnerships, and 9) cost structures.

Conceptual Framework. The research conducted with the object of Karya Nugraha Multipurpose Cooperative will be carried out by taking the pictures on the organization's business environment and activities by using nine elements of Business Model Canvas. By taking the pictures on 1) customer segments, 2) value propositions, 3) channels, 4) customer relationships, 5) revenue streams, 6) key resources, 7) key activities, 8) key partnerships, and 9) cost structures, it is expected that decision-making for the development of Karya Nugraha Multipurpose Cooperative business model can be carried out in a more targeted manner in accordance with the strengths and weaknesses of each element of Business Model Canvas of Karya Nugraha Multipurpose Cooperative.

METHODS OF RESEARCH

This research was conducted at Karya Nugraha Multipurpose Cooperative located in Cigugur Sub-District, Kuningan District, West Java. Data collection lasted for one month starting from October 2017-November 2017. This research uses two types of data consisting of primary and secondary data. The primary data were obtained from several respondents who had roles in Karya Nugraha Multipurpose Cooperative, among others, the chairman and board of Karya Nugraha Multipurpose Cooperative, and members of Karya Nugraha Multipurpose Cooperative. Moreover, the secondary data were obtained through the annual reports and documents of Karya Nugraha Multipurpose Cooperative, the Central Statistics Agency, the internet, books, journals, previous research and other data sources related to this research.

The stages applied in analyzing and processing data in this research are by mapping nine elements of Business Model Canvas to obtain a comprehensive picture of the business model run by Karya Nugraha Multipurpose Cooperative. These elements include: 1) customer segments, 2) value propositions, 3) channels, 4) customer relationships, 5) revenue streams, 6) key resources, 7) key activities, 8) key partnerships, and 9) cost structures. After the whole element is mapped, then the conclusion of the development of the business model is based on the potential of these elements.

RESULTS AND DISCUSSION

Identification of elements of the business model involves internal parties from Karya Nugraha Multipurpose Cooperative consisting of the chairman of Karya Nugraha Multipurpose Cooperative, the second chairman, secretary, head of administration and finance, and chairman of the supervisory section of Karya Nugraha Multipurpose Cooperative. These five respondents are assumed to have the ability and capacity to provide relevant information related to the data required to identify each BMC element. This internal party is also considered to have full authority in the formulation of what business models the organization is currently running and what ideas (inputs) can be used to develop a business model run by Karya Nugraha Multipurpose Cooperative. The results of the identification of

the nine elements of BMC in Karya Nugraha Multipurpose Cooperative currently are as follows:

1. Customer Segments. There are several customers served by Karya Nugraha Multipurpose Cooperative. The main customer is Ultra Jaya's milk processing industry as one party that takes about ninety percent of pure cow's milk production from Karya Nugraha Multipurpose Cooperative. In carrying out its daily production, Karya Nugraha Multipurpose Cooperative has delivered pure milk twice each day which is received entirely by Ultra Jaya only if the quality of the milk delivered by Karya Nugraha Multipurpose Cooperative is in accordance with the milk quality limit determined by Ultra Jaya. In addition to Ultra Jaya, as the main customer, there are also retail buyers who buy directly from Karya Nugraha Multipurpose Cooperative. Although these retail buyers are small in number, they can increase revenue from Karya Nugraha Multipurpose Cooperative because this retail buyer buys milk produced by the Multipurpose Cooperative whose prices is determined by the Multipurpose Cooperative which is higher than the purchase price of Ultra Jaya. The last customer served by Karya Nugraha Multipurpose Cooperative is a member of Karya Nugraha Multipurpose Cooperative. Overall, the members of this cooperative are farmers who do not generate income streams for the Multipurpose Cooperative, but the existence of these members is very important as the supplier of milk sold by the Multipurpose Cooperative with reciprocal services provided by Karya Nugraha Multipurpose Cooperative to assist farmers in the process of producing cow milk.

2. Value Propositions. Karya Nugraha Multipurpose Cooperative currently offers different value propositions and is adjusted to its customers, including:

a. Ultra Jaya. Karya Nugraha Multipurpose Cooperative, which has a cooperative relationship in terms of sellers and buyers with Ultra Jaya, has a value proposition offered in the form of quality cow's milk which is in accordance with the standards determined by Ultra Jaya. As a cow milk processing company, Ultra Jaya maintains its quality so that if there is a decrease in the quality of milk from Karya Nugraha Multipurpose Cooperative, it will reduce Ultra Jaya's trust to Karya Nugraha Multipurpose Cooperative and will pose a risk of terminating the sale and purchase relationship between them. In addition to quality, Karya Nugraha Multipurpose Cooperative needs to maintain the quantity every delivery period so that there is no sudden significant change in the amount because it will affect the processed milk production process that is carried out by Ultra Jaya.

b. Members of Karya Nugraha Multipurpose Cooperative. In 2016, Karya Nugraha Multipurpose Cooperative had 785 members. The number of members increased by about eight percent compared to the number of cooperative members in 2015. The value proposition offered by Karya Nugraha Multipurpose Cooperative to its members is, among others, the guarantee that milk produced by members will be purchased by cooperatives in accordance with the quality of milk produced from each farmer. In addition, the cooperative provide services in the form of sales of feed, livestock equipment, medical services, and artificial insemination for farmers with a payment scheme using a cutting system from a portion of the farmers' milk production which is deposited to Karya Nugraha Multipurpose Cooperative so that it does not burden the farmers in the service payment process.

c. Retail Buyer. Compared to Ultra Jaya, retail buyers have a small purchasing portion which is under ten percent of the total production of pure milk of Karya Nugraha Multipurpose Cooperative. However, those retail buyers still have a role in increasing the income of Karya Nugraha Multipurpose Cooperative. The value proposition offered by Karya Nugraha Multipurpose Cooperative to the retail buyers is basically the same as Ultra Jaya.

3. Channels. In communicating value propositions to its customers, Karya Nugraha Multipurpose Cooperative uses the word of mouth method (conveying information by word of mouth) and by using telephone services, text messages, and conducting face-to-face meetings with group leaders regularly. The communication method is used to inform if there is a schedule change in milk collection from each temporary milk storage area in each region in order to condition and maintain optimal milk quality. In addition, Karya Nugraha Multipurpose Cooperative has joined the IMCA (Indonesian Milk Cooperative Association), which aims to inform the general public about the development and existence of Karya Nugraha Multipurpose Cooperative. Karya Nugraha Multipurpose Cooperative already has its own website whose content is in the form of information on activities carried out by Karya

Nugraha Multipurpose Cooperative, the number of members, as well as various other information relating to the development of Karya Nugraha Multipurpose Cooperative. However, this website is still not optimally managed. It can be seen from the last update made by Karya Nugraha Multipurpose Cooperative which still contains information in 2016 and there has been no information update on activities or general information on developments related to Karya Nugraha Multipurpose Cooperative.

4. Customer Relationships. The type of relationship made by Karya Nugraha Multipurpose Cooperative along with its customers is a personal relationship, in which the relationship is based on direct interaction. Karya Nugraha Multipurpose Cooperative has a different personal relationship with each of its customers, especially to its members. The relationship between Karya Nugraha Multipurpose Cooperative and Ultra Jaya is conducted by delivering the pure milk purchased by Ultra Jaya accompanied by checking the quality of milk and the volume of milk delivered by Multipurpose Cooperative. The relationship between Multipurpose Cooperative and its members is carried out by providing guidance to members and prospective members on how to carry out the process of dairy farming properly, in terms of cattle selection, feed selection, and cattle care to produce pure milk that has good quality. In addition, Multipurpose Cooperative offers feed services, artificial insemination, animal husbandry equipment and treatment for members with affordable prices and payment schemes. Thus, members do not need to experience difficulties in finding daily needs in the livestock process. In addition, Karya Nugraha Multipurpose Cooperative prepares livestock groups in each sub-district which function as temporary shelters for cow's milk from farmers so that farmers do not need to bring their own pure milk and reduce the risk of damaged milk on the road outside the supervision of Karya Nugraha Multipurpose Cooperative. This livestock group also aims to gather the needs and aspirations of the farmer members to accommodate the needs of farmers in each sub-district more optimally. In addition, at the end of each year, Karya Nugraha Multipurpose Cooperative always conducts End of Year Meetings which aim to convey to members about the development of cooperatives in one year, discuss the direction of cooperative development that is expected by members for the next year, and share the surplus to its members.

5. Revenue Stream. Karya Nugraha Multipurpose Cooperative's revenue stream comes from the sale of Multipurpose Cooperative pure milk to Ultra Jaya and retail buyers who come to Karya Nugraha Multipurpose Cooperative. There is no income stream from cooperative members because the target of Karya Nugraha Multipurpose Cooperative for the members is to provide services without seeking benefits from them. The advantage gained from members is to get decent facilities in the farm process. Dairy cows cared for by the farmers are expected to provide increased production. This will increase the overall production of Karya Nugraha Multipurpose Cooperative and provide a higher revenue stream from the sale of pure milk. However, the collaboration of Karya Nugraha Multipurpose Cooperative, which only relies on one company, i.e. Ultra Jaya, provides a very high risk. Once a contract is terminated from Ultra Jaya to Multipurpose Cooperative, then Multipurpose Cooperative will lose its main income stream and will risk Multipurpose Cooperative's financial performance. It needs to be reconsidered to do additional cooperation or add value to the Karya Nugraha Multipurpose Cooperative final product in order to get a new source of revenue stream.

6. Key Resources. To run its business model, Karya Nugraha Multipurpose Cooperative has several main resources in the form of physical, intellectual and human resources.

a. Physical Resource. Currently, the physical resources owned by Karya Nugraha Multipurpose Cooperative include 1 unit of secretariat office, 3 units of cooling machine, 1 tank truck for pure milk transport, and 8 pick-up trucks for pure milk transport from the livestock group office to the refrigeration unit.

b. Intellectual Resource. Karya Nugraha Multipurpose Cooperative has a year-end report book whose contents are quite detailed including the structure of the Karya Nugraha Multipurpose Cooperative board of directors, the number of members and the area where they live, the number of cows, the average monthly production of members, the total number of cows, the performance report of Karya Nugraha Multipurpose Cooperative, as well as the details of the obligation and the distribution of surplus to its members.

c. Human Resource. Karya Nugraha Multipurpose Cooperative has an organizational structure that includes several management functions required by cooperatives. The management structure of Karya Nugraha Multipurpose Cooperative consists of chairman, first chairman, second chairman, secretary, treasurer, and supervisory section. In carrying out its business processes, Karya Nugraha Multipurpose Cooperative is accompanied by a financial manager appointed by the Office of Cooperatives and SMEs with the aim of maintaining the financial performance of Karya Nugraha Multipurpose Cooperative to remain in the expected position and purpose.

7. Key Activities. The main activities carried out by Karya Nugraha Multipurpose Cooperative in order to make the business model run well include: conducting training for new members who will join Karya Nugraha Multipurpose Cooperative about how to take care of farms in order to provide optimal results; in addition, Karya Nugraha Multipurpose Cooperative controls the quality of milk production for each farmer in order to monitor the routine production of each farmer and also to check the production quality of each farmer, which later, pure milk produced by each farmer will be accumulated and sent to Ultra Jaya as the main customer of Karya Nugraha Multipurpose Cooperative; control routine care for cows owned by the members; and perform other services needed by members in order to obtain optimal results and aim to increase revenue from Karya Nugraha Multipurpose Cooperative.

Table 1 – Business Model of Karya Nugraha Multipurpose Cooperative

<u>Key Partnerships</u> Multipurpose Cooperative Members Department of Cooperatives and SMEs Financial Institution Supplier of livestock supporting equipment	<u>Key Activities</u> Training for new members Product quality control Product distribution Cows care Livestock supporting services	<u>Value Propositions</u> Milk quality and quantity Guaranteed purchases based on the quality Member services	<u>Customer Relationships</u> Distribution and quality control Training and service Livestock groups Year-end meeting	<u>Customer Segments</u> Ultra Jaya Cooperative members Retail buyers
	<u>Key Resources</u> Physical resources Year-end report book Human resources		<u>Channels</u> Word of mouth and IT Indonesian Milk Cooperative Association	
<u>Cost Structures</u> Routine costs for the operations Karya Nugraha Multipurpose Cooperative Operational costs of transporting pure milk Cost for holding a year-end meeting			<u>Revenue Streams</u> Pure milk sale	

8. Key Partnership. The process of developing Karya Nugraha Multipurpose Cooperative, as a cow milk production cooperative, is inseparable from the collaboration carried out by Karya Nugraha Multipurpose Cooperative with its members as suppliers of pure milk for the Multipurpose Cooperative and partnering with the Cooperatives and SMEs Office to monitor the development direction of Karya Nugraha Multipurpose Cooperative so that it is inseparable from the cooperative values. Karya Nugraha Multipurpose Cooperative also partnered with financial institutions that provide loans to develop the businesses and also supply other livestock in the form of feed, animal husbandry, and medicines that are used to support the livestock process of members who have not been able to independently carry out the production.

9. Cost Structure. Running a business model is inseparable from the costs that must be incurred. The cost structure relies heavily on the management of key resources, key activities, and key partnerships that are built to facilitate the business model.

The cost structure of Karya Nugraha Multipurpose Cooperative business activities includes:

- Routine operational costs of Karya Nugraha Multipurpose Cooperative include the salary of the chairman, secretary, treasurer, and employees who work at the secretariat of Karya Nugraha Multipurpose Cooperative. The operational costs in the form of electricity, water and office administration tools are also part of the costs that need to be spent by Karya Nugraha Multipurpose Cooperative.

- Operational costs for the collection and delivery of pure milk to customers as well as the cost of the maintenance of the transport vehicle and maintenance of refrigeration for the pure milk (cooler).

The cost for holding a year-end meeting conducted by the cooperative at the end of the period aims to report on the annual results that have been running and discuss the development plans of Karya Nugraha Multipurpose Cooperative in the coming year with its members.

CONCLUSION

The findings of this research indicate that Karya Nugraha Multipurpose Cooperative has been able to segment the customers. However, customer limitations have made Karya Nugraha Multipurpose Cooperative experience a weak bargaining position so that the selling price of pure milk received by Karya Nugraha Multipurpose Cooperative is still greatly influenced by the decision of the buyer. In addition, by only having one main customer, Karya Nugraha Multipurpose Cooperative faces the risk of decreasing income if one day the customer decreases the quota of the purchase.

Karya Nugraha Multipurpose Cooperative delivers its value to customers through traditional methods of word of mouth so that information is vulnerable to not being conveyed to its customers. In addition, this traditional delivery method can hinder the development of Karya Nugraha Multipurpose Cooperative.

The revenue stream owned by Karya Nugraha Multipurpose Cooperative is still limited to selling pure milk only without any other income streams. If Karya Nugraha Multipurpose Cooperative does not develop its revenue stream, it is possible that there will be stagnation in the development of its business model because there is an increase in production costs without being followed by an increase in the income.

SUGGESTIONS

Karya Nugraha Multipurpose Cooperative needs to develop a market that aims to improve its bargaining position and reduce the risk of failure in selling the pure milk produced by farmers and increase revenue flow by increasing the scale of production to be more efficient.

Karya Nugraha Multipurpose Cooperative needs to develop its channel so that it can be more efficient in conveying its values to the customers. The increasing channel of Karya Nugraha Multipurpose Cooperative is expected to be able to explore new markets to develop.

Karya Nugraha Multipurpose Cooperative needs to develop pure dairy products that aim to provide added value and increase the income earned.

REFERENCES

1. Rahardi, F. 2003. *Agribisnis Peternakan*. Edisi Revisi. Penebar Swadaya. Jakarta.
2. Baden-Fuller, C. (2010) *Business Models as Models*. *Long Range Planning*, 43, 156-171.
3. Wheelen, Thomas L., Hunger, J. David, (2010) *Strategic Management and Business Policy Achieving Sustainability*. Twelfth Edition. Pearson.
4. Supriyadi. 2006. *Perluakah Mendesain Business Model Baru?* *Jurnal Manajemen Prasetya Mulya*. XX (90).
5. Osterwalder, Yves. Pigneur, Smith, Alan and et al. 2010. *Business Model Generation*. Self published, Modderman Drukwerk, Amsterdam, the Netherland.

DOI <https://doi.org/10.18551/rjoas.2018-11.20>

THE ROLE OF BRAND IMAGE MEDIATING THE EFFECT OF PRODUCT QUALITY ON REPURCHASE INTENTION

Yasa I Ketut

Politeknik Negeri Bali, Indonesia

E-mail: yasa_iketut@yahoo.com

ABSTRACT

Repurchase intention is a consumer action to buy back a product because of the satisfaction received after the previous purchase; so that consumers feel satisfied a company needs to pay attention to the factors that affect the repurchase intention. This study aims to determine the role of brand image to mediate the effect of product quality on the re-purchase intention on Adidas brand shoes in Denpasar City. This research was conducted in Denpasar City area by disseminating 120 questionnaires. Data collection method used is purposive sampling method. Data collection is done through the spread of questionnaires online and offline in the field. The analysis technique used is path analysis. Based on the results of research show that product quality has positive and significant effect to brand image. Product quality has a positive and significant effect on the repurchase intention. Brand image has a positive and significant effect on the repurchase intention. Brand image as a mediation variable has significant effect through product quality to repurchase intention by partial.

KEY WORDS

Brand image, product, quality, repurchase intention.

The company is required to continue to improve product quality and continue to innovate to create a variety of product innovations that are able to meet the needs and desires of the community. Companies need to learn and identify factors that will direct the company to success (Fouladivanda et al., 2013). Companies must be able to provide quality that is in accordance with the needs and desires of consumers by taking into account the existing market quality standards (Puspita et al, 2016). The reasons for improving product quality can be shown to maintain the existence of a company even to win business competition. One of them is the competition in the sports shoes market in Indonesia. Indonesia has a local shoe brand that is able to compete with shoe brands from outside and with the presence of outside and local brands that enliven the sports shoes market in Indonesia, the competition in this business is getting tighter.

Before consumers use a product to buy, consumers tend to rely on information from other people who have already purchased the product. Consumer decisions in deciding to choose a brand or buying a product cannot be separated from consumer behavior that is influenced by many factors (Widyastuti and Alwani, 2018). Consumers will use their judgment in determining and making their decisions, especially when buying quality products (Ackaradejruangsri, 2013). If this is not appropriate for them, then they will reject the product (Khraim, 2011).

According to Musay (2013), brand image is an image or impression caused by a brand in the customer's mind. Brand image according to (Roslina, 2010) is a guide that will be used by consumers to evaluate products when consumers do not have sufficient knowledge about a product. When a consumer obtains satisfaction on a previous purchase, there is an increase in the positive thinking of the consumer towards the product or service (Halim et al., 2014). A good brand image will make it easier for consumers to recognize a product and create a good perception of product quality and allow consumers to make purchase intentions and even repurchase the product. Chen et al., (2013) found that marketing can provide the right brand strategy for consumers according to different segments to positively strengthen brand associations. According to Ranto (2013), building a brand has become a necessity for companies to be able to compete with other companies.

This research was conducted based on several findings from previous research on the influence of brand image, product quality and repurchase intention with different results. The results of research from Ramadhan and Sentosa (2017) state that product quality does not have a significant effect on repurchase intention. This is in line with the results of Bahar and Herman's (2015) study stating that product quality has no significant effect on repurchase intention, because t-value is less than t-table ($0.100 > 1.293$) and significant level greater than 0.05 ($0.921 < 0.05$) so that product quality does not have a significant partial effect on repurchase interest. This result contrasts with the research of Aryadhe and Rastini (2016) which states that product quality and brand image have a positive influence on repurchase intention. This is in line with Yunus's research results (2014), product quality has a significant effect on repurchase intention.

LITERATURE REVIEW

Product Quality. Kotler and Armstrong (2012: 283) define product quality as the ability of a product to demonstrate its function, this includes overall durability, reliability, accuracy, ease of operation and product repair, as well as other product attributes. Consumers want the product they buy according to their wishes or the product is quality. The higher the quality of the product, the higher the consumer's decision to make a purchase (Idris, 2013). Ehsani (2015) states that product quality is the customer's perception of the overall quality or superiority of a product or service, in relation to its purpose, relative to alternatives.

Brand Image. Kotler and Keller (2012: 274) brand image is a public perception of the company or its products. Image or image itself is a picture, likeness of the main impression or outline even the shadow that someone has about something. Brand image is a perception and belief in a group of brand associations that occur in the minds of consumers (Sari, 2013). According to Adil (2012) the main function of brand image is to answer questions about how consumers choose between alternative brands after taking information. According to Evelina et al. (2013), brand image is a representation of the overall perception of the brand and is formed from past information and experience of the brand. Therefore the image or image can be maintained. This contains the interpretation of the target market for product attributes, benefits, situation of use, users, and characteristics of the manufacture or market. (Rizan et al., 2012) suggests that brand image is an assumption about brands that consumers reflect that hold on to consumers' memories.

Repurchase Intention. According to Hasan (2013: 173) interest in buying is the tendency of consumers to buy a brand or take actions related to purchasing as measured by the level of possible consumers to make purchases to predict consumer behavior in the future. Repurchase intention is part of consumer buying behavior where the suitability between the performance of the product or service offered by the company produces consumer interest to consume it again in the future (Wijaya, 2015). Ain and Ratnasari (2015) stated that repurchase intention was a post-purchase action caused by the satisfaction felt by consumers for products that had been purchased or consumed before. The intention to repurchase is a consumer commitment that is formed after the consumer purchases a product or service.

Hypothesis:

Product quality to brand image. Consumers will assess a high quality product if it has these elements and of course this can show its ability to meet consumer needs and in accordance with their expectations of the product. The quality of a product can affect consumers in the formation of a brand image. If the product quality of a brand is sold high, then consumers will associate high product quality to the brand, which means that the brand image is good. Product quality becomes very important because it involves consumer confidence in the product and the company itself because good quality will give birth to a positive image in the minds of consumers so that consumers believe in the product (Anis et al, 2015). If the quality of the product is good in the eyes of consumers, then a positive brand image is formed automatically in the eyes of consumers. Based on the results of previous studies suggested that product quality has a significant positive effect on brand image

(Noerchoidah, 2013; Yusmawan et al., 2014). Laura and Siska (2017), stated that product quality positively influences positively the brand image.

H₁: Product quality has a positive and significant effect on brand image.

Product quality to repurchase intention. According to Kotler and Armstrong (2014: 347) product quality is the ability of a product to perform its functions, this capability includes durability, reliability, accuracy produced, ease of operation and repair, and other valuable attributes in the overall product. In the results of Zulfadly's research (2013) in his research entitled "The Effect of Product Quality, Price and Brand Image on the Decision to Repurchase Yakult Products in Padang City" shows the results that product quality has a significant effect on repurchase decisions. Another study was also conducted by Saidani and Arifin (2012) which showed that product quality had a positive and significant effect on repurchase interest. Based on the results of the study that the quality of products has the greatest influence, the quality of products is increasingly maintained and enhanced, it will create a high repurchase intention.

H₂: Product quality has a positive and significant effect on repurchase intention.

Brand image to repurchase intention. Tariq et al., (2013) states that brand image is a very important aspect of purchase intention. This helps consumers to decide whether the chosen brand is a better choice for them and they are forced to make purchase intentions several times. A good image helps to create a long-term relationship between the product and the end user. This happens when consumers feel satisfied with the product / service received from a company that provides goods / services so it is very likely for consumers to make a repeat purchase. Ain and Ratnasari (2015), stated that a strong and positive brand image will increase consumer repurchase intention, otherwise if the brand image is not good, then repurchase intention will decrease. Thakur and Singh (2012) stated that there was a positive relationship between brand image and consumer repurchase intention for a brand or product. Brand image is formed through various attributes with the aim of one of them is to form a positive attitude towards a brand and generate intention to buy the brand, in other words, brand image has a significant effect on repurchase intention.

H₃: Brand image has a positive and significant effect on repurchase intention.

The role of brand image mediating the effect of product quality on repurchase intention. Based on research conducted by Anggitan (2013) shows that product quality has a direct positive influence with repurchase intentions indirectly through brand image. This is similar to the results of a research test conducted by Andriadi and Untarini (2013) that the brand image in one dimension has a significant influence that can form consumer repurchase intention. Aryadhe and Rasini (2016) in their research findings found that product quality through brand image has a positive and significant effect on repurchase intention.

H₄: Brand image has a positive effect mediating on product quality against repurchase intention.

METHODS OF RESEARCH

The location of this study was conducted on consumers who had already bought and used Adidas brand shoes in Denpasar City. The city of Denpasar was chosen as the location of the study because of the consideration that this location was the center of the city in Bali with a rapid economic sector growth. In addition, a dense population and a fairly high population that reflects the lifestyle of Balinese people who are updating the needs of new products, especially fashion products such as shoes used daily. The object in this study is the influence of product quality (X) on brand image (Y1), the influence of product quality (X) on repurchase intention (Y2), the influence of brand image (Y1) on repurchase intention (Y2), and brand influence image (Y1) mediates product quality (X) and repurchase intention (Y). The population in this study was consumers who had already bought or used Adidas brand shoes in Denpasar City. The sample determination method used in this research is non probability sampling.

This research uses path analysis techniques or commonly called path analysis. Path analysis or path analysis is an extension of statistical analysis developed from multiple

regressions. According to Riduwan and Kuncoro (2011: 2) the path analysis model is used to analyze the pattern of relationships between variables in order to determine the direct and indirect effects of a set of exogenous variables (product quality) on endogenous variables (repurchase intention). In this analysis the main subject is the variables that have a correlation and the model of the relationship between these variables is predetermined by the researcher. The basis for calculating the path coefficient is the correlation and regression analysis in the calculation using software with SPSS 24.00 for windows program.

RESULTS AND DISCUSSION

According to age grouping, the majority of respondents aged 20-25 years were 62.5%, then respondents aged over 25 years were 16.7% and respondents under 20 years old were 20.8%. Judging from the gender of the respondents, women dominated by 52.5% and men by 47.5%.

Testing the data in this study uses Path Analysis technique, where path analysis is an extension of multiple linear regression analysis to test the causality relationship between 2 or more variables. Stages do path analysis techniques, namely:

Sub-structural Equation 1:

$$Y_1 = \beta_1 X + e_1$$

Sub-structural Equation 2:

$$Y_2 = \beta_2 X + \beta_3 Y_1 + e_2$$

Path coefficient calculation is done by regression analysis through SPSS 24.0 for Windows software, obtained the results shown in Tables 1 and 2.

Table 1 – Model I

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t _{hitung}	Sig.
	B	Std. Error			
1 (Constant)	4,363	1,085		4,020	0,000
Product quality	0,488	0,042	0,734	11,734	0,000
R1 Square					0,538
F					137,683
Sig.					0,000

Source: Primary data, 2018.

$$Y_1 = \beta_1 X + \varepsilon_1$$

$$Y_1 = 0,734 X + \varepsilon_1$$

The value of β_1 is 0.734 meaning that Product Quality has a positive effect on Brand Image, in other words if the Product Quality increases, it will lead to an increase in the Brand Image of Adidas brand shoes.

Table 2 – Model II

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t _{hitung}	Sig.
	B	Std. Error			
1 (Constant)	0,559	1,952		0,286	0,775
Product quality	0,240	0,103	0,229	2,319	0,022
Brand image	0,794	0,155	0,504	5,111	0,000
R1 Square					0,475
F					52,983
Sig.					0,000

Source: Primary data, 2018.

$$Y_2 = \beta_2 X + \beta_3 Y_1 + \varepsilon_2$$

$$Y_2 = 0,229 X + 0,504 Y_1 + \varepsilon_2$$

Based on these equations it can be concluded that the value of β_2 is 0.229, meaning that product quality has a positive effect on repurchase intention, in other words, if the product quality factor increases, it will lead to an increase in repurchase intention of Adidas brand shoes in Denpasar City. The value of β_3 is 0.504 meaning that the brand image has a positive effect on repurchase intention, in other words if the brand image increases there will be an increase in repurchase intention on the Adidas brand shoes in Denpasar City.

Based on substructure model 1 and substructure 2, the final path diagram model can be arranged. Before preparing the final path diagram model, the standard error value is calculated as follows:

$$Pe_1 = \sqrt{1 - R_1^2}$$

$$Pe_1 = \sqrt{1 - R_1^2} = \sqrt{1 - 0,538} = 0,679$$

$$Pe_2 = \sqrt{1 - R_2^2} = \sqrt{1 - 0,475} = 0,724$$

Based on the calculation of the effect of error (Pe_1), the result of the error (Pe_1) was 0.679 and the effect of error (Pe_2) was 0.724. The results of the total determination coefficient are as follows:

$$R^2_m = 1 - (Pe_1)^2 - (Pe_2)^2 = 0,759$$

The total determination value of 0.759 means that 75.9% of the variation in repurchase intention is influenced by variations in product quality and brand image, while the remaining 24.1% is explained by other factors not included in the model.

The amount of direct influence and indirect influence and the total effect between variables. Calculation of influences between variables is found in Table 3 as follows.

Table 4 – Direct, Indirect and Total Effect Product Quality, Brand Image and Repurchase Intention

Model	Direct Effect	Indirect effect through brand image (Y_1) ($\beta_1 \times \beta_3$)	Total Effect
$X_1 \rightarrow Y_1$	0,734	-	0,734
$X_1 \rightarrow Y_2$	0,229	0,369	0,598
$Y_1 \rightarrow Y_2$	0,504	-	0,504

Source: Primary data, 2018.

The effect of product quality on brand image shows that product quality has a significant positive effect on brand image. This means that the better the quality of the products provided by Adidas brand shoes, it will increase the brand image of Adidas brand shoes. The results of this study support the findings of (Noerchoidah, 2013; Yusmawan et al., 2014). Laura and Siska (2017), stated that product quality positively influences significantly the brand image.

The effect of product quality on repurchase intention indicates that product quality has a significantly positive effect on repurchase intention. This means that the better the quality of the products provided by Adidas brand shoes, it will increase the consumers' repurchase intention in Adidas brand shoes. The results of this study support the findings of previous studies Zulfadly (2013), Saidani and Arifin (2012) which show that product quality has a positive and significant effect on repurchase intention.

The effect of brand image on repurchase intention indicates that brand image has a significant positive effect on repurchase intention. This means that the better the brand image given by the Adidas brand shoes, the higher the intention to repurchase the Adidas brand shoes in Denpasar City. The results of this study support the findings of previous

studies Ain and Ratnasari (2015), stating that a strong and positive brand image will increase consumer repurchase intention, on the contrary if the brand image is not good, then repurchase intention will decrease. Thakur and Singh (2012) stated that there was a positive relationship between brand image and consumer repurchase intention for a brand or product.

The role of brand image in mediating product quality on repurchase intention shows that brand image is able to mediate the influence of product quality on repurchase intention. This means that the brand image mediates the effect of product quality on partial repurchase intentions. In other words, brand image strengthens the influence of product quality on repurchase intention. The results of this study support the findings of Anggitan (2013), Andriadi and Untarini (2013) and Aryadhe and Rasini (2016), namely the quality of products through brand image has a positive and significant effect on repurchase intention.

CONCLUSSION AND SUGGESTIONS

This shows that the better quality of products on Adidas brand shoes will increase the brand image of Adidas brand shoes in Denpasar City. Product quality has a positive and significant effect on repurchase intention. This shows that the better quality of the product on the Adidas brand shoes will increase the repurchase intention of consumers of Adidas brand shoes in Denpasar City. Brand image has a positive and significant effect on repurchase intention. This shows that the better the brand image of the Adidas brand shoes, the higher the intention to repurchase the consumers of Adidas brand shoes in Denpasar City. Brand image can mediate the influence of product quality on repurchase intention. This shows that brand image mediates the effect of product quality on partial repurchase intentions. In other words, brand image strengthens the influence of product quality to repurchase intention.

The advice that can be put forward in this research is that Adidas producers are expected to give special prices to customers and can improve and maintain the brand image so that Adidas has a positive image, because brand image can attract consumers to buy a product. The quality of the Adidas product's durability needs to be improved even though the products produced are good, in addition to competitive prices for the quality of similar products (Nike) so that consumers' intention to repurchase increases.

For further researchers, it is expected to conduct research specifically on the type of Adidas brand shoes. In this study in the future it is also necessary to use other variables such as store image, price, and sales promotion, so that it can enrich the information obtained.

Research Implications. The implications of this study include two things, namely, theoretical implications and practical implications that emphasize the tangible benefits of the results of this study to increase customers in Adidas brand shoes. Companies should maintain a good brand image through good product quality so that customers have the intention to buy back Adidas brand shoes. Some implications of the results of this study are factors that influence repurchase intention in this research are product quality and brand image. Theoretical implications related to repurchase intentions consistently reinforce the previous theory that product quality and brand image affect customers to the emergence of intentions to repurchase. In addition, brand image variables are able to mediate the influence of product quality on repurchase intention. The better the quality of products owned by Adidas brand shoes, it will be able to increase a good brand image and the brand image has an important role in influencing the intention to repurchase Adidas brand shoes. This supports the research that has been revealed in the research hypothesis, so it can be concluded that this study supports and clarifies the relationship between the variable brand images, product quality, and repurchase intention.

Research Limitations. It is important to realize that there are some limitations of this study which include this research only carried out at a certain point in time, while the environment can change at any time, which makes this research important to be done again in the future. Lack of variables, where there are still other variables that can affect repurchase intentions such as store image, price, and sales promotion. This research has

not been specific, because it is carried out on all types of Adidas brand shoes, while Adidas brand shoes have many types of brand shoes.

REFERENCES

1. Ackaradejruangsri, P. 2013. The Effect of Product Quality Attributes on Thai Consumers' Buying Decision. *Ritsumeikan Journal of Asia Pasific Studies*, Vol.33, Hlm.14-24.
2. Adil, M. 2012. The Influence of Brand Image on Sales. *Journal of Basic and Applied Scientific Research*, Vol.2, No.4, Hlm.3552-3556.
3. Ain, N. dan Ratnasari, R.T. 2015. Pengaruh Citra Merek Melalui Sikap Konsumen Terhadap Niat Beli Ulang Pada Produk Busana Muslim Zoya di Surabaya, *JESTT*, Vol.2, No.7.
4. Andriadi, A. dan Untarini, N. 2013. Pengaruh Persepsi Kualitas Layanan dan Citra Merek Telkom Flexi Terhadap Niat Beli Ulang. *Jurnal Ilmu Manajemen*. Vol.1, No. 2.
5. Anggitan, A. R. 2013. Analisis Pengaruh Kualitas Produk, Harga dan Promosi Terhadap Loyalitas Pelanggan Dengan Minat Beli Ulang Sebagai Variabel Intervening. *Jurnal Manajemen*, Vol.7, No.9, Hlm.1-18.
6. Anis, L. M., Suharyono dan Sunarti. 2015. Pengaruh Kualitas Produk Terhadap International Brand Image Serta Dampaknya Terhadap Keputusan Pembelian Mahasiswa Pembeli dan Pengguna Laptop Lenovo di Fakultas Ilmu Administrasi Universitas Brawijaya. *Jurnal Administrasi Bisnis*, Vol.28, No.2, Malang.
7. Amryyanti, R. 2013. Pengaruh Kualitas Layanan, Produk, dan Kewajaran Harga Terhadap Kepuasan dan Loyalitas Pelanggan Pada LnC skin care Singaraja. *E-Jurnal Ekonomi dan Bisnis Universitas Udayana*, Vol.2, No.1, Hlm.22-29.
8. Aryadhe, P. dan Rastini, N.M . 2016. Kualitas Pelayanan, Kualitas Produk dan Citra Merek Terhadap Niat Beli Ulang di PT. Agung Toyota Denpasar. *E-Jurnal Manajemen Unud*. Vol. 5, No. 9.
9. Bahar, A. dan Sjahrudin, H. 2015. Pengaruh Kualitas Produk dan Kualitas Pelayanan Terhadap Kepuasan Konsumen dan Minat Beli Ulang. *Jurnal Organisasi dan Manajemen: Sekolah Tinggi Ilmu Ekonomi Bongaya Makassar*, Vol.3, Hlm.14-34.
10. Bruhn, M., Schoenmueller, V. And Schäfer, D.B. 2012. Are Social Media replacing traditional media in terms of brand equity creation. *Management Research Review*, Vol. 35, No. 9, Hlm. 770-790.
11. Chaudhuri, A. and Ligas, M. 2009. Consequences of value in retail markets. *Journal of Retailing*, Vol.85, No.3, Hlm.406-419.
12. Chen, T.Y., Yeh, T.L. and Jheng, W.S. 2013. Factors influencing brand association. *African Journal of Business Management*. Vol.7, No.19, Hlm. 1914-1926.
13. Dharma, Ngakan Putu Surya Adi dan I Putu Gde Sukaatmadja. 2015. Pengaruh Citra Merek, Kesadaran Merek, dan Kualitas Produk terhadap Keputusan Membeli Produk Apple. *E -Jurnal Manajemen Unud*, Vol 4 No 10, 2015. ISSN : 2302 – 8912. Pg 3228-3255
14. Ehsani, Z. and Ehsani, M.H. 2015. Effect of Quality and Price on Customer Satisfaction and Commitment in Iran Auto Industry. *International Journal of Service Sciences, Management and Engineering*. Vol.5, No.1, Hlm.5256.
15. Evelina, N., Waloejo, H.D. dan Listyorini, S. 2013. Pengaruh Citra Merek, Kualitas Produk, Harga, dan Promosi Terhadap Keputusan Pembelian Kartu Perdana Telkom Flexi (Studi Kasus pada Konsumen Telkom Flexi di Kecamatan Kota Kudus Kabupaten Kudus). *Jurnal Ilmu Administrasi Bisnis*, Vol.1, No.1, Hlm.203-213.
16. Fouladivanda, F., Pashandi, M.A., Hooman, A. and Khanmohammadi, Z. 2013. The Effect of Brand Equity On Consumer Buying Behaviour In Term of FMCG In Iran, Vol.4, No.9, Hlm.1-13.
17. Halim, B.C., Dharmayanti, D. dan Brahmana, R.K.M.R. 2014. Pengaruh Brand Identity terhadap Timbulnya Brand Preference dan Repurchase Intention pada Merek Toyota. *Jurnal Manajemen Pemasaran Petra*, Vol.2, No.1, Hlm.1-11.
18. Hasan, A. 2013. "Marketing Cetakan Pertama". Media Pressindo. Yogyakarta.

19. Idris, H.N.A. 2013. Pengaruh Kualitas Produk Citra Merek, Harga dan Promosi Terhadap Keputusan Pembelian Mobil Jenis Mpv Merek Toyota Kijang Innova di Semarang. *Diponegoro Journal Of Management*. Vol.2, No.3.
20. Kotler, P. (2012). *Manajemen Pemasaran Perspektif Asia (Pertama)*. Yogyakarta: Andi.
21. Kotler, P. Dan Keller, K.L. 2012. *Marketing Management (14th ed.)*. New Jersey: Pearson Prestice Hall.
22. Kotler, P. dan Armstrong, G. 2014. *Prinsip-prinsip Marketing*, Jakarta: Salemba Empat.
23. Kraim, H.S. 2011. The Influence Brand Loyalty on Cosmetics Buying Behavior of UAE Female Consumers. *International Journal of Marketing Studies*, Vol.3, No.2, Hlm.123-133.
24. Laura, S.N. dan Ringo, S.N.S. 2017. Pengaruh Kualitas Produk dan Kunggulan Bersaing Terhadap Keputusan Pembelian dengan Citra Merek Sebagai Variabel Intervening, *Journal of Management and Business Review*, Vol.14, No.2, Jakarta: Universitas 17 Agustus 1945 Jakarta.
25. Madahi, A. and Sukati, I. 2012. "The Effect of External Factors on Purchase Intention amongst Young Generation in Malaysia", *International Business Research*, Vol.5, No.8.
26. Musay, F.P. 2013. Pengaruh Brand Image terhadap Keputusan Pembelian (Survei Pada Konsumen KFC Kawi Malang). *Jurnal Administrasi Bisnis Universitas Brawijaya*. Vol.3, No.2.
27. Naufal, F.M. dan Widiyanto, I. 2014. Analisis Pengaruh Brand Awareness, Norma Subyektif, Keyakinan Label Halal terhadap Brand Attitude untuk Meningkatkan Minat Beli Ulang Kosmetik Merek Wardah. *Jurnal Manajemen*.Vol.16, No.5.
28. Noerchoidah. 2013. Analisis Pengaruh Harga, Kualitas Produk dan Iklan Terhadap Brand Image dan Keputusan Pembelian Sepeda Motor Merek Kawasaki. *Jurnal WIG*, Vol.3, No.1.
29. Paul, J. P. dan Olson, J. 2013. *Perilaku Konsumen dan Strategi Pemasaran*. Dialih bahasakan oleh Diah Tantri Edisi 9-Buku 1. Jakarta: Salemba Empat.
30. Puspita, L.,Yulianto, E. dan Sunarti. 2016. Pengaruh Kualitas Produk dan Word Of Mouth terhadap Keputusan Pembelian (Survei Kepada Konsumen Charles & Keith di Tunjungan Plaza Surabaya), *Jurnal Administrasi Bisnis (JAB)*, Vol. 34, No. 1, Malang: Universitas Brawijaya Malang.
31. Ramadhan, A.G. dan Sentosa, S.B. 2017. Analisis Pengaruh Kualitas Produk, Kualitas Pelayanan, dan Citra merek Terhadap Minat beli Ulang Pada Sepatu Nike Running di Semarang Melalui Kepuasan Pelanggan Sebagai Variabel Intervening. *Diponegoro Journal Of Management*. Semarang : Universitas Diponegoro, Vol.6, No.1, Hlm.1-12
32. Ranto, D.W.P. 2013. Menciptakan Islamic Branding Sebagai Strategi Menarik Minat Beli Konsumen. *Jurnal Bisnis Manajemen Akuntansi*, Vol.1, No.2 Hlm. 1-11.
33. Riduwan dan Kuncoro, E.A. 2011. *Cara Menggunakan dan Memakai Path Analysis (analisis jalur)*. Bandung : Alfabeta.
34. Rizan, M., Saidani, B. dan Sari, Y. 2012. Pengaruh Brand Image dan Brand Trust Terhadap Brand Loyalty Teh Botol Sosro Survey Konsumen Teh Botol Sosro di Food Court ITC Cempaka Mas, Jakarta Timur. *Jurnal Riset Manajemen sains Indonesia (JRMSI)*. Vol.3, No.1, Hlm.1-17.
35. Roslina. 2010. Citra Merek: Dimensi, Proses Pengembangan Serta Pengukurannya. *Jurnal Bisnis Dan Manajemen*. Vol.6, No.3,Hlm. 333-346.
36. Saidani, B. dan Arifin, S. 2012. Pengaruh kualitas produk dan kualitas layanan terhadap kepuasan konsumen dan minat beli pada ranch market. *JRMSI-Jurnal Riset Manajemen Sains Indonesia*, Vol.3, No.1, Hlm.1-22.
37. Sari, A.K. 2013. Pengaruh Citra Merek dan Keluarga Terhadap Keputusan Pembelian Honda Beat. *Jurnal Ilmu Manajemen*, Vol.1, No.1, Hlm.285-296.
38. Shahrinaz, I., Kasuma, J., Yacob, Y., Rahman, D.H.A.A. dan Mahdi, A.F. 2016. Relationship and Impact of E-WOM and Brand Image Towards Purchase Intention of Smartphone. *Journal of Scientific Research And Development*, Vol.3, No.5, Hlm.117-124.
39. Sunyoto, D. 2013. *Teori, Kuesioner & Analisis Data*. Yogyakarta:Graha Ilmu.

40. Tariq, M.I., Nawaz, M.R., Nawaz, M.M and Butt, H.A. 2013. Customer Perceptions about Branding and Purchase Intention: A Study of FMCG in an Emerging Market. *Journal of Basic and Applied Scientific Research*, Vol. 3, No.2, Hlm. 340-347.
41. Thakur, S. and Singh, A. P. 2012. Brand Image, Customer Satisfaction and Loyalty Intention: A Study in The Context of Cosmetic Product Among The People of Central India. *International Journal of Multidisciplinary Management Studies*, Vol.2, No.5, Hlm. 2249-2284.
42. Tjahjaningsih, E. dan Yuliani, M. 2009. Analisis Kualitas Produk dan Citra Merek dalam Mempengaruhi Keputusan Pembelian dan Dampaknya Terhadap Loyalitas Merek HP Nokia. *TEMA*, Vol.6, No.2, Hlm.104-118
43. Widyastuti, P. dan Alwani. 2018. Peran Community Advice Sebagai Pemoderasi Dalam Keputusan Pembelian. *Jurnal Manajemen dan Pemasaran Jasa*. Universitas 17 Agustus 1945 Jakarta, Vol. 11, No. 1, Hlm. 67-80
44. Wijaya, M. dan Jasfar, F. 2014. Pengaruh Rancangan Situs, Harga Kepercayaan, dan Keamanan Terhadap Pembelian Produk Fashion Melalui Online Shopping. *Jurnal Manajemen dan Pemasaran Jasa*, Vol.7, No.2, Hlm. 31-62.
45. Wijaya, T. 2015. Pengaruh Service Quality Perception dan Satisfaction Terhadap Repurchase Intention. *Modus Jurnal Ekonomi dan Bisnis*, Vol.17, No.1, Hlm. 39- 52.
46. Yunus, A. 2014. Pengaruh Kualitas Produk, Lokasi dan Lingkungan Fisik Terhadap Pembelian Ulang Pada Warung Kopi Harapan J2 di Kota Palu. *E-Jurnal Katalogis*. Universitas Tadulako, Vol.2, No.7.
47. Yusmawan., S., Kumadji, S. dan Rahardjo. 2014. Journal of The Effect of The Product Quality Mediation And Brand Image on The Influence of Pricing Policy And Service Quality Towards Trust. *Journal of Contemporary Research In Business*,
48. Zulfadly, E. 2013. Pengaruh Kualitas Produk, Harga dan Brand Image terhadap Keputusan Pembelian Ulang Produk Yakult di Kota Padang. *Jurnal Manajemen*, Vol.2, No.1.

DOI <https://doi.org/10.18551/rjoas.2018-11.21>

UNDERSTANDING «TRUST» IN THE PRACTICE OF AMIL ZAKAT ACCOUNTABILITY ORGANIZATION OF NURUL HAYAT

Agustinawati Vidya

Faculty of Economy and Bussiness, Airlangga University

E-mail: vidyaagustinawati@gmail.com

ABSTRACT

Zakat, Infak, Sedekah (ZIS) management institutions as one way of balancing social economy with equal distribution of income but a crisis of confidence due to the lack of accountability practices through financial reporting and service-based Information Technology (IT) in modern era. The purpose of this study reveals how accountability practices can increase public awareness to fulfill Zakat, Infaq and Sedekah (ZIS) as well as to influence the behavior of ZIS managers in presenting reports on Zakat acceptance as a form of accountability and channeling their funds to achieve social welfare through the Education Scholarship Program. The method used is case study at Lembaga Amil Zakat Nasional Nurul Hayat Foundation, Surabaya. Sources of data in this study are primary data and secondary data. Data collection techniques are conducted by: 1) Direct Observation, 2) Interviews, and 3) Documentation. The analysis of data to be performed consists of description and content analysis. The collected data was then analyzed using descriptive method, with qualitative analysis. The first finding of this study is the practice of Accountability based on Islamic Sharia has brought consequences that the humanitarian aspect of zakat accounting, that is related to the implementation of moral ethical principles and God's law. Another finding obtained by researchers is on Zakat online payment system "ZakatKita". The management of ZIS Nurul Hayat has developed because this online system makes it easier for the muzakki, donators to do Zakat, Infak, Sedekah wherever they are and whenever want to do it.

KEY WORDS

Management, Amil Zakat organizations; accountability, practices; Zakat, Infaq, Sedekah.

The current economic conditions in Indonesia require people to work hard to fulfill their daily needs such as clothing, food and shelter rather than a decent level of education. Islam is one of the universal religious teachings that advocates the balance of socio-economic life (Dianto, 2014). This is realized in the mechanism of payment and distribution of Zakat which provides an illustration of how a religious pillar has the core of the spirit of income distribution for all regions (Harianto, 2016). According Htay & Salman (2014) Zakat, infaq, sadaqah (ZIS) is part of worship *mahdah* to God, but it is also aworship *iztimaiyah Maliyah* that has a variety of social functions are very strategic in order to improve the welfare and minimize poverty.

Islamic civilization in the era of globalization has many opportunities that have not been traced and have not been maximally utilized to overcome these problems. One of them is the management of zakat, infaq, alms (ZIS) which is mandatory based on accountability practices through financial reporting and information technology-based services (IT). In fact, many Amil Zakat institutions have emerged but have not implemented the practice of accountability and zakat services according to the current technological era. According to Al-Khater & Naser (2003) and Arli, Grace, Palmer, & Pham (2017) this accountability practice is fundamental to the foundation of public trust in the reputation of the Organization. It is not hypocrisy, if the community (*muzaki*) based on the intention to pay zakat also requires an evidence of worship that can be channeled to those who deserve it (Masruki & Shafii, 2013).

The author proves by presenting data on zakat potential in Indonesia as one of the countries with a majority Muslim population of 216.66 million inhabitants or 85% of the total population based on the 2015 Central Statistics Data (BPS). This fact implies that Indonesia has a large potential of zakat, infaq, and alms (ZIS). The total growth of ZIS fund collection

during 2002-2015 reached 39.28% per year. The highest growth occurred between 2005 and 2007 (almost 100%) due to the Aceh tsunami national disaster and the Yogyakarta earthquake. In the last decade, ZIS experienced rapid growth. However, this growth is still very far from the potential of zakat in Indonesia. The number of ZIS potentials in member countries *OIC (Organization of Islamic Cooperation)* ranges between 1.8% - 4.34% of total GDP - Gross Domestic Product (Beik, 2015). If GDP is based on prices valid in 2015 amounting to Rp 11,531 trillion and Muslims in Indonesia as much as 85%, the potential for ZIS ranges between Rp 176.42 trillion - Rp 425.38 trillion. Of the target, only was realized 2.09%, amounting to Rp 3.7 trillion (0.03% of GDP).

However, until now zakat funds from muzaki still dominate with a portion of 63.29%, infaq / alms of 32.21%, and other socio-religious funds of 4.31%. The ZIS portion of individuals still shows significant numbers (74.04%) and the body (company) the remaining 25.96%. If we see the ZIS distribution in the social field occupying the top rank with a portion of 41.27%, followed by education 20.35%, economy 15.01%, da'wah 14.87%, and health 8.50%. Although education is the second priority in the use of ZIS funds, currently the dropout rate is still quite high at 1,218,020 or 3.06% of the total number of elementary school students up to secondary school. This is a motivation for the authors to take the topic of optimizing educational scholarship programs using ZIS funds based on public trust through accountability practices.

Various reasons were expressed as a response to the still low number of ZIS in Indonesia, including low public awareness and low trust in the ZIS management body. Rooted religious values should be a solution to overcome the two problems above. Communities tend to pay attention to corporate social responsibility when making judgment decisions about company image (Wagner & Weitz, 2009; Wan & Yu, 2016). In Nurul Hayat Surabaya Amil Zakat Foundation Foundation, Surabaya still does not use an accounting system in accordance with the PSAK that has been issued No. 109 concerning Accounting for Zakat because if without proper management such as accounting records with the principles stated in PSAK, an institution will have difficulty applying the principle of justice to parties those who have been involved well by the institution. The findings of this study are expected to be able to describe the practice of accountability in an organization by being able to implement and manage financial statements properly and transparently so as to increase public awareness, organizational reputation, and organizational achievement in presenting the overall Zakat acceptance report as a form of social welfare responsibility through education scholarship program (Arlı, Grace, et al. 2017).

THEORETICAL FRAMEWORK

Zakat, Infaq, Shodakoh (ZIS) and Islamic Value. According to Zain, Darus, et al. (2014) the concept underlying Zakat, Infaq and Shodaqoh (ZIS) is the concept of *Tawhid*, *Caliph* and *Ukhuwah*. The concept is a manifestation of Islamic values which is manifested in human relations to Allah SWT, human beings to the environment and humans to fellow humans (Yaya, 2004). The concept of *Tawhid* means accepting that God is the highest owner of everything on earth and in the universe and that humans are ultimately responsible to God. According to Zain, Darus et al. (2014) the belief that no human being is the same as God has given birth to the principle of equality of mankind. Islam represents *Ad-Din* (way of life), humanity is expected to devote its life to God through worship as a religious ritual.

Underlying the Concept of *Khalifah*, Zain, Darus, et al (2014) states that humans as caliphs on earth need to uphold Sharia in their lives, maintain harmony and peace, protect the environment and fulfill tasks in the best way through advice, trust, truth and wisdom. Human relations with Allah SWT revolves around actions to devote his life through worship to Him. Human relations with other humans are based on the need to ensure that everyone lives in peace as well as the welfare of one another.

Based on the concept of *Ukhuwah*, Zain, Darus, et al. (2014) said that the relationship between humans and the environment is based on the agreement that the earth that has been lent to us will survive indefinitely. The concept of *caliph* (representative) refers to the

role, status and also the responsibility of mankind towards themselves and society as a whole. Free to roam the earth, humanity has been entrusted with the responsibility to manage not only other humans but also other God's creations such as animals, plants and the environment.

Accountability Practices and the Meaning of the "Trust". National Amil Zakat Institution (Laznas) must hold the commitment of zakat autonomy which means by implementing a mandate metaphor that is realized with its concrete form, namely the zakat metaphor. The mandate metaphor in question is an allusion that is used to develop its organization in providing welfare to the community. The National Amil Zakat Institute (Laznas) is an organization that upholds its concern for the social community (Wahab & Rahim Abdul Rahman, 2011).

Participants revealed that the National Zakat Institution (Laznas) which is engaged in the social field has the intention to be able to help many people to be useful. In this case, the National Zakat Institution (Laznas) has a universal soul that can boost its sense of care to help many people without any background differences, because every human being has the right to welfare (Saad, Aziz, & Sawandi, 2014). Presentation of Sharia Financial Statements paragraph 25 that the principle of universalism can be essentially carried out for all interested parties regardless of ethnicity, religion, race and class.

According to Triyuwono Muhamad (2002), zakat is a bridge between human activities that are worldly and ukhrowi. Ummah funds are managed as a form of accountability to God (vertically) and *stakeholders*, especially donors (horizontally). Practice Accountability also serves as a counterweight between one's faith in Allah SWT and the belief in worship done to Humans. Accounting is information because the basis for making a decision in the organization because it can maintain the principle of justice in the community so that it can participate in ensuring its accuracy. Accounting is actually an Islamic teaching which is mandated to humans through their minds and minds and is part of muamalat Islam (Harahap & Sofyan Syafri, 2004).

METHODS OF RESEARCH

The research method used is a qualitative method. The qualitative method is used in this study by conducting case studies with an interpretive approach as one of the methods used by the author to capture and describe a problem or phenomenon to understand the mandate and interpret the accountability practices in the Nurul Hayat Foundation Surabaya (Creswell, 2007). Data Collection Techniques are carried out by: 1) Direct Observation, namely by observing directly the zakat accounting process and the online system "ZakatKita" applied at LAZ Nasional Nurul Hayat Surabaya. This is done to find out exactly how the application of zakat accounting is applied so that it can increase the form of distribution of their funds through education scholarship programs. 2) Interview to obtain information directly about the LAZ National Nurul Hayat Surabaya situation by asking a few questions to the authorized employees in their respective tasks. 3) Documentation. Documentation is supported by books/catalogs on zakat and financial reports and administrative reports. The reason for choosing the Nurul Hayat Foundation (YNH) as the object of this study was because the authors sought and explored the existence of an increase in the performance and organizational performance of Amil Zakat based on the BAZNAZ (National Zakat Amir) award in 2017 with the best ZIS collection in Surabaya.

RESULTS OF STUDY

Nurul Hayat Foundation was established in 2001. At that time it was called the Panti Asuhan Social Foundation (YSPA) Nurul Hayat. The foundation was originally formed as a fundraiser Zakat, Infaq, Sodaqoh and suppliers CSR (*Corporate Social Responsibility*) PT. FIRDHA PRIMA where the company is engaged in traditional herbal medicine business based in Surabaya.

In addition to PT CSR subsidies. Fridha Prima YSPA, they established an innovative business unit in Surabaya in 2002 in the form of a ready-to-serve Aqiqoh Business Unit. Seen the success of the month to month business experience an increase in profit surplus. From here YSPA Nurul Hayat developed a social program that is not only an orphanage and orphan scholarship.

Focusing on the mission of the social program, Nurul Hayat had to change a bigger costume. By law, on September 2, 2003, YSPA Nurul Hayat was dissolved and a new institution was established, called "Yayasan Nurul Hayat" and most of the fund raising was from the ummah's donations. This shows that Nurul Hayat is not an individual property but belongs to the ummah and is offered to the ummah.

Foundation's Yayasan Nurul Hayat Surabaya carried out fundraising through various funds including: zakat funds, general infaq shadaqah funds, humanitarian funds, waqf funds, management funds, and funds that are prohibited from shari'ah. The charity collected by Yayasan Nurul Hayat Surabaya comes from Surabaya residents and other regions, some donors come to submit their own funds to the Surabaya Branch of Nurul Hayat Foundation, some are asked to be picked up, and some are transferred through various banks including Bank Niaga, BII Syariah, Bank BNI Syariah, Syariah Mandiri, BCA, and Bank Muamalat.

There are three ways that are done, the most funds collected are funds that are directly picked up and come by themselves with a percentage of 60%, picked up (the foundation picks up the party who will collect the zakat funds in the foundation. While those who give zakat will come directly directly to the foundation). While the funds that go through the bank are only about 10% -15%, and the rest are funds from the Surabaya branch of Nurul Hayat Foundation, namely polyclinics, boutiques and shops.

Foundation Nurul Hayat Foundation is a social institution that applies sharia principles, but for its financial statements it still has not applied Islamic accounting because the accountants still do not understand it, as stated by participants regarding the introduction of Islamic accounting that is not yet understood. Accounting should be made to facilitate the users of financial statements and readers, even if it is a layman, because actually accounting is humanism that is able to neutralize humans, as revealed by (Triyuwono, 2010). Likewise with Islamic accounting that must be able to present financial statements transparently as a form of the realization of the mandate of a community fund management organization.

In the annual report in 2016 Nurul Hayat received donations amounting to Rp. 68,080,887,043, the distribution of donations to Mustahik (those who were entitled to receive the zakat we paid) was Rp. 67,355,622,798 (99%). This means that Nurul Hayat Foundation in 2016 succeeded independently where employee salaries were met from the profit of the business unit (not taking zakat, infaq and alms). In Figure 2 above, Nurul Hayat's financial report was recorded in the form of a diagram in January 2017. Unlike usual, which is dominated by zakat, at the beginning of the year the acquisition of ZIS funds was dominated by infaq. The Nurul Hayat Foundation accountability report is carried out through magazine publishing both in the form of *hardcopy* and presented on the website.

The financial statements made must be based on Islamic accounting principles, namely justice, truth and responsibility. The special principle in shari'ah accounting is the fast reporting, made by experts, firm, clear, and normative, has comprehensive information which can be addressed to all parties by being done in detail and thorough and not manipulated (Umah, 2011). Of all that will be used as a mandate, the aim is to maintain justice and truth, meaning that the principle emphasizes accountability so that no one involved is harmed by the trust given.

According to Nasrullah (2014) zakat accounting in accordance with PSAK No.109 aims to regulate the recognition, measurement, presentation and disclosure of zakat transactions, infaq, shodaqoh. Because recognition refers to the principle that governs when the transaction of revenue (revenue), expense (profit), profit (loss) and loss (loss) is recorded. Measurement also plays an important role in financial statements, namely the attributes used in measurement, this measurement aspect is almost no different from conventional accounting, because all attributes that will be used as references must consider the elements *relevant, reliability, understandability, and comparability*.

For the presentation of sharia financial statements in accordance with PSAK No. 109, it is still not widely known because the regulation was recently made by the Financial Accounting Standards Board. Financial reports at the Nurul Hayat Foundation still have not provided financial statements in accordance with PSAK 109, because the accountants are still not familiar with PSAK 109. However, it would be better if the Nurul Hayat Foundation could apply the form of sharia financial statements in accordance with PSAK 109, namely, Balance Sheet, Earnings Report loss, cash flow statement, equity report, report on source and use of zakat funds, report on sources and use of policy funds, and notes to financial statements.

The characteristics of Yayasan Nurul Hayat Surabaya are organizations that have a mandate. Because what is mandated is the part recommended by the religion of Islam, the management is also according to the religion of Islam. Identification like this is important to set the accounting objectives of zakat so that the objectives are in line with the goals of the organization. Nurul Hayat Foundation periodically publishes financial reports to account for organizational performance during the period (Velayutham, 2014). Like most organizations, the report will be examined by an independent examiner to test the validity of the report while building and enhancing public trust. The Nurul Hayat Foundation Surabaya is a sharia organization that is in accordance with Islamic sharia which must be accounted for not merely worldly. Sharia opinion is important because it will show that the organization has carried out its mu'amalah activities in accordance with Islamic sharia which is one manifestation of organizational responsibility to Allah SWT.

ZIS Revenue Results in LAZ Nurul Hayat January-June 2016 seen from the total amount of Rp2,054,276,616 is very significant because at that time it coincided with the month of Ramadan which certainly many people want to do good deeds by doing alms, infaq and zakat. This was utilized by Nurul Hayat to increase ZIS fund revenues and utilize the ZIS funds as best as possible in accordance with the products owned by Nurul Hayat. Nurul Hayat has the application "ZakatKita" where the user of the application system "ZakatKita" for zakat payments in each month has an increase which if presented at 3%, it is positive even though it cannot be said to increase maximally, because it shows an increase in its use, and more and more people are using this application and more and more are understanding it.

From the presentation of ZIS Laz Nurul Hayat's income for 4 months after the online application system of zakat payment in Laz Nurul Hayat, it can be seen that his opinion experienced a total increase both in the ZakatKita application and in the amount of income based on the table above shows there is an increase in users of the application system, especially in terms of payment of zakat. The conclusion that the online application system has a positive impact in the form of increasing ZIS income, in general and the increase in zakat included in the category of ZakatKita online system in Laz Nurul Hayat, and the increase in application users, this has an impact on Laz Nurul Hayat who is growing and known by the public in general.

From the explanation above, the online application is only provided for ZIS fund collection. There is no application that can be used to access information where the funds are distributed. If only by providing zakat payment applications online can increase the growth of ZIS funds by 4.6%, what if the application is equipped with information on who our zakat recipients are, and we can choose the mustahik freely, even we can interact with the mustahik, it is not impossible, public trust will increase, which in turn will increase the volume of zakat receipts, so that social welfare will be realized.

This study also provides a view to optimizing the ZIS fund Education Scholarship Program by providing a recommendation system for recording (accounting) mustahik through online applications. Related recommendations given by researchers aim to make accountability practices better add zakat sources and funding reports (on PSAK 109 Accounting for Zakat, Infaq / Alms) at Yayasan Nurul Hayat Surabaya. Amil includes eight groups of ashnaf who are entitled to receive zakat funds. Although Amil has the right to receive zakat funds, it is better if the zakat funds received by Amil are distributed entirely for the benefit of the ummah and da'wah. Bring up additional information in the Financial Report,

responsible for the flow of funds used for scholarships that cannot afford (consisting of information reports; student profiles, parents' profiles, and school profiles). For the online zakat payment system also requires socialization to people who do not understand the technology, and the need for security to secure the online zakat payment system.

CONCLUSION

Researchers conclude that trust in accountability practices carried out by Yayasan Nurul Hayat has fulfilled the principles of sharia which consist of benefit, universalism, balance and contain the values of transparency needed by the community. This can be seen from the financial statements of the Nurul Hayat Foundation made to be easily understood by many people and also presented transparently, able to balance the understanding of the community from various groups, backgrounds and levels of education. What is manifested in the practice of Accountability based on Islamic Shari'ah has brought the consequence that the humanitarian aspect of the accounting of zakat and infaq, namely matters related to the implementation of moral principles of God's ethics and law, such as virtue, truth, cannot be separated from the needs humans towards the values of accountability. The implication is that accountability practices on zakat, infaq, and alms (ZIS) accounting are able to stimulate the behavior of individuals around them to become individuals who are always doing transformation. Then the researcher found the online zakat payment system "*Zakat Kita*" where the management of ZIS Nurul Hayat developed because this online system made it easier for muzakki, donors to do zakat, infaq and alms wherever they were and whenever they wanted to.

The implication of this online zakat payment system is also a new breakthrough from the deepest potential of zakat payment and this has a good impact on the development of Nurul Hayat's ZIS Management. This online zakat payment system also regrets the development of technology at the moment, all of which are based on an easy and fast online. The limitation of this research is that not all zakat institutions are able to apply thoroughly what is revealed and recommended by researchers. At least the normative and simple accountability practices can be generalized.

REFERENCES

1. Al-Khater, K., & Naser, K. (2003). Users' Perceptions of Corporate Social Responsibility And Accountability: Evidence From An Emerging Economy. *Managerial Auditing Journal*, 18(6/7), 538-548.
2. Arli, D., Grace, A., Palmer, J., & Pham, C. (2017). Investigating The Direct And Indirect Effects Of Corporate Hypocrisy And Perceived Corporate Reputation On Consumers' Attitudes Toward The Company. *Journal of Retailing And Consumer Services*, 37, 139-145.
3. Dianto, AM (2014). The Role of Baitul Maal Hidayatullah National Zakat Institution in Improving the Mustahiq Welfare of Tulungagung Regency. *An-ratio: Economic Sharia Journal*, 1(1), 138-160.
4. Harianto, S. (2016). Zakat Accounting On Income Critical Study Based On Government Regulation (Case Study In Aceh Province Of Indonesia). *International Journal Of Business, Accounting And Management*, 1(3), 47-52.
5. Htay, SNN, & Salman, S. (2014). Proposed Best Practices Of Financial Information Disclosure For Alms Institutions: A Case Study Of Malaysia. *World Applied Science Journal*, 30(37), 288-294.
6. Masruki, R., & Shafii, Z. (2013). The Development of Waqf Accounting In Enhancing Accountability. *Middle-East Journal Of Scientific Research*, 13(13), 1-6.
7. Nasrullah, N. (2014). The Influence of Human Resources Competence and Application of Accounting Standards for Zakat, Infaq and Alms (Psak No. 109) on the Quality of Financial Statements.

8. Saad, RAJ, Aziz, NMA, & Sawandi, N. (2014). Islamic Accountability Framework In The Zakat Funds Management. *Procedia-Social And Behavioral Sciences*, 164, 508-515.
9. Harahap, Sofyan Syafri, *Islamic Accounting*, Jakarta: Bumi Aksara, 2004, p. 143
10. Triyuwono, I., & As' Udi, M. (2001). *Sharia Accounting: Formulating Profit Concepts in the Context of Zakat Metaphors*: Salemba Empat Publishers.
11. Umah, UK (2011). Application of Zakat Accounting at Amil Zakat Institutions (Study at LAZ DPU DT Semarang Branch). *Value Added | Economic and Business Magazine*, 7(2).
12. Velayutham, S. (2014). "Conventional" Accounting vs. "Islamic" Accounting: The Debate Revisited. *Journal of Islamic Accounting And Business Research*, 5(2), 126-141.
13. Wagner, T., Lutz, RJ, & Weitz, BA (2013). Corporate Hypocrisy: Overcoming The Threat of Inconsistent Corporate Social Responsibility Perceptions.
14. Wahab, NA, & Rahim Abdul Rahman, A. (2011). A Framework To Analyze The Efficiency And Governance Of Zakat Institutions. *Journal of Islamic Accounting And Business Research*, 2(1), 43-62.
15. Wan, LC, Poon, PS, & Yu, C. (2016). Consumer Reactions To Corporate Social Responsibility Brands: The Role Of Face Concern. *Journal of Consumer Marketing*, 33(1), 52-60.
16. Yaya, R. (2004). Would The Objectives And Characteristics Of Islamic Accounting For Islamic Business Organizations Meet The Islamic Socio-Economic Objectives? *Indonesian Journal of Accounting and Auditing*, 8(2).
17. Zain, M., Darus, F., Yusoff, H., Amran, A., Fauzi, H., Purwanto, Y., & Naim, D. (2014). Corporate Worship: An Islamic Perspective of Corporate Social Responsibility. *Middle-East Journal Of Scientific Research*, 22(2), 225-232.

DOI <https://doi.org/10.18551/rjoas.2018-11.22>

THE DYNAMICS OF POLITICAL MARKETING IN THE WINNING STRATEGY OF POLITICAL PARTIES IN INDONESIA

Triono*, PhD student

Political Studies, Faculty of Social and Political Sciences, Padjadjaran University, Indonesia

Kartini D.S., Sulaeman A.

Faculty of Social and Political Sciences, Padjadjaran University, Indonesia

*E-mail: triono.sr@gmail.com

ABSTRACT

The politic competition in the general election in the state that embraces the democracy political system like in Indonesia poses a challenge for political parties to do innovations and formulate strategies in order to political winning. The political winning strategy is performed as a part of political marketing and political campaign efforts to public. The objective of political marketing is that in order to the political programs and policies as parts of political party products can be accepted by public. The dynamics of political marketing development and political strategies make political parties make efforts to improve resources they have to be more maximum to run in the political works. There are many factors that make political parties survive in each political competition. Therefore, political marketing management as parts of political winning strategy efforts becomes important for political parties.

KEY WORDS

Political party, political marketing, democracy, general election.

Political strategy management is important for a political party in the political competition winning against other political parties, or directly by candidates of legislative members or candidates or regional heads who want power and influence from public. As a pillar of democracy system, the existence of political party becomes a distinctive magnet for academic study and public discussion. Political dynamics and political challenges continue to develop and demand political parties to perform innovations in formulating political winning strategies. This is because the formulation and execution of strategies can influence either success or failure of political strategy (Adrianus et.al, 2006: p. 196). The existence of political party is a must in the modern and democratic political life (Amal, 2007).

Therefore, the management of political winning strategy becomes important in the efforts to gain votes and political party position in every election contest. Effectiveness in empowering resources owned by a political party to be an indicator for either success or failure of designed and implemented political strategy processes. This is shown by public opinion that continue to build so that this shall be able to increase a candidate and political party popularities to be familiar for public as constituents (Chandrappa, 2014). Easton (1965: p.122-123) in his system theory states that political parties are one of regulators of demands for their mass.

According to Igor D. (2013: p.31), in developed countries, the implementation of marketing has been expanding beyond of business institutions. Marketing experts are very involved in competing to gain political power. The assumption is that the marketing concept can be run and provide benefits in political world. Nowadays, it can be said that anyone shall need marketing discipline. Political marketing offers a concept to politicians to be effectively able to make political products, political segmentations, political positioning, political communication, and the political marketing is a method and a concept of marketing application in the context of politics sciences.

The concept and model of political marketing is increasingly developing along with the demands of time and political situation. Some political marketing models are models by

Newman (1994); O’Cass (1996); J. Less-Marshment (2001); Schroeder (2003); Ormrod’s (2005); Nursal (2004); and Robinson (2005). Less-Marshment (2009: p.13), for example, divides orientation of political parties in their political marketing strategies into three; product oriented party (POP), sales oriented party (SOP), and market oriented party (MOP). As one of political marketing models, Less-Marshment states that the POP-SOP-MOP marketing political model as segmentation of political party is not absolutely able to apply fully in a political system embraced by a country, because of different geographical climate conditions and political systems in a country.

In the practice, the political marketing strategy is not always oriented to a final result where a political party gains high votes in a general election. However, it is rather to keep the constituent trust (voters) to stay voting a political party or a candidate nominated by a political party (Firmanzah, 2008). The role of political marketing is not limited to make voters for a particular political party or candidate in an election, but also to build cadre and constituent loyalties in the future.

The political winning strategy formulation to embrace public sympathy in each political constellation, as it is stated by J. Less-Marshment (2001: p.75), shall always be sought and formulated by a political party as a part of strategy in political winning. Nominating candidates and political programs that are reflected in the political policies become benchmark and assessment toward a political party performance. By political products offered by a political party to public, the public shall assess the quality and principle of making cause of a political party to public interests.

A political party winning strategy that is packed in the political marketing is more and more required to keep a political party sustainability in the future. It is proper that Schweiger & Adami (in Newman, 1999: p.83) suggests that current politics inclination is the evolution from prior politics, where the most capable political party to manage internal and external dynamics should relatively survive.

In the political marketing model by Less-Marshment (2009), the POP-SOP-MOP approach can be seen in the phases and stages how political products are built as efforts of political marketing strategy. Stages built with POP- SOP-MOP become the characteristics of existence of a political party in the different public segmentations and dimensions. In the SOP and POP models, the political party characteristics are shown by orientations of political party products that only focus to the political party itself. A political party with this kinds of models tends to refuse changes for its political products and does not see from the public perspective as part of its voters.

Since reformation era in 1998, the political development in Indonesia is far better in the democracy enforcement and freedom of political rights of citizens compared to political conditions in the previous era. This was indicated by the births of many political parties and they have been becoming contestants in Indonesia general election. In reformation era, there were 141 new political parties in Indonesia (Huesin, 2014: p.125). One of new parties born is reformation era was Justice Party (Partai Keadilan – PK). As a new comer, PK had provided different political nuance in the political party system in Indonesia. This party was born from movements of youth and campus activists (Rahmat, 2008: p.7).

In its journey, PK showed its identity as a party that developed democratization process in its internal of party. When looking at the history and platform of political party policy, PK had relative characteristics that were almost similar other similar parties in the world such as: *Adalet Ve Kalkinma Partisi* (AKP) in Turkey, FJP party in Egypt, *An Nahdhah* Party in Tunisia, PAS party in Malaysia, *Front Islamic du Salut* (FIS) party in Aljazair, Hamas party in Palestine, in other parties in other Middle East countries. This similarity could be seen from the political ideology source as the struggling spirit and movement of the politics.

Amir (2003) suggests that characteristics attributed to Islamic political parties are the use of Islamic symbols and Islamic basic of mass in their movements. Prosperous Justice Party (Partai keadilan Sejahtera – PKS), the next evolution of PK party, uses Islam as the party ideology by bringing values of Islamic missionary endeavor in its movement. The dynamics and events in internal of PKS party become interesting matters to study especially dynamics in life of political democracy in Indonesia. The existence and electability of PKS as

a political entity has really been tested with varying political issues and events. These political events are indeed parts of solidity of PKS cadres and the party sustainability in the politic stage in Indonesia.

Developing dynamics in internal of PKS party show solidity of internal of PKS party and autonomy of PKS cadres that become a system of solidarity in strengthening basic of party institution and its movements (Herdiansah, 2016). The PKS presence in the political stage in Indonesia that brings Islam as basic of party ideology becomes a new color in the Indonesia political development and becomes political market amongst youngsters.

The PKS cadre presence in the leadership of regional head becomes a proof that PKS has a position in public. The relationship with other political parties is also shown by PKS by cooperating in a political coalition in efforts of advancement of a region. PKS always has bargaining value in each moment of regional head election in Indonesia. This reality gives an illustration that there is an interesting matter from PKS in the party management and strategy of political marketing management in its internal of party. Polemics and political events afflicting PKS had been able to manage properly and this makes PKS to be more taken into account its credibility by other political parties.

In Lampung context, PKS has been presence since 1998 as a part of political entities in Lampung province. The PKS existence used to be having bargaining position in each political event in Lampung. It was recorded that from election 1999 to election 2014, the vote gains of PKS in Lampung increased. In the legislative election 2009, PKS in Lampung for Regional House of Representative level in Lampung province gained 302,835 voters with 7 chairs in regional parliament (Lampung Committee of General Election, 2017). The problem to study in this research was how did the PKS political marketing strategy in the efforts of winning legislative election 2009 in Lampung province and what factors were becoming obstacles in the political winning process.

METHODS OF RESEARCH

In the politics science study, according to Marsh and Stoker (2011: p.240), qualitative method plays a main role starting from individual to group researches in the formal politic stage, to public attitude and behavior such as behavior of voting. Therefore, data and arguments to build in this paper used qualitative study method, by collecting varying scientific reference sources from primary source by using interviews to research informants and secondary source by tracking back related writings such as journals, papers, mass media news concerning political marketing of political party.

Another objective in using qualitative design is to understand the analysis work frame based on the occurring reality concerning the political marketing essence of a political party in winning election. Cresswell (2010) and Howard Lune & Bruce L. Berg (1998) suggest that qualitative method is performed as a process where a researcher tries to build a holistic description upon observed problems or issues, so this shall require varying perspectives, and require identification on the factors involved in particular situations.

The researcher used data analysis technique containing of three paths of activities occurring in the same time; they were data reduction, data presentation and conclusion drawing or verification (Miles and Huberman, 1992: p.16-21). Data analysis was performed by using descriptive analysis by reviewing dynamics of political marketing strategy of PKS in Lampung in legislative election 2009 and factors becoming obstacles in the political winning process.

RESULTS AND DISCUSSION

Winning strategy is one of elements taking roles in determining and influencing political party success in the politics contest both in general election and regional head election performed by political parties. In this case the political party is demanded to do political planning and strategies to gain winning. Political winning strategy is performed as a part of political marketing process and political campaign to public. The objective is in order

to the programs and political policies as political products of a political party can be accepted by public.

Based findings in the field, the researcher suggests that as efforts in the PKS winning strategy in general election and regional head election, the social network development that is developed by PKS can be classified into 5 (five) models. First, education model of party cadres who are responsible for controlling and possessing mission to promote supporting organ for party from students, traders and academicians. In this model level, the researcher sees that PKS is success enough in getting big influences through educations in Islamic studies in campuses and group of Islamic studies to academicians and traders, and PKS struggling values can be delivered to public.

The second model, political recruitment from public in common with and objective that PKS can recruit potential cadres who are going to have public positions and who have high militancy in developing the party ideology. The researcher in this case sees that, as party cadres who had social networks in public, legislative candidates from PKS during general election 2009 both nationally and regionally in Lampung were dominantly occupied by internal cadres who their regeneration careers were proper to present to public as candidates of members of legislatures. The cadres as result of PKS cadre development had underwent long processes in their regeneration careers in internal of PKS, so that no wonder if the main strength of PKS lied on their militant cadre movements.

Third, social activity organization model by holding open activities for public, with an objective to build social networks with public so that public recognize and being convinced with the products informed by PKS.

Fourth, public imaging model by utilizing formal political channels that are supported by party regeneration system. This model is performed by using supporting media as a part of political campaign and education to public. In this pattern PKS makes efforts to disseminate images in better ways concerning campaign truth or responding negative issues about PKS.

Fifth, model of political communication through media networks. In this model PKS emphasizes the roles of media as political communication means and political strategy to public.

The party of democracy in general election 2009 became a political year with a high political competition, because numbers of political parties joining the legislative general election 2009 increased significantly compared to legislative general election 2014. In another side, referring to Hasto's (2016) statement, general election 2009 was an era for electoral parties, and this could be seen from the design of political party that was only becoming a means to mobilize votes to win the election by ways that emphasized political communication, imaging, and media strength support. According to Hasto, in this era, the party ideological characteristic was more becoming to cease and was transformed into a "catch-all party" characteristic.

Seeing the 44 political parties joining legislative general election 2009, it provided a description how tight the competition in the legislative general election 2009. Only political parties who were ready in terms of resources and political strategies in winning the election that succeeded to position their cadres in the legislative both nationally and regionally. Winning strategy becomes urgent and is required by each political party to survive in each general or regional head election event.

Another thing in general election 2009, it was an election by using proportional representative with an open list of candidates system to vote members of House of Representative, provincial Regional House of Representative, and district/municipal Regional House of Representative. Parliament chair won by each of political party reflected a proportion of total votes that each political party obtained. The mechanism of this system provided a big role for voters to determine their representatives that were going to have chairs in the House of Representative. The elected candidates were whose votes were the most. The voting for members of Regional Representative Board (DPD) was performed by a system of district with the most representative. District system applied in provincial level,

where each province would have 4 (four) representatives having chairs in the Regional Representative Board (DPD).

The political competition in legislative general election 2009 forced political parties to do political strategy scenarios that were able to gain public votes. This made both older and new political parties competed to gain votes. This competition amongst political parties brought up both healthy and unhealthy competitions such as propaganda wars by claiming their merits to public and giving pseudo political promises to public.

In legislative general election 2009, PKS gained 8,204,946 (7.88%) with 57 chairs in House of Representative of Republic of Indonesia. This votes gain increased numbers of chairs in parliament compared to result of legislative general election 2014 (45 chairs), however the votes gain decreased into 8,325,020 (7.34%) in legislative general election 2014. PKS in Lampung gained 7 chairs in Regional House of Representative in Lampung with 302,835 votes gain.

Many factors causing PKS votes gain in legislative general election 2009 did not meet target both nationally and regionally. Whereas, the PKS target in legislative general election 2009 was becoming one of three biggest national political parties with a target of 20 million voters. PKS political communication strategy was not the only determining variable for votes gain improvement in legislative general election 2009 if it was compared to previous general elections. However, the pattern of communication strategy implementation by PKS in legislative general election 2009 took role in determining PKS success in winning the election, because any political strategy should function as connecting bridge between objectives and political marketing of political party to obtained result. Winning strategy became a kind of political party contest of power in keeping and/or expanding network of mass of their voters.

Referring to notion of Schroeder (2009), the political strategy performed by PKS is a part of offensive and defensive strategy process in politic. This strategy is used in order to maintain the basic of voters in constituent region as well as a part of strategy to expand voter network to vote the political party. According to Firmansyah (2008), the fundamental problem for political parties is how to collect, manage, and use resources they own efficiently and effectively to support their political strategies. This becomes homework for political parties in Indonesia; how to proper formulate political strategies to be implemented in their political products.

Based on research result in the field, and by lying on political marketing theory by Less-Marshment (2009) concerning models of product oriented party (POP), sales oriented party (SOP), and market oriented party (MOP) as the base of analysis in this research, Less explains stages in POP-SOP-MOP model that are relatively similar: (1) product design stage, (2) communication stage, (3) campaign stage, (4) general election implementation stage, (5) handover stage, (6) market research stage, (7) adjustment stage, and (8) political promise implementation stage.

The political marketing of MOP model is more prominent in PKS characteristic as a political party that emphasizes political research in formulating political products and programs that become policies of PKS in Lampung. The political product design, political communication pattern, campaign strategy and implementation of political promises as stated by Less-Marshment (2009) in political marketing stages by PKS in Lampung are built based on political research performed internally by PKS in Lampung. This political research became a political umbrella for PKS in formulating its political strategies in winning legislative general election 2009.

In the researcher's perspective, the political marketing model of Less-Marshment (2009) can be added with political evaluation stage in the political marketing process. The political evaluation is analysis and assessment processes performed by a political party to effectiveness of political strategy that is used in obtaining its political objectives. The political evaluation becomes important as a political party stage in evaluating political party policy and program that are related to public interests (the constituent). In addition, the political evaluation becomes important in the organization improvement process of the political party. In this case, a classification about the position of political marketing strategy from political

parties in Indonesia may be made. The main objective is to find out the orientations of political parties in implementing their visions, missions, and strategies for political winning.

Factors becoming obstacles in the political winning process of PKS in Lampung in legislative general election 2009 include: minimum political financial capital, exclusive stigma that is attributed to PKS, and public pragmatic and apathetic conditions toward political parties. Public often judge that PKS is different amongst other groups with exclusive movements that PKS brings up by its cadres, where internal solidity is not followed by solidity with social and public. This does not make public interest immediately take role in each activity conducted by PKS.

CONCLUSION

The PKS existence in Lampung shows cadres' independences from both national and regional figures. The political marketing strategy with models of product oriented party (POP), sales oriented party (SOP), and market oriented party (MOP) by PKS in Lampung in its efforts to win the legislative general election 2009 was performed with strategies of political imaging, political figures, permanent campaign, local politic culture, social networks, mass media, and public services. MOP model mostly dominated the characteristic of political marketing performed by PKS in Lampung, because in formulating its political product and policy, PKS in Lampung always relied on political research result from internal and external of PKS.

Unachieved national votes target in the legislative general election 2009 was caused by come factors and obstacles the PKS faced. However, the political dynamics and formulation of political marketing performed by PKS in Lampung showed that political party management that was built by PKS had run properly. Taglines of "clean, concern, professional" as PKS political products were able to make cadre militancy of PKS in Lampung to possess stimulants and strength in driving political party machine as efforts in political winning strategy.

REFERENCES

1. Amal, Ichlasul. (2007). *Teori-teori Mutahir Partai Politik*. Yogyakarta: PT Tiara Wacana.
2. Amir, Zainal Abidin. (2003). *Peta Politik Islam Pasca Soeharto*. Jakarta: LP3ES.
3. Andrianus, Toni Pito dkk., (2006). *Mengenal Teori-Teori Politik dari Sistem Politik sampai Korupsi*. Bandung: Penerbit Nusantara.
4. Chandrappa, K. (2014). *The Influence of the Media in Politics-Campaigns and Elections*. 3 (12), 2310–2312.
5. Creswell, John W. (2010). *Research Design: Qualitative, Quantitave, Quantitative and Mixed Methods Approaches*, London: Sage Publication.
6. Dirgantara, Igor. (2013). *Strategi Political Marketing*. dalam <https://igordirgantara.wordpress.com/2013/06/05/3620/> [5/1/16]
7. Easton, David. (1965). *A Framework for Political Analysis*. Toronto: The Prentice Hall of Canada.
8. Firmanzah. (2008). *Mengelola Partai Politik; Komunikasi dan Positioning Ideologi Politik di Era Demokrasi*. Jakarta: Yayasan Obor Indonesia.
9. Herdiansah, Ari Ganjar. (2016). *Rasionalitas PKS; Berdemokrasi ala Tarbiyah*. Bandung: Unpad Press.
10. Husein, Harun. (2014). *Pemilu Indonesia: Fakta, Angka, Analisis, dan Studi Banding*. Jakarta: Perludem.
11. Kristiyanto, Hasto. (2016). *Dinamika Koalisi Partai Politik di Tingkat Parlemen*. Bahan Kuliah Umum Pascasarjana Prodi Ilmu Politik FISIP Universitas Padjadjaran. Bandung, 15 Februari 2016.
12. Lees-Marshment, Jennifer. (2001). *Political Marketing and British Political Parties: The Party's Just Begun*. Manchester: Manchester University Press.

13. Lees-Marshment, Jennifer. (2009). *Political Marketing: Principles and Applications*. London: Routledge.
14. Lees-Marshment, Jennifer. (2009). *Political Marketing and the 2008 New Zealand Election: A Comparative Perspective*. *Australian Journal of Political Science*. 44 (3) pp. 457-475.
15. Lees-Marshment, Jennifer, et.al. (2010). *Global Political Marketing*. Routledge 2 Park Square, Milton Park, Abingdon, Oxon, OX14 4RN.
16. Lune, Howard & Berg, Bruce L. (1998). *Qualitative Research Methods for the Social Sciences*. England: Pearson.
17. Marsh, David., dan Gerry Stoker. (2011). *Teori dan Metode dalam Ilmu Politik*. Bandung: Nusa Media.
18. Miles. M. B. & Huberman, A. M. (1984). *Qualitative Data Analysis, A Sourcebook of New Methods*. London, New Delhi: Sage Publications, Beverly Hills.
19. Newman, Bruce., I. (1999). *Handbook of Political Marketing*. California: Sage Publication.
20. Nursal, Adman. (2004). *Political Marketing: Strategi Memenangkan Pemilu Sebuah Pendekatan Baru Kampanye Pemilihan DPR, DPD, Presiden*. Jakarta: PT. Gramedia Pustaka Utama.
21. O'cass, Aron. (1996). *Political Marketing and the Marketing Concept*. *European Journal of Marketing*. Vol. 30 No.10/11, pp 37.
22. Rahmat, M. Imdadun. (2008). *Ideologi Politik PKS; Dari Masjid Kampus ke Gedung Parlemen*. Yogyakarta: LKiS.
23. Schroeder, Roger G. (2003). 2nd Edition. *Operations Management: Contemporary Concepts and Cases*. McGraw-Hill International Edition.
24. Schroeder, Peter. (2010). *Strategi Politik*. Jakarta: Friedrich-Naumann-Stiftung Fue die Freiheit.
25. Ware, Alan. (1995). *Political Parties and Party System*. New York: Oxford University Press Inc.

DOI <https://doi.org/10.18551/rjoas.2018-11.23>

PROFIT SHIFTING DETERMINANTS AND TAX HAVEN UTILIZATION: EVIDENCE FROM INDONESIA

Lambok Randy Suqih*, Jasman Jasman

Faculty of Economic and Business, IKPIA Perbanas, Jakarta, Indonesia

*E-mail: r.s.lambok.sitompul@gmail.com

ORCID: 0000-0002-9563-7682

ABSTRACT

Tax avoidance arrangement predominantly refers to multi-region schemes that fall under the grey area using a profit shifting scheme between high tax and negligible tax jurisdictions considered as tax havens. Multinational firms retain the incentive to enlarge their after-tax profits by implementing profit shifting from subsidiaries incorporated in high tax jurisdictions to subsidiaries in tax havens. The schemes to shift revenue including a higher proportion of debt to finance investments in high tax jurisdictions (thereby increasing deductible interest payments) and manipulation of transfer prices in intrafirm transactions. Tax havens are multiple jurisdictions characterized by negligible or zero to low single digits income taxes. Moreover, tax havens deploy a degree confidentiality of financial and taxation information. The effects of tax haven utilization recently have start raising significant tax compliance and procedural fairness issues. This research provides empirical evidence of multinationality, transfer pricing aggressiveness, thin capitalization, intangible assets and size which represent the key indicators of profit shifting and tax haven utilization. Based on a sample of 85 listed public firms in Indonesia over the 2012–2016 period, we find that multinationality, transfer pricing aggressiveness, and intangible assets have positive effects on tax haven utilization and they are statistically significant. Meanwhile, our calculation results obtain thin capitalization and size have non-significant correlations with tax haven utilization.

KEY WORDS

Profit shifting, multinationality, transfer pricing, thin capitalization, tax havens.

Interdependence between countries followed by the rapid increase of trade and economic relations especially in the field of capital has led to a development of a new order in the global economy, namely the emergence of global economic unification with the trend toward regionalization and globalization. Globalization is described as an ongoing process of economic interdependence among the countries in the world with a feature of the rapid growth of financial transactions and international trade, especially among transnational firms, the wave of foreign direct investment which has broad support from transnational firms, the emergence of global markets, and the dissemination of technology and ideas as a result of the rapid expansion of transportation and communication systems across the world. (Singh, 2008).

Foreign Direct Investment (FDI) is a form of foreign investment which involves in improving the welfare of host country because of the benefits associated with new innovations, new technologies, managerial techniques, skills development, capital raising, employment creation, and industrial sector development at host country (Wadhwa, 2011). Eclectic Theory, one of the most extensive and comprehensive FDI theories developed by Dunning (1997), suggests that multinational firms impose FDI on host country is due to three motives, namely infrastructure procured information seeking, efficiency seeking proxied by exchange rates and macroeconomic stability as measured by inflation, and market seeking proxied by the size of the domestic market and the degree of economic openness. From several previous studies, FDI flows are broadly influenced by the behavior of multinational firms to gain comparative advantage.

The primary objective of a firm establishment is to increase shareholder wealth (Sharfman, 2013). Efforts to maximize the welfare of shareholders can be done by tax

planning that allows the taxpayer minimize the burden of tax payable through a scheme that is not contrary to the tax regulations (Darussalam, 2009). Tax planning schemes are mostly done by firms and the business world is a form of tax avoidance that is considered legal and is not considered to be contrary to moral in public view because it does not violate the provisions of law and legislation (Back, 2013). From this definition, it is described that tax evasion is a scheme in order to obtain benefits and benefits related to taxation by utilizing affiliated firms in tax haven country and weakness in the existing taxation system and regulation.

Along with the large amount of foreign investment coming into Indonesia, government revenues from taxes from multinational firms should be high. Aryanti (2016) on Liputan6.com noted Director General of Taxes had revealed that 2000 multinational firms operating in Indonesia do not pay the Income Tax Article 25 and Article 29 for 10 years for reasons of loss. The tax avoidance practices undertaken by these firms are carried out by transfer pricing scheme from Indonesia to another country.

The Director of Dissemination, Services and Public Relations of the Directorate General of Taxes stated that the 2000 firms indicated to be taxing because the reason for the loss was caused by 3 things. First, the firm is an affiliated firm whose parent firm is overseas so it is prone to occur transfer pricing process. There is a difference in tariff between Indonesia and partner countries so that they sell cheaply and buy raw materials at high prices. This difference in selling price and purchase price triggered the firm in Indonesia to suffer losses, but the overseas firms had profits. Second, thousands of multinational firms are losing money because many of them get tax incentive facilities such as tax holiday and tax allowance when applying for permission to the Investment Coordinating Board (Badan Koordinasi Penanaman Modal). Firms often increase the cost of purchasing capital goods. At a time when tax incentives have been exhausted the cost of purchasing high capital goods will result in high depreciation costs, so the burden and losses incurred by these firms are also higher. Third, the firm is often renamed in order to recover the tax incentives and re-recognize losses like the previous mode.

From economic and business perspective, the establishment of subsidiaries by multinational firms is to increase the competitive advantage of a firm. By using related parties, a multinational firm can expand the market in order to increase profits, find raw materials not obtainable in the country of origin, minimize production costs by finding cheap labor or minimize the cost of transporting raw materials and distribution costs of production in order to maximize the profit order can transfer losses incurred in the firm to other regions. Based on the facts described above, the problem that arises is a related party should work to enhance the competitive advantage of a firm while improving the welfare of the recipient country (Kogut, 1983), but in fact, a related party is often used to exercise tax avoidance mechanisms (Merks, et al., 2007).

UK Parliament (2013) denotes tax avoidance arrangement predominantly refer to multi-region schemes that fall under the grey area between acceptable tax avoidance and unacceptable tax avoidance using a profit shifting scheme between high tax and negligible tax jurisdictions considered as tax havens. Multinational firms retain the incentive to enlarge their after-tax profits by implementing profit shifting from subsidiaries incorporated in high tax jurisdictions to subsidiaries in tax havens. Schemes to shift revenue including a higher proportion of debt to finance investments in high tax jurisdictions (thereby increasing deductible interest payments) and manipulation of transfer prices in intrafirm transactions (Grubert & Mutti, 1991). The OECD, the G-20 and worldwide tax authorities have seriously scrutinized tax havens regarding to tax avoidance issue (Gravelle, 2013). Tax havens are multiple jurisdictions characterized by negligible or zero to low single digits income taxes. Moreover, tax havens also deploy a degree confidentiality of financial and taxation information through administrative practices or laws which prevent the exchange dan transparency of information (Wilson, 2009). Significantly, in terms of accounting earnings, debt location, investment allocation, and tax revenues tax havens play a vital role. Tax havens take place for particular arrangements of financing (e.g., assets protection and hedge funds) and businesses which considered to be driving force of the cost of capital and perform

as important offshore financial centres which facilitate the stream of capital between jurisdictions (Hanlon & Heitzman, 2010). In fact, many treasury operations in tax havens are exercised by multinational firms in order to accommodate the intragroup stream of capital without obstructions due to strict regulations and enforcement in accordance with capital management requirements and information stream (Dyrenge & Lindsey, 2009; Gravelle, 2013).

Klassen & Laplante (2012) state multinational firms are technically capable to exercise profit shifting arrangements through the intentional intragroup transfer prices, preferential cost allocation, and tax motivated debt arrangements between variably taxed jurisdictions. Multinational firms have the opportunities of financial, regulatory and taxation arbitrage which are affected by courses of the shifting of debt and income in various tax jurisdictions. In particular, setting the prices of goods and services can obtain profit shifting which resulting in greater income to low-tax jurisdictions. They also mention that the preferential debt sourcing may create thinly capitalized structures in jurisdictions with high tax rates which resulting in greater tax deductions, such as loan fees and interest expenses, for the whole corporate as a group.

This research provides empirical evidence of multinationality, transfer pricing aggressiveness, thin capitalization, intangible assets and size which represent the key indicators of profit shifting by listed public firms in Indonesia. Also, this research is aim to encourage the Indonesian government to formulate regulations on the requirement for multinational firms in Indonesia to provide appropriate and reliable information on commercial nature of intragroup transactions in financial statements and tax documents. Last, this research could be potentially applied in other tax avoidance studies by developing the measurement of profit shifting determinants. This paper is consecutively organized into following order: introduction, literature reviews, research method, empirical results and conclusion.

LITERATURE REVIEW

The European Commission in its recommendation dated 6th December 2012, concerning aggressive tax planning, states that aggressive tax planning technically takes advantage of loopholes of tax system in a jurisdiction or between two or more tax systems for the intention of tax liability deduction, for example double nontaxation where firms abuse double-tax treaty networks which results in income not being taxed both in the state of residence and source or double deductions which result in loss deduction both in the state of residence and source. The OECD (2013) concludes in BEPS Report that some multinational firms have practiced tax avoidance and become more aggressive over time. The effects recently have start raising significant tax compliance and procedural fairness issues.

The existing studies provide evidence on how aggressively U.S multinational firms utilize profit shifting schemes through entities in variably taxed jurisdictions. The average global effective tax rates of U.S. multinational firms operating a subsidiary in a lax or non-existent tax laws jurisdiction is around 1.5 % points lower than firms without tax haven incorporated operations and result in the reduction of corporate income tax by USD64 billion for the profitable corporations operating in tax havens during 1995–2007 period. The results underscore that U.S. multinational firms possess the incentives to sufficiently exercise tax motivated profit shifting and employ tax rate differentials between U.S. and the tax havens (Klassen & Laplante, 2012; Dyrenge & Lindsey, 2009).

The existing research mentions that U.S. global firms possess opportunities to implement tax avoidance schemes. They found that the firms' effective income tax rate represents that aggressive strategies of profit shifting rely on tax havens and hybrid operations in variably taxed jurisdictions (Dyrenge et al., 2008). Rego (2003) also reports that U.S. global firms with are more successful in practicing tax avoidance arrangements than firms operating only in U.S. In addition, Hanlon, Mills and Slemrod (2005) report that the levels of tax noncompliance by U.S. foreign controlled subsidiaries are more than double than domestic-controlled firms. Assuming that multinational firms implement effective tax

planning strategy among their entities, there is a tendency that firms with overseas subsidiaries are more likely to practice tax avoidance. Considering the research literatures, the hypothesis is proposed as follows:

H1: Firms with multinational characteristics are likely to utilize tax haven.

The term transfer pricing actually has a neutral concept. This term is used to distinguish intragroup transaction price from market price as if purchased from an unrelated third party (Wündisch, 2003). Basically, the effort to maximize profit is a natural thing considering that generally the main goal of a firm establishment is to generate profits as much as possible for shareholders. Viewing from the perspective of management accounting, the profit maximization of integrated multinational firms is achievable through aggressive and abusive transfer prices manipulation of products or services. This policy will increase profits in subsidiaries located in the jurisdictions with lower tax rate (Horngern, 2012). The existence of different tax rates in each country will lead to maximum after tax earnings of the corporations as a whole by declaring high returns in jurisdictions with low tax rates (Bernard & Weiner, 1990).

Tyrrall and Atkinson (1999) argued that globalization causes transfer pricing to be one of the most complex and significant taxation issues in the business world (Jarallah & Kanazaki, 2011). A survey conducted by Ernst & Young (2013) shows that tax-risk management is a top priority for multinational firms, caused by the increasing focus of tax authorities on transfer rates through checks and regulations. According to the survey, transfer prices have become one of the main causes of disputes between multinationals and tax authorities and Indonesia is on the list of the top five countries that impose sanctions on multinationals on transfer pricing.

According to Liebman and De Boeck (1988), prices imposed on multinational firms' transactions do not reflect a reasonable price and are often very different from the price to be charged if the transaction is made with a non-related party with the firm. Based on the description, the hypothesis is proposed as follows:

H2: Firms with aggressive transfer pricing characteristic are more likely to utilize tax haven.

Based on the theory of capital structure presented by Miller and Modigliani (1963), debt can be used to increase the value of the firm, because there are tax incentives received by the firm through the ability of interest expense to reduce taxable income. The condition that a firm uses more debt than capital as its funding source is called the practice of thin capitalization (OECD, 2012). The practice of thin capitalization can serve as one of tax avoidance arrangements (Lietz, 2014).

The definition of thin capitalization by OECD (2012) refers to a situation where firms are financed by higher debt levels compared to capital. This understanding is also in line with the definition of thin capitalization contained in the writings of Taylor and Richardson (2013) and Taylor, Tower and Van der Zahn (2010). Firms that apply this practice are also called highly-leveraged or highly-g geared. The firm's strategy of obtaining capital has a noteworthy impact on the level of profit statements for tax purposes. The tax law allows for interest expenses already paid or which are still in the form of interest payable, as a deductible expense, when the measurement of fiscal profit is made. The higher the level of debt in the firm, the higher the interest expense to be paid. This results in lower fiscal profit (OECD, 2012).

Multinational firms often restructure their funding policies to maximize this profit. Not only can they construct a combination of debt and capital that results in tax efficiency in the source country, they can also influence the tax treatments imposed by the lender. For example, a firm may regulate the situation in which a lender may earn interest income in a tax jurisdiction that does not impose tax on interest income, or only impose a low tariff (OECD, 2012). Based on the description, the hypothesis is proposed as follows:

H3: Thinly capitalized firms are more likely to utilize tax haven.

The major problem regarding intragroup transfer of intangibles (i.e., patents, know-how, or scientific works) is that the intangible assets are very firm specific. This characteristic creates challenges for tax administrations to value the intangible assets at arm's length

principles and tax-planning opportunities for multinational firms by shifting profits to jurisdictions with lower tax rates. (Grubert and Mutti, 2007; Gravelle, 2010). U.S. Treasury Department (2007) asserts that the difficulties in determining the transactions involving intangible assets transfer and valuing arm's length prices and the variability in the interpretation of transfer pricing assessments result valuable intangible assets have a significant transfer risk in the form of transfer pricing aggressiveness. Intangible asset is a value-driver for multinational firms and highly mobile so it can easily be shifted (Grubert, 2003). Transfer pricing aggressiveness can be simultaneously obtained by the corporations in variably-taxed jurisdictions because the unavailability of mature markets and subjective valuation of intangibles (Dyrenge et al., 2008). Considering the research literatures, the hypothesis is proposed as follows:

H4: Firms with greater investments in intangible assets are more likely to utilize tax haven.

Large size firms can rely on their tax planning schemes to achieve the competitive advantage over small size firms by using their resources to intentionally deduct their tax liabilities (Rego, 2003). Furthermore, Pittman & Fortin (2004) also mention larger firms with their capabilities can successfully reach economies of scale to obtain earnings and to expand or borrow capital at a lower cost than smaller firms. The firm size issues the capacity of profit shifting by utilizing tax havens. Richardson and Lanis (2013) with political cost theory show that firm size has a positive association with aggressive tax avoidance because large size firms have political power and superior economic relative over small size firms and they can accordingly distribute their tax liabilities. For instance, the case of manipulation by the Asian Agri Group was committed in 2002 to 2006 by 16 subsidiaries in Indonesia and 5 affiliated firms in tax havens is an evidence of aggressive tax avoidance behavior conducted by a large company. According to the investigation conducted by the Indonesian Directorate General of Taxes, the total loss to the country came to Rp 1.26 trillion (Dharmasaputra, 2014). Based on the description, the hypothesis is proposed as follows:

H5: Large size firms are more likely to utilize tax haven.

Cash flow from operations (CFO), net operating loss carryforwards (NOL), return on assets (ROA), the market-to-book ratio (MKTBK), industry sector (INDSEC) effects and year (YEAR) effects are incorporated as control variables.

We calculate CFO in the regression to indicate how a firm is likely to perform to meet its future obligations, including payroll, taxes and debts (Dechow, Kothari, & Watts, 1998). CFO possesses a positive effect on tax avoidance and it is significant (Kim, Li, & Zhang, 2011). Hanlon (2005) mentions that book-tax differences as disclosed in the financial statements provide the earnings persistence which is also determined by the components of cash flow contained in the current earnings. The earnings persistence has implications for the assessment of future earnings of a firm. We calculate cash flows from operations per sum of assets to measure CFO.

H6: Firms with greater CFO are more likely to utilize tax haven.

Firms can utilize net operating losses carryforward to the future year's profits as part of corporate tax planning activities to deduct tax liability. For multinational firms the losses can be transferred among group members located in various tax jurisdictions to be effectively used, this includes the earnings offset derived from financial arrangements (Dyrenge et al., 2008). NOL is equal to 1 if a firm has a NOL balance in its financial statements, and 0 otherwise.

H7: Firms with greater NOL are more likely to utilize tax haven.

ROA is often used accounting measure of performance in financial research because it represents the ability of firms to generate profits from its total assets (Rowe & Morrow, 1999; Peng & Luo, 2000). Blouin and Larcker (2012) identify that ROA has a positive and significant association with tax avoidance. The availability of resources encourages profitable firms to establish and rely on entities primarily as offshore financial centers (Kim and Li, 2014). The operating performance and profitability in the regression are controlled by ROA. We calculate profit before tax per sum of assets to measure ROA.

H8: Firms with greater ROA are more likely to utilize tax haven.

MKTBK determines stock valuation and how the market views a firm's value. This variable is incorporated as a control for firm's growth in the regression model. The potential of incentives to establish tax haven entities describe that the operational and / or tax environments affecting high investment opportunities or growth firms are complex (Chen et al. 2010) and could affect the flow of capital and capital costs (Kim & Li, 2014). We calculate market value of equity per book value of equity to measure MKTBK.

H9: Firms with greater MKTBK are more likely to utilize tax haven.

INDSEC is equal to 1 in conformity with firm's type of business on Jakarta Stock Industrial Classification (Jasica) codes. This variable is included as a control of profit shifting fluctuation across various industry sectors in the regression model (Rego, 2003). In the regression model the variance in tax haven activities during the sample year 2012-2016 is controlled by YEAR.

METHODS OF RESEARCH

The sample consists of 85 listed public firms in Indonesia for the 2012-2016 period. We excluded financial firms, insurance firms, firms with no overseas subsidiaries, firms listed in the Indonesia Stock Exchange (IDX) after 2012 and firms not fully listed in 2012-2016 period. The financial and insurance firms were eliminated from the sample due to significant differences in the accounting standards and constraints. We collected the sample data from the financial statements publicly available on Indonesia Stock Exchange website.

In accordance with Richardson & Taylor's research (2015), the dependent variable is identified by THAV. We used three alternatives of tax haven utilization based on existing researches to obtain the robustness of the result. The first variable to indicate tax haven utilization is THAV1 in accordance with the research by Akamah, Hope, and Thomas (2014). THAV1 is equal to 1 if the firm has at least a subsidiary in the OECD (2006) tax haven list, and 0 otherwise. The second variable is THAV2 by reference to the study conducted by Desai et al. (2006). THAV2 is equal to 1 if a firm uses special purpose financing or insurance at least a subsidiary in the OECD (2006) tax haven list for treasury purposes, and 0 otherwise. The third variable is THAV3 by reference to the study by Desai & Dharmapala, (2009). THAV3 is a continuous variable and we calculate sum of subsidiaries in the OECD (2006) tax haven list per sum of subsidiaries to obtain the variable.

The independent variables consist of multinationality (MULTY), transfer pricing (TPRICE), thin capitalization (TCAP), intangible assets (INTANG) and firm size (SIZE). We calculate the sum of overseas subsidiaries per the sum of subsidiaries to obtain MULTY. TPRICE were hand-collected from the disclosures of related party transactions in financial statements in order to indicate the aggressiveness of transfer pricing. TPRICE is equal to 1 if the transactions with related parties are non-arm's length, and 0 otherwise. TCAP is equal to 1 if a firm's DER exceeds 1.5 and the net interest expense exceeds 50% of cash flow, and 0 otherwise. We calculate the sum of intangibles per the sum of assets to obtain INTANG. The firm size in this study refers to Hanlon (2005)'s research, where size is the natural logarithm of total assets.

Cash flow from operations (CFO), net operating loss carryforwards (NOL), return on assets (ROA), the market-to-book ratio (MKTBK), industry sector (INDSEC) effects and year (YEAR) effects are incorporated as control variables in the regression model.

The following formula describes the linear relationship:

$$THAV_{it} = \alpha_{it} + \beta_1 MULTY_{it} + \beta_2 TPRICE_{it} + \beta_3 TCAP_{it} + \beta_4 INTANG_{it} + \beta_5 SIZE_{it} + \beta_6 CFO_{it} + \beta_7 NOL_{it} + \beta_8 ROA_{it} + \beta_9 MKTBK_{it} + \beta_{10-16} INDSEC_{it} + \beta_{17-22} YEAR_{it} + \epsilon_{it}$$

Where: i = firms 1–85; t = financial years 2012-2016; THAV = tax haven indicator (THAV1–THAV3); MULTY = sum of overseas subsidiaries per sum of subsidiaries; TPRICE = a dummy variable, equal to 1 if the transactions with related parties are non-arm's length and 0 otherwise; TCAP = a dummy variable, equal to 1 if a firm's DER exceeds 1.5 and net interest expense exceeds 50% of cash flow, and 0 otherwise; INTANG = intangible assets per total

assets; SIZE = the natural logarithm of total assets; CFO = cash flow from operations per total assets; NOL = a dummy variable, equal to 1 if a firm has net operating loss carryforwards, and 0 otherwise; ROA = pre-tax income per total assets; MKTBK = market value of equity per book value of equity; INDSEC = a dummy variable, equal to 1 in conformity with the firm's type of business on Jakarta Stock Industrial Classification (Jasica) codes, and 0 otherwise; YEAR = a dummy variable, equal to 1 if the year falls within the specific year category, and 0 otherwise; and ε = the error term.

RESULTS AND DISCUSSION

Descriptive Statistics. Table 1 shows the descriptive statistics for the dependent variables (THAV1, THAV2 and THAV3), independent variables (MULTI, TPRICE, TCAP and INTANG, SIZE) and control variables (CFO, NOL, ROA and MKTBK). The dependent variable THAV1 has a mean of 0.746, showing that approximately 74,6% of the sample firms have at least one subsidiary incorporated in the OECD (2006) tax haven list. Meanwhile, THAV2 has a mean of 0.129, indicating that around 12,9% of the firms in the sample use a special purpose financing or insurance subsidiary incorporated in a tax haven for treasury purposes. For the independent variables, MULTI, TPRICE, TCAP, INTANG and SIZE have means of 0.507, 0.795, 0.353, 0.032, and 28.862 respectively. The mean, median and standard deviation of SIZE show the range of the natural logarithm is various from minimum 20.531 to maximum 32.207 with standard deviation 1.749. The range of the control variables are also presented in Table 1.

Table 1 – Descriptive Statistics

Variable	Mean	Median	Standard Deviation	Minimum	Maximum
THAV 1	0,746	1	0,436	0	1
THAV2	0,129	0	0,336	0	1
THAV 3	0,201	0,148	0,214	0	1
MULTY	0,507	0,455	0,320	0	1
TPRICE	0,795	1	0,404	0	1
TCAP	0,353	0	0,478	0	1
INTANG	0,032	0	0,107	0	0,736
SIZE	28,862	28,795	1,749	20,531	32,207
CFO	0,100	0,079	0,175	-0,291	1,630
NOL	0,148	0	0,356	0	1
ROA	0,069	0,044	0,164	-1,084	0,885
MKTBK	3,060	1,134	7,255	-2,939	62,931

Correlation Results. The Pearson correlation results in Table 2 indicates that THAV1 has significant correlations with MULTY and INTANG ($p < 0.01$ or better) and the control variables ROA and MKTBK ($p < 0.01$ or better). Meanwhile, THAV2 has significant correlations with the independent variables TCAP, INTANG ($p < 0.01$ or better) and SIZE ($p < 0.05$) and the control variables ROA and MKTBK ($p < 0.05$). THAV3 has significant correlations with the independent variables MULTY ($p < 0.10$ or better) and the control variables MKTBK ($p < 0.05$ or better). In fact, ROA and CFO have the highest correlation coefficient of 0.443 ($p < 0.01$). Finally, the variance inflation factors (VIFs) is calculated to estimate the regression models to test for signs of multi-collinearity between the explanatory variables. The overall correlation test results show that there are no correlations among independent variables that are higher than 0.90. This can be seen from the results of the correlation test shown in Table 2. Thus, it can be concluded that there is no multicollinearity among independent variables. In addition to the correlation matrix, this study examines the presence of multicollinearity by using Tolerance and Variance Inflation Factor (VIF) values. Figures commonly used to indicate the presence of multicollinearity are Tolerance < 0.10 or $VIF > 10$. The results indicate none of the tolerances below 0.10 and VIF exceeded 10 for all explanatory variables. Therefore, there was no multicollinearity problem in this study.

Table 2 – Correlation Matrix

Variables	THAV 1	THAV 2	THAV 3	MULTY	TPRICE	TCAP	INTANG	SIZE	CFO	NOL	ROA	MKTBK
THAV 1	1											
THAV 2	.225***	1										
THAV 3	.551***	.086**	1									
MULTY	.156***	-.082*	.392***	1								
TPRICE	.106**	.109**	0,013	0,042	1							
TCAP	-0,010	.199***	-0,071	-.246***	0,045	1						
INTANG	.132***	.118***	0,069	-.088**	.113**	-0,004	1					
SIZE	0,015	.090**	-0,040	-0,033	.130***	-0,018	.156***	1				
CFO	-0,042	-0,053	0,019	.222***	.102**	-.128***	0,047	0,016	1			
NOL	-0,015	-0,003	-0,023	-.102**	0,064	0,080	0,048	0,071	-0,041	1		
ROA	-.149***	-.090**	0,008	.287***	0,037	-.222***	-.119***	0,048	.443***	-.130***	1	
MKTBK	-.143***	-.097**	.083**	.210***	.126***	.150***	-0,006	0,037	.371***	-.119***	.541***	1

Notes: ***Significant at 1%; **Significant at 5%; *Significant at 10%.

Regression Results. The result of Overall Fit of Model shows the value of Chi-Square is 106.078 with the degree of freedom (df) of 20 and the value of sig. of 0,000. In other words, there appear to be significant associations between independent variables (MULTY, TPRICE, TCAP, INTANG, SIZE), control variables (CFO, NOL, ROA, MKTBK, INDSEC1-6, and Year) and THAV1 or at least one of MULTY, TPRICE, TCAP, INTANG, SIZE and control variables that affects THAV1. Hosmer and Lemeshow's test shows the value of Sig. is 0.655. (> Sig .05) so it can be assumed the model can predict the observation value. In addition, overall percentage shows that the model accuracy rate is 77.6%.

The Variables in the Equation Table in table 3 presents the regression result with logistic regression model as follows:

$$\text{Logit} \left[\frac{\pi(x)}{1-\pi(x)} \right] = -19,737 + 2,552 \text{MULTY} + 0,718 \text{TPRICE} + 0,040 \text{TCAP} + 12,472 \text{INTANG} - 0,031 \text{SIZE} + 0,101 \text{CFO} - 0,256 \text{NOL} - 4,099 \text{ROA} - 0,034 \text{MKTBK} - 17,856 \text{INDSEC1} - 18,202 \text{INDSEC2} - 18,582 \text{INDSEC3} - 19,713 \text{INDSEC4} - 18,752 \text{INDSEC5} - 18,305 \text{INDSEC7} - 18,981 \text{INDSEC9} - 0,080 \text{YEAR 2013} + 0,064 \text{YEAR 2014} - 0,058 \text{YEAR 2015} - 1,838 \text{YEAR 2016}$$

From the formula above, the following conclusions are drawn:

- The increase in the ratio of overseas subsidiaries to total number of subsidiaries by 1 point leads the increase of tax haven utilization of 2.552 times;
- The firm that disclosures the transactions with related party is non-arm's length has an odds ratio to utilize tax haven of 0.718 times;
- The increase in debt to equity ratio by 1 point leads to the increase of tax haven utilization of 0.040 times;
- The increase in the ratio of total intangible assets to total assets by 1 point leads to the increase of tax haven utilization of 12.472 times;
- The increase in the firm size by 1 point leads to utilize a tax haven incorporated firm of 0.031 times;
- The other variables remained constant.

The summary of the overall regression results is presented in Table 4. The summary presents the estimated value of the coefficient and the probability value of individual parameters from the regression test (Test Statistic t), as well as the significant values of the THAV1 – THAV2 from Logistic Regression Test. The coefficients for INDSEC and YEAR are not presented to be more concise. In order to test the research hypothesis, the dependent variable of THAV1 has been chosen as the main model. Meanwhile, the dependent variable THAV2 through THAV3 is the alternative measurements to test the robustness of the research main model.

Table 3 – Variables in the Equation

		Variables in the Equation					95% C.I.for EXP(B)		
		B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
Step 1 ^a	MULTY	2,552	,510	25,082	1	,000	12,832	4,727	34,837
	TPRICE	,718	,328	4,803	1	,028	2,051	1,079	3,899
	TCAP	,040	,309	,017	1	,898	1,041	,568	1,907
	INTANG	12,472	5,859	4,531	1	,033	260955,348	2,686	2,536E+10
	SIZE	-,031	,085	,136	1	,712	,969	,821	1,144
	CFO	,101	,891	,013	1	,910	1,106	,193	6,338
	NOL	-,256	,387	,437	1	,508	,774	,363	1,653
	ROA	-4,099	1,502	7,450	1	,006	,017	,001	,315
	MKTBK	-,034	,024	2,009	1	,156	,966	,922	1,013
	INDSEC1	-17,856	17299,292	,000	1	,999	,000	,000	.
	INDSEC2	-18,202	17299,292	,000	1	,999	,000	,000	.
	INDSEC3	-18,582	17299,292	,000	1	,999	,000	,000	.
	INDSEC4	-19,713	17299,292	,000	1	,999	,000	,000	.
	INDSEC5	-18,752	17299,292	,000	1	,999	,000	,000	.
	INDSEC7	-18,305	17299,292	,000	1	,999	,000	,000	.
	INDSEC9	-18,981	17299,292	,000	1	,999	,000	,000	.
	Th2013	-,080	,422	,036	1	,850	,923	,404	2,110
	Th2014	,064	,427	,023	1	,880	1,066	,462	2,464
	Th2015	-,058	,434	,018	1	,894	,944	,403	2,208
	Th2016	-1,838	,402	20,878	1	,000	,159	,072	,350
	Constant	19,737	17299,292	,000	1	,999	372924359,6		

a. Variable(s) entered on step 1: MULTY, TPRICE, TCAP, INTANG, SIZE, CFO, NOL, ROA, MKTBK, INDSEC1, INDSEC2, INDSEC3, INDSEC4, INDSEC5, INDSEC7, INDSEC9, Th2013, Th2014, Th2015, Th2016.

Table 4 – Empirical Results

Variables	Predicted Sign	THAV 1	THAV 2	THAV 3
MULTY	+	2,552***	-0,522	0,562498***
TPRICE	+	0,718**	0,987*	-0,305711**
TCAP	+	0,040	0,978***	0,129225**
INTANG	+	12,472**	2,778*	-0,176825
SIZE	+	-0,031	0,121	0,051167
CFO	+	0,101	0,731	0,348001
NOL	+	-0,256	-0,643	-0,042507
ROA	+	-4,099***	-0,020	-0,232763**
MKTBK	?	-0,034	-0,279**	-0,004150
INDSEC	?	Yes	yes	yes
YEAR	?	Yes	yes	yes

Notes: ***Significant at 1%; **Significant at 5%; *Significant at 10%.

MULTY: Multinationality; TPRICE: Transfer Pricing Aggressiveness; TCAP: Thin Capitalization; INTANG: Intangible Assets; SIZE: Firm size; CFO: Cash flow from operating activity; NOL: net operating loss carry forwards; ROA: Return on Assets; MKTBK: market-to-book ratio; INDSEC: industry sector effects; YEAR: year effects.

H1: Firms with multinational characteristics are likely to utilize tax haven.

The influence of MULTY on THAV1 is indicated by the coefficient 2.552, means that MULTY has a positive effect on THAV1. The calculation result obtained a significance value 0.000 ($p < 0.01$), it means the positive effect is statistically significant. Thus, it can be concluded that H1 is supported. Indonesian multinational firms may have an opportunity to gain a greater benefit from the value of a deductible interest expense and take advantage of different tax rates between taxation jurisdictions. Indonesian firms also may benefit when receiving loans from subsidiaries located in jurisdictions that impose a lower corporate tax rate. This result is in line with research results conducted by Taylor & Richardson (2013) and Hanlon, Mills, & Slemrod (2007) which mention that firms conducting large scale of multinational operations are more likely to utilize a tax haven incorporated firm.

H2: Firms with aggressive transfer pricing characteristic are more likely to utilize tax haven.

The regression correlation for TPRICE shows a positive sign indicated by the coefficient 0.718 and a significance value 0.028 ($p < 0.05$). It means TPRICE has a positive

effect on THAV1 and it is statistically significant. Thus, H2 is supported. Transfer pricing could be market based or alternatively nonmarket based. In the case of nonmarket based pricing, goods or services are either transferred above or below the prevailing market prices. It is predicated on the aggressive tax avoidance scheme. This is the instance when the concern for fairness and transparency arises. Transfer pricing schemes are designed to determine the amount of profit or loss that is attributable to the intragroup economic activities. Regrettably, these arrangements for all intents and purposes are artificial without economic substance, principally aimed to avoid payment of taxes. Such aggressive tax activities have been strongly criticised for causing the tax base erosion which tends to prevent the host country to mobilize domestic resources for development (Sundaram, 2012). It is reported by the Chinese government that about 60% of company losses recorded by the country were false, thereby triggering a tax loss of over 30 billion Yuen (US\$4.39 billion) per annum (Chang & Jin, 2016).

H3: Thinly capitalized firms are more likely to utilize tax haven.

The influence of TCAP on THAV1 is indicated by the coefficient 0.040, means that TCAP has a positive effect on THAV1. But, the calculation result obtained a significance value 0.898 ($p < 0.05$), it means the positive effect is statistically non-significant. Thus, H3 is rejected. Based on the theory of capital structure presented by Modigliani & Miller (1963) debt can be used to increase the value of the company, because there are tax incentives received by the company through the ability of interest expense to reduce taxable income. In this case, thinly capitalized firms have an opportunity to exercise tax avoidance schemes (Lietz, 2013). Ogundaja & Onakoya (2016) find that firms in developing countries are favourably financed by equity and do not use excessive debt. The regression result reflects the behaviour of firms in developing countries regarding capitalization. Besides, the Minister of Finance of Indonesia in October 1984 issued a decision Number 1002/KMK.04/1984 regulating the determination of deduction of interest expenses in income tax calculation which limited a debt-to-equity ratio (DER) of 3:1. Considering the investment climate in Indonesia, the implementation of the regulation was postponed through decision Number 254/KMK.04/1985 dated 8 March 1985. Thus, there was no provision of limitation on thin capitalization in Indonesia until 2016. The firms freely determined the proportion of debt to equity ratio. Finally, the Minister of Finance officially issued a regulation number PMK-169/PMK.010/2015 dated 9 September 2015 regulating the determination of comparative amount between firms' debt and equity in income tax calculation, which is effective since the fiscal year 2016 with debt to equity ratio level set as high as 4: 1.

H4: Firms with greater investments in intangible assets are more likely to utilize tax haven.

The influence of INTANG on THAV1 is indicated by the coefficient 12.472, means that INTANG has a positive effect on THAV1. The calculation result obtained a significance value 0.033 ($p < 0.05$), it means the positive effect is statistically significant. Therefore, H4 is supported. The existing studies conducted by Conover and Nichols (2000) and Treasury (2007) saying that the preferential locations of intangible assets in jurisdictions with high tax rate decrease the corporation income tax liability, and the increase in flow of intangible assets in the financial statements can be the indicator. This event may lead to the manipulation of transfer pricing. A tax haven incorporated subsidiary can acquire the rights of a valuable intangible property at a favourable price and engage with the operational subsidiaries in high-tax jurisdictions in a cost sharing agreement with a hybrid structure to facilitate the payment of royalties' benefits that are attributable to the assets. Thus, the deductible expense paid to tax haven will be eligible to zero or low tax rate (Mutti & Grubert, 2007).

For instance, in a 2012 U.S. Senate enquiry outlined the abuse of transfer-pricing involving Microsoft. Microsoft exercised a tax avoidance scheme by transferring significant rights of intellectual property to Ireland and Singapore which resulting payments amounted to \$US2.8 billion and \$US1.2 billion respectively. However, both subsidiaries still generated revenues of \$US9 billion and \$US3 billion from the transactions in a single year. In addition, Microsoft undertakes over 85% of research and development in U.S. (Levin 2012).

H5: Large size firms are more likely to utilize tax haven.

The regression correlation for SIZE shows a negative sign indicated by the coefficient -0.031 and a significance value 0.969 ($p < 0.05$). It means SIZE has a non-significant negative effect on THAV1. This result indicates that H5 is rejected. The empirical result illustrates that firm size does not affect tax haven utilization in Indonesia. Considering that aggressive tax avoidance behavior in Indonesia is generally carried out either passively or actively, for small size firms can either go through accounting fraud, tax management or by not paying and filing taxes which they are liable. While aggressive tax avoidance conducted by large firms tend to use a strategy that is still in the gray area, such as the practices of double deduction, double non-taxation, transfer pricing and treaty shopping. Researches conducted by Kim and Limpaphayom, (1998), Derashid et al. (2003), Rego (2003), and Hanlon (2005) show that firm size is not associated with aggressive tax avoidance.

CONCLUSION

This research is purposed to study and provide empirical evidence of multinationality, transfer pricing aggressiveness, thin capitalization, intangible assets and size which represent the indicators of profit shifting towards tax haven utilization by listed public firms in Indonesia. We find that multinationality, transfer pricing aggressiveness, and intangible assets have positive effects on tax haven utilization and they are statistically significant. Meanwhile, our calculation results obtain thin capitalization and size have non-significant correlations with tax haven utilization.

Further research is expected to use more extensive and significant proxies in studying tax haven utilization towards audit, intangible assets, transfer pricing aggressiveness and thin capitalization. Second, further research is expected to use data owned by the Indonesian Directorate General of Taxes. Third, future research is expected to study the determinants of tax haven utilization in other countries and contributes to improve anti-tax avoidance regulations which provide the guidelines on the determination of arm's length prices, documentations and other practical issues relevant to the transfer pricing transactions.

REFERENCES

1. Akamah, H., Hope, O.-K., & Thomas, W. B. (2015). Tax Havens and Disclosure Aggregation. Working Paper.
2. Armstrong, C. S., Blouin, J. L., Jagolinzer, A. D., & Larcker, D. F. (2015). Corporate Governance, Incentives, and Tax Avoidance. *Journal of Accounting and Economics*, 60(1), 1–17. <http://doi.org/10.1016/j.jacceco.2015.02.003>
3. Ariyanti, Fiki. (2016). "2000 Perusahaan Asing Gelapkan Pajak Selama 10 Tahun". *Liputan 6*. <http://bisnis.liputan6.com/read/2469089/2000-perusahaan-asing-gelapkan-pajak-selama-10-tahun>
4. Back, Foster, P. (2013). "Avoiding Tax May be Legal, but Can It Ever Be Ethical?". *The Guardian*. ISSN 0261-3077.
5. Baltagi, Badi H. (2005). *Econometric Analysis of Panel Data Third Edition*. England: John Wiley & Sons Ltd, The Atrium, Southern Gate
6. Bevan, A. A., & Estrin, S. (2004). The Determinants of Foreign Direct Investment Into European Transition Economies. *Journal of Comparative Economics*, 32(4), 775–787. <http://doi.org/10.1016/j.jce.2004.08.006>
7. Blouin, J., Huizinga, H., Laeven, L., & Nicodème, G. (2014). Thin Capitalization Rules and Multinational Firm Capital Structure. *Taxation Papers*, 42, 1-47. doi:10.2778./32784
8. Chen, S., X. Chen, Q. Cheng, and T. Shevlin. (2010). Are family firms more tax aggressive than nonfamily firms?. *Journal of Financial Economics*, 95 (1): 4161.
9. Coleman, N., & Bean, E. J. (2006). *Tax Haven Abuses: the Enablers, the Tools and Secrecy Minority & Majority Staff Report Permanent Subcommittee*. Office.
10. Desai, M., & Dharmapala, D. (2006). *Earnings management and corporate tax shelters*. Harvard University. <http://doi.org/http://dx.doi.org/10.2139/ssrn.884812>

11. Dharmapala, D., & Hines, J. R. (2009). Which countries become tax havens? *Journal of Public Economics*, 93(9–10), 1058–1068. <http://doi.org/10.1016/j.jpubeco.2009.07.005>
12. Dharmasaputra, M. (2014). *Key Witness: An Investigation of Indonesia's Largest Ever Tax Scandal*. Indonesia: PT Tempo Inti Merdeka Harian, Jakarta
13. Dunning, J. H., (1977). Trade, location of economic activity and the MNE: A search for an eclectic approach in Ohlin, B., Hesselborn, P. O. and Wijkman, P. J. (eds.) *The international allocation of economic activity*. England: Macmillan, London.
14. Dyreng, S. D., Hanlon, M., & Maydew, E. L. (2008). Long-Run Corporate Tax Avoidance. *The Accounting Review*, 83(1), 61–82. <http://doi.org/10.2308/accr.2008.83.1.61>
15. Dyreng, S. D., & Lindsey, B. P. (2009). Using Financial Accounting Data to Examine the Effect of Foreign Operations Located in Tax Havens and Other Countries on U.S. Multinational Firms' Tax rates. *Journal of Accounting Research*, 47(5), 1283–1316. <http://doi.org/10.1111/j.1475-679X.2009.00346.x>
16. Erickson, M., Hanlon, M., & Maydew, E. L. (2004). How Much Will Firms Pay For Earnings That Do Not Exist? Evidence of Taxes Paid on Allegedly Fraudulent Earnings. *Accounting Review*. <http://doi.org/10.2308/accr.2004.79.2.387>
17. Frank, M. M., Lynch, L. J., & Rego, S. O. (2009). Tax Reporting Aggressiveness and Its Relation to Aggressive Financial Reporting. In *Accounting Review* (Vol. 84, pp. 467–496). <http://doi.org/10.2308/accr.2009.84.2.467>
18. Gravelle, J. G. (2009). Tax Havens: International Tax Avoidance and Evasion. *National Tax Journal*, 62(4), 727–753. <http://doi.org/10.2307/41790645>
19. Gravelle, J. G. (2015). *Tax Havens: International Tax Avoidance and Evasion*. Congressional Research Service
20. Grubert, H., & Mutti, J. (1991). Taxes, Tariffs and Transfer Pricing in Multinational Corporate Decision Making. *The Review of Economics and Statistics*, 73(2), 285– 293. <http://doi.org/10.2307/2109519>
21. Gujarati, Damodar N. (2004). *Basic Econometrics* (4th edition). New York: McGraw-Hill Firms.
22. Harris, D., Morck, R., Slemrod, J., & Yeung, B. (1993). *Income Shifting in U.S. Multinational Corporations*. University of Chicago Press. <http://doi.org/10.3386/w3924>
23. Hodge, Margareth. (2013). *MPs Publish report on Google's tax avoidance*. Commitee of Public Account. UK Parliament.
24. Klassen, K. J., & Laplante, S. K. (2012). The Effect of Foreign Reinvestment and Financial Reporting Incentives on Cross-Jurisdictional Income Shifting. *Contemporary Accounting Research*, 29(3), 928–955. <http://doi.org/10.1111/j.1911-3846.2011.01136.x>
25. Kogut, Bruce. (1983). *Foreign Direct Investment as a Sequential Process, The Multinational Corporation in the 1980s*. MIT Press.
26. Maftuchan, AH, Wiko, Saputro. (2013). *Evaluasi Realisasi Penerimaan Pajak 2013: Berada Pada Titik Terendah Sejak 2011*. Prakarsa.
27. Merks, Paulus. (2007). "Categorizing International Tax Planing" dalam *Fundamental International Tax Planing*, Raffaele Russo (ed). IBFD. Hal 66-69.
28. Needham, C. (2013). *Library Briefing Corporate Tax Avoidance by Multinational Firms*. Library of the European Parliament, 1–5.
29. OECD. (2012). *Dealing Effectively with the Challenges of Transfer pricing*, Paris: OECD Publishing.
30. OECD. (2013). *Public Consultation: Draft Handbook On Transfer Pricing Risk Assessment*. Paris: OECD Publishing
31. OECD. (2013). *Public Consultation White Paper On Transfer pricing Documentation*. Paris: OECD Publishing
32. OECD. (2006). *The OECDs Project on Harmful Tax Practices: 2006 Update on Progress in Member Countries*. Washington DC: OECD.
33. OECD. (2009). *Countering Offshore Tax Evasion*. Washington DC: OECD.
34. Omar, N., & Zolkafliil, S. (2015). Profit Shifting and Earnings Management through Tax Haven Subsidiaries: An Exploratory Analysis of Multinational Firms. *Procedia Economics and Finance*, 28(April), 53–58. [http://doi.org/10.1016/S2212-5671\(15\)01081-3](http://doi.org/10.1016/S2212-5671(15)01081-3).

35. Rego, S. O. (2003). Tax-Avoidance Activities of U.S. Multinational Corporations. *Contemporary Accounting Research*, 20(4), 805–833. <http://doi.org/10.1506/VANN-B7UB-GMFA-9E6W>.
36. Richardson, G., & Taylor, G. (2015). Income Shifting Incentives and Tax Haven Utilization: Evidence from Multinational U.S. Firms. *International Journal of Accounting*, 50(4), 458–485. <http://doi.org/10.1016/j.intacc.2015.10.001>
37. Sharfman, B. S. (2013). Shareholder Wealth Maximization and Its Implementation Under Corporate Law. *Florida Law Review*, 66(1), 389–432.
38. Shevlin, T. (2007). The Future of Tax Research: From an Accounting Professor's Perspective. *The Journal of the American Taxation Association*, 29(2), 87–93. <http://doi.org/10.2308/jata.2007.29.2.87>
39. Singh, K. (2008). Taking It Private: The Global Consequences of Private Equity. *Corner House Briefing Paper*. 37, 1-26. <http://www.thecornerhouse.org.uk/>

DOI <https://doi.org/10.18551/rjoas.2018-11.24>

EMPOWERMENT PROGRAM THROUGH INCREASING CAPACITY OF ECONOMIC INSTITUTION IN MAGELANG REGENCY OF INDONESIA

Moordiani Roostian*

Master Program of Agribusiness, Faculty of Animal and Agricultural Sciences,
University of Diponegoro, Indonesia

Sumekar Wulan, Gayatri Siwi

Faculty of Animal and Agricultural Sciences, University of Diponegoro, Indonesia

*E-mail: rose_tean@yahoo.com

ABSTRACT

The poverty alleviation strategy through farmer's empowerment increases farmer's institutional capacity, for example, in Indonesia government put a lot of effort to transform a farmer's group (*Gabungan Kelompok Tani or gapoktan*) into *Kelembagaan Ekonomi Petani* (KEP) or farmer's economic institution. The objective of the research was to analyze the effect of KEP towards empowerment program among Indonesian farmers. Survey was used in this research. Path analysis was used to analyze the data. KEP had significantly affects into empowerment program. Based on the result, the effect of KEP still needs to be increased through the increasing of institutional capacity as well as more training need to be provided by government. The transforming of farmer's institution into KEP is needed to increase institution independency to become more business oriented. The supervision from government staff is needed, in order to improve farmer's welfare.

KEY WORDS

Farmer, empowerment, empowering farmer, strengthening economic institution.

Poverty alleviation is one of the priorities of national development, including the agricultural sector. Some of the problems faced by farmers include access to capital, technology, marketing and lack of support in farmer's institution (Nuswantara dan Pramonosidhi, 2014). One of the efforts to alleviate poverty can be done by empowering farmers through improve capacity of farmer institutions so that activities in a farmer group can be more effective and efficient. Empowerment strategies through farmer groups will have an impact on increasing their income (Desiana and Atik, 2017).

Farmer's empowerment is an effort to enable and to make farmers independent or help farmers to be able to help to solve their problem (Mardikanto, 2009). Empowering farmer can be done in several ways, such as institutional capacity in farmer group. Indonesian government supports transformation a farmers group or *Gapoktan* to become more independent in order to enhance institutional capacity. KEP is a farmer economic institution that it carrying out activities which is developed by, from and for farmers to improve economic scale and farming efficiency (Ministry of Agriculture, 2016).

Rural Agribusiness Development (*Pengembangan Usaha Agribisnis Pedesaan* or PUAP) is an Indonesian government program to facilitate capital assistance for farmers at village level which is giving donation through the farmers group association (*Gapoktan*) in the form of grant equal to Rp 100.000.000 (one hundred million rupiah). PUAP is a strategic program from the Ministry of Agriculture in order to reduce poverty and unemployment in rural areas (Junaedi, 2013). Capital strengthening is intended to develop agribusiness activities for *Gapoktan* according local resources and farmer's problem. However, KEP is faced with several problems, such as the weak management of organization and business, it has not yet been oriented on productive business and no legal force, low bargaining position and low accessibility to information, technology, financing and the market (Ministry of Agriculture, 2016).

Transformation of farmer group into KEP is needed to change farming orientation into business and increase economic scale and efficiency business along with improving bargaining position. Increased capacity of KEP was directed to form cooperatives or other business entities in accordance with the needs, culture and potential condition along with social economic of local people (Ministry of Agriculture, 2016).

This research was focused on KEP program and implementation of PUAP in Magelang Regency. The purpose of this research was to determine the effect of KEP on farmers empowerment in Magelang Regency. The benefits expected from this research were to provide recommendation on how to strengthening and developing institutional farmers into independent farmers economic institutions as well as providing information for the government in making policies related to the KEP and PUAP program hence it can give benefit to the national development.

METHODS OF RESEARCH

The research was done in Magelang Regency with considerations most of farmer groups in Magelang Regency were able to develop into KEP and Magelang Regency got an award for best KEP program in Central Java Province. There are 1.946 farmers got benefit from KEP program. Probability technique sampling was used to select the respondents. There were 195 respondents were selected in this research.

Independent variables from the effectiveness KEP were group objective achievement, group function and role, group innovativeness and group sustainability. The dependent variable are farmer's empowerment with capital access, information, and the farmer's income. Path analysis was used to analyze the data as well as to analyze the inherent causal relationship between some exogenous and endogenous variables, and to test the intervening variables (Haryono and Wardoyo, 2012).

RESULTS AND DISCUSSION

General Description of Location. Magelang Regency located in the border of Yogyakarta Province. It is located north of Temanggung Regency; east: part of Semarang Regency and Boyolali Regency, south of Purworejo Regency; west of Temanggung Regency and Wonosobo Regency. The total area of Magelang Regency is 1,085.73 km² and divided into 21 districts and 372 villages. 86,405 ha was used for agricultural land or 79.58% of the area, while 22,168 ha or 20.42% was used non-agricultural land. 36,855 ha was used for paddy field and the dry land is covering 49,550 ha for food crops, horticulture, plantations and forestry (BPS Magelang Regency, 2017).

There were 271 Gapoktan that have received PUAP funding since 2008. There were many activities developed by Gapoktan such as saving and loan. Moreover, there were 11 Gapoktan which transformed into cooperatives and have been registered by the government (BKPP Magelang Regency, 2016).

Characteristics of Respondents. One important element in agricultural development is farmers as human resources who participate in development program to improve their welfare (Suswono, 2014). Empowerment will succeed if there is participation from all community.

The number of male respondent were higher than female respondents, It is indicating that males were still dominant in farming activities, and have right to joining farmers institutions. Females or the house wives were involved in a number of activities, especially harvest, taking care of the children as well as the house and have a dominant role in decision making related with household accounting. The decision-making process between male and female is generally influenced by the dominance of involvement at each stage of the farming system. Male and normally the head of the household had an access and control over resources, including access and control over land resources which refers to the value of male and access to several sources of capital. (Hutajulu, 2015).

Respondents are officers and members of farmers group. According to Hariardi (2011) there are 3 types of members in the group, namely officers, active members and ordinary members or less active members. Farmers would check and observe what was the main goals of an organization, and that are the reason someone is being involved or not in group activities, if the group can support someone to get what they want and that needs are met.

Based on age, most respondents were in productive-age. It has a great potential to develop a farmer group into a more independent institution. According to Mardikanto (2009) age is related to the adoption of technological innovations. The older a person is, the longer he or she will adopt technological innovations and they only run a farm in a traditional way based on their habits.

Table 1 – Number and Percentage of Respondents Based on Respondent Characteristics

Characteristic	Criteria	Number (People)	%	Characteristic	Criteria	Number (People)	%
Gender	Male	106	54,4	Duration of membership	1 - 3 year (s)	68	34,9
	Female	89	45,6		4 - 6 years	72	36,9
Status in KEP	Officers	27	13,8		> 6 years	55	28,2
	Members	168	86,2	Type of Farming	Horticulture	113	57,95
Age	≤ 35	62	31,8		Horticulture – Livestock	26	13,33
	35 - 65	125	64,1		Crops	20	10,26
	≥ 65	8	4,1		Horticulture – Crops	19	9,74
Level of Education	Bachelor's Degree	20	10,3		Processed Agricultural Products	11	5,64
	Senior High School	76	39		Horticulture – Tobacco	4	2,05
	Junior High School	54	27,7	Tobacco	1	0,51	
	Elementary School	43	22,1	Fishery			
	No School	2	1				

Source: Primary Data 2017.

Based on the level of education, 50.8% of respondents had a 9-year basic education level or equivalent to a junior high school, while 49.2% had a high education (undergraduate). A level of education will influence his/her knowledge, as a factor forming individual behavior in the community (Syahyuti, 2011). Level of knowledge will influence decision making (Van den Ban, 1999). This will certainly affect the increase of farmers' income.

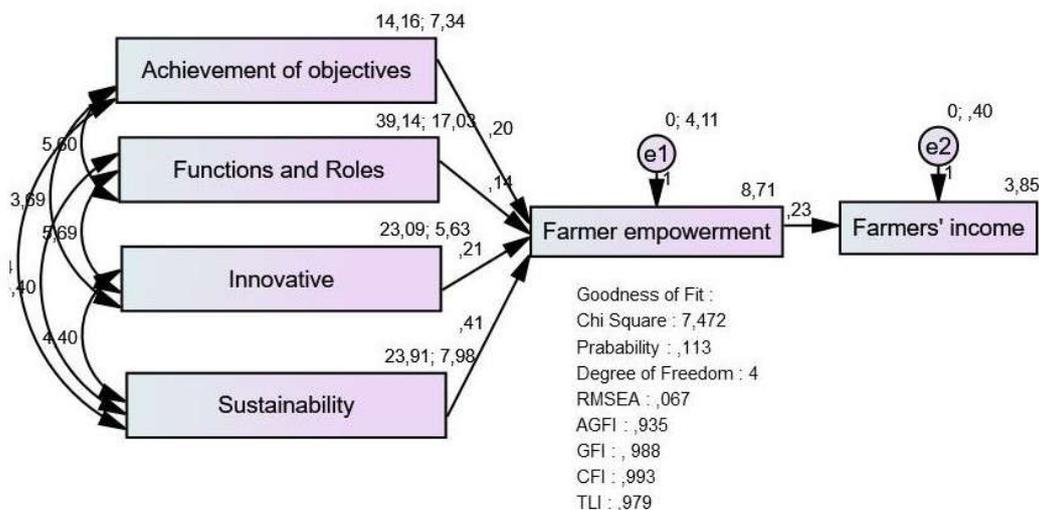


Figure 1 – Relationship between KEP Effect with Empowerment and Income of Farmers in Magelang Regency

The research location consisted of 7 districts located in the highlands of Magelang Regency. It shows 57.95% of respondents cultivated horticultural commodities including salak, various chili and vegetables. The respondent tries to cultivate a more profitable commodity so it can meet the needs of his/her family. According to Mardani et al (2017) farming activities have a purpose to increase productivity so that profits become higher.

Effect of Farmers Economy Institution. Based on the results of the path analysis, the exogenous variables are factors that influence the effect of Farmers Economy Institution (KEP). It is covering variables of the achievement group objectives, group roles and functions, group innovativeness. Group sustainability towards farmers' empowerment covering variables of access to capital and access to information. It is illustrated as follows:

The equation from Figure 1 about the relationship between KEP effect with empowerment and income of farmers in Magelang Regency is as follows:

$$Y = 0,20 X_1 + 0,14 X_2 + 0,21 X_3 + 0,41 X_4 + 4,11$$

The constant value of the equation is 4.11. It proved that the hypothesis is accepted where there is influence of the effectiveness of KEP on the farmers's empowerment in Magelang Regency.

Table 1 – Coefficient of Exogenous Variable towards Endogenous Variable

			Estimate	S.E.	C.R.	P	Lable
Empowerment	<---	Objective and Achievement	0,199	0,069	2,863	0,004	par_1
Empowerment	<---	Function and Role	0,141	0,046	3,061	0,002	par_2
Empowerment	<---	Innovativeness	0,212	0,09	2,346	0,019	par_3
Empowerment	<---	Sustainability	0,407	0,073	5,592	***	par_4
Income	<---	Empowerment	0,226	0,015	15,322	***	par_5

Source: Primary Data Analysis.

According to the results of path analysis, it shows that the effect of KEP (X variables) has a real positive effect towards farmer's empowerment (Y variables). The result shown that the value $p < 0.01$ and the regression coefficient value is positive. A positive effect is interpreted when every variable of institutional effect increases, then the empowerment of farmers' experiences will be increased.

The transformation a farmer group into KEP had been supported by Indonesian government in order to provide services and training, business development and enhance participation in the group. Group objectives that are clearly documented will make it easier for officers and members to understand each component need to be achieved. This will certainly affect the level of participation and trust of members towards the group. Purnomo et al (2016) stated that the overall involvement of the community in the empowerment program will foster ownership and responsibility for the programs. As well as improve community participation in development. Farmer participation supports the achievement of agricultural development programs (Aref F, 2011). Participation can be defined as a process in which all parties can be involved in all development initiatives. Participatory development is a process that improve engagement of the community in all substantial decisions relating to their lives (Syahyuti, 2014). The function and role of institution is the ability to manage information, human resources, capital and material resources, and it is concern several functions: acquisition, arrangement, maintenance, mobilization, and conflict management (Anantanyu et al, 2009). Moreover, the farmer has opportunities to exchange of information, provide training, sharing resources, and also can achieve economies scale of the member.

KEP in Magelang Regency has provided information to members, so members can easily obtain information about the requirements of membership, how to receive capital and the development of KEP business through working planning, business planning and the results of KEP accountability. Such information can be obtained through *gapoktan* ' officers, cooperative managers or fellow members. Interacation between members and officers will enhance good relationships as well as elicit participation of members within the cooperative.

Management of human resources referred to is the selection of officers and managers in the institution. The selection of managers has been in accordance with the rule of its organization. Members of the cooperative know the way and the process of selection of officers and manager. Cooperative managers are considered to be able to organize resources in organization. However, for the provision of capital or loan has not been fully met, because it was imposible to cover all member. The existence of KEP provides assistance for members in obtaining capital for their farm business. Members also have no difficulty in obtaining capital, from collateral, services and fast process.

This condition is in line with the results of Anantanyu's research (2011). The institution of farmers is considered as the role of mobilizing human resources, put the farmers as object of development program. However, the capital and material resources are still limited because of the availability of physical facilities, lack of human resources, lack of access in technology. It need collaboration to improve farmers' ability in farming system.

Group innovativeness is measured by the role and function of leadership within the institution; division of member roles; cooperative action among members; availability of funding sources (Anantanyu *et al*, 2009). The Chairman of KEP in Magelang Regency gives attention to the rights and obligations in accordance with the position and duties for each employee and member. The chairman is also able to give authority in accordance with their position. The head of farmer'group had responsibility improve farmer' opportunity to talk and had access in decision making in organization. *Gapoktan* can be developed into KEP with legal status in form of cooperative hence, it can be said that the role of the head of Gapokatan is important. Member's interest in the organization was indicated by the participation of members in every activities undertaken by KEP.

One of the requirements of the organization is leadership, improve participation of the members in decision making and organizational activities, organizational capacity to provide benefits and services to members. Leadership is one indicator in assessing organizational performance. Good organizational performance is when all parts of the organization work properly, effectively, and efficiently, to achieve the objective (Syahyuti, 2011). Member awareness, cohesiveness, trust, and cooperation among member of organization are indicators of group sustainability. Members of KEP have the obligation to pay membership fee. Each member of KEP has the right to access for the loan, while the obligation is to pay the interest.

Trust among member of KEP can be seen from transparent and accountable of financial report. Members told that KEP managers can help them to improve their capital through access to loan. Many Gapoktan in Magelang regency had ability to make network with some institutions especially on the process marketing system. The Farmer's group have better marketing capacity compared to individual marketing, so they can reduce operating costs and earn higher income (Yang and Zimin, 2012). According to Mutiara, *et al* (2012) one of the institutional development strategy is through the improvement of farmers financing management capability by applying the principle of accountability as part of transparent business management, enhancing the ability to develop innovative and productive business activities through the utilization of technology resources and information, and develop partnerships with various parties. Members told that the existence of KEP can be continued and sustain through KEP, members can easily access their capital. These things certainly increase the participation of members in KEP. The participation of farmers in the institution affects the effect of farmer institutions (Anantanyu, 2009). The higher the participation of farmers in groups, the higher the effect of farmer's institutions. Community participation is believed to strengthen the capacity of local institutions. With participation, the farmer group can obtain several benefits, such as: management skills, independence, trust, transparency, accountability, and access to resources (Anantanyu, 2009).

CONCLUSION

The effect of KEP has a positive effect on the empowerment activities in Magelang Regency. If the effect of KEP increases, then farmer's empowerment activities will be

increased. The effectiveness of KEP still needs to be improved to increase the empowerment activities and income of farmers through provide more trainings in the farmer' group. The transformation of farmer institutions, both *poktan* and *gapoktan* in Central Java into Farmers Economy Institution is needed to be increased as well as the independence of the farmer institutions. It need to improve the role of extension workers in improving the institutional capacity of farmers as well as to supervise the farmers in decision making to improve their farm size and improve the farmer' welfare.

REFERENCES

1. Anantanyu Sapja, Sumardjo, M. Slamet, dan P. Tjitropranoto. 2009. Factors Affecting Farmer Institutional Effectiveness (Case in Central Java Province). *Extension Journal* 5(1): 81 - 91.
2. Aref Farshid. 2011. Farmers' Participation In Agricultural Development: The Case Of Fars Province, Iran. *Indian Journal of Science and Technology* 4 (2): 155 – 158.
3. Desiana, N and Atik A. 2017. Improving Income through Farmers' Group Empowerment Strategy. *The Asian Journal of Technology Management* 10 (1): 41-47.
4. Haryono, S dan P. Wardoyo. 2012. *Structural Equation Modeling for Management Research Using AMOS 18.00. PT. Intermedia Personalia Utama. Bekasi.*
5. Ministry of Agriculture. 2016. *Guidelines for the Development and Development of Farmer Economic Institutions in 2016. Center for Agricultural Counseling of the Agricultural Human Resource Extension and Development Agency of the Ministry of Agriculture. Jakarta.*
6. Mardikanto, T. 2009. *Extension of Agricultural Development. Sebelas Maret University Press, Surakarta.*
7. Purnomo, WE, D. Wahyuni, W. Paramita. 2016. *The Village People Empowerment To Increase Social Welfare. Prosiding The Third International Conference on Law, Business and Governance (Icon-LBG 2016). Bandar Lampung University (UBL) Faculty of Law, Faculty of Economics and Faculty of Social Science. Page 45 – 49.*
8. Syahyuti. 2011. *Difficult Easy to Organize Farmers: Study of Theory and Practice of Sociology of Institutions and Organizations. IPB Press. Bogor.*
9. Yang, D and Zimin L. 2012. *Study On The Chinese Farmer Cooperative Economy Organizations And Agricultural Specialization. AGRIC. ECON. – CZECH, 58, 2012 (3): 135–146.*

DOI <https://doi.org/10.18551/rjoas.2018-11.25>

COMPANY SIZE, CORPORATE PERFORMANCE AND CORPORATE SOCIAL IRRESPONSIBILITY LEVEL: EVIDENCE FROM MANUFACTURING COMPANY IN INDONESIA

Wahyudi Disty Amelinda*, Setyawan Arif Nugroho

Master's Program of Accounting, Faculty of Economic and Business, University of Airlangga, Indonesia

*E-mail: distyamelinda@gmail.com

ORCID: 0000-0002-9169-2246

ABSTRACT

The company's main objective has changed in recent years. Company is not only trying to make a profit, but it is more trying to maintain the sustainability of its business and the environment around it through the act of Corporate Social Responsibility (CSR). Corporate Social Responsibility (CSI) is an idea that can not be separated with CSR activities. CSI and CSR run side by side because the company in its operation besides doing good is also required to avoid bad activities. The term of CSI is less familiar than CSR terms. The form of CSI can be actions such as discrimination, improper information to consumers, pricing strategies, earnings management, corruption and everything that can harm the company. Company size and company performance have been demonstrated by some studies discussing a relationship with CSR disclosure, but there has not been much research linking it with CSI levels mostly in developing countries. This research tries to prove the relationship between company size and company performance with CSI level in Indonesia, by taking the population of manufacturing companies listed on BEI in 2014-2016 involving 116 companies. From those companies, there are 20 negative news in 2014, 12 negative news in 2015, and 13 companies that get negative news in 2016. The method used in this study is quantitative with logistic regression analysis.

KEY WORDS

Corporate social, responsibility, irresponsibility, size, performance, profit.

Corporate Social Responsibility (CSR) has become a topic of discussion, and a research in recent years. Many researches and understanding are related to the concept of CSR, some researchers understand CSR as part of an additional contribution to the well-being of the inherent community of the company (Lin-Hi & Muller, 2013). It should be acknowledged that CSR activities conducted by the company can bring tremendous benefits to the environment and community. CSR in addition to the demands of the authorities then became one form of corporate philanthropy and also a part of corporate strategy to maintain relationships with stakeholders. Doing a lot of activities for the benefit of the planet and people, causes CSR synonymous with the idea that the company will do goodness for society. However, in addition to doing good things, the company has other responsibilities that is to avoid bad activities and avoid the actions of irresponsibility (Corporate Social Irresponsibility - CSI) (Lin-Hi & Muller, 2013).

CSI is an activity that can damage corporate image, corporate reputation (Amujo et al., 2012) and then it will have an impact on the financial crisis for management. CSI can be called as a driver of CSR activities (Jones, 2010). Why is that? Because if we look at CSI, we find that the company's actions are not in accordance with what should be, which then demanding this company to do good things (CSR) and avoid the bad ones. The form of CSI in the study of Popa & Santa (2014) is described as discrimination in the workplace, providing improper information to consumers, pricing strategies and other frauds in various forms that could harm the company. Previous studies linked CSI with CSR, CEO turnover, corporate performance, CEO morale as well as company image and reputation (Walker et al., 2016; Chiu, 2016; Amujo et al., 2012; Ormiston & Wong, 2013) where all these

researches take samples of companies in developed countries. From our observations, CSI research related on developing countries is not as much as done in developed countries, therefore researchers intend to conduct research on developing countries.

Accounting scandals since several years ago involving large corporations are a form of the narrowness of a rational understanding of economic concepts in management theory (Manning, 2012). The scandals of big companies involving Enron (2001), Lehman brother (2008) and VW (2015) show the company's inability to understand that profit is not the main company's purpose. What caused the company later to fall was that there was a tendency for immorality due to the privilege of being misused for personal gain. Therefore, ethics and cooperation are less emphasized, causing such actions to lead to Corporate Social Irresponsibility (CSI). To avoid any CSI other than the company itself, government regulation is also needed to reduce the risk of CSI. However, it can not be denied that the government's demand for CSR can also be the trigger of the company to do tricks or planning that led to the action of CSI (Jones, 2010).

The concept of CSI may not be so familiar when compared to the CSR concept and is rarely noticed, whereas corporate social responsibility is seen as coexisting with corporate social irresponsibility throughout the business world, since managers' decisions / actions are sometimes done without purpose between moral and immoral action (Popa & Salanta, 2014). CSI provides a theoretical platform to avoid ambiguity, unclear arbitrariness and CSR mysticism and deserves to be a serious research subject and demands more scientific attention (Tench, et al., 2012). The lack of CSI as a research object may be caused by its negative connotations. Even some parties have interpreted it as an action or behavior that is not responsible (Riera & Iborra, 2017).

Making developing countries as research objects has its own reasons. Developing countries have a different character compared with developed countries, where the country tends to be vulnerable to social and economic problems, whether it is corruption, environmental pollution and workers' rights due to the prevailing laws (Dissanayake et al., 2016). Unlike previous studies that have been conducted, this study seeks to analyze the relationship between company size and company performance with CSI levels in manufacturing firms in Indonesia in 2014-2016 period. The basic logic used is the greater the size of the company then the company will be more vulnerable to conduct violations both intentional and unintentional that led to the action of CSI. Based on that background we compiled research questions as follows:

- How is the relationship between firm size and CSI level in the company?
- What is the relationship between company performance and CSI level in the company?

This research tries to answer the research questions above and gives an idea of how the CSI level in developing countries and indirectly intended to know how high the level of transparency in developing countries, especially Indonesia.

This research is arranged by quantitative method with logistic regression analysis. In proving the hypothesis, we used logistic regression analysis so that the relationship between variables more easily explained. The population used is a manufacturing company listed in Indonesia Stock Exchange (ISE) in 2014-2016, numbering to 116 companies. The dependent variable in this study is the CSI level projected by the number of negative issues (news) obtained through google search engine and online newspaper, while the independent variable of this study is the size of the company is projected with ROA and the company's performance is projected to total assets owned by the company.

The results showed that there was no significant influence between firm size and financial performance. These results indicate that companies in Indonesia are not yet accustomed to disclose corporate social responsibility. This is interesting because companies that are floating on the Indonesian stock market are still reluctant to disclose their Corporate Social Irresponsibility. Though it could be that information will be able to influence the decision of stake holders.

This research is arranged in introduction, theory and hypotheses development, research method, result and conclusion.

Theory and Hypotheses Development. As the main objective of the company has changed to be more close to its environment, company has to maintain its relationship. Accordance to O'Donovan (2002) reffering to the legitimacy theory, for an organization to continue operating successfully, it must act in maner that society deems socially acceptable. The theory of legitimacy will provide a good explanation to the relationship between company and its stakeholder. The relationship between individual, society and organization can be seen as social contract. Larger companies engage in more activities than the smaller one, and thus have greater influence on society (Cowen et al., 1987). Therefore, the size of the company is closely related to the size of its responsibility and the size of the company can be assessed by using toal assets by transforming them into natural logarithms (Ghozali, 2006).

The theory of legitimacy explains that the greater the size of agencies or companies, then the influence of agencies or companies on society is greater. The impact of environmental performance of agencies or companies is also increasingly felt by the public due to the size of a large organization. In addition, public pressure on agencies or companies to publish environmental performance reports is also higher (Cowen et al., 1987). Large size organizations tend to prepare their accounting systems to increase the level of disclosure of environmental information to be more open than small size organizations so that the research hypothesis formula is: H1 = Company size is positively related to Corporate Social Irresponsibility (CSI).

The consensus of the negative impacts of poor economic conditions on corporate performance seem undeniable (Smith, 2010), the argument about the relationship between economic conditions and CSR has varied. At certain times the economic conditions affect CSR (Lee et al, 2013). The results of Walker's research, et al. (2016) finds CSR Levels when CSiR increases due to increased profitability and efficiency of the company. Given the company's performance is very influential on Corporate Social Irresponsibility, then prepared hypotheses is as follows: H2 = Company performance is positively related to Corporate Social Irresponsibility (CSI).

Conceptual Framework. From the background, the previously prepared theories and previous studies, the following conceptual framework is developed as the basis for answering the problem formulation.

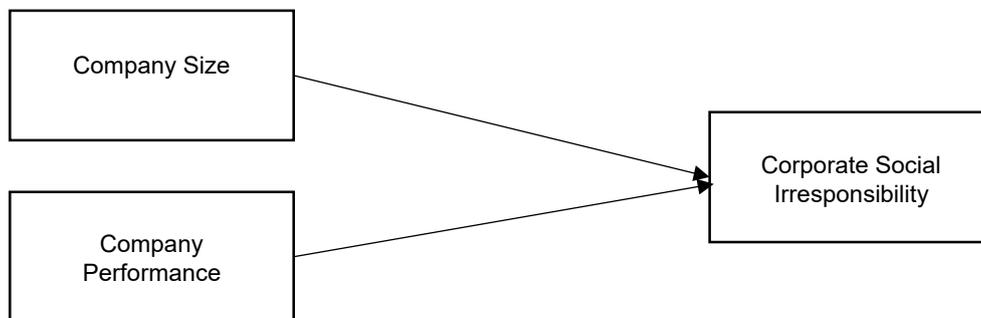


Figure 1 – Research Framework

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + e$$

Where: Y = Corporate Social Irresponsibility; α = Constanta; β1 - β2 = Regression Coefisien of Independent Variable; X1 = Company Size; X2 = Company Performance (financial); e = Standard Error.

METHODS OF RESEARCH

This research uses quantitative method with logistic regression analysis. Logistic regression is used because this study uses dummy variable "1" for companies affected by negative reporting and "0" for companies not affected by negative news.

The population in this research idea is listed manufacturing companies and submits financial report on Indonesia Stock Exchange within 2014-2016 period. Sources of data in this research idea uses secondary data, namely the company's annual report during the study period obtained from the data center of Faculty of Economics and Business Airlangga University Surabaya. Researchers uses two criteria in selecting a list of companies, namely companies whose financial statements ended December 31 and who received bad news in the mass media. Of the 116 companies in the manufacturing industry, there are 31 Companies that for 3 years alternately exposed negative news, in detail there were 20 companies that got bad news in 2014, 12 companies that got bad news in 2015 and 13 companies that got bad news in 2016.

Table 1 – The sum of news

No.	Year	Companies got bad news
1	2014	20
2	2015	12
3	2016	13

This study uses two variables that are dependent and independent. The dependent variable in this study is the CSI level (Y) projected by the number of negative issues (news) obtained through google search engine and online newspaper, while the independent variable of this study is company size (X1) which is projected with Total Assets and company performance (X2) is projected with ROA.

The company's financial performance can be measured through fundamental performance. Financial performance based on fundamental performance is measured using ROA. To calculate the fundamental performance of the company is done by calculating Return On Assets (ROA):

$$\text{ROA} = \text{Net Income} / \text{Total Assets}$$

The company size on the idea of this study is assessed based on the total size of the company's assets. Company's asset displays the assets used in the company's operational activities. Increasing the amount of asset value that is also accompanied by the increase of operating results adding external parties trust to the company, so it is possible the creditor interested in investing funds to the company (Weston and Brigham, 1994). The calculation of the size of the company is done by calculating the natural log of total Assets:
Company Size = Ln (Total Asset)

RESULTS AND DISCUSSION

Chi Square Analysis. Based on the case of processing table summary, it can be seen that there are 93 samples (31 companies multiplied by 3 years of research period) then the data inputted no missing.

Table 2 – Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Bad News * Ukuran Perusahaan	93	100.0%	0	0.0%	93	100.0%
Bad News * ROA	93	100.0%	0	0.0%	93	100.0%

We used Chi Square test for company size variables, it is known that the results if the data for variable size of the company is 0.451 which means the relationship between variables is not significant.

Table 3 – Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	93.000 ^a	92	.451
Likelihood Ratio	128.829	92	.007
Linear-by-Linear Association	.573	1	.449
N of Valid Cases	93		

a. 186 cells (100.0%) have expected count less than 5. The minimum expected count is .48.

The results are not much different for the Chi Square test of the financial performance variable (ROA), it is known that the results if the data for variable size of the company is 0.588, which means the relationship between variables not significant.

Table 3 Continue

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	30.582 ^a	33	.588
Likelihood Ratio	40.376	33	.177
Linear-by-Linear Association	1.287	1	.257
N of Valid Cases	93		

a. 66 cells (97.1%) have expected count less than 5. The minimum expected count is .48.

Based on the results of logistic regression test, first we have to determine dummy variables for companies affected by bad news given the value of "1" and unfavorable bad news given the value of "0" with the number of companies affected by bad news for 3 (three) years study period is as much 45 companies.

Table 4 – Dummy variables

Original Value	Original Value
Companies affected bad news	1
Companies unaffected bad news	0

Table 5 – Classification Table

Observed			Predicted		
			Bad News		Percentage Correct
			Tidak Ada Bad News	Ada Bad News	
Step 0	Bad News	Tidak Ada Bad News	48	0	100.0
		Ada Bad News	45	0	.0
Overall Percentage					51.6

a. Constant is included in the model.

b. The cut value is .500

Based on logistic regression testing, it is known that the effect of firm size (X1) and corporate financial performance (X2) in corporate social irresponsibility disclosure are as follows:

Table 6 – Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. Lower
Step 1 ^a	X1	.041	.103	.153	1	.695	1.041	.850
	X2	1.537	1.657	.860	1	.354	4.648	.181
	Constant	-.857	1.515	.320	1	.572	.424	

Variable size of the company has a significant value of 0.695. The value is much greater than the significant level of 0.05, it can be concluded that the test results show H1 is rejected. These results indicate that firm size variables are not proven in affecting corporate social responsibility. Companies with large assets do not become the impetus to disclose corporate social irresponsibility, companies with small amounts of assets behave similarly.

Researchers try to argue that the absence of correlation can also be caused by the size of a large company able to control the news so that it can reduce or even eliminate negative news in order to maintain the company's stability. Given the unstable condition of the company, it can make the stock market value of the company fluctuate uncontrollably.

Variable of financial performance has a significant value of 0.354. The value is much greater than the 0.05 significant level, thus it is concluded that based on the test indicates H2 is rejected. These results indicate that the variable financial performance is not proven to influence the disclosure corporate social irresponsibility company. Even though a company posted good financial performance, it does not make the company dare to deliver corporate social irresponsibility. The same thing happens to companies whose financial performance is not good; they still try to keep the information so as not to be exposed by the public.

CONCLUSION AND RECOMMENDATIONS

Based on the result of research, it is known that this research has not found correlation between company size and company performance with level of willingness to present or reveal bad news (corporate social irresponsibility). The researcher tries to guess why there is no relationship between firm size and financial performance against corporate social irresponsibility disclosure, one of which may be the cause is independent variable in chi square test didn't make it. Another thing that may be because Indonesia is not yet familiar with corporate social irresponsibility (CSI).

Another limitation of this research is in Indonesia there is no CSI measurement tool. Different with developing country such as United States, they have KLD data statistic which help to measure the strength and concern of a company using multiple indicators within seven qualitative issue area. There is no singel data of bad action of the company in Indonesia that collected by one indeks. That is why we try to use bad news from newspaper, magazine or online portal to measure the bad news. If Indonesia could provide some of this data the disclosure of CSI is not impossible to influence the stakeholders (stake holder's) in making economic decisions.

Therefore, we suggest that future research can conduct research with other variables or more comprehensive and supported a wider scope, eg in companies in ASEAN and using KLD index to help them measure CSI. We then recommend that authorized and regulatory authorities promptly regulate the disclosure of corporate social irresponsibility to firms that market on the stock exchange.

REFERENCES

1. Amujo, O. C., Adeyinka Laninhun, B., Otubanjo, O., & Olufunmilayo Ajala, V. (2012). Impact of corporate social irresponsibility on the corporate image and reputation of multinational oil corporations in Nigeria. In Corporate social irresponsibility: A challenging concept (pp. 263-293). Emerald Group Publishing Limited.

2. Baughn, C. C., & McIntosh, J. C. (2007). Corporate social and environmental responsibility in Asian countries and other geographical regions. *Corporate Social Responsibility and Environmental Management*, 14(4), 189-205.
3. Chiu, S. C., & Sharfman, M. (2016). Corporate social irresponsibility and executive succession: An empirical examination. *Journal of Business Ethics*, 1-17.
4. Cowen, S. S., Ferreri, L. B., & Parker, L. D. (1987). The impact of corporate characteristics on social responsibility disclosure: A typology and frequency-based analysis. *Accounting, Organizations and Society*, 12(2), 111-122.
5. Dissanayake, D., Tilt, C., & Xydias-Lobo, M. (2016). Sustainability reporting by publicly listed companies in Sri Lanka. *Journal of Cleaner Production*, 129, 169-182.
6. Ghozali, Imam. (2006). *Aplikasi analisis multivariate dengan program SPSS*. BP Universitas Diponegoro. Yogyakarta.
7. Jones, B. (2010). Corporate social irresponsibility: The role of government and ideology. In *reframing corporate social responsibility: Lessons from the global financial crisis* (pp. 57-75). Emerald Group Publishing Limited
8. Lee, S., Singal, M., & Kang, K. H. (2013). The corporate social responsibility–financial performance link in the US restaurant industry: Do economic conditions matter?. *International Journal of Hospitality Management*, 32, 2-10.
9. Lin-Hi, N., & Müller, K. (2013). The CSR bottom line: Preventing corporate social irresponsibility. *Journal of Business Research*, 66(10), 1928-1936.
10. Manning, P. (2012). Economic Rationality and Corporate Social Irresponsibility: An Illustrative Review of Social Capital Theory. In *Corporate Social Irresponsibility: A Challenging Concept* (pp. 111-134). Emerald Group Publishing Limited
11. O'Donovan, (2002). Environmental Disclosure in the Annual Report: Extending the Applicability and Predictive Power of Legitimacy Theory, *Accounting, Auditing and Accountability Journal*, Vol.15, No.3,pp.344-371.
12. Ormiston, M. E., & Wong, E. M. (2013). License to ill: The effects of corporate social responsibility and CEO moral identity on corporate social irresponsibility. *Personnel Psychology*, 66(4), 861-893.
13. Popa, M., & Salanta, I. (2014). Corporate social responsibility versus corporate social irresponsibility. *Management & Marketing*, 9(2), 137
14. Riera, M., & Iborra, M. (2017). Corporate social irresponsibility: review and conceptual boundaries. *European Journal of Management and Business Economics*, 26(2), 146-162.
15. Smith, A.D., 2010. Growth of corporate social responsibility as a sustainable business strategy in difficult financial times. *International Journal of Sustainable Economy* 2 (1), 59–79.
16. Tench, R., Sun, W., & Jones, B. (2012). The challenging concept of corporate social irresponsibility: An introduction. In *Corporate Social Irresponsibility: A Challenging Concept* (pp. 3-20). Emerald Group Publishing Limited.
17. Walker, K., Walker, K., Zhang, Z., Zhang, Z., Yu, B., & Yu, B. (2016). The angel-halo effect: How increases in corporate social responsibility and irresponsibility relate to firm performance. *European Business Review*, 28(6), 709-722.
18. Weston, J.F., & Brigham, E.F. (1994). *Dasar-dasar Manajemen Keuangan*. Erlangga. Jakarta

DOI <https://doi.org/10.18551/rjoas.2018-11.26>

INFORMATION SYSTEMS SUCCESS DIMENSION IN INDONESIA ONLINE TRAVEL AGENCY INDUSTRY

Kustiwi Irda Agustin

Department of Accounting, University of Airlangga, Surabaya, Indonesia

E-mail: irdaagustin@gmail.com

ABSTRACT

Technological developments allow us to carry out daily activities makes information more value expensive, quickly and easily obtained. Information technology is needed to obtain, manage, send and or share information. Online travel agency (OTA) industry are a part of information system that used application (website, application store, IOS) where an activity is supported by features classified according to needs. Others, information systems support is getting cheaper and easier such as in gadget that offers ease of doing activities that generate interest. Traveloka, Tiket.com, and Pegi-peggi are online travel agent applications that offer cheap, fast and supported by user friendly features. The base theory used to measure this information systems success is The DeLone and McLean Model. Descriptive quantitative method is used in research to describe a condition that includes 100 respondents which is ever use online travel agent application, then using purposive sampling technique for data collection. This paper result consists the high quality of system are obtained by Tiket.com, the quality of information obtained by Tiket.com, the quality of services obtained by Pegi-peggi, the users and the highest quality quality obtained by Traveloka, and the net benefits for users obtained by Tiket.com.

KEY WORDS

Information systems, success, Indonesia, online travel agency, industry.

The development of information technology is a driving factor for electronic-business, commonly known as e-businesses. A company that uses the internet network can establish relationships with business partners or consumers more efficiently. Until now the internet is an ideal infrastructure for running e-business based businesses so that the term e-business becomes synonymous with running a business on the internet. This statement is supported by Sid L. Huff, et.al (2000) which explains that e-business is an activity related to information and communication technology (ICT) both between organizations and between organizations to consumers.

Smart technology has provided extraordinary flexibility for organizations to be creative in various activities, including travel industry in Indonesia. So that there is an increase in demand in the field of online travel agencies (OTA) which have shifted traditional concepts into more modern concepts. Some online travel agents engaged in the online travel industry in Indonesia, namely Traveloka, Tiket.com, Pegi-peggi, and many others.

An interesting fact is online travel agent industry is growing so fast through an important role of technology. Online travel agency relies on internet services to market their services, including for the use of their services. This application used by website, application store, ios where an activity is supported by an application that has features that are classified according to needs. The other hand, technology support is getting cheaper and easier, with such phenomena, it certainly offers convenience in carrying out activities that generate interest. Traveloka, Tiket.com, and Pegi-peggi are parts of online travel agency that offer cheap and fast services supported by easy-to-use information systems. It was seen from the data of online travel agencies survey conducted by Dailysocial in 2018 that respondents who used online travel agency services in Indonesia reached 71.44%.

A technology that makes it easy for people to carry out daily activities, because information is quickly and easily obtained. So it is necessary to update technology to get, manage, send, and or share information. The extent to which information will continue to

consistently meet the requirements and expectations of all people who need information. The concept that is linked to information that uses data which is then processed so that it gives meaning to the recipient and is assisted by the application media.

The topic about successful information systems have been widely researched and produced several models. This system has two characteristics including mandatory and voluntary. The models that are part of a successful information system include the Unified theory of acceptance and use of technology-UTAUT (Morris, 2003), the DeLone and McLean-D & M Model (Delone and Mclean, 2003), and the Wixom and Todd Models (Wixom and Todd, 2003). However, this research focuses more on using the Delone and McLean model as a basic theory. Like the research conducted by Dorobat (2014) which measures information systems at the University using e-learning technology to see its information system success. Furthermore, the research of Lee and Yu (2012) and Zaied (2012) analyzed the company's management information system by using this model so that it could be done for decision making.

The online travel agency industry is positively welcomed by the community because it is an alternative travel agent that is efficient and effective. Its existence is very helpful in facilitating users. Every user who will use online travel agency services. Traveloka, Tiket.com, and Pegi-peggi are the three best startup sites engaged in online travel agency industry in Indonesia. This statement is supported on the Miner8.com site (2017), the three types of startup can facilitate users in finding accommodation on a trip such as plane tickets, trains, to hotel bookings. This can be done either through the site / website or can download the application via Playstore and Apple Store. Simple appearance with the main functions displayed on the main menu, of course lay people can easily understand. The features found on Traveloka, Tiket.com, and Pegi-peggi startups can make it easier for users to carry out activities, in this technological era it can increase interest in service users. As for what determines the success of the information system according to Delone and Mclean (2003), covers 6 important dimensions. The dimensions include system quality, information quality, usage, user satisfaction, service quality and net benefits (individual impact and organizational impact).

The case background of this research is to analyze information systems at Traveloka, Tiket.com, and Pegi-peggi startups both websites and mobile applications. This online travel agency industry can be accepted by the public if it have a good system quality, information quality that can meet user needs, service quality can help users, users of services most often used, user satisfaction to meet consumer expectations, and generate net benefits overall (both individually and organizationally). Thus, this research is more focused on explaining the e-business system implemented by online travel agency industry and the success of information systems both website and mobile applications used in the online travel agency industry by being limited by the three types of startups, namely Traveloka, Tiket.com, and Pegi-peggi.

Based on the explanation above, the researcher intends to raise these problems as research material. The title is "Information Systems Success Dimension in Indonesia Online Travel Agency (OTA) Industry".

THEORY AND HYPOTHESES DEVELOPMENT

Information Systems. According to Laudon (2012: 16) explains that the definition of an information system is a combination of several interrelated components that are useful for collecting, processing, and finally conveying information that can be used as an option to make decisions both organizations and companies.

Supported by the statement of Whitten, Bentley, and Ditman (2009: 10), the understanding of information systems is the result of the interaction of various parties such as people, data, and processed to become information technology needed by an agency.

Actually there are still many information system definitions put forward by several other authors, but indirectly this system has an important role for users. This is because the information system is part of several systems that are collected, processed, and issued into

output in the form of information that is useful for internal and external in taking an action for the survival of an organization or individual.

Besides that, information system has eight unique dimensions as stated by Sutabri (2012), it includes: (1) Components, (2) Boundary, (3) Environment, (4) Interface, (5) Input, (6) Output, (7) Process, and (8) Objective.

DeLone and McLane Information System Success Model. Based on research conducted by Jogiyanto (2007), DeLone and McLane Information System Success Model is a model form that has been expanded from previous research. The development of this model consists of several dimensions that will be described below:

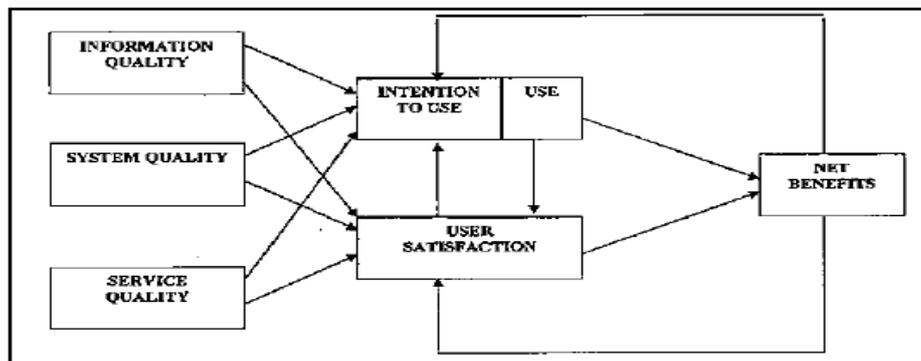


Figure 1 – The D&M IS Model (Source: DeLone and McLane, 2003)

The history of this developed model was carried out in 20003. Researchers DeLone and E. McLean updated the model to measure the quality of information systems that resulted from contributions from several previous studies and due to changes in role and handling of late information systems. DeLone and McLean renewed it and called it a System Success Model D & M Model Information. According to D & M, there are six dimensions of factors in the measurement of this model, there are:

- System Quality. The first dimension of this model is system quality. It is used in knowing the characteristics of the application of information technology itself. So that it can be said how far the quality and performance of the system. As for examples such as system reliability, ease of use, speed of access, system flexibility and security.
- Information Quality. Information quality is the second dimension of this model that has a function as a tool to measure the output of information systems. This must be relevant, complete and easy to understand.
- Service Quality. Service quality has the main function that can be used for marketing research of an organization. According to Pasaruraman, et.al. in Purnama (Purnama, 2006: 19), explaining about service quality is closely related to perceptions of the level of consumer expectations. So if the marketing of a company knows the needs and desires of consumers, then it can create profits.
- Use. The fourth dimension in the D & M model is use, where the discussion is broad as it covers the entire information retrieval system and interaction through navigation in the application. Today, the dimension of use has undergone a shift in meaning due to having a simple meaning even though it has a very broad role.
- User Satisfaction. User satisfaction connected to user satisfaction in utilizing the information system application features. According to Somers et.al. (2005: 597), end user satisfaction is an effective attitude that can be felt directly by users after using technology-based systems.
- Net Benefit. Net benefits are the last dimension of this model. This dimension is a collection of several impacts resulting from information systems, namely individual impacts and organizational impacts. When examined more deeply, the impact of this merger is very broad because it can occur between organizations, organizations to

consumers, to between countries. So that a model is needed for the parsimony system to occur.

METHODS OF RESEARCH

This study uses a quantitative research that is descriptive approach. According to Sugiyono (2009), quantitative approach means a research approach that is done by processing and presenting data by calculating statistics that involve numbers or scores so that the researcher can make decisions objectively. It is used because of relevancy to the formulation of the problem to be answered in this paper, which is trying to describe the comparison of information system success in OTA industry.

The total sample of this paper takes 100 consumers who ever use online travel agency industry application system (Traveloka, Tiket.com, and Pegi-peggi). Purposive sampling technique is used for data collection. This is obtained through questionnaires and measured by a likert scale. For data processing, this study chose measurement tools namely is SPSS. Generalization results are described descriptively then analyzed to find out the comparison of information system success in online travel agency industry in Indonesia.

The measurement tool used in this study is a five likert scale. There are many function of this scale likes used to measure attitudes, opinions and perceptions of a person or community regarding a phenomenon. A five likert scale options are usually provided with a format such as a value of 1 which is strongly disagree to the highest value of 5 which is strongly agreed. To determine the category of an answer whether high, medium, low, first, the interval class is determined.

The upper category interval all respondents answers to each variable include:

- Very high category values = 4,21 – 5,00;
- High category values = 3,41 – 4,20;
- Medium category value = 2,61 – 3,40;
- Low category value = 1,81 – 2,60;
- Very low category values = 1,00 – 1,80.

To be able to determine the respondent's answer classified, the total value of the variable will be determined on average by dividing the number of questions. From the results of the division, the respondent's answers will be included in the same category.

RESULTS AND DISCUSSION

The total sample used in this study was 100 respondents, which are users who ever used online travel agency online likes Traveloka, Tiket.com, and/or Pegi-peggi, were conducted by purposive sampling technique method. The selected measuring instrument is SPSS, this function as a processing tool and analyzes the data that has been collected. The following are the results of descriptive and analyze data that will be presented, there are:

A. Respondents Description. Overall about respondents' description of this paper can be seen in the table below as follows:

Table 1 – Respondents Description

No.	Item	Users Identity	Total
1	Education	1. Junior High School	-
		2. Senior High School	4
		3. Bachelor Degree	58
		4. Master Degree	<u>38</u>
		Total	100
2	Online Travel Agency (OTA)	1. Traveloka	34
		2. Tiket.com	33
		3. Pegi-peggi	<u>33</u>
		Total	100

Table 1 shows the profile description of respondents who use online travel agency which consists of the highest number of education items, namely bachelor degree of 58 users. In addition, online travel agency items that are widely used are Traveloka as many as 34 users.

B. Validity and Reliability Test. The results of the validity of the question instrument from DeLone and McLane Information System Success Model consists of system quality (21 questions), information quality (15 questions), service quality (5 questions), use (7 questions), users satisfaction (6 questions), and net benefits (6 questions). Based on the results of the validity of 100 respondents on the instrument the question used is declared valid because r counts from these variables is greater than r table.

The instrument can said to be reliable if Cronbach's Alpha > 0.60. The reliability test results can be summarized briefly in table 2 as follows:

Table 2 – Reliability Test

Classification	Cronbach's Alpha	Limit	Notes
Quality Systems	0.942	0.60	Reliable
Quality Information	0.958	0.60	Reliable
Service quality	0.813	0.60	Reliable
Use	0.784	0.60	Reliable
User satisfaction	0.782	0.60	Reliable
Net benefits	0.931	0.60	Reliable

In table 2 above, the data obtained from the study showed that all indicators obtained the value of Cronbach's alpha above the value of 0.60, so it can be concluded that all variables proved reliable.

C. DeLone and McLane Information System Success Model:

C.1. Quality System. Quality system is first variable of this model information systems success, has the advantage of being able to measure the characteristics of online travel agent applications both on websites and mobile phones such as system reliability, ease of use, speed of access, system flexibility and security. Following are the results of the table presented:

Table 3 – Quality System

n/n	N	Min	Max	Mean
Traveloka	34	61	105	83.71
Tiket.com	33	63	105	86.36
Pegi-pegi	33	58	105	82.94

We can see at Table 3 about Quality system, Tiket.com has the first rank with 86.36, Traveloka with 83.71, and Pegi-pegi with 82.94. It means Tiket.com has more advantages in the quality system dimension compared to others.

C.2. Quality Information. Second variable of information systems success model is quality information. This system can be said to be success if it is able to be measured, such as must be relevant, reliable, complete, easy to understand and user friendly. Hereby the table of quality information:

Table 4 – Quality Information

n/n	N	Min	Max	Mean
Traveloka	34	39	75	61.82
Tiket.com	33	45	75	62.94
Pegi-pegi	33	40	75	60.82

Based on table 4, Pegi-pegi gets the last rank with 60.82, Traveloka with 61.82, and Tiket.com with 62.94. This reason because Tiket.com have the quality of information presented (website and mobile smartphome) are more relevant and reliable for all users such as for all genders, age groups, and education.

C.3. Quality of Service. Quality of Service is a part of information systems that can be used in marketing research. This is because it is directly related to the needs and desires of customers to be able to provide the services expected by customers. Below is the test table:

Table 5 – Quality of service

n/n	N	Min	Max	Mean
Traveloka	34	12	25	20.18
Tiket.com	33	13	25	19.48
Pegi-pegi	33	19	49	37.52

Table 5 about quality of service explained that the mean value obtained Tiket.com is 19.48, Traveloka is 20.18, and Pegi-pegi is 37.52. From the results, Pegi-pegi gets the first rank that can be said that the quality of service is controlled by this startup.

C.4. Users. Fourth variable is users; it is quite significant to provide overall information retrieval systems as well as interaction with navigation in online application. We can see the results of the table below:

Table 6 – Users

n/n	N	Min	Max	Mean
Traveloka	34	24	35	29.82
Tiket.com	33	18	35	24.97
Pegi-pegi	33	18	35	23.70

Table 6 can be shown that the lowest mean value obtained is Pegi-pegi 23.70, Tiket.com earned 24.97, and Traveloka with 29.82 Grab, and the highest mean value obtained Gojek 29.82. So, many consumers that use Traveloka as their choice to do their travel.

C.5. User Quality. The other part of information systems success is user quality. This dimension can be said to be successful if it is able to provide satisfaction to the consumers through the quality of user satisfaction in the application. The results are seen through the table:

Table 7 – User Quality

n/n	N	Min	Max	Mean
Traveloka	34	19	30	25.32
Tiket.com	33	17	30	23.52
Pegi-pegi	33	12	30	23.09

We can know that Table 7 consist of the lowest mean value obtained is Pegi-pegi with 23.09, Tiket.com with 2352, last the highest one is Traveloka with 25.32. Traveloka has the highest score in user quality variable.

C.6. Net Benefits. Last but not least, net benefits are the sixth dimension of this model. It can be said that important variable for the information system, because it is related for long term benefits. This result can be seen at table:

Table 8 – Net Benefits

n/n	N	Min	Max	Mean
Traveloka	34	19	30	25.12
Tiket.com	33	18	30	25.45
Pegi-pegi	33	14	30	25.09

Based on Table 8 it can be seen that the net benefits of the lowest mean value obtained is Pegi-pegi with 25.09, Traveloka is the second one with 25.12, and the highest mean value obtained is Tiket.com with 25.45. From the results above, it can be said that the net benefit is controlled by Tiket.com as having the highest.

CONCLUSION AND SUGGESTIONS

Based on research that has been explored more deeply about the comparison of information systems success systems in the online travel agent industry in Indonesia, the authors can conclude that the quality of information on applications both online and mobile includes system quality, information quality, service quality, users, user quality and net benefits has been done optimally by the online travel agent industry. The results of the high quality of the system are obtained by Tiket.com, the quality of information obtained by Tiket.com, the quality of service obtained by Pegi-peggi, the highest user and quality of results obtained by Traveloka, the latest regarding the net benefits for users obtained by Tiket.com.

As for this study has limitations so that it can be used better in research in the field of online travel agents in the future, among others: (1) Can be added some variables that are adjusted to the conditions needed. This is more and more variables, expected to be more relevant and reliable. (2) Although it has fulfilled the respondent's requirements according to the SSS test tool, it is expected to be able to receive more feedback or input from respondents so that the results can be used widely.

For the sake of further research perfection, it is necessary to consider several variables that can be used to improve the validity of research results, which can be applied to e-commerce branches or other subjects, such as online shopping applications, online transportation applications, and many others.

REFERENCES

1. Zaied A. (2012). An Integrated Success Model for Evaluating Information System in Public Sectors. *Journal of Emerging Trends in Computing and Information Sciences*, Vol. 3, Pp. 814.
2. Beatley, Lonni D. and Jeffrey L. Whitten. (2007). *System Analysis and Design For The Global Enterprise*. Seventh Edition. New York: Mc Graw-Hill.
3. H. Wixom and P. A. Todd. (2005). A Theoretical Integration of User Satisfaction And Technology Acceptance. *Information System Research*, Vol. 16.
4. Chin WW. (1998). The Partial Least Squares Approach For Structural Equation Modeling. In: Marcoulides GA, Editor. *Modern methods for Business Research*. New York: Lawrence Erlbaum Associates Publishers: pp. 295±336.
5. Dailysocial.co.id. (2018). Laporan Dailysocial Survey Online Travel Agencies OTA 2018. Retrieved From <https://dailysocial.id/post/laporan-dailysocial-survey-online-travel-agencies-ota-2018>.
6. DeLone, W H, and McLean, E.R. (1992). Information System Success: The Quest For The Dependent Variable. *Information System Research* 3, No. 1 (1992): 60-90.
7. DeLone, W. H., and McLane, E. R. (2003). The DeLone and McLane Model of Information System Success A Ten-Year Update. *Journal of Management Information System*, Vol.19, No.4, 9-30.
8. Hair, J, W Black, B Babin, R Anderson, and R Tatham. (2006). *Multivariate Data Analysis*. New Jersey: Prentice Hall.
9. Dorobaç I. (2014). Models for Measuring E-Learning Success in Universities: A Literature Review. *Informatica Economica*, Vol. 18, Pp. 77.
10. Jogiyanto, H. (2007). *Model Kesuksesan Sistem Teknologi Informasi*. Yogyakarta: Andi.
11. Laudon, Kenneth C., dan Jane P. Laudon, (2012). *Management System: Managing the Digital Firm Twelfth Edition*. New Jersey: Prentice Hall.
12. Miner8.com. (2017). 12 Situs Untuk Booking Hotel dan Pesawat Online Dengan Harga Terbaik! Retrieved from <http://miner8.com/id/14572>.
13. Morris, M. G., et al. (2003). User Acceptance of Information Technology: Toward A Unified View. *MIS Quarterly*, Vol. 27, No. 3, Pp. 425–478.
14. Purnama, N. (2006). *Manajemen Kualitas (Edisi Pertama)*. Yogyakarta: Ekonisia.
15. Sid L. Huff, et.al. (2000). *Cases in Electronic Commerce*. McGraw-Hill.

16. Somers, T.M., Nelson, K., and Karimi, J. (2003). Confirmatory Factor Analysis of the End-User Computing Satisfaction Instrument: Replication within an ERP Domain. *Decision Science*, 34(3): 595-621
17. Sugiyono. (2009). *Quantitative and Qualitative Research Methods*. CV. Alfabeta: Bandung
18. Sutabri, Tata. (2012). *Analisis Sistem Informasi*. Yogyakarta: Andi.
19. Sutabri, Tata. (2012). *Konsep Sistem Informasi*. Yogyakarta: Andi.
20. S.-K. Lee and J.-H. Yu. (2012) Success model of Project Management Information System in Management. *Automation in Construction*, Vol. 25, Pp. 82–93.
21. Whitten, Jeffrey L., Lonnie D. Bentley, Kevin C. Ditman. (2004). *Systems Analysis and Design Method*. 6 Edition. McGraw-Hill.

DOI <https://doi.org/10.18551/rjoas.2018-11.27>

PLANNING OF HUMAN RESOURCE STRATEGY IN HOSPITAL MANAGEMENT USING THE CONCEPT OF SOCIAL HEALTH INSURANCE SERVICES

Tajus Ibrahim*

Graduate Program in Management, Esa Unggul University, Jakarta, Indonesia

Tantri Yanuar Rahmat Syah, Lecturer

Faculty of Economic, Esa Unggul University, Jakarta, Indonesia

*E-mail: tajusibr@gmail.com

ORCID: 0000-0002-9859-1640

ABSTRACT

In Indonesia, it has been stipulated in the 1945 Constitution that the State has a role in protecting its citizens. We must have been familiar to the slogan mentioning that “social security is the responsibility of the state”. Health is the most important part of life that characterizes good and prosperous conditions in living a life in which a person’s health condition includes healthy body, healthy soul, and socially possible to live productively both socially and economically. Health services must be perceived not only as services to people who are sick, but also insurance for public health as a whole. Health development is a part of national development aiming to improve optimal community health. To fulfill and realize the right of every citizen in obtaining proper health services and fulfill the government’s obligations in providing health facilities as mandated by the 1945 Constitution, health is a Public Good, so government’s intervention is needed. The potential for hospital development in Indonesia is marked by the current high-level need for health services that can be measured by the degree of public health.

KEY WORDS

Hospital, service management, bundle budgeting, concept of service.

In accordance with the Constitution No.23 of 1999 concerning Health Services, in order to improve health development, the 1982 National Health System was made which is used as a reference in the drafting of State Policy Guidelines on health sector and Constitution No. 23 of 1992 concerning health and also used as a guide on the form and manner of implementation starting from the formulation of policies, guidelines and directions for health development, either by Central and Regional Governments as well as other related parties. Health Services for National Health Insurance, article 1 point 9 (Minister of Health Regulation 71 of 2013), stated that Advanced Referral health services are efforts of individual health services that are specialist or sub-specialist which include advanced outpatient care, advanced level hospitalization and hospitalization in special care rooms.

In 2017, there were 2,755 hospitals in Indonesia which were divided into public hospitals and private hospitals. Public hospitals in Indonesia that are managed by the Ministry of Health were 33 units, Provincial Governments were 134 units, Municipal Governments were 590 units, the Indonesian National Armed Forces/the Indonesian National Police were 170 units, other Ministries were 17 units, SOEs were 87 units, and Private Public Hospitals/Maternity and Children’s Hospital were 1724 units (Ministry of Health data, October 23, 2017). The increasing construction of hospitals by the private sector is also supported by the activeness of the government in encouraging private investment in the hospital business sector. It is basically also related to the limited government funds for the construction of new hospitals. The government has supported the role of the private sector and even foreign investors to play a role in the development of hospitals in Indonesia. However, it was only through a Presidential Decree on the Negative Investment List No. 96 and No.118 of 2000; the government regulated that foreign investors in Indonesian hospital businesses could

have ownership of up to 49% of paid up capital. It further encouraged the development of national private hospitals in the form of joint ventures from foreign investors.

Currently, the number of hospitals in Indonesia is arguably in a poor condition since the era of National Health Insurance was held through a mechanism of Social Health Insurance using mandatory NHI programs based on Constitution No.40 of 2004. The aim is all Indonesian people are protected in the insurance system so that they can meet basic public health needs. Initially, hospital services could only be accessed by certain groups that had a lot of money but now it could be accessed by many people. This situation can be seen from the many queues of people who ask to be served, and even take a long time to get services. Behind these lacking services, there is always a good thing or opportunity that we can pursue; building a hospital. In the past, the concept of the hospital was trying to find patients but now it is flooded with patients. However, strong management is required to manage the strategy because when everything is not carefully calculated, it is like a double-edged knife; it will not obtain the benefits in terms of business, instead the big losses.

The growth rate of hospital existence from year to year has increased, especially private hospitals. Previously, in 2015, it was 1,540 units then it increased in 2017 to 1,724 units. It means that business in the health sector is fairly promising and good. In addition, the available data state that Indonesia is still lacking of hospitals and is still far from ideal. Especially at this time, the National Health Insurance (NHI) Program, through Social Security Administrator of Health, has its own large and promising market share for new hospitals to be established. Since the existence of the National Health Insurance through Social Security Administrator of Health, the newly opened hospital will be crowded with patients because all Indonesian people have the right and are guaranteed by the government to get health services in all Health Facilities and Hospitals.

The selection of Bogor District as the location for the business plan of Esummi Hospital describes the private hospital health care services with the advantages of a management system based on patient services of NHI participant. This business is engaged in the business of healthcare services as a place for quality, effective and efficient prevention and health care providers with core values which include excellence, compassion, respect, delivery, learning and improvement. Health and customer satisfaction are their commitments by always providing excellent plenary services to increase satisfaction and foster patient trust as key customers. It has values (main values) that include: (1) patients are the main customers, (2) good corporate culture, and (3) patient safety.

Based on the above background, it appears that there are still gaps in the huge population of Indonesia which is not balanced with the number of health and hospital service facilities that are not evenly distributed throughout Indonesia. It is a problem for the government about how to build a new hospital or invite private or foreign investors to build hospitals in all regions/regencies in order to fulfill the number of health facilities and fulfill the goals of improving community health status.

Since its implementation in early January 2014, the NHI program has drawn many pros and cons. There are still many hospital managements that are not ready, are not supported by human resources and information technology systems that are good, reliable, and connected to the Social Security Administrator of Health system. So, there are still many hospitals that carry out administrative processes manually. So far, the obstacle that many NHI participants complain about is the problem of service, fees, and registration mechanism. Throughout 2014, it was noted that there were more than one hundred thousand complaints regarding the services of NHI participants. In just three years, the NHI program certainly still has many limitations and shortcomings, this is tolerable, apart from being a young age, the number of people who have to be dealt with is very large and a very wide area is an obstacle.

Based on the above problem identification, then the problem solving of this business plan includes: (1) building an effective and efficient operational management hospital and a strong team, and providing a clear role for each position, carrying out internal strategies and policies a strong hospital, and having the ability to adapt to the rapid changes in Social Security Administrator of Health rules; (2) providing training and tricks to the coder to get a

big claim by still prioritizing patient safety; (3) cooperating and integrating with health facilities; (4) implementing a one-day service system and building relationships with Social Security Administrator of Health people; (5) offering and seeking short-term full-timer specialists, and sending the qualified doctors to become specialist doctors; (6) surveying the movement of patients and the business environment around the hospital to be built; (7) making a list of medicines and alternative vendors to overcome the vacancy in the availability of generic drugs (according to the National Formularies) in the E-Catalog (Walker et al, 2015; Gering & Conner, 2002; Voelker et al, 2001).

The hospital is a unique business category. In addition to its semi-commercial objectives or the elements of scientific development and community service, the hospital currently has an increasing business prospect. The number of the characteristics of a hospital business is a unique business, which does not have the same characteristics with other industry categories (Weingart et al, 2000). It is due to some of the related elements below: (1) The hospital industry is established, of course, not only about profit, but community service. Establishing a hospital is much more difficult than other businesses because it aims at community service. Thus, business plans are made and various activity programs are carried out with the aim of better health services from time to time to the community; (2) Hospital business has very strict rules, either related to licensing and marketing concepts. Similar to the pharmaceutical business or other health services, there are several rules of the game set by the government that aim to protect patients/customers. This requires the hospital to have a unique strategy in its own approach to the community; (3) In the era of global hospital competition, technology is a potential product that has a target market throughout the world. This is an area of excellence that must be met by a global hospital; (4) Excellent service has been embedded in the development of global hospitals. The things needed by the sick are of course a comfortable environment which is formed not only from interior design or other general equipment, but also from the provided services (Ferris et al, 2003; Ayanian& Weissman, 2002).

HUMAN RESOURCE STRATEGY

The Law of the Republic of Indonesia Article 35 No. 44 of 2009, concerning Hospitals, mentioned that a hospital is a health service institution for the community with its own characteristics which are influenced by the development of health science, technological advances and socio-economic life of the community which must still be able to improve services that are more quality and affordable by the community to achieve the highest degree of health.

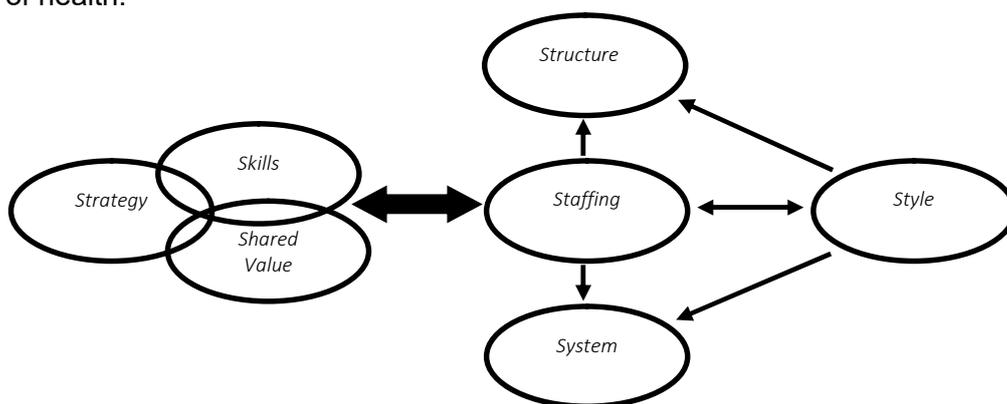


Figure 1 – The 7S McKinsey Model of Esummi Hospital HR

The principles and objectives of the establishment of a hospital must be based on humanity, ethics and professionalism, benefits, justice, equal rights and anti-discrimination, equity, protection, and patient safety and social functions. One of them is the organization of hospitals conducted by health workers who have professional ethics and attitudes and are compliant with hospital ethics (Bamberger et al, 2014). Hospital management is obliged to be

able to manage human resources, especially health workers, to have competency standards that are appropriate and have professional ethics standards in order to achieve maximum productivity by enhancing their ability and professionalism so that hospital organizations can survive and thrive.

Operational Excellence Strategy for Fast and Excellent Service

The Operational Excellence Strategy carried out by Esummi Hospital has three basic principles, among others: (1) Construction of fast delivery that emphasizes the administration process in patient services which is accelerated by the booking system. Booking a system in fast delivery is a fast implementation of standard operating procedures that covers the steps when the patient is admitted to the hospital, the patient's service process, and until the patient is discharged from the hospital. Fast and excellent service at the hospital is the service provided to patients so that they are satisfied and want to use the service and will even continue to use the services of the hospital in the future. It is because the services provided by the hospital can really satisfy patients so that patients including their families feel more valuable; (2) The provision of low costs compared to the competitors of the surrounding hospitals, by not reducing the quality of services provided to patients, aims to increase patient visits due to the spread of word of mouth information both patients and their families about the best quality of services received with low costs. For this reason, every patient who enters Esummi Hospital using IHC (Healthy Indonesia Card) will not be charged any fees in any hospital services that are in accordance with NHI-IHC service standards; (3) Providing quality services to patients in which this process brings closer the ways to provide services so that patients may feel comfort and feel being cared for before entering or going out of the hospital. In addition, patients who are about to carry out the patient service process, free from boredom and anxiety. The trick is to provide convenience in the registration process, run a good relationship by always interacting with patients during the ongoing treatment or providing health information about health services, receiving patient criticism and suggestions that can be directly delivered via telephone, SMS, BBM (Blackberry Messenger), e-mail, and WhatsApp including the process of scheduling patient services or actions (Bowen & Ford, 2004; Mok et al, 2013).

There are several workforce activities in Esummi Hospital that must be applied to the patient care in a hospital, including: (1) Creating reliable human resources is the best step to improve and create professional service excellence in a hospital. Reliable human resources can be achieved by education and training on a regular basis and in accordance with the fields of each officer; (2) Making hospital workers responsive or taking immediate action before being asked by the patient, as well as being skilled in accordance with their competence and being able to respect their patients so that the patient will use the services of the hospital again. The workers in this case include first-line officers who are dealing with patients until the patient is handled by the DPC (Doctor of Patients in Charge). To achieve this goal, every worker in the hospital from the executive level to the director board level must take part in Service Excellence training both internally and externally. Therefore, all activities taking place in the hospital will become hospital operational activities; (3) Making the workers in the hospital skillful and be able to respect their patients so that the patient will always return to use the services at the hospital; (4) Creating competence as one of the hospital's important operational excellence activities. By applying these competencies, all workers in the hospital can master their duties properly and professionally.

Casemix Skill and Lean Competency

In an effort to maintain the quality of medical care and nursing care, monitoring and quality control of the profession on an ongoing basis needs to be carried out. For this reason, efforts to monitor and control professional quality are carried out through: (1) Quality monitoring, for example by using Morning Report, difficult case discussions, rounds of rooms, death cases, medical audits and Journal Reading; (2) Follow up on quality findings such as short training, continuing education activities, and additional authority education. There is a monitoring of the quality of service of medical staff in hospitals, it is expected that unexpected events in terms of patient safety can be prevented. Hospital management together with the Medical Committee establishes matters that are evaluated in the service of

medical staff through coordination work meetings. Based on the results of the coordination meeting of the Medical Committee, there were two main things evaluated at the hospital medical staff that include: on-going professional practice evaluation and focused professional performance evaluation. Included in the on-going professional practice evaluation are: (1) Ethics and communication in the coordination of work among doctors, management and patients; (2) The discipline of the doctor during the patient's care in outpatient section/polyclinic; (3) The discipline of the doctor when patient service is outpatient section (time of visit and number of visits); (4) Compliance of doctors in the implementation of the Clinical Pathway; (5) Completeness of filling in medical record files (filling in medical resumes, consultation sheets, etc.); (6) Pattern of blood use and medicines/pharmacy; (7) Pattern of treatment duration; and (8) Utilization of consultation. Meanwhile, those included in focused professional performance evaluation are: (1) Review of the existence of Unexpected Events or Sentinel conducted by the case study in the form of discussion of difficult cases, discussion of death cases and medical audits; (2) Patient complaints against the doctors.

Patient service management from the concept of patient-focused services consists of four elements, among others: (1) It requires health care providers to listen and respect the views and choices of patients and families. In addition, knowledge and values, beliefs, cultural backgrounds of patients and families are included in the planning of health services and services; (2) It requires health care providers to communicate and share information thoroughly with patients and families, in which patients and families also receive timely, complete and accurate information; (3) Patients and families are encouraged and supported to participate in care and decision making and their choices; (4) Patients and families are partners of health care providers who require health care providers to collaborate with patients and families in the development, implementation and evaluation of policies and programs.

Currently, patient-centered care applies a more modern and innovative approach to health care. It is no longer doctor-centered, but a team leader of an interdisciplinary team, with adequate competence, in which each patient caregiver is equally important in health care for patients. A case manager is a person outside the patient care provider, whose job is to coordinate each patient care provider, so that patients get integrated services according to their needs. The integration and coordination of patient care activities is the goal to produce an efficient care process. Examples of team care are implemented in the form of: patient safety rounds between sections in the hospital, a combination of care planning forms, integrated patient medical record files, and a case manager (Banham & Connelly, 2002). Case managers must have a professional working relationship with doctors and clinical staffs. They must also be familiar with billing services, financial assistance services, assistance/support from the community and spiritual services. It is important for case managers to have relationships with patients and families. Case managers need to maintain mutual trust to show the patients that they are involved in patient benefits and interests. In the implementation of patient service management, a case manager can handle 25-70 patients, depending on the condition of complexity, clinical service system, and hospital work culture. Case managers conduct screening to patients who need patient service management based on high risk patients, high costs, high complaints potential, and cases with chronic, complex or complicated diseases. Case managers draw up the patient service management plan and collaborate with the Doctor of Patients in Charge and other clinical team members which reflects the appropriateness and cost-effectiveness of medical and clinical treatment and the patient's decision-making needs. There is documentation evidence of case manager activities which are included in medical records such as recording in information education forms.

Case Managers must immediately identify short-term, long-term and ongoing needs so that patient service management strategies and objectives can be developed to meet those needs. It is also necessary to prepare facilities, overcome problems and conflicts and pay attention to the expectations of payers, frequency of communication re-evaluation of patient development, revision of short and/or long-term goals.

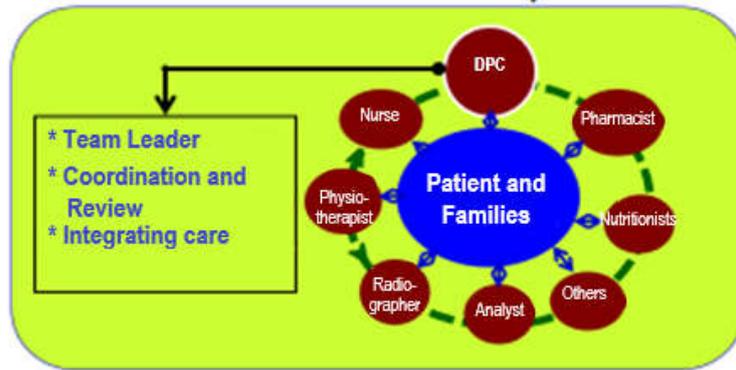


Figure 2 – Coordination Diagram of Service Continuity Integration in Interdisciplinary Care Team

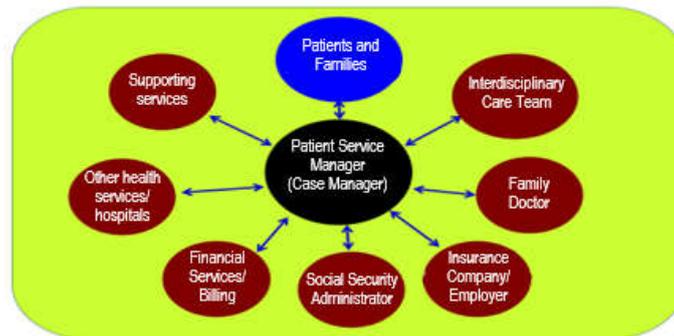


Figure 3 – Coordination Diagram of Continuity in Patient Service Management

Shared Value: Continuous Improvement & Knowledge Management. Esummi Hospital Operations carry out Continuous Improvement, which is an ongoing effort to develop and improve products and patient service processes in a hospital. The business aims to find and get the best form of the resulting improvement. Creating the best solution of the problem, which often arises during the patient service process, the results of which will continue to survive without any improvement in service and or develop better with the improvement of the service system both in technology and competency of the patient service workforce; depends on the assessment of patient satisfaction level as long as they get health care at the hospital.

There are eight easy steps to conduct Continuous Improvement activities, including: (1) The number of problems faced by an organization or company can be mapped through the problem matrix by providing value based on the urgency of the problem using the Pareto diagram approach to determine the frequency of problems and determine the dominant parameters; (2) Collecting the data related to problems that will be resolved with clear and valid data; (3) In searching for the root of the problem, the Fishbone Diagram method or also known as Cause-Effect Diagram or the 5-Why approach can help in identifying various potential causes of a problem. It is carried out by gathering people who are relevant and have a spirit of improvement and then asking them five things related to why a problem can occur; (4) After understanding the problem, it is formulating an alternative repair in the form of a matrix so that it is easy to see the best solution by setting two or three alternative improvements to be carried out; (5) Applying a solution in a location or place according to the data available, then taking the measurements in which the results are based on the initial data period, for example a week, a month or three months; (6) Performing a conformity analysis with the target to be achieved. If it is not appropriate, then it is going back to step three (look for the root of the problem). If it is appropriate then it can proceed to step seven; (7) Making standardization in the form of SOP (Standard Operating Procedures) if the targeted results are achieved; (8) Finding a new problem (Continuous improvement) by doing more mapping of new problems to continue to make improvements.

One of the efforts to deal with all the problems of patient care in this hospital is to change the mindset of all individual officers who consider that efforts to improve the hospital are as a series of 'seasonal' activities (because of the distance between limited time and resource). When the hospital has decided to implement a culture of continuous improvement in all work units, the hospital must realize that the success depends on a series of hard work efforts from all the involved resources which are carried out continuously. Hospital industry, whose work unit is closely related to health services, has two main categories in its business activities. The first category relates to the patient service process, which refers to all work, either proactive and reactive, and focuses on short-term outcomes. The second category deals with increasing operational activities to be more effective and efficient which refers to jobs that make operating activities more efficient, and focus on long-term results. Both activities are a challenge as well as a priority agenda for hospitals in implementing continuous improvement efforts. What is needed by the hospital is a systematic approach that is carried out continuously so that an activity that will become a culture in the hospital service system can be embedded. The effort to implement continuous improvement culture at the hospital is by introducing to all hospital staff that the improvement effort is not about a method or a set of tools that are able to solve the existing problems in a short time (Winkelman, & Choo 2003).

Esummi Hospital knowledge management activities are aimed at achieving certain outcomes such as shared knowledge, improved performance, competitive advantage, or higher levels of innovation. The concept of knowledge management includes HR management and information technology (IT) whose purpose is to reach a good hospital organization so that it can win business competition. The development of information technology plays an important role in the concept of knowledge management which cannot be separated from the management of patient services in the hospital. This condition requires new ways of addressing all the problems of hospital activities that occur in order to survive. The importance of HR quality is one of the responses in addressing these changes, and this of course requires efforts to improve and develop HR. In connection with this matter, the role of science is becoming more prominent because only with knowledge all the changes can be addressed appropriately. It means that education plays an important role in preparing quality and competitive human resources.

The implementation of knowledge management will have a positive influence on the company's business processes directly and indirectly, some of the benefits of knowledge management for companies include: (1) With a well-structured knowledge source, the company will be easier to use that knowledge for other contexts, so that the hospital can save time and money; (2) The source of knowledge will provide convenience to each hospital staff to utilize it, so that the process of utilizing knowledge in the hospital environment will increase; in the end of process, creativity and innovation will be encouraged more broadly and each hospital staff can improve their competence; (3) The hospital will be able to easily adapt to changes in the business environment; (4) Existing knowledge can be reused for the process or service to be developed, so that productivity of the hospital will increase.

Organizational Structure: Cross-Functional. Organizations can be seen from two different angles, including: (1) The structure in which the business environment requires customer-focused structures and cross-functional collaboration; (2) Capabilities, in which the business environment requires organizations to have the capability to learn, the capacity to change and have high accountability. Presidential Regulation of the Republic of Indonesia No. 77 of 2015, concerning effective, efficient and accountable hospital organization guidelines are implemented in order to achieve the vision and mission of the hospital in accordance with good corporate governance and good clinical governance. The structure of the hospital is considered to have an easy range of control because the hospital director can directly provide supervision to the direct staff, as well as the medical, nursing and medical support departments. Therefore, the level consists only of hospital directors, medical service divisions, nursing service divisions, general and financial divisions, and committees. It is intended to be able to cut operating costs which are certainly in accordance with government regulations and are able to work effectively. Esummi Hospital saw three aspects that exist in

a structure, including: (1) Puller (puller) is the part that provides input, namely the medical and nursing services division; (2) Core is the operational part of the hospital; the executive nurse, general practitioner and specialist; (3) Support is part of Puller and Core support so that both of these things can carry out their functions optimally. Support is part of the support in carrying out hospital operations; general and financial parts. These three aspects form a cross functional team which is a group of personnel who come from various functions or disciplines within an organization that has the same goal.

Esummi Hospital carries out the principle of Cross Functional Organization, in which the organization is oriented to a system that prioritizes patient service needs as a customer and the application of HR in forming Cross Functional Team in which each team has the responsibility to realize the system goals by making continuous improvements to the system. The Cross Functional Paradigm places the organization as a series of systems that are used to serve customer needs, as well as a collection of shared competencies and resources provided to meet customer needs. To deal with the ever-changing business environment conditions, Esummi Hospital must have a learning organization where all personnel have the ability to adapt to the trend of change and be able to adjust competencies to meet the demands of changes which will potentially be the determinants of organizational survival. Cross Functional Organization has advantages in terms of speed and complexity which focus on satisfying customer needs, creativity, learning and single point of contact.

Staffing: Job Description. In carrying out health service operations, Esummi Hospital which employs doctors and nurses must also be able to carry out work with existing job descriptions in which the assessment benchmark is in accordance with what the company's expectation with the provision of work assessments made twice a year. Basically, the job description is a formal document of the organization which contains a summary of important information about a position to facilitate differentiating positions from one another in Esummi Hospital. This job description is arranged in a structured format so that information is easily understood by all parties involved in this company. Job descriptions at Esummi Hospital must be clearly defined for each position, so that the official knows the duties and responsibilities he/she must do. Job description will provide assertiveness and standard tasks that must be achieved by an official who holds the position. Meanwhile, competence is a standard that must be fulfilled from a position. It is also supported by supporting/expert staff as advisory boards, who are also responsible for services and can provide operational advice and technical assistance at the hospital.

In order to achieve its objectives, in realizing its existence, an organization requires effective HR planning. Human resource planning is a management process in determining the movement of organizational human resources from a desired position in the future, while human resources are a set of processes and activities carried out jointly by HR managers and line managers to solve organizational problems that related to humans. The unification and coordination of human resources in hospitals requires human resources with the ability and mastery to cover aspects of management, legal aspects, and organizational culture. The comprehensiveness of this aspect of HR needs to be studied and developed in conjunction with the physical development of the hospital based on a framework of thought regarding the medical / epidemiological feasibility of the Esummi Hospital project. Therefore, HR needs can be expressed in the following sections: (1) HR needs for public services in hospitals; (2) HR needs for superior hospital services are in accordance to the planning. Even so, new hospital HR planning for both medical and non-medical human resources including recruitment-retention-release strategies of each HR need is made in more detail in the preparation of the Master Plan.

The addition of the availability of hospital operational workforce from the implementation level to the director level is discussed at the monthly HRD meetings scheduled for the third week. The HRD meeting is attended by all managers and directors only, where previously there was a workload analysis record made by the manager related to the addition of staffs at Esummi Hospital according to the needs of units/ sections. In the workforce recruitment, hospital prioritizes the community around the hospital and prioritize the families of the workers who have worked firstly in the hospital. However, it is still through

the selection of recruitment teams from hospital HRDs by prioritizing competencies that are in line with job formation.

Systems: Lean Management & Customer Relationship Management. Lean management is required in the work process in the entire value chain of the organization so that various forms of potential waste can be prevented. The hospital, which focuses on the operation of health services specifically for NHI-IHC participants, has several ways so that the process can provide maximum service, including the application of Lean Management function in the Blue Print Service, in which the goal is to simplify process and dispose of waste in the process in order to be able to provide better services from other existing places.

There are four operational “times” that must be considered and carried out by the hospital workers in the work process so that patients feel the comfort and satisfaction of medical services, among others: (1) On time which means that the DPC service at the clinic is always on time or comes before the practice hours begin; (2) Response time which means that in handling medical emergencies or patient complaints for medical or general problems, it is immediately/quickly responded to and followed up according to the problems of the patients or their family; (3) Waiting time means that it does not make the patients or his family wait in a long time to get medical services, medical information and/or handling complaints from the patients regarding medical/general services at the hospital; (4) Time motion means to shorten the service time experienced by the patients from the beginning process in the hospital until being examined and following up on the medical treatment until the patient returning home feeling satisfied with the services provided by the hospital. In supporting these processes and systems, Esummi Hospital is also assisted by a marketing system using CRM (Customer Relationship Management) in which this system is a marketing tool that builds close relationships between companies, i.e. hospitals and patients. In this system, it is expected that various service matters at Esummi Hospital related to planning, implementation, control and evaluation, budgets, and awards can be run optimally by the hospital.

Style: Transformation. The leadership style applied at Esummi Hospital is situational leadership that focuses on two basic concepts, namely the combination of leadership style and the development stage of the individual or group maturity level. According to Harsey and Blanchard, there are four leadership styles (S1 to S4) that are adjusted to the stage of developing worker ability (D1 to D4). It is expected that the hospital is able to run this leadership style model, starting when the company is established, in accordance with the existing timeframe, to be able to become a hospital that is able to optimal service, and be able to develop its employees as the core of the company’s success.



Figure 4 – Leadership Style

Leadership Situation S1 (Telling/Directing). In this situation, all hospital workers are still in the initial process, who do not know the pattern of good and fast work, and the tasks run very long because they are still hesitant to try something new. So, the leader must carry out

a role to direct. At this stage, attention is still intended to develop employee competence that is practically not well developed. Basically, in this situation, employees only do what is ordered by the leader.

Leadership Situation S2 (Selling/Coaching). This situation occurs when all hospital workers still lack competence, but they have the desire to work and want to try new things. In this situation, the hospital director has to give advice more on the implementation of various jobs than to instruct the employees to do the work in detail. Therefore, the leader must try to "sell" various ideas about how to carry out more effective and efficient work that so that the employee motivation can be further enhanced in which they can complete the task properly and correctly.

Leadership Situation S3 (Participating/Supporting). In this situation, all hospital staff have high competence, but they have a feeling of insecurity to do the job. In this situation, the leader must show what must be carried out by the employees and ask the employees to work together to carry out the work of their duties because they have the ability to do the work. In this situation, the hospital director must also motivate/encourage the hospital employees with the aim of increasing their confidence so that they are able to carry out their duties.

Leadership Situation S4 (Delegating/Observing). In this situation, all the officers in Esummi Hospital had the competence and also high commitment to complete the task so that the leader could delegate the work to the employees. Leaders in this situation have a focus on work and a low working relationship with the employees. Employees in this situation need little support from leaders because they can work independently. It is expected that this situational model leadership pattern can be implemented.

The rapid development of medical technology, the shift in disease patterns, the fluctuating changes in government policies in NHI-IHC, and all of these dynamic conditions have caused the hospital business environment to become increasingly complex and rapidly changing. Regarding to these conditions, every hospital is required to immediately change or carry out transformation and adapt to changes in the hospital business environment that was originally a competitor and then became a partnership. This transformation process is carried out through the transformation of patient service governance as well as the transformation of human resources. Quality control and cost control are carried out in the transformation of patient service governance. Meanwhile, the transformation of the HR function is intended to produce HR who have the capability to participate in the organizational change process.

CONCLUSION

Esummi Hospital Operations carry out Continuous Improvement and Knowledge Management which aims to find and get the best form and solution of problems that often arise during the patient service process, which results will continue to survive without any improvement in service and or develop better with the improvement of the system technology service and worker competency to the patient service. It depends on the assessment on the level of patient satisfaction when they get health care at the hospital.

Esummi Hospital carries out the principle of Cross Functional Organization, in which the organization is oriented to a system that prioritizes patient service needs as the customer and the implementation of HR that forms a Cross Functional Team where each team has the responsibility to realize the system goals by making continuous improvements to the system. The Cross Functional Paradigm places the organization as a series of systems that is used to serve customer needs as a collection of shared competencies and resources that is provided to meet customer needs. To deal with the ever-changing business environment conditions, Esummi Hospital must have a learning organization in which all personnel have the ability to adapt to the trend of change and are able to adjust competencies to meet the demands for changes that occur or which will potentially occur; it will be the determinants of survival of the organization. Cross Functional Organization has advantages in terms of speed, complexity, focusing on satisfying customer needs, creativity, learning and single point of contact.

SUGGESTIONS

Human resource management in a hospital should be carried out by building the character of hospital workers to have the senses of organization and competencies that are always upgraded and prioritize the safety of patients in the health service.

REFERENCES

1. Walker, J., Pan, E., Johnston, D., Adler-Milstein, J., Bates, D. W., & Middleton, B. (2005). The Value of Health Care Information Exchange And Interoperability: There is a business case to be made for spending money on a fully standardized nationwide system. *Health affairs*, 24(Suppl1), W5-10.
2. Gering, J., & Conner, J. (2002). A strategic approach to employee retention. *Healthcare Financial Management*, 56(11), 40-44.
3. Voelker, K. E., Rakich, J. S., & French, G. R. (2001). The balanced scorecard in healthcare organizations: a performance measurement and strategic planning methodology. *Hospital topics*, 79(3), 13-24.
4. Weingart, S. N., Iezzoni, L. I., Davis, R. B., Palmer, R. H., Cahalane, M., Hamel, M. B., ... & Banks, N. J. (2000). Use of administrative data to find substandard care: validation of the complications screening program. *Medical care*, 796-806.
5. Ferris, T. G., Marino, B. L., Homer, C. J., & Perrin, J. M. (2003). Are hospital characteristics associated with parental views of pediatric inpatient care quality?. *Pediatrics*, 111(2), 308-314.
6. Ayanian, J. Z., & Weissman, J. S. (2002). Teaching hospitals and quality of care: a review of the literature. *The Milbank Quarterly*, 80(3), 569-593.
7. Bamberger, P. A., Meshoulam, I., & Biron, M. (2014). *Human resource strategy: Formulation, implementation, and impact*. Routledge.
8. Bowen, J., & Ford, R. C. (2004). What experts say about managing hospitality service delivery systems. *International journal of contemporary hospitality management*, 16(7), 394-401.
9. Mok, C., Sparks, B., & Kadampully, J. (2013). *Service quality management in hospitality, tourism, and leisure*. Routledge.
10. Banham, L., & Connelly, J. (2002). Skill mix, doctors and nurses: substitution or diversification? *Journal of Management in Medicine*, 16(4), 259-270.
11. Winkelman, W. J., & Choo, C. W. (2003). Provider-sponsored virtual communities for chronic patients: improving health outcomes through organizational patient-centred knowledge management. *Health expectations*, 6(4), 352-358.

DOI <https://doi.org/10.18551/rjoas.2018-11.28>

CONTRIBUTION OF ORGANIZATIONAL JUSTICE AND ORGANIZATIONAL SUPPORT TO EMPLOYEE ENGAGEMENT AND ITS IMPACT ON EMPLOYEES PERFORMANCE

Wirakusuma I Nyoman*, Surya Ida Bagus Ketut
Management Program, University of Udayana, Bali, Indonesia
*E-mail: nyomanwirakusuma@gmail.com

ABSTRACT

The purpose of this study was to analyze how the contribution of organizational fairness and organizational support to employee engagement and its impact on employee performance. This research was conducted at PT. Astra International AUTO 2000 Cokroaminoto on sales staff of 50 employees with saturated sample method. Data were collected by distributing questionnaires and using Partial Least Square (PLS) as a technique of data analysis. The results of this study show that organizational fairness has a positive and significant impact on organizational support, organizational support has a positive and significant effect on employee engagement, organizational fairness has a positive and significant impact on employee engagement, in addition this research also revealed that employee engagement have a positive and significant impact on performance employees. the practical implications in this study of employees in AUTO 2000 companies perform well in group work) as well as upholding the way group work is compared to working individually. It appears that employees in the company AUTO 2000 have an attachment to their work. It is expected that the boss needs to know the importance of knowledge of justice and organizational support, when employees feel fair and get good support from employers so that employees will show good work which will have a positive impact on AUTO 2000 Cokroaminoto.

KEY WORDS

Organizational justice, organizational support, employee engagement, job, performance.

Every company will always try to get the best performance from its employees, in the hope that what the company's goals will be achieved. The role of human resources as one of the company's most important assets is not only seen from the results of work productivity but also seen from the quality of work produced. Therefore, employee performance is something that deserves important attention from the company. Given the importance of the role of employee performance for organizational success, understanding related factors that can improve employee performance itself is important and important (Ardi et al., 2017).

In responding to the challenges of higher productivity and quality of work, management can no longer rely on human resource management policies that are oriented to employee satisfaction or employee commitment to the organization. To overcome competition and answer the challenges of the organizational environment, management requires employees who have a high level of attachment to their work (Saroyeni, 2012). Individual involvement or employee involvement that allows individuals to develop emotional relationships with the organization in which they work, feel the same fate and responsibility in achieving success in achieving goals through investing in attention, emotional, technical and intellectual competencies on an ongoing basis. An understanding of the business environment, communication skills and emotional stability of individual employees will make a positive contribution to the transformation process to realize the vision of the organization so that they can be effective agents of change in pushing towards the expected conditions.

Ulrich (2007: 32) said that successful organizations depart from 3 important qualities that must be present in the employee, namely: competence, involvement, and contribution. It is important to realize that work performance and organizational success do not only depend on the competencies or cognitive skills that employees have, but also depend on how employees respond to the work and organization they work for. Organizations have long been interested in discussions about how thoughts and feelings employees feel about their

work, and about whether employees have a desire to dedicate themselves to the organization. The study of this problem is closely related to a concept called employee involvement or in some instances which is often referred to as job involvement (Putri, 2013).

Engagement to employees will emerge when employees have high morale. This is in line with the opinion of Bowles & Cooper (2009) who said that involvement is the result of high morale. Employees will work enthusiastically to produce more and better. Employee behavior is what is called the behavior of employees who have involvement. In other words, morale is an aspect that must first appear in employees before employees feel involved.

According to Macey et al., (2009) feelings of involvement are relationships, involvement, commitment, desire to contribute, a sense of belonging, loyalty, and a sense of pride in work and also the company. When employees are involved (involved) employees have an awareness of the purpose of their role to provide services so as to make employees provide all their best abilities. High attachments affect employees in completing work (tend to have satisfactory work quality) and will have an impact on the low desire to leave work (Schiemann, 2011).

Employee involvement in Indonesia has long been in the spotlight because the majority of employees in Indonesia have low employee involvement. The results of the Gallup survey presented recently at the Breakfast Meeting of the HR Director organized by PMSM Indonesia in Jakarta stated that nearly 80% of workers in Indonesia were categorized as not involved in the workplace. The details only 13% of workers were fully involved, 76% were not involved, and 11% were actively released. Compared to other countries in Asean, Indonesia's position in terms of workers involved is only better than Vietnam, still losing to Singapore, Thailand, Malaysia and the Philippines. This proves that there are still many employees and elements of companies or institutions in Indonesia that have not given more attention to employee involvement.

To foster employee engagement in the company, the management must develop a participatory leadership style, support employees and apply justice in determining policies to employees especially procedural justice consistently in each line of management (Saroyeni, 2012). When employees have a high perception of justice in the organization, it is certain that they feel obliged or required to be fair in playing their role by giving a greater portion of the engagement rate. On the other hand, the perception of low justice is caused by employees withdrawing and releasing themselves from their work roles (Margaretha et al, 2012).

LITERATURE REVIEW

Organizational Justice. Organizational justice describes the individual's perception of the treatment received from an organization and the behavioral reaction to that perception. Organizational justice can also be defined as an equality study in the workplace (Fatimah et al., 2011). The organizational framework refers to justice and ethical behavior in an organization. Organizational justice is defined as a personal feeling of fair wages and benefits (Farahbod, 2013). Organizational justice emphasizes manager decisions, perceived equality, the effects of justice and the relationship between individuals and their work environment and describes individual perceptions of justice in the workplace. Greenberg & Baron (2003) describe organizational justice as individual perceptions of justice in the decision-making process and the distribution of results that have been received by individuals. Employees consider their organization fair when they believe that the results they receive and how they are received are fair. An important element of organizational justice is an individual's perception of justice. In other words, justice is subjective, and lies in individual perceptions (Sekarwangi, 2014).

Organizational Support. Organizational support can be defined as employees' perceptions of the extent to which the organization supports employees and the extent to which the organization is prepared to provide assistance when needed (Mujiasih, 2015). Perception of organizational support is a person's belief that the organization in which he works values his contribution and cares for his welfare. Perceived organizational support is also seen as a guarantee that the organization will help employees when they need help to

carry out their work and tasks effectively (Rasheed et al., 2013). Perception of organizational support is considered as a global belief formed by each employee regarding their assessment of organizational policies and procedures established based on their experience of organizational policies and processes, the acceptance of resources, interaction with supervisors and their perception of the organization's concern for their welfare (Yasar et al., 2014).

Employee Engagement. Employees who have engagement with the organization will be committed emotionally and intellectually to the organization. With this commitment, employees will give their best effort beyond what is expected in a job. Organizational commitment is different from engagement which refers to the attitude and binding of someone to their organization. Engagement is not an attitude, this is the level at which someone pays attention and has an attachment to performance in their role (Welch, 2011). Engagement is also different from organizational citizenship behavior, OCB involves volunteerism and informal behavior that can help co-workers and organizations, while engagement focuses on the role of a person's formal performance beyond extra-role and voluntary behavior (Saks, 2006). Rafferty, et.al. in Saroyeni (2012) revealed differences in commitment and citizenship behavior with individual attachments because commitment and citizenship behavior is a unidirectional reaction from individual employees to the organization while individual attachment is the result of a two-way interaction process between management and employees. According to Margaretha et al. (2012) closer engagement is related to the construct of work engagement. Job involvement is defined as a cognitive or belief in the identification of psychology. This is a little different from engagement because it is more related to how someone empowers them when they work which includes emotional and behavioral aspects. Employee engagement is the result of a cognitive decision about one's ability to satisfy the needs of work and is tied to one's self-image (Putri, 2013).

Employee performance. A person's willingness and skills are not effective enough to do something without a clear understanding of what is done and how to do it. Performance is a real behavior that is displayed by everyone as work performance produced by employees in accordance with their role in the company. Based on some understanding of employee performance that has been described by experts, it can be stated that employee performance is the achievement of employee work on the duties and authorities that have been given by the company in accordance with the capabilities and competencies of the employee both in terms of quantity and quality to achieve goals, vision and mission of the company. To determine employee performance, it is necessary to conduct a performance appraisal process. There are five parties that can assess employee performance, namely: direct supervisor, co-workers, self-evaluation, direct subordinates, a comprehensive approach that is 360 degrees (Robbins, 2015).

Hypotheses:

- H1: Organizational justice has a positive effect on organizational support;
- H2: Organizational support has a positive effect on employee engagement
- H3: Organizational justice has a positive effect on employee engagement;
- H4: Employee engagement has a positive effect on employee performance.

METHODS OF RESEARCH

The population in this study were all sales employees of PT. Astra International Auto 2000 Cokroaminoto has 50 employees. This study uses saturated samples, namely all employees in the sales department of PT. Astra International Auto 2000 Cokroaminoto totaling 50 employees. To obtain the data to be examined, researchers used data collection techniques using a questionnaire. Likert scale can be used to measure attitudes, opinions or perceptions of a person or group of people towards social phenomena. This study uses descriptive statistics and inferential statistics for data analysis. Descriptive statistics are used to describe the demographic data of respondents presented through tables, average calculations, and percentage calculations, while inferential statistics are used to test

hypotheses. This research uses SEM (Structural Equation Modeling) analysis technique based on component or variance, namely PLS (Partial Least Square).

RESULTS AND DISCUSSION

In this structural model, there are three dependent variables, namely: organizational support (X2), employee engagement (Y1), and employee performance (Y2). The coefficient of determination (R^2) of each dependent variable can be presented in Table 1 below:

Table 1 – R-Square

Variable	R-Square
Org. Support	0.951
Employee Engagement	0.917
Employee Performance	0.978

Source: Primary Data, 2018.

The R-square value of the organizational support construct of 0.951 in Table 5.9 can be interpreted that 95.10% of the construct variability of organizational support is explained by organizational justice, while 4.90% is explained by variables outside the model. Likewise, the employee engagement construct with R-square value of 0.917 means that 91.70% of the variability is explained by organizational justice and organizational support, while 8.30% is explained by variables outside the model. The R-square value of the employee performance construct of 0.978 can be interpreted that 97.80% of the construct variability of employee performance is explained by the employee engagement construct, while 2.80% is explained by variables outside the model.

This study uses the Partial Least Square (PLS) analysis approach to test and analyze the research hypotheses previously stated. The results of empirical research model analysis using Partial Least Square (PLS) analysis tools can be seen in Table 2.

Table 2 – Path Coefficients

Hypotheses	Original Sample (O)	t-statistic	p Values	Description
H ₁	0.989	179.706	0.000	Sig.
H ₂	0.438	2.274	0.006	Sig.
H ₃	0.540	2.784	0.000	Sig.
H ₄	0.958	35.744	0.023	Sig.

Source: Primary Data, 2018.

Based on Table 2 it can be explained that organizational justice has a positive and significant effect on organizational support with a correlation coefficient of 0.989 and a statistical t value of 179.706 (t value 179.706 > t table 1.96). This means that the higher the organizational justice perceived by employees, the higher the organizational support they have. The results of this study indicate that managers or superiors must show fair attitude to all employees in accordance with their input and output so that employees feel supported by the organization that makes these employees do their jobs better. Organizations must show that they can be fair to each employee without differentiating them by developing policies that allow managers to make decisions fairly in fulfilling the rights and needs of their employees. The results of this study are supported by Fu (2012) which shows a significant relationship between organizational justice and perceived organizational support. A positive relationship between distributive justice and organizational support perceptions among managers of women who have a high and average level of awareness, but the effects of distributive justice and perceptions of organizational support are more apparent to managers of women with lower levels of awareness, who generally have perceptions of organizational support which is higher than those who have a low level of consciousness.

Organizational support has a positive and significant effect on employee engagement with a correlation coefficient of 0.438 and a statistical t value of 2,274 (t value value 2,274 >

value of t table 1,96). This means that the higher the perception of organizational support that the company has, the higher the level of engagement that employees have. The higher the organizational support perceived by employees, the higher the level of engagement that employees have. High perception of organizational support can increase the positive effects of employee engagement. Voluntary willingness of employees with positive emotions to be involved and drifting with their work is consistent with their positive perception of the support provided by their organization. Employee engagement is more likely to have a beneficial impact such as increased employee productivity if employees feel motivated by the support and attention of the company. The results of this study are supported by the results of research conducted by Saks (2006) regarding the relationship between the perceptions of organizational support and employee engagement shows that employees who feel a high level of support are more likely to have a level of attachment or engagement to their work or organization. The same research results were also shown by Ahmed (2015) who found that perceived support by employees would affect his engagement with the company. Rich (2010) in his research on 245 firefighters in four different places stated that individuals will feel more attached / demoted to their work if they have a high level of organizational support perception.

Organizational justice has a positive and significant effect on employee engagement with a correlation coefficient of 0.540 and a statistical t value of 2.784 (t value of 2.784 > t table value of 1.96). This means that the higher the organizational justice perceived by employees, the higher the engagement that is owned by the employee. In the organization, this is important especially in terms of distributing rewards to employees and the procedures used to allocate them. Distributive justice is related to one's perception of the outcome of the decision, to assess fair distribution or cannot be seen from the upholding of the applicable regulations. If the agreed decision is not carried out properly or partially, the justice will not be achieved. This will determine the level of employee engagement, if the justice perceived by employees is high then he will comply with the regulations made by the organization, then engagement will be achieved. The results of this study are supported by research conducted by Park et al. (2016) in his research showed a positive relationship between organizational justice and self-leadership and employee engagement. Today's companies need employees who have engagement to be key in creating change and resilience in the organization. Similar results were also expressed by Haifani et al. (2017) where procedural justice has a positive effect on employee engagement. Organizational justice factors that are felt by employees will certainly bring stronger employee engagement with their organization.

Employee engagement has a positive and significant effect on employee performance with a correlation coefficient of 0.958 and a t statistic value of 35.744 (t value 35.744 > t table 1.96). This means that the better the engagement that the employee has, the better the performance of the employee. It is known that employee engagement is one of the important aspects that most affect employee performance, so that the availability of support at work is needed, feeling safe, fair and meaningful in the workplace. With this in mind, employees can feel engaged with the company and can improve their performance. Companies with engaged employees have relatively low turnover rates, high productivity and customer satisfaction. On the other hand, companies with employees who are not engaged are shown by low employee commitment, increased absenteeism and decreasing employee productivity. The results of this study supported by research conducted by Kazimoto (2016) in his research on employee engagement and organizational performance in 120 employees in the retail industry in Uganda showed that there was a positive and significant relationship between employee engagement and performance. A high level of employee engagement will be able to increase its involvement in work that will motivate employees to increase their productivity.

CONCLUSION AND SUGGESTIONS

Organizational justice has a positive and significant influence on organizational support. This means that the higher the organizational justice perceived by employees, the

higher the organizational support felt by employees. The results of this study indicate that managers or superiors must pay more attention and support employees to enable them to do work better.

Organizational support perceived by employees has a positive and significant effect on employee engagement. This means that the higher the organizational support perceived by employees, the higher the level of employee engagement that is owned by employees. Perception of high organizational support can increase the positive effects of employee engagement on employee productivity.

Organizational justice has a positive and significant effect on employee engagement. This means that the higher the organizational justice perceived by employees, the higher the employee engagement owned by employees. In the organization this is important to do especially in terms of distributing rewards to employees and the procedures used to allocate them.

Employee engagement has a positive and significant effect on employee performance. This means that the higher the employee engagement that is owned by the employee, the better the performance of the employee. It is known that employee engagement is one of the things that most influences employee performance, so that the availability of support at work is needed, feeling safe, fair and meaningful in the workplace. With this in mind, employees can feel engaged with the company and can improve their performance.

Future research needs to consider using other constructs such as organizational culture and leadership that can be predictors of employee engagement and how it affects employee performance. Based on the results of the study, the authors suggest that it is expected that in the next research it is necessary to examine the AUTO 2000 companies in other branches or can use research respondents on employees who work in government agencies. Then it can be compared to the variables of organizational justice, organizational support, employee engagement and employee performance in private employees and civil servants.

Based on research that has been done several limitations in this study. Only limited to the AUTO 2000 company research at Cokroaminoto, this research cannot be generalized to other AUTO 2000 branch companies. Time limitations make the writer only able to research only one branch. It is expected that the next research needs to be examined in AUTO 2000 other branch companies or can use research respondents to employees who work in government agencies. Then it can be compared to the variables of organizational justice, organizational support, employee engagement and employee performance in private employees and civil servants.

REFERENCES

1. Ahmed, Ishfaq and Nawaz, Muhammad M. 2015. Antecedents and outcomes of perceived organizational support: a literature survey approach. *Journal of Management Development*. Vol. 34 No. 7, pp. 867-880.
2. Ardi, Venna T.P., Astuti, Endang S. dan Sulisty, M. Cahyo. 2017. Pengaruh Self Efficacy Employee Engagement dan Kinerja Karyawan (Studi pada Karyawan PT Telekomunikasi Indonesia Regional V Surabaya). *Jurnal Administrasi Bisnis*. Vol. 52 No. 1.
3. Bowles, D., & Cooper, C. 2009. *Employee morale: Driving performance in challenging times*. Basingstoke: Palgrave Macmillan.
4. Fatimah, O., Amiraa, A M., and Halim, F W. 2011. The Relationships between Organizational Justice, Organizational Citizenship Behavior and Job Satisfaction. *Pertanika J. Soc. Sci. & Hum*, 9, pp: 115-121.
5. Farahbod, Farzin,. Azadehdel, M.R., dan Jirdehi, M.N. 2013. Organizational justice, employees trust and organizational support. *Kuwait Chapter of Arabian Journal of Business and Management Review*. Vol. 3, No.2.
6. Forootan, Farideh. 2012. The role of perceived organizational support and career opportunities as moderators of the relationship between work engagement and job

- satisfaction. Thesis. The Faculty of the Department of Psychology San José State University
7. Fu, Yang and Lihua, Zhang. 2012. Organizational justice and perceived organizational support the moderating role of conscientiousness in China. *Nankai Business Review International*. Vol. 3 No. 2, pp. 145-166.
 8. Gallup. 2008. *Employee Engagement - What's Your Engagement Ratio?*. Gallup Inc.
 9. Gallup. 2004. *Study Engaged Employees Inspire Company Innovation*. Gallup Management Journal.
 10. Greenberg, Jerald & Robert A. Baron. 2003. *Behaviour in organization, understanding and managing the human side of work*. Third Edition. Allin and Bacon. A Division of Schuster. Massachusetts.
 11. Kazimoto, Paluku. 2016. Employee Engagement and Organizational Performance of Retails Enterprises. *American Journal of Industrial and Business Management*. Vol. 6, Pg. 516-525
 12. Macey, W.H., B. Schneider., K.M Barbera., S.A Young. 2009. *Employee Engagement: Tools for Analysis, Practice, and Competitive Advantage*. United States: Wiley-Blackwell
 13. Markos, Solomon and Sridevi, Sandhya M. 2010. Employee Engagement: The Key to Improving Performance. *International Journal of Business and Management*. Vol. 5, No. 12
 14. Margaretha, Meily & T. Elisabeth, Cintya Santosa. 2012. Keadilan procedural dan keadilan distributif sebagai prediktor employee engagement. *Jurnal Manajemen*, Vol.12, No.1, pp 103-114.
 15. Mathis, R.L. dan Jackson, J.H. 2006. *Human Resource Management, Terjemahan, Edisi Kesepuluh*. Jakarta: Salemba Empat.
 16. Park, Yukyung., Song, Ji Hoon., Lim, Doo Hun. 2016. Organizational justice and work engagement: the mediating effect of self-leadership. *Leadership & Organization Development Journal*. Vol. 37, Iss. 6, 711-729.
 17. Putri, Vicentia dan Liestiawati, Fibria. 2013. Pengaruh employee engagement terhadap organizational citizenship behavior pada karyawan PT. sepatu bata, Tbk.. *Jurnal Universitas Indonesia*. 3, 17-25.
 18. Rasheed, Adnan., Khan, Sanam., And Ramzan, Muhammad. 2013. Antecedents and Consequences of Employee Engagement: The Case of Pakistan. *Journal of Business Studies Quarterly*. Vol. 4, No. 4. Pp 183-200.
 19. Rich, Bruce L., Lepine, J.A., and Crawford, Eean R. 2010. Job engagement : antecedents and effects on job performance. *Academy of Management Journal*. Vol. 53, No. 3, Pp. 617–635.
 20. Saks, A.M. 2006. Antecedents and consequences of employee engagement. *Journal of Managerial Psychology*. Vol. 21 No. 7, pp. 600-619.
 21. Saroyeni Piartrini, Putu. *Keterikatan Karyawan Merupakan Alternatif, Ketika Kepuasan Kerja dan Komitmen Tidak Cukup Untuk Meningkatkan Kinerja Organisasi*. Piramida. [S.I.], Nov. 2012. ISSN 1907-3275
 22. Scheimann, W.A. 2011. *Alignment, capability, engagement: pendekatan baru talent management untuk mendongkrak kinerja organisasi*. Penerjemah : Setyo Untoro. Jakarta. Penerbit PPM.
 23. Sekarwangi, Endah dan Meiyanto, Sito. 2014. Pengaruh Stress Kerja dan Keadilan Organisasi terhadap Employee engagement. *Jurnal Psikologi Universitas Gadjah Mada*. Vol. 2.
 24. Ulrich, D. 2007. The talent trifecta. *Workforce Management*, 86(15), 32-33.
 25. Welch, Mary. 2011. The evolution of the employee engagement concept: communication implications. *Corporate Communications: An International Journal*. Vol. 16 No. 4, pp. 328-346
 26. Yasar, M.F., Emhan, Abdurrahim and Ebere, Pauline. 2014. Analysis of Organizational Justice, Supervisor Support, and Organizational Commitment: A Case Study of Energy Sector in Nigeria. *Journal of Business Studies Quarterly*. Vol. 5, No. 3.

DOI <https://doi.org/10.18551/rjoas.2018-11.29>

THE INFLUENCE OF SPIRITUAL INTELLIGENCE ON JOB STRESS AND TURNOVER INTENTION

Manoppo Vinno Petrus

Doctoral Program, Faculty of Administrative Sciences, University of Brawijaya &
State University of Manado, Indonesia

Astuti Endang Siti, Rahardjo Kusdi, Kusumawati Andriani*

Business Administration, University of Brawijaya, Indonesia

*E-mail: andriani_kusuma@ub.ac.id

ABSTRACT

This research aims to analyze and explain the influence of spiritual intelligence, job stress on turnover intention nurse. Explanatory research is done by applying survey method. This research was conducted in 4 (four) private hospitals in Manado City, North Sulawesi Province, Indonesia. The population used in this study is all nursing staff who are permanent employees with total 522 nurses. The number of sample is 227 respondents by using probability random sampling method and measurement of questionnaire with Likert scale. The Likert scale is a more systematic way of scoring the index. The Likert scale in this study used five (5) levels: strongly disagree (STS), disagree (TS), Neutral (N), agree (S) and strongly agree (SS). Data analysis method used is GSCA by using GeSCA program. The result of the research on hypothesis shows there is negative significant influence between spiritual intelligence to job stress, there is significant negative influence between spiritual intelligence on turnover intention and there is positive significant influence between job stress to turnover intention. The conclusion is spiritual intelligence has a significant and negative effect on job stress, spiritual intelligence has a significant and negative effect on turnover intention and positive significant influence between job stress to turnover intention.

KEY WORDS

Spiritual intelligence, job, stress, turnover intention.

An organization can be said succeed in managing human resources if the policies implemented can maintain employee stability, in the sense of being able to keep low rate of employee turnover. Employee turnover is a phenomenon that often occurs within an organization. It could be a resignation from the organization, dismissal or death of an organization member. Employee turnover can occur voluntarily or involuntary. Voluntary turnover or quit is an employee's decision to leave the organization or company voluntarily due to factors of how attractive the current job is, and the availability of other work alternatives. On the other side, involuntary turnover or employee dismissal is an employer's decision to terminate a work relationship and be uncontrollable to the employee who is experiencing it (Robbins, 2006). Turnover intention can occur due to job stress. Job stress is an unpleasant emotional state of an person that occurs when he feels uncertain about his ability to overcome constraints or obstacles that have high values (McGrath, 1976).

Job stress is the main reason or "contribution" of people to leave (turnover) their work (Moore, 2002). The impacts arise from job stress are increased absenteeism and followed by increased intention to quit (turnover intention) and actual turnover, both of which are very detrimental to the organization (Luthans, 2011).

Spiritual intelligence is the best or the highest and complete intelligence compared with other intelligences because this intelligence is based on spirituality or the psyche of human (Zohar and Marshall, 2000). Working environment that engaged spirituality can affect an organization's success by reducing staff turnover, stress, fatigue, and nonattendance

(Moalemi, 2010; Eikzad, 2011). According to Chawla and Guda (2010) there is a strong negative relationship between spiritual intelligence and turnover intention.

LITERATURE REVIEW

Spiritual Intelligence. Zohar and Marshall (2000) respond Emmons challenge with their famous book, "Spiritual Quotient: Connecting with our Spiritual Intelligence". They describe the spiritual intelligence as the highest intelligence and defined it as the intelligence to achieve meaning or value, the core intelligence that put one's life in a broader and richer meaning, the intelligence to judge a person's actions or way of life more vigorously compared with others. In line with Emmons (2000), they also emphasize spiritual intelligence applies to humanist and atheist just as people who practice formal religious practices. They claimed that religion might improve spiritual intelligence, but spiritual intelligence is not dependent on religion. They also provide the criteria used to evaluate and measure someone's spiritual intelligence.

The results of Kathleen Noble's (2001) study described people with high spiritual intelligence have inner strength and resilience that makes them better able to adapt to overcome adversity. Kathleen Noble (2001) quoted resilience's definition from Norman Garmezy as " the process of, capacity for, or outcome of successful adaptation despite challenging or threatening circumstances".

Danah Zohar, in his book SQ: Spiritual Intelligence, The Ultimate Intelligence, assess that spiritual intelligence is a form of highest intelligence that combines two defined intelligences; intellectual intelligence and emotional intelligence. Spiritual intelligence is regarded as the highest intelligence because it is engaging one's ability to put meaning in everything and considered as a way to feel happiness. This intelligence is the intelligence that lifts the function of the soul as an internal self-device that has the ability and sensitivity in seeing the meaning that is behind a certain object or event. Technically, the spiritual intelligence strongly associated with the event of meaning and value was first conceived and discovered by Danah Zohar and Ian Marshall (2000). They bring up several indicators of high spiritual intelligence: the ability to be flexible, capacity to face and transcend pain, reluctance to cause unnecessary harm, dedicated and responsible leaders.

Job stress. Stress is an uncomfortable emotional state that occurs when a person feels unconvinced about his ability to overcome an important perceived challenge (McGrath, 1976). According to Davis and Newstrom (2008) job stress is a state of tension that affects the emotions, processes of the mind and the physical condition of a person. According to Davis and Newstrom (2008) job stress is caused by excessive workload, limited time in doing the job, lack of adequate responsibilities, differences in value with the company.

Turnover Intention. Turnover is the termination of an employee from his or her place of employment on a voluntary basis. Turnover intention is the tendency or intention of the employee to stop working from his work voluntarily at his own will (Zeffane, 1994). Robbins (1996), explains that turnover may occur voluntarily (voluntary turnover) or forced (involuntary turnover). According to Grant et al. (2001) turnover intention is an attitude tendencies or the degree to which an employee is likely to leave the organization or voluntarily resign from his job. Further described by Mobley, Horner and Holling Sworth, 1978 in Grant et al. (2001) the desire to move can be an early symptom of turnover in the company. The turnover intention can also be interpreted as the transfer of labor from the organization. Turnover may include resignation, transfer out of an organizational unit, dismissal or death of an organization member. According to Harnoto (2002) turnover intention by various matters concerning employee behavior, among others:, start being lazy at work, rising courage to violate work order, courage to oppose or protest to superiors, and losing seriousness to complete all employee responsibilities.

Hypotheses and Research Models:

H₁: Spiritual Intelligence Significantly Effect Job Stress;

H₂: Spiritual Intelligence Significantly Effect Turnover Intention;

H₃: Job Stress Significantly Effect Turnover Intention.

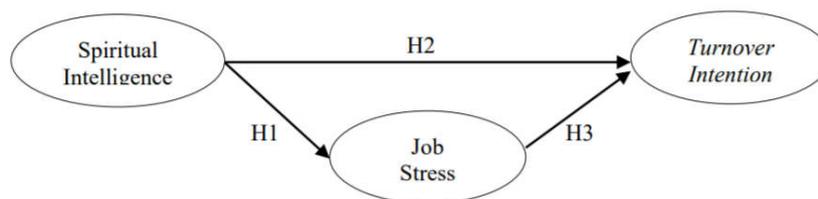


Figure 1 – Research Model

Research Variable and Indicator. Questionnaires in this study were compiled using Likert scale. Sofian Effendi in Singarimbun (1999) states that the Likert scale is a more systematic way of scoring the index. The Likert scale in this study used five (5) levels: strongly disagree (STS), disagree (TS), Neutral (N), agree (S) and strongly agree (SS).

METHODS OF RESEARCH

This type of research is explanatory research by applying survey method. The population used in this study is all nursing staff who are permanent employees, who work in four (4) private hospitals in Manado city with total 522 nurses. This study sizeing the samples using Slovin formula (1960) to obtain the total number of samples as many as 227 nurses. Based on the proposition number of nursing personnel in each hospital then the number of samples can be taken by random sampling by using proportional allocation.

The type of data in this study is quantitative data in the form of cross section data. While the data source comes from primary data and secondary data.

Validity Test is used to indicate the extent to which the data collected does not deviate from the condition of the variables in question. Validity is tested using Product Moment Pearson.

Convergent Validity 1st order is intended to find out whether the item is valid in measuring dimensions. Convergent validity 1st order of each item in measuring dimension is indicated by the size of the loading factor. An item is said to be valid if loading factor is positive and bigger 0.6. The results of complete testing can be seen in table 4.1. below this:

Based on the results of the analysis of 1st order measurement model can be seen that all items of each variables of spiritual intelligence, job stress and turnover intention variables result in a loading factor greater than 0.6. Thus the item can be declared valid or able to measure variables.

Table 1 – Convergent Validity 1st Order (Item)

Variable/ Dimension	Item	Loading Factor	Cut Off	Result
Spiritual Intelligence (X)	X1	0.820	0.6	Valid
	X2	0.833	0.6	Valid
	X3	0.794	0.6	Valid
Job Stress (Y1)	Y1.1	0.774	0.6	Valid
	Y1.2	0.902	0.6	Valid
	Y1.3	0.916	0.6	Valid
	Y1.4	0.884	0.6	Valid
Turnover Intention (Y2)	Y2.1	0.903	0.6	Valid
	Y2.2	0.914	0.6	Valid
	Y2.3	0.923	0.6	Valid
	Y2.4	0.928	0.6	Valid

Source: Data processed by researchers, 2018.

Reliability Test is a tool to measure a phenomenon at different times and always give the same results. Reliability is tested using Alfa Cronbach formulation. Testing criteria if Cronbach's Alpha value is greater than 0.6 and discriminant reliability (AVE) value greater than or equal to 0.5 it can be stated that the construct has been reliable. The results of complete testing can be seen in Table 1.

The reliability test above informs that ideal variables of spiritual intelligence, job stress and turnover intention variables produce AVE values greater than 0.5. Thus, all items that measure variables are declared reliable or reliable. The reliability test above also informs that Cronbach's Alpha variables of spiritual intelligence, job stress and turnover intention variables worth greater than 0.6. Thus, all items that measure variables are declared reliable or reliable.

Descriptive statistical analysis Is used to determine the frequency distribution of respondents' answers from the questionnaire and describe the variables studied in depth.

Inferential statistical analysis Is used by GSCA for scores (not scalable) and can also be applied to very small samples and enables multicollinearity (Ghozali, 2008). The analytical tool used is GeSCA can be applied to structural models whose theoretical foundations are well established as confirmatory analyzes or on models whose theoretical basis is not yet well established, including reflective and formative indicators, the samples should not be large and the data should not be normally distributed.

RESULTS OF STUDY

Goodness of FIT Model. Based on a summary of Table 1. it can be seen that the value of GFI of 0.994 indicates that the value of GFI is greater than 0.9. Thus the research model is declared feasible. FIT value of 0.583, this can show that the variability of turnover intention variables can be explained by spiritual intelligence variables and job stress as a whole by 58.3%, while the remaining 41.7% is explained by other variables not discussed in this study.

Table 2 – Goodness of FIT Model

Model Fit	
FIT	0.583
AFIT	0.579
GFI	0.994

Table 3 – Testing Hypothesis

Path Coefficients			
	Estimate	SE	CR
SI->JS	-0.155	0.076	2.05*
SI->TI	-0.154	0.064	2.43*
JS->TI	0.508	0.082	6.19*

*p < .05

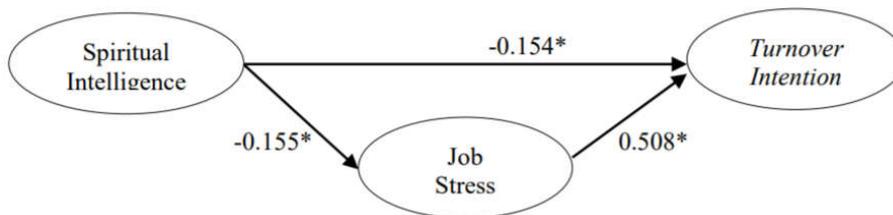


Figure 2 – Path Analysis Result

Hypothesis testing. Table 3 shows three test relationships between variables. It consists of spiritual intelligence towards job stress, spiritual intelligence towards turnover intention and job stress towards turnover intention. Out of the three, all indicates an significant relationship. The following will explain the relationship between each variable. Hypothesis test results as follows: (1) Hypothesis 1 is accepted. showing a significant negative influence of spiritual intelligence on job stress, (2) Hypothesis 2 is accepted, this shows significant negative effect of spiritual intelligence on turnover intention, (3) Hypothesis 3 is accepted, this shows a significant positive effect of job stress on turnover intention.

DISCUSSION OF RESULTS

The Influence of Spiritual Intelligence on Job Stress. Spiritual intelligence has a significant positive effect on job stress because it obtained path coefficient of -0.155 with a critical ratio (CR) of 2.05* greater than 1.96. This means the fifth hypothesis (H1) is accepted.

King (2008) states that spiritual intelligence acts as a disorder in the relationship of stress and nonconformity. Job stress essentially refers to the conditions of the workers who threaten the individual. These threats may arise from job demands or because of the lack of individual needs. Job stress arises as a form of disharmony of individuals with the environment. The results of this study do not support previous studies conducted by Javadein et al. (2015) who said that spiritual intelligence has a significant negative effect on job stress. Then also does not support research conducted by Dela Pena (2010) who said that spiritual intelligence has a positive effect is not significant on job stress. But it supports research conducted by Gorji et al. (2014) that spiritual intelligence has a significant positive effect on job stress.

The Influence of Spiritual Intelligence on Turnover Intention. Spiritual intelligence significantly negatively influences the turnover intention because the path coefficient is obtained -0.154 with the critical ratio (CR) of 2.43* which is greater than 1.96. This means the fourth hypothesis (H2) is accepted.

The application of spirituality in the workplace will stimulate employees to form a more positive perception of the organization so that employees will get change and achieve better adjustment through work with higher satisfaction, commitment to organization, organizational well-being and low willingness to turnover and absence Martin, et al. (2005).

The results of this study support previous studies conducted by Chawla and Guda (2010) who said that there is a strong negative relationship between spiritual intelligence and turnover intention and Rashvand and Bahrevar (2013) who also said that spiritual intelligence has a significant negative effect on turnover intention.

The Influence of Job Stress on Turnover Intention. Job stress has a significant positive effect on turnover intention because the obtained path coefficient of 0.508 with critical ratio (CR) of 6.19 is greater than 1.96. This means the fifth hypothesis (H3) is accepted.

A nursing staff in a private hospital in Manado city should serve patients for 8 hours a day as their primary duty. Working for 8 hours can potentially lead to job stress. The behaviour of any patient who is often fussy when examined can make the nursing personnel experience stress. Likewise with the behavior of colleagues who are less helpful and only help when needed. In accordance with Moore's theory (2002) which stated that job stress is the main reason that contributed people to leave their jobs. This condition puts stress on physically, causing them to have a desire to leave the job (turnover intention).

The results of this study do not support previous research conducted by Paille (2011) who said that job stress affects positively insignificant to turnover intention. On the contrary, the results of this study support previous studies conducted by Azlina et al. (2012); Arshadi and Damiri (2012); Mosadeghrad (2013); Qureshi et al. (2013) who say that job stress affects significant positive toward turnover intention. This means that the higher the work stress perceived, the higher the intention turnover.

Research Limitation. This study only uses 3 variables that are suspected as cause of turnover intention. The three variables are spiritual intelligence, job stress and turnover intention. If this research use involves the broader variables such as organizational culture and others, it will probably give different results and can lead to different cause of turnover intention. Respondents from this study were nursing personnel in 4 (four) private hospitals in Manado City, so the conclusion was not generally applicable to all nursing staff in this case nursing staff working in government hospitals as civil state apparatus (ASN).

CONCLUSION

The conclusion of this research is based on the research objectives: (1) Spiritual intelligence has a significant and negative effect on job stress, (2) Spiritual intelligence has a significant and negative effect on turnover intention, (3) Job stress has a significant and positive effect on turnover intention.

REFERENCES

1. Arshadi, N, Damiri, H. 2012. The Relationship of Job Stress with Turnover Intention and Job Performance: Moderating Role of OBSE. *Procedia - Social and Behavioral Sciences* 84 (2013) 706 – 710.
2. Azlina, N, Basrib, Y.M, Kennedy. 2012. Relationship Between Climate of Politics , Job Stress, Job Satisfaction and Turnover Intention Accounting Staff in Local Governments.
3. Bass, B.M. 1985, "From Transactional to Transformational Leadership : Learning to Share the Vision", *Organizational Dynamics* Vol. 18. No.3.
4. Davis, Keith and John W. Newstrom. 2008. *Perilaku Dalam Organisasi*. Jilid 1-2. Jakarta: PT. Erlangga.
5. Dela Pena III, S. 2010. Spiritual Intelligence and Work Stress among Basic Education Faculty of A Private Non-Sectarian School. *Liceo Journal of Higher Education Research Social Science Section*, Vol. 6 No. 2.
6. Ekong, E.A, Olusegun, A.A, Mukaila, O.A. 2013. Managerial Style and Staff Turnover in Nigerian Banks: A Comparative Analysis. *American International Journal of Social Science* Vol. 2 No. 6.
7. Emmons, Robert A. 2000. Spirituality and Intelligence: Problems and Prospects. *The International Journal for The Psychology of Religion*, 10(1), 57-64.
8. Ghozali, Imam. 2008. *Model Persamaan Struktural Konsep and Aplikasi dengan Program Amos 16.0*, Badan Penerbit UNDIP, Semarang.
9. Gorji, S.H, Mahmoudi, H.S, Lotfi, H. 2014. Relationship between Spiritual Intelligence and Job Stress in Male and Female Elementary Teachers, Behshahr, Iran. *Spectrum: A Journal of Multidisciplinary Research* Vol. 3 Issue 8.
10. Harnoto, 2002. *Manajemen Sumber Daya Manusia*. Prehallindo: Jakarta.
11. Javadein, S.R.S, Neshan, M.S, Moghaddam, M.M. 2015. Investigating the Effects of Spiritual and Emotional Intelligence on Nurses' Job Stress and Its Impact on Patient Satisfaction. *Global Journal of Management Studies and Researches*, 2(1), Pages: 1-8.
12. King, Ursula. 2008. *The Search for Spirituality: Our Global Quest for A Spiritual Life: Blue Bridge*.
13. Luthans, F. 2011. *Perilaku Organisasi*, Edisi Duabelas, Yogyakarta: Penerbit Andi.
14. Moalemi S. 2010. The Relationship Between Mental Health And Spiritual Intelligence In Sistan And Azad-Marzabadi E. et al. *Journal of Military Medicine*; 12(1):702-709.
15. Mosadeghrad, A. M. 2003. The Role of Participative Management (Suggestion System) in Hospital Effectiveness and Efficiency. *Research in Medical Sciences*, 8(3), 85-89.
16. McGrath, J. 1976. Stress and Behaviour in Organization. In M.D. Dunnette (Ed), *Handbook of Industrial and Organizational Psychology* (pp. 1351-1395) Chichago: Rand McNally.
17. Moore, K.A., 2002. Hospital Restructuring: Impact on Nurses Mediated by Social Support and A Perception of Challenge, *J. Health Hum. Serv. Adm*, 23: 490-517. PMID: 11924310.
18. Noble, K. 2001. *Riding the Windhorse: Spiritual Intelligence and the Growth of the Self*. Cresskill, NJ: Hampton Press.
19. Paillé, P. 2011. Stressful Work, Citizenship Behaviour and Intention to Leave the Organization in a High Turnover Environment: Examining the Mediating Role of Job Satisfaction. *Journal of Management Research*, Vol. 3, No. 1: E1.
20. Qureshi, M, I, Mehwish, I, Abbas,S,G, Hassan,U, Khan,K and Zaman,K. 2013. Relationship Between Job Stress, Workload, Environment and Employees Turnover

Intentions: What We Know, What Should We Know. *World Applied Sciences Journal* 23 (6): 764-770, 2013.

21. Rashvand, Omid, and Elham Bahrevar. 2013. "A Study of the Relationship among Spiritual Intelligence, Organizational Citizenship Behavior and Turnover Intentions." *International Journal of Research in Organizational Behaviour and Human Resource Management* 1.2: 25.
22. Robbins, Stephen P. 2006. *Organization Theory: Structure, Design and Applications*, Third Edition. Prentice Hall International Inc, Singapore.
23. Singarimbun, Masri and Sofian Effendi. 1989. *Metode Penelitian Survei*. Jakarta: LP3ES.
24. Zeffane, Rachid. 1994. Understanding Employee Turnover: The Need for A Contingency Approach, *International Journal of Manpower*, Vol. 15, No. 9, pp. 1-14.
25. Zohar, D. & Marshall, I. 2000. *SQ: Connecting With Our Spiritual Intelligence*. New York: Bloomsbury Publishing.

DOI <https://doi.org/10.18551/rjoas.2018-11.30>

CORPORATE SOCIAL RESPONSIBILITY IN PUBLIC RELATIONS: A STUDY OF STAKEHOLDERS' OPINIONS IN INDONESIA

Anggraini Choiria, Kriyantono Rachmat

University of Brawijaya, Indonesia

E-mail: choiriaanggraini@gmail.com

ABSTRACT

Research using this quantitative method concentrates on being able to find out stakeholder opinions on the implementation of CSR programs carried out by five companies in Indonesia, namely: (1) PT. Energasindo, PT. Sharp, PT. Pertamina, PT. Hongkong and Shanghai Banking Corporation (HSBC), PT Perusahaan Gas Negara (PGN). This research was conducted in the work area of each company spread in several cities such as: Bekasi, Karwang, Medan, Pontianak, Yogyakarta, Jakarta, Tangerang, Sidoarjo, and Pangkal Pinang. The survey that researchers did combines three scales to understand community opinion on CSR programs that have been rolled out by several companies. The three scale indicators include the CSR Index built by Dedy Prayogo and Yosef Hilarius; Chopra's Kanji Corporate Social Responsibility by Kanji and Chopra; last is the scale adopted from ISO 26000. This research is important to find out the stakeholder opinion on the CSR program that has been rolled out by the company considering that this opinion will have implications for the reputation of the company by the public at large. The results of this study indicate that in general stakeholders provide good opinions on the practice of implementing CSR by companies in Indonesia. However, in practice, the sustainability program category has not received a good assessment. Referring to this, the researcher offers a way to communicate this to the public with the concept of community involvement. The implementation of community involvement as a form of applicative communication for public relations to be able to dialogize with stakeholders through CSR

KEY WORDS

Corporate social responsibility, public relations, stakeholder management, opinion, survey, quantitative.

Sarman Simanjorang, Deputy I of the Organization and Institutional Affairs of the Central Board of the Social Welfare CSR Forum, said that not many companies in Indonesia are fully concerned about CSR (Wulandari, 2016). Though some researchers explain that CSR can help companies to promote company products (Arli and Tjiptono, 2013). Not only can it help promote products, CSR can also help communicate the company's identity to the public Verboven (2011). The other most important thing from the launch of CSR programs by companies can be a helper of the company when a crisis is caused by the public outrage (Kriyantono, 2015). Of course, if reviewed in more detail, this will have implications for public or community support for the sustainability of the company's operations.

This CSR will also have implications for the company's reputation and community support for the company. It also remembers that CSR is an important factor for consumers to assess the company's credibility and consideration in purchasing company products (Sen & Bhattacharya, 2001; Vanhamme and Grobбен, 2009) and especially for the mining and oil and gas industry, this program has a strategic position to build reciprocal relations between the corporation and its stakeholders (Prayogo, 2011). On a business basis, the results of the program evaluation can be used as an objective presentation of corporate social performance, which then becomes very useful to improve corporate image and consideration for potential investors to be able to collaborate with corporations (Orlitzky and John, 2001).

A similar statement was also conveyed by Regester and Larkin (2008) that three quarters of the population paid close attention to the company's reputation before buying products and 60% of consumers said that they avoided buying products from certain

companies because they still doubted the company's social, ethical and environmental record. Especially if at a time when the company is in a crisis position, CSR can be used as a strategy to be able to maintain the company's reputation, namely as a crisis management tool (Coombs, 1995; Dincer and Dincer, 2013; Tesler and Malone, 2008; Vanhamme and Grobbs, 2009), because each crisis raises public challenges about corporate social responsibility (Coombs, 2010; Ferguson, Wallace and Chandler, 2010).

In addition to the issue of community support and maintaining a reputation for harmony during the crisis, CSR is an important element of corporate dialogue with its stakeholders. Stakeholders in this context are groups of CSR stakeholders or more specifically researchers refer to the community. For the record, in this context the CSR beneficiary community of the company enters the company's external stakeholder section. This is evidenced by several studies which explain that many corporations rely on the end result of CSR (Bhattacharya, Kroschun, and Sen, 2009; Kriyantono, 2015) as an element of dialogue. Communities as part of stakeholders also become part of the overall strategic planning process in the organization (Freeman, 1984), because they are people who can influence and be influenced by company activities and decisions (Coombs, 2007; Dempsey, 2009; Freeman, 1984; and Grunig and Repper, 2008), including CSR activities.

In the context of communication, CSR is a long-term corporate social investment that is useful to build a corporate reputation in the eyes of stakeholders (Kriyantono, 2015; 2016), because it contributes positively to the improvement of social welfare (Bhattacharya, et al, 2009), not only for corporate benefits only, but also for employees, stakeholders, consumers, community, environment and society (Kanji and Chopra, 2010). Moreover, according to the presentation conveyed by the Register and Larkin (2008), the community is more likely to judge that the company is more socially responsible than just spending products at low prices. Harrison (2008) refers to this as a company performance that is defined as a demand for the company that the company not only produces and sells products but the company must also be able to manage its social and political environment.

However, this has not been well understood by companies in Indonesia. Evidently based on Sarman's explanation, there are only three companies that have good reputation in Indonesia, namely Unilever, Pertamina, and Telkom (Social Welfare CSR Forum, 2016). This is also reinforced by recent research which states that companies in Indonesia have a lower quality of corporate social responsibility (CSR) compared to Thai companies due to low company understanding of CSR practices (Suastha, 2016). So Sarman can classify that there are three types of companies in implementing CSR, namely: (1) companies that have committed to implement CSR, (2) companies that want to implement CSR but do not know how to channel it, (3) companies that only when asked to issue a program CSR (Thaha, 2016).

This statement was further strengthened by an explanation given by Eugene Tan, Co-director of the Center for Scholars Development Singapore Management University, that many companies that companies in ASEAN do not have regulations in implementing sustainable CSR (Suastha, 2016). However, this condition should be different from Indonesia because Indonesia already has a clear regulation for the implementation of CSR by its implementing companies is still low. Because of this, a research is needed to find out the implementation of CSR by companies in Indonesia, as expressed by Yanti Triwadianti, Chair of the ASEAN CSR Network, that the involvement of academics and research is an important key in encouraging sustainable business practices (Suastha, 2016). Specifically, more than that, there are facts that show that even though Indonesia has a regulation using the concept of mandatory approach to regulate corporate CSR activities, its implementation is still low and even only three corporations have a high commitment to CSR implementers and the company is wrong oil and gas is certainly a big question. Although Indonesia has obliged (mandatory approach) companies in Indonesia to implement CSR, but this cannot be used as a benchmark that the implementation of CSR in Indonesia is good (Kriyantono, 2015). Referring to these arguments and the facts conveyed that the 2016 Forkesos RI requires a study on the assessment of the implementation of CSR in Indonesia. One way to find out this

assessment is through stakeholder opinion which in this context is represented by the beneficiary community towards CSR implementation activities.

Therefore, based on several empirical arguments and the facts above, it becomes important to do a research to see the opinions of CSR beneficiaries as part of the company's stakeholders. Because of this it is quite urgent to be able to do a research with a focus on the formulation of the problem about the company's stakeholder opinion about the CSR implementation activities by the company. The opinion of the beneficiary is an essential matter because the opinions expressed will show the legitimacy given by the community to the company. Legitimacy is obtained from the approval of communities around the organization (Habermas, 1975, quoted in Culbertson, et al., 1993) and is built on two aspects: organizational competence (organization's competence) and organizational character (Veil et al., 2005). In addition, it refers to the findings of research conducted by Shah and Chen (2010) that CSR as a social aspect of a company that gets a positive assessment from the community will be able to improve the credibility and reputation of the company. In this regard, the formulation of the problem is answered by one frame of quantitative research method with the positivistic paradigm.

LITERATURE REVIEW

Corporate Social Responsibility (CSR) is a form of corporate social responsibility to the community voluntarily to create social welfare that focuses more on economic problems (Siltaoja, Malin, and Pyykkonen (2015). Van Marrewijk (2003) further defines CSR as a relationship Corporate social responsibility in the community regarding economic, social and environmental issues (in, Cho, Furey, and Mohr, 2016) More specifically Kim (2014) made six categories of CSR activities such as: (1) environmental stewardship, (2) philanthropic contribution, (3) educational commitments, (4) community / employee involvement, (5) public health commitments, and (6) sponsorship of cultural / sports activities (in, Cho, Furey, and Mohr, 2016) Referring to these six categories, it can be said that the greatest essence of the CSR concept is that the company is required to compensate each company for good activities directly. or will not directly affect the community around the company. This is because currently the public needs a lot of information and oversees the company's practices and contributions to the lives of surrounding communities through CSR (Lehtimaki, Kujala, and Heikkinen, 2011).

Furthermore, based on the literature review that researchers have done it can be seen that so far CSR and existing research focuses on several things such as: (1) Research on the influence of CSR on consumer behavior is carried out by Arli and Tjiptono (2013). This research was conducted in Indonesia using survey methods. In this study it can be seen that consumers will be more supportive of companies that carry out CSR with philanthropic concepts such as donations, direct assistance, and volunteerism. Arli and Tjiptono (2013) also added that through CSR companies can promote their products. (2) Furthermore, other studies on CSR discuss much about communicating CSR to the public as practiced by Verboven (2011). Verboven (2011) examines the use of slogans to communicate CSR and corporate identity to the public. Through qualitative research methods using rhetorical theory, it is found that the communication of CSR by chemical industries aims to obtain a "license" from the community so that the company can continue to operate. Next, another research on CSR leads to (3) the relationship between CSR and employees such as research conducted by Smith and Langford (2011). Smith and Langford (2011) use the survey method to find out about this and the results show that CSR carried out by companies can attract prospective employees and can better strengthen the relationship between employees and the company.

Next, other researches on CSR are involved (4) the influence of regulation on the implementation of CSR by companies such as those carried out by Kriyantono (2015). Research conducted by Kriyantono (2015) using this survey method shows that the main purpose of the regulation on CSR is to create social welfare for the community and in its implementation in Indonesia, the person considered the most important in the process of implementing a company's CSR is public relations. Several other studies that also reviewed

CSR were also carried out by Chapple and Moon (2005) with the aim of (5) observing the implementation of CSR in seven countries in Asia through the website. Chapple and Moon (2005) explained that the implementation of CSR in countries in Asia is homogeneous which is influenced by the stages of state development and globalization. However, it can be concluded that multinational companies in Asia implement CSR more comprehensively in the countries where they operate than their countries of origin. Research on CSR is also carried out by Zoller and Tener (2010) using (6) CSR as a tool for conducting environmental and stakeholder management. Zoller and Tener (2010) conclude that by being a "good neighbor" through CSR, companies can play a central role in making decisions in the community to gain legitimacy from the company's operations and can influence people's perceptions of environmental conditions that may need to be changed or given innovation.

Similarly, Zoller and Tener (2010) stated that CSR is used to shape community perceptions, O'Connor and Gronewold (2012) and Lehtimäki, Kujala, and Heikkinen (2011) also found similar results. O'Connor and Gronewold stated that (7) by making a comprehensive CSR communication especially on environmental issues for mining companies will help companies to be sustainable. Next Lehtimäki, Kujala, and Heikkinen (2011) also stated from the results of their research that (8) communicating CSR can reduce conflict tension and controversial situations in companies or investors in the company. The utilization of CSR for the benefit of one side of the company is not only revealed by the three studies above. Jamali (2008) also revealed that (9) CSR as a method to approach stakeholders. This is also further strengthened by the results of research conducted by Malin and Pyykkonen (2015) that (10) in the process every part of the company, especially employees, must be able to define CSR well that focuses on welfare.

Based on the explanation of several preliminary studies above, it can be seen that there is no single research on CSR that specifically examines stakeholder opinion through three measurement scales as well as a comprehensive one. Whereas on the one hand CSR through its dimensions has the potential as a medium for dealing with poverty. This refers to the concept of CSR which is defined as a form of corporate social responsibility to the community voluntarily to create social welfare that focuses more on economic problems (Siltäoja, Malin, and Pyykkonen (2015). Furthermore Van Marrewijk (2003) defines CSR as a the relationship of corporate social responsibility to society regarding economic, social and environmental issues (in, Cho, Furey, and Mohr, 2016) More specifically Kim (2014) makes six categories of CSR activities such as: environmental stewardship, philanthropic contributions, educational commitments, community / employee involvement, public health commitments, and sponsorship of cultural / sports activities (in, Cho, Furey, and Mohr, 2016). Other dimensions of CSR are also made by Carroll (1991) in four dimensions: economic, legal, ethical, and philanthropic. In addition to Carroll Dahlsrud (2008) also made five dimensions in implementing CSR namely: environment, social, economic, stakeholder and volunteerism. From these dimensions, an early preposition can be drawn that economics is an important CSR element to be implemented.

However, it seems that CSR research related to economic issues is not much done or has not yet become a focus. This refers to several presentations of previous research related to the focus of research and implementation of CSR. So that it becomes a challenge in itself to be able to show that CSR has the potential to be developed into a poverty alleviation media in the economic dimension of CSR. Especially in CSR there are several supporting dimensions such as community involvement and volunteerism. When these three dimensions are combined, of course economic empowerment can be carried out so indirectly this will help alleviate poverty by making the community empowered.

This argument is also reinforced by the statements of Brammer, He, and Mellahi (2014) that current research on CSR must focus on social problems. This focus is also seen from the problems that are often raised on several companies' websites such as issues about community and the environment, although there are also several other problems such as human rights and employees (Smith, 2017). However, even so, the community is still a dominant topic considering CSR is an integration of the resolution of social and

environmental problems by the company. Therefore, the social problems raised in this study relate to the problem of community namely poverty.

Of course based on some of the research above it can be concluded that no one has specifically studied and described stakeholder opinions. Even though through the implementation of good stakeholder management can help companies to predict the environment in order to ensure the sustainability of the company in the future. This is also further strengthened by the statement of Bhattacharya, Korschun, and Sen (2009) about understanding the company's stakeholders in CSR as an important agenda. Plus, trace Kriyantono (2014), stakeholder management provides a comprehensive explanation of how to build company relations with various parties related to the company's operational activities to achieve superior performance. Therefore it is important for the company to identify this influence group. On this occasion the author tries to provide an example of stakeholder management. The processing becomes a foundation that must be controlled by the company to be able to control and predict all forms of problems and changes in the environment (Freeman and McVea, 2001). One way that can be done to manage stakeholders is the benefit of CSR as a dialogical media of the company and stakeholders. Stakeholders in this study are specifically beneficiaries of the CSR programs of the five companies.

This urgency is considering CSR is a company program to engage in social problems by contributing and value benefits to economic development and improving people's welfare in the day-to-day operations of the company (Kottler & Lee, 2004; Iriantara, 2004; Kriyantono, 2016; Turker, 2009). In addition CSR is an important element of corporate dialogue with its stakeholders and researchers find many companies rely on the end result of CSR (Bhattacharya, et al, 2009; Kriyantono, 2015). The final results can be interpreted as a form of community assessment of CSR activities that have been carried out by the company. This assessment can be done by asking public opinion about the CSR program that was rolled out.

Continuing Freeman and McVea's (2001) statement of change in confusion in CSR, the researchers outline that the environment in question is not only limited to the natural environment but also encompasses an environment that deals with social, political and cultural problems. Freeman and McVea (2001) added that stakeholder management is an integrated approach to determine or make a company decision that ultimately the decision is expected to satisfy stakeholders. The word "satisfying" in this context can be seen as a value that the company seeks to fulfill. This value is the basis for the emergence of stakeholder theories which are assumed to be an important part of a business (Freeman, Wicks, and Parmar, 2004). This makes the company must be able to facilitate and bring stakeholders to be able to build shared values and understanding about the related company.

METHODS OF RESEARCH

Next, enter the research method. The method used is quantitative with a large umbrella of the positivistic paradigm. Next enter the research object. The object of research in this study are five companies in Indonesia, especially those engaged in the oil and gas sector such as: PT. Pertamina Drilling Indonesia, State Gas Company (PGN), PT. Energy Station, Hongkong Shanghai Bank Corporation (HSBC), and PT Sharp Indonesia. This is because according to Himawan (2017) the oil and gas sector contributes greatly to Indonesia by contributing gross domestic product of three to four percent per year. Realistically, if the corporation engaged in oil and gas is also required to be able to provide a balanced contribution in the context of CSR, considering that the corporation is capable of lifting 802,000 barrels of oil per day (Novalius, 2017). Although this amount is an accumulation of all oil and gas corporations in Indonesia, this can reflect that this sector has the ability to be able to carry out CSR more comprehensively. When viewed based on data showing the 10 largest oil and gas companies in Indonesia, Pertamina is not a company in the first rank in this category but is capable of bearing the title as a company that implements CSR well version of the Kesos RI CSR Forum 2016. In addition to Oil and Gas, researchers also added several companies engaged in banking such as Hongkong and Shanghai Bank

Corporation (HSBC) and companies engaged in manufacturing such as PT. Sharp Indonesia. These five companies were selected with consideration of accessibility of research data.

In total in the study there were five companies that became the object of research. The five companies are spread in several major cities in Indonesia including: Bekasi, Karwang, Medan, Pontianak, Yogyakarta, Jakarta, Tangerang, Sidoarjo, and Pangkal Pinang. Furthermore, with regard to the number of samples to be taken for this study, it refers to the elaboration given by Prayogo and Hilarius (2011) that for CSR research samples were taken between 75-300 samples. This is considering that the number of recipients of CSR programs is very heterogeneous. Researchers take the upper limit of the sample is 300 respondents in this study. In this study, researchers combined three measurement scales to determine public opinion on CSR program activities that have been carried out by some of these companies. The measurement scale that researchers first used is an indicator that has been built by Dedi Prayogo and Yoseph Hilarius (2010) to evaluate CSR. Prayogo and Hilarius (2010) studied it from the context of sociology and researchers are currently studying from the context of communication and public relations. The indicators built by Prayogo and Hilarius are called the Community Development Index (CD Index) which has six indicators, namely: (1) effectiveness, (2) relevance, (3) sustainability, (4) impact, (5) empowerment, (6) participation).

Furthermore, the second scale that researchers use is the CSR measurement scale developed by Kanji and Chopra (2015). This Chopra Corporate Social Responsibility (KCCSR) Kanji scale is used by researchers to be able to see how far the company has run social responsibility. KCCSR has indicators that enable researchers to be able to identify, classify, analyze and respond to CSR. Some KCCSR indicators include: (1) social accountability and social investment, (2) ethics and human resources, (3) corporate governance and economic responsibility, (4) environment protection and sustainability. The next measurement scale used to evaluate CSR is ISO 2600. ISO 2600 is used to determine public opinion on the implementation of CSR programs based on international standards. This ISO 2600 includes: (1) organizational governance, (2) the environment, (3) labor practice, (4) fair operating process, (5) human rights, (6) consumer issues, (7) community involvement and development. The three scales used by researchers to determine public opinion on the implementation of CSR activities that have been carried out by five companies and nine major cities in Indonesia. The measuring scale is translated into the items in question with a scale of 1 to 4.

RESULTS OF STUDY

Kanji Cophra Corporate Social Responsibility (KCCSR). In the first discussion, in this section the researcher enters the scales used to conduct this research. The first scale that the researcher will present is Kanji Cophra Corporate Social Responsibility (KCCSR) which is used to view social media that is successfully obtained by the company through the roll-out of CSR programs. This KCCSR has four main indicators, namely: (1) social accountability and social investment, (2) ethics and human resource, (3) corporate governance and economic responsibility, and lastly (4) environment protection and sustenance ability. The four indicators are assessed through 31 statement items that the researchers detailed in the table below as follows:

The table above research presents along with the calculation of the mean score of each statement item in all four indicators. This score shows the tendency of respondents' answers in each statement. The highest value that the researcher set in this study is 4 and the lowest value is one and with a percentage value > 75% which means that the opinion of the beneficiary can be said to be good for each indicator used in this research. When viewed from the calculation of the mean score above, all indicators approach the highest value, which means that the community's assessment of CSR programs rolled out by the company is in a good position.

Table 1 – Calculation of Meanscore CSR Index

NO	Index Category	Mean Scores	Maximal Scores
<i>Social Accountability And Social Investment</i>			
1	The company has been transparent and open about its business activities	3.24	4.00
2	The company has provided a system to prevent corruption in the company environment, including preventing financial abuse and transaction fraud.	3.147	4.00
3	The company has provided arrangements to produce positive impacts for a better society	3.137	4.00
4	The company has provided facilities for socially responsible investments, such as education and health facilities	3.143	4.00
5	The company has provided social accountability within itself to meet public expectations	3.090	4.00
6	The company has considered its social responsibility to the community to be important	3.307	4.00
	Total	19.064	24
	Index Value	79,433%	100%
<i>Ethics And Human Resource</i>			
7	The company contributes to campaigns and projects that focus on community welfare	3.137	4.00
8	Companies always pay taxes regularly and continuously	3.150	4.00
9	The company supports people who want to get additional education	3.167	4.00
10	The company provides complete and accurate information about its products to the public.	3.190	4.00
11	The company respects the rights of the community as determined by the rule of law	3.193	4.00
12	The company has been concerned about environmental problems for its customers	3.210	4.00
13	The company has implemented a transparent system to control labor practices such as: <ul style="list-style-type: none"> • Normal working hours • There is no labor exploitation • Hard and inhumane treatment of labor 	3.130	4.00
14	The company has successfully implemented a clean and hygienic workplace and safe working conditions	3.207	4.00
15	The company does not discriminate against its employees / society for welfare.	3.173	4.00
16	The company encourages people to participate in voluntary activities	3.327	4.00
17	The company supports non-governmental organizations (NGOs) overcoming social problems	3.150	4.00
	Total	35.034	44
	Index Value	79,622%	100%
<i>Corporate Governance And Economics Responsibility</i>			
18	The company has interacted with the community in conducting social responsibility programs (CSR)	3.273	4.00
19	Company management is very concerned about the needs and desires of the community	3.110	4.00
20	The company has respected the quality of life of the workforce and their families and the community as a whole	3.003	4.00
21	Management decisions related to the community are usually fair	3.103	4.00
22	The company has achieved its contribution to the country's economic development	3.063	4.00
23	The company has been able to create employment opportunities for the surrounding community	3.057	4.00
	Total	18.609	24
	Index Value	77.537%	100%
<i>Environment Protection And Sustainability</i>			
24	The company has attempted to manage and control risks in the company to control incidents such as environmental accidents	3.194	4.00
25	The company has attempted to publish the environmental impact of its products on the website or print media so that the public is aware	3.180	4.00
26	The company has sought to change the product brand or product value in accordance with global environmental considerations	3.040	4.00
27	The company has sought to cut unwanted product packaging in global environmental problems	3.097	4.00
28	The company participates in activities aimed at protecting and developing environmental quality	3.423	4.00
29	The company has attempted to communicate the environmental effects of economic actions to certain groups or the wider community	3.067	4.00
30	Our company targets sustainable growth for future generations	3.357	4.00
31	Our company invests in creating a better life for future generations	3.387	4.00
	Total	25.745	32
	Index Value	80.453%	100%

In more detail the researcher presents the discussion of each indicator as follows. The first indicator measurement scale is Social Accountability And Social Investment (SASI). The value index for the SASI indicator measurement scale is at a value of 79.433%. The value index describes the acceptance and good perception of the implementation of CSR programs from the companies concerned by the beneficiaries of those companies. Based on the results of the index value, it can also be seen that the CSR programs that have been

rolled out by the sample companies in this study have been considered by the beneficiaries to be able to create a positive impact on the sustainability of beneficiaries and society in general. This can be seen from six question items in this category. Of the six items that are available, the highest assessment is found in the item question about the company's focus related to social responsibility to the community.

The next scale of measuring CSR indicators is the Ethics and Human Resource (EHR). In general, the index value in this indicator is 79.62%. The value index has indicated that the implementation and acceptance of beneficiaries of CSR activities carried out by these companies is quite good. The results of the index value above also indicate that these companies have realized CSR activities in accordance with the applicable law with a fairly good category. Especially about the problem of responsibility to consumers. This means that the company has tried carefully to create environmental security for the beneficiaries around the area of its operation.

The next indicator measurement scale is Corporate Governance and Economics Responsibility (CGER). In general, based on the table above it can be seen that in general stakeholders have perceived that CSR activities carried out by the company have been implemented quite well. This conclusion is drawn based on the index value obtained in this indicator of 77.54%. The lowest perception, although still in good category, arises from CSR activities carried out by the company to the beneficiaries in fair treatment. Beneficiaries have seen that all activities carried out by the company respect the quality of life both from the workforce to the wider community. Assessment of the company's respect for these beneficiaries is derived from an opinion assessment which states that the company has provided interaction space and involves beneficiaries as stakeholders in the existing CSR programs.

The last scale of measuring CSR indicators is Environment Protection and Sustainability (EPS). The final result of the calculation of the index value of this indicator is not much different from the results of the calculation of the three index values of the previous indicator which is still in the range of 50% -75%. In this indicator, the index value is 80.45% which means that in general the perception of beneficiaries regarding the implementation of CSR programs by the company at a fairly good level. Beneficiaries based on the highest means scores calculated that the company had done well enough to develop environmental quality. This assessment arises with one strong reason that the company is considered to have been present among the beneficiaries with its various programs aimed at improving the quality and welfare of beneficiaries as company stakeholders.

Next, in more detail the researcher presents a diagram of the results of the research related to the perception of the beneficiaries of CSR activities carried out by the company based on the four scales of CSR measurement indicators, as follows:

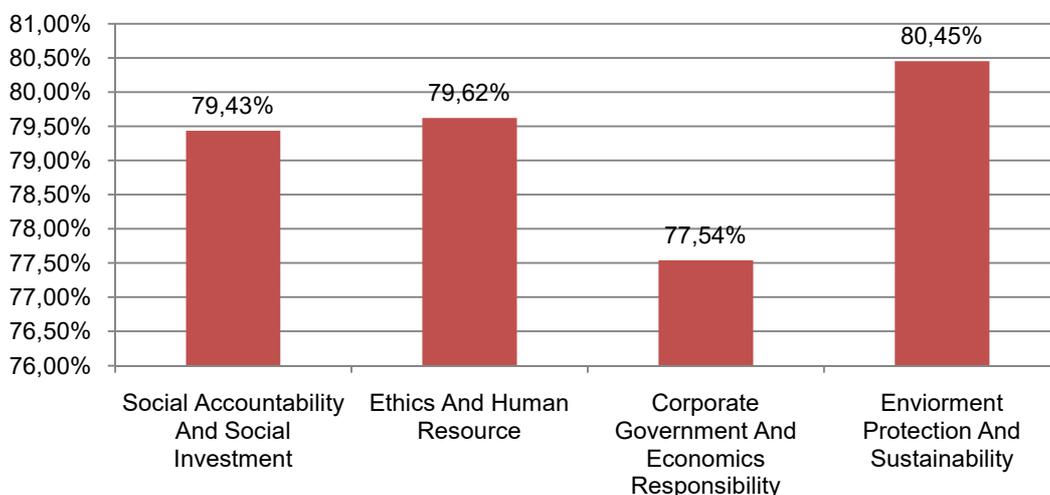


Figure 1 – KCCSR Scale

In general, the overall indicators are in the range of 50% -75% which means that the overall perception of the welfare of the beneficiaries as stakeholders of the company towards CSR activities that have been carried out by the company is at a fairly good level. Based on the data above, it can also be seen that the highest level of perception by beneficiaries is that the environmental responsibility of the company is considered good enough. Beneficiaries as stakeholders of the company consider that the company has carried out environmental responsibility and future generations. In addition, the difference in index value of one indicator with other indicators is not much different, which means that four indicators on this scale are responded positively by the beneficiaries.

The beneficiary's opinions reflected show consistency of assessment on each indicator. In the first indicator of social accountability and social investment (SASI) the positive response that emerges is that the beneficiary assesses that the company has demonstrated its responsibility to the community through each CSR program that was rolled out. Or in other words, the welfare of beneficiaries as company stakeholders assesses that the company has placed social responsibility as an important part of the company. Based on the second indicator of ethics and human resources (HER), what is meant by social responsibility that has been implemented by the company well is social responsibility regarding environmental issues. This positive response was also established by the company because the welfare of beneficiaries as stakeholders of the company felt that they had been given space and involved in the process of implementing CSR programs. The positive response researchers read from the indicators of corporate governance and economic responsibility (CGER). Because of this, the welfare of the beneficiaries as stakeholders of the company responds to all actions taken by the company through the existing CSR programs is a form of corporate business to help protect and develop the quality of life of the community.

Corporate Social Responsibility (CSR) Index. The second scale that researchers use in this study is the CSR Index built by Prayogo and Hilarius (2011). This scale is used to determine the effectiveness of a CSR program in poverty alleviation. There are six main indicators on this scale namely: effectivity, relevance, sustainability, impact, empowerment, and participant. Researchers use these six indicators to examine six fields at the same time in implementing CSR such as: education, health, economy, environment, infrastructure, and donations. In more detail the researchers submit in the table below as follows:

Table 2 – Corporate Social Responsibility Index

No.	Category	Parameters						Total		Maximal Score
		Mean Score								
		Education	Health	Economy	Environment	Infrastructure	Charity			
1.	Effectiveness	3.130	3.163	3.113	3.243	2.990	3.223	18.862	78.441%	4.00
2.	Relevance	2.973	3.157	3.003	3.223	2.953	3.153	18.462	76.925%	4.00
3.	Sustainability	3.020	2.863	2.940	3.153	2.890	3.087	17.593	73.304%	4.00
4.	Impact	2.910	3.103	3.010	3.213	2.983	3.160	18.379	76.579%	4.00
5.	Empowerment	2.997	3.127	3.073	3.257	3.013	3.187	18.654	77.725%	4.00
6.	Participant	3.053	3.173	3.113	3.313	3.083	3.230	18.965	79.020%	4.00
Total		18.083	18.486	18.252	19.402	17.912	19.04	Total		24
		75.345%	77.441%	76.05%	80.841%	74.633%	79.333%			100%

Based on the table above can be seen the implementation of CSR by companies in Indonesia both by category and by field. One piece is charged for the category of participants in the maximum category of 79.020%. Furthermore, in terms of area the highest percentage in the environmental sector is 80,841%.

From the diagram above it can be seen that based on the participant category is the highest indicator. This shows that the involvement of the community in the process of implementing CSR is quite good. However, based on field data owned by researchers, the involvement of beneficiaries as stakeholders of this company is only done when the CSR program is implemented. Beneficiaries have not been involved in the planning phase. However, the program was considered effective (78.44%) by stakeholders because the program had relevance (76.93%). So the impact (76.60%) is also good for the community, with one of them being able to empower or empower (77.73%) the community. However, the

biggest homework in implementing a program is that sustainability issues that are still legible have the lowest value among other categories, namely 73.30%. Although mathematically the value for sustainability is in a good category, of course this is a separate note in the future. Based on the data above, the researcher tries to find a cause of contradiction, meaning that the CSR implementation system is not as long as it is free from the top down system. So the results are contradictory. Researchers traced further this matter and found new facts and hypotheses that require further research in the future. All existing programs from the six companies are implemented without involving stakeholders who are beneficiaries of the program in the planning stage. So even though the participant's high value of sustainability is still a bit far behind.

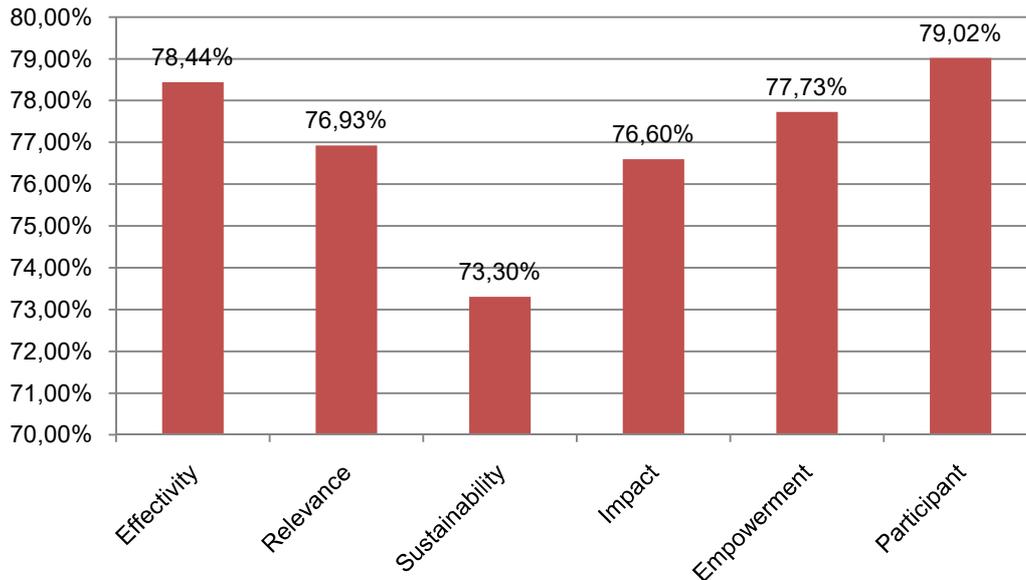


Figure 2 – Distribution Frequency CSR Index Based on Category

ISO 2600 is a general reference standard that must be met by the company in the CSR implementation process. In this study, researchers want to measure public perceptions of the implementation of CSR through a number of indicators that are established internationally through ISO 2600. In the table below the researchers describe the results of the survey and the calculation of the mean score of each indicator as follows:

Table 3 – ISO 26000

No	Indicator	Maximal Score	Minimal Score
1.	Organizational Government	4.00	3.167
2.	The Environment	4.00	3.083
3.	Labor Practice	4.00	3.258
4.	Fair Operating Practice	4.00	3.200
5.	Human Rights	4.00	3.250
6.	Consumer Issue	4.00	3.050
7.	Community Involvement and Development	4.00	3.340
Total		32	22.348
		100%	69.837%

From the table above it can be seen that the overall indicator gets a good assessment from the stakeholder community. Furthermore, if accumulated in percentage form, the amount can already be included in either category. Because the range of good categories is in the percentage range of 50-75%. Somewhat different from other measurement scales, on a measurement scale that uses ISO, environmental issues occupy the lowest rating and followed by consumer issues also get a low rating.

Still referring to the diagram above, it can be seen that involving the community in the process of implementing high CSR. It is evident from the seven indicators that there are indicators of community involvement and development getting the best assessment. This further strengthens that currently the implementation of the CSR system no longer uses a top-down system but has implemented a bottom up system. However, even so, this high level of community involvement has only occurred in the implementation stage and has not yet begun from the planning stage.

DISCUSSION OF RESULTS

CSR Opinion Stakeholders through 3 Measuring Scales: KCCSR, CSR Index, and ISO 2600. The main subjects in this study were beneficiaries as stakeholders of companies that received CSR programs from companies. Beneficiaries as company stakeholders in this study are defined as "key drivers" to achieve company reputation (Bussy, 2008). The reputation of the company in this context the researcher means as an assessment or stakeholder opinion on CSR programs that have been implemented by the company. This definition more clearly describes the condition of the beneficiary as a group or individual that has the potential to influence or be influenced by activities carried out by the company (Coombs, 2007). Because of the reciprocal nature of the beneficiaries as stakeholders of the company and the company, this raises the concept of interconnection between the two. So it can be concluded that stakeholders are the main target of every activity carried out by the company (Freeman, 1984; Kriyantono, 2015; Seitel, 2001).

The explanation above explains that the measurement scale of the opinion of the beneficiaries as the company's stakeholders on CSR programs can be done by knowing the stakeholder perceptions of CSR activities carried out by the related companies. In addition, by understanding stakeholder opinion which also includes stakeholder trust and knowledge (Galloway & Aidoo, 2005), it is hoped that it can create a mutually beneficial understanding (mutual understanding) between stakeholders and related companies (Cultip, Center, & Broom, 2011). So with this trust and mutual understanding will bring support for the company. Based on the above understanding, the researcher conducted a form of opinion study to find out stakeholder perceptions of CSR activities carried out by companies in Indonesia as a communication medium to get support from stakeholders from the CSR programs rolled out.

The results of this study indicate that stakeholders have a fairly good perception of CSR activities that have been carried out by companies in Indonesia. This means that there has been a mutual understanding between stakeholders and related companies. In general, the three scales that researchers use to conduct this evaluation study show results in good categories. Of the three scales that researchers use, the KCCSR and CSR Index show that community members in this context are represented by stakeholders who agree that the company has a high commitment to CSR programs related to environmental issues. However, for the scale that researchers adopted from ISO 2600 the results were no different. On this scale the highest assessment is the attitude of openness of the company with evidence of giving space to the public to actively participate in CSR programs that are being rolled out. This also means that CSR programs that are rolled out by the company have been able to become a medium of communication for companies to be able to engage in community psychology. This statement is strengthened by research findings

Basically CSR can be an important element for companies to communicate with the community and not infrequently many companies from various research results rely heavily on CSR to establish relationships with stakeholders (Battacharya, et al, 2009; Kriyantono, 2015). This is evidenced by the measurement results of two of the three scales used that the company has actively engaged the community in every CSR program rolled out. Both on the CSR Index scale through the category of participant in all fields and the scale of ISO 26000 with indicators of community involvement and development all get the highest assessment by the community at each measurement scale. This shows that CSR is really used by companies as a communication medium. Of course this will help the company to get support

from stakeholder. From the research that the researchers did, this was also measured by the companies that were used as the sample of the study in this study. So that it can also be understood that CSR communication patterns rolled out today are no longer fully top down but have become bottom up by accommodating and involving the community in the process. Although there is still a large record in the process, community involvement has only begun in the implementation phase rather than planning.

This should be a separate consideration for the company because the process of bottom-up communication certainly has a significant impact on the overall aspects of the CSR program being rolled out. The CSR process that is bottom-up provides space for stakeholders to be able to express their opinions. Because of this, the corporate governance and economic KCCSR dimensions of the community provide the highest assessment of items of statement that the company has interacted with the community. This bottom-up communication process has implications for the effective and relevance assessment on the CSR Index scale which shows that in all fields get a good assessment. Again, this shows that CSR can be used as a medium of communication with the community to get support. Of course, with a note that the company must open a space of participation for the community so that the CSR program that is rolled out as a communication medium runs effectively by finding the relevance of community needs which are then translated into CSR programs. At present, this is a good assessment by the community on the scale of ISO 26000 to be precisely the indicator of human right on the number of good acceptance by the community.

However, even though the three scales used in each indicator, category, and field under study in CSR are in good judgment, there are several indicators that have a low rating compared to indicators, categories and other fields. This can be seen from the acquisition of the value index listed from the KCCSR and ISO 26000 which has the lowest revenue average even though it is still in a good category. Examples of Corporate Governance and Economic Responsibility in KCCSR have the lowest index value among the three other indicators, but the assessment of the community against this indicator is still at a pretty good level. In this indicator, the community considers that with the CSR being rolled out by the company, the company is assessed that the economic social responsibility that has been carried out by the company to direct stakeholders such as investors, employees and customers is quite important but not more than other indicators. This is also supported by the results of the scale in ISO 2600 that the consumer issue is the lowest point, even though it is still in a good category compared to the other seven indicators in ISO 26000.

The next category that gets a low rating that appears from the CSR Index is the sustainability program. Of the six existing fields such as education, health, economy, environment, infrastructure, donations, only two areas with high sustainability programs are in the field of environment and education. Based on the achievement of 3,153 figures for the environmental field and 3.02 for the education sector, this indicator is also perceived by the public at a fairly good level which means that the company has been able to implement this indicator quite well. However, of course, looking at the other four areas that value towards the sustainability category are still relatively low even though they are still in a good range, this has become a separate homework for program organizers to be able to create CSR programs in every field that has high sustainability. This is also a matter worth considering because it is directly proportional to the sustainability program, so the social legitimacy of the community can also last longer.

Overall, the community's assessment of CSR activities that have been carried out by several companies in Indonesia at a good level or in other words that the CSR program rolled out has been considered effective.. This also indicates that CSR is indirectly a good medium of communication and has a significant impact on the relationship between the community and the company. Besides that the implementation of CSR properly will be able to help the dialogue process between the company and the community better to be able to achieve mutual understanding which ultimately gives birth to social support for the company.

Corporate Social Responsibility: A Future Potential Public Relations Communication Activity. The main challenge in this study is to put empirically CSR as a public relations activity in a communication perspective. In addition in this study, researchers are also

obliged to be able to describe the potential of CSR as a trend of CSR activities in the future to create the image and reputation of the company. First for the problem of occupying CSR as a study of communication can be seen from the overall results of the opinions of beneficiaries as stakeholders of the company who generally agree that the company has implemented CSR well. This opinion shows that beneficiaries as stakeholders of the company have been able to understand the message in CSR activities.

It should be understood at the outset that CSR in this context is not only a product of the company that aims to create a social welfare for its stakeholders, but also a medium of communication. If CSR is understood as a communication medium, there is a message in CSR. Borrowing the Laswell transmission model, it can be considered a communicator in this communication process is the company represented by public relations as the communication manager, the message that is brought is CSR creates welfare and gives stakeholders benefits through various fields and indicators, the media used is CSR programs, communication are the beneficiaries as company stakeholders, and the effect of communication that emerges is a good opinion of benefiting from the existing CSR programs.

Based on the description above, it can be understood in terms of communication that CSR works well and has the potential to serve as a communication medium for companies to shape the image and reputation of the company. Moreover, CSR as a communication medium has not only fulfilled the communication aspect in the transmission model, but has also led to the two way communication model. This is evidenced from the three sakala used by researchers to find out the opinions of beneficiaries as stakeholders of the company towards all existing CSR activities, showing positive significant results on participant indicators in the CSR Index, community involvement and development at ISO 2600, and ethics and human resources on KCCSR. The three indicators in each scale discuss the company's efforts to provide dialogue space for beneficiaries as company stakeholders. This dialogue space can be interpreted as a form of communication between beneficiary companies as company stakeholders.

This form of communication creates a sense of belonging for beneficiaries as company stakeholders. This high sense of belonging is able to make stakeholders to the side with the company and provide support. This provides two benefits for the company. First, the company benefits from getting a good image and reputation. Second, the assessment of a good social track record will certainly be able to help companies in the future if they experience a crisis. That is, CSR becomes a communication medium that can provide two benefits at once in one action. Plus, if the implementation of CSR is done appropriately, the public relations function as a communication agent can be done well with two good neighbors that have a big ear. The concept of good neighbor and big ear will be able to help public relations and question the environment and anticipate things that might end the image and cause of crisis. When the overall CSR activities have been carried out properly and ensure the beneficiaries as stakeholders have been well involved and created of belongings, the next task is to maximize the potential of the medium in order to create an image and a good corporate reputation. is to do publications and media media relations. The purpose of this action is to report publicly on the CSR actions that have been carried out by the company. This aim to convey the company is focused and good tendency to maintain and manage the environment. Of course, the initial prediction of the results of this study will provide benefits for the company. This is a public relations activity in the future by utilizing CSR as a communication medium to predict and manage the environment in order to create an image and reputation for the company.

CONCLUSION

In general, the results of this study indicate that the beneficiaries as stakeholders of the company provide positive value by eliminating the value range of three quarters of the percentage that is on the indicators in each field. This shows that CSR has a high potential as a medium of communication. This argument is supported by data that the value of participation of beneficiaries as stakeholders of companies occupies a high rating on a scale.

This means that CSR has been carried out with a bottom-up model by the company. This model is then able to create a system of belongings for stakeholders towards the company.

Furthermore, based on the six existing CSR fields such as economics, education, environment, health, infrastructure, and donations, the highest considered to have been implemented properly by the company is the environment. This result also relates to the type of company that is the object of research is a mining company. Because of this, the results will be in line that for the type of companies engaged in mining, more will be concentrated on environmental problems.

Other findings that the researchers are able to describe as a result of this research are that CSR carried out by this company is a public relations activity that can be used as a way to predict the environment as a reference for composing a preventive action for potential crisis in the company. This is due to the fact that through CSR the company can find out about the situation of stakeholders and how to manage it. Referring to all these things can be taken a big conclusion that in the future CSR can be used as a trend of public relations activities in order to shape the image and reputation of the company and as a media to predict and control the environment as a preventive measure of a crisis that might befall the company. This high participation rate can also be utilized by the company with the concept of community involvement to maintain all the good relationships that have been established between stakeholders and the company. Following up on these results, in the future there are several studies that can be done to complement the results of the research including: (1) Conducting research in the context to compare the practice of implementing CSR in the state-owned and private institutions. This aims to be able to become an input to the CSR regulations in Indonesia. (2) Test Try the Community Involvement concept to convey the message in forming a sustainability program in every existing CSR program. Lastly, (3) conducting a research study on the analysis of CSR and public relations to see the level of awareness of public relations in utilizing CSR as a communication medium.

REFERENCES

1. Arli, D., & Tjiptono, F. (2013). Does corporate social responsibility matter to consumers in Indonesia?. *Social Responsibility Journal*, 10 (3), 537-549
2. Bhattacharya, C.B., Korschun, D., & Sen, S. (2009). Strengthening stakeholder – company relationships through mutually beneficial corporate social responsibility initiatives. *Journal of Business Ethics*, 85, 257-272.
3. Brammer, S., He, H., & Mellahi, K. (2014). Corporate social responsibility, employee organizational identification, and creative effort: the moderating impact of corporate ability. *Group And Organization Management*, 1-30.
4. Chapple, W., & Moon, Jeremy. (2005). Corporate social responsibility in asia: A seven country study of csr website reporting. *Business & Society*, 4 (44), 415-441
5. Cho, M., Furey, L. D., & Mohr, T. (2016). Communicating corporate social responsibility on social media: strategies, stakeholder s, and public engagement on corporate facebook. *Business and Professional Communication Quarterly*, 1–18.
6. Coombs, W. T. (1995). Choosing the right words: The development of guidelines for the selection of appropriate crisis-response strategies, *Management Communication Quarterly*, 8(4), 447–476.
7. Dawkiin, C., & Ngunjiri, F.W. (2008). Corporate social responsibility reporting in south africa: Descriptive and comparative analysis, *Journal Of Business Communication*, 45 (3), 286-307.
8. Dincer, B., & Dincer, C. (2013). Corporate social responsibility communication and perception: Media and risks, *International Journal of Academic Research in Business and Social Sciences*, 3(4), 207-224.
9. Freeman, R.E., Wicks, A.C., & Parmar, B. (2004). Stakeholder theory and “the corporate objective revisited”. *Organization Science*, 15 (3), 364–369.
10. Hupperts, P. & Kroder, H. (2013). The implementation of SR: Best practice and tools for ISO 26000. Netherlands: Nederlands Normalisatie-Instituut.

11. Ika. (23 November 2016). Indonesia belum mampu mengurangi angka kemiskinan. Kementrian PPN/ Bappenas. Diakses dari www.sdgsindonesia.or.id
12. Jamali, D. (2008). A stakeholder approach social responsibility: A fresh perspective into theory and practice. *Journal Of Business Ethics*, 82, 213-231
13. Kanji, G., & Chopra, P. (2010). Corporate social responsibility in a global economy. *Total Quality Management & Business Excellence*, 21(2), 119-143.
14. Kriyantono, R. (2015). Public relations and corporate social responsibility in mandatory approach era in indonesia. *Procedia Social and Behavioral Sciences*, 2 (11), 320 – 327.
15. Kriyantono, R. (2012). *Public relations writing*. Jakarta: Prenada Media
16. Kriyantono, R. (2015). *Public relations, issue, dan crisis management: Pendekatan critical public relations, etnografi kritis, dan kualitatif*. Jakarta: Kencana Prenada.
17. Kriyantono, R. (2008). *Public relations writing: Teknik produksi media public relations dan publisitas korporate*. Jakarta: Kencana Prenada.
18. Kriyantono, R. (2014). *Teori public relations perspektif barat dan lokal: Aplikasi penelitian dan praktik*. Jakarta: Kencana Prenada.
19. Lehtimaki, H., Kujala, J., & Heikkinen, (2011). Corporate responsibility in communication: empirical analysis of press releases in a conflict. *Business Communication Quarterly*, 7 (4), 432-449.
20. Gupta, A.D. (2012). Corporate social responsibility and strategy: a bird's eye view. *Global Business review*, 13 (1), 153-165
21. O'Connor, A., & Gronewold. (2012). Black gold, green earth: An analysis of the petroleum industry's csr environmental sustainability discourse. *Management Communication Quarterly*, 27 (2), 210- 236.
22. Orlitzky, M., & John D.B. (2001). Corporate social performance and firm risk: A meta-analytic review. *Business and Society*, 40 (4), 369-396.
23. Purbaya, A.A. (21 September 2015). Ada 19 kementerian urus kemiskinan. *Detik Finance*. Diakses dari www.finance.detik.com
24. Prayogo, D. (2011). Evaluasi program corporate social responsibility dan community development pada industri tambang dan migas. *Makara Sosial Humaniora*, 15 (2), 43-58
25. Prayogo, D., & Hilarius, Y. (2012). Efektivitas program csr/cd dalam pengentasan kemiskinan; studi peran perusahaan geotermal di jawa barat. *Makara Sosial Humaniora*, (12) 1, 1-22.
26. Saputro, E.P. (5 Januari 2017). Problem kemiskinan 2017. *Media Indonesia*. Diakses dari www.mediaindonesia.com
27. Sen, S., & Bhattacharya, C.B. (2001). Does doing good always lead to doing better? Consumer reactions to corporate social responsibility, *Journal of Marketing Research*, 38(2), 225–243.
28. Sharma, J.P. & Khana, S. (2015). Corporate social responsibility, corporate governance and sustainability: synergies and inter-relationships. *Indian Journal of Corporate Governance*, 7 (1), 14-38.
29. Smith, K.T. (2017). Longitudinal analysis of corporate social responsibility on company websites. *Business And Professional Communication Quarterly*, 80 (1), 70-90.
30. Siltaoja, M., Malin, V., & Pyykkonen. (2015). 'We are all responsible now': Governmentality and responsabilized subjects in corporate social responsibility. *Management Learning*, 46 (4), 444–460.
31. M. Suastha, R.D. (21 Juli 2016). Riset temukan kualitas csr perusahaan indonesia rendah. *CNN Indonesia*. Diakses dari www.cnnindonesia.com
32. Tesler, L.E., & Malone, R.E. (2008). Corporate philanthropy, lobbying, and public health policy, *American Journal of Public Health*, 98(12), 2123-2135.
33. Thaha, R. (4 Juli 2016). Csr kw dan csr original. *Forum CSR Kesos*. Diakses dari www.forumcsrkesos.or.id
34. Vanhamme, J., & Grobbsen, B. (2009). "Too good to be true!" The effectiveness of CSR history in countering negative publicity. *Journal of Business Ethics*, 85, 273–283.
35. Verboven, H. (2011). Communicating csr and business identity in the chemical industry through mission slogans. *Business Communication Quarterly*, 74 (4), 415-431.

36. Widiyanto, U. (19 September 2015). 17 goal dokumen pbb tentang tujuan pembangunan berkelanjutan. Tempo. Diakses dari www.tempo.com
37. Wulandari, F. (15 Juni 2016). Bayanyak perusahaan indonesia yang belum peduli csr. Tribun Bisnis. Diakses dari www.tribunnews.com
38. World Business Council For Sustainable Development (2010)
39. Zatnika, A.M. (10 Mei 2015). Kementerian sosial tambah ditjen untuk urus fakir miskin. Kompas. Diakses dari www.kompas.com
40. Zoller, H.M., & Tener, M. (2010). Corporate proactive as adiscursive fiction: Managing environmental health activism and regulation. *Management Communication Quarterly*, 24

DOI <https://doi.org/10.18551/rjoas.2018-11.31>

AREA MAPPING AND IMPLEMENTATION OF AGRICULTURE INSURANCE IN THE ORGANIZATION OF SUBAK IN BALI PROVINCE

Darmawan Dwi Putra*, Arisena Gede Mekse Korri

Agribusiness Study Program, Faculty of Agriculture, Udayana University, Indonesia

Utami Ni Wayan Febriana

Landscape Architecture Study Program, Faculty of Agriculture, Udayana University,
Indonesia

Gunadi I Gusti Alit

Agroecotechnology Study Program, Faculty of Agriculture, Udayana University, Indonesia

*E-mail: dwiputradarmawan@yahoo.com

ABSTRACT

Development of agricultural insurance as a risk management strategy mechanism is complex. Conditions of farmers in Indonesia also became one of the causes difficult to build agricultural insurance as part of Indonesian agricultural development. Moral hazard in each individual farmer in Indonesia as well as every farmer in Indonesia is still not insurance-minded also be one of the causes. As a precaution against the possibility of crop failure that can occur in paddy rice farming, the government has launched a program of agricultural insurance in several regions in Indonesia which applied to paddy and the name of the program is the Rice Farming Insurance Program (RFIP). For information, *subak* is an organization owned by the farming community in Bali which specifically regulates the management or irrigation system of rice field used in traditional rice farming. The existence of *subak* is a manifestation of the Hindu philosophy of *Tri Hita Karana* (the concept of harmony). Because the role of RFIP for *krama subak* is very important, hence it is interesting to do research on "Area Mapping and Implementation of Agriculture Insurance in the Organization of *Subak* in Bali Province". This research aims to find out more about the implementation of RFIP in *Subak* and *krama Subak* in Bali Province.

KEY WORDS

Agriculture insurance, mapping area, *subak*.

Rice is one of the agricultural products which are the most widely consumed food by the Indonesian people compared to other foodstuffs. Based on the 2013 National Socio-Economic Survey data, five foodstuffs with the highest average annual consumption per capita include: rice, sugar, shallots, red chili, and ground coffee. The average per capita consumption of rice in 2013 was 85,514 kg. Meanwhile, the rice field area in 2013 was only 13.77 million hectares with rice production of 70.87 million tons (Insyafiah and Wardhani, 2014).

The high level of national rice consumption is caused by the large population of Indonesia; difficulty of diversification towards other food commodities; people who began to switch to consuming rice as staple food; and the price policy carried out by the Indonesian government on rice commodities. This also caused the open market for rice commodities in Indonesia. The role of rice farming in meeting Indonesia's food needs seems to be accompanied by agricultural characteristics that are prone to risk, thus it is often a threat to the welfare of rice farmers in Indonesia. External factors from the agricultural sector have greater influence than internal factors. For example, anomalies of climate change occurring today, impacted directly on farming activities in Indonesia. Climate change is increasingly unpredictable by farmers, leading to frequent occurrence of events that harm farmers as non-

optimal or damage to irrigation, farm roads and other agricultural infrastructure (Ramadhana, 2013).

As a precaution against the possibility of crop failure that can occur in paddy rice farming, the government has launched a program of agricultural insurance in several regions in Indonesia that is applied to rice and named Rice Farming Insurance Program (RFIP). Agricultural insurance products are motivated to help farmers bear the risks that arise due to changes in seasonal shifts and loss of agricultural produce. Sources of funding to pay insurance premiums came from government subsidies and farmers, as well as from state-owned companies that cooperate with farmers.

Slightly different from other provinces in Indonesia, RFIP participants in Bali Province are *krama subak* (*subak* members) who are members of a *subak* organization (RFIP participants in other provinces in Indonesia are members of the Farmers Group). Once the role of RFIP is important for *krama subak*, it is interesting to conduct research on "Mapping Regions and Implementation of Rice Farming Insurance in Bali Province", this research aims to find out more in the implementation and application of RFIP on *subak* and *krama subak* in Bali Province.

METHODS OF RESEARCH

The method of selecting the location of the research was conducted purposively, namely the method of taking the research area by considering the reasons known from the area of the study (Singarimbun, 1991). The use of this method was carried out on the basis of consideration in Bali Province that the RFIP participants in Bali Province were *krama subak* (*subak* members) who were members of a *subak* organization (other Provinces in Indonesia RFIP participants were members of the Farmers Group). After determining the Province of Bali as the location of the study, then Tabanan Regency was chosen as the location of the study with consideration. Tabanan Regency targets the realization of the Rice Farmer Insurance Program (RFIP) to reach 8,000 hectares in 2017 from a total agricultural land area of 21,714 hectares. After determining Tabanan Regency as the location of the study, then Penebel Subdistrict was chosen as the location of the research with consideration, from the realization of the Rice Farmer Insurance Program (RFIP) in Tabanan Subdistrict which reached 8,000 hectares, Penebel Subdistrict received the most allocation compared to other Districts, which is 1,607 hectares. After determining Penebel Sub-district as the location of the study, then three *subak* were selected to carry out the research, namely *Subak* Buruan, Penatahan and Keloncing. The three of them were chosen because they have the widest area.

The population in this study were all wetland rice farmers who worked in Penebel Subdistrict. The number of *subak* samples is three and in each *Subak* sampled by 20 farmers, thus samples in this study are 60 farmers. Roscoe (1975) in Sekaran (2006) provides a general reference for determining sample sizes of more than 30 and less than 500 is appropriate for most studies.

In this study, data were collected through observation and interviews. The observation technique used was direct observation, observing or seeing, hearing, and feeling the object of the problem under study. Researchers as data collectors were participated and involved in activities that become a source of observation.

Besides being analyzed descriptively, the data was processed with several variations of statistical analysis. For more details, the analysis of each goal is detailed as follows. The first objective is mapping the *subak* area in Bali Province that has participated in the agricultural insurance program using the on screen digitations method and ground truth check (using ArcGIS software) to the field to produce a map of the research location (Figure 1). The process continued with digitizing all the villages in the entire Tabanan Subdistrict and then entering attribute data from the villages participating in the agricultural insurance program (Figure 2) with the participation period starting in 2016-2018. Furthermore, the process to produce Figure 3 is by entering data on the attributes of the type of funding from the village that follows the insurance, whether the village that participates in insurance uses

CSR funds or independent funds during the 2016-2018 period. Finally, Figure 4 is produced by choosing the area with Penebel Subdistrict boundary. From all villages in Penebel Subdistrict, then the attribute data of village participation in the agricultural insurance program was added during the 2016-2018 period.

The second objective is to study the implementation of agricultural insurance in Bali Province using descriptive analysis method. This analysis method is used to describe qualitatively the implementation of agricultural insurance in Bali Province, including: (1) background of agricultural insurance, (2) the benefits of agricultural insurance for farmers, (3) the purpose of agricultural insurance, (3) agricultural insurance targets, (4) agricultural insurance model in Bali Province, (5) rice farming insurance, (6) the process of issuing insurance policies and (7) the process of claim settlement. This descriptive analysis method is carried out by means of observation, interviews, and discussions with state-owned enterprises, *subak* and *krama subak*.

RESULTS AND DISCUSSION

This research was conducted in Penebel Subdistrict, by choosing *Subak* Buruan, Penatahan and Keloncing as samples with the consideration that the three *Subak* have the largest area compared to other *subak* in Penebel Subdistrict. Visually in the form of maps can be seen in Figure 1.

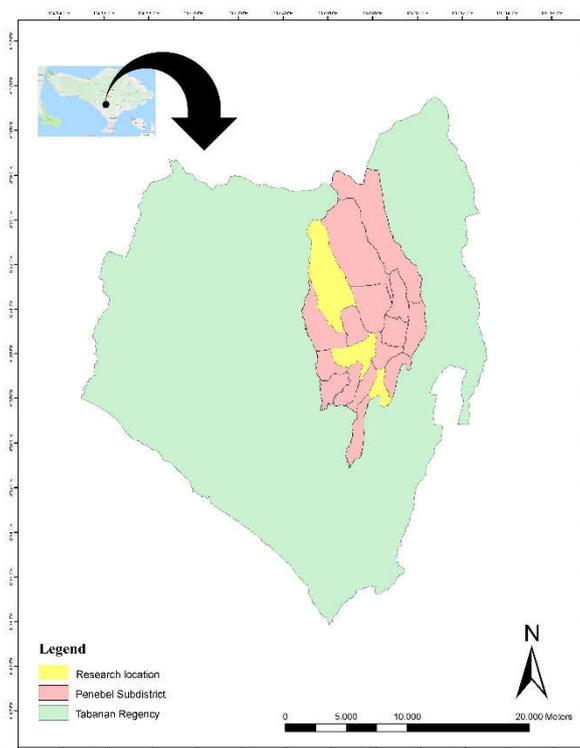


Figure 1 – Map of Research Location

When viewed from the number of participants in agricultural insurance in Tabanan Regency for the period of 2016-2018, the number of *Subak* participating in the RFI program is decreasing. Visually in the form of maps can be seen in Figure 2.

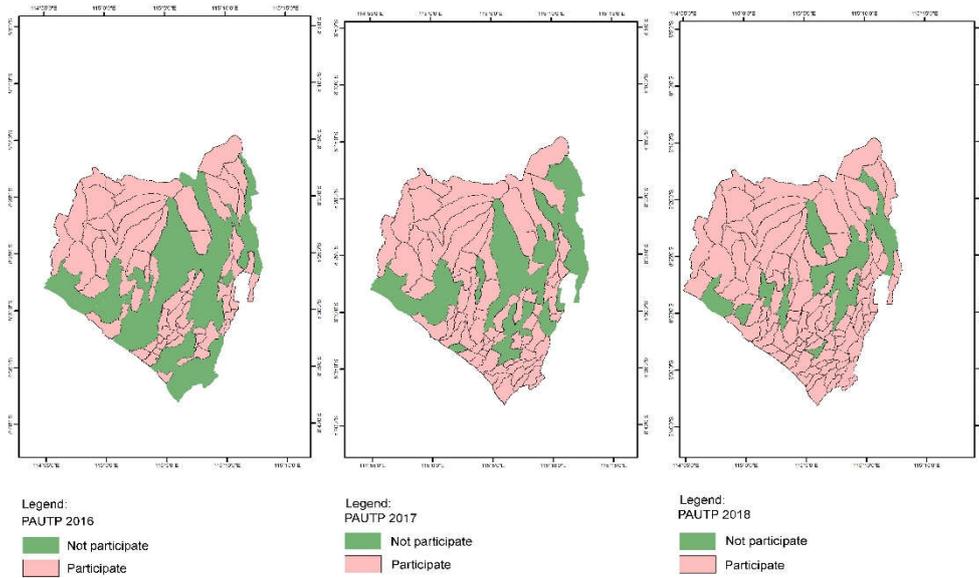


Figure 2 – Distribution of Participants in Agricultural Insurance in Tabanan Regency, 2016-2018

When viewed from the total number of agricultural insurance participants in Penebel Subdistrict for the period of 2016-2018, the number of *subak* participating in the RFIP program has decreased, this is almost the same as the reduced number of *subak* agriculture insurance participants in Tabanan Regency. Visually in the form of maps can be seen in Figure 3.

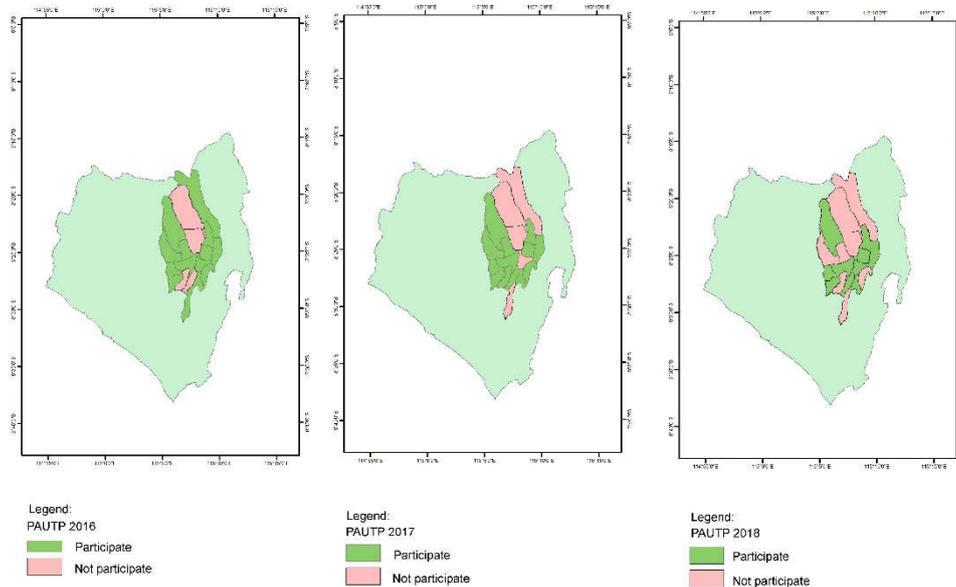


Figure 3 – Distribution of Participants in Agricultural Insurance in Penebel Subdistrict, 2016-2018

When viewed from agricultural insurance participants in Tabanan Regency based on funding sources for the 2016-2018 period, the type of funding that comes from CSR only exists in 2016, whereas in 2017 and 2018 the source of funds for all RFIP participants came from independent funds. Visually in the form of a map can be seen in Figure 4.

Requirements to follow the RFIP up to an explanation of how the process of registering participants, payment of policy issuance and settlement of claims. RFIP socialization was given to prospective RFIP participants. Prospective participants are all farmers who are members of farmer groups in the Province of Bali called *Subak* and cultivate the types of rice crops.

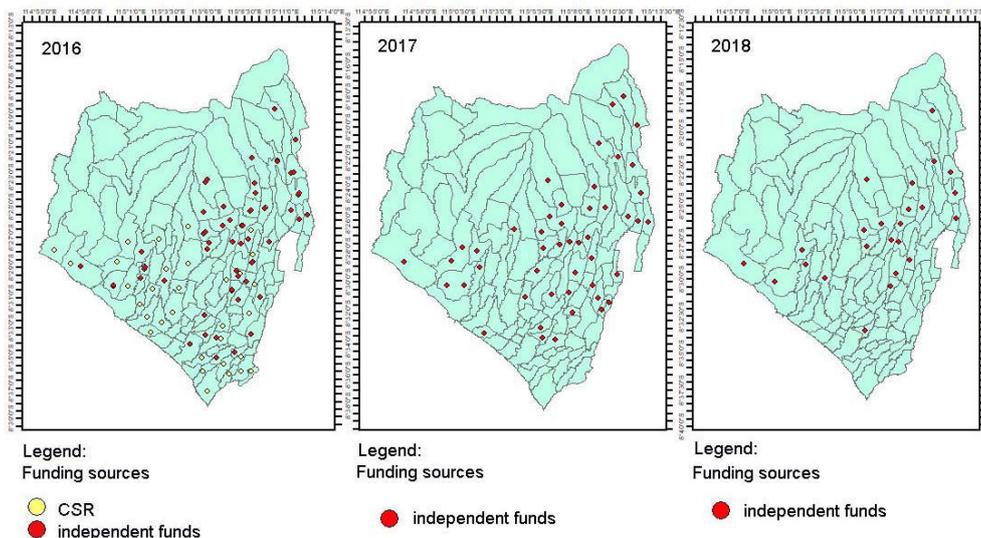


Figure 4 – Distribution of Participants in Agricultural Insurance in Tabanan Regency Based on Funding Sources, 2016-2018

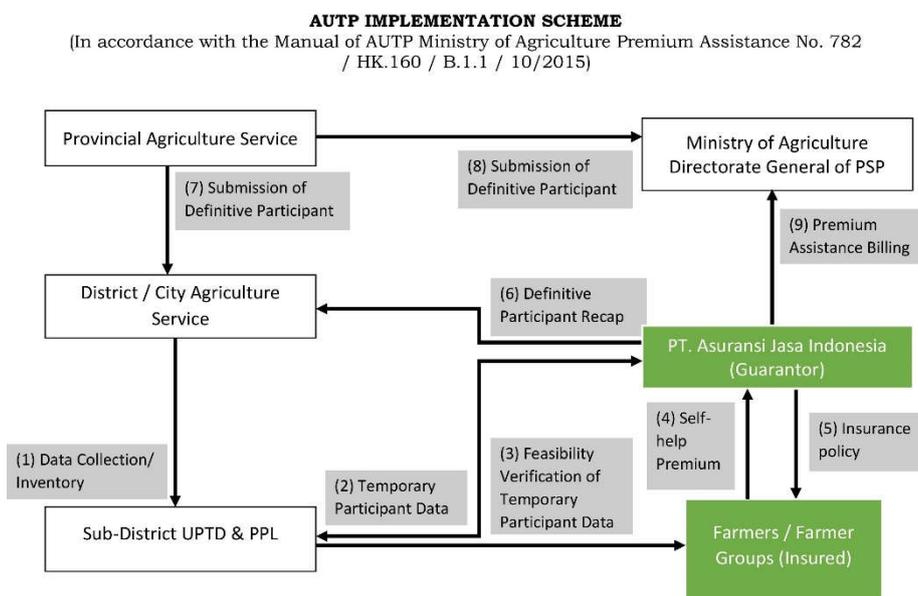


Figure 5 – RFI Implementation Scheme

The implementation of the RFI consists of several stages as follows:

- The implementation of RFI starts from data collection of Prospective Participants - Prospective Locations are farmers who are members of farmer / *Subak* groups using Form 1, namely Data Collection Form for Prospective Participants - Prospective Location of Rice Farming Insurance.
- The next step is the registration process for participants by the farmer groups who take part in the RFI by filling out the RFI Participant Registration Form, which includes Form 2 for the insurance, Form 3 for the regional technical implementation unit, Form 4 for the district agriculture office, Form 5 for the Provincial Agriculture Office and Form 6 for the Central Ministry of Agriculture thus a decree can be issued for the disbursement of premium subsidy assistance of 80% for each farmer, namely IDR 144,000.
- Form 1 and Form 2 are verified by the local field extension officer by looking at the eligibility of the participant's data such as checking the farmer's land area to match the amount of premium self-help paid by farmers.

- RFIP participant data that has been verified is immediately paid in self-help premium with a calculation of 1 ha of land paid in premium amounting to IDR36,000 and the premium calculation is proportional to the size of the farmer's rice field and added with IDR144,000 of government subsidies. In the payment process, the regional technical implementation unit is usually the one who contacted PT Jasindo Denpasar Branch to pay the premium.
- The premium is repaid no later than 15 days after the policy is issued. The policy is issued when the RFIP registration file is complete.
- If a claim occurs, the farmer / *Subak* group fills in Form 7, the Damage Notification Form and Form 8 regarding damage events approved by local field extension officers, coordinator for Plant Disturbing Organism Controllers - Pest and Disease Observers, and the City / District Agriculture Service.
- After the file is complete, the claim process can be completed, but awaiting approval from the insurance and disbursement of funds for claims of farmers from the Ministry of Agriculture Central. After the funds are disbursed, compensation for damaged rice land claims will be given by the insurance to the head of the farmer group. Funds can be in the form of cash or Bilyet Giro (BG).

The process of submitting and disbursing RFIP claim funds takes place every week. Submission of RFIP claim funds is carried out every day depending on whether or not the claim is submitted.

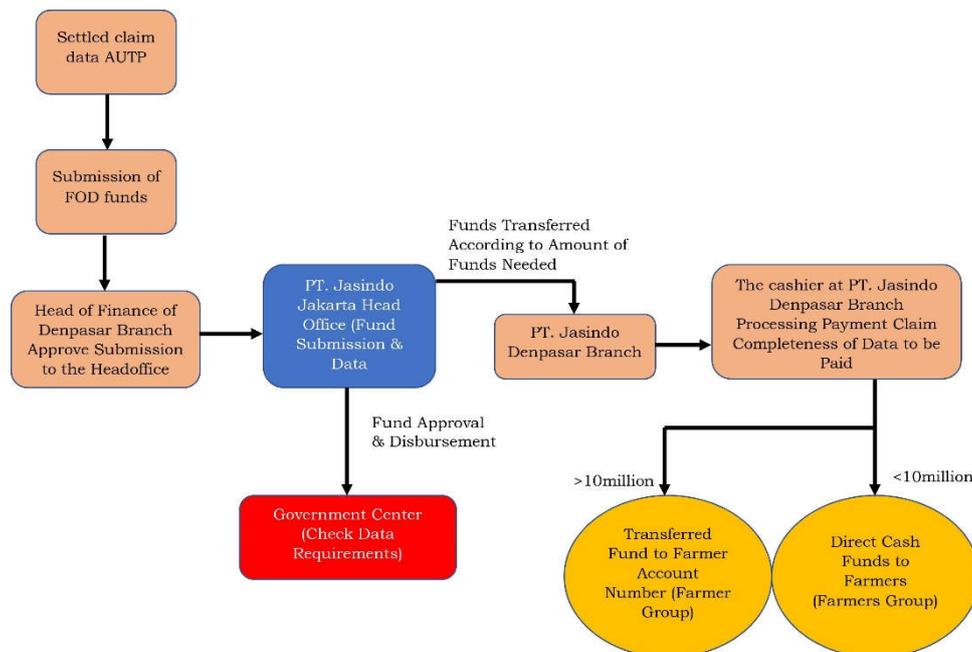


Figure 6 – Submission Process and Fund Disbursement of RFIP Claims at PT Jasindo Denpasar Branch

Figure 6 is the flow or process for submitting and disbursing RFIP claim funds, as follows:

- Settled RFIP claims: The final approval process in the process of making or submitting claims. This process is a claim that has been resolved by Jasindo, the staff serving in the claim section for the next process in applying for funds. If the claim has been settled or resolved, it means that the claim made has actually been in accordance with the data provided by the claimant.
- Submission of bank overdraft (overdraft facility) and non-overdraft facility: funds that will be submitted to the center. The funds proposed are two types of funds, namely bank overdraft and non-overdraft facility. Bank overdraft is the amount of submission of funds that exceeds IDR 200,000,000 while the non-overdraft facility is the amount

of fund submission that is less than IDR 200,000,000. Jasindo party, namely the claim administration will submit a proposal for funds that have been detailed to the head of the internal financial unit which will then be processed.

- Head of the Denpasar Branch Financial Unit: In the process of disbursing funds, the Head of the Financial Unit of PT Jasindo Denpasar Branch has the duty to approve or approve the submission of funds that have been settled, either submission of bank overdraft or non-overdraft facility. Without prior approval from the head of the financial unit, funds cannot be submitted to the center (PT Jasindo in Jakarta).
- PT Jasindo Jakarta Center: PT Jasindo Jakarta Center will continue the submission of funds sent by the PT Jasindo Denpasar Branch earlier. PT Jasindo Pusat then submits the proposal to the Government Center.
- Government Center of the Ministry of Agriculture: The submission of funds submitted by PT Jasindo center will be processed in advance by the Government Center of the Ministry of Agriculture whether it has fulfilled the requirements and the data is complete. The data is complete and fulfills the requirements, the government will approve and disburse the funds that have been submitted (funds disbursed by the Government to all PT Jasindo Branches that propose funds). Funds that have been disbursed by the Government were transferred to PT Jasindo Pusat Jakarta. PT Jasindo Pusat has the duty to transfer funds that have been submitted previously by each PT Jasindo Branch to the account number used.
- PT Jasindo Denpasar Branch: PT Jasindo Denpasar Branch receives funds that have been transferred by PT Jasindo Pusat to Bank Mandiri account numbers specifically used by PT Jasindo Denpasar Branch to receive money from the central Jasindo.
- Cashier of PT Jasindo Denpasar Branch: Cashier processes claim payments. The cashier will request data from the administration of the RFIP claim in the form of details of funds that can be paid, receipts and cash loans as proof that the funds have been paid. Then the cashier will transfer funds to the farmer's account number.
- Payment of claim funds to farmers: payment of claim funds can be made by transferring to the bank account number owned by the farmer (if the claim fund payment is more than IDR 10,000,000), and can also be paid directly to farmers or in cash (if the claim payment is less than IDR 10,000,000).

The RFIP premium system is calculated for 1 hectare of rice land, farmers are required to pay a self-help premium of 20%, which is IDR 36,000 and if there is a claim, it will get the compensation that will be obtained for IDR 6,000,000. Such an explanation is considered to be the land insured must be 1 hectare, thus farmers do not join RFIP because they do not have a land area of 1 hectare. Even though the total area of land that you want to insure may be under 1 hectare and a maximum of 2 hectares for each farmer. The following is an example of premium payments with a land area of 50 Are (0.5 hectare), as follows:

Total Premium (1 hectare) = interest rate of RFIP X Claim Value (1 hectare of land area) = IDR 180,000

Thus, for 0.5 hectare of land, farmers only pay IDR 18,000 per planting season.

CONCLUSION

The RFIP program launched in October 2015 by the Ministry of Agriculture collaborates with Jasindo Insurance and aims to protect farmers from the risks of uncertainty in their farming. Insurance premiums subsidized by the government are 80% or IDR144,000/hectare and farmers only need to pay a self-help premium of 20% or IDR 36,000/hectare of the total premium that must be paid in the amount of IDR 180,000.00/hectare/planting season, if there are no subsidies from the government, thus it is expected that many farmers are interested in participating in insurance. If the farmer has less than two hectares of land, the calculation of premiums and claims is calculated proportionally.

In the process of submitting and disbursing RFIP claim funds, after settled the claim of administration claims will submit a request for funds in the form of a bank overdraft or non-

bank overdraft to the head of the internal financial unit, then processed to PT Jasindo center in Jakarta and proceed to the government center. After being approved by the government in accordance with the new data, the funds were disbursed to PT Jasindo Jakarta center. PT Jasindo centers to transfer funds that have been submitted to each Jasindo branch. After funds are received at PT Jasindo Denpasar Branch, the funds will be transferred through the Bank to the account number of the farmer according to the claim submitted by them.

REFERENCES

1. Asuransi Jasa Indonesia, 2015. Annual Report Book, PT Asuransi Jasa Indonesia (Persero). Jakarta.
2. Calkin PH, DiPietre, DD.1983. Farm Business Management Succesful Decisions in Changing Environment. New York: Macmillan Publishing Co. Inc.
3. Fleisher B. 1990. Agricultural Risk Management. London: Lynne Rienr Publisher, Inc.
4. Geriya, Wayan., Triguna, IBGY., Dhana, IN. 1985. Pola Kehidupan Petani Subak Rejasa Di Tabanan. Proyek Penelitian dan Pengkajian Kebudayaan Nusantara (Javanologi) Direktorat Jendral Kebudayaan: Yogyakarta.
5. Harwood J, Heifiner R, Coble K, Perry J, Somwaru A. 1999. Managing Risk in Farming: Concepts, Research and Analysis. Agricultural Economic Report No.774. US Department of Agriculture.
6. Hadi, P. U, C. Saleh, A.S. Bagyo, R. Hendayana, Y. Marisa dan I. Sadikin. 2000. Studi Kebutuhan Asuransi Pertanian Pada Pertanian Rakyat. Laporan Hasil Penelitian. Pusat Penelitian Sosial Ekonomi Pertanian, Badan Litbang Pertanian, Departemen Pertanian.
7. Pasaribu, S.M., H.P. Saliem, E. Ariningsih. 2009. Developing agricultural insurance for rice farming. Final Report of Project CGP/RAS/214/IFA: Pro-Poor Policy Formulation, Dialogue and Implementation At Country Level: Indonesia. Indonesian Center for Agriculture Socio Economic and Policy Studies (ICASEPS) and Food And Agriculture Organization-Regional Asia and The Pacific Office (FAO-RAP), Bogor.
8. Soekartawi. 2003. Agribisnis Teori dan Aplikasinya. PT. Raja Grafindo Persada: Jakarta.
9. Soekartawi. 2005. Prinsip Dasar Ekonomi Pertanian. PT. Raja Grafindo Persada: Jakarta.
10. Soekartawi. 2006. Analisis Usahatani. UI-Press: Jakarta.
11. Subak Sembung. 2014. Eka Ilikita Subak Sembung Desa Peguyangan. Unpublished: Denpasar.
12. Tenaya, Narka. 2009. Bahan Kuliah Ekonometrika Program Studi Agribisnis. Laboratorium Statistika Fakultas Pertanian Universitas Udayana: Denpasar.
13. W.Windia, IW, Sudana, I Ketut Wirta Griadhi, Sutawan, Nyoman., Ngakan Made Samudra, Suadnya, IGM., I G. Pitana, Nyoman Norken, Ida Bgs. Pt. Purwita, Sushila, Jelantik. 1997. Subak Sistem Irigasi Tradisional Di Bali Sebuah Canangsari. Denpasar: PT Upada Sastra.
14. Windia, Wayan. 2006. Transformasi Sistem Irigasi Subak yang Berlandaskan Konsep Tri Hita Karana. Denpasar: Bali Pustaka.
15. Windia, Wayan., Sudarta, Wayan., Astiti, WS. dkk. 2015. Sistem Subak di Bali (Kajian Sosiologis). Denpasar: Udayana University Press.

DOI <https://doi.org/10.18551/rjoas.2018-11.32>

RELATIONSHIP AMONG ECONOMIC DEVELOPMENT, POPULATION MIGRATION AND POPULATION DEVELOPMENT IN BALI PROVINCE OF INDONESIA

Budhi Made Kembar Sri, Yasa I Nyoman Mahaendra, Lecturers

Faculty of Economics and Business, University of Udayana, Denpasar, Bali, Indonesia

*E-mail: kacungdobel@yahoo.com

ABSTRACT

Population development is a dynamic balance between addition and reduction in population. A large population for some circles is a positive thing, but there are also those who argue that this will add to the development burden. If reviewed regionally, additional population due to natural factors (births) is also caused by in-migration. Bali Province is a highly developed tourism sector, which attracts many residents outside Bali to migrate to Bali. But will the development of the population have an impact on economic development? The objectives of this research are: (1) to determine the impact of population migration on population development and economic development in Bali Province; (2) to determine the impact of population development on economic development in Bali Province; (3) to find out whether population development mediates the impact of population migration on economic development; and (4) to find out what efforts can be made to control the population in Bali Province. This study uses secondary data types or time series data. Data were obtained from the Central Bureau Statistics of Bali Province for the past five years. Data analysis method used in this research is path analysis with WarpPLS application. The results showed that: (1) population migration had a positive and significant impact on the development of the population in Bali Province; (2) population migration has a positive and significant impact on economic development in Bali Province; (3) population development has a positive and significant impact on economic development in Bali Province; and (4) efforts to control the population can be carried out by strengthening family planning programs and equitable development to prevent unbalanced population migration in each region.

KEY WORDS

Economic development, population, migration, Bali, regional policy.

Population growth is actually a dynamic balance between two forces that increase or reduce the population. Population development will be affected by the number of births, but simultaneously will be reduced by the number of deaths. In the context of spatial mobility or population migration also affects changes in population, where immigration or in-migration will increase population and emigration or out-migration will reduce the population in an area.

A large population for some circles is a positive thing because the large population can be used as the subject of development; the economy will develop if the number of its workforce is large. But on the other hand, some circles doubt whether the large population is as an asset as previously explained, but the opposite of that is that the population is a burden for development. This relates to the fulfillment of needs which are increasingly increasing along with the development of the population. This pessimistic view is supported by the Malthus theory which states that population growth according to the temporary measurement of food growth according to the arithmetical series. The conclusions from this pessimistic view are not the prosperity that is obtained, but instead poverty will be encountered when the population is not controlled properly. Actually, the problems that arise in the population sector not only in large numbers but also in the derivatives of large quantities include population distribution, population quality, adequacy in terms of consumption, population structures that are mostly young, capital and technology ownership is also still low and consequently work productivity is decreasing as well as crucial problems related to employment.

The phenomenon in the province of Bali is slightly different from other regions in Indonesia in terms of population development, because the dimensions are regional, so that population migration causes high population growth in this region. Its net migration has positive value which means that incoming migration is more than out migration, this can be seen from population growth during the census period that has been carried out.

Table 1 – Population Growth in Bali Province, Year 1961 – 1971 Until 2000 – 2001

Period of Year	Population Growth (people)
1961 – 1971	2,120,322
1971 – 1980	2,469,930
1980 – 1990	2,777,811
1990 – 2000	3,151,162
2000 – 2010	3,890,757

Source: Central Bureau of Statistics of Bali Province (2018).

For more details, population growth in Bali Province can be described as follows:

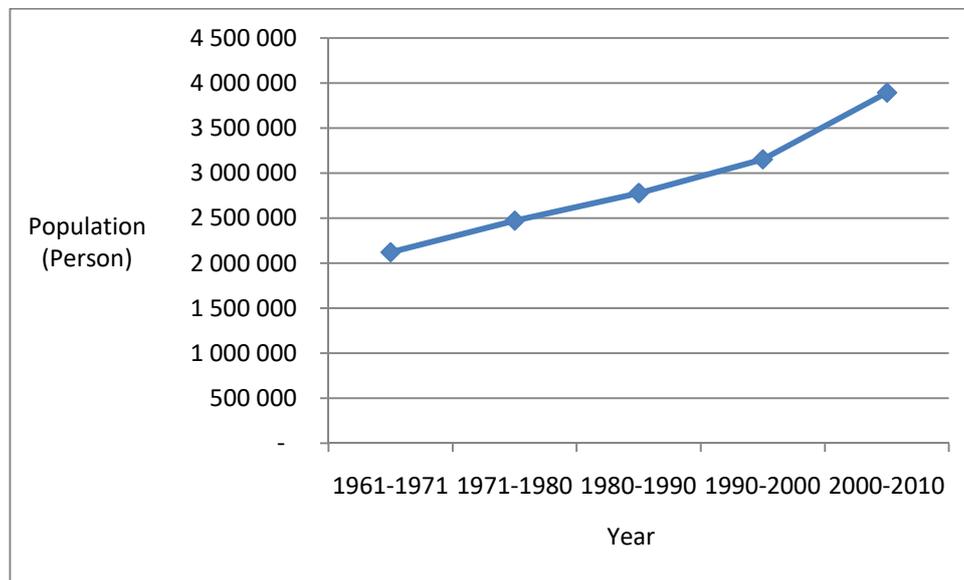


Figure 1 – Chart of Population Growth of Bali Province, Years 1961-1971 until 2000-2001

Source: Central Bureau of Statistics of Bali Province (2018)

In addition to population problems, in the economic dimension in the past, economic success indicators were always oriented towards success in generating high national income, so that the approach taken was more directed towards production activities. But in the future until now, the development orientation based on production is increasingly unpopular, because often the success of development with these indicators is not enjoyed by the population as a whole. The new paradigm of development has shifted to the importance of people centered development. Many experts say that the population is not only an object of development but also a subject of development. Because it is required that residents must participate as subjects, it is necessary to improve the quality of human resources so that the desired development can be achieved.

Population involvement in economic development becomes important in order to increase income. The policy of expanding employment opportunities is another important policy in development, because in addition to being a benchmark for the success of economic development, the next can also be used as a measure of prosperity. Rapid population growth will result in a rapid increase in the number of workers. Many empirical theories and frameworks have proven that labor is not only seen as a part of the unit in the creation of output (production), but also how the quality of the workforce interacts with other

production factors to create added value (Wahyuningsih, 2009). Therefore, a strong effort is made to increase the participation of population income, among others by diversifying employment opportunities created by the government and the private sector. This is intended so that the population has a choice in the effort to obtain employment in an effort to generate income, so as to meet the needs needed and improve their welfare. The problem faced now is that the development of the population of the Province of Bali is still relatively high because this region has its own attraction for migrants from outside the province. But will the growth of the population have an impact on economic growth? Based on these problems this study aims to analyze the relationship between economic growth, population migration, and population development in Bali Province.

The objectives of this research are: (1) to determine the impact of population migration on population development and economic development in Bali Province; (2) to determine the impact of population development on economic development in Bali Province; (3) to find out whether population development mediates the impact of population migration on economic development; and (4) to find out what efforts can be made to control the population in Bali Province.

THEORETICAL REVIEW

Population Theory. Todaro (2005) states that migration is a process that is very selective in influencing each individual with certain economic, social, educational and demographic characteristics, so the effect on economic and non-economic factors of each individual also varies. This variation is not only found in the flow of migration between regions in the same country, but also in migration between countries. According to Mantra (2000) Migration is the movement of people from one region to another with the intention of settling in the destination. While non-permanent mobility is the movement of the population from one place to another not with the intention to settle in the destination.

Horizontal or geographical population mobility includes all population movements that cross certain boundaries in a certain period (Mantra 2000). The area limit used is the administrative boundary. Population mobility is twofold, permanent and non-permanent mobility called sercular mobility. The theories of early migration are based on surplus labor, fixed growth rates and job creation and these various theories see exit migration as a social trauma. While the new theory realizes that migration if driven by economic power is a positive and selective process.

Migration in a country can be distinguished on international migration and internal migration. Transmigration and urbanization are a form of internal migration. Internal migration is the movement of people over the administrative boundaries of the same country. The Central Bureau of Statistics (BPS) defines internal migration as a movement of population that crosses provincial boundaries. Sukamdi and Mujahid (2015) divided internal migration into four categories: migration between economic corridors, inter-provincial migration, inter-regional migration (regency/city/village) and rural-urban migration.

According to the Central Bureau of Statistics, internal migration can be divided into two types, namely lifetime migration and risk migration. Lifelong migration is a condition of a person's displacement that occurred long ago from a place of birth that is different from where he lives now. Risen migration is a condition of the movement of a person five years ago, which is different from the place of residence during the enumeration. Rising migration consists of incoming migration, outgoing migration and net migration. Incoming migration is a migrant entering the destination. Out migration is a migrant who comes out of the area of residence. Net migration is the difference between the amount of incoming migration minus the number of outgoing migrations.

Economic Development Theory. According to Todaro (2000) economic development means a multi-dimensional process involving major changes in social structure, social attitudes, and national institutions including acceleration or acceleration of economic growth, reduction of inequality and absolute poverty.

Keyfit and Nitisastro (1997) explained that the ultimate goal of a country's economic development is to obtain an economic arrangement in such a way that it can guarantee the highest level of living for all citizens. The level of living in a country is usually measured by the average income of each person based on national development. Even so, increasing production results does not mean an increase in the level of livelihood, if population growth exceeds the rate of increase in production.

The Development Goal is the distribution of development and the results lead to social justice for all Indonesian people, as mandated by Pancasila. High economic growth and the creation of a healthy and dynamic national stability. Participation in development will be felt quickly by the population if employment opportunities are available well and in accordance with the conditions of the community. Job opportunities created for the population can generate income that will be used to enjoy a decent life and increase from time to time.

Economic Growth Theory. Economic growth must reflect the growth of per capita, meaning the growth of real wages and rising living standards. Thus economic growth is a condition of the development of potential GNP that reflects the growth of per capita output and the improvement of people's living standards (Murni, 2006).

According to the classical theory that output will develop in line with population development. Adam Smith, who pioneered the Classical theory, assumed that at that time land was not yet scarce, no capital had been taken into account, but only the amount of labor was taken into account. As a result, population growth is seen as a factor that can drive economic growth. Considering that output is developing in line with the development of the population, the concept of the law of diminishing return did not yet apply, as David Ricardo discovered in the following period. Because according to this theory the population is considered to be a driving force for economic growth, so the motto of many children is a lot of fortune means that more and more children, more workers can be involved to work on the land so that it adds output. The law of diminishing return is revealed after the population increases as well as national production, but after the golden age began to be felt that the longer the population increases, while the amount of land does not increase which causes the land to feel narrower. Every new worker will get smaller land to cultivate. The declining ratio between land cultivated and the large number of workers will lead to a decrease in marginal product so that it will reduce real wages.

Adam Smith (in Arsyad, 2010) reveals three main elements of a country's production system, namely: first, available natural resources, second, human resources and third, capital accumulation that must be possessed. But Smith put more emphasis on capital stock which is an element that actively determines the level of output. Economic growth is related to the increase in output per capita. There are two sides to consider, namely the total output side and the population size. Per capita output is the total output divided by the population. So the process of increasing output per capita, cannot or cannot, must be analyzed by looking at what happens with total output on the one hand, and the population on the other (Boediono, 1992).

FRAMEWORK AND HYPOTHESES

Based on the description of literature review and research objectives, the conceptual framework of this research can be described as Figure 1.

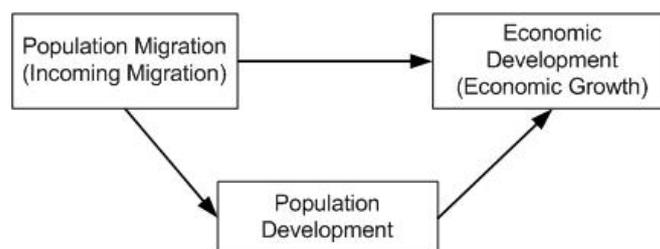


Figure 1 – Conceptual Framework

Based on the conceptual framework, the hypotheses of this research:

- Population migration has a positive and significant effect on population development;
- Population migration has a positive and significant impact on economic development;
- Population development has a positive and significant impact on economic development;
- Population development mediates significantly the influence of population migration on economic development.

METHODS OF RESEARCH

This study uses secondary data types or time series data. Data was obtained from the Central Bureau of Statistics of Bali Province and each regency/city for the past five years. All data obtained is annual data from each regency/city in Bali Province. This time period was chosen taking into account the limitations of data sources and the limited time available. The sample in this study is the Regency/City in Bali Province.

Data analysis method used in this study is path analysis. Path analysis is used to determine the effect of a variable on other variables both direct and indirect influences.

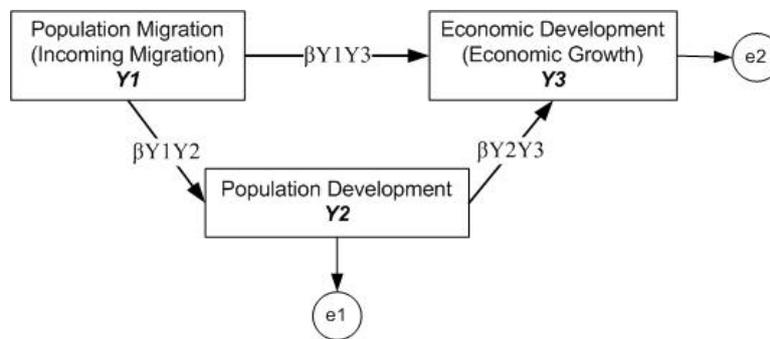


Figure 2 – Path Diagram Design

Note: Y1 = Population migration; Y2 = Population development; Y3 = Economic growth (GRDP); β_{Y1Y2} = Path coefficient of population migration on population development; β_{Y1Y3} = Path coefficient of population migration on economic growth; β_{Y2Y3} = Path coefficient of population development on economic growth; e = error.

Because the path coefficient has no units, it can be concluded that the greater the path coefficient, the greater the influence given by the opic le. Requirements that are needed are as follows:

- The relationship between variables is a linear relationship;
- All residual variables do not have correlation with each other;
- The pattern of relationships between variables is recursive;
- The measurement scale for both the independent variable and the dependent variable is at least the interval.

The mathematical equations for each relationship are as follows:

$$Y2 = \beta_{Y1Y2} + e1$$

$$Y3 = \beta_{Y1Y3} + \beta_{Y2Y3} + e2$$

RESULTS AND DISCUSSION

Population Migration in Bali Province. Migration is the movement of people from one region to another. In general, the movement carried out by the population is caused by economic factors in addition to other factors, namely social and political. Many considerations are carried out by the residents in making the move seen from the

advantages and disadvantages. In general, Bali Province experienced an increase from the Population Census 2000 to the Population Census 2010.

For more details when compared through graphs like Figure 3, it is clear that Denpasar City is still the main destination for population migration. Whereas based on Population Census 2000 the number of migrant population in Denpasar City has reached 82,535 people, while the second most migrated destination area, namely Badung Regency, only 30,438 people.

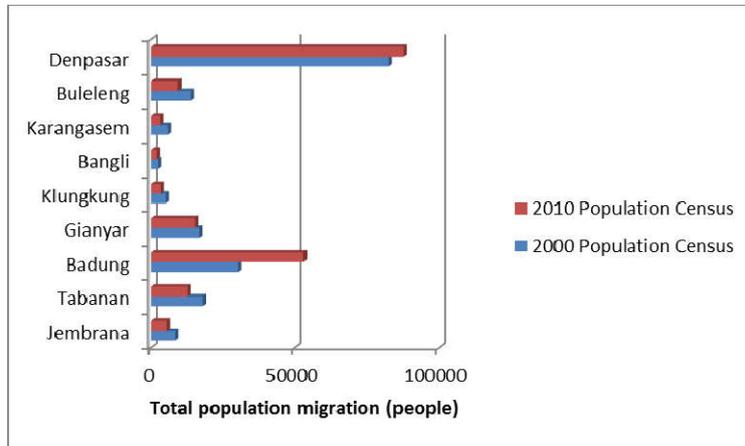


Figure 3 – Comparison of Regency/City Migration Populations in Bali Province, based on the Population Census 2000 and the Population Census 2010
 Source: Central Bureau of Statistics of Bali Province (2018)

Furthermore, when viewed from the development of population migration by comparing migration in the Population Census 2000 with the Population Census 2010, it can be compared to the development of population migration as Figure 4. It is seen that the development of positive migration only occurs in two regions, namely Badung Regency and Denpasar City, but in aggregate Bali Province still experiences positive population development. Even the development of population migration in Badung Regency is very high, namely 74%, while Denpasar City is only 6.07%, and Bali Province is 4.46%.

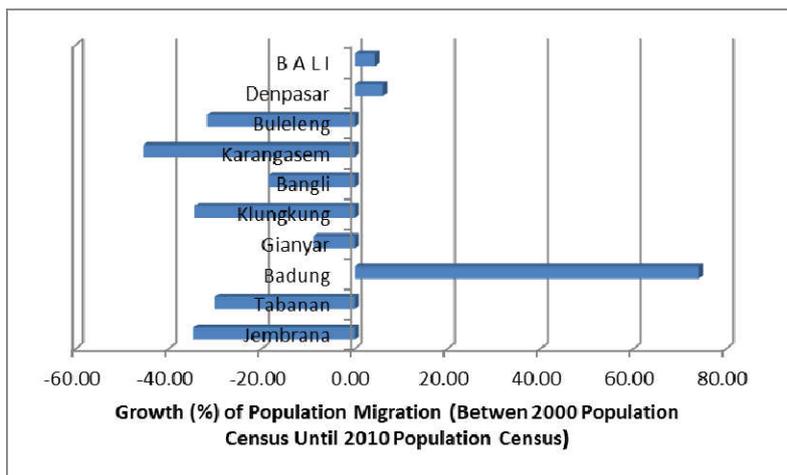


Figure 4 – Growth of Regency/City Population Migration in Bali Province, between the Population Census 2000 and the Population Census 2010 (in percent)
 Source: Central Bureau of Statistics of Bali Province (2018)

Badung Regency is the district with the highest economic growth compared to other regencies/cities in Bali Province. So that over the past five years, Badung Regency has become a destination for immigration, nearly 74% of the population from other

regencies/cities and other provinces as the chosen area to settle down and find work or work.

Population Development of Bali Province. Population in Bali Province experiences a positive growth every year, even though the amount is fluctuating. Figure 5 follows graphically a comparison of the population of regencies/cities in Bali Province. Figure 5 shows that the highest population is in Badung Regency, while the least population is in Klungkung Regency.

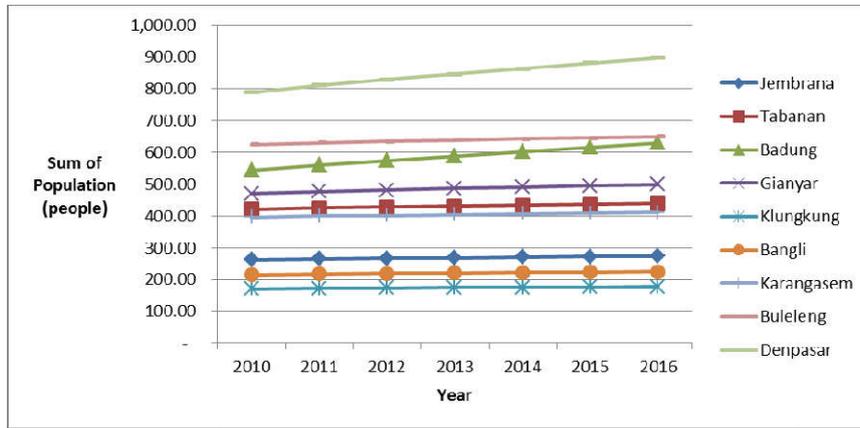


Figure 5 – Population in Bali Province in 2010 – 2016 (in thousand people)
Source: Central Bureau of Statistics of Bali Province (2018)

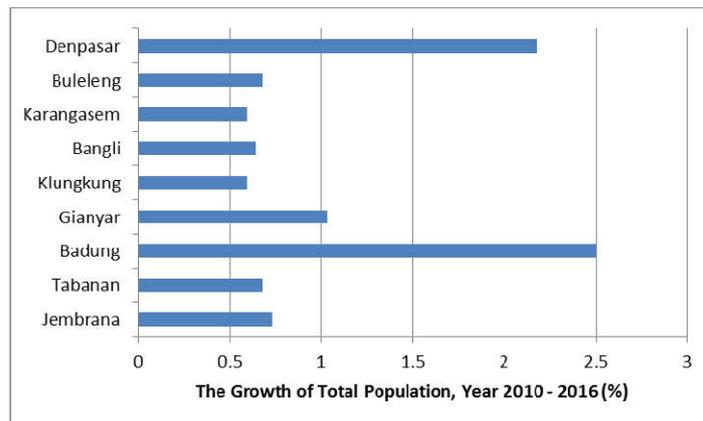


Figure 6 – Growth of Regency/City Population in Bali Province Year 2010 - 2016 (%)
Source: Central Bureau of Statistics of Bali Province (2018)

Figure 6 shows the highest population growth in Badung Regency (2.50%), followed by Denpasar City (2.18%), and Gianyar Regency (1.03%).

Economic Development of Bali Province. The structure of Bali's economy in general is supported by three main sectors, namely the agricultural sector, small industry (especially the handicraft industry), and the tourism sector as the leading sector. Judging from the development of GRDP per Regency/City, Bali's GRDP is still dominated by three districts/cities, namely Badung Regency, Denpasar City, and Gianyar Regency.

The three regions are tourist destinations, such as Badung Regency which is the center of tourism accommodation, as well as the center of economic activity. Furthermore, the City of Denpasar, in addition to being the central government of the Province of Bali is also the center of economic activity, education, tourism and others. While Gianyar Regency which is a tourism destination is also an industrial center, especially small and medium-sized industries. The economic growth of the three regencies/cities is between 12.61% to 14.68%. While the smallest GRDP is Bangli Regency and Klungkung Regency with an average GRDP growth of 12.15% and 12.41% per year based on current prices. Bangli Regency is

the only regency in Bali that has no sea/beach and is not crossed by inter-provincial roads, so Bangli regency can be said to be an isolated district compared to other regencies/cities in Bali and most of the area is dry land namely forest. Bangli Regency is a water catchment area and the role of the agricultural sector is dominant compared to other sectors.

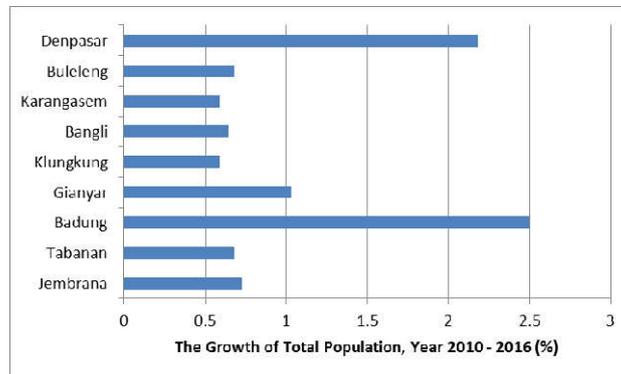


Figure 7 – Development of Regency/City Population in Bali Province, Year 2010 - 2016 (%)
 Source: Central Bureau of Statistics of Bali Province (2018)

Figure 7 shows that the regency/city GRDP in general is continuously increasing from year to year. The highest increase occurred in Badung Regency, considering that Badung Regency was the center of Bali's economy. Furthermore, the difference is not too far followed by the City of Denpasar which is the center of the government of the Province of Bali. It is seen that the difference in the development of GRDP between Badung Regency and Denpasar City with other districts is quite significant.

Regression Analysis and Hypotheses Testing. As previously described on data analysis techniques, the output of the regression test results with the Warp-PLS application as in Table 1 below.

Table 1 – Result of Regression Test

	Path Regression	p-values	Standard Errors	Effect Sizes
Y1 → Y2	0,875	< 0,001	0,093	0,766
Y1 → Y3	0,476	< 0,001	0,107	0,406
Y2 → Y3	0,465	< 0,001	0,107	0,395
Y1 → Y2 → Y3	0.407	< 0,001		
R ² (Y2) = 0,766				
R ² (Y3) = 0,801				

Regression coefficients and p-values in Table 1 show that:

- The effect of population migration (Y1) on population development (Y2) has a regression coefficient of 0.875 and a p-value <0.001 so that it can be concluded that population migration (Y1) has a positive effect on population development (Y2);
- The effect of population migration (Y1) on economic development (Y3) has a regression coefficient of 0.476 and p-value <0.001 so that it can be concluded that population migration (Y1) has a positive and significant effect on economic development (Y3);
- The effect of population development (Y2) on economic development (Y3) has a regression coefficient of 0.465 and p-value <0.001 so that it can be concluded that population development (Y2) has a positive and significant effect on economic development (Y3);
- Population development (Y2) significantly mediates the effect of population migration (Y1) on economic development (Y3) with a regression coefficient of 0.407 and p-value <0.001.

Appropriate Table 1 It can also be seen that the R² value of the population development variable is 0.763 which means that 76.3 percent of the population development

variables are influenced by population migration factors, and the remaining 23.7 percent are other factors. Furthermore, it is also known that the R² value of the economic development variable is 0.801, which means that as much as 80.1 percent of the economic development variables are influenced by the variables of population migration and population development, while the remaining 19.9 percent are other factors.

DISCUSSION OF RESULTS

Effect of Population Migration on Population Development in Bali Province. The results of data analysis show that population migration has a positive and significant effect on the development of the population in Bali Province. This means that if the population migration becomes more positive (in-migration) and increases, it will be followed by an increase in the population, and vice versa.

As we know, the population growth rate is dominated by demographic determinants, namely: (1) natality/fertility (birth); (2) mortality (death); (3) migration (population movement) (Suartha, 2016). Birth certainly gives an increase in population, on the contrary death will reduce the population. While migration can increase or decrease the population. If the incoming migration will increase the population, on the contrary if out migration will reduce the population.

Effect of Population Migration on Economic Development in Bali Province. Based on the results of data analysis, it is known that population migration has a positive and significant effect on the economic development of Bali Province. This means that if migration is positive (in-migration) is increasing, it will have a positive effect on the economic development of Bali, and vice versa.

As explained earlier, that the theories of early migration are based on surplus labor, a fixed rate of growth and the creation of employment and these various theories see exit migration as a social trauma. While the new theory realizes that migration if driven by economic power is a positive and selective process (Suartha, 2016). With advances in technology and transportation infrastructure, labor mobility continues to increase. Labor migration encourages growth.

In the domestic sphere, it shows that labor migration contributes to aggregate growth by improving the distribution of labor which then encourages concentration. With the occurrence of the grouping of skills and talents possessed by the workforce can create an abundance of agglomeration to other regions. Some non-economic factors that influence a person's desire to migrate are: 1) social factors including the desire of migrants to break away from the traditional constraints contained in social organizations that previously restrained them; 2) physical factors including climate influences and meteorological disasters such as floods and droughts. 3) demographic factors including a reduction in mortality rates which then accelerates the rate of growth of a population somewhere; 4) cultural factors including fostering the sustainability of large family relationships that are at the destination of migration; 5) communication factors including the quality of all means of transportation, education systems that tend to be oriented towards city life. The more advanced socioeconomic conditions of a region will create full factors such as industrial development, trade, education, housing and transportation. This condition is in demand by residents of other regions who hope to meet their needs and desires. On the other hand, each region has a push factor that causes a number of residents to migrate outside their regions.

Effect of Population Development on Economic Development in Bali Province. The results of data analysis show that population development has a positive and significant impact on economic development in Bali. This means that if the population increases, it will be able to increase the economy as well, and vice versa.

Population growth in an area on one side will constitute development capital, because there is a work force in accordance with the development of the population. However, economic development cannot be separated from the optimization of resource allocation, both physical, natural and human resources. The trigger factor for migration is very complex, especially the reasons for meeting the needs of life. Until now migrants made economic

motives as a reason for someone to make a move. Gilbert and Gugler (1996) say the majority of the population moves because of economic reasons. Dustmann (2007) added that not only economic reasons, but also those caused by natural disasters. The economic factors in question can be in the form of employment status, level of wages, amount of income, house ownership, and ownership of agricultural land. People tend to move to areas that promise a better life (Ananta, 1985).

Likewise in Bali Province, migration rates are still relatively positive. This means that many residents migrate (risen) to Bali, or if viewed by regency/city, the destination of migration is only in Denpasar City or Badung Regency. Migrants from outside Bali generally go to Bali to work in the informal sectors, because the interest of local residents to fill the informal sector is not high.

Likewise Denpasar City and Badung Regency became the destination of risk migration because they provided many jobs and employment opportunities, especially in the tourism and government sectors. In addition, Denpasar City is also a trade center and government center, as well as the availability of various education and health facilities. So it is normal for migration to the area.

Population Control Efforts in Bali Province. Population control is a strategic issue that will have a major impact on development. The population is indeed the source of labor and the main economic capital of a region. But when the population cannot be controlled, it will become a burden for the government. For example, if the population of productive age is less than the population of productive age, it would certainly be a heavy burden with a high dependency rate. If the population of productive age is many, but not followed by the quality and availability of employment, then it could be a burden on the State, increasing unemployment, and prone to trigger crime.

As discussed earlier, that an increase in the population of birth factors can be controlled through a Family Planning program. Through the Family Planning program carried out by the Bali Provincial BKKBN (National Family Planning Coordinating Board) and related agencies, it is expected that the community can plan the number and time of birth, so that the population can be controlled.

Furthermore, related to the high level of migration in certain regions, it is necessary to study the causes of migration. The general population will migrate to areas that have or suspected to open many job opportunities. Migration between regencies/cities in Bali Province tends to be unbalanced. Incoming migration is dominated by Badung Regency and Denpasar City, while other areas tend to be negative. Therefore, a program for equitable development and expansion of employment is needed that is evenly distributed to all regencies/cities in Bali.

CONCLUSION

The results of data analysis and discussion show that population migration has a positive and significant effect on population development and economic development in Bali Province. Furthermore, population development also has a positive and significant impact on economic development in the Province of Bali. Population development was also proven to significantly mediate the influence of population migration on economic development in Bali Province. Efforts to control the population in Bali Province need to be done through efforts to strengthen the Family Planning program to control birth rates. In addition, it is necessary to make equitable development in various regions both in Bali and in Indonesia, so that population migration does not only focus on certain regions, including in Bali Province.

There are several things that can be suggested as a follow-up to the results of the study, namely:

- It is necessary to strengthen the population control program and coordinate arrangements between institutions that handle the central level population control (BKKBN) and regional apparatus organizations (OPD) in the regions;
- Equitable development and the distribution of the potential of the regency in the Province of Bali need to be carried out not to focus only on areas that have

developed. Equitable infrastructure development is also believed to be able to open investment opportunities in remote areas;

- The younger generation is directed to develop entrepreneurial skills, so they can become job creators without the need to migrate to urban areas and can have a positive impact on the economic development of their regions.

REFERENCES

1. Ananta. 1985. Ten "Windu" (Eight Years Cycle) Transmigration in Indonesia 1905-1985. Jakarta: University of Indonesia.
2. Arsyad, Lincolin. 2010. Development Economy. Jakarta: Ghalia Indonesia.
3. Central Bureau of Statistics of Bali Province. 2018. Bali in Figure 2018. Denpasar: Central Bureau of Statistics of Bali Province.
4. Boediono. 2001. Development Economics. Jakarta: LPUI.
5. Dustmann, C. and Y. Weiss. 2007. Return Migration: Theory and Empirical Evidence from the UK. *British Journal of Industrial Relations*. Vol 45, pp 236–256.
6. Gilbert, A. and J. Gugler. 1996. Urbanization and Poverty in the Third World. (Transfer Language: Anshori and Juanda). Yogyakarta: PT Tiara Wacana Yogya.
7. Keyfitz, N. and Nitisastro, W. 1997. Indonesian Population and Development Issues. Jakarta: PT Pembangunan.
8. Mantra, I. B. 2000. Survey Research Methodology. Yogyakarta: Offset Student Library.
9. Murni, Asfia, 2006. Macroeconomics of Economic Growth and Macro Policy. Bandung: PT. Refika Aditama.
10. Suartha, N. 2016. Factors Affecting the High Growth Rate and Implementation of Population Policy in Bali Province. *PIRAMIDA*. Vol. XII, No.1: 1-7.
11. Sukamdi and G. Mujahid. 2015. Internal Migrations in Indonesia. UNFPA Indonesia. Monograph Series No.3.
12. Todaro, M. P. and S.C. Smith. 2003. Economic Development in the Third World. Eighth Edition. Jakarta: Erlangga.

DOI <https://doi.org/10.18551/rjoas.2018-11.33>

THE IMPLEMENTATION OF THE USE OF VILLAGE ALLOCATION FUNDS FOR THE AGRICULTURAL SECTOR IN SOUTHWEST ACEH REGENCY OF INDONESIA

Maulana Ona

Meurandeh Village, Lembah Sabil District, Southwest Aceh

Agussabti

Jl Prada-Lamnyong, Syiah Kuala District, Banda Aceh

Fajri

Tanjung Harapan, Syiah Kuala District, Banda Aceh

*E-mail: ona.maulana24@gmail.com

ABSTRACT

Dana Desa (Village Allocation Funds) are funds sourced from the *APBN* (State Budget) allocated to villages transferred through the *APBN* and *Anggaran Pendapatan dan Belanja Kabupaten* (Regency Budget) and used to fund government administration, development administration, community development and empowerment of rural communities. There are 3 priority principles in the use of Village Allocation Funds: justice, village's priority needs and typologies. Village Allocation Funds can also be used to use natural resources in rural areas such as the agricultural sector. The Government of Southwest Aceh issued a regional policy in order to use village allocation funds for the agricultural sector whose budget allocation was taken from the village funds. But the reality is that the implementation of the use of village allocation funds for the agricultural sector is not managed properly and there are problems that the implementers face towards the Southwest Aceh policy program. Therefore, it is very important to review the process of implementation of the use of village funds in the agricultural sector in Southwest Aceh.

KEY WORDS

Implementation, village allocation funds, agriculture.

Village is a legal community unit that has jurisdictional territorial boundaries, which are authorized to regulate and manage the interests of the local community based on the origin and local customs that are recognized and respected in the National Government system and located under the Regency / City Government. (Law No.32 of 2004 concerning Regional Government). This means that the village is an independent government within the sub-system of the National Government in Indonesia.

Based on data from the Ministry of Internal Affairs, there are 74,754 villages in Indonesia starting from Sabang Island to Meurake Island (Minister of Home Affairs Regulation Number 56 of 2015 concerning Code and Data of Government Administration areas). With that large number of villages, this proves that the village as the smallest unit within the National Government has an important role in the development of the Indonesian.

Therefore, to strengthen the role of the village in development, the Indonesian Government issued Law Number 6 of 2014 concerning village allocation funds. Village allocation funds are funds sourced from the *APBN* (State Budget) allocated to villages transferred through the *APBN* and *Anggaran Pendapatan dan Belanja Kabupaten* (Regency Budget) and used to fund government administration, development administration, community development and empowerment of rural communities.

In the use of village allocation funds, there are three principles of priority in the use of village allocation funds: (1) *justice*; prioritizing the rights and interests of all villagers without discriminating, (2) *priority needs*; prioritizing village interests that are more urgent, more needed and directly related to the interests of most of the villagers, and (3) *village typology*;

taking into account the specific conditions and characteristics of the geographical, sociological, anthropological, economic and ecological characteristics of the village and changes or developments in the village's improvement. Therefore, the village allocation funds will strengthen the village's philosophy that is improving the welfare and equity of rural development through improving public services in the village, improving the village economy, overcoming inter-rural development gaps and strengthening rural communities as the subject of the development of this country.

The village allocation fund will strengthen the village's philosophy; increasing the welfare and equity of rural development through improving public services in the village, advancing the village economy, overcoming inter-village development gaps and strengthening rural communities as the subject of the country's development. The Southwest Aceh is one of the regencies in Aceh Province; the regency is located in the south west side of Aceh Province, which is the agricultural producing region in *Serambi Mekah* (Aceh).

Southwest Aceh have received village allocation funds for three years, from 2015 to 2017, from the first year to the third year the village allocation funds have increased. The increase will encourage rural economic development to be better for the welfare of rural communities within the regency.

Table 1 – Amount of village allocation funds transferred in Southwest Aceh Barat Regency (2015-2017)

No	District	Total Amount of Village Allocation Funds Each Year		
		2015	2016	2017
1	Lembah Sabil	Rp 3,799,998,620	Rp.11,412,001,878	Rp.14,855,485,000
2.	Manggeng	Rp.5,366,524,218	Rp. 15,796,891,153	Rp,18,915,435,000
3.	Tangan-Tangan	Rp. 4,838,153,490	Rp.15,120,573,267	Rp, 16,789,391,000
4.	Setia	Rp. 1,917,088,523	Rp. 5,855,656,756	Rp, 9,563,175,000
5.	Blang Pidie	Rp. 5,955,799,964	Rp. 17,444,045,834	Rp, 20,942,156,000
6.	Susoh	Rp. 8,772,664,182	Rp. 25,435,873,202	Rp.,30,129,777,700
7.	Jeumpa	Rp. 5,664,362,316	Rp. 10,795,640,860	Rp,13,846,031,000
8.	Kuala Batee	Rp. 5,774,091,961	Rp. 17,788,198,982	Rp,22,829,748,000
9.	Babahrot	Rp. 2,458,734,703	Rp. 9,280,092,967	Rp,16,544,634,000
Total		Rp. 44,547,417,977	Rp. 128,928,974,899	Rp.164,415,882,700

Source: *Dinas Pemberdayaan Masyarakat, Pengendalian Penduduk Dan Perlindungan Perempuan Kabupaten Aceh Barat Daya (Department of Community Empowerment, Population Control and Women's Protection in the Southwest Aceh).*

Based on the village typologies within Southwest Aceh, the villages there rely on the agricultural sector as their rural economic base. So the Southwest Aceh government issued a regulation on the use of village allocation funds for the agricultural sector where each village allocates few percents of the village allocation funds for the agricultural sector based on the submission from the village community in order to help the village community who work as farmers in conducting agricultural business within in the villages.

The village allocation funds in the agricultural sector has been running for three years in the Southwest Aceh, where each village allocates funds in different amounts depending on the village apparatus submission in accordance with the village allocation fund and the amount of agricultural land owned by the village community. In the implementation of the regent's regulation regarding the use of village allocation funds for the agricultural sector has not been carried out in accordance with the expectations of the local government of

Southwest Aceh where there are difficulties that must be faced by the executive officer in carrying out the regulations.

In the case, in implementing the regulation on the use of village allocation funds for agriculture, it takes the role of the executive officer as well as the participation of the village community in the process of implementing the program, both from the process of submitting the allocation to the distribution process of village allocation fund to the agricultural sector so that the program can run optimally and on target.

METHODS OF RESEARCH

This research was conducted in the Southwest Aceh, precisely in two districts, *Manggeng* and *Lembah Sabil* by taking samples in eight villages. In *Manggeng* there are four villages that became the research area, *Sejahtera*, *Pante Pirak*, *Ujung Padang* and *Pante Raja*. In *Lembah Sabil* there are four villages that became the research area, *Ladang Tuha II*, *Alue Rambot*, *Meunasah Sukon* and *Meunasah Tengah*.

According to Sugiyono (2012), population is a generalization area consisting of objects or subjects that have certain qualities and characteristics set by researchers to be studied and then drawn conclusions. The populations in this study were the executors involved in the policy program on the use of village allocation funds for the agricultural sector in Southwest Aceh consisting of the Heads of Agencies involved in the program, the *Camats* and the Village Heads and the village facilitators consisting of counterpart experts district, district facilitators and local village assistants.

According to Sugiyono (2014), sample is part of the sum and characteristics possessed by the population. In this study, the sampling technique used was *random sampling*; a sample selection method where each sample selection in the population has the same probability to choose from. In sampling process, the researcher uses a multi-stage sampling technique; a multi-stage sampling technique is a random sampling technique that is carried out in stages ranging from the highest level to the lowest level.

This study uses a qualitative approach, which in this study is descriptive; a research that is limited in efforts to express a problem, situation or event by conducting in-depth interviews conducted. Descriptive method according to Arikunto (2010) is a research method that is intended to investigate the circumstances, conditions or other things that have been mentioned, the results of which are presented in the form of research reports or descriptions of research conditions.

RESULTS OF STUDY

Village Development is aimed to improve the welfare of the villagers and their quality and poverty alleviation through the fulfillment of basic needs, the development facilities and infrastructure, the development of local economic potential, and sustainable use of natural and environmental resources. So in establishing the village, it cannot be separated from the issue of the village budget as one of a support in the framework of the village development activities. Therefore, the Law Number 6 of 2014 concerning Villages, is a legal protection for the village government in carrying out their duties and functions in the development process. In that Law, stated the village allocation funds for each village in Indonesia and considered as a new stage of village development in overcoming the development gap between urban and village.

The benefits of the village allocation funds are:

- Improve public services;
- Alleviate poverty;
- Advancing the village economy;
- Overcoming the gap between villages and inter-village development;
- Strengthening rural communities as the subject of development.

The Southwest Aceh government made one of the regional policies related to the village funds; the use of village allocation funds for the agricultural sector, this is one way to

help the people of Southwest Aceh who are mostly become farmers, in improving their welfare, where the policy of using village funds for the agricultural sector is already running from 2015 to 2017 where the Southwest Aceh overnment has issued three regulations regarding the policy, namely:

- Regent Regulation of Southwest Aceh No. 14 of 2015;
- Regent Regulation of Southwest Aceh No. 7 of 2016;
- Regent Regulation of Southwest Aceh No. 23 of 2017.

Based on the Regulations of the Southwest Aceh Regent, the village allocation funds for the agricultural sector are allocated in each village with a certain amount without any compulsion for the village to allocate the funds or the village refuses to allocate the funds for the agricultural sector, all depends on deliberation what is done by the village apparatus with the villagers.

Table 2 – Village allocation funds for the agricultural sector in 2016-2017 in Southwest Aceh

No	Program Type	Location	Year	Allocated Funds
1	Procurement of Fertilizer and Rice Seeds	Southwest Aceh	2016	Rp. 1,739,168,134
2.	Procurement of Fertilizer	Southwest Aceh	2017	Rp. 6,227,420,339
3.	Procurement of Corn Seeds	Southwest Aceh	2017	Rp. 785,000,000

Source: *Program Pembangunan dan Pemberdayaan Masyarakat Desa (Village Community Development and Empowerment Program; P3MD) of Southwest Aceh.*

Based on the table above, in 2016, villages that allocated the village funds for the agricultural sector for all region of Southwest Aceh as much as Rp. 1,739,168,134 allocated in the form of seeds and fertilizer. In 2017 village allocation funds for the agricultural sector increased to Rp. 6,227,420,339 allocated for fertilizer types and in that year also allocated for procurement of corn seeds as much as Rp.785,000,000 for Southwest Aceh.

Village allocation funds for the agricultural sector. A regional government policy program will not be separated from the budgeting problem of funds that will be used in the program that will be made, the better the budget allocation made by policy makers and implementing the policy, the bigger the impact of the program on policy recipients. Allocation of funds in a program must also be adjusted to the ability of available funds, not only that the program is prioritized until other fields that require these funds cannot be empowered.

In this study there were eight villages in two districts which were the object of research in the implementation of the use of village allocation funds for the agricultural sector. In the *Manggeng* there are four villages that became the research area, *Sejahtera*, *Pante Pirak*, *Ujung Padang* and *Pante Raja*. In *Lembah Sabil* there are four villages that became the research area, *Ladang Tuha II*, *Alue Rambot*, *Meunasah Sukon* and *Meunasah Tengah*.

The use of village allocation funds for the agricultural sector is a budgeting process for village funds for the agricultural sector in which there are villages whose source of funds comes from village funds and the determination of the allocation amount is based on village deliberations conducted by the village government and the villagers and adjusted according to the applied Law and Regional Regulation.

In the table above explained that the village allocation fund for the agricultural sector is categorized in varying amounts, in *Manggeng* in 2016 the bigger allocation of the funds for the agricultural sector is *Sejahtera* with the amount of Rp. 40,000,000 and *Ujung Padang* with the amounts of Rp. 25,0000 000. However, in 2016 *Pante Pirak* and *Pante Raja* did not allocate funds for the agricultural sector. Whereas in 2016 *Lembah Sabil* in 2016 only three villages allocated the funds, *Alue Rambot*, *Meunasah Sukon* and *Meunasah Tengah* but *Ladang Tuha II* did not allocate village funds for the agricultural sector in that year. But in 2017 all villages in the study area allocated village funds for the agricultural sector.

From the data above shows that not all villages allocate the funds for the agricultural sector. Basically, all depends on the village deliberations conducted between the village government and the villagers. In addition, the amount of village funds allocated to the agricultural sector is also different among villages, but based on the data above, there is an

increase in the amount of village funds allocated to the agricultural sector in the villages in the study area.

Table 3 – Village Allocation Fund Usage in *Manggeng* and *Lembah Sabil*

No	Program Type	Districts	Locations (Villages)	Time (Year)	Budgets Allocation
1.	Procurement of Fertilizer and Rice Seeds	Manggeng	Sejahtera	2016	Rp.40.000.000
		Manggeng	Pante Pirak	2016	-
		Manggeng	Ujung Padang	2016	Rp.25,000,000
		Manggeng	Pante Raja	2016	-
		Lembah Sabil	Ladang Tuha II	2016	-
		Lembah Sabil	Alue Rambot	2016	Rp, 25,200,000
		Lembah Sabil	Meunasah Sukon	2016	Rp. 23,015,875
		Lembah Sabil	Meunasah Tengah	2016	Rp. 17,920,000
2.	Procurement of Fertilizer	Manggeng	Sejahtera	2017	Rp. 77,200,000
		Manggeng	Pante Pirak	2017	Rp. 110,000,000
		Manggeng	Ujung Padang	2017	Rp. 72,000,000
		Manggeng	Pante Raja	2017	Rp. 50.800.000
		Lembah Sabil	Ladang Tuha II	2017	Rp. 61,613,000
		Lembah Sabil	Alue Rambot	2017	Rp. 41,500,000
		Lembah Sabil	Meunasah Sukon	2017	Rp. 30,906,000
		Lembah Sabil	Meunasah Tengah	2017	Rp.21.000.000
3.	Procurement of Corn Seeds	Manggeng	Sejahtera	2017	Rp. 5.000.000
		Manggeng	Pante Pirak	2017	Rp. 5.000.000
		Manggeng	Ujung Padang	2017	Rp. 5.000.000
		Manggeng	Pante Raja	2017	Rp. 5.000.000
		Lembah Sabil	Ladang Tuha II	2017	Rp. 5.000.000
		Lembah Sabil	Alue Rambot	2017	Rp. 5.000.000
		Lembah Sabil	Alue Rambot	2017	Rp. 5.000.000
		Lembah Sabil	Alue Rambot	2017	Rp. 5.000.000

Source: Program Pembangunan dan Pemberdayaan Masyarakat Desa (Village Community Development and Empowerment Program; P3MD) of Southwest Aceh.

The amount of village funds allocated by the village to the agricultural sector varies in number, but the current problem is that if the amount allocated is sufficient for the needs of the village community or not. If all village funds are allocated to the agricultural sector, what about other fields that require village funds as well. This problem must be regulated by the village apparatus as the village government who is authorized to regulate the village fund allocation so that each sector's allocation in the village fund can be adjusted properly so that the use of village funds can be used for the welfare of the village community.

Table 4 – Results of interviews with village heads in the study area regarding the adequacy of village allocation funds for agricultural sector

No	Villages	Village Allocation Funds for Agricultural Sector	
		Adequate	Inadequate
1.	Manggeng District		
	Sejahtera		v
	Pante Pirak		v
	Ujung Padang		v
	Pante Raja		v
2.	Lembah Sabil District		
	Ladang Tuha II		v
	Alue Rambot		v
	Meunasah Sukon		v
	Meunasah Tengah		v

Source: Interviews with village heads in the study area.

Based on interviews with village heads within the study area, it was known that the amount of village allocation funds for the agricultural sector had not been sufficient for their villages, because the amount of village allocation fund allocations for the agricultural sector

had not been sufficient for their agricultural needs, as well as the vast amount of agricultural land cultivated by the villagers. It is inversely proportional to the amount of village allocation fund for the agricultural sector in their village.

Coordination. In implementing the use of village funds, a good coordination is needed between the implementers (executive officers), because coordination has an important role in conveying, directing and determining the direction of the program policy for the use of village allocation funds in general. Coordination between implementers starts from the budget allocation planning process that is budgeted, the process of submission from village to district, the process of disbursing village funds, as well as the activities of distributing village funds to the agricultural sector to the community.

Coordination has an important role in carrying out a government program policy that has been determined. The role is divided according to the respective duties and functions in accordance with the direction of policy makers in the area. In the policy of using village funds for the agricultural sector in the Southwest Aceh, good coordination is needed between the parties related to the village funds, because if the misuse of the village funds will be fatal and harm the community in the village. The implementing party must be able to coordinate well with those who oversee the village funds.

There are 3 forms of coordination carried out in the implementation of the use of village funds to run according to the target to be achieved.

Horizontal Coordination; the coordination of cooperation in harmonious and synchronous way between equal institutions. So horizontal coordination on the program for the use of village funds for the agricultural sector is coordination between the *Dinas Pemberdayaan Masyarakat dan Desa* (Community and Village Empowerment Service; PMD), *Pengendalian Penduduk dan Keluarga Berencana* (Population Control and Family Planning; PPKB), *Pemberdayaan Perempuan dan Perlindungan Anak* (Women's Empowerment and Child Protection; P3A) which is mandated by the regional government as the implementer (executive officer) in the program. As well as the accompaniment of the district level village experts as the party accompanying the implementation of the program to run in accordance with the regulations that have been set.

Vertical Coordination; the coordination of cooperation in harmonious and synchronous way from the higher level institutions to other institutions in the lower degree. Vertical coordination here is meant:

Coordination between the agencies dealing with village funds, *Dinas Pemberdayaan Masyarakat dan Desa* (Community and Village Empowerment Service; PMD), *Pengendalian Penduduk dan Keluarga Berencana* (Population Control and Family Planning; PPKB), *Pemberdayaan Perempuan dan Perlindungan Anak* (Women's Empowerment and Child Protection; P3A), *Dinas Pemberdayaan Masyarakat dan Gampong* (Community and Gampong Empowerment Service; DPMG) with all districts in Southwest Aceh involved in the process of socialization to the community about the regent's regulation on allowing the use of village funds for agriculture. Here is the role of the empowerment agency to coordinate with the district about how the system will be implemented in the district and its functions in implementing the implementation of the village funds program for the agricultural sector.

The sub-district then coordinates with the village head within his district about the socialization on allowing the use of village funds for the agricultural sector and the mechanism for budgeting village funds for the program.

Functional Coordination; coordination of cooperation in harmonious and synchronous way between institutions that have similarities in the work function. This coordination is occur between the village head and the village level facilitator and village fund supervisors so that the process in the implementation of village funds can proceed according to the applied regulations.

Forms and Models of Village Fund Distribution for the Agricultural Sector for the Community. The distribution of village allocation fund is the most important thing in the development and empowerment of rural communities, with the enactment of Law Number 6 of 2014 concerning villages that there are billions of rupiah of funds disbursed directly to the village sourced from village allocation fund which are part of the balance funds received by

the Regency / City in Government Regulation Number 60 of 2014 concerning Village Allocation Funds sourced from the National Budget.

The agricultural sector is one of the priorities in the use of village allocation funds that aimed to strengthen Indonesian food sovereignty. In fact, there are still many cases of using village funds that are not right on target, such as corruption. Its misuse can also occur due to several factors such as villages not yet ready to manage the funds, lack of human resources, village governments that are not transparent and accountable. Therefore, it is necessary to do a number of things so that the use of village funds is on target, is by reforming or optimizing village government organizations, accountable and transparent village government, and budget oversight.

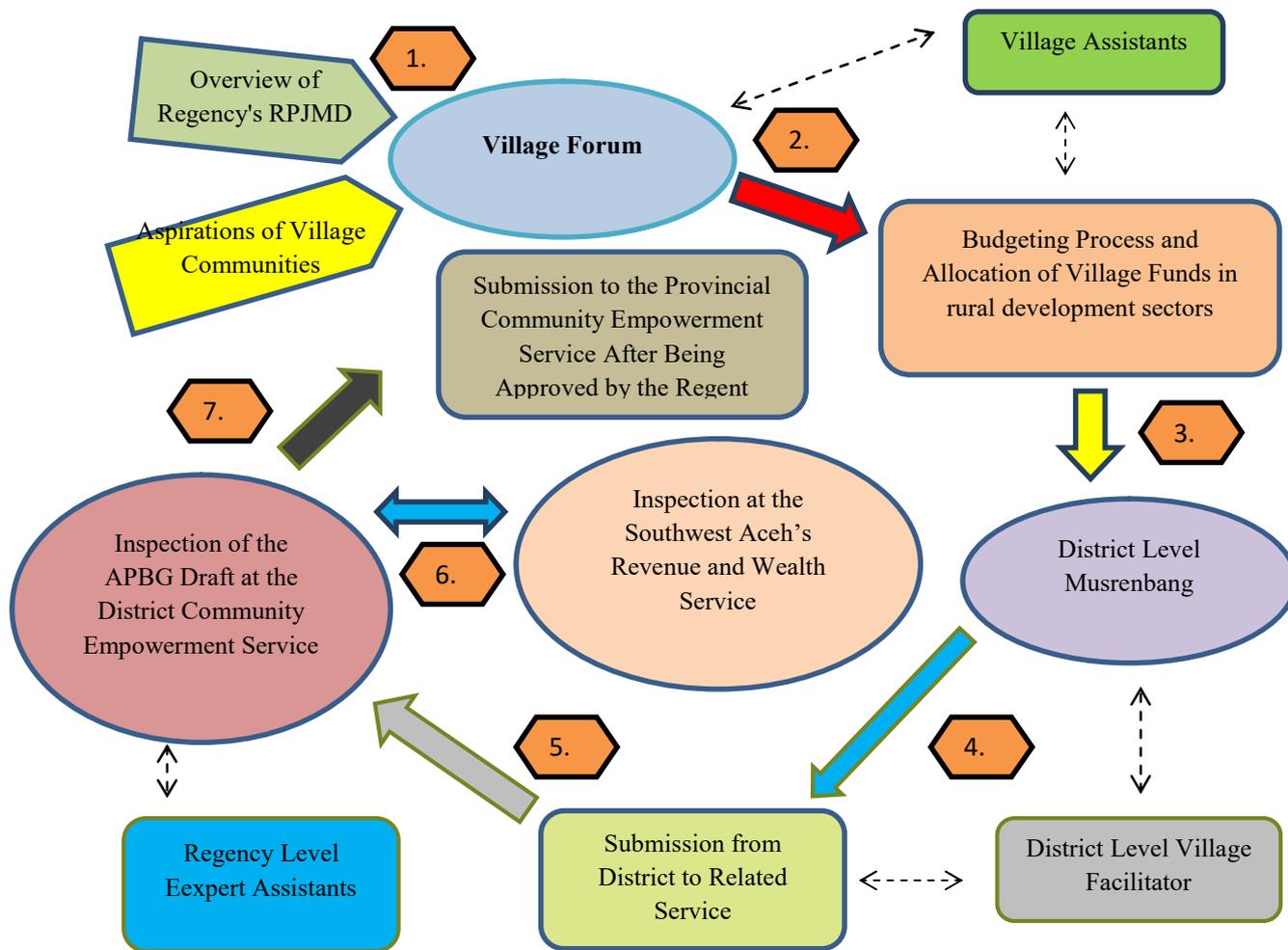


Figure 1 – Overview of the Planning Process in Village Allocation Fund for the Agricultural Sector in Southwest Aceh

The use of village funds for the agricultural sector is one form of economic empowerment for rural communities who own agricultural land. Community empowerment has a close relationship with sustainable development where community empowerment is a major prerequisite and can be likened to a train that will bring the community towards a dynamic economic, social ecological sustainability. Therefore, the strengthening of community empowerment in the regions needs to be carried out in a sustainable manner, because the community has shown that they have the will and desire to improve aspects of life both in the political, social and other sectors as evidenced by a critical attitude in responding to each symptom and actions of government officials and issues concerning development.

The village head has an important role in empowerment development in the village, the village head is the smallest unit in the government and as the mouthpiece of the regency government in carrying out and continuing the policies that have been set by the government. Simply put, the role of the village head in enhancing community empowerment can be described; by carrying out a democratic life, by accommodating and channeling community aspirations in community empowerment programs, by preparing participatory planning activities, developing and enhancing self-help and mutual empowerment in development activities and exploring the available resource potential to improve development, by referring to PP No. 72 of 2005 concerning Village Heads in carrying out their duties, authorities, and responsibilities, namely carrying out a democratic life, coordinating village development in a participatory manner, empowering communities, enhancing the welfare of the community, developing natural resources potential, and develop community income.

The role of the village head regarding the use of village funds for the agricultural sector in Southwest Aceh is very vital, because from the process of submitting the use of village funds to the disbursement process as well as the accountability reports of the village head who do it, so that the implementation of local government policies can run well, various the method taken by the village head so that the assistance program for the use of village funds for the agricultural sector -fertilizer and seeds- can be right on target and not cause conflict among the community.

The role of the village head was done by holding meetings with the community and the village apparatus regarding the mechanism for distributing assistance programs for the use of village funds for the agricultural sector, which in average were in the form of fertilizers, there were village heads to divide according to the regent's regulations, like for the rice farmers, but it caused conflict in the village community.

There are several ways in which the village head's role in the distribution of assistance, there is distribution of assistance to the agricultural sector which is also based on the area of land in the village and based on the number of people working on agricultural land (sharecroppers) and the distribution based on the number of villagers who own agricultural land and manage the land the farm.

Other than that, there is a village head who distributes the aid program evenly to the village community without seeing their work. The important thing is that all the community can get the assistance even though in a small amount. Various reasons were expressed by the village heads so that they evenly distributed the aid even though it violated the existing regent's regulations and could not be on target in distributing it.

Table 5 – Model of Distribution of Support for Agriculture Sector from the Use of Village Allocation Funds in Southwest Aceh which is applied by village heads in the study area

No	Villages	Model of Distribution		
		Distribution For Sharecropper Farmers	Distribution for all farmers (sharecroppers and land owners)	Even Distribution for Village Communities Without Seeing Their Work
Manggeng District				
1.	Sejahtera		v	
2.	Pante Pirak	v		
3.	Ujung Padang	v		
4.	Pante Raja		v	
Lembah Sabil District				
1.	Ladang Tuha II		v	
2.	Alue Rambot		v	
3.	Meunasah Sukon			v
4.	Meunasah Tengah		v	

Source: Interviews with village heads in the study area.

From the data above, it is explained that almost the average village head distributes fertilizer which is one of the assistance from village funds for the agricultural sector to all farmers regardless of whether the farmers or the owners of rice fields whose have land all can be distributed.

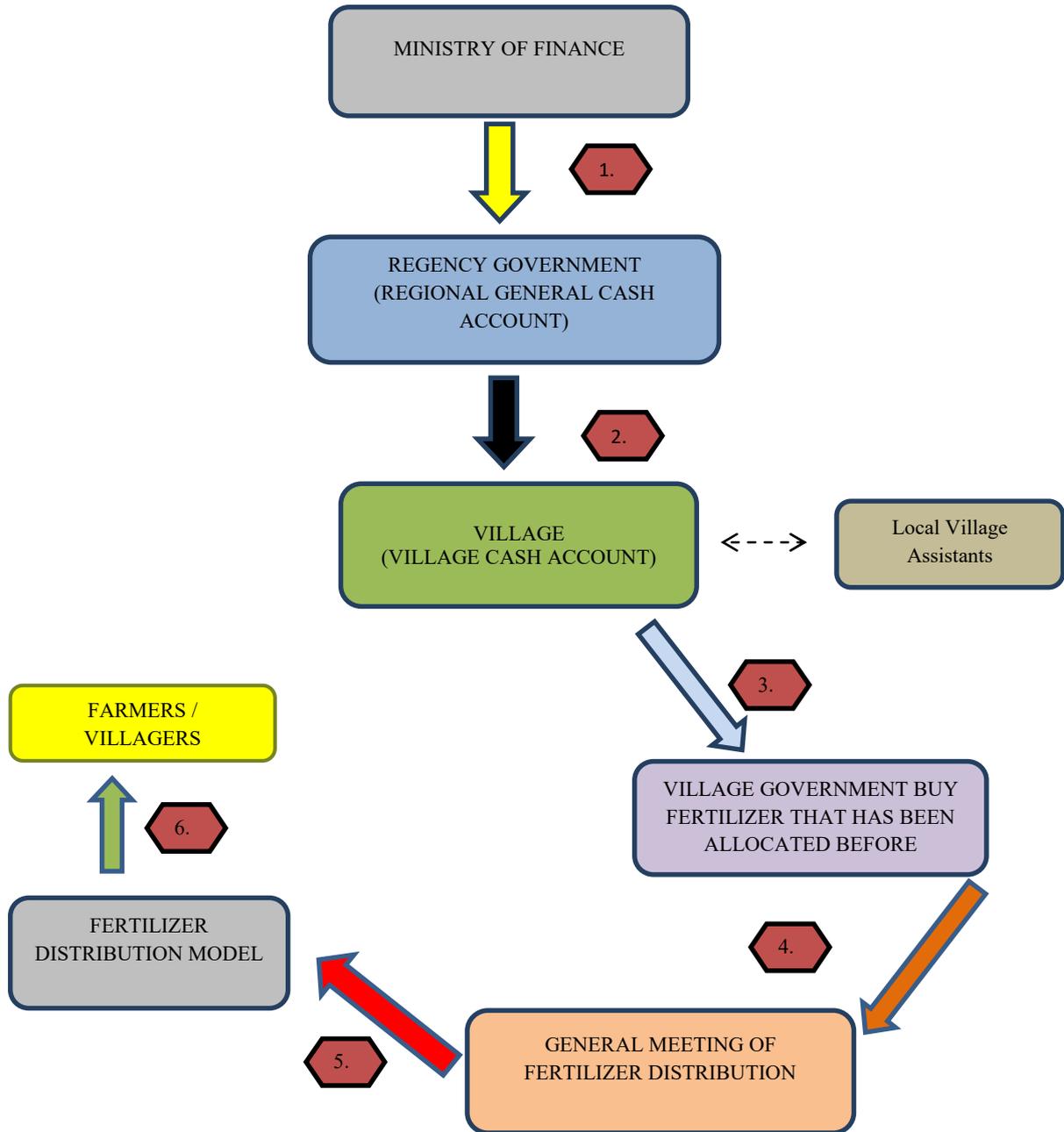


Figure 2 – Scheme for distribution of village funds for the agricultural sector in Southwest Aceh

The data also explained that only two villages distributed fertilizer from village funds only for farmers and only one village that distributed all the fertilizer to the villagers, to prevent turmoil in the community, then evenly distributed to the village community.

CONCLUSION

The amount of village allocation funds for the agricultural sector in Southwest Aceh increases every year but the allocation of funds was inadequate for the needs of the agricultural sector in the villages within the district.

Coordination between implementers (executive officers) of Southwest Aceh policy program on the use of village funds for the agricultural sector went well, so that the process of implementing local government policies went as expected.

In the distribution process to the agricultural sector, the village allocation funds, the village heads distribute it in 3 ways according to the results of the general meeting between the village head, the village apparatus and the community so as to avoid social conflict in the village community.

REFERENCES

1. Abdullah, Syukur, 1988. Laporan temu kajian posisi dan peran ilmu administrasi dan manajemen, Jakarta: Lembaga Administrasi Negara Republik Indonesia dan Asia Foundation.
2. Apriliani, Sherly Gresita, 2013. Akuntabilitas Pengelolaan Alokasi Dana Desa. Universitas Muhammadiyah, Malang.
3. AR, Nahfi Hanani. Dkk. 2002. Strategi Pengembangan Pertanian. PT Rineka Cipta, Jakarta.
4. Chambert, Robert. 1997. Pembangunan Desa mulai dari belakang. LP3ES, Jakarta
5. Cravens David W. (1998) “. Implementation Strategies in the market-driven Strategy Era “. Journal of the Academy of Marketing
6. Dunn, W.N., 1992. Analisa kebijaksanaan publik, Yogyakarta: Hanindita graha widya.
7. Dye, Thomas R. 1978. Understanding Public Policy. New Jersey. Prentice Hall, Inc. Englewood Cliffs, N.J.
8. Fermana, Surya, 2009. Kebijakan publik sebuah tinjauan filosofis, Jogjakarta: Ar-ruzz.
9. Hartono, 2008. Pembangunan Partisipatif Masyarakat Desa Implementasinya Dalam Program Alokasi Dana Desa, Jawa Tengah: Malang.
10. Hariyanto Slamet, 2015. Dampak Kebijakan Alokasi Dana Desa (ADD) Terhadap Pembangunan Desa Di Kabupaten Bulungan Tahun 2011 – 2014. Umuha: Yogyakarta
11. Hidayana, Bambang dan Tim Peneliti FPPD, 2005, Peluang Pengembangan Partisipatif Masyarakat Desa Melalui Kebijakan Alokasi Dana Desa, Pengalaman Enam Kabupaten, makalah di sampaikan pada pertemuan forum pengembangan partisipasi masyarakat (FPPM) di Lombok Barat.
12. Kartika, Ray Septianis. 2015. Partisipasi Masyarakat Dalam Mengelola Alokasi Dana Desa (ADD) di Desa Tegeswetan Dan Desa Jangkrikan Kecamatan Kepil Kabupaten Wonosobo. Jurnal Bina Praja: Journal of Home Affair Governance. 4.3: 179-188.
13. Kementrian Hukum Dan Ham, 2014. Peraturan pemerintah, Jakarta: Kemenkumham RI.
14. Kementrian Pedesaan, 2014. Panduan Tentang Dana Desa, Kemdes, Jakarta.
15. LPD, Okta Rosalinda. 2013. Pengelolaan Alokasi Dana Desa (ADD) Dalam Menunjang Pembangunan Pedesaan (Studi Kasus: Desa Segodorejo dan desa Ploso Kere, Kecamatan Sumobito, Kabupaten Jombang). Jurnal Ilmiah.
16. Peraturan Menteri Dalam Negeri nomor 113 Tahun 2014 Tentang Pengelolaan Keuangan Desa.
17. Peraturan Menteri desa pembangunan daerah tertinggal dan transmigrasi nomor 22 tahun 2016 tentang penetapan prioritas pembangunan dana desa tahun 2017
18. Peraturan Pemerintah Nomor 43 tahun 2014 Tentang Peraturan Pelaksanaan Undang – Undang Nomor 6 Tahun 2014 Tentang Desa.
19. Peraturan Pemerintah Nomor 60 Tahun 2014 Tentang Dana Desa Yang Bersumber Dari Anggaran Dan Pendapatan Belanja Negara.
20. Pressman, J.L, and Aaron Wildavsky. 1973. Implementation. University of California Press. Berkeley.
21. Putra, Chandra Kusuma, 2013. Pengelolaan Alokasi Dana Desa Dalam Pemberdayaan Masyarakat Desa (Studi Pada Desa Wonorejo Kecamatan Singosari Kabupaten Malang). Jurnal Administrasi Publik.
22. Setiawan, Guntur. 2004. Implementasi Dalam Biokrasi Pembangunan. Bandung: Remaja Rosdakarya.
23. Shaftitz, Jay M and E.W. Russel. 2005. Introducing Public Administration. Pearson Education Inc., New York.
24. Siagian, Sondang P. (2004). Manajemen Sumber Daya Manusi. Jakarta: Bumi Aksara.

25. Soekartawi. 2002. Analisis Usahatani. Jakarta: Universitas Indonesia.
26. Subroto, Agus. 2009. Akuntabilitas Pengelolaan Dana Desa. UGM, Yogyakarta.
27. Sudaryanto, T dan Munif, A. 2005, Pelaksanaan Revitalisasi Pertanian, Jakarta: Agrimedia.
28. Sumodiningrat, G. 2000. Visi dan Misi Pembangunan Pertanian Berbasis Pemberdayaan. IDEA, Yogyakarta.
29. Sugiyono. 2012. Metode Penelitian Kuantitatif Kualitatif, Bandung: Alfabeta.
30. Suryanto Hary 2011, Implementasi Program Peningkatan Kemandirian Perempuan Pedesaan Di Kecamatan Sumarorong Kabupaten Mamasa, Universitas Hasanuddin: Makassar.
31. Tiza Agustinus Longa, 2014, Implementasi Program Pembangunan Desa Mandiri Anggaran Untuk Rakyat Menuju Sejahtera. NTT.
32. Undang – Undang Nomor 6 Tahun 2014 Tentang Desa.
33. Wahab Solichin Abdul., 2008. Analisis kebijaksanaan, dari formulasi ke implementasi kebijaksanaan negara. Jakarta: Bumi aksara.
34. Wahab Solichin Abdul., 2008. Pengantar Analisis kebijakan publik, Malang: UMM press.
35. Winardi, 1999, Pembangunan Indonesia, Bandung: Gramedia.
36. W.J.S. Poerdwadarminta, 1997, Kamus Bahasa Indonesia, Airlangga: Jakarta.

DOI <https://doi.org/10.18551/rjoas.2018-11.34>

ECONOMIC EVALUATION OF BIOURIN LIQUID ORGANIC FERTILIZER IN THE VILLAGE OF PAYA TUNGEL OF CENTRAL ACEH REGENCY, INDONESIA

Andriani Rini*

Graduate Study Program of Agribusiness, Syiah Kuala University, Banda Aceh, Indonesia

Kasimin Suyanti, Bakar Yusya Abu

Faculty of Agriculture, Syiah Kuala University, Banda Aceh, Indonesia

*E-mail: riniandriani.bptp@gmail.com

ABSTRACT

Many efforts have been made by the peasant community in improving their standard of living, including by making farmer groups to increase the capacity of individuals in the group. In the district of Central Aceh there are several active farmer groups that still hope for assistance from related parties in terms of advancing their efforts to increase income. One of the empowerments carried out to improve the standard of living of farmers in Central Aceh District is to evaluate the related economic business of biourin liquid fertilizer. The raw material for biourin liquid organic fertilizer business is obtained by utilizing local resources that are around, namely the urine of cattle. Making the process of liquid organic fertilizer, this biourin produces an average number of products as much as 110 liters in a single production process, with a selling price of Rp. 60,000 per liter. It can be seen that the R / C ratio of the biourin liquid organic fertilizer business is more than 1 that is equal to 4.34. Based on the results of the calculation of the Break Even Point (BEP) analysis shows that this biourin business will benefit if this business produces or sells more than 98.96 liters per production process. In each production process the amount of profit obtained is Rp. 4,617,500, - and the total investment is Rp. 1,382,500. Of this amount, the ROI value is 3.34%. The calculation results obtained a value added ratio in biourin products of 0.974 or 97.4%.

KEY WORDS

Economic evaluation, empowerment, farmer groups, biourin liquid fertilizer.

The content of organic fertilizers as well as inorganic fertilizers each contain nutrients needed by plants, but nitrogen and other nutrients contained in organic fertilizers are released slowly so that their use must be sustainable, the value of fertilizer contained in organic fertilizers is also low and very varies, the supply of nutrients occurs slowly and provides limited amounts of nutrients (Sutanto, 2006).

Table 1 – Characteristics of Organic and Inorganic Fertilizers

Characteristics	Organic Fertilizer	Inorganic Fertilizer
Crop response	Slow	Fast
Target plants	Special-broad	Large
Provision of nutrients	Indirect	Directly
Relationship process with plant	Biological	Chemistry
Quality requirements	Generally not frozen yet	Standard
Environmental impact	No available	Available

Many efforts have been made by the peasant community in improving their standard of living, including by making farmer groups to increase the capacity of individuals in the group. In the district of Central Aceh there are several active farmer groups that still hope for assistance from related parties in terms of advancing their efforts to increase income.

Paya Tugel Village, Jagong Jeget District, Central Aceh District is an area that has the potential of livestock farming and processing of cattle waste in Central Aceh District. The

raw material used is cow urine. The cattle waste processing business in Paya Tungal Village has been running for two years, starting in 2016. Beginning with the existence of livestock assistance from the government to 4 active farmer groups namely Bali cattle as many as 50 and 25 Brahman Cross. At present the cows are placed next to the house land of one of the heads of the farmer groups. To treat the cows, each member of the farmer group gets a picket schedule or daily grass feed, so that the cattle will not lack food.

The potential of farmers in Paya Tungal Village, Jagong Jeget Subdistrict, must be developed by conducting an economic evaluation and empowering farmer groups so that farmers in Paya Tungal Village, Jagong Jeget District can maximize profits. Economic evaluation functions so that farmers can find out the correct way of bookkeeping, knowing acceptance, profits, R / C Ratio, BEP, ROI, and value added analysis. From the results of the analysis, it is expected to provide insight for business makers in managing financial performance. In addition, it also needs to be seen how the empowerment of farmer groups in increasing business income of liquid organic fertilizer (biourin).

Identification and The Formulation of Problem How is the economic evaluation of the business of liquid organic fertilizer biourin in Paya Tungal Village, Central Aceh District?

METHODS OF RESEARCH

This research was conducted in Paya Tungal Village, Jagong Jeget District, Central Aceh District. The product of this business is liquid organic fertilizer (biourin). The method used in this research is survey method. The data used are qualitative and quantitative data. (Marshal, 1989) in the book *Quantitative & Qualitative Research Methods* defines qualitative research as a process that tries to gain a better understanding of the complexity that exists in human interaction. The population in this study were all farmer groups who worked and used biourin products in Paya Tungal Village, Central Aceh District. Determination of sample respondents was done intentionally (purposive).

Profit Analysis. According to Soekartawi (1995), revenue and gross income are defined as the total product value in a period of time. While net income is the difference between revenue and total costs during the production process. While profit or income is the difference between total business revenue and total costs incurred. Methodologically revenues and profits can be notified as follows:

$$\begin{aligned} TC &= TFC + TVC \\ TR &= P \times Q \\ \pi &= TR - TC \end{aligned}$$

Where: P = Selling price / unit (Rp); Q = Number of items produced (liters); TFC = Total Fixed Cost (Rp); TVC = Total Variable Cost (Rp); π = Profit (Rp); TR = Total revenue (Rp); TC = Total cost (Rp).

Soekartawi (1995) states that the R / C ratio is the ratio (ratio) between revenue and production costs. Following is the R / C Ratio formula:

$$RC \text{ Ratio} = \frac{TR}{TC}$$

Conditions: If the R / C ratio is > 1 , then the business is feasible and profitable; If the R / C ratio = 1, then the business is even or not profitable and does not lose; If the R / C ratio is < 1 , then the business is not profitable.

Analysis of Break Even Point (BEP). According to Rahardi (1998), BEP is a form of analysis that shows the relationship between fixed costs, variable costs, profits, and minimal sales volume that must be maintained so as not to suffer losses. BEP values can be calculated using the following formula:

$$BEP \text{ (Rupiah)} = \frac{FC}{1 - \frac{VC}{S}}$$

$$\text{BEP (Unit)} = \frac{FC}{P-V}$$

Where: FC = Fixed fee (Rp); VC = Variable Cost (Rp); S = net sales (Rp); P = Price per product unit (Rp); V = variable cost per unit (Rp / unit).

BEP indicator: BEP Value (Rupiah) = The nominal amount of money that must be generated in order; the company is not profitable and does not lose; BEP Value (Unit) = The number of product units that the company must produce; the company is not profitable and does not lose.

Return On Investment (ROI) Analysis. Rahardi (1998) states that a business is also said to be efficient if the ROI value of the business is high. ROI is the value obtained by the entrepreneur from every money invested in his business in a certain period of time. ROI or analysis of the rate of return on capital that has been used to determine business profits related to the capital that has been issued. ROI calculations can be done using the following formula:

$$\text{ROI} = \frac{NP}{I} \times 100\%$$

Where: ROI = Return On Investment; NP = net profit (net profit); I = Investment / capital; Indicator: The greater the ROI percentage, the better the ROI.

Value Added Analysis. According to Hayami (1990), there are two ways to calculate added value, namely value added for processing and value added for marketing.

Table 2 – Hayami Method Add Value Calculation Procedures

n/n	Calculation Element	Calculation Formula
1.	Production result	a
2.	Raw material	b
3.	Labor	c
4.	Conversion factor	a/b=h
5.	Labor coefficient (%)	c/b=i
6.	Product price	d
7.	Average wage	e
8.	Raw material prices	f
9.	Another input	g
10.	Production Value	h x d = j
11.	a. Value-added b. Added Value Ratio (%)	j - f - g = k k/j
12.	a. Labor benefits (Rp) b. Labor portion (%)	i x e = m m/k
13.	a. Profit b. Profit Level (%)	k - m = o o/k
14.	Processing margin	j - f = q

Source: Hayami, (1990).

RESULTS AND DISCUSSION

The raw material for the business of liquid organic fertilizer (biourin) was obtained by utilizing local resources around, namely the urine of cattle. This is due to the need to utilize existing resources so that they are not wasted. The source of these raw materials is utilized to the maximum extent possible because it will be able to support the expansion of employment opportunities, increase farmers' income, and be environmentally friendly. Aside from the raw material for cow urine, local fruits are also used which are processed into Local Micro Organisms (MOL) and spices that are around.

Production, Acceptance and Profit Costs. Production costs consist of identifying the amount of fixed costs and variable costs used in producing liquid organic fertilizer biourin. The making of this biourin liquid organic fertilizer process produces an average number of products as much as 110 liters in a single production process, with a selling price of Rp. 60,000, - / liter. Based on the results of calculations, the amount of profits from this business

can be said to be relatively large or very profitable. Therefore, this biourin business is expected to continue to survive and develop.

Analysis of the R / C ratio of the biourin liquid organic fertilizer business is more than 1 that is equal to 4.34. This ratio figures indicate that this business is very feasible to continue or develop in the future because this business gets a profit that can be said to be quite large. This advantage can be used for business development that can increase the worker's income.

The Break Even Point (BEP) analysis shows that this biourin business will benefit if this business produces or sells more than 98.96 liters per production process and vice versa, this business will get a loss if it sells less than that number.

Table 3 – Materials And Tools For Making Biourin Fertilizer

Materials and tools needed	Amounts	Unit
100 liters of urine	100	Liter
5 liter MOL	5	Liter
Sere ½ kg	½	Kg
Galangal ½ kg	½	Kg
½ kg of turmeric	½	Kg
1/2 kg of ginger	½	Kg
2 kg young bamboo shoots	2	Kg
Poly tank	1	Item
Suction pump (aerator)	1	Item
Gutter	1	Item
Water hose	1	Item
Paralon glue	1	Item

Source: Primary data processed, 2018.

Table 4 – Fixed Costs of Liquid Biourin Organic Fertilizer Business in Paya Tungal Village, Jagong Jeget District, Central Aceh

Number	Amounts	Price
Poly Tank Fiber Royal measuring 250 liters	1 piece	530.000
Suction pump (aerator)	1 piece	350.000
Gutter	½ rod	35.000
Water hose	5 meters	75.000
Paralon glue	1 piece	10.000
Plastic drum / water barrel	1 piece	80.000
Knife	1 piece	20.000
Miyako brand blender	1 piece	225.000
Rubber strap	1 meter	1.000
1 meter black plastic	1 meter	10.000
Total		1.336.000

Source: Primary data processed, 2018.

Table 5 – Costs of Depreciating Liquid Biourin Organic Fertilizer in Paya Tungal Village, Jagong Jeget District, Central Aceh

No	Equipment Type	Equipment Prices (Rp)	Equipment Prices (Rp)	Depreciation Value (Rp)
1	Poly Tank Fiber Royal measuring 250 liters	530.000	3	110.000
2	Suction pump (aerator)	350.000	2	125.000
3	Gutter	35.000	2	15.000
4	Water hose	75.000	2	35.000
5	Paralon glue	10.000	1	2.000
6	Plastic drum / water barrel	80.000	1	60.000
7	Knife	20.000	1	15.000
8	Miyako brand blender	225.000	2	75.000
9	Rubber strap	1.000	1	100
10	1 meter black plastic	10.000	1	8.000
	Total	1.336.000		FC=445.100

Source: Primary data processed, 2018.

Table 6 – Variable Cost of Liquid Biourin Organic Fertilizer Business in Paya Tungel Village, Jagong Jeget District, Central Aceh

No	Description	Amount	Price
a.	liter MOL production costs		
	- Papaya	2 pieces	2.000
	- Pineapple	1 piece	2.000
	- Banana	3 pieces	3.000
	-Coconut water	2 liters	10.000
	- Rice washing water	3 liters	1.500
	-Brown sugar	1 kg	10.000
	Total		28.500
b.	Biourin Production Costs		
	-Lemongrass	½ kg	2.000
	-Lengkuas	½ kg	2.000
	-Turmeric	½ kg	2.000
	-Ginger	½ kg	2.000
	-Bung Bamboo	2 kg	10.000
	Total		18.000
	VC =		46.500

Source: Primary data processed, 2018.

$$TC = FC + VC = \text{Rp. } 491,600$$

Reception:

$$TR = P \times Q = \text{Rp. } 6,000,000, -$$

Where: TR = Acceptance; P = Biourin Price (Rp); Q = Biourin Production (liters); TR = Rp. 60,000 / liter x 100 liters

Profit:

$$TC = TFC + TVC = 1,382,500$$

Then, profit = Rp. 6,000,000 - Rp. 1,382,500 = Rp. 4,617,500.

Table 7 – Biourin Fertilizer Business Feasibility Analysis

Type of Analysis	Value
Revenue Per Cost Ratio	4,34
Break Even Point (Unit)	98,96 liter
Break Even Point (Rupiah)	Rp. 1.346.774,19
Return on Investment	3,34%

Source: Primary data processed, 2018.

Table 8 – Analysis Of Added Value In Biourin Fertilizers Using Hayami Method

Calculation Element	Calculation Formula	Value
Production results (liter / production process)	a	100
Raw material (liter / production process)	b	2
Labor (hours / production process)	c	8
Conversion factor	a/b=h	50
Labor coefficient (%)	c/b=i	4
Product price (IDR / liter)	d	60.000
Average wage (IDR / liter)	e	50.000
Price of raw materials (Rp / liter)	f	77.000
Other inputs (Rp / liter)	g	0
Production Value (IDR / liter)	h x d = j	3.000.000
a. Added value (Rp / liter)	j - f - g = k	2.923.000
b. Added Value Ratio (%)	k/j	0,974
a. Labor benefits (Rp)	i x e = m	200.000
b. Labor portion (%)	m/k	0,0684
a. Benefits (IDR / liter)	k - m = o	2.723.000
b. Profit Level (%)	o/k	0,9315
Processing margin	j - f = q	2.923.000

Source: Primary data processed, 2017.

In each production process, the amount of profit obtained is Rp. 4,617,500, - and the total investment is Rp. 1,382,500. Of this amount, the ROI value is 3.34%. This means that every 1 unit of capital issued by this biourin manufacturing business will get a capital return of 3.34% of the issued capital. The amount of ROI value from the results of this calculation can be a consideration for investors to invest in this business and can be used as business expansion.

From the calculation results obtained the ratio of value added to biourin products of 0.974 or 97.4%. This value indicates that the biourin business is classified as high in accordance with the indicator that if the value added ratio is greater than 40% then the business is said to have high added value in each liter of its product.

REFERENCES

1. Hayami, Y et al. 1987. Agricultural Marketing and Processing in Upland Java, A Prespective From Sinda Village. Coarse Grains Pulses Roots and Tuber Center (CGPRTC). Bogor. 75 hal.
2. Madjid, A. 2011. Dasar dasar ilmu tanah. PT. Medityama Sarana Perkasa, Jakarta.
3. Marshall, Catherine and Rossman, B. Gretchen. (1989). Designing qualitative research. London, New Neldi: Sage Publications.
4. Rahardi, F. Dkk. 1998. Agribisnis perikanan. Penebar swadaya. Jakarta.
5. Soekartawi. 1995. Analisis uaha tani. UI Press. Jakarta.
6. Sutanto, R. 2002. Pertanian Organik menuju pertanian alternatif dan berkelanjutan. Kanisius. Yogyakarta.

DOI <https://doi.org/10.18551/rjoas.2018-11.35>

FEASIBILITY ANALYSIS OF WASTE RICE CULTIVATION (*ORYZA SATIVA L.*) ON OPTIMAL SUB LANDS OF WEST ACEH REGENCY, INDONESIA

Fuqara Fantashir Awwal*

Graduate Program, Syiah Kuala University, Banda Aceh, Indonesia

Sofyan, Hakim Lukman

Faculty of Agriculture, Syiah Kuala University, Banda Aceh, Indonesia

*E-mail: opan.pano89@gmail.com

ABSTRACT

Farmers should be understand about the cost of production in order to a farmhand who run got advantage maximum. The cost of production in lowland rice farming consist of the cost of purchasing seeds, fertilizers, pesticides, insecticides, labor costs, equipment rental costs, and post-harvest costs. From the results of the analysis, if the average wetland area for each respondent is 0.9 Ha, then the amount of production costs that must be spent in the paddy cultivation cultivation for one planting season is Rp. 2,552,000. From the results obtained, with an average land area of 0.9 Ha, the total production is 74,000 kg. The production obtained by each respondent varies, this is due to the land area, cultivation system, and the availability of different capital. In lowland rice farming, the production produced by farmers is in the form of rice with a selling price of Rp.4,100 per kilogram. The results of this study concluded that the total income of respondents was Rp. 136,724,000, - with an average income of Rp. 3,598,000, -for each planting season of the 38 respondents who were sampled in this study. In addition to the area of land and the amount of production income from respondents is strongly influenced by the costs incurred in running rice farming on sub-optimal land. The results of the analysis show that the B/C Ratio value of 1.4 is greater than zero. The value of B/C Ratio determines that rice farming is feasible to cultivate. This value means that if the addition of one unit of cost is used or issued in the rice field farming, then the farm will get an additional benefit of one rupiah.

KEY WORDS

Feasibility, analysis, sub-optimal land, rice.

Food needs will continue to grow along with the increase in population, on the other hand fertile land decreases, both due to the conversion of land to the plantation sub-sector and outside the agricultural sector, so that they have to find another alternative by optimizing sub-optimal land that is still very wide and scattered throughout Indonesia.

Table 1 – Sub-Optimal Land Distribution (Data Analysis Scale 1: 250,000)

Mainland Indonesia (191.09 Million Ha)	Wetlands (46.62 million Ha)	Swamp	Tidal (8.35 Million Ha)
			Low lands (11.67 Million Ha)
			Peat (14.93 million Ha)
	Dry land (144.47millionHa)	Non Swamp (8.7 Million Ha)	-
Acid (107.36 million Ha) LK Dry Climate (10.75 Million Ha)			-

Source: *Agricultural Research and Development Agency Ministry of Agriculture (2013).*

The Central Bureau of Statistics, Aceh Province (2014), mentions that land use in Aceh Province consists of 380,709 ha of dry land, 224,027 ha of fields, 170,362 ha of grassland

and 732,500 ha of plantations. These lands are generally classified as sub-optimal land which has great potential to be utilized. Therefore it is necessary to inventoried and analyzed technological innovation needs so that the land can be utilized.

Sub-optimal land has great potential to be used as a strategic choice for the future development of agricultural production areas that face increasingly complex challenges, especially to compensate for the shrinking of fertile land and increase production demand, including food security and agribusiness development (Alihamsyah, 2002).

Almost all areas of Aceh cultivate rice. One of them is West Aceh Regency. This West Aceh Regency has sub-optimal land potential in the form of extensive dry land which is estimated to reach 1,300.87 Km² (BPS, 2015). Dominant dry sub-optimal land is in Meureubo District, West Aceh Regency and several other sub-districts with a smaller percentage. The fact that so far the land has generally not been used optimally because farmers do not master technology properly.

METHODS OF RESEARCH

Data collection method is part of the data collection instrument to determine whether or not a study is successful. Research data consists of primary data and secondary data. Primary data obtained from farmers using structured interviews guided by questionnaires. Secondary data is data obtained from agencies, related agencies, and libraries. Qualitative analysis was used to describe descriptively the description of primary data and secondary data obtained during the study. This analysis is used to describe the characteristics of respondents at the research location.

The aim of the research was to calculate the income of rice farming on sub-optimal land within a period of one production, with the formula: (Soekartawi, 1995)

$$NI = TR - TC$$

Where: NI = Net Income; TR = Total Revenue; TC = Total Cost.

R/C Ratio states the feasibility of a business whether profitable, break even or a business can be said to have a loss (Firdaus, 2008). Systematically (R/C) can be formulated as follows.

$$R/C \text{ Ratio} = TR / TC$$

Where: TR = Total Revenue; TC = Total Cost.

Criteria based on R/C Ratio are: R/C ratio > 1, sub-optimal cultivation of paddy fields is feasible; R/C ratio = 1, then the sub-optimal land cultivation rice cultivation business is not profitable and does not lose; R/C ratio < 1, sub-optimal cultivation of paddy field cultivation is not feasible to cultivate.

The next analysis to declare business feasibility is to calculate the BCR (Benefit Cost Ratio) with the following formula:

$$\text{Net B/C} = B/C$$

Where: BCR < 1, Farming is not feasible; BCR ≥ 1, Farming is feasible.

Break Event Point Analysis (BEP). The main point of return (Break Event Point) is a value of commercial sales at a certain period which is the same amount as the cost incurred so that the entrepreneur at that time does not suffer losses also does not get profit and to know at what level of production so that the point of return and for knowing at what acceptance so as to create the main return point (Rahardi, F, 2003). The BEP formula used is as follows:

$$\text{BEP Price} = \frac{TC}{Q}$$

$$\text{BEP Production} = \frac{TC}{P}$$

RESULTS AND DISCUSSION

The location of this study was conducted in Meureubo District, West Aceh District, Aceh Province. The population of this study was all sub-optimal rice farmers in Meureubo District. Consisting of the villages of Arah Puerlak, Kajeung, Geudong, Tuwi Saya, Ramti, Gleng, Lancong, Kajeung, Gaseu, Leubok Beutong, and Gunong Buloh. Sampling in this study is by purposive sampling. The total sample is 38 respondents.

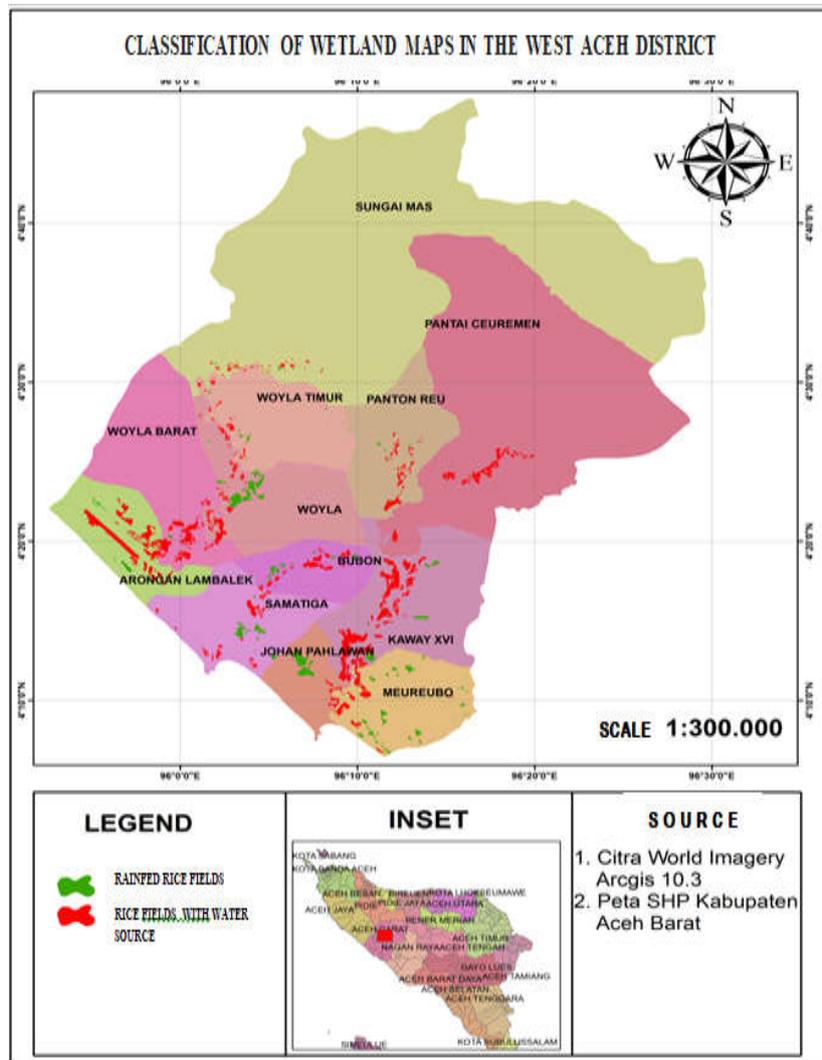


Figure 1 – Land Classification map

Analysis of Farmers' Rice Field Income in Sub-Optimal Land. Production Costs According to Sudarsono in Luntungan (2012), costs are all materials that must be borne to provide goods to be ready for use by consumers. Meanwhile, according to Kartasapoetra (1988), production costs are all expenses that must be spent by producers to obtain production factors and other supporting materials to be used so that certain planned products can be realized properly. A farmer in carrying out his farm requires production costs to support the farming activities he manages. Farmers must understand the production costs so that the farms they run get maximum benefits. Production costs in lowland rice farming consist of the cost of purchasing seeds, fertilizers, pesticides, insecticides, labor costs, equipment rental costs, and post-harvest costs. Based on table 2 above, if the average rice field area for each respondent is 0.9 Ha, then the amount of production costs that must be spent in paddy cultivation cultivation for one planting season is Rp. 2,552,000 for more details the overall cost can be seen in table 3.

Table 2 – Characteristics of Farmers' Respondents on Rice Fields in the Sub-Optimal Land

No.	Name	Age	Level of Education	Sub-Optimal Rice Farmers Business Experience (Years)	Land Area (Ha)	Land Status
1	Khairan	35	Elementary School	5	2	Private
2	Syarifuddin	47	Elementary School	7	1.5	Private
3	Juhari	33	Elementary School	4	1	Rent
4	Samsuddin	36	Middle School	5	1	Private
5	Syarwani	48	Middle School	4	0.5	Private
6	M.Sufi	35	Elementary School	3	1	Private
7	M.Sabi	43	Elementary School	6	0.5	Private
8	Hasan J.	44	Elementary School	8	1	Private
9	M. Syusri	35	Middle School	7	0.25	Private
10	Ismujal	38	High School	7	0.25	Private
11	Nurdin	50	Elementary School	12	1	Private
12	Samsul bahri	47	Elementary School	14	1	Private
13	Muzakir	35	Middle School	5	0.5	Private
14	Jauhari	45	Middle School	4	1.5	Private
15	Usman UT	65	Elementary School	5	2	Private
16	Rusdi	35	High School	6	0.5	Private
17	Muslem	28	High School	8	0.5	Private
18	Zaini	60	Elementary School	12	0.5	Private
19	Efendi	41	Middle School	10	1	Rent
20	Jasman	43	Middle School	5	1.5	Private
21	Mukhtar	55	Elementary School	9	1	Private
22	Razuan	28	High School	9	0.5	Private
23	M.Yusuf	25	High School	4	0.5	Private
24	Bustamam	30	High School	7	1	Private
25	Rasyidin	38	Middle School	8	1	Private
26	Ansari	47	Middle School	9	0.5	Private
27	Naban	41	Elementary School	10	2	Private
28	Jalaluddin	50	Elementary School	10	2	Private
29	Abu kari	40	Elementary School	8	1	Private
30	Nasrun	35	High School	8	1	Private
31	Dini	66	Elementary School	9	1	Private
32	Ali basyiah	50	Elementary School	7	1	Private
33	Razali	43	Elementary School	9	0.25	Private
34	Abdul rais	50	Elementary School	10	0.5	Private
35	Amran	45	Middle School	9	1.5	Private
36	Amri	43	Elementary School	9	2	Private
37	Taqwa	50	Elementary School	7	1.5	Private
38	Syafari	53	Elementary School	10	1	Private

Source: primary data processed (2018).

Table 3 – Production Costs of Rice Farmers in the Sub-Optimal Land (Planting Season/0.9 Ha)

No.	Types of Production Costs	Total Production Costs (Rp)	Average Production Cost (Rp)
1.	Seed Costs	6,574,000,-	173,000,-
2.	Fertilizer Costs (Urea, SP-36, NPK)	28,158,000,-	741,000,-
3.	Cost of Pesticides	6,840,000,-	180,000,-
4.	Insecticide Costs	4,104,000,-	108,000,-
5.	TK Wage Fees	38,000,000,-	1,000,000,-
6.	Equipment Rental Fees	3,800,000,-	100,000,-
7.	Post Harvest Costs (Sacks, transportation)	9,500,000,-	250,000,-
Total		96,976,000,-	2,552,000,-

Source: primary data processed (2018).

Production is a process of utilizing available resources, which are expected to produce results that are more than all the sacrifices that have been given (Hernanto, 1995). Farmers who carry out farming activities want high production so that they can increase income. From the results obtained, with an average land area of 0.9 Ha, the total production is 74,000 kg. The production obtained by each respondent varies, this is due to the land area, cultivation system, and the availability of different capital. Production results obtained are less than the production on normal land. this is because sub-optimal land on dry land can reduce the amount of production. For more details can be seen in table 4.

Acceptance is an estimate between the production obtained and the selling price (Sudiyono, 1991). Revenue is obtained from the total production multiplied by the selling price. According to Kotler (2001) in Lumintang (2013), price is the amount of money charged

on a product or service, or the value exchanged by consumers for benefits because of owning or using the service product. In the lowland rice production farms produced by farmers are in the form of rice with a selling price of Rp. 4,100 per kilogram. For more details can be seen in table 4.

Table 4 – Total and Average Acceptance of Rice Field Respondents in Sub-Optimal Land/Season (0.9 Ha)

Description	Total	Average
Production	74,100 Kg	1,950 kg
Acceptance	Rp. 233,700,000,-	Rp. 6,150,000,-

Table 3 shows that the production produced by the 38 respondents was 74,100 kilograms of rice with a total revenue of Rp. 233,700,000 with an average of Rp. 6,150,000 per planting season. The acceptance of each farmer is different depending on the production produced and the selling price that applies when the farmer sells his produce.

According to Belkaoui (2000), said income comes from the sale of goods and services and is measured by the burden borne by the customer, client, or tenant on the goods and services delivered to them. Farming income is the difference between revenue and total costs used in carrying out farming. This is in line with the opinion of Hadisapoetra in Sudana (2013), which states that farm income is the total net income derived from all farm activities which is the difference between total revenue and total costs incurred. The results of this study concluded that the total income of respondents was Rp. 136,724,000 with an average income of Rp. 3,598,000 per planting season of the 38 respondents who were sampled in this study. In addition to the area of land and the amount of production income from respondents is strongly influenced by the costs incurred in running rice farming on sub-optimal land.

Business Feasibility Analysis of Rice Fields in Sub-Optimal Land. According to Ibrahim (2009), business feasibility analysis is an activity of analyzing, reviewing, and researching to assess the extent to which benefits can be obtained in carrying out a business activity. The feasibility analysis of paddy farming business using R/C Ratio and Benefit Cost ratio (B/C Ratio). This analysis is to calculate the ratio of income and production costs.

Requirements for provisions: $BCR < 1$, Farming is not feasible; $BCR \geq 1$ Farming is feasible; $R/C \text{ ratio} > 1$, sub-optimal cultivation of paddy fields is feasible; $R/C \text{ ratio} = 1$, then the sub-optimal land cultivation rice cultivation business is not profitable and does not lose; $R/C \text{ ratio} < 1$, sub-optimal cultivation of paddy field cultivation is not feasible to cultivate.

The results of the analysis are shown in table 5 below.

Table 5 – Average and Total Revenue, Production Costs, Revenue, R/C and B/C Ratio of Sub-Optimal Rice Field Farming in Sub District of Meurebo

Description	Total	Average
Acceptance	Rp. 233,700,000,-	Rp. 6,150,000,-
Production Costs	Rp. 96,976,000,-	Rp. 2,552,000,-
Income	Rp. 136,724,000,-	Rp. 3,598,000,-
R/C	-	2.4
B/C	-	1.4

Based on the results of the calculation above, it can be seen that if the average revenue obtained by the respondent farmers in the study area amounted to Rp. amounting to Rp 3,598,000, the value of R/C Ratio is 2.4. That is, every Rp 1 spent by farmers for the cost of farming lowland rice will generate a profit of Rp 2.4. Because the value of R/C Ratio is greater than 1 ($R/C > 1$), rice farming is feasible to cultivate. Thus, if farmers plant rice with an area that is getting bigger then the profits will be even greater. The results of the analysis show that the B/C Ratio value of 1.4 is greater than zero. The value of B/C Ratio determines that rice farming is feasible to cultivate. This value means that if the addition of one unit of cost is used or issued in the rice field farming, then the farm will get an additional benefit of one rupiah.

However, there are some farmers who have low farm income so that the BCR value is < 1 and categorized as not feasible. Based on the results of the study, there were 87 percent of respondents in the feasible category because of the BCR value ≥ 1 , while the remaining 13 percent of respondents were in the improper category because of the BCR value < 1. This is because production is not maximized. In addition, the low income received by respondents is also caused by spending on a substantial production cost, namely in the labor sector, on average the respondents have to incur substantial costs to rent equipment and farm laborers to manage their land. This is because most of the farmers in carrying out their farming are not supported by machines and equipment that are owned by themselves so that they have to rent which of course requires substantial additional costs.

Break Event Point Analysis (BEP). The main break point (Break Event Point) is an output level point where lowland rice farming activities do not get profit / profit and also do not experience losses.

$$\text{BEP Price} = \frac{TC}{Q} = \frac{2,552,000}{1,950} = 1,308$$

$$\text{BEP Production} = \frac{TC}{P} = \frac{2,552,000}{4,100} = 623$$

Break Even Point on lowland rice farming in Meurebo Sub-district, West Aceh District, based on the calculation, produced a BEP Price of Rp. 1,308 and BEP Production of 623 kg. That is, if the respondent farmers in the study area produced 623 kg of paddy rice production with a selling price of Rp 1,308/kg, then the rice field farming would break even, ie no loss or gain profit.

CONCLUSION

The average land area of the respondent's farm is 0.9 Ha, so the average production cost that must be spent by the farmer is Rp. 2,552,000;

The average revenue obtained by lowland rice farmers in the study area is Rp. 6,150,000, and the production cost is Rp. 2,552,000, then the R/C ratio is obtained at 2.4. then rice farming is feasible. Thus, if farmers plant rice with an area that is getting bigger then the profits will be even greater;

Break Even Point or break-even point on wetland rice farming based on calculations produces a BEP price of Rp. 1,308 and a BEP of production of 623 kg. That is, if the respondent farmers in the study area produced 623 kg of paddy rice production with a selling price of Rp 1,308/kg, then the rice field farming would break even, ie no loss or gain profit.

REFERENCES

1. Badan Pusat Statistik. 2013. Luas Lahan menurut Penggunaan 1998-2002. Tahunan.
2. Belkooui. 2000. Konsep Pendapatan, dalam <http://dwiermayanti.wordpress.com/konsep-pendapatan>. Diakses pada 28 September 2018 .
3. Hernanto. 1988. Ilmu Usahatani. Jakarta: Penebar Swadaya
4. Ibrahim, Y. 2009. Studi Kelayakan Bisnis. Jakarta: Rineka Cipta
5. Kartasapoetra. 1988. Pengantar Ekonomi Produksi Pertanian. Penebar Swadaya.
6. Rahardi dan Hartono, 2000. Agribisnis Peternakan. Jakarta: Penebar Swadaya
7. Rahardi, F, 2003. Agribisnis Tanaman Buah. Jakarta: Penebar Swadaya
8. Soekartawi. 1995. Analisis Usahatani. Jakarta: Universitas Indonesia.
9. Sudiyono, A. 1991. Ekonomi Pertanian. Jakarta: Penebar Swadaya.
10. Sudana. 2013. Kelayakan Usaha Budidaya Ikan Lele Dumbo (*Clarias gariepinus*) dan Pengaruhnya Terhadap Tingkat Pendapatan Petani Ikan Lele di Kabupaten Tabanan. Jurnal manajemen agribisnis. 1(1).

DOI <https://doi.org/10.18551/rjoas.2018-11.36>

THE TECHNICAL EFFICIENCY ANALYSIS OF RICE FARMING IN DISTRICTS OF SOUTH BORNEO, INDONESIA

Ikhsan Sadik, Azis Yusuf, Salawati Umi

Department of Agricultural Economics and Social Sciences, Faculty of Agriculture,
Lambung Mangkurat University, Banjarbaru, Indonesia

*E-mail: sikhsan@ulm.ac.id

ABSTRACT

The technical efficiency is meant as the ability of a firm to produce maximum output given a set of inputs and available production technology. A firm that had production does not reach maximum level is supposed to be technically inefficient. This research aimed to assess the technical efficiency performance of rice farming in the Sub-District of Cerbon, the District of Barito Kuala and the Sub-District of Aluh-aluh, District of Banjar by employing an econometric model of the stochastic frontier production function. The error structure of stochastic frontier production model made up of two independent components. One is a general random error and the other is an error which assumed to account for technical inefficiency in production. The method of maximum likelihood estimation (MLE) was applied to estimate parameters of the model which were then used to count the maximum level of output possible to produce by firms given a set of inputs. The technical efficiency index, expressed by TE index, $0 \leq TE \leq 1$, was measured as the ratio between actual output and assumed the maximum level of output possible to produce. The results showed an average index of TE rice farming in the Sub-District of Cerbon, the District of Barito Kuala and the Sub-District of Aluh-aluh, District of Banjar was 0.87 indicating the performance of production was relatively good. However, there was 3.33% of all the rice farming considered technically inefficient. Such results imply that some treatments may be set to consolidate production managerial aspects in order to improve the technical efficiency of production.

KEY WORDS

Technical efficiency, stochastic frontier production function, rice, farming.

Efficiency becomes a measure to express the right or appropriate process to do or produce something by not wasting time, effort, and costs. By not "wasting" means the resources of time, energy, and costs are managed to be devoted to as little as possible. Farrell (1957: 254-255) separates the efficiency into two components, namely technical efficiency and price efficiency. Technical efficiency reflects the ability of the effort unit to get the maximum output from the input group used; while price efficiency (or allocative efficiency) reflects the ability to manage the use of input in an optimal proportion by taking into account input and output prices and production technology. When both technical efficiency and price efficiency are fulfilled, it can be said as economically efficient (Coelli *et al* (2005: 51)) or, by using the term of Farrell (1957: 255), i.e overall efficiency.

To measure the technical efficiency above, Farrel (1957) proposed an input-oriented idea through the unit-isoquant concept (Figure 1). Unit-isoquant which was defined as the ratio of input-per-output-unit, reflected the use of "the most efficient" inputs to produce output (Battese, 1992: 186). Each point contained in the isoquant was the output produced by an efficient effort unit on the input groups (X_1 and X_2) used. There was no observation ratio value in the input-per-output-unit space which exceeded the unit isoquant limit located between the unit isoquant and the reference point 0. The input-per-output-unit ratio was only located on the unit isoquant or deviated from the unit isoquant and was located in the space outside the isoquant unit. The production activities that had a ratio of input-per-output-unit ratio that deviated from this isoquant unit, for example at point P, were seen as technically inefficient because to produce per isoquant unit, it required a relatively larger quantity of input

groups rather than needed when producing at point Q. The size of the technical inefficiency at point P is measured relatively as $\frac{OP}{OQ}$ ratio, with $\frac{OP}{OQ} < 1$.

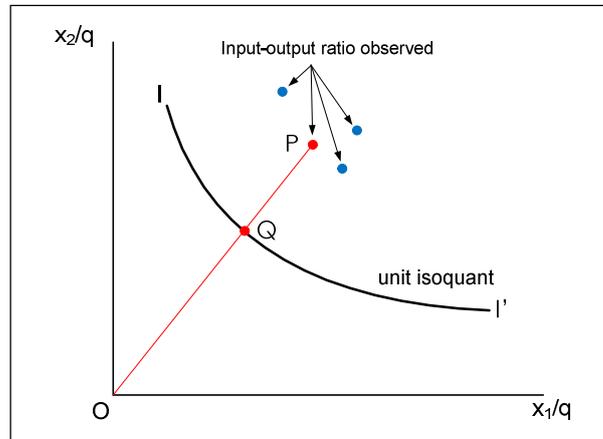


Figure 1 – Technical efficiency at point Q was measured in the concept of isoquant units (adapted from Farrell (1957: 254), Battese (1992: 186), and Coelli *et al* (2005: 52)

The concept of Farrell's unit isoquant technical efficiency above was elaborated by Battese (1992: 187) with an output-oriented approach using frontier production functions. The output-oriented approach focused on measuring the efficiency of achieving the maximum level of output that may be produced at a certain quantity level from input groups and the production technology used. Effort unit production activities were encouraged proportionally to produce maximum output at a certain level of technology without the need to change the number of input groups used (Coelli, *et al* (2005: 54 and 67)). The frontier production function, in this sense, was defined in terms of maximum output that can be produced from a certain measure of input clusters at the level of available technology (Battese (1992)), Chambers (1988) and Yotopoulos & Nugent (1976).

The production function, thus, showed the intended technical efficiency. The failure of the production performance of an effort unit to produce output as indicated by the frontier production function at a certain level of input clusters indicated a technical inefficiency.

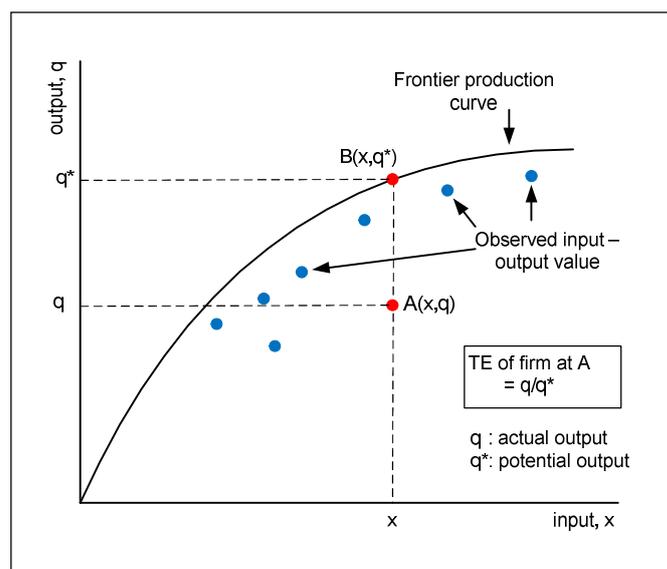


Figure 2 – Technical inefficiency at production point A was $\frac{q}{q^*} < 1$ because the quantity of output produced was lower than the potential output (adapted from Battese (1992: 187)

The size of the technical unit inefficiency was expressed relatively as a ratio of the actual output to the potential maximum output (Figure 2) and denoted as $\frac{q}{q^*}$, where q is the quantity of actual output and q^* is the potential output quantity. The technical inefficiency of the effort unit is shown by $\frac{q}{q^*} < 1$.

The measurement of the technical efficiency of rice farming has an important position, especially if it is used as an evaluation of the production performance of the farm and as the input and consideration for future improvements. Moreover, this rice farming was located in the location of tidal swamp wetlands. Because of its biophysical characteristics that were always saturated or waterlogged by the shallow water throughout the year or for a long time in a year (Subagyo, 2005: 1) caused by the influence of tidal floods (Noor, 2007: 4-5) made tidal swamp land became not optimal or had low fertility for plant growth. There were 121,864 hectares of tidal swamp land in South Borneo, most of which were located in Barito Kuala District (76,811 hectares) and in Banjar District (29,953 hectares) (Hamdani, 2014: 30).

To make it capable of producing maximum output quantities, sub-optimal lands with a number of natural constraints and specific limitations need to be improved through engineering and advanced technology and managerial capabilities to allocate proportional input use. Muller (1974: 731) in Battese (1992: 187) revealed that one source of technical inefficiency in effort units in production was derived from the role of non-physical inputs, especially information or knowledge that affects the ability of effort units to use technology that is available thoroughly. Amodu (2011) identified education, farming experience, and family size were the non-physical factors that had a significant effect on the inefficiency of effort unit managerial to allocate the use of input to achieve the maximum output levels.

This study was aimed to identify the factors of production that influence the performance of production technical efficiency in lowland rice farming in Cerbon Subdistrict, Barito Kuala District and Aluh-aluh Subdistrict in Banjar District, as well as to plot the existence of rice farming based on the technical efficiency performance.

METHODS OF RESEARCH

This study was conducted in Cerbon Subdistrict, Barito Kuala District and in Aluh-aluh Subdistrict, Banjar District – South Borneo. These sub-districts were determined based on the consideration that the production of rice in both sub-districts was large.

Stochastic Frontier Production Function was specified as a Cobb-Douglas production function:

$$q = \beta_0 \prod_{i=1}^7 x_i^{\beta_i} e^{(v-u)} \quad (1)$$

To make (eq. 1) linear so that the regression estimation can be carried out, a log-linear monotonic transformation was done:

$$\ln q = \ln \beta_0 + \sum_{i=1}^7 \beta_i \ln x_i + (v - u) \quad (2)$$

Where: q is the quantity of milled dry paddy produced (kg); x_1 is planting land (hectares); x_2 is number of seeds (kg); x_3 is number of limestones (kg); x_4 is number of chemical fertilizer (kg); x_5 is number of family labour (manday work); x_6 is number of hired labour (manday work); x_7 is number of drugs: insecticides and fungicide (L); $v - u$ is error terms consisting of random error, v which is assumed to be free and identical distribution following the normal distribution $v \sim N(0, \sigma_v^2)$; and one-side error, u whose existence is associated with technical inefficiencies,

assumed to spread following a half-normal distribution, denoted as $u \sim |N(0, \sigma_u)|$ (Jondrow *et al*, 1982: 233-234).

The size of β_i for each input x_i used was the production elasticity, E_p from the input that was interpreted as a percentage response to the change in output produced if the quantity of input used was changed (or raised) by 1 percent. The β_i size also identified the quantity allocation of input use whether it was in an economically-feasible region of production or not (Coelli, 2005: 13). If an input has a production elasticity, E_p with $0 < E_p < 1$, then it could be said that the input has been allocated economically-feasible.

Stochastic frontier production function (2) was estimated using MLE (Maximum Likelihood Estimation) procedure using Frontier 4.1 program. Tests on the results of the estimation are carried out by t-test.

The technical coefficient index was calculated from the following:

$$TE = \frac{\beta_0 \prod_{i=1}^k x_i^{\beta_i} e^{(v-u)}}{\beta_0 \prod_{i=1}^k x_i^{\beta_i} e^v} = \frac{q}{q^*}, 0 \leq TE \leq 1(3)$$

Where: q is actual output; and q^* is potential output.

Using Collie’s Frontier 4.1 programme, the β_i estimator was found along with the parameter estimator: $\sigma_\epsilon^2 = \sigma_v^2 + \sigma_u^2$ (denoted as sigma square), $\gamma = \frac{\sigma_u^2}{\sigma_\epsilon^2} = \frac{\sigma_u^2}{(\sigma_v^2 + \sigma_u^2)}$

(denoted as gamma), and the value of TE where $0 \leq TE \leq 1$. Parameter estimator γ stated the large share of various technical inefficiency errors in the overall error range. The LR (log-likelihood ratio) test was performed on the hypothesis $H_0: \gamma = 0$ which specified that there was no form of technical inefficiency in the model. Test statistics: $\lambda = 2[\ln\{L(H_0)\} - \ln\{L(H_1)\}]$ with $L(H_0)$ and $L(H_1)$ were the values of the likelihood function in the null hypothesis, H_0 and at the alternative hypothesis, H_1 respectively. At the position of the hypothesis $H_0: \gamma = 0$, the statistics λ distributed close to the $\chi_{(1-2\alpha, df=1)}^2$ distribution.

RESULTS AND DISCUSSION

Estimating Stochastic Frontier Production Function. The results of the MLE estimation of the frontier production function (2) are shown in Table 1.

Table 1 – MLE estimation results on frontier production functions

		Coefficient	Standard error	t-ratio
	beta 0	0.3276E+01	0.4194E+00	0.7812E+01
Land	beta 1	0.8082E+00	0.1066E+00	0.7585E+01 ¹
Seed	beta 2	-0.4789E-01	0.5681E-01	-0.8429E+00 ^{ns}
Limestone	beta 3	0.7285E-01	0.4488E-01	0.1623E+01 ³
Chem. fertilizer	beta 4	0.2072E-01	0.8396E-01	0.2468E+00 ^{ns}
Family labour	beta 5	0.2866E-01	0.4161E-01	0.6886E+00 ^{ns}
Hire labour	beta 6	0.2206E+00	0.9486E-01	0.2325E+01 ²
Drugs	beta 7	0.5800E-01	0.4125E-01	0.1406E+01 ⁴

log likelihood function = 0.1178E+02
 LR test of the one-sided error = 0.465E+01⁵
 with number of restrictions = 1

Note:

- 1 Significance level $\alpha = 0.010$, $t_{0.005}(df = 52) = 2.6737$
 - 2 Significance level $\alpha = 0.050$, $t_{0.025}(df = 52) = 2.0066$
 - 3 Significance level $\alpha = 0.115$, $t_{0.057}(df = 52) = 1.6029$
 - 4 Significance level $\alpha = 0.179$, $t_{0.085}(df = 52) = 1.3980$
 - 5 Significance level $\alpha = 0.070$, $\chi_{0.965}^2(df = 1) = 4.4452$
- ns not significant

The results of statistical testing by referring to the t-ratio of each coefficient of production input showed that the production input as follows: land (at significant level, $\alpha = 0.01$), hired labour ($\alpha = 0.05$), limestone ($\alpha = 0.115$), and drugs ($\alpha = 0.179$) had an effect on the yield of milled dry grain produced. Meanwhile, the input of seeds, chemical fertilizers, and family from the results of the testing, was declared to have no significant effect.

The size of the coefficient on regression estimation of stochastic frontier production function (2) in Table 1 was defined as the production elasticity, E_p of each production input, namely the percentage effect of each input if it was changed by 1% to the percentage change in output. The coefficient value of 0.8082E+00 on the land factor, for example, means that if the area of paddy field used for rice farming is increased by 1%, then the resulting output of dry milled grain will increase by 0.81%.

The size and sign of the production elasticity characterized whether production inputs had been allocated economically-feasible or not. If it has $0 < E_p < 1$, then the quantity of the input was said to have been allocated economically feasible. The input quantity provided was at stage II of the neoclassical production function. According to Chambers (1988: 9), the quantity of input given at stage II met the properties as follows: nonnegativity, weak essentiality, non-decreasing in \underline{x} (or monotonicity), and concave in \underline{x} , with \underline{x} was the input vector used in production.

Concave in x or the curvature of the production function in a concave form to the input variables x implied that the marginal product of all inputs was non-increasing which was known as the law of diminishing marginal productivity. Included in the criteria was the number of such input doses, namely land, limestone, chemical fertilizer, family labour, hired labour, and drugs.

If $E_p < 0$ (negative) meaning that the quantity of input given at stage III of the neoclassical production function, it was said that the allocation of the use of production inputs related to it violates the monotonicity property (Coelli, *et al*, 2005: 14). The amount of use of input in production activities at this position was overutilized. Each addition per unit of input, the resulting output will decrease. In the lowland rice farming activity studied, seeds were the production input which considered as excessively use compared to what was needed economically.

Technical Efficiency Index. The existence of technical inefficiencies in farming production activities as represented by the error in the function equation of stochastic frontier production (2) was indicated by the results of a significant LR statistical test $\alpha = 0.070$ ($\chi^2_{1-\alpha/2(df=1)} = \chi^2_{0.965(df=1)} = 4.4452$ so $\chi^2_{count} = 4.651 > \chi^2_{0.969(df=1)}$) (Table 1). The intensity of the inefficiency in each farm was indicated by the technical efficiency index. Technical efficiency index, TE was calculated as the ratio between the quantity of actual output produced by farming and the estimator value of its frontier potential output (eq. 3) as shown in Table 2.

Table 2 – Estimating technical efficiency index, TE

firm	eff.-est., TE	firm	eff.-est., TE	firm	eff.-est., TE
1	0.92109109E+00	21	0.87764176E+00	41	0.63483538E+00
2	0.82671180E+00	22	0.90653686E+00	42	0.89858975E+00
3	0.86982556E+00	23	0.87104592E+00	43	0.86402138E+00
4	0.90437711E+00	24	0.86129502E+00	44	0.87977982E+00
5	0.88829478E+00	25	0.88658280E+00	45	0.81908363E+00
6	0.83161372E+00	26	0.91554369E+00	46	0.85829689E+00
7	0.93793184E+00	27	0.94685634E+00	47	0.89320098E+00
8	0.91042893E+00	28	0.90434305E+00	48	0.83463793E+00
9	0.90714441E+00	29	0.91545590E+00	49	0.90393801E+00
10	0.87247703E+00	30	0.87490899E+00	50	0.86129726E+00
11	0.87571130E+00	31	0.85409107E+00	51	0.92331710E+00
12	0.81846054E+00	32	0.94895567E+00	52	0.84323516E+00
13	0.86358310E+00	33	0.87862593E+00	53	0.83860082E+00
14	0.85653148E+00	34	0.85178106E+00	54	0.89812735E+00
15	0.89831013E+00	35	0.92672537E+00	55	0.84723254E+00
16	0.88419122E+00	36	0.92505011E+00	56	0.86046982E+00
17	0.91066415E+00	37	0.89154799E+00	57	0.80503981E+00
18	0.93145062E+00	38	0.85112898E+00	58	0.80809716E+00
19	0.78726296E+00	39	0.85411086E+00	59	0.93327122E+00
20	0.87804240E+00	40	0.89111353E+00	60	0.88806826E+00

Mean efficiency = 0.87500976E+00

The calculation results showed the average index of the technical efficiency of rice farming was 0.875, which means that it was technically efficient. However, from all the farming examples observed, 3.3% had a low index, $TE < 0.8$ or technically inefficient; 66.67% had $0.8 \leq TE < 0.9$; and the remaining 30.00% have TE had 0.9 (Figure 3). The average technical efficiency index, TE of 0.875 was higher than the results of the Bravo-Ureta & Pinheiro (1993) compilation of 30 studies related to the efficiency at the level of farming which was generally dominated by rice that had been carried out in 14 countries which concluded the average technical efficiency index ranged about 0.72.

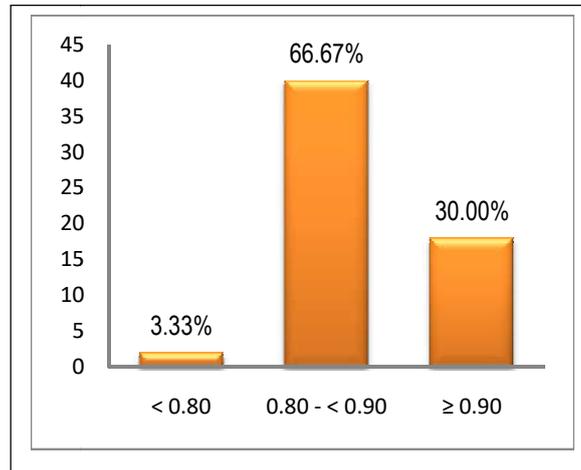


Figure 3 – Distribution of technical efficiency in rice farming

CONCLUSION

From the results of the study, it can be concluded that:

- Production inputs that had a significant effect on the level of the frontier output of wetland rice farming, namely land, limestone, hired labour, and drugs. Seed, although not statistically significant, but had a negative production elasticity indicated overutilized allocation so that it should be reduced;
- The average TE index of wetland rice farming was 0.875 or classified as technically efficient. However, among them, there were 3.33% of farms that were technically inefficient. For this farming, managerial improvement of input allocation was needed to be done, especially the one that related to seed input which indicated excessive allocation of use, as well as inputs that had a large elasticity value such as land and hired labour because the impact of changes to the input allocation has a relatively large effect on production compared to other inputs.

REFERENCES

1. Aigner, D., Lovell, C.A.K. & Schmidt, P. (1977). Formulation and estimation of stochastic frontier production function models. *Journal of Econometrics* 6:21-37.
2. Amodu, M.Y., Owolabi, J.O., & Adeola, S.S. 2011. Resource use efficiency in part-time food crop production: the Stochastic Frontier Approach. *Nigerian Journal of Basic and Applied Science*, 19(1):102-110.
3. Battese, G.E. (1992). Frontier production function and technical efficiency: a survey of empirical application in agricultural economics. *Agricultural Economics* 7:185-208.
4. Bravo-Ureta, B.E. & Pinheiro, A.E. (1993). Efficiency analysis of developing country agriculture: a review of the frontier function literature. *Agricultural and Resource Economics Review* 22(1):88-101.
5. Chamber, R.G. (1988). *Applied Production Analysis. A dual approach*. Cambridge: Cambridge University Press.

6. Collie, T.J., Rao, D.S.P., O'Donnell, C.J. & Battese, G.E. (2005). *An Introduction to Efficiency and Productivity Analysis*. Ed. ke-2. New York: Springer Science + Business Media, Inc.
7. Collie, T.J. (1996). *A guide to FRONTIER Version 4.1: a computer program for stochastic frontier production and cost function estimation*. CEPA Working Papers. Department of Econometrics, UNE, Australia.
8. Farrell, M.J. (1957). The measurement of productive efficiency. *Journal of the Royal Statistical Society, Series A (General)* 120(3):253-290.
9. Jondrow, J., Lovell, C.A.K., Materov, I.S. & Schmidt, P. (1982). On the estimation of technical inefficiency in the stochastic frontier production function model. *Journal of Econometrics* 19:233-238.
10. Meeusen & van den Broeck. (1977). Efficiency estimation from Cobb-Douglas production function with composed error. *International Economic Review* 18(2): 435-444.
11. Schmidt, P. & Lovell, C.A.K. 1979. Estimating technical and allocative inefficiency relative to stochastic production and cost frontiers. *Journal of Econometrics* 9:343-366.
12. Yotopoulos, P. A. & Nugent, J. B. 1976. *Economics of Development: Empirical Investigations*. New York: Harper & Row Publishers.

DOI <https://doi.org/10.18551/rjoas.2018-11.37>

**MULTIDIMENSION ASSESMENT OF OIL PALM SUSTAINBILITY ON PEATLAND:
A CASE STUDY OF OIL PALM SMALLHOLDER IN RUPAT, RIAU PROVINCE
OF INDONESIA**

Hidayat Herman*

Postgraduate School of Environmental and Development, University of Brawijaya,
Malang, Indonesia

Soemarno

Department of Soil Science, Faculty of Agriculture, University of Brawijaya,
Malang, Indonesia

Muhaimin Abdul Wahib

Department of Agriculture Economic, Faculty of Agriculture, University of Brawijaya,
Malang, Indonesia

*E-mail: hhidayaat@yahoo.co.id

ABSTRACT

This study aims to assess the sustainability index and status of smallholder oil palm plantations on peatlands. By using a multidimensional approach which was then analyzed using the Rap-SAWIT technique, modified from RAPFISH (Rapid Assessment Technique for Fisheries). It was found that the sustainability index value of smallholder palm oil plantations on peatland in Tanjung Kapal Village is 56.19% with fairly sustainable status. The results of the analysis of each dimension show that the institutional dimensions have the highest index value of 71.12% with a fairly sustainable status, then subsequently followed by the environmental dimension with an index value of 67.75% with a fairly sustainable status, an economic dimension with index value of 60.46% with a fairly sustainable status, technology and infrastructure dimension with index value of 48.13% with a fairly sustainable status and with the lowest index value of the social dimension has an index value of 33.50% with a less sustainable status. There are 20 key factors that affect the sustainability of smallholder oil palm plantations on peatlands.

KEY WORDS

Sustaibility, multidimension, rapfish, smallholder, oil palm, peatland.

As a tropical country, Indonesia has around 13.5-26.5 million ha of peatland (Wetland International, 1996). Peatland ecosystems can mostly be found on Sumatra (8.9 million ha), Kalimantan (6.5 million ha) and Papua (10.5 million ha). Peatlands have ecological, economic and social functions. As a store of carbon, peatland plays a role in the carbon cycle and serve as sponges which can absorb rainwater to reduce the impact of flooding. Peatlands can also be used as agricultural land.

In the Southeast Asian region, including Indonesia, peatlands are utilized for the development of agriculture and plantations due to the narrowing of agricultural land and increasing population. The most developed commodity in peatland is oil palm. An estimated 1.3 million ha of peatland in Indonesia is planted by oil palm (Page et al, 2011) and this number is predicted to increase to 2.5 million ha by 2020 (Hooijer et al, 2006; Page et al, 2011). Oil palm plantation is an important sector in regional development in Riau Province. The increasing demand for derivative products made from raw CPO (Crude Palm Oil) has caused wider land clearing for oil palm plantations.

Oil palm plantations are divided into three categories: Large Private Plantations, State Plantations and Smallholder Plantations. Hutabarat (2017) states that smallholder plantations have an important role in the development of oil palm plantations. The area of smallholder oil

palm plantations reached 41.4% of the total area of Indonesian oil palm plantations with a production of 36.6% of the total Indonesian palm oil production in 2016. With the total number of smallholder plantation farmers reaching 2.3 million, smallholder oil palm plantations are expected to be the driving force of the rural economy. However, smallholder plantation farmers face problems such as the lack of technology mastery, the lack of knowledge regarding peatland management and clearing by burning which causes damage to the peat ecosystem.

The use of peatlands for the development of oil palm plantations is thought to be the cause of environmental damage and the loss of economic and social functions on peatlands. A multidisciplinary approach that integrates ecological, social and economic aspects can evaluate the sustainability of plantation activities (Cooke et al, 2009; Walter and Stuzel, 2009). This study aims to assess the sustainability status of smallholder oil palm plantations on peatlands by integrating environmental, economic, social, technology infrastructure and institutional dimensions. The assessment of sustainability status of oil palm plantations is important to conduct in order to determine the right steps to ensure future sustainability.

METHODS OF RESEARCH

This research was conducted in Tanjung Kapal Village of Rupert District in Riau Province for 4 (four) months from May 2018 to August 2018. The location was chosen as it represents one of the central areas of smallholder oil palm plantations in Riau Province. The population of this research includes 631 smallholders who manage plantations on peatland. The sample of this study consists of 10% of the total population, particularly 63 oil palm farmers. Primary data collection is done by survey, questionnaire and independent interview. The questionnaire provided contains attributes of the five dimensions of sustainability from literature review of prior studies. The attributes in this study amounted to 36; each attribute is given a score of 0-3, where '0' is very good and '3' is bad.

Data of the study were analyzed using Multidimensional Scaling approach with RapSAWIT technique modified from RAPFISH (Rapid Assessment Technique for Fisheries) developed by the Fisheries Centre of University of Columbia (Kavanagh, 2001). The RAPFISH application was run on an add-in of Microsoft Excel. The sustainability index scale is organized into four sustainability categories, namely: (1) 0.00-25.00 represents bad sustainability status, (2) 25.01-50.00 indicates poor sustainability status, (3) 51.01-75.00 denotes fair sustainability status and (4) 75.01-100.00 indicates good sustainability status. The attributes of each dimension are analyzed using Leverage Analysis to determine the effect of each of the key factors of the five dimensions of sustainability. The index and sustainability status of each dimension is visualized in the form of a kite diagram. Monte Carlo analysis is done to determine the error rate on the attributes under study.

RESULTS AND DISCUSSION

Environmental Dimension. Sustainability analysis of environmental dimension is carried out using 8 (eight) attributes that are expected to affect sustainability, namely (1) land use; (2) land clearing; (3) biodiversity conservation; (4) water management arrangements; (5) frequency of flooding; (6) frequency of forest and land fires; (7) pest control and (8) use of chemical fertilizers. The results of the Multidimensional Scaling analysis on the environmental dimension show a sustainability index of 67.75% (Figure 1a). The key factors that affect the sustainability index in the environmental dimension are: (1) frequency of land fire; (2) pest control; (3) use of chemical fertilizers and (4) water management arrangements (Figure 1b).

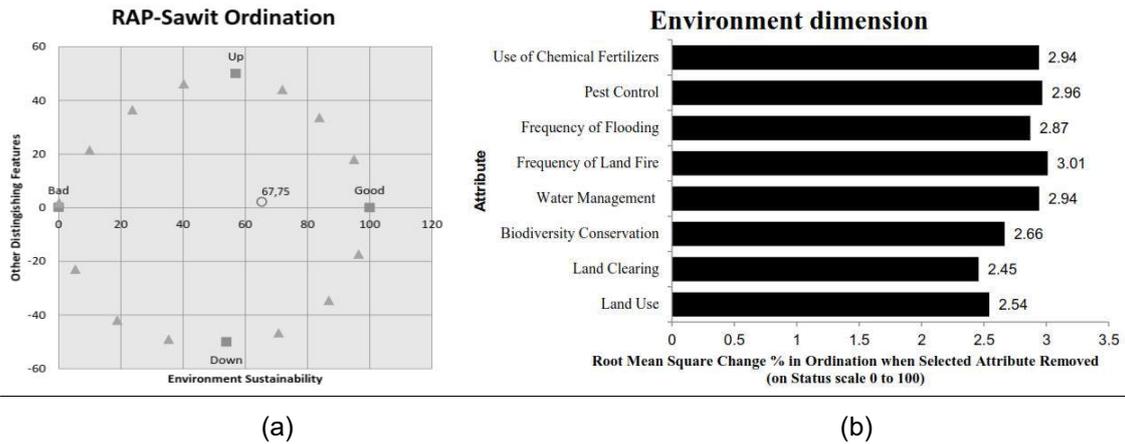


Figure 1 – Sustainability index (a) and sensitive attributes that affect environmental dimension (b) of smallholder oil palm plantations

Fertilization is one of the determining factors for achieving high productivity in oil palm plantation. Fertilization of oil palm must be done to guarantee vegetative and generative growth in order that oil palm can produce optimal fresh fruit bunches and produce quality palm oil (Adwignda, 2007). Peatland is an environment that has high potential for disease outbreaks (Noor, 2001). Pest attacks can reduce the production of fresh fruit bunches in the first year by up to 69% and death in young plants. The use of environmentally friendly fertilizers and integrated pest control can guarantee the sustainability of oil palm.

To reduce environmental risks and impacts, the utilization of peatlands is done selectively and very carefully. The water table arrangement will greatly affect the productivity of oil palm, the ideal condition of groundwater level must be maintained between 30-80cm. Groundwater level that is too shallow will cause oil palm growth to be disturbed whereas groundwater level that is too deep can cause a rapid rate of subsidence and cause dryness, therefore flammable. Fires on peatlands will be very difficult to extinguish because they can penetrate below the soil surface (Najiyati et al, 2005). The clearing of oil palm plantations with slash and burn system is the main trigger for forest fires on peatlands.

Economic Dimension. The sustainability analysis of the economic dimension was carried out using 8 (eight) attributes including (1) land area; (2) land ownership; (3) production costs; (4) total productivity; (5) total income; (6) total revenue contribution; (7) selling price, and (8) marketing (Figure 2a). The result of the MDS analysis for the sustainability index of the economic dimension is 60.46%. The key factors that influence the sustainability of the economic dimension are: (1) selling prices; (2) production costs; (3) total income, and (4) total productivity (Figure 2b).

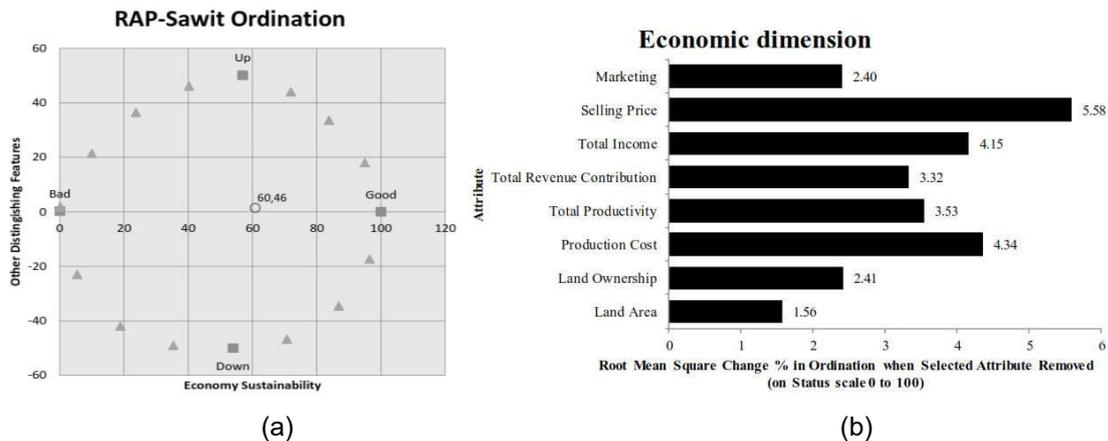


Figure 2 – Sustainability index (a) and sensitive attributes that affect economic dimension (b) of smallholder oil palm plantations

The income of oil palm farmers depends on the age of the oil palm plantations, the older the oil palm plant (optimum age), the more the palm kernel. The high content of core palm oil produced will then affect the price of fresh fruit bunches received by farmers. On average, oil palm plants that are more than 25 years old will require replanting. The selling price received by farmers will affect the sustainability in managing oil palm farming. The average productivity of smallholder oil palm plantations in Riau Province is lower than private plantations.

The inequality in the number of producers is due to production inputs such as the use of fertilizers, seeds and the use of technology. On average, oil palm farmers produce 65.82 tons of year⁻¹ on a land area of 2.1 ha. With an average selling price of fresh fruit bunches of Rp. 1,280 kg⁻¹ farmer income in farming is Rp. 84,256.508 year⁻¹ with a total income of Rp. 57,325.596. Farming feasibility can be calculated using the formula of Revenue Cost Ratio (R/C) with R/C value, it can be discovered whether a farm can be profitable or not. Farming is said to be feasible and can continue if $R/C > 1$. The R/C value of smallholder oil palm plantations managed by farmers is 2.13, which means that oil palm farming is profitable.

Social Dimension. The sustainability analysis of social dimension is done using 6 (six) attributes, namely: (1) frequency of social conflict; (2) participation of family labor; (3) level of knowledge regarding sustainability; (4) management of peat based on local wisdom; (5) age of farmers, and (6) level of education of farmers. The result of the Multidimensional Scaling analysis for the sustainability index in the social dimension is 33.50% (Figure 3a). Key factors that influence social dimension include: (1) participation of family labor; (2) level of knowledge regarding sustainability; (3) age of farmers, and (4) frequency of social conflict (Figure 3b).

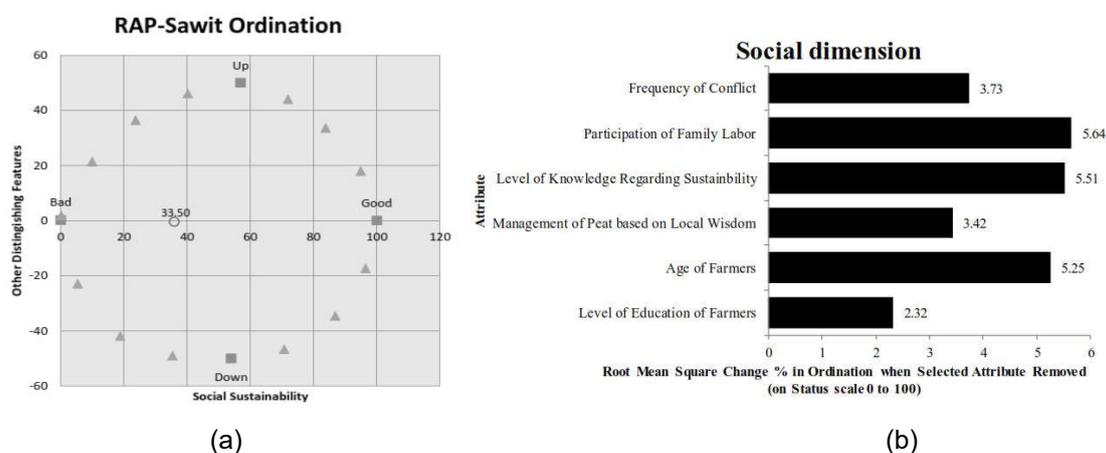


Figure 3 – Sustainability Index (a) and sensitive attributes that affect social dimension (b) of smallholder oil palm plantations

Social conflict problem in the development of oil palm plantations shows an increasing intensity. Social conflict usually occurs between local community and private companies based on unilateral claims on land management rights (Suwondo, 2011). The growing private plantation expansion activities tend to cause higher level of social conflict. In agrarian conflicts, local community is usually in defeated position as they do not have legal proof of land ownership. Sumardjo (2010) explains, the concept of social development and Corporate Social Responsibility (CSR) needs to be applied to overcome social conflicts between indigenous communities and private companies. In addition, partnerships between industry and farmers will create mutually beneficial cooperation and avoid social conflict.

Palm oil commodities that do not last long and which require advanced technology for processing need adequate quality of human resources. Therefore farmers who are still in productive age are needed. The age of farmers influences their work ability (Nurmedika, 2015). Younger farmers tend to have a working spirit and can accept innovation and take risks. The 2013 Agricultural Census Results Report explains that the productive age of

farmers is 15-64 years. Farmers who exceed the productive age have a tendency to have low working spirit. The regeneration of farmers in managing oil palm plantations is key to the sustainability of oil palm farming.

Technology and Infrastructure Dimension. Sustainability analysis of technology and infrastructure dimension is carried out using 7 (seven) attributes, namely: (1) road condition; (2) transportation; (3) distance to processing plant; (4) fire prevention; (5) harvest technology; (6) land conservation, and water and (7) the use of quality seeds. Result of Multidimensional Scaling shows that the sustainability index within the technology and infrastructure dimension is 48.13% (Figure 4a). The key factors that influence the sustainability of the technology and infrastructure dimension includes: (1) road condition; (2) harvest technology; (3) land fire prevention, and (4) the use of quality seed (Figure 4b).

The success of harvesting activities also depends on the cultivation activities and the availability of infrastructure facilities for processing activities (Muhammad, 2015). Harvesting activities must pay attention to fruit maturity, crop rotation and fruit cutting aspects. In smallholder oil palm plantations, harvesting activities are carried out periodically 4 times a month.

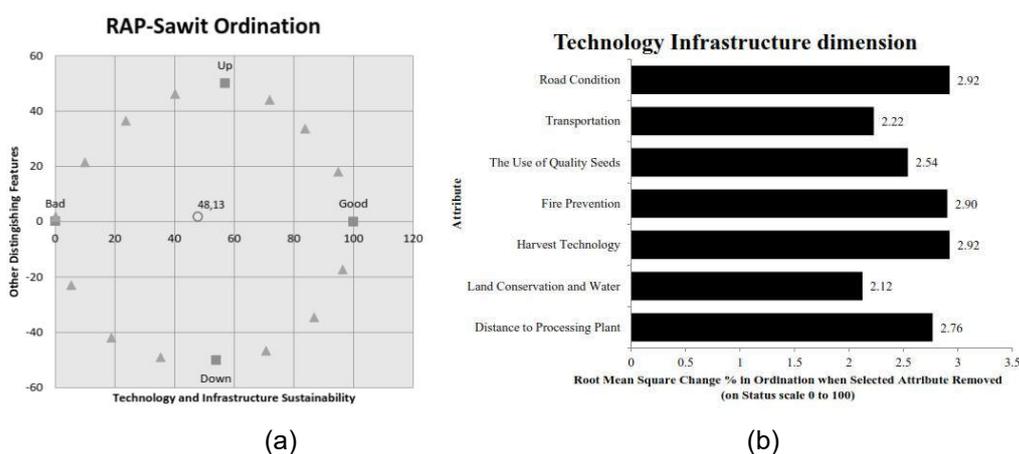


Figure 4 – Sustainability index (a) and sensitive attributes that affect dimensions of technology and infrastructure (b) in smallholder oil palm plantations

Infrastructure has an essential role as the driver of agricultural development. The smooth transportation of fruits depends on road conditions. Good connecting road conditions are key to the distribution of fresh fruit bunches to processing plants. After being harvested, fresh fruit bunches must be transported to the processing plant to avoid the presence of wet fatty acids (Sinarmas, 2017). The palm oil processing industry has an important role in maintaining the stability of the price of fresh fruit bunches produced by farmers. The characteristics of palm fruit (i.e., easily damaged and significant quality reduction) requires the availability of a processing industry that is not far from the location of the plantation.

Institutional Dimension. The institutional dimension of sustainability analysis is carried out using 7 (seven) attributes, namely: (1) government support; (2) policy of land clearing without burning; (3) farmer participation in farmer groups; (4) availability of farmer groups; (5) access to financial institutions; (6) availability of financial institutions, and (7) permits. The results of the Multidimensional Scaling reveal sustainability index on the institutional dimension is 71.12% (Figure 5a). The key factors influencing the institutional dimension are: (1) government support; (2) access to financial institutions; (3) policy on non-burning land clearing, and (4) participation of farmers in farmer groups (Figure 5b).

The government has attempted to prevent and reduce the negative impact of oil palm expansion by issuing a moratorium on granting business licenses for private companies to expand oil palm plantations on primary natural forests and peatlands. This policy was issued in Presidential Instruction (Inpres) No. 8 of 2015. In addition to preventing the negative impacts caused by oil palm plantations, the moratorium policy aims to encourage increased

productivity of smallholder oil palm plantations (Suwondo, 2011). This opportunity to increase productivity put into consideration the fact that currently smallholder plantations only produce 16 tons of fresh fruit bunches year⁻¹, while the production potential reaches 30 tons year⁻¹ (BBP2TP, 2013).

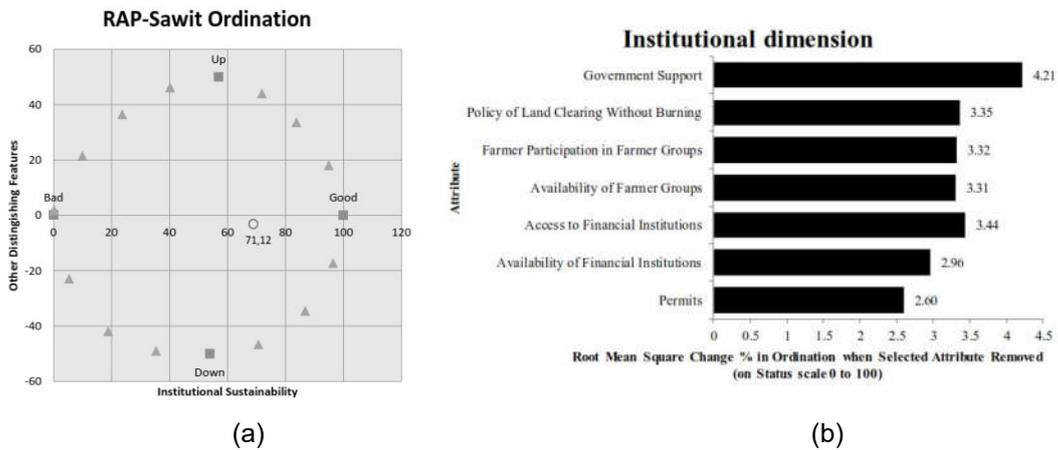


Figure 5 – Sustainability index (a) and sensitive attributes that affect the institutional dimension (b) in smallholder oil palm plantations

The commitment of the Regional Government through the Department of Agriculture can be seen from the routine provision of fertilizer subsidies and the provision of counseling on the development of oil palm plantations on peatlands. The Regional Government in the Regional Medium Term Plan (RPJMD) is working on the development of superior commodity processing industries to increase the added value of oil palm. Strong institutions will create independent rural communities. Syahza (2010) emphasizes the importance of economic institutions and farmer groups in reducing the gap between smallholder plantations and private plantations.

Sustainability Index and Status for each dimension. The results of the analysis using Rap-Sawit show that the value of the sustainability index on smallholder oil palm plantations on peatlands is categorized as fairly sustainable with an index value of 56.19%. The sustainability index values of the Environmental dimension is 67.75 (fairly sustainable); Economic dimension is 60.46% (fairly sustainable), Social dimension is 33.50% (poorly sustainable), Technology infrastructure dimension is 48.13% (poorly sustainable) and Institutional dimension is 71.12% (fairly sustainable) (Figure 6). To improve the sustainability status of oil palm plantations, it is necessary to improve social aspects by increasing farmers' knowledge of peatland management and improving supporting infrastructure that supports plantation activities.

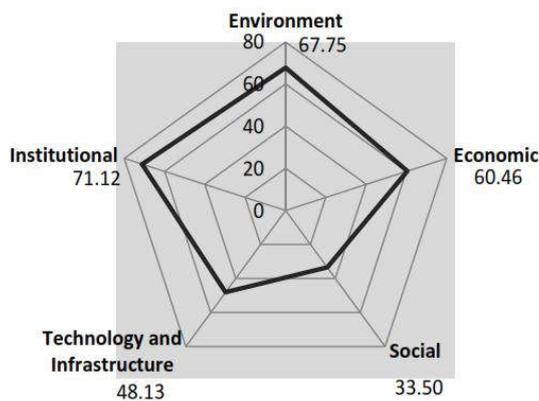


Figure 6 – Kite Diagram Sustainability Index of Smallholder Palm Oil Plantations on Peatlands

Table1 – Difference in Values of Monte Carlo and Multidimensional Scaling

Sustainability Dimensions	Sustainability Index Value (%)		Difference between the values of Monte Carlo and MDS
	MDS Value	Monte Carlo Value	
Environment	67.75	66.93	0.81
Economic	60.46	59.72	0.74
Social	33.50	33.06	0.44
Technology and Infrastructure	48.13	48.04	0.09
Institutional	71.12	70.36	0.75

Table 1 displays the difference between the Multidimensional Scaling and Monte Carlo values. Monte Carlo analysis is done to find out errors in Rap-Sawit analysis. Monte Carlo analysis shows that at 95% confidence level, each dimension has a small difference. Based on the data obtained, the differences between values in each dimension is <1. It can be concluded that: (1) Rap-SAWIT has a relatively small error in providing scoring to each attribute; (2) has a high level of Multidimensional Scaling stability; (3) the attributes studied have a high level of confidence. Rap-SAWIT method is good enough as one of the tools in assessing the sustainability of smallholder oil palm plantations on peatlands.

CONCLUSION

The sustainability of smallholder oil palm plantations on peatlands has a sustainability index value of 56.19% with a fairly sustainable status. Leverage analysis in each dimension shows that social dimension is the dimension with the lowest sustainability index value (33.50%) with poor sustainability status. Increasing the sustainability status of the social dimension can be done by preventing social conflict and improving the management of peatland based on local wisdom. Monte Carlo analysis shows that each attribute in the use of Rap-SAWIT is valid and can be accounted for, hence it can be used as a guide to evaluate the sustainability of smallholder oil palm plantations on peatlands.

REFERENCES

1. Adiwiganda, R. (2007). Manajemen Tanah dan Pemupukan Kelapa Sawit. Di dalam: S. Mangoensoekarjo (ed). Manajemen Tanah dan Pemupukan Budidaya Tanaman Perkebunan. Gadjah Mada University Press, Yogyakarta.
2. BBP2TP. (2015). Teknologi Budidaya Kelapa Sawit. Badan Litbang Kementerian Pertanian. Bogor.
3. Cooke, I.R., et al. (2009). Integrating Socio-Economic and Ecology: Taxonomy of Quantitative Methods and a Review of Tropical Peat Research Laboratory and Applied Agriculture Resources. Kuala Lumpur.
4. Hooijer, A., Silvius, M., Wosten, H., Page, S. (2006). PEAT-CO₂, Assesment of CO₂ Emissions from Drained Peatland in Southeast Asia. Delft Hydraulics report Q3943. WL Delft Hydraulics, Delf, Netherlands.
5. Hutabarat, S. (2017). Tantangan Keberlanjutan Perkebunan Kelapa Sawit Rakyat Di Kabupaten Pelalawan, Riau dalam Perubahan Perdagangan Global. Jurnal Ilmu Sosial Indonesia. 43 (1): 47-64.
6. Kavanagh, P. (2001). Rapid Appraisal of Fisheries (RAPFISH) Project. University of British Columbia, Fisheries Centre.
7. Muhammad. (2015). Kajian kegiatan Panen di Perkebunan Kelapa Sawit (Eagis Guineensis Jacq) PT. Sawit Sejahtera Desa Senyir Kecamatan Muara Ancalong Kabupaten Kutai Timur Provinsi Kalimantan Timur. Program Studi Budidaya Tanaman Perkebunan.
8. Najiyati, S., Agus Asmana, I Nyoman N. Suryadiputra. (2005). Pemberdayaan Masyarakat di Lahan Gambut. Proyek Climate Change, Forests and Peatlands in Indonesia. Wetlands International – Indonesia Programme dan Wildlife Habitat Canada. Bogor.
9. Noor, M. (2001). Pertanian Lahan Gambut; Potensi dan Kendala. Kanisius.

10. Nurmedika. (2015). Analisis Faktor-Faktor Yang Mempengaruhi Pilihan Petani Melakukan Alih Usahatani di Kecamatan Rio Kabupaten Donggala. *Jurnal Agroland*. 22 (1): 61-66.
11. Page, S.E., Rieley, J.O., Banks, C.J. (2011). Global and Regional Importance of The Tropical Peatland Carbon pool. *Global Change Biology*. 17 (2): 798-818.
12. Sinarmas. (2017). Dari Kebun ke Pabrik dalam 24 Jam. From <https://www.smart-tbk.com/kebun-ke-pabrik-dalam-24-jam/>
13. Sumardjo. (2010). Model Pemberdayaan Masyarakat dan Pengelolaan Konflik di Provinsi Riau. Pusat Kajian Resolusi Konflik (CARE) Lembaga Penelitian dan Pengabdian kepada Masyarakat Institut Pertanian Bogor.
14. Suwondo., Sabiham, S., Sumardjo., Parmudya, B. (2011). Analysis Of Sustainability Peatland In Agroecology Oil Palm Plantation. *Jurnal Rekayasa Lingkungan*. 7 (2): 161-170.
15. Syahza, A. (2010). Model Kelembagaan Ekonomi pada Perkebunan Kelapa Sawit di Provinsi Riau. Seminar dan Lokakarya Pengelolaan terpadu Lingkungan Perkebunan Kelapa Sawit Berkelanjutan di Provinsi Riau. Pekanbaru.
16. Walter, C and Stuzel, H. (2009). A New Method for Assessing the Sustainability of Land-Use System (I): Identifying the Relevant Issue. *Journal Ecological Economics*. 68: 1275-1287.
17. Wetland International. (1996). Pelingkungan AMDAL Di Lahan Basah (Disampaikan Oleh I.N.N Suryadiputra). Seminar Regional Aplikasi AMDAL Pada Lahan Reklamasi Rawa. Pusat Penelitian Lingkungan. Universitas Lambung Mangkurat.

DOI <https://doi.org/10.18551/rjoas.2018-11.38>

OYSTER MUSHROOM CULTIVATION AS A STRATEGY OF COMMUNITY EMPOWERMENT IN IMPROVING ECONOMIC GROWTH AND DISTRIBUTION OF RURAL AREAS IN INDONESIA

Istikhoroh Siti*, Sukandani Yuni, Arianto Bisma

Faculty of Economics, PGRI Adi Buana University of Surabaya, Indonesia

*E-mail: istiistitc@gmail.com

ABSTRACT

This article is a literature review on community empowerment and cultivation of oyster mushrooms as one of its strategies. The main concept of empowerment is that people are not only made objects of development, but also subject. There are 3 (three) efforts in community empowerment, namely enabling, empowering, and protecting. These efforts require the involvement of every element of society. The purpose of community empowerment is to establish, enable, and advance people's lives; so that they can participate in development that is people-centered; as well as improving human and institutional resources. One strategy for community empowerment is the cultivation of oyster mushrooms. In addition to not requiring large investments, oyster mushrooms have potential in the market due to the high interest of the Indonesian people towards oyster mushroom-based foods.

KEY WORDS

Community, rural, poverty, strategy, business.

Poverty is one of the complex social problems faced by Indonesia until now. Various analyzes, approaches and strategies are implemented to eliminate poverty, but to date data still shows the ups and downs of the conditions of the poor (Widayanti, 2012). The latest data shows that the poverty rate in Indonesia in March 2018 reached 25.95 million people (9.82%) (Indonesian Central Statistics Agency, 2018). There have been many discussions about poverty in Indonesia and all things related to it, ranging from causes to how to overcome them (Hammado, 2016; Kurniawati, Supriyono, & Hanafi, 2013; Lianah, Umriana, & Aziz, 2013; Sapar, Palatte, & Ukkas, 2014; Widjajanti, 2011). Various opinions also state that the natural wealth possessed by Indonesia is actually very sufficient to release its people from the problem of poverty and to improve the welfare of society (Harahap, 2012; Lianah et al., 2013; Sururi, 2015; Widayanti, 2012). But in reality, the condition of the community is very different from what is expected. Until now, poverty is precisely the main problem in the midst of abundant natural resources and potential.

Community empowerment is a concern of various parties and is considered as one of the appropriate approaches in overcoming social problems, especially poverty (Jones, Harris, & Joseph, 2017; Unni, 2013). Government agencies, businesses and the public have made various efforts related to the empowerment of this community. Even with different perspectives and theoretical foundations, the empowerment program they carry out has the same goal, namely as an effort to resolve or at least reduce the impact of social problems.

Empowerment is the process of developing, building, self-supporting, and strengthening the bargaining position of the lower layers of society against the pressure forces in all fields and sectors of life (Harahap, 2012; Noor, 2011; Perkins & Zimmerman, 1995; Wilson, 1996; Zimmerman, 1995). Community empowerment can be interpreted as an effort to restore or enhance the empowerment of a community to be able to act in accordance with their dignity in obtaining rights and carrying out their responsibilities as a community and citizen (Harahap, 2012). Community empowerment is also carried out to facilitate local communities in planning, deciding and managing the resources they have so that in the end they have the ability and independence in an economic, ecological and social

manner in a sustainable manner (Noor, 2011). Therefore, community empowerment is essentially closely related to sustainable development.

Community empowerment as an alternative strategy in the development of a region has developed in various literature, although its implementation has not been maximized (Noor, 2011). Community empowerment is something that is much talked about because it is related to the progress and change of the nation, especially if it is associated with the ability of the community which is still lacking will greatly hamper economic growth itself. Community empowerment as a model of regional development is an effort to improve the dignity of some people who are still trapped in poverty and underdevelopment. The main targets are those who are weak and do not have the power, strength or ability to access productive resources, or marginalized communities in development. The ultimate goal of the community empowerment process is the recovery of human values according to their dignity as a unique, independent and independent person. Unique in the context of human diversity; independence from all internal and external shackles including the bonds of worldliness and poverty; and independent to be able to manage and be responsible for themselves and others. In other words, the purpose of this empowerment is to make the citizens self-sufficient so that they can improve the living standards of their families and optimize their resources.

One of the strategy that can be done in the community empowerment program is the food self-sufficiency program (Lianah et al., 2013) through the cultivation of oyster mushrooms. Oyster mushroom cultivation can be an alternative because it is in accordance with Indonesia's tropical climate, does not require large investments, and the high interest of the Indonesian people in food based on oyster mushrooms. proactive towards policies and social change (Perkins & Zimmerman, 1995). Empowerment shows participation with other people to achieve goals, efforts to gain access to resources, and some critical understanding of the socio-political environment is a basic component of construction. Empowerment includes organizational processes and structures that increase member participation and enhance the achievement of organizational goals. At the community level, empowerment refers to collective action to improve the quality of life in a community and relations between community organizations. Efforts to gain control, access to resources, and critical understanding of one's socio-political context are fundamental aspects of the empowerment process. (Zimmerman, 1995) Community empowerment is a concept of economic development that summarizes the values of society to build a new paradigm in development that is people-centered, participatory, empowerment and sustainable (Chambers, 1995). The concept of development with a model of community empowerment is not only solely to fulfill the basic needs of the community but rather as an effort to find alternative local economic growth (Noor, 2011). Empowerment is also an act of accepting delegations of power to act in accordance with the mechanisms of individual participation, community networks, organizations and institutions (Ahmad, Yusof, & Abdullah, 2013). In other words, empowerment is a process of increasing the capacity of individuals or groups to make or change a choice into desired actions and outcomes. The empowering process is a process where people create or are given the opportunity to control their own destiny and influence decisions that affect their lives. They are a series of experiences in which individuals learn to see closer relations between their goals and a sense of how to achieve them, gain greater access and control over resources, and where people, organizations and communities gain control over their lives (Zimmerman, 1995).

The concept of community empowerment. Empowerment is a construction that links individual strengths and competencies, natural assistance systems, and proactive behavior to policies and social change (Perkins & Zimmerman, 1995). Empowerment shows participation with other people to achieve goals, efforts to gain access to resources, and some critical understanding of the socio-political environment is a basic component of construction. Empowerment includes organizational processes and structures that increase member participation and enhance the achievement of organizational goals. At the community level, empowerment refers to collective action to improve the quality of life in a community and relations between community organizations. Efforts to gain control, access to

resources, and critical understanding of one's socio-political context are fundamental aspects of the empowerment process (Zimmerman, 1995).

Community empowerment is a concept of economic development that summarizes the values of society to build a new paradigm in development that is people-centered, participatory, empowerment and sustainable (Chambers, 1995). The concept of development with a model of community empowerment is not only solely to fulfill the basic needs of the community but rather as an effort to find alternative local economic growth (Noor, 2011). Empowerment is also an act of accepting delegations of power to act in accordance with the mechanisms of individual participation, community networks, organizations and institutions (Ahmad, Yusof, & Abdullah, 2013). In other words, empowerment is a process of increasing the capacity of individuals or groups to make or change a choice into desired action and results.

The empowering process is a process where people create or are given the opportunity to control their own destiny and influence decisions that affect their lives. They are a series of experiences in which individuals learn to see closer relations between their goals and a sense of how to achieve them, gain greater access and control over resources, and where people, organizations and communities gain control over their lives (Zimmerman, 1995).

Community empowerment approach. Community empowerment strategy is a process of transformation in the cultural, social, economic and political relations of society. the expected transformation results are an ongoing process. Appropriate intervention is needed in microeconomic theories so that policies at the macro level close the existing gap through empowerment activities in the lower classes (Noor, 2011). Therefore, empowerment can be a bridge for macro and micro development concepts.

Various inputs such as funds, infrastructure and facilities allocated to the community through various development programs must be placed as stimuli to spur the acceleration of community socio-economic activities. This process is directed at increasing the capacity of the community through the accumulation of capital sourced from the surplus generated and in turn can create income enjoyed by the people. Capital fertilization shows that financial assistance, facilities and infrastructure must be managed in an orderly and transparent manner by adhering to the five basic principles. First, it is easy to be accepted and utilized by the community as executor and manager (acceptable); secondly, it can be managed by the public openly and can be accountable; third, provide adequate income and educate the public to manage activities economically (profitable); fourth, the results can be preserved by the community itself so as to create a capital accumulation in the place of a local socio-economic institution (sustainable); and fifth, fund management and yield preservation can be easily rolled out and developed by the community in a wider scope (replicable) (Kartasasmitha, 1997).

"Society is not the object of development, but the subject of development" is the main approach of the concept of empowerment (Kartasasmitha, 1997). The concept shows that in carrying out the empowerment process it is very important that the community involvement be empowered so that the objectives of empowerment can be achieved maximally. In the empowerment process, there are two parties that have a very close relationship, first, empowering parties (community workers) and second, empowered (community) parties. Both parties must mutually support each other so that the community as the party to be empowered is not only made an object, but is more directed as a subject. Some approaches that can be used in community empowerment are:

- The empowerment program must be directed. This is so that all efforts in the empowerment program must be aimed at those that really need and are designed to overcome their problems;
- Engaging the community. this aims to help aid and empowerment programs run effectively because people can directly design, implement, manage, and account for the results of their efforts to improve their own economy;
- Using a group approach. This approach is used because in general the community at the bottom is difficult or even unfamiliar with solving their own problems (Noor, 2011;

Widayanti, 2012; Widjajanti, 2011). In addition, the existence of partnerships between groups can be mutually beneficial and advance the group.

Oyster mushroom cultivation as a community empowerment strategy. Oyster mushrooms are a type of wood fungus that has a higher nutritional content compared to other types of wood fungi. Oyster mushrooms contain protein, fat, phosphorus, iron, thiamin and riboflavin higher than other types of fungi. Every 100 grams of oyster mushrooms contain 19-35% protein with 9 kinds of amino acids; 1.7-2.2% fat consists of 72% unsaturated fatty acids. While mushroom carbohydrates consist of thiamine, riboflavin, and niacin are the main B vitamins in oyster mushrooms, in addition to vitamin D and C minerals they consist of K, P, Na, Ca, Mg, Zn, Fe, Mn, Co and Pb. Metal microelements are very low so they are safe for consumption every day (Nasution, 2016).

The selection of oyster mushroom cultivation as an alternative in community empowerment is certainly based on several reasons. First, the cultivation of oyster mushrooms is very suitable for tropical regions such as Indonesia. Second, the investment needed to start an oyster mushroom cultivation business is quite cheap and can be done gradually. Third, oyster mushroom cultivation does not require too much land and maintenance is easy and not too expensive. In addition, the waste of oyster mushrooms can be used to make organic fertilizer (Efendi & Masjudin, 2015). Fourth, various foods made from oyster mushrooms are in great demand by Indonesian people. Fifth, oyster mushrooms can be sold raw or cooked. All of them provide a high level of profit because of the high demand, while the supply from the farmers is only a little. Evidently, the price of mushrooms that have been packaged in unlabeled plastic is twice the price of mushrooms sold by farmers. Prices can be more expensive if the packaging has been labeled. Sixth, doing mushroom business is able to provide a large expected return. Farmers can rent 5x5 meters of land for one harvest (5 months). The land area is enough to put 1000 bag-logs (where mushrooms grow). Each log bag produces 4-5 oyster mushrooms for 4-5 months with a total harvest of about 0.8 to 1 kg. The price of fresh oyster mushrooms in traditional markets is around Rp. 18,000 to 20,000 per kg. Of these reasons, it can be concluded that the development of this business has high prospects for the community because it does not require extensive land and special capabilities in its maintenance, potential market absorption is still very high, and is able to provide high expected return for the community.

Efforts in empowerment of communities. The concept of empowerment tries to break away from the trap of "zero-sum games and trade offs" with the starting point of view that with equality created a broader foundation to ensure sustainable growth. The resulting growth is not only with a smaller cost but also with a small foreign exchange (Browne, 1995), which means that it is very influential for developing countries that experience shortages of foreign exchange and are weak in their balance of payments position. There are 3 (three) efforts in empowering the community (Kurniawati et al., 2013; Noor, 2011), namely:

1. Creating an atmosphere that enables the potential of the community to develop (enabling). This emphasizes that every individual in society has the potential to be developed. Empowerment is an effort to encourage, motivate, and generate public awareness of the potential they have as well as efforts to develop their potential.
2. Strengthening community-owned potential (empowering). This effort can be done through the provision of supporting facilities that can help people develop their potential. Some actions that can be taken are improving education, health, and facilitating access to sources of economic progress such as roads, electricity, schools, and health services that can be accessed by all levels of society, especially the lowest layers. Another action that can be taken is to create a program specifically for people in the lowest layers. This is deemed necessary because general programs that apply do not always touch the community at this level.
3. Protecting the interests of the community (protecting). Empowered communities are often considered weak (Cai, Chew, & Levy, 2015; Kaur, 2014; Noor, 2011). This protection aims to increase public participation. protecting does not mean isolating or covering from interaction, but rather an attempt to prevent unbalanced competition.

Community empowerment does not aim to make them dependent on various institutions or government programs. This is because basically the empowerment program tries to teach the community if they want to enjoy something that must be produced from their own efforts (the results of which can be sold or exchanged with other parties). Thus, the goal of establishing, enabling, and advancing a better community life can be achieved. In addition, empowerment is also intended to create community empowerment so that they can participate in people-centered development. Empowerment is not only related to funding but also enhancement of human and institutional resources.

CONCLUSION

Community empowerment is a concept of economic development that summarizes community values to build a new paradigm in development that is people-centered, participatory, empowerment and sustainable. The concept of development with a model of community empowerment is not only solely to meet the basic needs of the community but rather as an effort to find alternative local economic growth.

Community empowerment strategy is a process of transformation in the cultural, social, economic and political relations of society. The expected transformation results are an ongoing process. Various inputs such as funds, infrastructure and facilities allocated to the community through various development programs must be placed as stimuli to spur the acceleration of community socio-economic activities. The main concept of empowerment is that the community is not only the object of development, but also the subject (implementer). Some approaches that can be used in community empowerment are programs that must be directed, community participation, and group approaches.

In addition, there are 3 (three) efforts in community empowerment, namely enabling, empowering, and protecting. Empowerment also requires the involvement of all elements of society such as government, organizations from outside or within the community, cooperatives, facilitators, and more capable communities. The existence of community empowerment aims to establish, enable, and advance people's lives; so that they can participate in development that is people-centered; as well as improving human and institutional resources.

Oyster mushroom cultivation can be an alternative in improving people's economy. Oyster mushrooms have great potential in improving the economy of rural communities in Indonesia. This business development has several advantages, including not requiring extensive land and special capabilities in its maintenance, the potential for market absorption that is still very high, and able to provide high expected return for the community.

REFERENCES

1. Ahmad, P., Yusof, F., & Abdullah, F. (2013). Local Economic Growth and Community Sustainability. *Procedia - Social and Behavioral Sciences*, 101, 437–444.
2. Badan Pusat Statistik Indonesia. (2018). *Profil Kemiskinan di Indonesia Maret 2018*. Badan Pusat Statistik (Vol. 29).
3. Browne, C. V. (1995). Empowerment in Social Work Practice with Older Women. *Social Work*, 40(3).
4. Cai, T., Chew, H. E., & Levy, M. R. (2015). Mobile value-added services and the economic empowerment of women: The case of Usaha Wanita in Indonesia. *Mobile Media and Communication*, 3(2), 267–285.
5. Chambers, R. (1995). Poverty and livelihoods: whose reality counts? *Environment and Urbanization*, 7(1), 173–204.
6. Efendi, I., & Masjudin. (2015). Pemberdayaan Masyarakat melalui Pembudidayaan Jamur Tiram dan Pengolahan Limbahnya menjadi Pupuk Organik berbasis Koperasi Syari'ah. *Jurnal Kependidikan*, 14(4), 351–360.
7. Hammado, N. (2016). Pemberdayaan Kelompok Usaha Rumah Jamur dalam Pembuatan Bibit Jamur Tiram di Palopo. In *Prosiding Seminar Nasional Hasil-Hasil Penelitian*

- Pascasarjana, SPS UNDIP.
8. Harahap, E. F. (2012). Pemberdayaan Masyarakat Dalam Bidang Ekonomi Untuk Mewujudkan Ekonomi Nasional Yang Tangguh Dan Mandiri. *Manajemen Dan Kewirausahaan*, 3(1), 78–96.
 9. Jones, M., Harris, A., & Joseph, J. (2017). Do micro and small business enterprises economically empower women in developing countries? Evidences from Mekelle City, Tigray, Ethiopia. *Journal of Organizational Change Management*, 1–17.
 10. Kartasasmita, G. (1997). Pemberdayaan Masyarakat: Konsep Pembangunan yang Berakar Pada Masyarakat. In *Sarasehan DPD GOLKAR Tk. I Jawa Timur* (pp. 1–25).
 11. Kaur, I. J. (2014). Economic Empowerment of Rural Women and MGNREGA. *Indian Journal of Public Administration*, 60(3), 696–719.
 12. Kurniawati, D. P., Supriyono, B., & Hanafi, I. (2013). Pemberdayaan Masyarakat di Bidang Usaha Ekonomi (Studi pada Badan Pemberdayaan Masyarakat Kota Mojokerto). *Jurnal Administrasi Publik*, 1(4), 9–14.
 13. Lianah, Umriana, A., & Aziz, F. (2013). Peningkatan Ekonomi Masyarakat Sriging Patemon Gunungpati Semarang Melalui Budidaya Jamur Tiram. *Dimas*, 13(2), 405–422.
 14. Nasution, J. (2016). Kandungan Karbohidrat dan Protein Jamur Tiram Putih (*Pleurotus ostreatus*) Pada Media Tanam Serbuk Kayu Kemiri (*Aleurites moluccana*) dan Serbuk Kayu Campuran. *Jurnal Eksakta*, 1, 1–4.
 15. Noor, M. (2011). Pemberdayaan Masyarakat. *Jurnal Ilmiah CIVIS*, 1(2), 87–99.
 16. Perkins, D. D., & Zimmerman, M. A. (1995). Empowerment theory, research, and application. *American Journal of Community Psychology*, 23(5), 569–79.
 17. Sapar, Palatte, M. H., & Ukkas, I. (2014). Pemberdayaan Kelompok Tani Usaha Budidaya Jamur Tiram Kelurahan Kambo Kecamatan Mungkajang Kota Palopo. *Jurnal Equilibrium*, 04(02), 124–130.
 18. Sururi, A. (2015). Pemberdayaan Masyarakat Melalui Program Pembangunan Infrastruktur Perdesaan Dalam Meningkatkan Kesejahteraan Masyarakat Kecamatan Wanasalam Kabupaten Lebak. *Jurnal Administrasi Negara*, 3(2), 1–25.
 19. Unni, J. (2013). Economic Empowerment of women. *Indian Journal of Human Development*, 7(2), 364–366.
 20. Widayanti, S. (2012). Pemberdayaan Masyarakat: Pendekatan Teoritis. *Ilmu Kesejahteraan Sosial*, 1(1), 87–102.
 21. Widjajanti, K. (2011). Model Pemberdayaan Masyarakat. *Jurnal Ekonomi Pembangunan*, 12(1), 15–27.
 22. Wilson, P. A. (1996). Empowerment: Community Economic Development from the Inside Out. *Urban Studies*, 33(Nos 4-5), 617–630.
 23. Zimmerman, M. A. (1995). Psychological Empowerment: Issues and Illustrations. *American Journal of Community Psychology*, 23(5), 581–599.

DOI <https://doi.org/10.18551/rjoas.2018-11.39>

DEVELOPING THE ADDED VALUE OF CORN CHIPS AS WAY OF IMPROVING THE COMMUNITY ECONOMY IN GORONTALO PROVINCE OF INDONESIA

Hasan A.M.*

Department of Biology, Faculty of Mathematics and Natural Sciences,
University of Negeri Gorontalo, Indonesia

Halid A.

Faculty of Agriculture, University of Negeri Gorontalo, Indonesia

Ahmad L.

Department of Agricultural Technology, Faculty of Agriculture,
University of Negeri Gorontalo, Indonesia

Hasdiana

Department of Craft Engineering, Faculty of Engineering, University of Negeri Gorontalo,
Indonesia

Ilato R.

Department of Administration and Public Policy, Faculty of Economy and Business,
University of Negeri Gorontalo, Indonesia

*E-mail: transbahasa.ilmiah@gmail.com

ABSTRACT

The objective of this study is to create the model for the development of corn-based products. The ultimate objectives of this study is: 1) the availability of development and utilization of appropriate technology for corn processing products to be adopted by industry; 2) the increase of added value for each actor within the value chain and community as the economic multiplier effect in Gorontalo province. The method used in this study is quantitative descriptive method which encompasses desk study, secondary data analysis, workshop and meeting with related stakeholders, develop the design of the study for each value chain actor, field visit and in-depth interview, focus group discussion, presentation and findings discussion to formulate the master plan and the model for the development of corn commodity. The conclusion of this study is 1) benefit of chips very dependant on the type of packaging; 2) the advantages of chips are increasingly improved; 3) based on the results of the organoleptic test seen from the aroma, taste, texture and the most preferred color is Balado.

KEY WORDS

Corn chips, economic value, community, public service.

Gorontalo Province is known as the maize province that optimistically has the program of one-million-ton maize product achievement in a year to support the national food security. In 2011 there was an extension of maize farmland by 3.500 hectares, and this then had increased the production of maize around 245.000 ton, and that time the product of maize could reach 600.000 tonnes. Besides, as an attempt to increase the maize production, the Government of Gorontalo Province also has attempted various ways including through the improvement of the capacity of the elucidator, the use of the qualified high yield seed and the provision of fertilizer. As stated by Isa (2012), the maize production in Gorontalo from time to time has been increasing in which it is predicted that each maize crop could reach around 65%, and 35% is in the form of wastes such as stalk, leaves, husk, and stem of maize ear.

In addition, to fulfill the daily needs of society in Gorontalo, maize also can be processed for a variety of products such as maize steak, maize oil, maize meal, livestock feed, fish feed, and many more. Moreover, the maize grains can be processed into various products, and the waste of maize is also used to be various products such as the ruminant feed and organic fertilizer. The stem of maize ear, furthermore, can be processed to be the charcoal briquette and the husk of maize can be processed to be a flower, toffee wrapping, and starting product of clothes, tablecloth, and many more unique products.

As revealed by a survey, the maize grains in Gorontalo are commonly used as daily food and sold in other neighbor countries or provinces. Usually, the maize grains have not been processed to be other processed products that can improve the economic values from the products. As an illustration, the ratio of the price of one kilogram of maize grains is Rp. 2.800 and when it has been processed to be the livestock feed, then the price can be five times higher than the initial price. By processing the maize grains to be basic livestock feed, it is potential to improve the economical values of the product.

Economic welfare growth depends on the capacity to innovate, to produce sustainably high value-added products which cannot be easily imitated by others. This should be supported by the progressing target, implementation of appropriate technology, developing better quality products and better production process as the foundation for the regional, even international economy in this modern era.

Agriculture sector plays a significant role in the country's economic development, as Indonesia is an agricultural country. Economic development heavily relied on agricultural and agricultural-based industry or agroindustry. Within the agribusiness system, agroindustry is one of the sub-systems which together with other sub-systems shaped the agribusiness. One of the efforts to develop the product from the agricultural sector is by increasing the added value of its products. This can be done by linking the agriculture with industry/processing industry or services in the economic sector [3][4].

Gorontalo province is currently trying to boost its maize commodity, from cultivation to development of its processed products. The maize production in Gorontalo province increases by 7.58% in 2014 compared to the previous year which was only 719, 787 tons [4]. As the featured product from Gorontalo, the added value of maize into various processed products is needed through the involvement of small and medium scale industries. Processing industries of agricultural production will increase the economic value of the products.

One of the popular agricultural product processing industries is corn-based processing industry. There are quite several small-scale corn-based processing industries, such as corn chips, corn flour, popcorn, corn crackers, and fried corn. This corn processing industry process locally produced corn with limited market coverage. In addition, there are also several large companies which produce the maize flour, corn-based noodle, and corn-based snacks such as corn flakes, tortilla chips, and popcorn [6][7].

The objective of this study is to create a model for the development of corn-based products. The ultimate objectives of this study are: 1) the availability of development and utilization of appropriate technology for corn processing products to be adopted by industry; 2) the increase of added value for each actor within the value chain and community as the economic multiplier effect in Gorontalo province.

LITERATURE REVIEW

Corn Commodity. Corn is the second food source of carbohydrates after rice, essential for food security. Corn also plays an important role in the animal feed industry and the food industry. In Anonim (2012) it was explained that in the past five years, the need for national maize for feed, food and beverage industry materials increased $\pm 10\%$ -15% / year. Based on the order of staple food in the world, corn is the third after wheat and rice (Directorate General of Food Crops, 2012). Corn plants have many uses. Almost all parts of the plant can be utilized, for example, 1) Young leaves: cake wrappers (sticky dodol, corn leaf flowers, fabric fibers); 2) Young stems and leaves: animal feed; 3) Old stems and leaves; green

manure or compost; 4) Dry stems and leaves for firewood. According to Anggraeny et al. (2006) corn waste from stems ranged from 55.4-62.3%, from leaves 22.6-27.4% and from klobot between 11.9-16.4%; 5) Corn stalks; pulp (paper material); 6) Young corn fruits: cakes, vegetables, bakwan; and 7) Old corn kernels; substitute for rice, marning, pastries, animal feed, flour, rice noodles, mixtures of ground coffee, biscuits, corn bread, popcorn, animal feed, raw materials for beer industry, pharmaceutical industry, dextrin, adhesives, textile industry.

Corn Farmers Society. The community of corn farmers is a community that has a basic business and livelihood as a corn farmer. Farmers' lives are synonymous with the lives of people in rural areas so that the corn farming community is also called a farmer or peasant. Corn farmers are human resources that need to be considered because part of agricultural producers in a region. Commodities produced by corn farmers are corn (*Zea mays*) which can grow normally in altitude areas 0-1300 above sea level (Mindalan 2007). This infographic characteristic is characteristic of the Indonesian region, including in Gorontalo Province, especially in Boalemo District, so it can be concluded that corn is a plant that is very suitable in developing productive commodities through various community empowerments, especially corn farming communities.

Corn Chips. Corn is one of the important types of food with complete nutritional content such as rice. According to EIRI (Engineers India Research Institute), the composition of nutrients contained in each corn seed is carbohydrates 8-10%, Proteins 9 - 7%, starch 50 - 60%, Fat 10-15%, water in small amounts, sugar 10% and ash \pm 3%. This chemical composition makes corn as the second food source after rice.

In Indonesia, corn is not only consumed in the form of whole corn seeds which are processed by boiling, burning or added to vegetables but as technology advances, processed corn products are also increasingly diverse. One of them is corn chips.

Corn chips are one of the corn processing industries which are very potential to be developed in rural areas because the manufacturing process is very simple, high yield and products in the form of raw chips have a long shelf life because of the low moisture content and fat content. Therefore, corn chips is one of the processed products that has been widely known by the community, especially in Java, this is evidenced by the many agro-industries there that make corn chips as one of the starting products, among others, as mentioned by Hadi (2010) in his study stated that for the case study in the Pandan Wangi sub-district, Blimbing District, Malang Municipality, the average agro-industry for corn chips earned a profit of Rp 1,990,000 for one production process.

The data from the Development Studies Association (2008) obtained from statistical data in 2006 that 12.2 million people living in Ethiopian urban areas with an average of 5 family members represented around 2.5 million families; only 2.5 percent of these families can meet the need for chips with the potential demand for 62,500 families. With a conservative assumption that of 1 kilogram of corn chips consumed per family per week at a lower price, the annual demand will increase to 3000 tons. Analysis of this demand increased when the public and requests from hotels, restaurants and international cafes were added to the calculation.

METHODS OF RESEARCH

The method used in this study is quantitative descriptive method which encompasses desk study, secondary data analysis, workshop and meeting with related stakeholders, develop the design of the study for each value chain actor, field visit and in-depth interview, focus group discussion, presentation and findings discussion to formulate the master plan and the model for the development of corn commodity.

Activities: 1) identification of potentially applicable corn processing technology for the industry, 2) engineering of the appropriate technology and economic analysis and technical analysis for the utilization of appropriate technology engine, 3) business feasibility analysis, added value analysis and projection of multiplier effect, 4) stakeholder and institutional mapping, SWOT analysis, strategy formulation for the strengthening of value chain strategy

for various corn processing products, 5) formulation of intervention activities to increase production, 6) socialization and evaluation toward the implementation of value chain result/formulation of strategy for intervention activities, increasing the production of various corn-processing products, replication of various corn processing-based industries to other areas in Gorontalo, 7) research roadmap initiated by previous study.

RESULTS AND DISCUSSION

Total Production Cost and the Sales Volume of Corn chips Product for 2015-2017. The data on the production cost of corn chips fluctuated monthly and annually. This production cost fluctuation is largely influenced by a number of produced products. The average fluctuation in each year consecutively is 15% in 2015, 7% in 2016, and 3% in 2017. The production cost steadily increased annually along with the increase in sales volume. The average increase of production cost on the period of 2015-2017 is 79%; whereas the average increase of sales volume of corn chips annually for a similar period is 85%.

The average range of monthly production cost is from Rp. 900.000 to Rp. 1.500.000 from 2015 to 2017. The average sales also increase from Rp. 1.500.000 to Rp. 2.700.000 during a similar period. The comparison of production cost against the sales volume for each month ranges from 67.75% to 77.9%. The sales volume value is higher than the production cost. Thus, the income for this corn chips production stays positive over the years.

Table 1 – Total production cost and the sales volume of corn chips product for 2015-2017

Month	Year					
	2015		2016		2017	
	Production cost	Sales	Production cost	Sales	Production cost	Sales
January	2.914.972	4.403.800	8.462.849	14.817.400	12.800.850	23.695.900
February	3.461.676	5.551.000	8.883.372	15.501.800	11.873.569	20.982.100
March	2.856.185	4.358.000	8.412.812	14.607.400	14.790.457	28.270.800
April	4.168.967	6.698.200	11.353.687	20.486.700	10.749.833	19.042.700
May	2.438.936	3.891.600	8.910.574	18.585.800	15.197.112	30.696.800
June	5.120.296	9.031.600	10.452.950	20.004.500	8.272.321	12.894.500
July	5.833.965	10.607.200	4.203.190	8.078.800	10.134.201	16.996.900
August	3.844.406	6.575.600	8.297.840	13.731.000	14.258.374	26.322.700
September	5.019.945	8.191.000	9.536.060	16.407.300	13.669.801	24.178.900
October	3.633.890	5.809.800	8.785.913	15.244.700	12.461.701	19.778.500
November	3.613.152	5.812.600	8.207.503	13.540.800	13.901.187	25.195.900
December	6.001.766	11.113.400	8.848.623	12.223.500	11.931.132	18.883.500
Total	48.908.157	82.043.800	104.355.373	183.229.700	150.040.538	266.939.200

Source: processed secondary data, 2018.

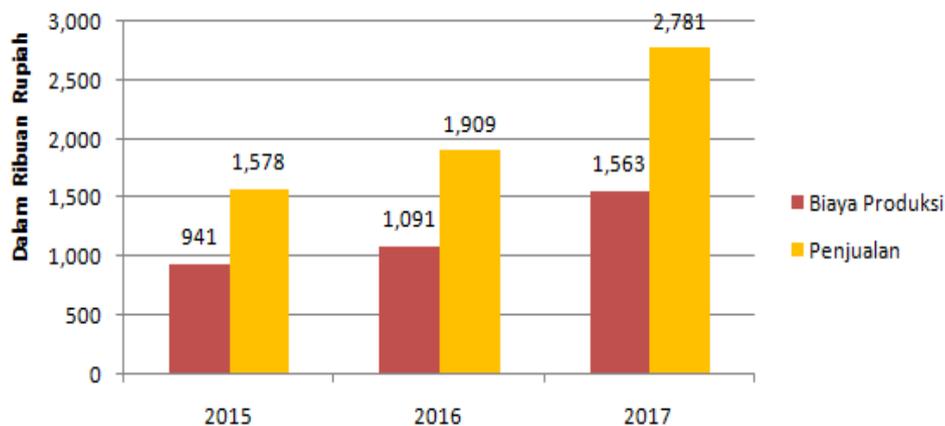


Figure 1 – Comparison graphic of average production cost and sales volume for the period of 2015-2017 (Source: processed secondary data source, 2018)

The income value for corn chips production for the period of 2015-2017. As seen in Table 2, it shows that the monthly income from corn chips production stays positive over the years. The monthly income is influenced by production cost and total sales of the product. The lowest income per month on average is Rp. 1.500.000; and the highest income per month is Rp. 11.000.000. The highest average increase of income per month for the period of 2015-2017 is 27.7%; whereas the lowest average income per month from this product for a similar period is 12.4%.

Table 2 – The income value for corn chips production for the period of 2015-2017

Month	Income/year (in Rupiah)		
	2015	2016	2017
January	1.488.828	6.354.551	10.895.050
February	2.089.324	6.618.428	9.108.531
March	1.501.815	6.194.588	13.480.343
April	2.529.233	9.133.013	8.292.867
May	1.452.664	9.675.226	15.499.688
June	3.911.304	9.551.550	4.622.179
July	4.773.235	3.875.610	6.862.699
August	2.731.194	5.433.160	12.064.326
September	3.171.055	6.871.240	10.509.099
October	2.175.910	6.458.787	7.316.799
November	2.199.448	5.333.297	11.294.713
December	5.111.634	3.374.877	6.952.368
Total	33.135.600	78.874.300	116.898.650

Source: processed secondary data, 2018.

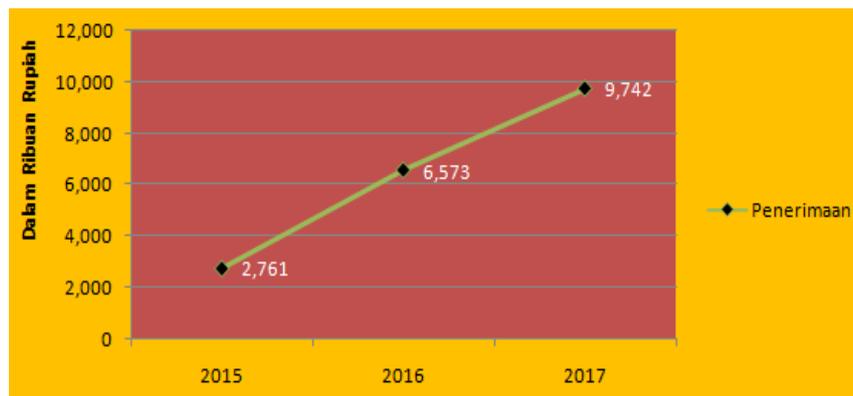


Figure 2 – The trend of the average increase in income in the period of 2015-2017 (Source: processed secondary data, 2018)

For each month, the average income is about Rp. 2.700.000 to Rp. 9.700.000 from 2015 to 2017. In 2016, the average income increases by 138% compared to the previous year; meanwhile, in 2017, the increase is 48% compared to 2016. The average income increases by 93% during the period of 2015-2017. This steady positive increase of income indicates that the corn chips product is favored by the consumers and can increase the welfare of the small-scale industry that works in producing these corn chips.

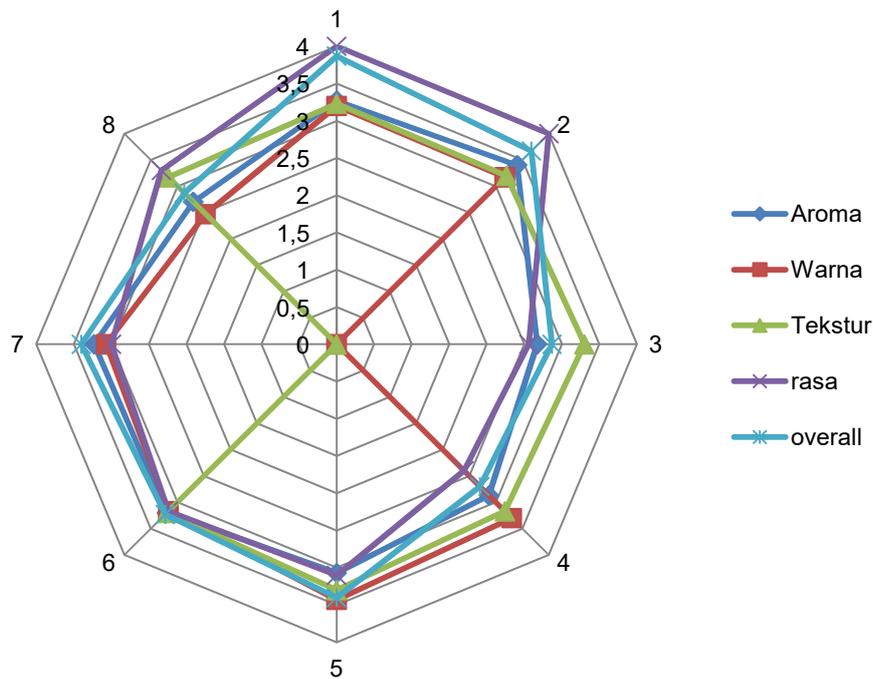
As seen in Figure 3 below, the total production cost, total sales volume, and income from these corn chips during the period of 2015-2017, the total production cost annually increases with linear pattern toward the sales and income. This brings the positive influence for the improvement of welfare level through improvement of performance of the small-scale industries which produce these corn chips.

The level of sales of these small-scale industries which produce these corn chips is very profitable and promising as the economic locomotive for the products in Gorontalo. The value of sales is above all the cost components, which in turn yields positive returns.



Figure 3 – Graphic of total value development for the period of 2015-2017 (Source: processed secondary data, 2018)

Organoleptic Analysis. The organoleptic analysis is one of the analyses used to determine whether a product is suitable or not, especially food products are preferred or not liked. The results of this assessment will be used as a basis for the chips industry to be developed or not because the organoleptic aspect has been accepted by consumers. The results of the organoleptic analysis of corn chips were carried out with 5 testing scales, namely: 5 = very like, 4 = like, 3 = Rather like, 2 = less like it, 1 = Don't like the picture below



Note: 1 = Balado Taste, 2 = Spicy Sweet Balado Flavored Chips, 3 = Sweet Cheese Flavor, 4 = Salted Cheese Flavor, 5 = Empty Flavored Corn Flavor, 6 = Roasted Chicken Flavored Chips, 7 = Roast Cow Flavor, 8 = Taste Flavored Chips

Figure 4 – Spider diagram for organoleptic corn chips with 8 flavor variants

Organoleptic testing showed that corn chips for flavor parameters (purple) with Balado flavored corn chips and sweet spicy balado occupied the outermost point on scale 4 on the spider diagram above. Likewise, for the overall organoleptic parameters, it shows values in the scale range above 3 for the two variants. This value can be interpreted that the average consumer "likes" the aroma, taste, texture, color and taste of corn chips with this flavor

variant. Unlike the chips with sweet cheese flavors, salted cheese and balado flavor, the results of the average rating for the overall parameters are in the range of 2 and above. This value can be interpreted that consumers give a "rather like" rating, as well as the color, taste, aroma, and texture of corn chips for the three formulas. When observed, the panelist's assessment of all corn chips is in the scale of 3 (rather like) on all test parameters except for the salted cheese flavor, sweet cheese flavor and barbeque flavor with overall parameters. Nevertheless, the results of testing of corn chips with different flavor variants organoleptically did not show a significant difference for all test parameters.

Analysis of Production Cost Correlation with the Sales of Corn Chips Product. The correlational analysis is carried out to investigate whether there is a correlation between the production test and the level of sales of these corn chips product. This test is administered using the Pearson *product moment* correlation test, where different annual financial data are used. This test is to ensure the significant correlation between production cost and sales of the corn chips product. The result of this test is presented in Table 3 below.

Table 3 – Average value and Deviation Standard

Variables	Total	Average	Std. deviation
Production cost	36	8425112,97	3856708,430
Sales	36	7,1399	0,32043

Source: processed secondary data, 2018.

The average value of production cost for corn chips product is compared against the standard deviation value. As seen in Table 3 above, the average value 8425112,97; whereas the standard deviation value is 3856708,430. This average value is higher than the standard deviation value. Hence, it can be said that the data is appropriate to be analyzed. Similarly, the average value of sales variable is 7,1399 with the standard deviation value of 0,32043. The average value is larger than the deviation standard value, thus, worthy of analysis.

Table 4 – Summary of the Correlational test result

	r-count ($t_{table} = \pm 1,975$)	Sig. (p-value)	notes
Production cost* sales	0,775	0,000	Significant

Source: processed secondary data, 2018.

The result of the correlation test of the production cost and the sales yields the r-count of 0,775 with the significance level of 0,000. The r-count 0,775 describes that there is a strong and positive correlation between the production cost and sales of corn chips product. This increase in corn chips production is also followed by the positive increase in sales. This is statistically proven that there is a significant correlation between production cost and sales, where the *p-value* 0,000 is smaller than alpha 0,05. Therefore, it also indicates that the production cost of corn chips also influences the increase of sales of the product and impacts on the increase in income. This result indicates that production cost and the sales of the corn chips are promising for the community to utilize this corn commodity and turn it into corn chips. The corn commodity as the leading commodity in Gorontalo can be utilized into corn chips, which have been done by these small-scale industries to increase their economic welfare.

Normality data test of the production cost and sales variables of corn chips. Normality test is to test whether data or the investigated variables or the developed model has normal or abnormal distribution. In linear correlation, the data distribution is expected to have to have a normal distribution. The normality test is conducted using the *Kolmogorov-Smirnov* test, where the test is carried out and proven with the *asymptotic significance*. *Asymptotic significance* value which larger than 0.05, shows that the variables or observed data have a normal distribution, and vice versa. The *Kolmogorov-Smirnov* test result is presented in Table 5 below.

Table 5 – The result of data normality test

Variables	Asymptotic Sig.	Alpha (α)	Notes
Production cost	0.200	0.05	Normal
Sales	0.200		Normal

Source: Processed data, 2018.

Table 5 above shows that the *asymptotic significance* value of production cost and marketing is more than alpha 0.05 (> 5%). Therefore, it can be said that the variables used in the correlation model meet the normal assumption and appropriate to be used.

Linearity Test of Production Test Variable and Sales price of Corn Chips Product. The linearity test is conducted to see whether there is a linear correlation pattern between the variable or insignificant. The test is carried out using the *Test for Linearity* with the significance level of 0.05. Two variables can be said to have a linear correlation when the significance level is less than 0.05. The linearity test of the variable is shown in Table 6 below.

Table 6 – Linearity test of the variable

	Linearity	Alpha (α)	notes
Production cost * sales price	0.000 < 0.05		Linier

Source: processed data, 2018.

From Table 6 above on the linearity test result above, it is known that the significance value on the linearity is 0.000. The significance value of the test for linearity is smaller than the alpha value (0.000 < 0.05). Therefore, it can be concluded that there is a linearity correlation between the production cost and sales price.

Table 7 – Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Production cost	.116	36	.200	.944	36	.066
Log_ Sales price	.112	36	.200*	.906	36	.005

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction.

Table 8 – ANOVA Table

			Sum of Squares	Df
Production cost	*Between Groups	(Combined)	32.563	202
Log_ sales price		Linearity	29.638	1
		Deviation from Linearity	2.925	201
	Within Groups		.132	35
	Total		32.695	237

Table 9 – ANOVA Table

			Mean Square	F
Production cost	*Between Groups	(Combined)	.161	42.624
Log_ sales price		Linearity	29.638	7836.628
		Deviation from Linearity	.015	3.847
	Within Groups		.004	
	Total			

Table 10 – ANOVA Table

			Sig.
Production cost	*Between Groups	(Combined)	.000
Log_ sales price		Linearity	.000
		Deviation from Linearity	.000
	Within Groups		
	Total		

CONCLUSION

The conclusion of this study is 1) benefit of chips very depending on the type of packaging; 2) the advantages of chips are increasingly increasing; 3) based on the results of the organoleptic test seen from the aroma, taste, texture and the most preferred color is Balado.

ACKNOWLEDGMENTS

Researchers would like to thank the parties who have funded this research:

- Directorate General of Strengthening Research and Development of the Ministry of Research and Technology in Jakarta, contract PUSN 2018 number: 249/UN47.D/PL/2018 at 19th February 2018;
- Pohuwato Regency Industry and Trade Service, Recommendation number: 518/DPPK&UKM-PHWT/256/2017;
- Gorontalo Regency Industry and Trade Service, Recommendation number: 800/DPP/VI/215/2017.

REFERENCES

1. Suyono, HaryonodanHaryanto, R. 2007. Pedoman Pembentukandan Pengembangan Pemberdayaan Keluarga – POSDAYA.BalaiPustaka.
2. Hasan, M. Ani. 2011. Aktualisasi Program Pemberdayaan Masyarakat Pedesaan Guna Peningkatan Pertumbuhan Ekonomi Daerah Dalam Rangka Ketahanan Nasional. Laporan Penelitian.
3. Muhammad, Fadel. 2012. Indonesia EffortsTowards the Leading of Maize Agribusiness and Agroindustry in the World by 2025.Paparandisampaikanpada International Maize Conference. Gorontalo 22-24 November 2012.
4. Ahmad, Lisna. 2011 dan 2012. Analisisifat Fisiokimiadan Respon Konsumenterhadap Tepung Pudding InstanHasil Formula Siteping Jagungdan Karagenan. Laporan Penelitian. Gorontalo: Lemlit UNG.
5. Kajian Kebijakan Agribisnis Komodistas Unggulan Daerah di Provinsi Gorontalo, Balai Pengkajian Teknologi Pertanian (BPTP) Gorontalo, 2012
6. Halid, Amir. 2010. Dampak Agropolitan Jagung Terhadap Penurunan Angka Kemiskinan di Kabupaten Gorontalo;.LaporanPenelitian
7. Hasan, A.M., R. Ilato, A. Haliddan L. Ahmad. 2016. Farmer Empowerment through Prcessing of Maize and Each Waste in To Productive Economic Comodity in Boalemo Regency of Gorontalo. International Journal of Bussiness, Accounting and Management.Vol.1 Issue 3. ISSN 2527-3531: 53-64
8. Halid, Amir, 2014. Pengembangan Profitabilitas Jagung, Idaes Publishing, Gorontalo.
9. Ilato, Rosmandan Bahua, M. Ikbai. 2013. Analisis Rantai Nilai Komoditas Jagungserta Strategi Peningkatan Pendapatan Petani Jagung di PropinsiGorontalo. Penelitian MP3EI 2011-2025). Gorontalo: Lemlit UNG.

DOI <https://doi.org/10.18551/rjoas.2018-11.40>

**ANALYSIS OF THE AMOUNT OF PRODUCTION AND INCOME OF THE FARMERS
OF PINEAPPLE INTERCROPPING PLANTS OF TANJUNG MEDANG VILLAGE,
MUARA ENIM DISTRICT**

Mulyana Eka, Researcher
University of Sriwijaya, Indonesia
E-mail: eka.agri@gmail.com

ABSTRACT

This study aimed to analyze the amount of production and farming income of pineapple intercropping plants of Tanjung Medang Village, Muara Enim District. It was conducted in Tanjung Medang Village, Muara Enim District. The data were collected in the location in May 2018. The survey method was used. The sampling technique was a simple random sampling by taking 34 respondents out of 148 farmers of pineapple intercropping plants. The collected data were primary and secondary data. The results of the study showed that the average amount of production of pineapple intercrops was 24,547 pieces/lg/mt. The average income of the farmers obtained from the pineapple intercropping was IDR 42,552,070, -/lg/mt.

KEY WORDS

Pineapple intercropping, production, income, intercrops.

Plantations are one of the important agricultural sub-sectors because they have a significant contribution to the Indonesian economy. One of the most important plantation crops in Indonesia is rubber since it supports many of Indonesia's economy. The rubber plantation business is mostly cultivated by the people up to 85% of the total plantations cultivated by the state and the private sectors. According to the data of the Directorate General of Plantations (2016), most of Indonesia's rubber plantation areas are located in Sumatra (70%), Kalimantan (24%), and Java (4%).

South Sumatra Province has the largest rubber plantation in Indonesia and absorbs a much larger workforce than any other commodity does. The total area of rubber cultivation is 841,252 hectares and the number of rubber farmers is 464,541 householders. The total area consists of Unprocessed Crops (UC) covering 114,353 Ha, Produced Crops (PC) covering 710,174 Ha, and Old Crops (OC) covering 16,724 Ha. During the UC period, South Sumatra itself has a quite extensive area of rubber plantations to be optimized for the rubber farmers' additional income during the waiting period. One of the many ways to do it is intercropping. Intercropping can be an alternative income during the waiting period for farmers who do not have other income apart from the rubber. In addition to providing additional income for farmers during the waiting period for rubber plants to produce, intercrops can also provide direct benefits to rubber plants. Rosyid (2007) conducted a study that intercrops could have a positive effect on rubber growth in the rejuvenation area of Sarolangun District of Jambi. Using a monoculture cropping pattern caused seasonal unemployment, where the farmers did not have work between the UC and PC periods. One of the intercropping plants grown by the farmers was pineapple.

Pineapple (*Ananas comosus* L.) is one of the leading fruit commodities in Indonesia. It refers to the amount of pineapple production which is the third position after that of bananas and mangoes. Besides being consumed fresh, pineapples can also be processed into various products such as juice, jam, syrup and chips. They contain elements of water, sugar, organic acids, minerals, nitrogen, protein, bromelin and all vitamins in small amounts, except vitamin D. Pineapple peel can be processed into syrup or extracted liquid for animal feed, while the fiber in the leaves can be processed into paper and textiles (Hadiati and Indriyani, 2008)..

Kelekar Subdistrict is one of the subdistricts of Muara Enim District where rubber farmers cultivate intercrops among unprocessed rubber plants, especially in Tanjung

Medang Village. The area of pineapple plantations in Kelekar Subdistrict is 80 hectares with a production of 3,443.50 tons. This causes the land area used for pineapple farming to be less extensive than that of rubber plantation. According to the local villagers, pineapple intercropping of Tanjung Medang Village has existed since 1971. At the beginning of the pineapple intercropping, there were very few farmers cultivating it because the cost and lack of knowledge of farmers on intercropping pineapple cultivation. Based on the description above, the author was interested in studying how much production and income was earned from the intercropping pineapple farming in Tanjung Medang Village, Muara Enim District.

METHODS OF RESEARCH

Place and Time of the Study. This research was conducted in the village of Tanjung Medang, Kelekar Subdistrict of Muara Enim District. The location was selected on purposive based on the consideration that Tanjung Medang Village was one of the villages in Muara Enim District planting intercropping pineapple among unprocessed rubber plants. The study was carried out from May 2018 to completion.

The study used a survey method and simple random sampling, considering that each member of the population had the same chance to be selected sample and they were homogeneous or had an similar character (Suharso, 2012). The number of sample was determined by using Slovin formulas (Sriati, 2013) as follows:

$$n = \frac{N}{1+N.e^2} = \frac{148}{1+148(0,15)^2} = 34.18014 \text{ (34 people)}$$

The collected data were primary and secondary data. The primary data were obtained through survey results and direct interviews with farmer samples using questionnaires. The secondary data were obtained from the literature study such as books, articles, and previous research results related to this study. The data were then analyzed mathematically, presented in tabulation, and explained descriptively. The data were analysed using Microsoft Excel 2013 computer application.

The findings on the amount of the pineapple intercropping production are presented in tabulation and explained descriptively based on the data obtained from the field. To calculate the amount of farmers' income, the following formula is used (Sjarkowi and Sufri, 2004):

$$Pd_u = Pn_u - BT_u$$

Where: Pd_u = Farmer's income in the cultivation of pineapple (IDR/lg/mt); Pn_u = Revenue (IDR/lg/mt); BT_u = The total cost of pineapple intercropping (IDR/lg/mt).

RESULTS AND DISCUSSION

The production of pineapple intercropping was carried out with a variety of farming activities such as seed selection, land preparation, planting, plant maintenance, fertilization, pest control and plant diseases, carbide use, and harvesting. The output produced from pineapple intercrops was fresh pineapple. The production calculated was the yield of one planting season, meaning that the yield occurred three times in one planting season in a period of approximately two years. The average production amount obtained by the sample farmers in one planting season was 24,547 pieces / lg.

Pineapple crop production costs were calculated from the costs incurred by farmers during one planting season. They consisted of fixed costs and variable costs. The incurred fixed costs were hand sprayers, *tengkuit* (a grass cutting tool) and machetes. Meanwhile, the variable costs incurred included the use of pineapple seeds, fertilizer, pesticides, land rent, carbide and labor during land preparation, planting, and carbide use. This production cost was calculated based on the price multiplied by each number of factors of production. The price was determined by the owner of the production factor.

Table 1 – Average Total Cost of Production of Pineapple Crops in Tanjung Medang Village

No	Item	Total (IDR/lg/mt)
1	Fixed Cost	298,239
2	Variable Cost	5,021,456
	Grand Total	5,319,695

The above data shows that the total cost of production of pineapple crop farming is Rp 5,120,869, - /lg/mt. The costs incurred in this farming were the variable costs of Rp 5,021,456,- /lg/mt while the fixed costs are Rp 99,413, - /lg/mt. The variable costs were spent more because pineapple intercrops among unprocessed rubber required greater use of fertilizers, pesticides, carbides, land rent and labor costs.

The details of the average fixed costs incurred by pineapple farmers is presented in Table 2 as follows:

Table 2 – Average Fixed Cost of Variable of Pineapple Intercropping Farming in Tanjung Medang Village

No	Fixed Cost	Total (IDR/Lg/MT)
1	Hand Sprayer	133,472
2	<i>Tengkuit</i>	63,208
3	Machete	101,560
	Grand Total	298,239

Table 2 shows that the average fixed costs of pineapple intercropping farming was IDR 298,239, - / lg / mt. The average cost of handsprayer was IDR 133,472, - /l /mt. The sample farmers usually used manual handsprayers. The average cost of *tengkuit* was IDR 63,208,- /lg/mt. The average cost of machetes spent by the farmers was IDR 101,560,- /lg/mt. While the average variable costs incurred by pineapple intercropping crop farmers is given in the table below.

Table 3 – Average Fixed Cost of Variable of Pineapple Intercropping Farming in Tanjung Medang Village

No	Variable Cost	Total (IDR/lg/mt)
1	Seed	919,118
2	Fertilizers	2,200,618
3.	Pesticides	184,765
4	Land Rentals	867,647
5	Carbide	110,485
6	Labor	738,824
	Grand Total	5,021,456

Table 3 above shows that the total cost of variable of pineapple intercropping was Rp. 5,021,456, - /lg/mt. The variable costs were derived from the ones for nurseries, fertilizers (organic fertilizers, urea fertilizers, NPK fertilizers, and phonska fertilizers), pesticides, land rent, carbide, and labor. A lot of variable costs were spent on fertilizer as much as IDR 2,200,618, - /kg/mt and seeds as much as IDR 919,118,- /lg/mt. It resulted from the price of chemical fertilizers such as urea, NPK, and phonska which was more expensive than any other variable costs. The average price of urea fertilizer was IDR 124,536,- per sack of 50 kg, the price depended on the type of urea; the white urea was IDR 250,000,- /sack, the red urea was IDR 120,000,- /sack. The NPK fertilizer cost ranged from IDR 250,000,- to IDR 500,000,- /sack. A sack of NPK fertilizer weighed 50 kg. Meanwhile, the average Phonska fertilizer cost about IDR 124,536 /sack of 50 kg.

Revenue of Pineapple Intercropping Farming. The revenue of pineapple intercropping farming was in accordance with the production for one planting season which was three times, as well as based on the prices set by the middlemen as the buyers of the pineapples. Table 4 shows the average income obtained by the farmers from the pineapple intercropping

farming for three harvests for IDR 47,476,484,- /kg/mt with an average price of IDR 1,945.100.- per piece.

Table 4 – Average Revenue of Pineapple Intercropping Farming in Tanjung Medang Village

No	Items	Total
1	Production Amount (piece/lg/mt)	24,547
	Harvest 1	8,876
	Harvest 2	8,471
	Harvest 3	7,200
2	Price (IDR/piece/lg/mt)	1,945.100
	Harvest 1	2,701.47
	Harvest 2	1,992.650
	Harvest 3	1,141.180
	Revenue (IDR/lg/mt)	47,746.484

Income of Pineapple Intercropping Farming. Based on the data above, the average yield of pineapple intercropping production amounted to 24,547 /piece /lg/mt with the average price of a pineapple was IDR 1,950.204,- /lg/mt. The total production cost was Rp 5,319,695,- /kg/mt and the farmer's income for three harvests was IDR 47,871,765,- /kg/mt so that the farmers' income was Rp. 42,552,070,- /lg/mt.

Table 5 – Average Revenue of Pineapple Intercropping Farming in Tanjung Medang Village

No	Item	Total
1	Average amount of pineapple intercropping production (piece/lg/mt)	24.547
2	Price (IDR/piece/lg/mt)	1,945.100
2	Revenue (IDR/lg/mt)	47,746,484
3	Production Total Cost (IDR/lg/mt)	5,319,695
	Revenue (IDR/lg/mt)	42,552,070

CONCLUSION

The average amount of production obtained by the sample farmers in pineapple intercropping farming was IDR 24.547 /piece/kg/mt, and the average income of the pineapple intercropping farmers was IDR 42,552,070, - /lg/mt.

REFERENCES

1. Badan Pusat Statistik Kecamatan Inderalaya Selatan.2017. Kecamatan Inderalaya Selatan dalam Angka 2017 [online].http://sumsel.bps.go.id/beckend/pdf_publicasi/Provinsi-Sumatera-Selatan-dalam-Angka-2017.pdf
2. Chayanov, A.V. 1966. The Theory of Peasant Economy (Edited by Daniel Thorner, Basile Kerblay and R.E.F. Smith). Illinois: Homewood
3. Drucker, Peter Ferdinand. 1909. Inovation and entrepreneurship. Sidney Feinberg. New York. ISBN 0-06-091360-6.
4. Duth, Kenneth D. 1979. Principles of management in agribusiness. Reston Publishing Company, Inc. Aprentice-Hall Company. Reston, Virginia. ISBN 0-8359-5595-8.
5. Husin, L dan Lifianthi. 2008. Ekonomi Produksi Pertanian. Fakultas Pertanian Universitas Sriwijaya. Indralaya
6. Putra.I.D.P and W.S. Untari. 2010. Analisis Usahatani Blewa di Desa Demang Kecamatan Besuki [online]. <https://unars.ac.id/jurnal/>
7. Tiwari, Ak. 2013. Economic growth, energy consumption, financial development, international trade and CO2 emissions in Indonesia. Renewable and Sustainable Energy Reviews Volume 25, September 2013, Pages 109-121
8. Wildayana, E. 2012. The Analyses Structure and Household Income Distribution of Palm Oil (*Elaeisguineensis Jacq*) Farmers NES-TRANS in South Sumatra, Indonesia. The UMT 11th International Annual Symposium on Sustainability Science and Management, p. 1480-1487, e-ISBN 978-967-5366-93-2.

DOI <https://doi.org/10.18551/rjoas.2018-11.41>

EFFECT OF POTASSIUM APPLICATION ON GROWTH AND YIELD OF SWEET POTATO VARIETIES (IPOMOEA BATATAS L.)

Garfansa Marchel Putra*, Sudiarmo, Suminarti Nur Edy

Faculty of Agriculture, University of Brawijaya, Malang, Indonesia

*E-mail: marchel.opg@gmail.com

ABSTRACT

In Indonesia, which is a tropical country, sweet potatoes can grow on almost all islands in Indonesia. Sweet potatoes have various varieties. Sweet potato plants are known to be very responsive to potassium. It is hoped that through this research information will be obtained about the proportion of appropriate potassium fertilizer in each variety tested so that the productivity of sweet potato plants can be increased. A field experiment conducted using a Split Plot Design was repeated three times. The main plot was Varieties (V), i.e. Gunung Kawi and Cilembu Varieties. The sub plot was dose of KCl (K) fertilizer consisting of five doses, i.e. K₀ = 0 kg ha⁻¹, K₁ = 78 kg ha⁻¹, K₂ = 137 kg ha⁻¹, K₃ = 196 kg ha⁻¹ and K₄ = 255 kg ha⁻¹. The results showed that there was a positive interaction between the productivity of sweet potatoes with KCl doses in the Gunung Kawi and Cilembu varieties. The treatment of KCl 196 kg ha⁻¹ gave favorable results for the varieties of Gunung Kawi and Cilembu at 28.7 t ha⁻¹ and 16.3 t ha⁻¹.

KEY WORDS

Sweet potato, environment, fertilizer, variety, productivity, potassium.

Sweet potato plant is easily cultivated by farmers. In Indonesia, sweet potatoes can be grown on almost all islands in Indonesia (Yaningsih et al, 2013). Besides being used as an alternative food, sweet potatoes can also be processed into various forms of products such as flour and cosmetic ingredients, while the waste can be used for animal feed. This causes sweet potato plant to become one of the important commodities in Indonesia (Jusuf and Erliana, 2014). However sweet potato productivity at the national level has decreased by 89 tons from 2013-2015 and is predicted to continue to decline every year. Onunka et al. (2012) confirmed that yields of sweet potato is presently restricted by many factors among which are low soil fertility, varietal selection, planting date, weather condition, soil type, weed, insect and disease pressure and crop management practices among others. Various ways have been conducted to increase the yield of sweet potatoes such as improving soil fertility and plant maintenance methods, especially in the application of fertilizer and using suitable variety.

Potassium fertilizer is known to have a role in improving the quality and quantity of sweet potato plants (Pushpalatha et al, 2017) because of its function that affects tuber formation (Dkhil et al, 2011). Zelelew et al, (2016) reported that K fertilizer with 300 kg ha⁻¹ produced the best yield of sweet potato from *ajiba* variety. Another research found that sweet potato responded to K application up to the 160 kg ha⁻¹ rate based on improved growth, tuber yield and tuber appearance (Uwah et al, 2013).

The rapid development of sweet potato plants is not only shown in the processed products produced but the creation of various sweet potato varieties that can excel in terms of appearance and content. Selection and selection of varieties needs to be done to get the potential desired by farmers (Trustinah and Iswanto, 2014). Cilembu and Gunung Kawi varieties are local varieties that are often cultivated in Indonesia. Cilembu variety is popular among the community because of its high sweetness and nutrition. The average sugar content of Cilembu tubers ranges from 5.39% - 6.97% in the raw state, while the sugar content in regular sweet potato tubers is only about 2.38% causing Cilembu tubers to have high sweetness. On the other hand there is a variety of Gunung Kawi where the sweetness level almost resembles the tubers produced by Cilembu variety. Gunung Kawi varieties have

high carbohydrate and anthocyanin pigments. In addition, Gunung Kawi varieties have more tuber yield than other sweet potato varieties, causing Gunung Kawi variety to be favored by farmers (Suhardi et al., 2016)

In order to obtain good yield, studies must be conducted on improved varieties of crops which normally do require higher quantities of fertilizers with corresponding higher yield compared to the local varieties. The objective of this study was to select a suitable sweet potato variety between the two and determine the optimum dose of K fertilizer for its production.

MATERIALS AND METHODS OF RESEARCH

This research was conducted from September 2017 to January 2018 in Dadaprejo Village, Semanding Subdistrict, Malang, East Java in the middle plains with an altitude of 520 meters above sea level and temperatures between 27 ° C - 29 ° C. Percentage physic soil experiment before planting: 20% sandy, 48% dusty, 32% loamy and available K: 0.14 ppm. Research design, treatment and data collection factorial experiment was arranged in a split plot design and repeated three times. The main plot was sweet potato variety (V), while the sub plot was the dose of KCl. The main plot consisted of two sweet potato varieties, V1 = Gunung Kawi Variety and V2 = Cilembu Variety. The sub plot was dose of KCl (K) fertilizers which consisted of five types, K0 = 0 kg ha⁻¹ (control), K1 = 78 kg ha⁻¹, K2 = 137 kg ha⁻¹, K3 = 196 kg ha⁻¹ and K4 = 255 kg ha⁻¹. The sweet potato were planted on farming area of 570 m² by spacing 75 x 25 cm. There were 30 treatment plot comprised of beds of 3 x 3.2 m in size. The first stage of K fertilizer were applied at 7 days before planting, the second stage were repeated once in 14 days after planting. experiment replicated ten plots and repeated three times, so there were 30 experimental plot units. The observation was done on leaf area (cm² plant⁻¹) and total dry weight (g plant⁻¹) which observed at 20, 40, 60 and 80 days after planting. The destructive observation include fresh tuber (ton ha⁻¹) at the age of the plant 120 days after planting. estimation of potassium absorption. Leaf area was measured using a Leaf Area Meter-211.

Analysis of soil chemical properties carried out at the Chemical Laboratory of the Soil Department, Faculty of Agriculture, Brawijaya University, Malang included physic texture of soil, K and Mg (HCl 25% method) at 3 stage they are before planting, mid cropping, and after harvest. The Estimates available of K and Mg were calculated used the following formula:

$$\text{Estimates available nutrient (\%)} = \frac{\text{Available Nutrient in mid cropping} - \text{available Nutrient after harvest}}{\text{Available Nutrient in mid cropping}} \times 100\%$$

Data analysis used analysis of variance with a 5% F test to indicate whether the data had a significant interaction or there were no significant differences in treatment. If the result of F count > F table means that the data is significantly different and continued with HSD test at level 5% (Gomez and Gomez, 1995). Besides, regresion tests were also conducted to determine the relationship between treatments.

RESULTS AND DISCUSSION

Leaf Area. The development of leaf area under all treatment combinations is presented in Table 2. The value of leaf index indices of varieties and dose of KCl showed significant differences (P <0.05) at the age of 40, 60 to 80 DAP. At 80 DAP, plants with control treatment showed a significantly lower leaf area compared with 137 Kg ha⁻¹, 196 Kg ha⁻¹, and 255 Kg ha⁻¹ KCl. Similar things were also seen in the Cilembu variety with KCl 196 Kg ha⁻¹, the leaf area produced was significantly more than the control but not significantly different from other treatments. The lack of nutrients, especially potassium which is available to plants, results in inhibition of the physiological activities of plants. Potassium element can trigger plant growth because of its function in elongation and widening of vegetative organs. This statement is in accordance with Dkhil (2011), which shows potassium fertilizer gives

significant results on the development of vegetative organs compared to the control treatment due to cell enlargement and elongation. The availability of low K elements also causes the formation of assimilate to be disrupted which will later be used for the formation of plant organs such as leaves (Chuan, 2017).

Table 1 – Estimation K and Mg absorption by plant

Treatments	Nutrient content (%)	
	Mg	K
V1K0 (Gunung Kawi: 0 Kg ha ⁻¹ KCl)	11 %	25 %
V1K1 (Gunung Kawi: 78 Kg ha ⁻¹ KCl)	12 %	24 %
V1K2 (Gunung Kawi: 137 Kg ha ⁻¹ KCl)	11 %	41 %
V1K3 (Gunung Kawi: 196 Kg ha ⁻¹ KCl)	10 %	50 %
V1K4 (Gunung Kawi: 255 Kg ha ⁻¹ KCl)	9 %	54 %
V2K0 (Cilembu: 0 Kg ha ⁻¹ KCl)	15 %	26 %
V2K1 (Cilembu: 78 Kg ha ⁻¹ KCl)	14 %	35 %
V2K2 (Cilembu: 137 Kg ha ⁻¹ KCl)	14 %	51 %
V2K3 (Cilembu: 196 Kg ha ⁻¹ KCl)	8 %	60 %
V2K4 (Cilembu: 255 Kg ha ⁻¹ KCl)	7 %	57 %

Table 2 – Interaction between Varieties and KCl to Leaf Area (cm² plant⁻¹) of Plants at 40, 60 and 80 DAP

DAP	Treatments	Dose of KCl (Kg ha ⁻¹)				
		Control	78 Kg ha ⁻¹	137 Kg ha ⁻¹	196 Kg ha ⁻¹	255 Kg ha ⁻¹
40	Gunung Kawi	1833.3 a B	2233.7 ab B	2486.7 bc B	2506.7 bc B	2905.7 c B
	Cilembu	1465.2 a A	1504.7 a A	1548.3 a A	1900.2 ab A	2119.7 b A
	HSD 5%	565				
60	Gunung Kawi	2801.3 a A	2843.7 a A	3276.3 a A	5960.7 b B	6036.7 b A
	Cilembu	1929.7 a A	2635.3 ab A	3668.4 ab A	3252.3 ab A	4916.3 b A
	HSD 5%	2661				
80	Gunung Kawi	3269.7 a A	5374.7 ab A	6174.2 b A	7486.3 b B	6331.2 b B
	Cilembu	2158.3 a A	2300.3 ab A	3970.7 ab A	4804.7 b A	3625.3 ab A
	HSD 5%	2567.4				

Note: Numbers with the same lowercase letters in the same row and the same upper case in the same column show not significant difference in HSD test ($P < 0.05$), DAP = days after planting.

When reviewed by the effect of KCl on both varieties, giving 196 Kg ha⁻¹ and 255 Kg ha⁻¹ wider leaf area was obtained in Gunung Kawi variety. This is quite reasonable when viewed based on the leaf type owned by Gunung Kawi variety is round and oval with wider leaf area. Whereas the Cilembu variety has a leaf type with a lower leaf area which causes Gunung Kawi to have a wider leaf area. This can be seen from the observation of the leaf area produced where the Gunung Kawi variety produces wider leaf area than Cilembu (Table 2). The statement explains that the large number of leaves formed is not always followed by the total width of the plant leaves. Leaf size per individual plant for each variety is different. The Cilembu variety has a relatively larger number of leaves with the breed type whereas for Gunung Kawi the is oval with a wider leaf area. Each variety planted has different leaf characteristics. The difference in morphology will be obvious if planted in the same environment (Rahayu et al, 2010). In sweet potatoes themselves for different varieties will show different results in leaf area and will certainly affect the results of the analysis of the fresh weight of the plant (Yusnita, 2010). From these genetic differences, optimum nutrient requirements and environmental conditions will be different for each variety later. To see how far the relationship between KCl fertilizer (X) and leaf area (Y) of both sweet potato varieties

was correlated, regression analysis was carried out (Figure 1a). Regression analysis for the Gunung Kawi variety shows $Y = -0.0874X^2 + 35.802X + 3159.7$, $R^2 = 0.93$ whereas for Cilembu the regression equation is $Y = -0.0477X^2 + 20.512X + 1862.5$, $R^2 = 0.72$. Based on these equations it can be seen that the Gunung Kawi variety in KCl fertilization 210 Kg ha⁻¹ will obtain a leaf area of 6823 cm². Whereas for Cilembu variety on KCl fertilization of 216 Kg ha⁻¹, a leaf area of 4067 cm² will be obtained and if it exceeds the dose, the leaf area will be reduced. The determinant coefficients on the Cilembu and Gunung Kawi varieties were 0.72 and 0.93, which means about 72% and 93% of the leaf area produced in the Cilembu and Gunung Kawi varieties were influenced by KCl fertilizer.

Total Dry Weight. The amount of assimilation produced by plants can be described by measuring the total dry weight of the plant. Table 3 shows that at the age of 80 days in the Gunung Kawi variety, when the addition of KCl fertilizer was carried out from 78 Kg ha⁻¹ to 255 Kg ha⁻¹, the dry weight produced was significantly higher than the control treatment, while the Cilembu variety for control and 78 Kg ha⁻¹ dry weight produced was significantly lower than 137 Kg ha⁻¹ and 196 Kg ha⁻¹. The low dry weight produced shows the low nutrients available to plants that cause the formation of physiological organs of the plant to be inhibited. Assimilate formation is strongly influenced by vegetative organs of plants such as leaves that are used as the place for the photosynthesis process. Plant dry weight is a picture of the result of translocation of photosynthate to all parts of the plant as a process of photosynthetic rate in leaves in intercepting solar radiation (Madhu and Jerry, 2016). This is enough to explain that the low KCl fertilizer can affect the formation process of the assimilate itself. It is known that assimilation is energy that will be used for 3 activities in plants, namely: (1) some energy will be used as growth energy, (2) some will be stored as food reserves, and (3) some of the energy will be stored as sinks which is a form of economic yield of plants. The extent to which the relationship between KCl fertilizer (X) and the total dry weight of the plant (Y) can be seen from the regression test (Figure 1b). Based on these equations it can be seen that the Gunung Kawi variety when fertilizing KCl 176 Kg ha⁻¹ was carried out to obtain a plant dry weight of 127 g. Whereas for Cilembu varieties on KCl fertilization of 168 Kg ha⁻¹, the plant's dry weight will be obtained at 109 g and if it exceeds this dose it will reduce the dry weight of the plants produced. The determinant coefficients on the Cilembu and Gunung Kawi varieties were 0.82 and 0.99 which means that 82% and 99% of the dry weight produced in the Cilembu and Gunung Kawi varieties were influenced by KCl fertilizer.

Table 3 – Interaction between Varieties and KCl to Total Dry Weight (g plant⁻¹) of Plants at 40, 60 and 80 DAP

DAP	Treatments	Dose of KCl (Kg ha ⁻¹)				
		Control	78 Kg ha ⁻¹	137 Kg ha ⁻¹	196 Kg ha ⁻¹	255 Kg ha ⁻¹
40	Gunung Kawi	42.7 a A	69.1 bc A	48.2 ab A	96.3 d A	86.1 cd B
	Cilembu	48.47 a A	48.7 a A	70.1 ab A	81.1 b A	57.8 ab A
	HSD 5%	25.5				
60	Gunung Kawi	54.7 a A	76.9 b A	79.2 bc A	109.1 c B	97.7 c A
	Cilembu	58.3 a A	60.4 a A	93.4 b A	87.3 b A	103.3 b A
	HSD 5%	20.6				
80	Gunung Kawi	76.7 a A	113.6 b B	122.6 b A	128.4 b A	119.1 b A
	Cilembu	83.1 a A	87.8 a A	112.2 b A	120.3 b A	98.2 ab A
	HSD 5%	23.5				

Note: Numbers with the same lowercase letters in the same row and the same upper case in the same column show not significant difference in HSD test ($P < 0.05$), DAP = days after planting.

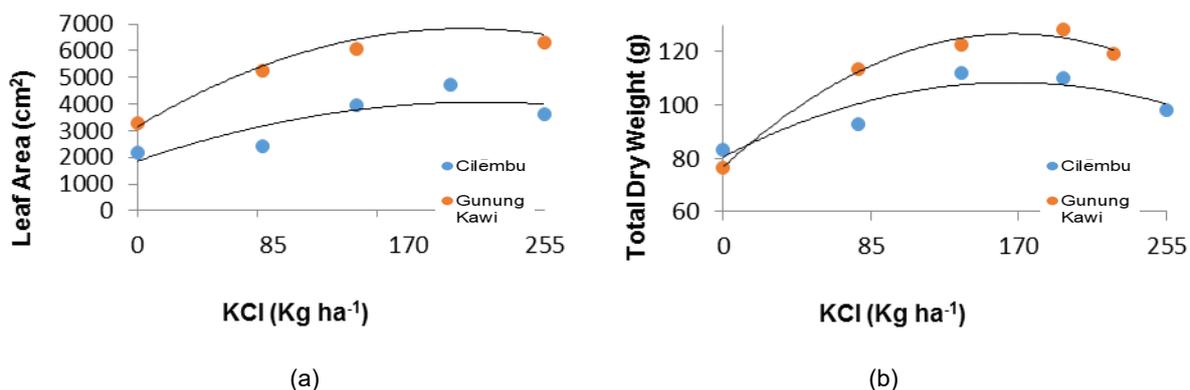


Figure 1 – The effect of KCl toward total dry weight and leaf area on sweet potato varieties (a) relationship between KCl toward leaf area, Gunung Kawi varieties $Y = -0.0874X^2 + 35.802X + 3159.7$, $R^2 = 0.93$ and Cilembu varieties $Y = -0.0477X^2 + 20.512X + 1862.5$, $R^2 = 0.72$. (b) relationship between KCl toward total dry weight, Gunung Kawi varieties $Y = -0.0016X^2 + 0.5624X + 77.211$, $R^2 = 0.99$ and Cilembu varieties $Y = -0.001X^2 + 0.3359X + 80.504$, $R^2 = 0.82$.

Tuber Yield. The growth component will affect the yield components of a plant. The existence of a good growth phase, will be followed by a good generative phase in which the plant's generative organs will grow well and the plants can produce good results. In this study, the results for sweet potato plants of Gunung Kawi variety which were not given KCl fertilizer were significantly lower yields of 8.3 tons ha⁻¹ (46%) and 10.9 tons ha⁻¹ (61%) compared to KCl dose 137 Kg ha⁻¹ and 196 Kg ha⁻¹. The low yield is thought to be due to the lower K uptake by plants without KCl fertilizer (35%) when compared to plants in KCl fertilizer 137 Kg ha⁻¹ (41%) and 196 Kg ha⁻¹ (50%). The same thing was shown in the yield of Cilembu variety where for plants that were not given KCl fertilizer showed significantly lower yields with an estimated absorption of 32%, compared to KCl fertilization 78 Kg ha⁻¹ (35%), 137 Kg ha⁻¹ (51 %) and 196 Kg ha⁻¹ (60%). This is enough to prove that the size of the impact given to sweet potato plants in the tuber formation process is influenced by the availability of K elements contained in the soil. As previously explained, the formed tubers originate from developments that occur in young roots under conditions of low temperature and high supply of potassium (Kolowski, 1977). Considering the addition of KCl fertilizer in the soil can increase the availability of K elements in plants and the element K plays an important role in the formation of tubers so that the addition of KCl fertilizer can increase the harvest of tubers (tons ha⁻¹). It is also shown in the observation of other harvest components such as the number of tubers, tuber weight, tuber diameter, and tuber length. Even so, when giving KCl improved both Gunung Kawi and Cilembu varieties from 196 Kg ha⁻¹ to 255 Kg ha⁻¹, the yield of tons of ha⁻¹ obtained was not significantly different compared to other treatments. This is suspected with 255 Kg ha⁻¹ KCl, the element K absorbed by the plant has exceeded the optimum dose needed in the tuber formation process. Please note that tubers in absorption K are plants that are luxury consumption which means that plants will absorb K excessively in the soil to be stored in tendrils and will not be used for the metabolic processes of plants. This will have an impact on the level of absorption of K in the soil but not followed by an increase in the production of yields obtained. The supply of potassium in the soil can be reduced, because of three things: taking potassium by the plant, washing potassium by water, and soil erosion. In general, the role of potassium is related to metabolic processes, such as photosynthesis and respiration.

Various doses of KCl fertilizer in various varieties, Gunung Kawi produce higher yields than Cilembu. This is quite understandable on every different variable. The ability of sweet potatoes is in the form of tubers other than by environmental factors as well as by plant factors themselves. As previously explained, the Gunung Kawi variety has a different morphology compared to Cilembu. The Gunung Kawi variety has a round leaf morphology with a leaf density level that will be greater than the radiation interception that will produce

more, namely better and more growth rates. Unlike the Cilembu variety which has the characteristics of leaf leaves with leaf area more intense and has a high leaf density. This led to the study of Zhang et al. (2018), which states that the existence of light interception is based on wide optimization followed by photosynthesis and the resulting biomass. Optimal photosynthesis will produce photosynthate which is also good for the formation of tubers well. This shows that the Gunung Kawi variety is able to capture sunlight better than Cilembu. The high vegetative phase level (leaves) results in the least amount of carbohydrates left for tuber development (Saitama, 2017). Isa et al. (2015), in his study also explained the inhibition of tuber formation due to growth in the high vegetative phase. Based on Table 4 also shows that when fertilizer is increased to 255 kg ha⁻¹, yields decrease and the results obtained show a value that is not significantly different from other treatments. Interim estimates that can be understood that in 255 Kg ha⁻¹ KCl, the availability of Mg in the soil cannot be fully absorbed by plants due to the high K element (Table 1). As previously explained, high potassium will affect the level of availability of Mg. Increasing the amount of K in the soil will cause Mg to become chelated to decrease the element of Mg. Potassium is known as an element that is antagonistic to magnesium (Mg). This is consistent with Ding's (2006) statement, which explains that the addition of excess K elements to plants will cause antagonistic effects between elements K and Mg so that Mg availability becomes low. Another opinion suggests that when the K element content in the soil is excessive, it is likely that some elements of Mg²⁺ and Ca²⁺ will be retained and replaced by K⁺ ions causing dissolution of Mg and Ca elements (Bolan et al., 2005). If Mg is bound to the soil in the presence of a high KCl application, photosynthesis will decrease due to the function of chlorophyll as a light absorbent. In Ding Yu Chuan's research (2008), showed that the low element of Mg will have an impact on the decrease of chlorophyll content and photosynthetic activity causing the formation of assimilates to be inhibited so that the bulb enlargement will decrease. Chlorophyll is an important key in photosynthesis, so that with increasing chlorophyll will increase photosynthetic activity which affects the yield and growth of plants (Subaedah et al, 2016). In the description above, it has been explained the important role of element K. Therefore, if the plant has K deficiency, it can inhibit the photosynthesis process, as well as the assimilation translocation process. The main role of potassium is in its ability as a catalyst. In a plant's life cycle, fertilizer will greatly affect the growth and development of plants and the crops that will be obtained.

Table 4 – Interaction between Varieties and KCl on Yield (ton ha⁻¹) of Plants

Treatments	Dose of KCl (Kg ha ⁻¹)				
	Control	78 Kg ha ⁻¹	137 Kg ha ⁻¹	196 Kg ha ⁻¹	255 Kg ha ⁻¹
Gunung Kawi	17.8 a B	20.7 ab B	26.1 bc B	28.7 c B	23.1 abc B
Cilembu	8.3 a A	14.5 b A	15.2 b A	16.3 b A	13.6 ab A
HSD 5%	5.7				

Note: Numbers with the same lowercase letters in the same row and the same upper case in the same column show not significant difference in HSD test ($P < 0.05$).

CONCLUSION

This study has demonstrated that sweet potato responded to K application up to the 196 kg ha⁻¹ rate based on improved leaf area, total dry weight and tuber yield. The application of K fertilizer 196 kg ha⁻¹ produced the best tuber yield per hectare at both variety, Cilembu 16.3 t ha⁻¹ and Gunung Kawi 28.7 t ha⁻¹. The application of K at 196 kg ha⁻¹ appeared appropriate for optimum yield in our study area. Production of sweet potato on these soils would therefore require K in the fertilizer regime unless the pre-planting soil test result is shown to be adequate in potassium.

REFERENCES

1. Bolan, N.S., Paripurnanda L., and Surinder S. 2005. Encyclopedia of Soils in the Environment. pp. 149-154.
2. Chuan, N. et al. 2017. Impacts of Chemical Fertilizer Reduction and Organic Amendments Supplementation on Soil Nutrient, Enzyme Activity and Heavy Metal Content. 2017. J. Integ. Agr. 16(8): 1819-1831.
3. Gomez, A.K. and Gomez, A.A., 1995. Prosedur Statistik untuk Penelitian Pertanian. Edisi Kedua. (Diterjemahkan oleh Endang Sjamsuddin dan Yustika S Baharsjah). Jakarta. Universitas Indonesia Press. 4 hal.
4. Ding, Y., W. Luo, and G. Xu. 2006. Characterisation of Magnesium and Interaction of Magnesium and Potassium in Rice. J. Annals of Applied Biology. 149: 111-123.
5. Ding, Y. et al. 2008. High Potassium Aggravates the Oxidative Stress Induced by Magnesium Deficiency in Rice Leaves. J. Soil Sci Society of China. 18(3): 316-327.
6. Dkhil, B.B., Mounir, D., and Samia, A. 2011. Foliar Potassium Fertilization and its Effect on Growth, Yield and Quality of Potato Grown under Loam-sandy Soil and Semi-arid Conditions, J. Agric. Res. 6(7): 593-600.
7. Isa, M., Hot S. dan Lollie A.P. 2015 The effect of Internode Number and The Grow Angle on the Growth and Yield of Several Sweet Potatoes (*Ipomoea batatas* L.) Varieties. J. Agron. 4 (1): 45-52.
8. Jusuf, M., and Erliana, G., 2014. The Prospects and Challenges of Sweet Potato as Bio-ethanol Source in Indonesia, Energy Procedia, 47: 173-179.
9. Kozlowski, T.T. 1977. Ecophysiology of Tropical Crops. Academic Press. New York. San Fransisco. London. P. 237-247.
10. Madhu, M., and Jerry L.H. 2016. Dry Matter Partitioning and Growth Analysis of Soybean Grown Under Elevated CO₂ and Soil Moisture Levels. J. Current Sci. 6(111): 981-984.
11. Onunka, N. A., Chukwu, L. I., Mbanasor, E. O., & Ebeniro, C. N. (2012). Effect of organic and inorganic manures and time of application on soil properties and yield of sweet potato in a tropical ultisol. Journal of Agriculture & Social Reseach, 12(1), 182-193.
12. Pushpalatha, M., Vaidya P.H., and Adsul P.B. 2017. Effect of Graded Levels of Nitrogen and Potassium on Yield and Quality of Sweet Potato. J. Curr. Microbiol. 6(5): 1689-1696.
13. Rahayu, M. 2010. Pertumbuhan Vegetatif Beberapa Varietas Nanas (*Ananas Comosus* (L.) Merr) Dalam Sistem Tumpangsari dengan Ubi Jalar. Agrosains 12(2): 50-55.
14. Saitama, A. Yiel Response of Ten Varieties of Sweet Potato (*Ipomoea batatas* L.) Cultivated on Dryland in Rainy Season. J. of Degr. and Mining Lands Man. 4(4): 919-926.
15. Subaedah, S. 2016. Fertilization of Nitrogen, Phospor and Application of Green Manure of *Crotalaria juncea* In Increasing Yield of Maize In Marginal Dry Land. J. Agr Sci. 9: 20-25.
16. Suhardi, C.J., Retty, R., and Husnul, K., 2016. Pengaruh Pemberian Antosianin dari *Ipomea batatas* L. Varietas Gunung Kawi Kultivar Gunung Kawi dalam Meningkatkan Kadar Superoxide Dismutase pada Tikus. Majalah Kesehatan FKUB., 3(4):166-173.
17. Trustinah and Iswanto, R., 2014. Pengelompokan Aksesori Kacang Hijau Berdasarkan Karakter Kuantitatif. Prosiding Seminar Nasional Hasil Penelitian Tanaman Aneka Kacang dan Umbi Tahun 2013. Malang. pp 7-14.
18. Uwah, D.F., Undie U.L., John N.M., and Ukoha G.O. 2013. Growth and Yield Response of Improved Sweet Potato (*Ipomoea batatas* (L.) Lam) Varieties to Different Rates of Potassium Fertilizer in Calabar, Nigeria. J. Agri. Sci. 5(7): 61-69.
19. Yaningsih, H. et al. 2013. Studi Karakteristik Gizi Ubi Jalar Ungu (*Ipomea batatas* var Gunung Kawi) pada Beberapa Umur Panen. Rekayasa dan Man. Agroind., 1(1): 21-30.
20. Yusnita, D.H. 2010. Adaptabilitas Beberapa Varietas Ubi Jalar (*Ipomea Batatas*) pada Kesuburan Tanah yang Berbeda. J. Saintech. 2 (3): 69-76.
21. Zelelew, D.Z., Sewa L., Tesfai T.K., and Biniam M.G. 2016. Effect of Potassium Levels on Growth and Productivity of Potato Varieties. J. Plant. Sci. 7: 1629-1638.
22. Zhang, W., Xiu-Xiu C., Yu-Min L., Dun Y., Yun-Fei D., Xin-Ping C., and Chun-Qin Z. 2018. The Role of Phosphorus Supply in Maximizing the Leaf Area, Photosynthetic rate, Coordinated to Grain Yield of Summer Maize. J. Field Crops. Res. 219: 113-119.

DOI <https://doi.org/10.18551/rjoas.2018-11.42>

SEAWEED BUSINESS DEVELOPMENT STRATEGY IN BUTON REGENCY, SOUTHEAST SULAWESI OF INDONESIA

Darmi*, Hasbullah Rokhani, Jahroh Siti

School of Business, Bogor Agriculture University, Indonesia

*E-mail: darmibinhamid@gmail.com

ABSTRACT

Seaweed is a type of superior aquaculture commodity in Buton Regency. Seaweed has the potential to develop seaweed businesses with high economic value. This study aims to analyze: 1) What factors influence the development of seaweed business in Buton Regency; 2) Alternative strategies for developing seaweed business in Buton Regency; 3) Priority strategies and managerial implications for enhancing seaweed business development in Buton Regency. This study used descriptive quantitative and qualitative approaches. Data analysis techniques used are Internal Factor Evaluation (IFE), External Factor Evaluation (EFE), Strength Weakness Opportunity Threat (SWOT), and Quantitative Strategy Planning Matrix (QSPM). The results of this study indicate that the IFE analysis, the internal environmental factors that gave influence is a superior cultivation commodity as the main factor of strength and limited knowledge of human resources in processing seaweed yield as the main factor of weakness. External environmental factors that gave influence are the demand for large seaweed markets as a major factor in the opportunities and ice-ice disease as a major factor of threat. The priority strategy that can be done by the Buton Regency government in increasing seaweed business with the expansion of seaweed cultivation areas. This is used as a priority strategy because there are still many potential areas for seaweed cultivation that have not been cultivated so that with the increase in seaweed cultivation area, seaweed production is expected to increase.

KEY WORDS

Superior commodities, priority strategy, business, seaweed.

Seaweed is a biological resource that is very abundant in Indonesian waters which is a potential aspect to be developed, especially in the food, beverage and cosmetic industries. The function of seaweed as a raw material for various processed products of high economic value for both food and non-food purposes makes many seaweed cultivated and traded in the local and international markets (Sri Luhur et al. 2012). The types of seaweed that are abundant in Indonesian waters are Gracilaria, Gelidium, Eucheuma, Hypnea, Sargasum and Tubrinaria (Wijayanto et al. 2011). The area of the seaweed habitat in Indonesia alone reached 1.1 million hectares (BPS 2016). Furthermore, the indicative area of land that can be used for the cultivation of Indonesian seaweed commodities reaches 769,452 ha. Of that amount, only around 50% or an area of 384,733 ha is effectively utilized, and will continue to be utilized so that the 2019 production target of 19.5 million tons can be achieved (KKP 2015). This shows that the great potential of Indonesian seaweed is to be developed and become a superior product of Indonesian export commodities. This strategy step is a very important part, considering the data of seaweed-producing regions with great potential to be developed, as shown in Table 1.

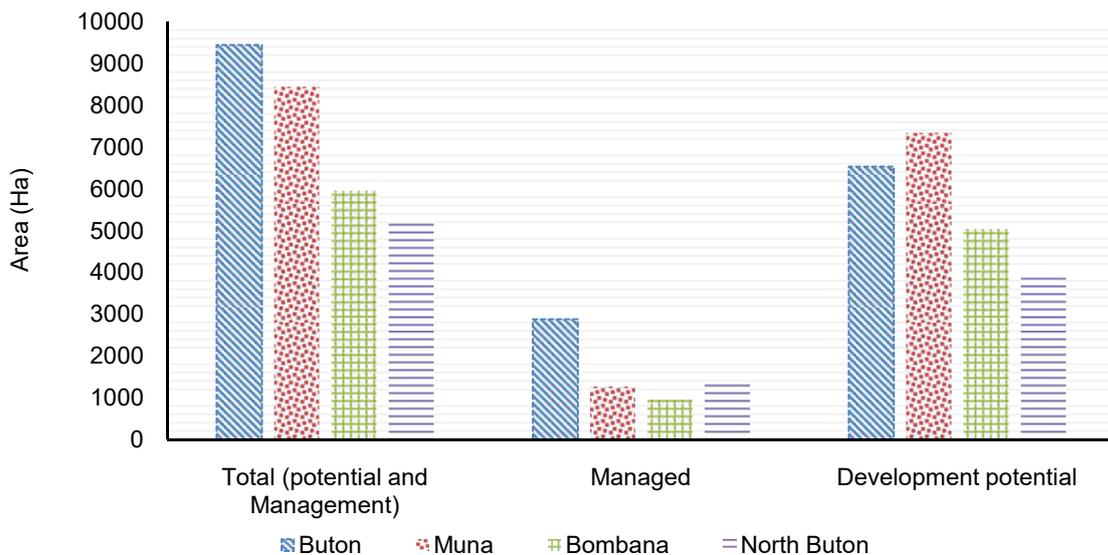
In Table 1, can be seen that seaweed cultivation production in Indonesian provinces in 2011-2015 tends to increase. South Sulawesi province is the largest seaweed producing province in 2015. In 2015 the production of seaweed cultivation in South Sulawesi province reached 2,411,124 tons, an increase of 15,4% from 2014 of 2,087,841 tons, followed by East Nusa Tenggara (2,283,331 tons), Central Sulawesi (1,362,812 tons), West Nusa Tenggara (937,463 tons), and Southeast Sulawesi (915,895 tons). In this data it is clear that Sulawesi Island is the highest producer of seaweed and it is very important to develop it.

Table 1 – Provinces producing seaweed in Indonesia 2011-2015

No	Province	Seaweed (Ton)					Increase Average (%)
		2011	2012	2013	2014	2015	
1	South Sulawesi	1,024,302	1,480,712	1,661,335	2,087,841	2,411,124	24,48
2	East Nusa Tenggara	377,2	398,736	1,846,334	1,966,255	2,283,331	97,84
3	Central Sulawesi	734,381	891,381	1,233,058	1,137,030	1,362,812	17,94
4	West Nusa Tenggara	277,7	451,031	599,1	749,141	937,463	36,36
5	Southeast Sulawesi	586,965	639,192	917,363	956,017	915,895	13,11

Source: Directorate General of Aquaculture KKP (2016).

Table 1 shows that the highest amount of seaweed production in Sulawesi is in South Sulawesi. Even so, the province of Southeast Sulawesi is one of the provinces that has lower seaweed production than other provinces in the Sulawesi Islands. This province has the widest land area among the other provinces which is 54,770 hectares (KKP 2016). The yield of seaweed produced is dominated by the type of *Kappaphycus alvarezii* (cottoni). Seaweed usually grows well in the dry season, on the contrary it grows slowly in the rainy season (Arisandi A et al. 2013). According to interviews with local authorities and farmers in Buton Regency, Southeast Sulawesi, this type of cottoni seaweed is the easiest to cultivate and has a high price. Although the area of seaweed cultivation is extensive, the area is only around 50% or 27,385 hectares are used for seaweed cultivation. One of the most potential regencies for developing seaweed cultivation is in Buton Regency, as shown in Figure 1.



Source: Bank Indonesia (Data processed), 2016

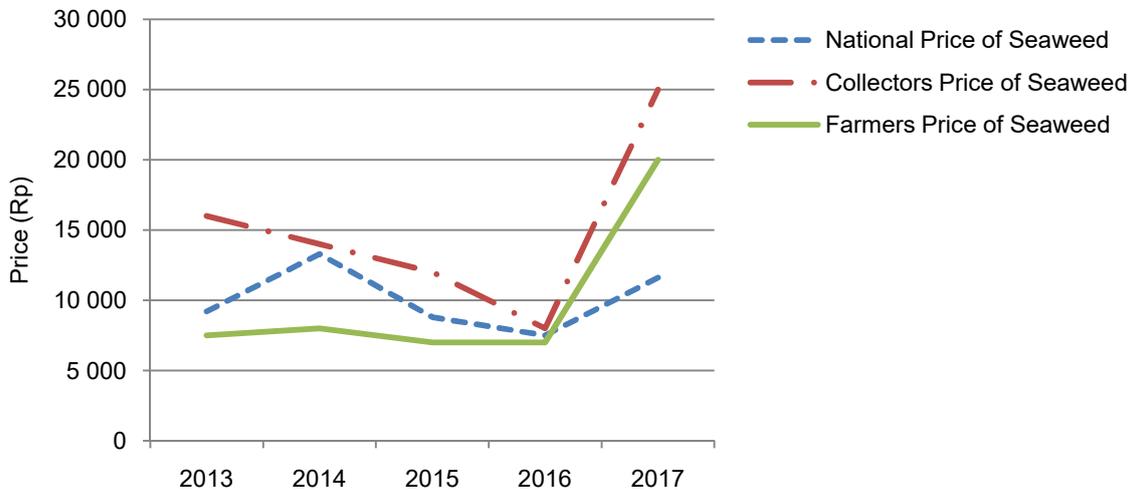
Figure 1 – Extent of seaweed cultivation in four Buton Regencies in Southeast Sulawesi Province (in hectares)

In Figure 1 can be seen that the potential of seaweed to be managed in Buton Regency is very high, that is 9,825 hectares. This is far from the potential for development carried out by the local government. Thus it is very important to develop a seaweed business strategy in Buton Regency.

Seeing the role of Buton Regency in the contribution of seaweed has been recognized nationally and internationally, but it is still necessary to increase the seaweed processing industry in the regions and domestically. So that the industry and the results of processing seaweed can be sold both at domestic and international. If that happens then the production in the following year must be above 5,000 per ton so that domestic and foreign supplies are not hampered due to their production.

This certainly needs special attention and a strategy for developing a planned seaweed business. In addition, the price bought by collectors from farmers is still very low, which

causes farmers to feel disadvantaged in Buton Regency. In addition, the purchase price of all types of seaweed from the farmers is valued at the same price without seeing the quality and type of seaweed by the collectors. In Figure 2 shows the development of seaweed prices at the national level, collectors, and farmers from 2013 to 2017 in Buton Regency.



Source: Fisheries and Maritime Office of Buton Regency (Data processed), 2017

Figure 2 – Seaweed prices in Buton Regency

Figure 2 shows a very volatile price difference both at the level of farmers, collectors and at the national level. This happens because the farmers who do not know the up-to-date price differences in the market/Farmer Benchmark Price. Thus the price of seaweed is still affected by the season and the respective regions of Hikmayani et al. (2007). This indirectly provides greater benefits for collectors, but disadvantages the farmers because farmers should receive higher prices from collectors because the quality of seaweed produced by farmers is classified as high quality seaweed and relatively high prices of processed seaweed. It was seen in 2016 the price of cottoni type seaweed was at a low point, because farmers had been tied to collectors or had debts with collectors, so the bargaining position of farmers was so low to collectors.

Based on the background analysis that has been described, it can be drawn three main issues of the problems that occur, namely 1) minimum price and capital transparency among farmers, as well as unclear regulations regarding the standard price of seaweed from the government; 2) inadequate seaweed processing systems and low human resources; 3) inadequate infrastructure in post-harvest activities and government policies related to the development of seaweed business.

Based on exposure to the background and problem, the objectives of this study are as follows:

- Identify environmental factors that influence the development of seaweed business in Buton Regency, Southeast Sulawesi;
- Formulate alternative development strategies for seaweed business in Buton Regency, Southeast Sulawesi;
- Formulate strategic priorities and managerial implications to improve the development of seaweed business in Buton Regency, Southeast Sulawesi.

METHODS OF RESEARCH

This research was conducted from January 2018 to February 2018 located in the province of Buton Regency, Southeast Sulawesi. The data used in this study is in the form of primary and secondary data. Primary data is obtained from the results of questionnaires and in-depth interviews with selected respondents. Secondary data were obtained from literature

studies derived from journals, books, archives of the Buton Marine and Fisheries Office, Central Agency on Statistics, and previous research. The data sources in this study can be seen in Table 2.

Table 2 – Data sources

No	Data Type	Data Retrieval Techniques	Data Source
1	Primary Data External internal factors that influence the development of seaweed agribusiness in Buton Regency	Questionnaire Interview	Seaweed Businessman Marine and Fisheries Office Seaweed Expert Farmer
2	Secondary Data Other supporting data	Content Analysis (literature review)	Business Report Data Government Data Research Publication Internet and journal

The analysis used in this study is qualitative analysis that is quantified by approaches to strategic management concepts from scientific literature, opinions of experts, and opinions of practitioners who have empirical experience in their fields of expertise. The qualitative method used is descriptive analysis, can be seen in Table 3. This analysis is used to describe an in-depth description of matters related to research object.

Table 3 – Data processing and analysis techniques

No	Analysis Process	Analysis Tool	Output
1.	Analysis of the existing strategy of seaweed business	IFE/EFE	Information on the issue of seaweed business development strategies in Buton Regency
2.	Formulation of alternative strategies	SWOT	Alternative strategy formulation Prioritized strategies to be applied in the development of seaweed businesses in Buton Regency
3.	Determination of strategic priorities	QSPM	

RESULTS AND DISCUSSION

Factors were distinguished by internal and external factors, so that internal environmental conditions can be identified in the form of strengths and weaknesses and external environmental conditions in the form of opportunities and threats, for development of seaweed business in Buton Regency.

Internal Factor Evaluation (IFE) Analysis. IFE matrix analysis is the result of internal factors identification in the form of strengths and weaknesses of Buton Regency from the analysis of internal environmental aspects that have been explained previously, this IFE analysis can be seen in Table 4.

Table 4 – Results of IFE matrix analysis in seaweed development strategies in Buton Regency

Strategic Factors	Integrity	Rate	Score
Strength			
Superior cultivation commodities	0.1117	4	0.4466
High production level	0.1068	4	0.4272
Potential resources	0.1068	4	0.4272
The farmers are able to produce seeds independently	0.1019	3	0.3058
The quality of raw materials has met national standards	0.1068	4	0.4272
Weakness			
Unable to meet the demand	0.1019	2	0.2039
Seaweed productivity is not optimal	0.1068	1	0.1068
The absence of a standard price for seaweed	0.0971	1	0.0971
The quality of seaweed doesn't meet export standards	0.0922	2	0.1845
Limited knowledge of human resources in processing seaweed products	0.0777	2	0.1553
Total	1		2.7427

In Table 4, it can be seen that the IFE matrix obtained a total score 2.7427 of Buton Regency in the development of seaweed. With a total weight score above 2.5 indicating that the internal position of Buton Regency is sufficient to overcome the existing weaknesses with its strength. Furthermore, the results of the IFE matrix show that the strength factor that has a large influence on Buton Regency is a superior cultivation commodity with (score 0.4466). While the **main** weakness factor of Buton Regency is Buton Regency has not been able to meet the existing demand (score 0.2039).

External Factor Evaluation (EFE) Analysis. EFE matrix analysis of seaweed development in Buton Regency is the result of identification of external factors in the form of opportunities and threats that influence the development of seaweed, as shown in Table 5.

Table 5 – Results of EFE matrix analysis in seaweed development strategies in Buton Regency

Strategic Factors	Integrity	Rate	Score
Opportunity			
High demand of seaweed market	0.1214	3	0.3641
Seaweed derivative products are so diverse	0.1117	1	0.1117
Potential area of seaweed cultivation that has not been cultivated	0.1165	2	0.2330
Government support in developing the integration of the seaweed industry	0.1068	3	0.3204
Threat			
Uncertain climate conditions	0.1068	3	0.3204
Government policies related to taxes	0.0825	2	0.1650
No infrastructure is available regarding post-harvest activities	0.0777	1	0.0777
Ice-ice disease	0.1214	4	0.4854
Blooming algae	0.0922	4	0.3689
The threat of seaweed delisting by the United States	0.0631	1	0.0631
Total	1		1.4806

Based on the results of the EFE matrix in Table 5, a total score of 1.4806 was obtained. With a total weight score below 2.5 indicating that the Buton Regency government has not been able to fully respond well to external factors by utilizing opportunities to overcome existing threats. This means that the Buton Regency government must make improvements through optimal utilization of existing opportunities. Furthermore, the main opportunity for developing seaweed business in Buton Regency is the demand for a large seaweed market with a score of 0.3641. While the main threat of seaweed business development is ice-ice disease with a score of 0.4854.

SWOT Analysis. Based on the analysis of the internal and external environment carried out by identifying environmental factors in the seaweed business development strategy in the Buton regency through the process of filling out questionnaires by the speakers. Then formulate strategic alternatives through Strength-Opportunity (SO), Strength-Threat (ST), Weakness-Opportunity (WO) and Weakness-Threat (WT) analysis. Based on SWOT matrix analysis, alternative strategies can be formulated as follows:

Strength-Opportunity Strategy (S-O). This S-O strategy is carried out based on the Buton regency governance strategy of how to use the owned power to take advantage of the opportunities that exist in developing seaweed business. In this strategy, there are two alternative strategies, those are:

- Expansion of seaweed cultivation area (S1, S2, O3). This strategy is considered very appropriate to be implemented by the Buton Regency government to develop superior seaweed commodities. This is because the increase in the amount of seaweed production must be balanced by the expansion of seaweed area.
- Increasing institutional role in each stakeholder of seaweed (farmers, distribution, marketing and government) (S4, S3, O4). This strategy step aims to strengthen the cooperative relationship between stakeholders and their responsibility to jointly improve the level of welfare of the Buton Regency through optimizing the productivity of seaweed business.

Strength-Threat Strategy (S-T). This strategy is the use of the strength of the Buton Regency government in avoiding external threats. This strategy produces two alternative strategies.

- Evaluation and analysis of risk management of seaweed cultivation in Buton Regency (S1, S2, S3, S4, S5, T1, T4, T5). This strategy generally aims to control the output that has been targeted at the collaborations carried out by the Buton Regency government.
- Improvement of infrastructure and system implementation of seaweed industry in Buton Regency (S3, S4, T2, T3). Infrastructure and all supporting administrative systems are essential conditions for developing and increasing seaweed commodities. This means the opportunity to disclose seaweed exports and imports in Buton Regency.

Weakness-Opportunity Strategy (W-O). This W-O strategy is a strategy to improve internal weaknesses by utilizing external opportunities. There are two alternative strategies, those are:

- Enhancement of productivity, quality and competitiveness of seaweed (W1, W2, W3, W4, O1, O3, O4). The development of seaweed commodity competitiveness through increasing productivity and quality of seaweed products, will certainly be the right step.
- Intensive government participation in HR development, guidance and training (W5, W4, O2, O4). Government involvement in increasing the productivity of seaweed must be supported by intensive training, counseling and guidance for seaweed farmers. The value of this education can increase the knowledge and skills of farmers and the community.

Weakness-Threat Strategy (W-T). The W-T strategy is an alternative strategy aimed at reducing internal weaknesses and avoiding external threats. This strategy persists by reducing weaknesses and avoiding threats.

- Application of appropriate technology, in improving risk management of seaweed cultivation (W2, W4, W5, T1, T4, T5). Appropriate technology and innovation are the key to a successful business in this era of technology and information. By utilizing seaweed processing technology and its derivative products, it will accelerate the increase in seaweed business in Buton Regency.
- Strengthening the market price strategy (W3, T2). The government needs to encourage the establishment and strengthening of seaweed prices from upstream to downstream. This is considered important to maintain the stability of seaweed prices and improve the welfare of seaweed farmers.

QSPM Analysis. Decision making in this research used the Quantitative Strategy Planning Matrix (QSPM) analysis tool. In the final stage of strategy formulation development is to make decisions (decision stage) using the QSPM matrix. The results of the QSPM matrix analysis can be seen in Table 6.

Table 6 – Alternative strategies of QSPM matrix results

No	Alternative Strategy	TAS	Priority Strategy
1	Expansion of seaweed cultivation area	3.18	1
2	Increased institutional role in each stakeholder of seaweed (farmers, distribution, marketing and government)	3.12	2
3	Strengthening the market price strategy	3.02	3
4	Increased productivity, quality and competitiveness of seaweed	2.90	4
5	Intensive government participation in developing human resource development and training	2.83	5
6	Evaluation and analysis of risk management of seaweed cultivation in Buton Regency	2.67	6
7	Application of appropriate technology, in increasing risk management of seaweed cultivation	2.61	7
8	Infrastructure improvement and system implementation in the seaweed industry in Buton Regency	2.26	8

Table 6 above shows that an alternative strategy for developing seaweed business that has the highest priority is the strategy of expanding the area of seaweed cultivation (weight 3.18).

MANAGERIAL IMPLICATIONS

Based on the analysis of internal-external factors, SWOT matrix and QSPM matrix, alternative strategies for Buton Regency government were obtained to develop seaweed businesses to prosper the people. The managerial implications steps that can be applied by the Buton Regency government are as follows:

Expansion of seaweed cultivation area. The implication programs run by the Buton Regency government collaborating with stakeholders to open up land areas for seaweed cultivation by exempting potential lands. With this step, through cooperation with stakeholders, Buton Regency Government must issue investment funds to expand the cultivation area of seaweed business. The source of this investment fund can be sourced from the regional budget of Buton Regency as well as from outside investment, one of which is from the Japanese company side which in its MoU is committed to developing seaweed cultivation in Buton Regency.

Increased institutional role in each stakeholder of seaweed (farmers, distribution, marketing and government). This strategy is focus on prioritizing the continuity role of collaboration among stakeholders through institutions. The first program that is very important to do is formally form a cooperative institution. The existence of cooperatives for farmers in each region or group of seaweed farmers will certainly accelerate all obstacles faced by seaweed farmers, including the transparency of seaweed prices at the farmer level. With the existence of cooperatives, seaweed farmers will get official price transparency by the government and make the members of the seaweed farmers group prosperous. The second program is a program to improve infrastructure support for both import and export activities, namely in the form of access to roads, ports, markets and infrastructure in the form of administrative offices for seaweed business managers in Buton Regency. Furthermore, the third program is providing credit or capital loans to potential seaweed farmers. This credit must be followed by a low interest rate. This is important to do because all this time the farmers' capital has relied on the bank, and from money lenders with high interest. By opening these three priority programs, in the next five or ten years it will certainly make seaweed commodities superior and become a source of Indonesian seaweed exports.

Strengthening the market price strategy. The managerial implication program for strengthening the right market price by the Buton Regency government is the determination of a standard price for seaweed. The basis for determining this one price comes from the central government. With the application of one price, it is expected that seaweed farmers, wholesalers, and entrepreneurs who play a role in it contribute to advancing the seaweed business for mutual welfare. Furthermore, to strengthen the market price strategy for all seaweed products, we must pay attention to the Segmentation, Targeting, Positioning (STP) strategy.

CONCLUSION AND RECOMMENDATIONS

Based on the analysis of the results and the discussion that has been described, the following is a conclusion of this research:

The internal environmental factors that influence the development of seaweed business in Buton Regency, that seaweed is a superior cultivation commodity and the highest production of cultivation commodities as the main factor of strength, and productivity is not optimal as the main factor of weakness. The external environmental factors that influence the development of seaweed business in Buton Regency are the demand for large seaweed markets as the main factors of opportunity and ice-ice disease as the main factor of threat.

Alternative strategies in increasing seaweed business in Buton Regency by notice the existing strategic factors such as Strength-Opportunity (SO), Strength-Threats (ST),

Weakness-Opportunity (WO) and Weakness-Threat (WT) factors such as 1). Expansion of seaweed cultivation area, 2). Increasing institutional role in each stakeholder of seaweed (farmers, distribution, marketing and government), 3). Strengthening the market price strategy, 4). Enhancement of productivity, quality and competitiveness of seaweed, 5). Intensive government participation in HR development, guidance and training, 6). Evaluation and analysis of risk management of seaweed cultivation in Buton Regency, 7). Application of appropriate technology, in improving risk management of seaweed cultivation, 8). Improvement of infrastructure and system implementation of seaweed industry in Buton Regency.

The priority strategy that can be done by the Buton Regency government in improving seaweed business is the expansion of seaweed cultivation areas. This is used as a priority strategy because there are still many potential areas of seaweed cultivation that have not been cultivated so that with expanding the area of seaweed cultivation, seaweed production is expected to increase.

RECOMMENDATIONS

Based on the analysis that has been conducted to answer the research objectives, such as identifying environmental factors that influence the seaweed business development strategy in Buton Regency, formulating alternative seaweed business development strategies, as well as formulating strategic priorities and managerial implications to improve the development of seaweed in Buton Regency, it can be concluded that important recommendations in this research are as follows:

- Buton Regency Government must utilize the power of abundant natural resource potential to increase the potential of seaweed cultivation in Buton Regency;
- Buton Regency Government must cooperate with several strategic parties, such as stakeholders by establishing joint ventures such as cooperatives;
- Future research can further examine the potential of other aquaculture commodities in Buton Regency. This is important because the hidden potential in Buton Regency is not only seaweed commodities, other commodities such as lobster, grouper fish, mabe pearl and other marine commodities that have the potential to be developed in Buton Regency.

REFERENCES

1. Arisandi A, Farid A, Wahyuni A, Rokhmaniati S. 2013. Dampak Infeksi Ice-Ice dan Epifit terhadap Pertumbuhan *Eucheuma Cottani*. *Jurnal Ilmu Kelautan* Maret 2013 Vol. 18(1): 1-6.
2. [BPS] Badan Pusat Statistik. 2016. *Statistik Sumber Daya Laut dan Pesisir*. Jakarta (ID): Badan Pusat Statistik.
3. Hikmayani Y, Aprilliani T, Zamroni A. 2007. Analisis pemasaran rumput laut di wilayah potensial di Indonesia. *Sosial Ekonomi Kelautan dan Perikanan*. 2(2):159-175.
4. Sri Luhur E, Witomo MC, Firdaus M 2012. *Analisa Daya Saing Rumput Laut di Indonesia (Studi Kasus : Kabupaten Konawe Selatan, Sulawesi Tenggara*. Balai Besar Penelitian Sosial Ekonomi Kelautan dan Penelitian. *J. Sosek KP* Vol. 7 No.
5. Wijayanto T, Hendri M, Aryawati R. 2011. Studi pertumbuhan rumput laut *eucheum cootonii* dengan berbagai metode penanaman yang berbeda di perairan Kalinda Lampung Selatan. *Masparin*. 3:51-57.

DOI <https://doi.org/10.18551/rjoas.2018-11.43>

THE APPLICATION OF GREEN ECONOMY TO ENHANCE PERFORMANCE OF CREATIVE INDUSTRIES THROUGH THE IMPLEMENTATION OF BLUE OCEAN STRATEGY: A CASE STUDY ON THE CREATIVE INDUSTRIES

Asj'ari F., Subandowo M., Bagus I M.D.

Researchers, Indonesia

*E-mail: fachrudu@unipasby.ac.id

ABSTRACT

This research intended to asses the green economy to enhance the performance which must be performed of the creative industries in connection with performance of the employee. This research was conducted at creative industries which covered 108 employees as respondent. This research by utilizing Structural Equation Modeling (SEM), the technique was processed with AMOS program 6.0 to analyze some hypothesis. The intercorrelations models between these variables in this study revealed that three hypothesis have significant correlation. The result of this research was empirical data of the development of the theoretical of human resources and practice management.

KEY WORDS

Green economy, Blue Ocean, strategy, performance.

This research proves there is no company that has always excelled, when there is no industry that has always excelled. As found in the course of a winding up, as well as companies that do things smarter and things that are not intelligent. To improve the quality of success, it is necessary that we make what colleagues specializing in ancient times that has produced a positive difference and understand how repeating the actions that systematically. This is what is called a smart strategy, measures and found that the strategic measures that are important is creating an ocean-Ocean Blue (2007:10).

According to Kim and Mauborgne (2007:10), blue ocean strategy States (blue ocean strategic), challenging the company to get out of the bloody red ocean competition by way of creating a space market that its competitors do not yet exist, so the word any competition no longer relevant. Red ocean strategic versus a blue ocean strategic can be seen in the following table:

Table 1 – Ocean Strategies

Red Ocean Strategic	Blue Ocean Strategic
Competing in an existing market	Space creates a market space that no rivals
Winning the competition	Making the competition irrelevant
Exploit existing demand	Creates demand and capture new
Choose between cost (value-cost trade-offs)	Breaking down Exchange-value cost
Integrating the entire system of corporate activities with the strategic choice between low cost or differentiation	Combines the entire system of corporate activities in pursuit of differentiation and low cost

Indonesia's economic growth become the background of this article to see the extent to which balance economic growth with this consciousness of the maintenance of a sustainable environment. In Indonesia, the mindset towards Green Growth necessary for a harmonious balance between economic growth and a sustainable environment, to shift from the mindset to Grow First, Clean up Later. This article has research purposes namely to State perceptions of Green Industry in Indonesia, especially relating to the present conditions, challenges and a new mindset. The second objective, is to analyze and enforce up the present conditions in Indonesia, accompanied by the current Challenges associated with economic growth in Indonesia, where a further need for a mindset towards Green Growth. All purpose mentioned supported the Foundation of the theory of energonomics and

methodology of DPSIR (Driving Forces, Pressure, State, Impact and Response), and thus created an understanding and concrete actions for the development of the Green Industry. Economic growth is expected to lead to a new mindset towards Green Growth in real action from all company categories Low, Medium and High impact.

LITERATURE REVIEW

Green Industry. Green economic or green Industry can not be separated from a number of factors, especially when associated with situations and conditions in Indonesia, in an era of rapid economic growth, along with a similar growth in Asia Pacific, as has been discussed in table 1, table 2, Figure 1 and Figure 2. Later, Chung & Quah (2010), states the existence of a relationship between the following factors in the Green Industry, namely economic growth and the environmental performance and economic growth and environmental sustainability.

In the economic growth and environmental performance, economic growth is associated with the ability of the environment, i.e. the efficiency of environmental administration organizers in reducing pollution and protecting the environment. In Indonesia, the Government's participation as organizer of the environmental administration was instrumental in the ability of this environment, which is certainly need for support from all parties. While, in economic growth and environmental sustainability, economic growth associated with the sustainability of the environment, i.e. the efficiency of ecology, where Community production and consumption activities.

More specifically can be put forward that in Indonesian society, the process of the industrialization society along with the growth of industrial production activity through several companies. So, to answer the problem in Indonesia is expected to within the scope of the larger again, Green Industry, can align simultaneously between economic growth with Environmental Performance and Environmental Sustainability. When associated with the process of industrialization which is characterized by the growth of the industry of some companies in Indonesia, it should be noted that there is a pollution level. In this Green Industry may refer to a pattern called the Environmental Kuznets Curve (EKC). Chung & Quah (2010), describes the EKC with some of the following statement: at the level of per capita income is low enough, the level of pollution in the beginning will increase at a time when income increases. However, once it reaches a certain threshold, the level of pollution will decrease with increasing income. Furthermore, EKC in theory, explained that at the time of economic growth and industrialization, the level and intensity of pollution emissions will increase, due to the high activity of production of goods and services.

Green Economy. The concept of green economy is currently being hotly discussed. The green economy is the economy of optimizing the three groups, namely the value of the value of social, environmental, and financial. The definition of a green economy that is sustainable in environmental, social, and fair in its roots. Green Economics refers to economic activities which have considered the social environment and in order to obtain a better benefit from investment in natural, human, and economic capital. Indonesia is a country rich in natural resources. Indonesia is a developing country that is constantly working to improve the economy of the country. When the economy and the environment is not increased correspondingly, the trade off between economic development and will affect the well-being of the community.

Economic development essentially on natural resources and the environment. One of the functions of the environment that is as life support by providing natural resources as raw materials to be processed into a product. There are environmental degradation will affect the economy. For example, when the supply of human food needs decrease environmental degradation will occur due to imbalance of the market that would affect consumer and producer surplus. These imbalances will affect the welfare of society (human welfare).

In 2017 must be better than the previous year. Economic development is not yet take into account the environmental aspects must be shifted on the green economy. Promotion on green marketing should continue to introduce to consumers that the eco-friendly products

that have added value and benefit more. It is these obstacles in implementing the green economy. The benefits of a green economy relative to the long term so that the community is difficult watching him and feel the benefits in no time.

The Government has already made efforts in building a green economy in the system of rice intensification of whom (SRI) and organic farming. Resolutions regarding green economy must continue to be supported and developed optimally. Rules on environmental pollution should be taken into account. Coaching about green economy should be exposed so that companies can environmentally. The community was given the direction and understanding of the importance of safeguarding the environment.

Knowledge about renewable energy, environmentally friendly technology, and systems based on the environment should be supported and continue to be developed in order to be better implemented in 2017 and for years to come. Let us keep our environment as well as supporting and realizing the program of green economy.

In simple way, the sense of a green economy formulated as activities of an economy that does not harm or damage the environment. Meanwhile, the United Nations Environment Programme (UNEP) to associate the notion of green economy with economic significance that is able to enhance the well-being and social justice, by giving the sense that: Greening the economy refers to the process of reconfiguring business and infrastructure to deliver better returns on natural, human and economic capital investments, while at the same time reducing greenhouse gas emissions, extracting and using less natural resources, creating less waste and reducing social disparities.

The concept of green economy (green economy) become the paradigm of sustainable development which is essential in tackling the impact of climate change is happening. Green economy more or less be the answer from Brown's economy, namely the economic activities that produce lots of carbon. Brown economy is economic activity that uses energy in inefficient (wasteful) but not enough socially inclusive, that does not involve a lot of people in the process of taking its decision. In relation to the management and utilization of materials mines and minerals such as coal, Brown was dominant economic activities.

Green economy according to Cato (2009), has the following characteristics:

- A green economy is an economy based locally;
- In the green economy, people will relate to each other first and then traded. The market is seen as a place for socializing and friendship fun where news and political views are exchanged as well as goods and money;
- The green economy is very likely involves the distribution of assets by using the improved inheritance and capital gains tax;
- In the green economy, taxes likely used also strategically to influence power and business conduct. Neoliberal domination of decision-making resulted in the shifting of the corporation tax to the income of the population;
- The green economy will be guided by the values of sustainability rather than by value for money;
- The green economy will leave the addiction on economic growth and lead to a steady-state economy;
- The green economy will become a friendly economy oak where relationships and community becomes a substitute for the consumption and technology;
- Green economy gives it a wider role for the informal economy and the system of community-based cooperatives and mutual support;
- In the green economy, the health system will focus on the development of good health and the provision of primary care, local-based rather than high-tech medicine and pharmaceutical companies;
- The green economy will replace fossil fuels and intensive farming systems with organic agriculture and various systems such as agriculture with the support of the community, in which human beings are connected more closely with the source pangannya.

There are at least 4 dimensions which are used to measure the success of a country promoting green economic model in support of the activities of its construction. These four aspects are: the commitment of national leaders, an environmentally friendly domestic policies, investment-friendly environment, and economic activities such as tourism-dimensional environment. The process of internalization of the concept of green economy (green economy) in the setting of policies and the management and utilization of natural resources, must be based on principles of natural resource management contained in Ordinance No. IX/MPR MPR/2001 of Agrarian reform and the management of natural resources, namely:

- Maintain and defend the integrity of Unitary State of Republic of Indonesia;
- Respecting and upholding human rights;
- Respect for the rule of law with computing diversity in unification of law;
- Welfare, primarily through an increase in the quality of human resources Indonesia;
- Develop democracy, legal compliance, transparency and optimization of popular participation;
- Realizing justice including gender equality in mastery, possession, usage, utilization and maintenance of agrarian resources/natural resources;
- Maintain sustainability can give optimal benefits, both for the present generation or future generations by remaining attentive to the capacity and resources support neighborhood;
- Carry out social functions, sustainability and ecological functions in accordance with the social conditions of the local culture;
- Enhancing coordination and alignment of development sectors and between regions in the implementation of agrarian reform and the management of natural resources;
- Recognize, respect and protect the rights of customary law society and cultural diversity of the nation over the agrarian resources/natural resources;
- Maintains a balance of rights and obligations of the State, the Government (Central, provincial, district/regional towns and villages or level) the community and the individual;
- Implementing a decentralized form of Division of authority at the national level, the region of the province, kabupaten/kota and the village or level, relating to the allocation and management of agrarian resources/natural resources.

The twelve principles of natural resource management at the top, if it was concluded on 3 main principles are conical, namely:

- The principle of democratic equality in dimension between the Government with the people, community empowerment and the development of good governance in Mastering and exploiting natural resources;
- The principle of fairness, in the philosophical dimension of both intergenerasi as well as justice justice between the generations in an effort to access the agrarian resources;
- The principle of sustainability, in the dimension of sustainability function and benefits the Sepik and successful action.

Green Ocean Strategic. To formulate strategies, the company should make a choice based on the analysis of internal, external, environmental and industry. In the stage of formulation of the green ocean strategic assumption is that industry is growing as environmental change, and the company has the option to stay in the same industry or be part of a growing industry.

In the formulation of the green ocean strategy company assumption is not creating new industries. The industry is evolving due to changes in the environment, and that smart companies recognize the evolution of the industry and looking for new opportunities because of these changes. Despite the name, the green ocean strategy is not about greening or environmental. Rather, it is a discipline strategy which concentrates on how to maximize the internal remains, and human resources. Copy or benchmarking against competitors, the focus was to be more realistic in relation to what the business can actually do or provide.

Studies show that the company's main frustration is that they set goals not being met. However, this should also be seen from the opposite point of view: how it targets determined? Whether they are logical, reasonable and fair? Sometimes, management may not relate to the true state of the business process, people skills or even customer feedback. Sometimes, the decision was made based on the wrong assumptions.

Green ocean strategy begins with the assessment process of the internal competency what these companies, how they rate and what the impact is. Then it focuses on the existing markets that are served as well as a potential market. From here, it validates if there is a match between versus what the company can really give the current market. Nine strategies are then available to the Organization to grow in a sea of green, depending on the results of the assessment. We will discuss this strategy in the next issue.

Knowledge-based economy for companies to create an atmosphere of uncontested market by creating a product or service by combining components from two different industries. In the blue ocean strategy, creating uncontested market space by innovation service is not a good suggestion. The company recognized opportunities in the marine industry that is expanding and moving into the market with a strategy of differentiation. The marine industry has not made an uncontested market space. Companies compete for revenues in the marine industry by implementing a strategy of differentiation.

I believe that the best way to learn about the company's strategy is to observe and experience businesses that provide their product or service. Decision making process emphasizes the fact that the marine industry creating uncontested market space, marine industry operates in a competitive environment. The current financial situation proves that the company does not create a new industry or create a blue ocean and the competition alive. The concept of the blue ocean is not a practical choice for the formulation stage of the strategy. This brings us back to a strategy of growth and sustainable development, which means that the green ocean strategy is the best strategy for success in the market.

Performance. Herriegel et al. (1989:143), stating the individual's performance as a result of the multiplication or a function of motivation and ability. Performance formula is as follows performance (P) = function (Ability and motivation); or performance = f (x ability motivation). Gibson (1996:95) States that the employee's performance level is a measure that can be used to specify the comparison of the results of the execution of the task, the responsibility given by the Organization in a certain period and the relative can be used to measure the accomplishments of the work or the performance of the organization. According to Simamora (2004:339-340) performance indicators include: Absenteeism, Tardiness, length of time, quantity and quality of work produced, protective Action, cooperation, constructive Ideas, training and attitude profitable.

METHODS OF RESEARCH

In this research analysis using SEM (structural equation modelling). According to Ferdidand (2002:6), structural equation Models, structural equation modelling (SEM) is a set of techniques that allow a statistikal testing a series of relationships that are relatively "complicated" simultaneously. The complicated relationships that can be established between one or more of the dependent variable with one or more independent variables. Sampling techniques using proportional random sampling with a sample number of 108 people. Ferdinand (2002:33), SEM can do modeling steps are as follows: 1). The development of a theoretical model, 2). diagram of the path of Development, 3). diagram of the path of Conversion into the equation, 4). The selection of the input matrix and estimation models, 5). Assessing the problem identification, 6). The evaluation Model, 7). Interpretation and modification of the model.

RESULTS AND DISCUSSION

In this section, expressed about the outcome of the analysis based on print out SEM. In the analysis of SEM, there are two main components of the analysis model of measurement

(measurement model) and the structural model (structural models). Model measurement (measurement model) concerns the analysis whether the indicators really are valid and reliability measure invalid constructs (unobserved variable), while structural model (structural models) concerning the analysis of the influence of a invalid constructs against other invalid constructs.

Table 1 – The assumptions of SEM

HUBUNGAN			ESTIMASI	P	ALPHA	LABEL
Y1	<---	X1	0.511	0.002	0.05	Signifikan
Y2	<---	Y1	0.349	0.013	0.05	Signifikan
Y2	<---	X1	0.288	0.027	0.05	Signifikan
GE4	<---	X1	0.565	0.000	0.05	Signifikan
GE3	<---	X1	0.851	0.000	0.05	Signifikan
GE2	<---	X1	0.392	0.000	0.05	Signifikan
GE1	<---	X1	0.585	0.000	0.05	Signifikan
BOS1	<---	Y1	0.826	0.000	0.05	Signifikan
BOS2	<---	Y1	0.683	0.000	0.05	Signifikan
BOS3	<---	Y1	0.615	0.000	0.05	Signifikan
BOS4	<---	Y1	0.548	0.000	0.05	Signifikan
BOS5	<---	Y1	0.482	0.000	0.05	Signifikan
K1	<---	Y2	0.557	0.000	0.05	Signifikan
K2	<---	Y2	0.374	0.000	0.05	Signifikan
K3	<---	Y2	0.628	0.000	0.05	Signifikan
K4	<---	Y2	0.827	0.000	0.05	Signifikan
K5	<---	Y2	0.843	0.000	0.05	Signifikan
K6	<---	Y2	0.534	0.000	0.05	Signifikan
K7	<---	Y2	1.01	0.000	0.05	Signifikan
K8	<---	Y2	0.494	0.000	0.05	Signifikan
K9	<---	Y2	0.372	0.000	0.05	Signifikan

Both models are related, and this means that the model must be valid and measurement reliability, can proceed with structural equation analysis. Because if the measurement model is invalid then the structural model is not good because the indicators that are used are not capable of measuring the invalid constructs which should be as measured.

Analysis of measurement model. In this section will be described about three main things model measurements are: first, about the value of loading factor or regression weight (component estimate) or lamda (ferdinand, 2002:79). Second, about the level of their significance in each invalid constructs. Third, about the construct of reliability. However this measurement model, the most important is the level of signifiansinya (must be less than 5% or 0.05) and the value of the construct of reliability ($\rho\eta$) > 0.70. Study variables are said to be valid if it has a value of unidimensional Goodness of Fit Index (GFI) > 0.90.

Loading Factor. Loading factor value shows the weighting of each indicator as a measure of each variable. Indicator with large loading factor indicates that an indicator measuring variables such as the strongest (dominant).

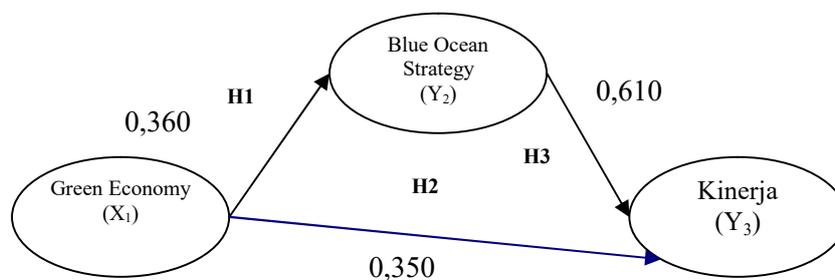


Figure 1 – Research Model

Each Path Coefficient of Relationship between Invalid Constructs. For the coefficients of the line, as the standard in the analysis of SEM, used component's. The standardized

coefficients, are used because this coefficient refers to the net contribution from a direct relationship between the variables.

The top line of the influence coefficient of green economy (X1) to the blue ocean strategy (Y1) of 0.360. This means if the green economy (X1) rises then the blue ocean strategy (Y1) will increase. Conversely, if the green economy (X1) get down then the blue ocean strategy (Y1) will decrease. Practically, this means that any improvements of the green economy of creative industries would increase the blue ocean strategy of creative industries in ,.

The top line of the influence coefficient of green economy (X1) against performance (Y2) of 0.350. This means if the green economy (X1) increases then the performance (Y2) will increase. Conversely, if the green economy (X1) get down then the performance (Y2) will decrease. Practically, this means that any improvements of the green economy will improve the performance of the creative industries.

The top line of influence coefficient of blue ocean strategy (Y1) against performance (Y2) of 0.610. This means if the blue ocean strategy (Y1) increases then the performance (Y2) will increase. Conversely, if the blue ocean strategy (Y1) get down then the performance (Y2) will decrease. Practically, this means any repairs of blue ocean strategy will improve the performance of the creative industries.

The Results of Hypothesis Testing. Hypothesis testing is done with test t (t test) on each line partially direct influence. A complete analysis of the results is contained in the results of the analysis of SEM.

Hypothesis 1: the Green economy (X1) effect significantly to the blue ocean strategy (Y1). The SEM analysis results variable green economy (X1) to the blue ocean strategy (Y1) 0.360 path coefficient were obtained and the p-value 0.002. Then there is enough empirical evidence to accept the hypothesis that the "green economy" (X1) effect significantly to blue ocean strategy (Y1). Given the marked path coefficient is positive (0.360), meaning the relationship both this variable is positive, it means the better the green economy, then the higher the blue ocean strategy employees.

Hypothesis 2: Green economy (X 1) effect significantly to performance (Y2). The SEM analysis results variable Green economy (X1) to the performance (Y2) 0.350 path coefficient were obtained and the p-value 0.013. Then there is enough empirical evidence to accept the hypothesis that the "Green economy" (X1) effect significantly to performance (Y2). Given the marked path coefficient is positive (0.350), meaning the relationship both this variable is positive, it means the better the Green economy, then the higher the performance of employees.

Hypothesis 3: Blue ocean strategy (Y1) significant effect on performance (Y2). The SEM analysis results variable Blue ocean strategy (Y1) to the performance (Y2) 0.610 path coefficient were obtained and the p-value of 0.027. Then there is enough empirical evidence to accept the hypothesis that "Blue ocean strategy (Y1) significant effect on performance (Y2)". Given the marked path coefficient is positive (0.610), meaning the relationship both these variables are positive, meaning that the higher the Blue ocean strategy, then the higher the performance of employees.

CONCLUSION

Blue ocean strategy gives a dominant influence on performance of creative industry.

The necessity of maintaining the Blue Ocean strategy impacting positively on the performance of, and working to reduce the negative impact of the culture. It is realized, it is no easy job as it pertains to mental attitude. Similarly facing cross cultural, we should be able to distinguish and filter cross cultural influences.

The performance of creative industry still needs refinement and development in order to face globalization.

The application of the norms of the green economy that is universal in Indonesia should be adjusted with the lofty values and culture of the nation of Indonesia.

Pearls of wisdom on value of Javanese culture coloring and contribute valuable against the performance of the creative industry.

REFERENCES

1. Akhmad Fauzi, *Ekonomi Hijau untuk Bumi*, Artikel pada Surat Kabar Harian KOMPAS, Jakarta, 7 Juli 2012.
2. Cato, M.S., *Green Economics: An Introduction to Theory, Policy and Practice*, earthscan, London, 2009, dalam Sudarsono Soedomo, *Ekonomi Hijau: Pendekatan Sosial, Kultural dan Teknologi*, makalah pada Diskusi “Konsep Ekonomi Hijau/Pembangunan Ekonomi yang Berkelanjutan untuk Indonesia, Jakarta 14 Juli 2010.
3. Chay Asdak, *Kajian Lingkungan Hidup Strategis: Jalan Menuju Pembangunan Berkelanjutan*, Gadjah Mada University Press, Yogyakarta, 2012.
4. Daud Silalahi, *Pembangunan Berkelanjutan dalam Rangka Pengelolaan (termasuk Perlindungan) Sumber Daya Alam berbasis Pembangunan Sosial Ekonomi*, Makalah pada Seminar Pembangunan Hukum Nasional VIII, Bali 14-18 Juli 2003.
5. Fungsi dan Peran Asuransi dalam Perlindungan dan Penegakan Hukum Lingkungan, Makalah pada Seminar Nasional “Peran Asuransi Lingkungan dalam Pemberian Ganti Kerugian bagi Masyarakat dan Pemulihan Lingkungan, Fakultas Hukum Unpad, Bandung 13 September 2012.
Ditjen Pengelolaan Lahan dan Air (PLA) Kementerian Pertanian, *Strategi dan Kebijakan Pengelolaan Lahan*, Jakarta, 2005.
6. Emil Salim, *Ratusan Bangsa Merusak Satu Bumi*, Penerbit KOMPAS, Jakarta, 2010.
7. Hariadi Kartodihadjo dan Hira Jhamtani (penyunting), *Politik Lingkungan dan kekuasaan di Indonesia*, Equinox Publishing Indonesia-Ford Foundation, Jakarta, 2006.
8. Hasim Purba, *Reformasi Agraria dan Tanah untuk Rakyat: Sengketa Petani vs Perkebunan*, artikel pada Jurnal Law Review, Volume X, No. 2 November 2010.
9. Ida Nurlinda, *Prinsip-prinsip Pembaruan Agraria: Perspektif Hukum*, Raja Grafindo Persada, Jakarta, 2009.
10. Koesnadi Hardjasoemantri, *Hukum Tata Lingkungan*, Gadjah Mada Press, Yogyakarta, 2006.
11. Laksmi Dhewanthi, *Kebijakan Instrumen Ekonomi Lingkungan Hidup: Asuransi bagi Perlindungan dan Pengelolaan Lingkungan Hidup*, Makalah pada Seminar Nasional “Peran Asuransi Lingkungan dalam Pemberian Ganti Kerugian bagi Masyarakat dan Pemulihan Lingkungan, Fakultas Hukum Unpad, Bandung, 13 September 2012.
12. Makmun, *Green Economy: Konsep, Implementasi dan Peranan Kementerian Keuangan*, Artikel dalam Jurnal “Ekonomi dan Pembangunan”, LIPI, volume XIX (2) 2011.
13. Maria Sumardjono, *Transnasional Justice atas Hak Sumber Daya Alam*, tulisan dalam buku *Himpunan tulisan Komnas HAM: Keadilan dalam Masa Transisi*, Komnas HAM-Jakarta, 2001.
14. Otto Soemarwoto, *Pembangunan Berkelanjutan antar Konsep dan Realitas*, Ceramah umum ulang tahun Otto Soemarwoto ke-80 di Universitas Padjadjaran, Bandung, 20 Februari 2006.
15. Sonny Mumbunan, *Ekonomi Hijau dan Pemerintahan Bersih*, www.perspektifbaru.com, diunduh 1 Juni 2012.
16. Velix Wanggai, *Menuju Ekonomi Hijau*, Artikel pada Jurnal Nasional, Jakarta, 28 Juni 2012.

DOI <https://doi.org/10.18551/rjoas.2018-11.44>

FRESH FISH MARKETING ANALYSIS OF SMALL-SCALE FISHERIES IN BELU, EAST NUSA TENGGARA OF INDONESIA

Kiuk Johanis W.*

Faculty of Economics, Artha Wacana Christian University, Kupang, Indonesia

Rehatta Beatrix M.

Faculty of Fisheries and Marine Sciences, Artha Wacana Christian University,
Kupang, Indonesia

Ninef Jotham S.R.

Faculty of Marine and Fisheries, University of Nusa Cendana, Kupang, Indonesia

*E-mail: jhnkiuk@ukaw.ac.id

ABSTRACT

Small-scale fisheries play main role in fish capture and fulfillment of fish demand for local people primarily in Belu. In the activities of fisheries resources utilization, marketing seems to be an important part in order to distribute fish catch to consumers. The main problems majorily come from fish perishability (highly susceptible to deterioration and quality degradation), in which the production centers are distributed to many locations and far from retail markets. Marketing system should be established properly, enabling to effectively distribute fishery products to consumers while maintaining their quality. This research was conducted in fish production centers of Belu, specifically in some villages, i.e. Silawan, Kenebibi, Jenilu and Dualaus, as well as in fish market center in Atambua. The analysis of fresh fish marketing system in small-scale fisheries in Belu focused mainly on marketing channels and marketing functions in each marketing institution. As a result, marketing channel for fresh fish in Belu consisted of six types that involved six marketing institutions. The marketing factors included selling, purchasing, sortation, storage, transportation, risk, cost, and market information. All marketing institutions performed following functions: selling, risk, cost, and market information, while retailers performed entire marketing functions. However, other agents performed some marketing functions.

KEY WORDS

Marketing, small-scale fisheries, Belu, public service.

Marketing is an essential in fishery activities; fish catch is commercially valuable when it is purchased (Hanafiah and Saefuddin 2006). Marketing activities involved positioning and market control (especially buyer) for fish catches by fishermen, cooperation, company, and community. In short, the activities could provide commercial income for fishermen, enabling to produce significant positive impact to them, while unsold fish could adversely affect their income. Marketing refers to the activities in order to ensure that fresh fish from marine are transported to the next destination in micro level, which is highly essential for fishermen, cooperation, company, and community. In micro level, fish marketing included promotion for fish consumption (for instance by a national campaign for fish consumption by a particular organization) and specific promotion (for instance by advertisements for targeted countries). In this case, the efforts for enhancement of marketing and distribution significantly contributed to the economy development in a region. The fish distribution mechanism is also crucial, where marketing system is accomplished when the fish reach buyers. This is noteworthy that in fact, people in developing countries, even reaching 50% of total population, cannot eat fish due to a simple main cause, i.e. unavailability. In some countries, the fish consumption per capita was low which may be ascribed to high cost, but in other parts of the world, fish is not considered as traditional food, resulting in a low demand.

In this study, analysis of fresh fish marketing system in Belu District was performed using functional and institutional approach. Institutional approach is based on analysis of marketing channels, while functional approach is based on analysis of marketing functions performed by all involved institutions in each marketing agent.

METHODS OF RESEARCH

This current work was conducted in fish production and marketing centers in some villages of Belu District, i.e. Silawan, Kenebibi, Jenilu and Dualaus, and central market in Atambua City. Data were collected using survey and observation. Survey was performed using semi-structured interview. Respondents were selected according to purposive sampling, intentionally selecting them based on roles of the respondents in fish marketing chain, including fishermen, retailer, assembly agent, wholesaler, and consumer. Observation was conducted using non-participative method towards fish marketing activities. Parameters of the research included 1) identification of marketing institutions, 2) analysis of marketing channels, and 3) analysis of marketing functions performed by each marketing institution. Data were then analyzed using descriptive-analytic approach.

RESULTS AND DISCUSSION

Small-scale fisheries performance. Fishing vessels in Belu are categorized into 3 types, i.e. motorized boats, outboard motorized boat, and non-motorized boat, as presented in Table 1.

Table 1 – Number of fishing boat by its type in Belu, 2012-2014

No	Type of boat	Number (Unit)			Increment (%)
		2012	2013	2014	
1.	Non-motorized boat	602	645	645	7.14
	a. <i>Jukung</i> (wooden boat)	542	559	559	3.14
	b. <i>Perahu Papan</i> (wooden plank-built boat)	60	86	86	43.33
	• Small	27	44	44	62.96
	• Medium	18	27	27	50.00
	• Large	15	15	15	0
2.	Outboard motorized boat	295	318	325	10.17
3.	Motorized boat	48	53	53	10.42
Total		945	1016	1023	8.25

Source: DKP of Belu (2015).

According to a number of fishing vessels in 2014, we could mention that non-motorized boat seemed to be dominant (63.05%), being significantly higher than outboard motorized boat (31.77%) and motorized boat (5.18%), as reported by DKP of Belu (2015). This suggests that capture fisheries in Belu are a small-scale fishery, which commonly operates in onshore or along the coast from their home with a limited operational range.

Fishing gears in Belu may vary, depending on the need of fishermen. In this case, we reported 9 types of fishing gear, i.e seine net, purse seine, gill net, trammel net, lift net, pole and line, cash net, *bubu* (trap), and others, as presented in Table 2.

Table 2 – Type and percentage of fishing gear in Belu

No	Type of fishing gear	Number (Unit)		Percentage (%)	
		2013	2014	2013	2014
1.	Seine net	10	16	0.46	0.78
2.	Purse seine	6	0	0.27	0
3.	Gill net	999	833	45.78	40.67
4.	Trammel net	246	291	11.27	14.21
5.	Lift net	6	6	0.27	0.29
6.	Pool and line	528	515	24.20	25.15
7.	Cash net	186	186	8.52	9.08
8.	<i>Bubu</i> (trap)	151	151	6.92	7.37
9.	Other	50	50	2.29	2.44
Total		2182	2048	100	100

Source: DKP of Belu (2015).

As mentioned above, the dominant fishing gear in Belu was gill net, pool and line, trammel net, cash net, and *bubu*, accounting for 95% of the total fishing gear used in Belu. The characteristics of the common fishing tool in Belu sea are passive fishing gear which is used in shallow waters around sea grass area and coral reefs. This indicates that most fishermen in Belu are traditional fishers that operate in shallow waters using various simple fishing tools. The finding is also in line with limitation in number and capacity of vessels dominated by non-motorized boat and outboard motorized boat (94.82 %).

Capture fisheries commodities in Belu included 5 types of fish resources, i.e. small pelagic, large pelagic, demersal fish, mollusc, and crustacea (Figure 1). Based on DKP of Belu (2015), small pelagic showed the greatest contributor for capture fisheries in 2014, reaching 38.52%, followed by large pelagic (31.43%), demersal fish (19.89%), crustaceae (6.60%) and mollusc (3.56%).

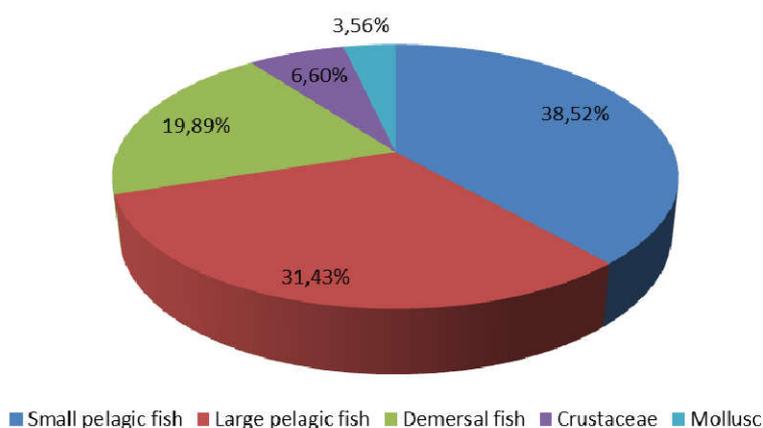


Figure 1 – Contributor of capture fisheries by group of fish resources in Belu (Source: DKP of Belu 2015)

Fishery households (*Rumah Tangga Perikanan*, RTP) and fishermen in Belu were categorized into 3 groups based on their livelihood, i.e. full-time fishermen, part-time (major) fishermen, and part-time (minor) fishermen. Totally, their population reached 2925 people in 2014, consisting of 1266 (43.28%) full-time fishermen, 247 (8.44%) part-time (major) fishermen, and 1412 (48.27%) part-time (minor) fishermen. The full-time fishermen from RTP were recorded at 378 RTP (28.70%), while their number as major and minor part-time fishermen was 86 RTP (6.53%) and 853 RTP (64.77%), respectively (DKP of Belu, 2015).

Marketing channels. Fishery products are perishable, which means that they are highly susceptible to spoilage. In addition, their production centers are also not concentrated and far away from markets (Hanafiah and Saefuddin 2006). Furthermore, there is a need to establish marketing system allow providing a rapid distribution of fish to consumers without reducing the quality of fish. Hidayati (2000) reported that marketing institution services were strongly helpful in order to connect producers and consumers.

Marketing channels in small-scale fisheries located in Belu comprised of 7 marketing institutions, including:

1. Fishermen;
2. Retailers;
3. Assembly agents;
4. Wholesalers;
5. Non-native fishermen;
6. Consumers.

A marketing channel refers to channel actors as a sequence of institutions that carry out the transfer of goods from the producer to the end-costumer. In general, a product may have more than one marketing channel, either complex or simple pattern, mainly depending on the type of product. Marketing institutions capable of distributing product rapidly often

possess a simpler channel. Activities on marketing channel are strategic efforts which are based on their capability to create assistance on producing economical value. The economical value itself can determine the price of product and service to individuals (Swastha 2002). In marketing channel, producers frequently involve middlemen or intermediaries, referred to an independent and distinct institution standing between producers and end-customers.

In this present work, the pattern of fresh fish marketing channel in small-scale fisheries in Belu is described as follows:

1. Fishermen – consumers;
2. Fishermen – retailers – consumers;
3. Fishermen – assembly agents – retailers – consumers;
4. Fishermen – assembly agents – consumers;
5. Fishermen – wholesalers;
6. Fishermen – non-native fishermen.

The schematic description of marketing channel is depicted in Figure 2.

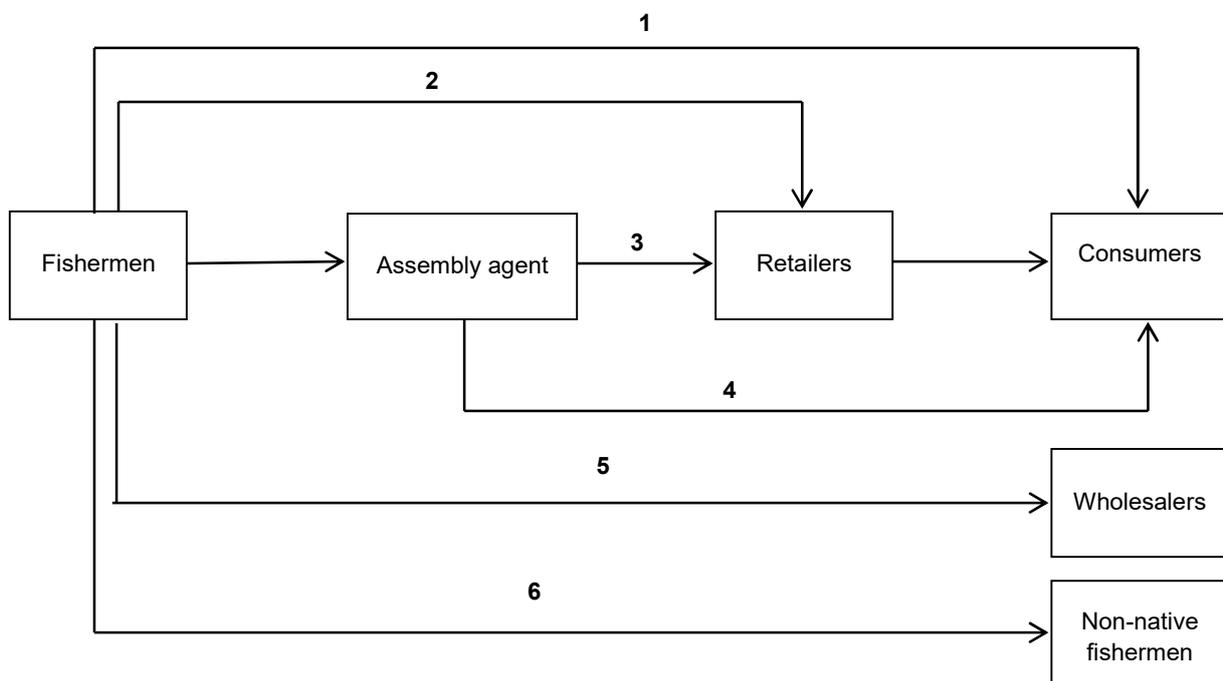


Figure 2 – Marketing channel of fresh fish in Belu

1. Fishermen – Consumers. This marketing channel occurs when consumers are close to the fishermen as producers. In this case, consumers buy fish just after the fish are landed in port or coast. The consumers are also from fishery household. They purchase fish due to absence of their family in fishing activities.

2. Fishermen – Retailers – Consumers. In this channel, retailers closely live with fishermen, or even they are part of the fishermen's family (wife, children, sister). The fish are then brought to market in Atambua or sold along main road near their home. This marketing channel is often used by fishermen when the volume of fish catch is low. Through this strategy, fishermen can directly collect money from their selling. Retailers, that may be fishermen's wife, daughter, and sister, directly use the money to buy their main foods such as rice and frying oil, after selling fish.

3. Fishermen – Assembly agent – Retailers – Consumers. This channel seems to be one of the most popular pathways in Belu. This is used by many fishermen that capture fish using lampara net since the fishing gear allows to capture fish in a large volume. Fishermen and assembly agent have established an agreement to sell the fish for a long time. This allows the fishermen to keep earning money at a high supply of fish, since assembly agent purchase their fish. The assembly agent has a full control to the fish in market. From market,

the fish are then distributed to retailers and sold to consumers. During low fishing season, where fish are rather scarce, the fishermen have to sell their capture to regular assembly agent, although they may have a better option to sell fish to other agents, enabling them to earn more money.

4. Fishermen – Assembly agents – Consumers. In this case, assembly agents also operate as retailers, depending on fish availability. In excessive fish supply, assembly agents serve to collect fish and sell it to retailers. In contrast, at a limited fish supply, they directly sell fish to consumers in market. The assembly agents can obtain a lot of profits through this marketing channel.

5. Fishermen – Wholesalers. This present channel often occurs for tuna, in which fishermen have already built cooperation with wholesalers that will buy their fish. The company (buyer) covers operational cost and in some cases, they also provide fishing vessels. The main market for tuna is in other regions such as Bali and export in either whole or loin form to Timor Leste. In 2016, total fishery products for other area and export to Timor Leste by wholesalers reached 135,388.8 kg.

6. Fishermen – Non-native fishermen. The most cases for this channel are from fish capture using fish hook and lampara in around Fishing Aggregating Device (FAD). The fish catches are often sold to fishermen from Timor Leste and the transaction is conducted in sea, just before landing to the port. This is a common activity since they have established a collaborative understanding in capturing fish around FAD. When fishermen from Timor Leste are unable to catch fish in FAD, they will purchase fish from local fishermen and bring it to their country.

Marketing function. Marketing function performed by marketing institutions include 3 main aspects: exchange (selling and purchasing), physic (sortation, storage, transportation), and facility (risk, cost and market information). All marketing institution perform selling, risk, cost and market information function. Retailers are found to perform all marketing functions studied, while other institutions perform some functions, as presented in Table 3.

Table 3 – Marketing functions of small-scale fisheries by institutions in Belu

Marketing institution channels	Marketing function							
	Exchange		Physic			Facility		
	Selling	Purchaning	Transportation	Storage	Sortation	Risk	Cost	Market Information
Channel 1 : Fishermen	*				*	*	*	
Channel 2 : Fishermen	*					*	*	*
Retailer	*	*	*	*	*	*	*	*
Channel 3 : Fishermen	*					*	*	*
Assembly agent	*	*	*			*	*	*
Retailer	*	*	*	*	*	*	*	*
Channel 4 : Fishermen	*					*	*	*
Assembly agent	*	*	*	*	*	*	*	*
Channel 5 : Fishermen	*				*	*	*	
Wholesaler	*	*	*	*	*	*	*	*
Channel 6 : Fishermen	*						*	*
Non-native fishermen	*	*	*	*	*	*	*	*

CONCLUSION

Marketing channels of fresh fish in small-scale fisheries in Belu covered 6 channels that involved 6 marketing institutions. The marketing functions performed by the studied institutions included selling, purchasing, sortation, storage, transportation, risk, cost, and

market information. Retailers were observed to perform all marketing functions, while others performed some marketing functions.

ACKNOWLEDGEMENTS

Authors would like to express thank to General Directorate of Higher Education, Ministry of Research and Higher Education, for providing financial support under scheme of Applied Product Research (Penelitian Produk Terapan, PPT) year 2017 - 2018.

REFERENCES

1. Apituley, Y.M.N.T., D Bawole. 2017. Development of fresh fish marketing in Maluku. Occasional papers No. 58 (March 2017)
2. Baba, Md., I.D. Sanchi, T.A. Manga. 2015. Analysis of fresh fish marketing in Ngaski Local Government Area of Kebbi State, Nigeria. *International Journal of Sustainable Agricultural Research*. Vol. 2, No. 2. Pp 22-30
3. Butler JRA, R Gunn, HL Berry, GA Wagey, BD Hardesty, C Wilcox. 2013. A value chain analysis of ghost nets in the Arafura Sea: Identifying trans-boundary stakeholders, intervention points and livelihood trade-offs. *Journal of Environmental Management* 123 (2013) 14-25.
4. DKP [Dinas Kelautan dan Perikanan] Kabupaten Belu. 2015. Status Pengembangan Perikanan Tangkap dan Perikanan Budidaya di Kabupaten Belu.
5. DKP [Dinas Kelautan dan Perikanan] Provinsi Nusa Tenggara Timur. 2016. Statistik Perikanan Tangkap 2016. Dinas Kelautan dan Perikanan Provinsi Nusa Tenggara Timur. Kupang.
6. Fauzi, A. 2004. *Ekonomi Sumberdaya Alam dan Lingkungan: Teori dan Aplikasi*. PT. Gramedia Pustaka Utama, Jakarta.
7. Hanafiah AM, Saefuddin AM. 2006. *Tataniaga Hasil Perikanan*. Penerbit Universitas Indonesia. Jakarta.
8. Hidayati A. 2000. Analisis Kinerja Sistem Pemasaran dan Lembaga Penunjang Pemasaran Kaitannya Dengan Pengembangan Produksi Rumput Laut di Kabupaten Lombok Timur [Tesis]. Program Pascasarjana, Institut Pertanian Bogor. Bogor.
9. Kotler P, Amstrong G. 2004. *Dasar-Dasar Pemasaran*. Terjemahan Alex Sindoro dan Bambang Sarwiji, Edisi Sembilan, Jilid 1 dan 2. PT Indeks. Jakarta.
10. Luhur, ES, R. Yusuf. 2017. Analisis rantai nilai ikan cakalang di Kota Ambon, Maluku. *Jurnal Sosek KP* Vol. 12 No. 1. Juni 2017: 93-105
11. Nielsen M, P Andersen, L Ravensbeck, F Langesen, DM Kristofersson, H Ellefsen. 2017. Fisheries management and the value chain: The Northeast Atlantic pelagic fisheries case. *Fisheries Research* 186 (2017) 36-47.
12. Nikijuluw VPH. 2002. *Rezim Pengelolaan Sumberdaya Perikanan*. Kerjasama P3R dengan PT Pustaka Cidesindo. Jakarta.
13. Purwaningsih, R. 2015. Analisis Nilai Tambah Produk Perikanan Lemuru Pelabuhan Muncar Banyuwangi. *Jurnal Ilmiah Teknik Industri*, 14(1): 13-23.
14. Rosales RM, R Pomeroy, IJ Calabio, M Batong, K Cedo, N Escara, V Facunla, A Gulayan, M Narvadez, M Sarahadil, MA Sobrevega. 2017. Value chain analysis and small-scale fisheries management. *Marine Policy* 83 (2017) 11-21.
15. Swastha B. 2002. *Azas-Azas Marketing*. Edisi II. Penerbit Liberty. Yogyakarta.
16. Widodo J, Suadi. 2006. *Pengelolaan Sumberdaya Perikanan Laut*. Gadjah Mada University Press. Yogyakarta.

DOI <https://doi.org/10.18551/rjoas.2018-11.45>

ESTIMATION OF HOUSEHOLD CONSUMPTION EXPENDITURE OF SMALL-SCALE FISHERMEN IN INDONESIA

Rahim A., Hastuti D.R.D.

Faculty of Economics, University of Negeri Makassar, Indonesia

Bustanul N.

Faculty of Agriculture, University of Hasanuddin, Indonesia

*E-mail: abd.rahim@unm.ac.id

ORCID: 0000-0002-1720-7150

ABSTRACT

One of the causes of changes in household consumption expenditure of small-scale fishermen in Indonesia is the change of catches production and catching business income resulting from seasonal changes every year. Changes in household consumption expenditures are certainly influenced by the determinants. Based on the time dimension, this paper uses cross-sectional data sourced from primary data with the respondents of outboard motor fishermen and non-powered motor. The econometric analysis of multiple linear regressions with the classical assumption test is used in this method. The determinants of expenditure for household consumption of outboard motor are positively influenced by the number of family members covered and the difference in the area of residence of the fisherman and negatively by the household income, whereas the wife's formal education has no significant effect. In contrast, household consumption expenditures of non-powered motor fishermen are positively influenced by household income and are negatively influenced by wife education and regional differences, while the number of family members borne has no significant effect.

KEY WORDS

Household expenditure, small-scale fisherman, outboard motor, non-powered motor, Indonesia.

International fisheries policy through the Committee on Fisheries (COFI) and Subcommittee is to support the sustainable development and safeguard of small fisheries in the context since small-scale fisheries produce two-thirds of all targeted catches for direct human consumption and provide 90% of employment in this sector (Food and Agriculture Organizations, 2016), while the objective of fisheries development in Indonesia is to improve the welfare of fishermen, fish farmers and other coastal communities (Keputusan Menteri Kelautan dan Perikanan No.18/Men/2002) through the development of economic activities, quality improvement and quantity of human resources, strengthening of socio-economic institutions, and utilize marine and fishery resources in an optimal and (Keputusan Menteri Kelautan dan Perikanan No.18/ Men/2004).

In particular traditional fishermen are small-scale fishermen (Al-Marshudi and Kotagama, 2006; Andrew and Evans, 2009; Lopes and Begossi, 2011; Gebremedhin *et al.*, 2013) or artisanal fisheries (Mozumder, *et al.*, 2018) characterized as poor and marginalized (Asiedu, *et al.*, 2013), but these small-scale fisheries support the livelihoods and wellbeing of more than 500 million people worldwide and as an important source of income in developing countries where millions of poor people live near the coast and nearly 97% of world's fishermen are located (Pomeroy and Andrew, 2011; Mauthe *et al.*, 2013) of the 36 million fishermen in the world (Mohammed, *et al.*, 2017) In Indonesia, the fishing population is dominated by small-scale fishermen (Susanto *et al.*, 2017), 95% of traditional fishermen (Sudarmo *et al.*, 2015).

Small-scale fishermen consist of outboard motor and non-powered motor while modern fishermen are using motor boats (Gebremedhin *et al.*, 2013) using catching technology in the form of outboard engines (Ele and Nkang, 2014) and simple fishing gear (Rahim and Hastuti, 2017; Rahim *et al.*, 2018), whereas according to Law no. 45 of 2009 on fisheries in Indonesia that small-scale fishermen are small fishermen with the size of fishing vessels owned by the largest 5 *gross tonnage* (GT).

Most of the small-scale fishermen in Indonesia are found in coastal areas (Rahim and Hastuti, 2018; Rahim, 2018) and become one of the economic development sections of the coastal zone (Israel *et al.*, 2004). Although part of economic development, however, the level of welfare is still below other sectors and generally occupy the lowest strata compared to other communities on land, even as marginalized groups (Asiedu, *et al.*, 2013) because it belongs to the poorest groups in all countries with the attributes of "the poorest of poor" (Wiyono and Mustaruddin, 2015), ironically 32.14% of the 16.42 million people in coastal communities in Indonesia are alive below the poverty line with an income indicator of US \$ 1 per day (Muflikhati *et al.*, 2010) or with per capita income per month US \$ 7-10 (Agunggunanto, 2011).

The case in this research is the change of expenditure for the consumption of small-scale fishermen in West coastal area of Barru District South Sulawesi Province Indonesia caused by the change of catching production and catching income (Rahim and Hastuti, 2017). Research on household consumption expenditure of fishermen has been done in many countries, as reported by Israel *et al.*, (2004) in the Philippines, Mukarrama *et al.*, (2010) in Sri Lanka, Khan *et al.*, (2012) in Bangladesh, Ofwona (2013) in Kenya, Olamedji *et al.*, (2015) in Nigeria, as well as in Indonesia itself (Zamroni and Yamao, 2011; Zulkifli *et al.*, 2015). However, the findings have not yet discussed the determinant or factors that affect the change in household consumption expenditure of small-scale fishermen.

In economics, household consumption expenditure is financial planning (Tapsin and Hepsa, 2014) considered the primary indicator of the welfare economy (Moratti and Natali, 2012) and the most important component of national income and aggregate demand (Khan, 2014). Furthermore each household seeks to maximize utility in consuming goods and services with income levels as constraints (Carrol, 2001), which refers to an independent household decision (Bonke, 2015). In general, changes in consumption are influenced by changes in income (Carrol, 2001; Ofwona, 2013), net income and time-discount rate, leisure, wealth or assets (Branson, 1989), while changes in household consumption expenditures are microeconomically affected by age, income, marital status, insurance and household size (Caglayan and Astar, 2012), while macroeconomically influenced by price level changes that have the effect of real income and real exchange rate (Bonsu and Muzindutsi, 2017).

The purpose of this paper is to estimate the consumption expenditure of small-scale fishermen households using econometric approach with a qualitative independent variable determinant model in the West coastal area of Barru District, South Sulawesi Province, Indonesia as the case study.

MATERIALS AND METHODS OF RESEARCH

We used an Explanatory method for estimate of small-scale catch fishermen household consumption expenditure in Indonesia. Cross-Section data from a household fishermen survey. Questionnaires were administered to 107 of 586 total respondents, including 69 of outboard motor and 38 of non-powered motor boats. Number of sample about 10-20% of total respondents (Gay and Diehl, 1992)

We used a multiple regression method with exponential functions model for analyzed estimate of small-scale catch fishermen household consumption expenditure using econometric approach of qualitative independent variable (dummy variable) with method of analysis with non linear regression equation: (Gujarati and Porter, 2009).

$$CRTNPM = \beta_0 \pi RTNPM^{\beta_1} AEdIstr^{\beta_2} QAKT^{\beta_3} KTR^{\beta_4} KB^{\beta_5} KSR^{\beta_6} KBLs^{\beta_7 \mu_1} \quad (1)$$

$$CRTNPTM = \beta_4 \pi RTNPM^{\beta_5} AEdIstr^{\beta_6} QAKT^{\beta_7} KTR^{\beta_8} KB^{\beta_9} KSR^{\beta_{10}} KBLs^{\beta_{11} \mu_2} \quad (2)$$

To facilitate the computation of equations (1) and (2) models, the equations are converted to multiple linear by double log or natural logarithms (Ln) as follows:

$$LnCRTNPM = Ln\beta_0 + \beta_2 Ln\pi RTNPM + \beta_3 LnEdIstr + \beta_4 LnQAKT + \delta_1 KTR + \delta_2 KB + \delta_3 KSR + \delta_4 KBLs + \mu_1 \quad (3)$$

$$LnCRTNPTM = Ln\beta_5 + \beta_6 Ln\pi RTNPM + \beta_7 LnEdIstr + \beta_8 LnQAKT + \delta_5 KTR + \delta_6 KB + \delta_7 KSR + \delta_8 KBLs + \mu_2 \quad (4)$$

Where, $LnCRTNPM$: household consumption expenditure fisherman outboard motor boats on food and non-food (IDR); $LnCRTNPTM$: household consumption expenditure fisherman non-powered motor on food and non-food (IDR); β_0 and β_5 : intercept; β_2, \dots, β_4 and β_6, \dots, β_8 : independent variable regression coefficients; $\delta_1, \dots, \delta_8$: dummy variable coefficient; $\pi RTNPM$: household income of fishermen outboard motor (IDR); $\pi RTNPTM$: household income of fishermen non-powered motor (IDR); $EdIstr$: wife education (years); QAK : the number of dependent family members (people); *Dummy* small-scale fishermen regional differences; KTR : 1, for the District of Tanete Rilau; 0, for the other; KB : 1, for the District of Barru; 0, for the other; KSR : 1, for the District of Soppeng Riaja; 0, for the other; $KBLs$: 1, for the District of Balusu; 0, for the other; μ_1 dan μ_2 : error term

RESULTS AND DISCUSION

Determinant or factors affecting household consumption expenditures of outboard motor and non-powered motor in the western coastal area of Barru District in addition to using multiple regression analysis models also used classical assumption assumptions of multicollinearity and heteroscedasticity (Table 1). The results of multicollinearity testing with Gujarati and Porter (2009) variance inflection factor (VIF) method do not show or indicate multicollinearity or double collinearity, VIF values less than 10 (Table 1). As for heteroscedasticity testing using park test (Gujarati and Porter, 2009), variable error as dependent variable with each independent variable and produce coefficient value (β) is not significant it can be concluded there is no heteroscedasticity (Table 1).

Table 1 – Determinant of Household Consumption Expenditure of Small-scale Fishermen

Independent Variable	E.S	Outboard Motor					Non powered Motor				
		β	t-test	VIF	Park	β	t-test	VIF	Park		
Household income	+	-0,276***	-4,692	1,445	0,017 ^{ns}	-0,086***	-3,334	1,101	-8,827 ^{ns}		
Education wife	+	0,013	1,521	1,522	-0,014 ^{ns}	1,011***	40,921	1,335	-0,939 ^{ns}		
Members of the family	+	1,475***	32,007	1,201	0,065 ^{ns}	0,031	1,261	1,028	0,941 ^{ns}		
Tanete Rilau Sub-District	+	-0,028	-0,871	1,253	0,000 ^{ns}	-0,011	-0,528	1,150	0,000 ^{ns}		
Barru Sub-District	+	0,020	0,709	1,334	0,000 ^{ns}	0,069**	1,967	7,082	0,000 ^{ns}		
Soppeng Riaja Sub-District	+	-0,104*	-2,143	3,393	0,000 ^{ns}	-2,284***	6,83	2,649	0,000 ^{ns}		
Balusu Sub-District	+	0,233*	1,887	1,882	0,000 ^{ns}	0,013	0,507	1,208	0,000 ^{ns}		
Intercept		-1,980				0,986					
F-test		176,18				325,145					
Adjusted R ²		0,947				0,986					
n		69				38					

*** = Significant error rate of 1% (0.01), or 99% confidence level; ** = Significant error rate of 5% (0.05), or 95% confidence level; * = Significant error rate of 10% (0.10), or 90% confidence level; ns = not significant; ES is an expectation sign; If the VIF value is less than 10 then there is no multicollinearity, otherwise If VIF value is greater than 10 then multicollinearity occurs ns => not significant; if β value is not significant, then it is not available heteroscedasticity, otherwise if the value of β significant, then there is heteroscedasticity.

In the measurement of the model accuracy of the adjusted R² shows the independent variables in the expenditure function model for household consumption of outboard motor and non-powered motor the presented can explain each of the percentage of free variable contribution to household income, wife education, number of members (94.7%) and 98.6% of the variation (ups and downs) of non-free variables while the other by 5.3% and 1.4% respectively are contributions from other factors which is not included in the model (Table 1). The result of F-test that the factors influencing the expenditure for household consumption of outboard motor and non-powered motor significantly influence the error rate of 1 percent (Table 1). It can be interpreted that all independent variables together (simultaneously)

significantly affect the expenditure for household consumption of fishermen. Furthermore, individual influence (partial) from each independent variable to expenditure for household consumption of fisherman used t-test and regression coefficient value in the discussion.

Variable income of small-scale fisherman households either motor boat fisherman or motor boat without negative influence to household consumption expenditure at error rate of 1% or 99% confidence level, meaning that every change of household income increase hence the expenditure of capture fisherman household in coastal area West Coast of Barru District will decrease. This is due to the decline in demand for food items, and to switch to secondary non-food needs in the form of education, clothing, health, and the need for fishing (fuel and fish bait). If it is related to the theory of the elasticity of demand for income, then the change in income increase leads to a decrease in inferior good demanded (Henderson and Quant, 1980).

These findings are consistent with Kartika (2012) in Mataram City, that the higher the family income, the proportion of expenditure on food consumption declines, followed by an increase in the proportion of non-food expenditure. The results of this study are different from other research areas, ie, income has a positive effect on household consumption expenditure in Madura Strait (Primyastanto *et al.*, 2013) and Donggala (Zulkifli *et al.*, 2015) and Khan *et al.* (2012) that the management of Community Based Fisheries (CBFM) in Bangladesh has a positive and significant impact on fishermen income and household expenditure. Changes in household income of fishermen will affect household expenditures derived from productive fishery conditions, such as those occurring in West Africa (Weigel *et al.*, 2018), fishing season in Tamil Nadu, India (Colwella and Axelrod, 2016), and climate change in the West Pacific Palau (Wabnitz *et al.*, 2018).

Empirically, the average expenditure for traditional fisherman household consumption expenditure in 5 sample sub-districts in Barru District y both food and non-food within a month, outboard motor fishermen (IDR 2.84 million = USD 218) and non-powered motor fishermen (IDR 1, 63 million = USD 125). Food consumption is the largest of non-food consumption, ie motor boat fishermen (IDR 1.8 million = USD 138) and non-motorized boat fishermen (IDR 1 million = USD 130) in the form of rice, side dishes, gas / kerosene, cooking oil, tea / coffee, and sugar. According Primyastanto *et al.*, (2013); Zulkifli *et al.*, (2015) the amount of expenditure for household consumption of fishermen in Indonesia comes from food and non-food. These findings are consistent with findings in Donggala District (Zulkifli, *et al.*, 2015) and Oladimeji *et al.*, (2015) in Nigeria that 77% of total monthly fisheries household expenditure and the remaining 23% for non-food are in the form of payments for energy, clothing, health and education.

Unlike the case with findings Musemwa *et al.*, (2013) most household consumption expenditure in South Africa is used to buy food rather than agricultural production because in that area it does not explore its agricultural potential. According to Erdogen *et al.*, (2011) food consumption, especially seafood is an important ingredient to improve intelligence in education and much needed parents, such as fish as the most inexpensive and affordable source of animal protein (Ogundari and Ojo, 2009). Furthermore, this finding is different from the findings that occurred in Sri Lanka that the expenditure for household consumption of fishermen has no effect on food security (Mukarrama *et al.*, 2010). According to Budiwinarto (2006) the greater the level of household income, the proportion of expenditure (consumption) for food is smaller than non-food, this is said to be the level of prosperity (welfare) of the economy getting better, as happened in Bangladesh that fishermen's welfare is determined by changes in household income and expenditure (Khan *et al.*, 2012).

The education of wife without a motor has a positive effect on the change of household consumption expenditure at a 1% error level or 99% confidence level, meaning that the high level of formal education of wife will decrease the expenditure for fisherman household consumption in West coastal area of Barru District. This indicates that the existence of formal education wife can help manage the family finances both expenditure for food consumption and non-food. The benefits of education are investment (Psacharopoulos & Patrinos, 2002) for the increase of income and consumption and their welfare (Agarwal *et al.*, 2009;

Rabearisoa and Norsis, 2013) because the higher the level of education, the decision will be more rational and lead to improved welfare economy of his family.

Another case education of outboard motor fishermen's wife does not significantly affect the changes in spending for household consumption of outboard motor fishermen both food and non-food expenditure. This happened because the average of formal education level of traditional fisherman wife of Barru District is not 55 (51,40%) primary school, followed by junior high level 29 (27,10%), elementary 17 soul (15,89%), senior high school as many as 6 people (5.61%), and college does not exist. This research is in line with Ningsih *et al.*, (2013) study that education level has no significant effect on food consumption pattern and fisherman household fishery in Tungkal Ilir Sub-district, Tanjung Jabung Barat District, and the level of education of women in fishery households in Vietnam is lower so that little chance to work in processing fish despite having access to credit (Hao, 2012).

The variable of the quantity of family members who bear the positive effect of the expenditure for household consumption, meaning the more the number of family members there is a tendency of spending for household consumption more and more. Another case expenditure for household consumption of non-powered motor is not affected by the number of family members borne. This study is different from the findings of Lantika (2009) that the number of family members has a negative effect on household consumption in Samaan Malang City. The quantity of family members who will use a small amount of income will result in low levels of consumption because the number of family dependents will encourage fishermen to work hard to meet the needs of family members (Rahim and Hastuti, 2017). This affects the productivity of work, intelligence and declining ability to invest so as to affect the level of welfare, such as Roumah (2015) findings on coastal fishing communities in Malaysia, that the size or number of family members will greatly determine the poverty of fishermen other than income, Education, and marital status.

Empirically, the quantity of family members in the household of motor boat fishermen of Barru District consisting of his wife and children and other family members between 1 - 5 people who live in a fisherman's household thus affect the changes in household consumption expenditure such as food needs (rice, side dishes, cooking oil, kerosene, gas, sugar, tea and coffee), non-food (education, clothing, health, and the necessities of fishing like fuels and fish baits).

Dummy of differences in the areas where have a positive and negative impact on household consumption expenditure of fishermen in the western coastal area of Barru District at error rate of 1%, 5% and 10% as a comparison of the high or low expenditure consumption of traditional fishermen. Empirically, the consumption expenditure per sub-district within a month, that is the motor boat fisherman of Barru District as the capital of Barru District (IDR 3.1 million = USD 238) is bigger than the fishermen of Tanete Rilau Sub-district (IDR 1.6 million = USD 123) and more small from Balusu sub-district fishermen, IDR 3.6 million = USD 276. Unlike the case of the consumption of non-motorized boat fishermen in Kecamatan Barru (IDR 1.6 = USD 123) smaller than Soppeng Riaja fishermen (IDR 1.8 million = USD138) and Mallusetasi (IDR 1.9 million = USD 146). This result is different from the Saptanto *et al.*, (2011) study by comparing the amount of food and non-food household expenditure of each coastal fisherman in each sub district in Indramayu without using dummy variable regression determinant model such as this research.

Coastal fishing communities are a group of people living in coastal areas forming and having a distinctive culture associated with its dependence on the utilization of coastal resources in conducting economic activities (Fahrunnisa, 2015). This refers to the opinion of Ostorm and Hess (2007), that coastal coastal communities have rights over common property resources that provide the benefits and efficiency of the sustainability of existing resources. The role of common property provides (1) important roles in livelihoods, (2) minimizes the possibility of disputes or conflicts, and (3) shapes the community into a compact and control of shared resources (Fahrunnisa, 2015).

CONCLUSION AND RECOMMENDATIONS

Expenditures for household consumption of outboard motor small-scale fishermen are positively influenced by the number of family members covered and the different areas of the fisherman's residence, and then negatively influenced by household income, whereas the wife's formal education has no significant effect. Another case, household consumption expenditure of non-powered motor fishermen is positively influenced by household income and is negatively influenced by wife education and regional differences, while the number of family members covered is not significant

The increase in household income of outboard motor fishermen decreased their consumption expenditure, as a result of greater food consumption of non-food consumption. This is done by continuing to improve the pattern of food through subsidized rice distribution program or poor rice (*raskin*), especially during famine season (west season). In terms of education, the low education of the wife of outboard motor fishermen and non-powered motor so that consumption expenditures tend to not change in terms of quality because the income only comes from the sale of fish. Therefore, it is necessary to optimize the role of fishermen wife through the strategy of developing productive economy through empowerment program of fisherman wife such as cultivation of fish catch, fish cracker, fish meal and so on.

REFERENCES

1. Agarwal S., Rahman S., & Errington E. (2009). Measuring the determinants of relative economic income of rural areas. *Journal of Rural Studies*, 25, 309-321
2. Agunggunanto, E.Y. (2011), Analisis Kemiskinan dan Pendapatan Keluarga Nelayan Kasus di Kecamatan Wedung Kabupaten Demak, Jawa Tengah, Indonesia, *Jurnal Dinamika Ekonomi Pembangunan*, 1(1), 25-38
3. Al-Marshudi A.S., & Kotagama H. (2006). Socio-Economic Structure and Performance of Traditional Fishermen in the Sultanate of Oman. *Journal of Marine Resource Economics*, 21, 221-230.
4. Andrew N, & Evans. (2009). Approaches and Frameworks for Management and Research in Small-scale Fisheries in the Developing World. The World Fish Center Working Paper 1941. The World Fish Center, Penang, Malaysia
5. Asiedu B., Nunoo, F.K.E., Ofori-Danson, P.K., Sarpong, D.B., & Sumaila, U.R. (2013). Poverty Measurements in Small-scale Fisheries of Ghana: A Step towards Poverty Eradication. *Current Research Journal of Social Sciences*. 5(3),75-90
6. Barnes-Mauthe M, Oleson KLL., & Zafindrasilivonona B. (2013). The total economic value of small-scale fisheries with a characterization of post-landing trends: An application in Madagascar with Global Relevance, *Journal of Fisheries Research* 147: 175-185.
7. Budiwinarto, K. (2006). Penerapan Model Almost Ideal Demand System (AIDS) pada Pola Konsumsi Pangan Rumah Tangga Nelayan di Kecamatan Tambak Kabupaten Banyumas, Fakultas Ekonomi Universitas Surakarta
8. Bonke, J. 2015. Pooling of Income and Sharing Of Consumption Within Households. *Review of Economics of The Household*. 13(1):73-93
9. Bonsu, C.O., And Muzindutsi, P. 2017. Macroeconomic Determinants of Household Consumption Expenditure in Ghana: A Multivariate Cointegration Approach. *International Journal of Economics and Financial*. 7(4):737-745.
10. Branson, W.H. (1989). *Macroeconomic Theory and Policy*, 3th edition. Harper and Row Publisher, New York.
11. Ele, I.E, & Nkang MO. (2014). Analysis of Production Determinants and Technical Efficiency In Crayfish Production In The Lower Cross River Basin. Nigeria, *Journal of Research In Humanities and Social Science*. 2(11): 30-36
12. Caglayan, E., & Astar, M. (2012). A Microeconometric Analysis of Household Consumption Expenditure Determinants For Both Rural and Urban Areas In Turkey. *American International Journal of Contemporary Research*. 2(2):27-34

13. Carroll, C.D. (2001). A Theory of the Consumption Function, With and Without Liquidity Constraints. *Journal of Economic Perspective*. 23-45
14. Colwella, J.M.N., Axelrod, M. (2016). Socio-Economic Impacts of a Closed Fishing Season on Resource-Dependent Stakeholders in Tamil Nadu, India: Differences in Income and Expenditure Effects by Occupational Group. *Marine Policy*. 77: 182-190
15. Erdogan, B.E., Mol, S. Coşansu, S. (2011). Factors Influencing the Consumption of Seafood in Istanbul, Turkey. *Turkish Journal of Fisheries and Aquatic Sciences* 11: 631-639.
16. Fahrunnisa, Azhar, H., Muswar H.S, Miharja H.A., & Fahmi A. (2015). Dilema Agraria Pesisir (Studi Kasus Masyarakat Pesisir Dusun Ujung Genteng Kabupaten Sukabumi). *Jurnal Sosiologi Pedesaan*. 3 (3): 107-113.
17. Food and Agriculture Organization. (2016). Sustainable Small-Scale Fisheries. Fisheries and Aquaculture Department.
18. Gay, L.R., & Diehl, P.L. (1992). *Research Methods for Business and Management*. Publishing Company, New York
19. Gebremedhin S, Budusa M, Mingist M, & Vijverberg J. (2013). Determining Factors For Fishers' Income: The Case Of Lake Tana, Ethiopia. *International Journal of Current Research*. 5 (5):1182-1186.
20. Gujarati, D.N. and Porter, D.C. (2009), *Basic Econometrics*, 5th edition. McGraw-Hill, American
21. Hao, N.D. (2012). Gender Issues in the Fishery Communities of the Central Coastal Provinces of Vietnam. *Asian Fisheries Science*
22. Henderson, J.M., Quant, R.E. (1980). *Microeconomic Theory (A Mathematical Approach)* Third Edition, McGraw-Hill, New York
23. Israel DC, Adan, E.Y, Lopez, N.F., & Castro, J.C. (2004). Perceptions of Fishermen Households On The Long-Term Impact of Coastal Resources Management In Panguil Bay Philippine. *Journal of Development*. 31 (1):107-134
24. Kartika, I.B.E. (2012). Analisis Pola Konsumsi Masyarakat Berdasarkan Tingkat Pendapatan dan Jumlah Anggota Rumah Tangga di Kota Mataram, *Jurnal Ekonomi*.; 2(3) 25-31
25. Keputusan Menteri Kelautan dan Perikanan Nomor 18/Men/2002, Tentang Rencana Strategis Pembangunan Kelautan Perikanan Tahun 2002-2004, Jakarta
26. Keputusan Menteri Kelautan dan Perikanan Nomor 18/Men/2004, Tentang Program Pemberdayaan Ekonomi Masyarakat Pesisir, Jakarta
27. Khan, A., Alam, F., & Islam, K.J. (2012). The Impact of Co-Management on Household Income and Expenditure: An Empirical Analysis of Common Property Fishery Resource Management In Bangladesh. *Ocean & Coastal Management*. 65: 67-78.
28. Khan, H. (2014). An Empirical Investigation of Consumption Function under Relative Income Hypothesis: Evidence from Farm Households in Northern Pakistan. *International Journal of Economic Sciences*. 3(2):43-52
29. Lopes, P.F.M, & Begossi, A. (2011). Decision-Making Processes By Small-Scale Fishermen On The Southeast Coast of Brazil. *Journal Fisheries Management And Ecology*. 2(3):1-11
30. Long, L.H., & Yabe., M. (2011). Factors Affecting to Household Income of The Kinh and The Ethnic Minority in Rural Vietnam: A Case Study in The Buffer Zone of Bach Ma National Park. *Asian-African Journal of Economics and Econometrics*. 1 (11):135-145.
31. Muflikhati, I., Hartoyo, Sumarwan, U., Fahrudin, A., Puspitawati, H. (2010). Kondisi Sosial Ekonomi dan Tingkat Kesejahteraan Keluarga: Kasus Di Wilayah Pesisir Jawa Barat. *Jurnal Ilmu Kel. & Kons*. 3(1): 1-10
32. Mukarrama, M.M.F., Udugama, J.M.M., Jayasinghemudaligae, U.K., Ikram, S.M.M., & Dissanayake., S.N. (2010). Assessing the Household Food Security of Marine Fisheries Sector in Sri Lanka: Case of Muslim Fishing Community in the Beruwala Divisional Secretariat Division. *Journal Aquatic Science*. 61-73.

33. Musemwa, L., Zhou, L., Ndhleve, S., & Aghdasi, F. (2013). Factors Affecting Household Access To Enough Food In the Eastern Cape Province of South Africa. *Journal of Development and Agricultural Economics*, 5(3), 84-91. DOI: 10.5897/JDAE12.039
34. Mohammed, K.K., Dash, G., Kumari, S., 1, Sreenath, K.R1, Makwana, N.P., Dash, S.S., Ambrose T.V., Shyam, Shyam, S., Kripa, Zacharia,V., Zacharia, P. U. (2017). Vulnerability of Coastal Fisher Households to Climate Change: A Case Study from Gujarat, India. *Turkish Journal of Fisheries and Aquatic Sciences* 17, 193-203. DOI: 10.4194/1303-2712-v17_1_21
35. Moratti, M. & Natali, L. (2012). Measuring Household Welfare: Short versus long consumption modules. Working Paper 2012-04. UNICEF Office of Research, Florence
36. Mozumder, M.M.H., Shamsuzzaman, M., Un-Nabi, R., & Al-Rashid, A.H. (2018). Socio-Economic Characteristics and Fishing Operation Activities of the Artisanal Fishers in the Sundarbans Mangrove Forest, Bangladesh. *Turkish Journal of Fisheries and Aquatic Sciences*. 18, 789-799. DOI: 10.4194/1303-2712-v18_6_05
37. Ofwona, A.C. (2013). Determinant of the Consumption Function for Kenya Using Keynes' Absolute Income Hypothesis for the Period 1992-2011. *Journal of Emerging Trends in Economics and Management Sciences (JETEMS)*, 4(1),103-105
38. Ogundari, K., & Ojo, S.S. (2009). An Examination of Income Generation Potential of Aquaculture Farms in Alleviating Household Poverty: Estimation and Policy Implications from Nigeria. *Turkish Journal of Fisheries and Aquatic Sciences*, 9, 39-45
39. Oladimeji, Y.U., Abdulsalam, Z., Damisa, M.A., & Omokore, D.F. (2015). Analysis of Food Consumption Pattern among Rural Fishery Households: A Panacea to Poverty Alleviation in North Central Nigeria. *Asian Journal of Agricultural Extension, Economics & Sociology*. 6(2), 102-110
40. Ostorm, E., & Hess, C. (2007). Private and Common Property Rights. Workshop in Political Theory and Policy Analysis, Indiana University. W07-25.
41. Pameroy, R.S., & Andrew, N.L. (2011). *Small-Scale Fisheries Management: Frameworks and Approaches for the Developing World*. CPI Antony Rome, Chippenham
42. Psacharopoulos, G, & Patrinos, H.A. (2002). Returns to investment in education. A further update. Policy Research Working Paper No 2881. Washington, D.C. World Bank, Education Sector Unit, Latin America and the Caribbean Region, 36 pp
43. Rabearisoa, A.L., & Zorzi, E. (2013). An Economic Return To Education In Small-Scale Fisheries In North-East Madagascar. *Western Indian Ocean J. Mar. Sci.* 12 (2):185-188
44. Rahim, A., and Hastuti, D.R.D. (2017). Demand Estimation of Fresh Sea Fish with Panel Data Model. *Proceeding. The 1st International Conference On Education, Science, Art and Technology (The 1st ICESAT) Universitas Negeri Makassar*. 1(1): 279-287.
45. Rahim A, (2018). The Empowerment Strategy of The Traditional Fisherman's Wives In The Coastal Area of Barru Regency, South Sulawesi. *Journal of Socioeconomics and Development*. 1(1): 1-6
46. Rahim, A., and Hastuti, D.R.D. (2018). Applied Multiple Regression Method with Exponential Functions: an Estimation of Traditional Catch Fishermen Household Income. *Journal of Physics: Conference Series*. 1028(1), 1–8.
47. Rahim, A., Hastuti, D.R.D., Ningsih, S.R., Mardia, Nuryanti, D.M., Patta, A.A., Yatim, H., and Hayat, N.Z. 2018. The Influence of Marketing Volume and Marketing Channel on Fresh Tiger Shrimp Marketing Margin. *Indonesian Journal of Fundamental Sciences*. 4(1):16-23
48. Rhoumah, A.M.O. (2016). Determinants of Factors That Affect Poverty among Coastal Fishermen Community in Malaysia. *Journal of Economics and Finance*. 7(3):9-13. <http://doi/10.9790/5933-0703020912>
49. Primyastanto, M., Efani A., Soemarno, & Muhammad, S. (2013). Faktor Yang Berpengaruh Terhadap Pendapatan dan Pengeluaran Nelayan Payang Jurung Di Selat Madura. *Wacana*. 16 (1):15-23
50. Saptanto S., Lindawati, & Zulham A. (2011). Analisis Pola Migrasi Dan Konsumsi Rumah Tangga Di Daerah Asal Migrasi Terkait Kemiskinan Dan Kerentanan Pangan (Studi Kasus Indramayu). *Jurnal Organisasi dan Manajemen*. 7 (1): 21-37

51. Sudarmo, A.P., Baskoro, M.S., Wiryawan, B., Wiyono, E. S., & Monintja., D.R. (2015). Social Economics Characteristics of Coastal Small-Scale Fisheries In Tegal City, Indonesia. *International Journal of Scientific & Technology Research*. 4(1):85-88
52. Susanto, A., Irnawati R., Mustahal, & Syabana, M.A. (2017). Fishing Efficiency of LED Lamps for Fixed Lift Net Fisheries in Banten Bay Indonesia. *Turkish Journal of Fisheries and Aquatic Sciences* 17: 283-291. DOI: 10.4194/1303-2712-v17_2_07
53. Tapsin, G., & Hepsag. A. (2014). An Analysis Of Household Consumption Expenditures In Ea-18. *European Scientific Journal*. 10 (16):1-12
54. Wabnitz, C.C.C., Montemayor, A.M.C., Hanich, Q. & Ota, Y. (2018). Ecotourism, Climate Change and Reef Fish Consumption in Palau: Benefits, Trade-Offs And Adaptation Strategies. *Marine Policy*. 88:323-332 <https://doi.org/10.1016/j.marpol.2017.07.022>
55. Weigel, J.Y., Morand, P., Charpin, A., & Sadio, O. (2018). Impact Assessment of a Marine and Coastal Protected Area on Fishing Households Through a Counterfactual Approach. A Senegalese Case Study (West Africa). *Ocean & Coastal Management*. 55:113-125 <https://doi.org/10.1016/j.ocecoaman.2018.02.009> Get rights and content
56. Zamroni, A., & M. Yamao. (2011) Sustainable Household Economics: A Case of Altering Income of Small-Scale Fishermen In Indonesia. *International Conference On Financial Management and Economics*. 11 (11): 343-347
57. Zulkifli, Jokolelono E, & Muhtar, L.M. (2015). Analisis Konsumsi Rumah Tangga Nelayan Di Kelurahan Boneoge Kecamatan Banawa Kabupaten Donggala *Jurnal Katalogis*. 3 (12): 34-44

DOI <https://doi.org/10.18551/rjoas.2018-11.46>

ERYTHROCYTE MICRONUCLEI DESCRIPTION OF TILAPIA FISH IN SUNGAI WANGI WATERS, INDONESIA

Mardika Hanisya Putri Kania*, Herawati Endang Yuli, Zakiyah Umi

Faculty of Fisheries and Marine Sciences, University of Brawijaya, Indonesia

*E-mail: hanisyaputri@gmail.com

ABSTRACT

An increase in industrial and human activities results in another increase in the amount of domestic and industrial waste dumped to Sungai Wangi, a river located in Beji, Pasuruan Municipality, East Java. It is predicted that the waste contains accumulated heavy metals that cause damage to the river and living organisms in and around the river. One of the living organisms prone to the damage is tilapia fish. This fish is considered as an indicator of environmental damage taking place in Sungai Wangi. Its hematological profile (erythrocyte, hematocrit, total leukocyte and micronuclei) helps identifying how polluted the river is. Objective of this study is to describe environmental parameter score, heavy metal content in tilapia fish (*Oreochromis* sp) gills and liver and hematological parameter score (erythrocyte, hematocrit, total leukocyte and micronuclei). The findings stated that the amount of Pb and Cd found on the tilapia fish gills and liver has exceeded the normal threshold while the percentage of micronuclei is between 3.12 and 15.60%. At last, the heavy metal causes several erythrocyte micronuclei damage.

KEY WORDS

Micronuclei, erythrocytes, *Oreochromis* sp., Wangi River.

Human activities and rapid development are resulting in increasing amount of water pollutant. Foreign object dumped into the water, an example of water pollution, may cause accumulation into the water, substrate and living organism in the water. Javed, et.al (2016), reported that the freshwater or river can potentially be affected by anthropogenic and xenobiotic activities (heavy metals and pesticides). This condition is deteriorating quality of water in several rivers located in the city. One of them is Sungai Wangi, a river located in Wangi village, Beji, Pasuruan Municipality, Indonesia. Adam and Maftuch (2015) stated that Sungai Wangi is prone to heavy metal contamination because domestic, industrial and agricultural waste from Sungai Prigen to Bangil is flowing to Sungai Wangi. As the result, heavy metals are accumulated in Sungai Wangi and causes health damage to living organisms in and around the river, including fish.

Heavy metal contamination causes some changes in fish hematological response. Seriani, et al (2015) reported that blood characteristics are the most suitable indicator for health condition of vertebrae, more particularly that of fish. Grant (2015) mentioned that one method to observe blood of stressful and metal-contaminated fish is to analyze erythrocyte micronuclei of the fish.

There are a lot of previous studies discussing heavy metal-contaminated water in a controlled environment. However, very few discussed hematological profile of heavy metal-contaminated fish in Sungai Wangi, Beji, Pasuruan Municipality. Therefore, the researchers are interested in running an analysis on Pb and Cd, two types of heavy metal, found in Sungai Wangi and their impact towards fish based on erythrocyte micronuclei response of the fish.

METHODS OF RESEARCH

The study was conducted on October, 2016, in Sungai Wangi, Bujeng village, Beji sub-district, Pasuruan, East Java. Observations were conducted in 4 stations. Station 1 was located in an industrial area, station 2 and 3 were located in residential area while station 4 is

in agricultural area. Two bamboo cages (*keramba*) were placed in every station and these cages were submerged under water. Each bamboo cage consisted of 10 to 20 tilapia fish (*Oreochromis niloticus*). The following procedures were to observe environmental parameters, take blood samples for erythrocyte micronuclei detection and conduct descriptive analysis.

RESULTS AND DISCUSSION

Table 1 and 2 showed the quality of water in the 4 stations in Sungai Wangi in the beginning and at the end of the study. The data were average of samples obtained in the beginning and at the end of the study (10 days) and standard deviation.

Table 1 – Quality of Water in the Beginning of the Study

Parameter	Station			
	1	2	3	4
Temperature ($^{\circ}$ C)	28.07 \pm 0.84	28.63 \pm 0.35	28.73 \pm 0.55	28.73 \pm 0.64
Velocity (m/s)	25.00 \pm 5	20.00 \pm 5	20.00 \pm 2.89	26.67 \pm 2.89
DO (mg/L)	7.55 \pm 0.34	7.49 \pm 0.21	7.49 \pm 0.10	7.46 \pm 0.15
COD (mg/L)	39.33 \pm 6.35	39.67 \pm 3.21	39.67 \pm 5	41.33 \pm 3.79
BOD (mg/L)	30.33 \pm 5.86	36.33 \pm 4.16	36.33 \pm 1.15	66.67 \pm 2.52
pH	6.84 \pm 0.33	7.00 \pm 0.20	7.00 \pm 0.23	6.78 \pm 0.32
Pb (water) (mg/L)	0.0173 \pm 0.0035	0.017 \pm 0.0026	0.017 \pm 0.006	0.021 \pm 0.0036
Pb (sediment) (mg/L)	0.0993 \pm 0.0067	0.1147 \pm 0.0025	0.1147 \pm 0.0214	0.0827 \pm 0.0055
Hg (water) (mg/L)	0.007 \pm 0.002	0.0067 \pm 0.004	0.0067 \pm 0	0.0057 \pm 0.0015
Hg (sediment) (mg/L)	0.1350 \pm 0.0106	0.0887 \pm 0.011	0.0887 \pm 0.0199	0.1063 \pm 0.0206
Cd (water) (mg/L)	0.0050 \pm 0.0026	0.0050 \pm 0.001	0.0050 \pm 0.0012	0.0063 \pm 0.0006
Cd (sediment) (mg/L)	0.0323 \pm 0.0117	0.0303 \pm 0.0075	0.0303 \pm 0.008	0.0550 \pm 0.005

Table 2 – Quality of Water at the End of the Study

Parameter	Station			
	1	2	3	4
Temperature ($^{\circ}$ C)	27.80 \pm 0.50	28.97 \pm 0.15	28.57 \pm 0.06	29.57 \pm 0.64
Velocity (m/s)	26.67 \pm 2.89	26.67 \pm 2.89	38.33 \pm 2.89	33.33 \pm 5.77
DO (mg/L)	7.29 \pm 0.23	7.29 \pm 0.15	7.17 \pm 0.10	7.39 \pm 0.06
COD (mg/L)	41.33 \pm 3.79	41.33 \pm 0.58	60.67 \pm 6.11	50.67 \pm 6.11
BOD (mg/L)	27.33 \pm 0.58	27.33 \pm 3.06	61.67 \pm 2.31	66.33 \pm 2.08
pH	6.96 \pm 0.12	6.96 \pm 0.11	7.02 \pm 0.06	6.92 \pm 0.04
Pb (water) (mg/L)	0.0203 \pm 0.0012	0.0203 \pm 0.0006	0.0157 \pm 0.0047	0.0227 \pm 0.0012
Pb (sediment) (mg/L)	0.1097 \pm 0.0049	0.1097 \pm 0.0061	0.0733 \pm 0.0064	0.0837 \pm 0.0031
Hg (water) (mg/L)	0.0067 \pm 0.0006	0.0067 \pm 0.0015	0.0067 \pm 0.0006	0.0067 \pm 0.0006
Hg (sediment) (mg/L)	0.1377 \pm 0.0057	0.1377 \pm 0.0080	0.0983 \pm 0.0187	0.1120 \pm 0.0123
Cd (water) (mg/L)	0.0057 \pm 0.0006	0.0057 \pm 0.001	0.0053 \pm 0.0023	0.0047 \pm 0.0012
Cd (sediment) (mg/L)	0.0393 \pm 0.0046	0.0393 \pm 0.0015	0.0560 \pm 0.0035	0.0600 \pm 0.0104

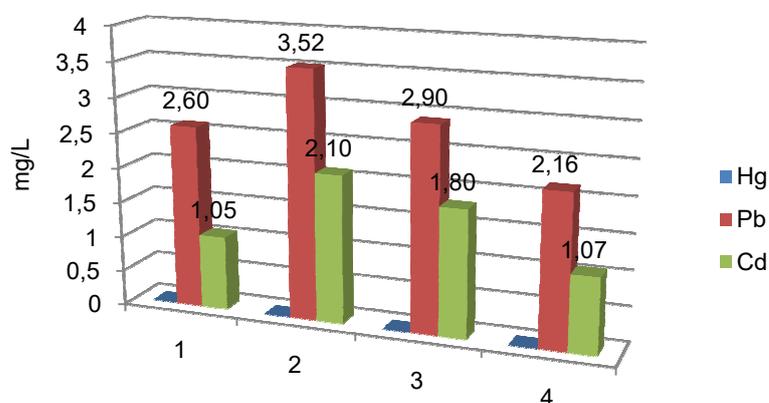


Figure 1 – Concentration of heavy metals on fish gills from the 4 stations

The observation detected two heavy metals, Pb and Cd, in the gill of the tilapia while Hg was not detected. 2.60 mg/Kg of Pb and 1.05 mg/Kg of Cd were found in station 1, 3.52 mg/kg of Pb and 2.10 mg/Kg of Cd were found in station 2, 2.90 mg/kg of Pb and 1.80 mg/Kg of Cd were found in station 3, 2.16 mg/kg of Pb and 1.07 mg/Kg of Cd were found in station 4. The highest Pb and Cd concentration was detected in station 2 because industrial and domestic disposal from station 1 was flowing to the station (station 2). Stations 1 and 2 are located in a straight line without any barrier to flow of the water. Pb and Cd concentration decreased from station 3 and 4 because these two last stations are not in as straight line to the first two stations (station 1 and 2). It is predicted that the waste (heavy metals) is deposited in sinuous curves and bends of Sungai Wangi basin.

The amount of Pb is higher than that of Cd. According to Hutagalung (1990), the ability of biota (living organism) to accumulate heavy metals is probably influenced by several factors such as type of heavy metal, type or size of the organism, length of exposure, and environmental condition or water condition. The Pb and Cd were accumulated in the fish gills because gills were the first exposed organ and functioned to filter air and water. Darmono (2011) explained that gills are sensitive to Pb toxicity. It is predicted that heavy metals were accumulated in the gills without precipitating in the sediment. Absorption through gills flows into fish body and facilitates gas exchange and osmosis.

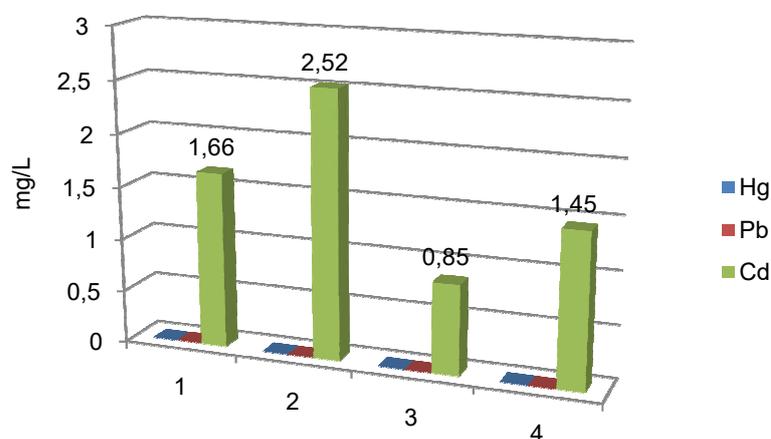


Figure 2 – Concentration of heavy metals in fish liver from the 4 stations

Type of heavy metal found in the fish liver is Cd or cadmium while either Hg or Pb was not detected. 1.66 ± 0.02 mg/Kg of Cd was found in station 1, 2.52 ± 0.09 mg/kg of Cd was found in station 2, 0.85 ± 0.1 mg/kg was found in station 3 and 1.45 ± 0.02 mg/kg of Cd was found in station 4. The researchers found higher Cd content of Cd in the fish liver than in the water. It showed that the metal can accumulate in the fish liver as the organ functions to filter toxic.

Heavy metal accumulation occurs because heavy metals tend to form complex compounds with organic substances the fish contains; thus, the heavy metal is fixed in the fish body instead of being excreted immediately. Fish liver metabolizes Cd and the metal is activated by enzymes in the fish liver. According to Linder (2006), heavy metal absorption in the digestive system is brought into the blood plasma, bound by new albumin and protein and carried to the liver, where it is incorporated into seruloplasmin and specific liver proteins or enzymes then excreted through the bile.

Micronuclei observation in station 1-4 showed that higher micronuclei means worse damage to erythrocyte cells taking place due to heavy metals. The figure above showed that station 2 had the highest micronuclei while station 4 had the lowest one. Station 2 had the highest micronuclei because all waste from agricultural, domestic and industrial activities is flowing to the station. Micronuclei is a change in cell nucleus due to failure in cell division. Mikronuclei are characterized by 2 separated cell nucleus in which one is smaller than the

other. The smaller nucleus is oval or round-shaped and one-third to one-sixth smaller than the cell nucleus (Rajkokila, et al., 2010). Diameter of micronuclei is less than one-fifth of cell nucleus diameter, is close to the cell nucleus and has similar color intensity as the cell nucleus (Lusiyanti, et.al., 1996).

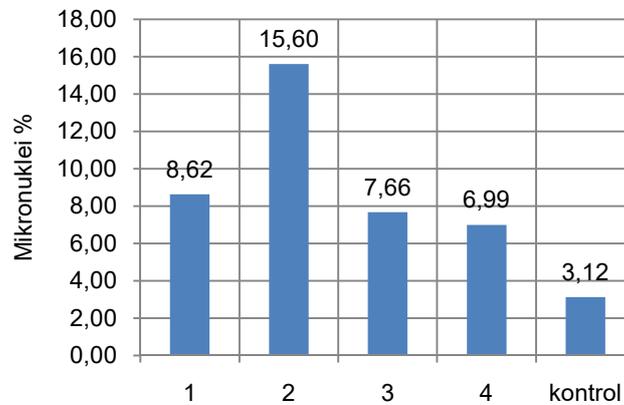


Figure 3 – Frequency of micronuclei in the fish exposed to Wangi River

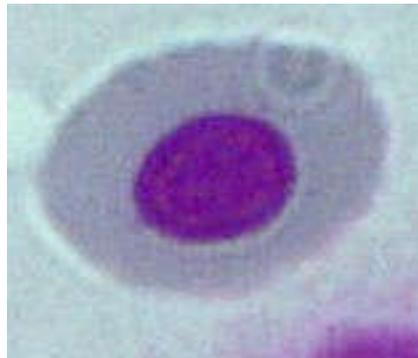


Figure 4 – Normal Erythrocyte Cell

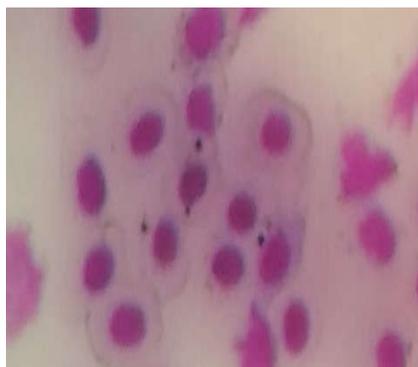


Figure 5 – Nuclear Budd

Micronuclei may be considered as cell of which nucleus is abnormal; some examples of abnormality in cell nucleus are berikut adalah bentuk abnormalitas seperti binucleated cell, karyorhetic cell, karyolytic cell, nuclear budd, and fragmented nucleus (Holland, et.al., 2008). The figure above showed micronuclei obtained from station 1. It showed some changes in the shape of micronuclei (cell is supposed to have 1 nucleus instead of 2 nuclei having different size). The damage is called nuclear budd because one cell has two separated nuclei and one nucleus is bigger than the other one. Nuclear budd occurs due to failure in cell division.



Figure 6 – Binucleated cell with 2 separated nuclei

Having observed station 1 (industrial area), the researchers were able to identify another type of nucleus damage called Binucleated cell, where a cell has two separated nuclei. Lusiyaniti, et.al (1996) stated that micronuclei takes place due to pressure from ligand such as environment, microorganism or chemicals and as the result, chromatin fiber in the chromosome shrinks and develops micronuclei due to energy shortage. It is predicted that the heavy metals in Sungai Wangi contributed to the micronuclei development. Erythrocyte cells were unable to divide perfectly and therefore, the micronuclei are developed.

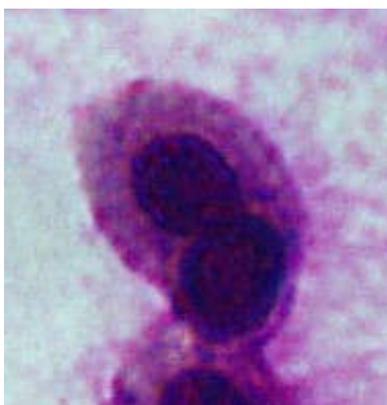


Figure 7 – Binucleated Cell

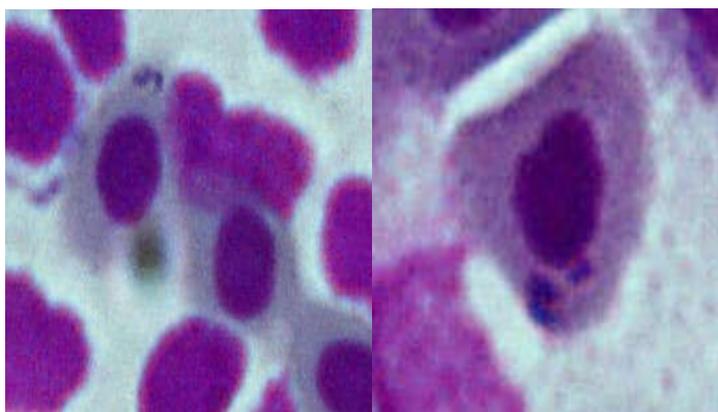


Figure 8 – Binucleated cell with nuclear blebs in Station 2 and 4

Figure 7 showed binucleated erythrocyte cell obtained from station 3 (residential area). Both cell nuclei were not separated completely due to failure in cell division. It showed that the water in station 1 is flowing to station 2 and 3 and as the result, stressor in station 1 and 2 would influence the water in station 3. Binucleated cell took place due to cytokinesis failure affected by ligand stressor in the water. Micronuclei were developed from ascentric fragment

or various chromosomal fractures. More aberration meant more micronuclei (number). Chromosomal aberration analysis can be conducted to cells in their metaphase stage only.

Figure 8 showed binucleated cell with nuclear blebs, another type of micronuclei. According to Zelazna, et.al (2011), the erythrocyte is the result of both aneugenic and clastogenic influence. Heavy metals may cause failure in cell division in which spindle fibers were unable to split. During anaphase stage, when elements started to move to the spindle fibers, chromatid center and chromosome fracture entered the lag phase. After telophase, intact chromosome fracture, for example nuclear fracture, produced small nucleus. Although cell division also took place in the other cell, most were transferred to one or more secondary nuclei, far smaller than the original nuclei and in general called micronucleus or micronuclei (Gangar, et.al. 2010).

CONCLUSION

The study reported that the level of Pb and Cd found in tilapia fish gills and liver has exceeded the normal threshold (Pb in tilapia fish gills is between 2.10 and 3.52 mg/L while Cd in tilapia fish is 2.52 mg/L). In addition, the percentage of micronuclei is between 3.12 and 15.60%. At last, heavy metals resulted in various erythrocyte micronuclei damage such as nuclear budd and Binucleated cell (Binucleated cell with 2 separated nuclei and binucleated cell with nuclear blebs).

REFERENCES

1. Adam, M.A. & Maftuch. 2015. Evaluasi pengoptimalan instansi pengolahan water limbah terhadap pencemaran sungai wangi di pasuruan. *Journal of Environmental Engineering & Sustainable Technology*. 2(1) :1-5
2. Darmono. 2010. *Lingkungan Hidup dan Pencemaran (Hubungannya dengan Toksikologi Senyawa Logam)*. Jakarta: UI Press.
3. Holland, N., Bolognesi, C., Kirsch-Volders, M., Bonassi, S., Zeiger, E., Knasmueller, S., Fenech, M. 2008. *The Micronucleus Assay In Human Buccal Cell as A Tool For Biomonitoring DNA Damage : The Human Project Perspective On Current Status and Knowledge Gaps*. Elsevier, pp. 16-30.
4. Hutagalung, H.P. 1991. *Pencemaran Laut Oleh Logam Berat. Puslitbang Oseanologi. Status Pencemaran Laut di Indonesia dan Teknik Pemantauannya*. Jakarta: LIPI.
5. Javed, M., Ahmad, I., Usmani, N., & Ahmad, M. 2016. *Studies on Biomarkers of Oxidative Stress And Associated Genotoxicity and Histopathology in Channa punctatus From Heavy Metal Polluted Canal*. *Chemosphere*. 151 : 210-219
6. Linder, M.C. 2006. *Biokimia Nutrisi dan Metabolisme*. Jakarta: UI-Press, pp. 265-278.
7. Lusiyanti, Y., Indrawati, I., Wa'id, A., Lubis, M. 1996. *Studi Awal Mikronuklei Pada Sel Limfosit Perifer*. *Proceeding, Presentasi Ilmiah Keselamatan Radiasi dan Lingkungan BATAN*, August 20-21, 1996, (8): 278-282
8. Rajkokila, K., Shajithanoop, S., Usrahani, M.V. 2010. *Nuclear anomalies in exfoliated buccal epithelial cell of petrol station attendants in Tamilnadu, South India*. *Journal Genetic and Genomics* 2(2) : 18-22
9. Seriani, R. et al. 2015. *In vitro mucus transportability, cytogenotoxicity, and hematological changes as non-destructive physiological biomarkers in fish chronically exposed to metals*. *Ecotoxicology and Environmental Safety*. 112 : 162-168
10. Gangar, S.C., Sandhir, R., Koul, A. 2010. *Anti-clastogenic activity of azadirachta indica against benzo(a)pyrene in murine forestomach tumorigenesis bioassay*. *Acta Poloniae Pharmaceutica – Drug Research*, 67: 381-390.
11. Grant, K.R. 2015. *Fish Hematology and Associated Disorders*. *Veterinary Clinics of North America Exotic Animal Practice*. 18(1) : 681-701
12. Zelazna, K., Rudnicka, K., & Tejs, S. (2011). *Micronucleus test and PAHs*. *Environmental Biotechnology*, 7: 70-80.

DOI <https://doi.org/10.18551/rjoas.2018-11.47>

PELAGIC FISH RESOURCE MANAGEMENT REGIME IN AMBON CITY FISHING GROUND BASED ON FISHERIES BIOECONOMICS

Matakupan Hansje

Fisheries Resource Utilization Study Program, Faculty of Fisheries and Marine Sciences,
University of Pattimura, Ambon, Indonesia

E-mail: jekysuymrs@gmail.com

ABSTRACT

Fisheries resource management requires consideration of economic factors to increase benefits, without abandoning biological and fisheries factors, especially fishing technology. This study uses data and information on the potential, production, and level of utilization of pelagic fish resources by including fish prices and costs. The fisheries bioeconomics approach is used to determine the regime of pelagic fish resource management properly and appropriately. This study aims to analyze the value of bioeconomic parameters and the potential of pelagic fish resources in Ambon City and analyze the production, and the level of utilization of pelagic fish. Analysis of the potential of pelagic fish resources based on Gordon-Schaefer's bioeconomics, using multiple linear regression techniques with two control variables based on the equations of Shirakihara, (1994), Schnute (1977), and Uhler (1980). The development of production uses a modified periodic method (Dajan, 1983) and utilization level according to Sparre and Venema (1998). The results stated that the sustainable potential of pelagic fish resources in the management regime of MSY amounted to 178.942,68 tons / year on fishing efforts (f_{msy}) of 4.634,62 trips, and production could reach 89,471.34 tons/year with economic rent equal to Rp. 114.224,34 million. The sustainable potential in the management regime of MEY amounted to 192.627,73 tons/year on f_{mey} equal to 4.280,17 trips, and the production amounted to 44.648,12 tons/year with economic rent equal to Rp. 218.841,42 million. Actual production although fluctuating but tends to increase and in the last three years has increased significantly. The level of utilization of pelagic fish resources based on the management regime of MSY is 28,58% from MSY or 35,72% from JTB/TAC. The level of utilization based on the MEY management regime only reached 27,75% or 33.18% of JTB/TA.

KEY WORDS

Fishing ground, pelagic fish, Ambon city, fisheries, bioeconomics.

Pelagic fish resources is one of the natural resources that can be recovered, but it is a source of food that has a lot of demand because always consumed by local, national, and also exported to various countries. The high level exploitation of pelagic fish resources can cause this resource to diminish in *fishing grounds*, so that *overfishing* can occur at any time. *Fishing ground* is all the waters used by fishermen as a place (location) to operate a fishing gear. Prevention of *overfishing* in a *fishing ground* by gaining economic benefits through pelagic capture fisheries, can be done appropriately through fisheries bioeconomic analysis. According to Fauzi (2010), analysis of fisheries bioeconomics is needed to optimize benefits by combining biological, economic and fisheries science. This opinion suggests that the management of fisheries resources requires consideration of economic factors to increase benefits, without abandoning biological and fisheries factors, especially fishing technology. In order for all of these factors to be taken into account, then in the economic factors include the price of fish and costs used in the fisheries business unit.

Pelagic fishing business activities by Ambon City fishermen have long been carried out in the surrounding waters as a *fishing ground*, namely in the Inside Part of Ambon Bay, Outer Ambon Bay, South Ambon Island, and Seram Sea. Pelagic fishing technology that is applied by them by using boats and alat penangkap ikan pancing tangan (*hand line*), pancing tonda (*troll line*), pancing joran/"huhate" (*pole and line*), jaring angkat/"bagan" (*lift net*), jaring insang

(*gill net*), pukat cincin/"jaring bobo" (*purse seine*), and pukat pantai/"jaring redi" (*beach seine*). The improvement of the pelagic fishing technology applied by Ambon City fishermen can be done properly and appropriately if the potential, production and utilization level/ rate of pelagic fish are known. Data and information on the production and utilization of fish resources through the capture fisheries sub-sector in Ambon city and various factors that influence it, can be used by fisheries researchers as reference material and/or comparison in conducting various fisheries research. Studies in the field of capture fisheries for the development of fisheries development in Ambon City by fisheries experts, can refer to the results of analysis of production and utilization of pelagic fish resources from Ambon City *fishing ground*.

The complexity of fisheries resources causes the need to develop a model that is needed as an approach in policy making, including using a bioeconomic approach. The combination of biology, economics and fisheries is known as fisheries bioeconomics. Bioeconomics of fisheries is a multi-disciplinary science. In bioeconomics, the basic model uses biological theories and concepts which are then combined with economic concepts. The use of economic concepts is intended to optimize the use of biological resources based on economic reviews. Whereas fisheries bioeconomics is the application of the bioeconomic concept in the fisheries sector.

The fisheries bioeconomic approach has not been used to determine the potential, fishing efforts, production, and value of benefits from the pelagic fish resources of Ambon City. The level of utilization and the amount of catchment allowed in pelagic fish resources from Ambon City fishing ground, at the present time has also not been analyzed and known. The fisheries bioeconomic approach is used to express it, so that the management of pelagic fish resources can be carried out properly and appropriately. The purpose of this study were (1) to analyze the value of bioeconomic parameters and the potential of pelagic fish resources in Ambon City, (2) analyze the production, and the level of utilization of pelagic fish based on fisheries bioeconomics. The results of this study can be a database and information that is used by all fisheries stakeholders as a management and utilization regime of pelagic fish resources in Ambon City and its surroundings, so that it is useful now and in the future.

METHODS OF RESEARCH

Data collection. This research was conducted in the Ambon City area, the administrative area of Ambon City and the surrounding waters. Collection of pelagic capture fisheries statistical data sourced from the Department of Marine and Fisheries, The Central Bureau of Statistics, and referenced with the results of data collection directly at the research site. Information and activities of fishing operations by Ambon City fishermen are obtained by the recording of the survey data using the method of *Rapid Rural Appraisal (RRA)* and *Participation Rural Appraisal (PRA)* (DKP, 2006; Freudenberger, 2008), equipped with closed or open questionnaires. This data and information was obtained from 170 (one hundred and seventy respondents in 16 (sixteen) research locations.

Data tables for survey needs are made in the form of certain matrices and formats, then recorded data are classified or tabulated according to the same type and character according to the research objectives. The survey results in the form of qualitative data are discussed descriptively and quantitative data is calculated in order to obtain the expected value in the discussion later. Data collection of other secondary information, as well as scientific reference sources, obtained from various current library sources that are published responsibly.

Analysis of bioeconomic, potential and production of pelagic fish resources parameters. Bioeconomic analysis of Ambon City's pelagic capture fisheries was carried out in order to predict biological, technological, and economic parameters. Bioeconomic parameters are thought to consist of biological, technological, and economic parameters. Biological parameters include the constant of waters carrying/ bearing capacity (K), natural growth constants (r), and technological parameters (q). Economic parameters include the cost per

fishing effort (c or p), fish price per unit of catch (p), and *discount rate* (δ). Estimation analysis of biological and technological parameters using multiple linear regression techniques with two control variables, applying several models (Clark, 1990; Seijo *et al*, 1998; Zulfainarni *et al*, 2002 in Najamuddin, 2013) namely:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2$$

Some suggested models are as follows:

Model 1, Shirakihara (1994):

$$(CPUE_{t+1}-CPUE_t)/CPUE_t = \beta_0 + \beta_1 CPUE_t + \beta_2 E_t + e$$

Model 2, Schnute (1977):

$$\ln(CPUE_{t+1}-CPUE_t)/CPUE_t = \beta_0 + \beta_1 (CPUE_{t+1} + CPUE_t)/2 + \beta_2 (E_{t+1} + E_t)/2 + e$$

Model 3, Uhler (1980):

$$(CPUE_{t+1}-CPUE_t)/CPUE_t = \beta_0 + \beta_1 (CPUE_{t+1} + CPUE_t)/2 + \beta_2 (E_{t+1} + E_t)/2 + e$$

Model 4, Uhler (1980):

$$\ln(CPUE_{t+1}/CPUE_t) = \beta_0 + \beta_1 CPUE_t + \beta_2 E_t + e$$

Where:

$CPUE_{t+1}$: CPUE at time $t + 1$;

$CPUE_t$: CPUE at time t ;

E_{t+1} : Fishing effort at time $t+1$;

E_t : Fishing effort at time t ;

β_0 : Intersep;

β_1 : CPUE Regression Coefficient;

β_2 : Fishing effort regression coefficient;

e : Estimation error.

Model testing conducted to determine the accuracy of the model used. A significant model is used in subsequent bioeconomic calculations by referring to the results of the diversity analysis, namely the model with the highest "F" value and the lowest "P" value. Regression coefficient ($\beta_0, \beta_1, \beta_2$) used to estimate biological and technological parameters (indirect parameters or as technological indicators) of the bioeconomic models r, K , and q with the equations (Shirakihara, 1994; Schnute, 1977; Uhler, 1980 in Najamuddin, 2013) as follows:

$$r = \beta_0; K = r/(q\beta_1); \text{ and } q = \beta_2$$

Where:

r : The constant of natural growth rate of the fish;

K : The Constant of environmental carrying/ bearing capacity (waters);

q : The ability/capture coefficient of a fishing gear.

The economic parameters of the bioeconomic model are calculated using the arithmetic average formula, i.e.:

$$c = \sum c_i/n_1 \text{ and } p = \sum p_i/n_2$$

Where:

c : Average fishing operation costs per year;

c_i : Fishing costs per fishing effort of respondent $-i$;

- p : Average catch per kg or ton;
 p_i : The average price for the season i ;
 n_1 : Number of respondents;
 n_2 : Number of seasons (peak, normal, famine).

The parameter of the discount rate (δ) of resources and time, is a characteristic of the dynamics of the model. The discount rate is the natural logarithm of the real interest rate that applies to a particular year written with the equation (Clark, 1990 in Najamuddin, 2013; Fauzi, 2010) as follow:

$$\delta = \ln(1 + i)$$

Where:

i : The nominal investment interest rate is reduced by the inflation rate.

The assumptions of the bioeconomic model applied are as follows:

- Population is in equilibrium condition;
- In *equilibrium* condition, fishing mortality (F) is proportional to the fishing effort E wherein the fishing coefficient (q) is a proportional constant, so that $F = qE$. Catch per unit effort (CPUE) is the relative abundance index of the population. $CPUE = Y/E = qX$;
- Stock is limited by the constant environment carrying/ bearing capacity (K);
- Stock will respond quickly to variations in the scale of effort used;
- Constant fishing mortality (F);
- Prices and marginal costs/averages are constant and do not depend on the level of effort used;
- The total cost is proportional to the effort and the change in slope on the total cost curve will change the bioeconomic and MEY level data.

The output of the bioeconomic model includes the estimation of optimal biomass (stock) (X), optimal catch (Y), and fishing efforts (E). According to Fauzi (2010), the Gordon-Schaefer model was developed based on sustainable production wherein the growth curve is in a long-term equilibrium condition (*long run equilibrium*). According to Najamuddin (2013), the calculation of the potential of MSY, MEY, and *open access* use the equations:

$$E_{msy} = r/2q; Y_{msy} = K/4; \text{ and } X_{msy} = K/2$$

Analysis of fishing effort (E_{mey}), fish biomass (stock) (X_{mey}), and catch yield/production (Y_{mey}) at *Maximum Economic Yield* (MEY) condition, by using the formula:

$$E_{mey} = r/2q(1-(c/pqK)); X_{mey} = K((c/2pqK)+0,5); \text{ and } Y_{mey} = Kr/2(1-(c/pqK))((c/2pqK)-0,5)$$

On the condition of pelagic fisheries resources that are free/open (open access) because they are *common property*, then fishing effort (E_∞) and catch yield/production (Y_∞) analyzed by using formulas:

$$E_\infty = 2.E_{mey}, \text{ or } E_\infty = r/q(1-(c/pqK)), \text{ and } Y_\infty = Kr(1-(c/pqK))(c/pqK)$$

Fishermen only accept opportunity costs and resource economic rents or economic benefits not obtained. Economic rent of the resource (economic rent) is defined as the difference between total revenues from resource extraction to all expenses incurred to extract it. The level of effort in this position is the level of effort in the equilibrium condition that Gordon calls it as "*bioeconomic equilibrium of open access fishery*" or bioeconomic balance in open access conditions. The economic model developed by Gordon (1954) was based on the Schaefer model and introduced *overfishing* in open fisheries. Revenues derived from the fishing are function of total sustainable revenues (TSR = *Total Sustainable Revenue*) and Total cost (TC = *Total Cost*), then the profit / rents can be calculated using the formula of Fauzi (2010).

According to Fauzi (2010), several assumptions were used to develop the Gordon-Schaefer model to facilitate the understanding. These assumptions among others:

- Price per unit *output*, (Rp/kg) assumed constant or the demand curve is assumed to be perfectly elastic;
- Cost per unit effort (*c*) considered constant;
- Single species of fish resources (*single spesies*);
- Market structure is competitive;
- Only fishing factors that taken into account (do not include postharvest factors, etc.).

Production and Level of Utilization of Pelagic Fish Resources. The ability of fish production calculated in accordance with the distribution of fishery statistical data on the number and type of fishing gear which is operated by the fishermen in the city of Ambon, in order to take into account the level of utilization of pelagic fish resources. Production development (P_p) of Small pelagic fish from 2005 to 2015 were calculated using a modified periodic method (Dajan, 1983), with a mathematical formula:

$$P_p = \{(C_{n+1} - C_n)/C_n\} \times 100\%$$

Where:

C_{n+1} : total production of pelagic fish from Ambon City in the year "n + 1";

C_n : total production of pelagic fish commodities from Ambon City in the year -n.

The level of utilization of pelagic fish resources available in the fishing ground of Ambon City is calculated based on the percentage (%) of the calculation of annual fish production capacity (ton) per estimation yield of potential pelagic fish resources (MSY) according to API and fishing trips available in the Ambon City fishing ground. The level of utilization of pelagic fish in Ambon City and its surrounding waters was analyzed according to Sparre and Venema (1998) by using the mathematical model as follows:

$$TP_i = (C_i/MSY) \times 100\% \text{ and/or } TP_i = (C_i/JTB) \times 100\%$$

Where:

TP_i : The level of utilization of small pelagic fish resources in Ambon City in the year -i C_i : The catch yield (production) of pelagic fish in the year -i;

JTB_i : The number of pelagic fish catches allowed in the year -i;

($JTB = 0,8MSY$ (Kepmen KP RI No: 47/KEPMEN-KP/2016)).

According to Kepmen KP RI No: 47/KEPMEN-KP/2016, if the utilization rate/ level is $<0,5$ ($<50\%$) it is said moderate that is fishing effort can be added, if $0,5 \leq TP < 1$ ($50\% \leq TP < 100\%$) it is said *fully-exploited* namely the fishing effort is maintained with a tight monitor, and $TP \geq 1$ ($\geq 100\%$) it is said *over-exploited* fishing effort should be reduced.

RESULTS AND DISCUSSION

Bioeconomic Parameters and Potential of Pelagic Fish Resources in Ambon City. Pelagic fish resources used by Ambon City fishermen through fishing activities, consisting of large pelagic and small pelagic fishes. Fishing operations conducted on fishing grounds in Ambon City and its surrounding waters. The waters of Ambon City and its surroundings are included in the Banda Sea waters. Based on the results of the reference at the study site, several small pelagic fish species that were dominantly captured in this fishing ground/ daerah penangkapan ikan (DPI) by Ambon City fishermen, namely layang (Decapterus spp), selar (Selar spp), kembung (Rastrelliger spp), terbang (Cypsilurus spp), sardin (Sardinella spp), and puri (Stolephorus spp). The big pelagic fish that dominantly caught were cob/ tongkol (Auxis thazard; Euthynnus affinis), skipjack / cakalang (Katsuwonus pelamis), and tuna madidihang (Thunnus albacares).

Production data (tons) of pelagic fish and annual (trip) fishing efforts for Ambon pelagic fishing activities by 7 (seven) types of fishing equipment, are used for fisheries bioeconomic

analysis. Summary results of the statistical analysis of the four multiple regression equation as a form of bio-economic models to test the significance of the model shown in Table 1.

Based on the model significance test, the selected multiple regression equation model is model 4 according to Uhler (1980) because it has the highest "F" value and the lowest "P" value, namely $Y = 0,241 - 0,0259 X_1 + 0,000026 X_2$. P value equal to 0,263 stated that 26,3% CPUE and fishing efforts could not explain the model or model could be explained by CPUE and fishing efforts amounted to 73,7%. Equation of model 4 is stated to be more significant (meaningful) to explain biological and technological parameters compared to the equation formed by other models. This equation states that the values of titik potong (*intersept*), $\beta_0 = 0,241$; CPUE regression coefficient, $\beta_1 = 0,0259$; and the regression coefficient of fishing effort, $\beta_2 = 0.000026$.

Table 1 – The results of significance test of biological and technological parameter models with multiple regression equation using two control variables

Model	Equations Formed	F-Value	P-Value
1. Shirakihara (1994)	$Y = 0,45 - 0,0240 X_1 + 0,000056 X_2$	0,93	0,440
2. Schnute (1977)	$Y = -0,50 + 0,0082 X_1 + 0,000034 X_2$	0,03	0,968
3. Uhler (1980)	$Y = -0,28 + 0,0150 X_1 + 0,000039 X_2$	0,02	0,975
4. Uhler (1980)	$Y = 0,241 - 0,0259 X_1 + 0,000026 X_2$	1,63	0,263

Source: Processed from the Maluku Province Marine and Fisheries Service (2006-20016) which was verified.

Calculation of the sustainability of pelagic fish resources with a bioeconomic model, requires the value of several parameters, namely biology, technology, and economics. Estimation of bioeconomic parameters as biological and technological indicators using the model 4 equation, so that it is known that the constants of natural growth rate of pelagic fish (r) equal to 0,241. This means that small pelagic fish will increase by 0,241 units from the potential of pelagic fish resources which available in the waters around Ambon City as fishing grounds. The constant of waters carrying/ bearing capacity (K) is 357.885,36 tons/year, stating that the potential of pelagic fish resources available in the waters of Ambon City and its surroundings as a fishing ground that can be utilized is 357.885,36 tons/year. *Catchability coefficient* of pelagic fish (q) amounted to 0,000026, stating that one unit of pelagic fishing equipment operated by Ambon City fishermen, if accumulated, has an average of catchability (proportion) of 0,000026 units for each fishing effort (trip). The values of the biological, technological, and economic parameters of the pelagic capture fisheries in Ambon City, shown in Table 2.

The development of Gordon-Schaefer's model in the bioeconomics analysis of this pelagic capture fisheries resources, assumes price per unit *output* (p) and cost per unit effort (c) considered constant. The price of pelagic fish in Ambon City varies throughout the year according to the type, size, fishing base, and fishing season, following the market mechanism. The price of pelagic fish used in bioeconomic analysis is based on the price of the types of pelagic fish that dominant caught throughout the year, then the average price is calculated per unit volume (kg converted to tons). The pelagic fishing operation costs used in the analysis are the variable costs incurred in each trip of the fishing operation by each type of fishing gear. Costs incurred per trip of fishing operations to produce 1 kg of pelagic fish, then converted into variable costs per ton of pelagic fish catch yield. Components of variable costs recorded according to the fishing method, consist of fuel costs, consumption / supplies, ice, bait, fishermen's wages, FADs, and others. Resource discount rate/*discount rate* (δ) calculated based on the bank's real interest rate namely the difference between the percentage of average bank's nominal interest rate and the percentage of the average inflation rate in a year.

The values of biological (r and K), technological (q), and economics (p , c , and δ) parameter, then used to analyze the utilization of pelagic fish resources in a sustainable manner with a bioeconomic approach. The results of the analysis of the value of biomass (tons), fishing effort (trip), production (tons), and profit / rent (Rp.) based on various systems of pelagic fish resource management can be seen in Table 3.

Table 2 – The value of the biological, technological, and economic parameters of the pelagic capture fisheries in Ambon City

No.	Parameter Symbol	Value	Information
1.	R	0,241	The constants of natural growth rate of pelagic fish
2.	K	357.885,36	The constants of Environmental carrying/ bearing capacity (tons/year) of waters
3.	Q	0,000026	Catchability coefficient from pelagic fishing gear
4.	P	14.500.000	Average pelagic fish prices (Rp./ Ton)
5.	Δ	8,01	Discount rate based on the bank's real interest (%)
6.	C	10.318.530	Average pelagic fishing operation costs (Rp./Ton)

Source: Processed from the Maluku Province Marine and Fisheries Service (2006-20016) which was verified; Primary data (processed).

Table 3 – The parameter values of biomass, effort, production and rent based on Pelagic fish resource management system in Ambon City

No.	Information	Parameter Symbol	Pelagic Resource Management Regime		
			MSY	MEY	Open Access
1.	Biomass (Ton/Year)	X	178.942,68	192.627,73	27.370,11
2.	Fishing effort (Trip)	E	4.634,62	4.280,17	8.560,35
3.	Production (Ton/Year)	Y	89.471,34	44.648,12	3.045,87
4.	Rents (Million Rp.)	J	114.224,33	218.841,42	0,00

Source: Processed from the Maluku Province Marine and Fisheries Service (2006-20016) which was verified; Primary data (processed)

The results of calculations using Gordon-Schaefer's bioeconomic approach state the potential of pelagic fish resources in the condition of *Maximum Sustainable Yield* (MSY) namely 178.942,68 tons/year bigger 12,13% and in the condition of *Maximum Economic Yield* (MEY) namely 192.627,73 tons/year bigger 20,71% from the potential of pelagic fish resources at the WPPNRI 714 (Banda Sea) according to Kepmen KP RI Number 47/Kepmen-KP/2016 that is equal to 159.578 tons/year. Data of Pelagic fish production and fishing efforts (trip) are sourced from fishing operations by Ambon City fishermen on fishing ground/ DPI which are only partially from the WPPNRI 714. This condition can explain that the prediction of the potential of pelagic fish resources in the Banda Sea fishing ground may be even greater. This is presumably due to the rapid growth of pelagic fish biomass due to the moratorium on fishing in part of WPP 714, and increasing / tightening supervision of the activities of *Illegal, Unreported and Unregulated* (IUU) Fishing.

The optimal stock of pelagic fish biomass (stock) based on the management system in MSY conditions is smaller than the management system in MEY conditions, and is greater than the open access management system according to sustainable production functions. Fishing effort (trip) on pelagic fish resource management with MSY system is greater than MEY condition, but smaller than management system in open access condition. Production (tons) of pelagic fish is greater than the management system in open access conditions but smaller than the management system in MSY and MEY conditions. Fish production in the pelagic fish resource management system in the MSY condition amounted to 89.471.34 tons greater than fish production with a management system in MEY and open access conditions, but the economic profit / rent was Rp. 114.224,33 million smaller than the MEY management system which was Rp. 218.841,42 million according to a sustainable function management system. This fact is in accordance with what was stated by Fauzi (2010), that at point E_{msy} (MSY fishing effort) no maximum economic rents generated so that the input to the E_{msy} not said to be a socially optimal input. The MEY management system is an ideal management system for the sustainability of pelagic fish resources which results in greater economic rents with smaller fishing efforts. In Gordon-Schaefer's perspective, efficient and socially optimal management is at point E_{mey} which is known as the *maximum economic yield* (MEY) balance/ equilibrium. This balance/ equilibrium point can be obtained if the fishery is controlled with a clear ownership regime or often termed the "*sole owner*" regime.

Optimal fishing efforts with more than 8.560,35 trip open access management systems, but produce less pelagic fish production of 3.045,87 tons compared to other management systems and do not get economic profit/rent. In this open access management system, stock of biomass of pelagic fish resources are also smaller than other management systems namely 27.370,11 tons/year. The open access pelagic fisheries resource management system is very uneconomical because with larger fishing efforts, it only produces smaller fish production without obtaining economic benefits. The implementation of an open access management system will threaten the sustainability of pelagic fish resources so that it is not recommended to be allowed to occur.

The pelagic fish resource management system in maximum sustainable production conditions (MSY), economically allocates pelagic fish biomass stock equal to 178.942,68 tons/year. Pelagic fishing efforts amounted to 4.634,62 tons/year produce 89.471,34 tons/year of production and profit/rent equal to Rp. 114.224,33 million, through the MSY management system. Economically, a pelagic fisheries management system based on sustainable economic production (MEY) is better than other management systems. With a smaller fishing effort namely 4.280,17 trips/year, it can produce pelagic fish production of 44.648,12 tons/year and profit/rent equal to Rp. 218.841,42 million. The profit/rent obtained is greater than the MSY and open access management system. Similarly, larger stocks of pelagic fish biomass (stock) namely 192.627,73 tons/year compared to other management systems. Gordon *in* Fauzi (2010) states that the balance/ equilibrium of open access is not socially optimal because the cost is too large.

Fishing efforts (trip) on the *Maximum Sustainable Yield* (MSY) management system and the *Maximum Economic Yield* (MEY) management system are far less than *open access* to achieve benefits in sustainable conditions or the sustainability of pelagic Fish Resources. The open access balance/ equilibrium leads to the misallocation of natural resources due to excess of production factors and should be allocated for other more productive economic activities. This is the core of Gordon's prediction that open access fisheries will create *economic overfishing* conditions. In the case of *open access* management of pelagic fish, fishermen tend to increase fishing and production efforts even though there are few biomass stock. Additional efforts were conducted by increasing fishing trips or fishing gear. This results in increased production so that the balance/ equilibrium of management will be achieved at the level of effort (E^2), wherein total revenue equals total cost ($TR = TC$). In this case, fisheries actors only receive opportunity costs and economic resource rents or economic benefits are not obtained. The level of effort in this position is the level of effort in the equilibrium condition that Gordon calls it as "*bioeconomic equilibrium of open access fishery*" or economic balance/ equilibrium in conditions of open access (Fauzi, 2010).

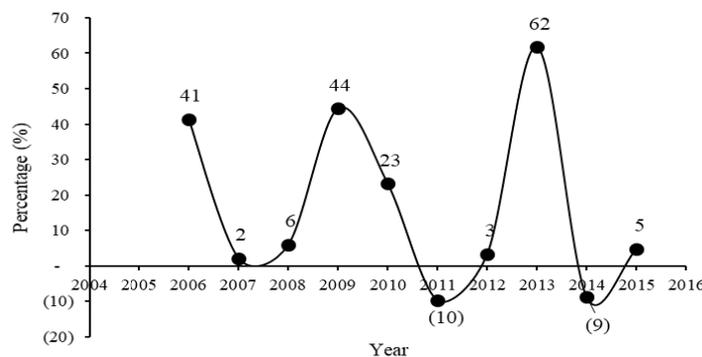


Figure 1 – Trajectory percentage (%) of the development of pelagic fish production in Ambon City in 2005-2015

Production and Level of Utilization of Pelagic Fish Resources in Ambon City. Pelagic fish production from this fishing activity, shows dynamic fluctuations according to the time and location of fishing during 2005 to 2015, but tends to increase because the application of pelagic fishing technology by Ambon City fishermen has improved. Percentage (%) of the

fluctuating development of pelagic fish production for 11 (eleven) years, 3 (three) times down and 3 (three) times up. Pelagic fish production fell in 2006 to 2007, 2009 to 2011, and 2013 to 2014. Pelagic fish production increased in 2007 to 2009, in 2011 to 2013, and in 2014 to 2015, as shown in Figure 1.

The condition of the development of pelagic fish production when examined its suitability with the use of pelagic KPI and API by Ambon City fishermen, apparently in those years the pattern is not the same. Thus, the development of pelagic fish production is also influenced by other fishing technology factors besides KPI and API, for example the application of fishing methods, fishing season, fisherman skills, etc.

The estimation of the potential of Pelagic fish resources in Ambon City using Gordon-Schaefer's bioeconomic approach, obtained a higher/greater potential value (biomass) than the estimation using the Schaefer model. With this approach, the level of utilization of pelagic fish resources is analyzed based on the potential at the condition of *Maximum Sustainable Yield* (MSY) and *Maximum Economic Yield* (MEY) only. The management of pelagic fish resources in a state of optimal ideal balance (*equilibrium*), in reality is very difficult even impossible conducted (achieved) and in the case of open access, it is highly discouraged and difficult to find on the Fishing Ground, so that the two management systems are not used as reference.

The potential which is an index of relative abundance of pelagic fish in the Fishing Ground of Ambon City at the condition of *Maximum Sustainable Yield* (MSY), according to Gordon-Schaefer bioeconomic approach amounted to 178.943 tons. The potential of this pelagic fish is used as a reference for its management, by analyzing the condition of annual actual production so that it is known the utilization rate/ level that has been achieved, as shown in Figure 2.

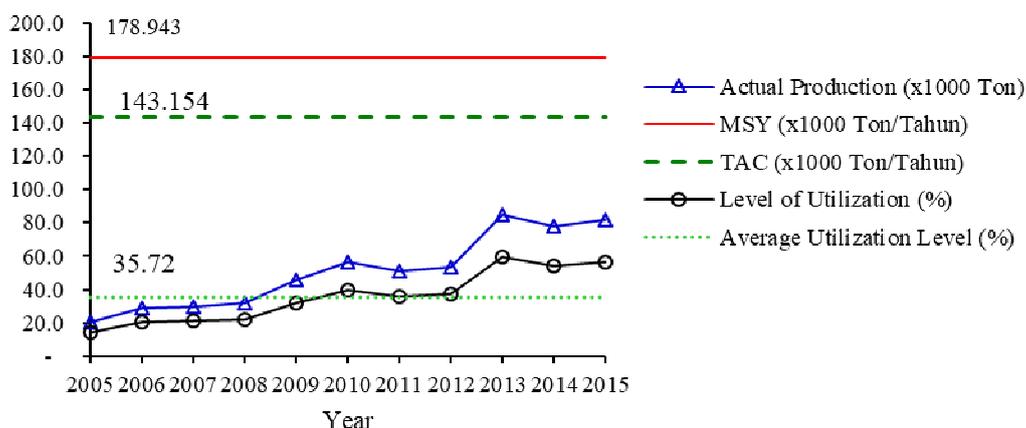


Figure 2 – The state/ condition of actual production and the level of utilization of pelagic fish at Ambon City in 2005-2015 towards MSY by bio-economic approach (Gordon-Schaefer)

Based on the increase annual actual production, then the rate/ level of utilization of Pelagic Fish Resources in the Fishing Ground of Ambon City from MSY Gordon-Schaefer also showed an improvement from 2005 to 2015. The level of utilization of pelagic fish resources in the city of Ambon is an average amounted to 28,58% from MSY or 35,72% from JTB/TAC in the pelagic resources management system which refers to MSY. Starting from 2010, the utilization rate/ level of pelagic resources has been more than the annual average and continues to increase until 2015. Starting from 2010, the level in the last three years (2013 - 2015), the average utilization rate/ level of pelagic fish resources from Ambon City Fishing Ground was 45,49% from MSY or 56,87% from JTB/TAC, and the highest in 2013 amounted to 47,60 from MSY or 59,50% from JTB/TAC. This situation indicates the possibility to increase pelagic fish production from Ambon City Fishing Ground in order to achieve the total allowable catch (JTB/TAC) namely equal to 143.154 tons/year.

The suggested pelagic fish resource management in Ambon City is by refer to sustainable maximum economic management system (*Maximum Economic Yield/MEY*). can be achieved at the MEY level namely equal to 192.628 tons / year. In Figure 3, shown the actual production conditions and utilization rates/ level of pelagic fish in Ambon City Fishing Ground towards the total allowable catch (JTB/TAC) and the level of utilization of pelagic Fish Resources.

The results of the analysis of the relative potential or abundance of pelagic Fish Resources in the form of biomass (stock) at the sustainable maximum economics level (*maximum economic Yield/ MEY*) amounted to 19.168 tons/year. Based on the actual production of pelagic fish resources from 2005 to 2015 by Ambon city fishermen, then the average of utilization rate/ level with the pelagic Fish Resource management system with reference to MEY has only reached 27,75% of MEY or 33.18% from JTB/TAC which amounted to 154.102 tons/year.

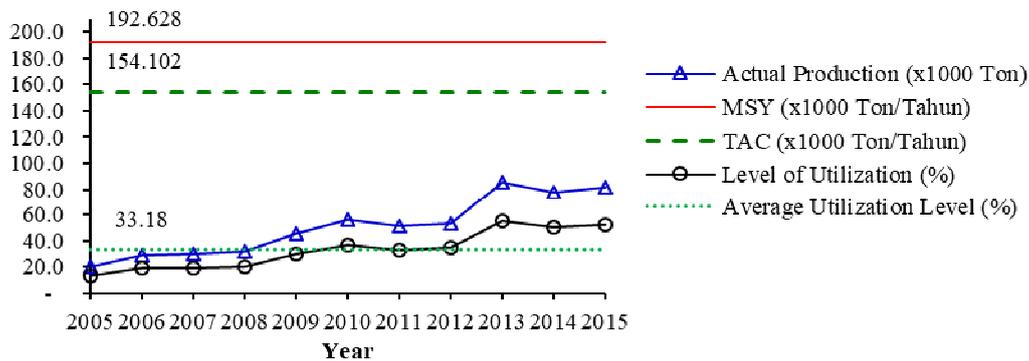


Figure 3 – The condition of actual production and the level of utilization of pelagic fish at Ambon City in 2005-2015 towards MEY with bio-economic approach (Gordon-Schaefer)

The above facts prove that the actual production of pelagic fish by Ambon City fishermen tends to increase from 2005 to 2015. The increase in production has occurred so far, but the utilization rate/ level in accordance with the management system of MEY is still small so that the production can be further increased. The production situation in the last three years fluctuated, which in 2013 tended to increase significantly, but tended to fall again in 2014, then rose again in 2015, with an average utilization rate/ level equal to 42,26% from MEY or 52,83% from JTB/TAC. This means that in the last three years, pelagic fish production in Ambon City has increased to reach a utilization rate/ level of more than half of JTB/TAC. This situation needs to be maintained, even production needs to be further improved by increasing fishing efforts (trips), increasing the number of pelagic API, improving MPI, and revitalizing capture fisheries infrastructure.

CONCLUSION

This research concludes several things according to the purpose. as follows:

Biological parameter values in the form of the constants of natural growth rates of pelagic fish (r) is 0,241, technological parameters in the form of environmental carrying/ bearing capacity (K) equal to 357.885,36 tons/year and catchability coefficient from pelagic fishing gear (q) is 0,000026. The values of economic parameters in the form of pelagic fish prices (p) an average of Rp. 14.500.000.- per ton, *discount rate* (δ) based on bank real interest amounted to 8,01%, and the cost of pelagic fishing operations (c) an average of Rp. 10.318.530.- per ton. The sustainable potential of pelagic fish resources in *the fishing ground* in the management regime of *Maximum Sustainable Yield* (MSY) based on Gordon-Schaefer's bioeconomics is 178.942,68 tons/year on fishing efforts (f_{msy}) equal to 4.634,62 trip, and production can reach 89.471,34 tons/year with economic rent of Rp. 114.224,34 million. The sustainable potential for the *Maximum Economic Yield* (MEY) management regime namely 192,627.73 tons/year for fishing efforts (f_{mey}) equal to 4.280,17 trip, and

production equal to 44.648,12 tons/year with economic rent of Rp. 218.841,42 million. It is recommended to manage fishing grounds based on the MEY management regime.

The actual production of pelagic fish in Ambon City is fluctuating, but tends to increase, even the average in the last three years has increased significantly. The average utilization rate/ level of pelagic fish resources from MSY was 28,58% from MSY or 35,72% from JTB/TAC and the highest in the last three years was 45,49% from MSY or 56,87% from JTB/TAC. The level of utilization of pelagic fish resources based on the MEY management regime has only reached 27,75% or 33,18% from JTB/TAC.

SUGGESTIONS

Data and information about the potential, production, and level of utilization of fish resources in Ambon City waters need to be known periodically so that the management does not deviate. Fish resource management regimes in fishing ground should be based on a fisheries bioeconomic approach so that could optimize the profit (benefits).

ACKNOWLEDGMENTS

The writer would like to thank the enumerators and brothers W. Waileruny as the Head of the Fisheries Resource Utilization Study Program, Faculty of Fisheries and Marine Sciences Pattimura University, which has joyfully helped to carry out this research.

REFERENCES

1. Badruddin, 2005. Analisis Data Catch & Effort Untuk Pendugaan MSY. Fisheries Specialist, Indonesian Marine and Climate Support (IMACS) Project. USAID Indonesia-KKP.
2. Dajan A., 1983. Pengantar Metode Statistik Jilid I. Lembaga Penelitian, Pendidikan, and Penerangan Ekonomi and Sosial (LP3ES). Jakarta. (Edisi Revisi).
3. Departemen Kelautan and Perikanan, 2004. Ensiklopedi Perikanan. Direktorat Kelembagaan Internasional. Direktur Jenderal Peningkatan Kapasitas Kelembagaan and Pemasaran (Ditjen PK2P). Jakarta.
4. Departemen Kelautan and Perikanan, 2006. Panduan Pengambilan Data Dengan Metode Rapid Rural Appraisal (RRA) and Participatory Rural Appraisal (PRA). Program Rehabilitasi and Pemulihan Cadangan Sumberdaya Alam. Satker Rehabilitasi and Pengelolaan Terumbu Karang (COREMAP II) Tahun 2006. Dirjen KP3K. DKP. Jakarta.
5. Dinas Kelautan and Perikanan Provinsi Maluku. Buku Tahunan Statistik Perikanan Provinsi Maluku Tahun 2006 – 2016.
6. Freudenberger K. S., 2008. Rapid Rural Appraisal (RRA) and Participatory Rural Appraisal (PRA). A Manual for CRS Field Workers and Partners. 228 W. Lexinton Street. Baltimore. Maryland 21201-3443.
7. Gulland. J. A., 1991. Fish Stock Assessment. A Manual of Basic Methods. Marine Resources Service . Fishery Resources and Enviroment Division. FAO-UN. Rome. Italy. John Wiley and Sons.
8. Iswardono, 2001. Sekelumit Analisis Regresi and Korelasi. Fakultas Ekonomi UGM. Edisi Pertama. Cetakan Kelima. Dicitak and Diterbitkan oleh BPFE Yogyakarta. Yogyakarta.
9. Kawaguchi S., S. Nicol, K. Taki, and M. Naganobu, 2006. Fishing Ground Selection In The Antarctic Krill Fishery: Trends in Patterns Across Years. Seasons and Nations. CCAMLR Science. Vol. 13 (2006). P 117-141.
10. Keputusan Menteri Kelautan and Perikanan Republik Indonesia Nomor 47/KEPMEN-KP/2016 Tentang Estimasi Potensi, Jumlah Tangkapan Yang Diperbolehkan, and Tingkat Pemanfaatan Sumberdaya Ikan Di Wilayah Pengelolaan Perikanan Negara Republik Indonesia.
11. King M., 1995. Fisheries Biology. Assesment and Management. Fishing News Book. A division of Blackwell Science Ltd.

12. Nikijuluw V. P. H., 2002. Rezim Pengelolaan Sumberdaya Perikanan. Pusat Pemberdayaan Pembangunan Regional (P3R) dengan PT. Pustaka Cidesindo. Jakarta.
13. Nikijuluw V. P. H., N. V. Huliselan, Frits P. Lesnussa, and Hansje Matakupan, 2005. Analisis Sebaran Temporal Penangkapan Ikan Sebagai Basis Kebijakan Pengembangan Pelabuhan Perikanan Nusantara (PPN) Tual. *Ichthyos. Jurnal Penelitian Ilmu-Ilmu Perikanan and Kelautan (Terakreditasi)* Vol. 4 No. 2. Ambon.
14. Novita Lusi andriani and Dian Ayunita NDD, 2011. Potensi and Tingkat Pemanfaatan Sumberdaya Ikan Demersal di Perairan kabupaten Pekalongan. *Jurnal UNDIP*.
15. Peraturan Menteri Kelautan and Perikanan Republik Indonesia Nomor: 71/PERMEN-KP/2016 tentang Jalur Penangkapan Ikan and Penempatan Alat Penangkapan Ikan Di Wilayah Pengelolaan Perikanan Negara Republik Indonesia.
16. Sparre P., and S. C. Venema, 1998. Introduction to Tropical Fish Stock Assesment Part 1-Manual - FAO Fisheries Technical Paper. FAO Rome.
17. Steel R. G. D., and James H. Torrie, 1993. Prinsip and Prosedur Statistika. Suatu Pendekatan Biometrik. P.T. Gramedia Utama. Jakarta.
18. Undang-Undang Republik Indonesia Nomor 45 Tahun 2009 tentang Perubahan Atas Undang-Undang Nomor 31 Tahun 2004 tentang Perikanan.
19. Widodo J., 2001. Model-model Surplus Produksi Untuk Mengestimasi Hasil Tangkapan Maksimum Lestari (Maximum Sustainable Yield, MSY). Penuntun Pengkajian Stok Sumber Daya Ikan Perairan Indonesia. Proyek Riset and Eksplorasi Sumber Daya Laut, Pusat Riset Kelautan and Perikanan. DKP-Pusat Penelitian Oseanografi-LIPI. Jakarta
20. Widodo J., and Suadi, 2006. Pengelolaan Sumberdaya Perikanan Laut. Gadjah Mada University Press. P. O. Box 14. Bulaksumur. Yogyakarta 55281.

DOI <https://doi.org/10.18551/rjoas.2018-11.48>

COMPARATIVE CHARACTERISTIC OF THE CAUSATIVE AGENTS OF CLOSTRIDIOSIS IN CATTLE

Pimenov Nikolai*, Doctor of Biological Sciences

Kolesnikova Yulia, Candidate of Biological Sciences

Moscow State Academy of Veterinary Medicine and Biotechnology, Moscow, Russia

*E-mail: pimenov-nikolai@yandex.ru

ABSTRACT

Description of the etiology and comparative characteristics of the selected strains of clostridia is given in the article. The prevalence of different types of *Clostridium perfringens* in calves of different age groups, the etiological importance of other species of *Clostridia*: *Cl. septicum*, *Cl. sordellii*, *Cl. novyi* are shown. Biological properties of the isolates of the causative agent of anaerobic enterotoxaemia in cattle were studied. The most pathogenic strains of *Cl. perfringens* (types A, C and D) were identified.

KEY WORDS

Anaerobic enterotoxaemia, clostridiosis, *Clostridium*: *Cl. perfringens*, *Cl. septicum*, *Cl. sordellii*, *Cl. novyi*, calves, cattle.

In cattle breeding animals must be provided with balanced feeding, exercises, the optimal conditions of maintenance and the relevant norms of microclimate parameters for life support, health, reproduction and high productivity. Even minor technological violations lead to malfunctions, diseases and death of the animals. However, intensification of animal husbandry leads to the serious changes of many physiological parameters of animal organism. Not typical diseases of the high-yielding cattle appear under the adverse conditions of maintenance and unbalanced feeding. Thus, blackleg was only one actual clostridiosis during breeding of cattle in the USSR. Diseases caused by bacteria of the genus *Clostridium* – *Cl. perfringens*, *Cl. septicum*, *Cl. sordellii*, *Cl. tetani* and *Cl. oedematiens* did not have a serious epizootic significance because they occurred in individual cases [1, 9].

Currently, imperfect and unbalanced feeding causes metabolic abnormalities, diseases of the digestive tract, organs, musculoskeletal system and others in cows with productivity of 8,000 liters of milk per year and up. These diseases are compounded by anaerobic infections, in particular *Cl. perfringens*, *Cl. septicum*, *Cl. sordellii*, *Cl. novyi*, *Cl. oedematiens* et al. [3, 6].

Newborn and young heifers are most often suffered from clostridiosis immediately after calving in farms that do not monitor their physiological state during pregnancy. Organism of newborn cow does not have time or cannot be reconstructed after the changes of physiological state, and the milk yield at milking ensured not by nutrients coming from the food, but at the expense of the internal reserves of organism. The process leads to a rapid animal exhaustion, disorders of physiological homeostasis and is complicated by infectious diseases, in particular clostridiosis, which causes diseases of bowel (in this case the causative agent is *Cl. Perfringens*) and muscle tissue, usually it affects pelvic limbs (causative agents are *Cl. Rerfringens*, *Cl. Septicum*, *Cl sordellii* and other, often - in the complex). Almost 100% of cases the disease ends with death or forced slaughter of an animal. Infections are of a fixed character and are characterized by a high mortality rate, resulting in significant economic losses for farms [1, 2, 3, 9].

Elimination of the infectious diseases with clostridial etiology is carried out in two directions: the general animal health measures and the specific prevention of diseases, which provides the insensitiveness of vaccinated animals due to the forming immunity for a sufficiently long period of time.

Today a number of products are offered including a wide range of antigens for the immunization against clostridiosis of cattle («One Shot Ultra 8», «One Shot Ultra 10»,

«Millenium», «Multiclos», «Toxipra Plus», «Bar Vac 10»), and two Russian-made vaccines: «Clostbovac-8» (LLC «Vetbiochem») and «Antox-9» (PCF «Stavropol Biofactory»). All these preparations are intended for the vaccination of animals with 1.5 months of age and pregnant cows [3, 4, 7].

It should be noted that for the vaccination of pregnant cows in order to create colostral immunity against the relevant to young infectious diseases of newborn calves is advisable to use complex vaccines for the prevention of the diseases of different etiology, such as escherichiosis, anaerobic enterotoxaemia, rotavirus enteritis and coronavirus infection in cattle. Currently, however, these drugs of domestic production are absent. Monovalent vaccines against the anaerobic enterotoxaemia of calves are also not presented on the market, although their use in permanently disadvantaged farms would be effective and in demand [5, 8]. In this regard, the development of immunobiological preparation for the prevention of anaerobic infections of calves is an important issue [9].

The study of the species composition and biological properties of clostridia, which cause clinically significant diseases in cattle and selection of the most promising strains to create an experimental vaccine against clostridiosis, was the goal of this work.

The following tasks were set to achieve the goal:

- Conduct a bacteriological examination of the samples of mortem material from dead and slaughtered animals with signs of anaerobic etiology diseases, allocate isolates and identify them to species;
- Study the biological properties of the causative agents of clostridiosis. Compare their virulent and toxigenic properties;
- Describe and certify strains of clostridia.

MATERIALS AND METHODS OF RESEARCH

To identify the causative agents of clostridiosis the study of pathological material was conducted according to the conventional methods of the laboratory diagnostics of clostridiosis. Sections of the small intestine with the content, samples of diseased muscle tissue, pieces of the heart, liver, kidney and spleen were collected for bacteriological investigations. The material was plated on Kitt-Tarozzi medium, Schaedler agar with the addition of 10% sheep blood, as well as on beef extract agar (BEA), meat-peptone broth (MPB), Sabouraud agar. Cultures were incubated in anaerobic jars at 37° C using the gas generating bags. Obtained pure cultures of clostridia isolates were typed by the enzymatic properties using a set of «RapIDANII», designed to identify the most clinically relevant species of anaerobic gram-positive bacteria [7]. Obtained isolates of *Cl. perfringens* were additionally identified up to the type by neutralization reaction with antitoxic serums.

Determination of pathogenicity and toxigenicity of isolates was performed by the experimental infection of laboratory animals, for that purpose chinchilla rabbits weighing 2.5 ± 0.54 kg, guinea pigs weighing 250.0 ± 4.32 g and white mice weighing 17.0 ± 2.64 g were used.

Totally we have performed bacteriological examination of 276 samples from 46 heads of cattle: 27 heifers and 19 heads of the calves of various ages.

RESULTS OF STUDY

The material for the research was obtained from eleven regions of the Russian Federation: Belgorod, Irkutsk, Kirov, Kursk, Moscow, Nizhny Novgorod, Samara, Saratov, Tver, Chelyabinsk regions and the Republic of Mordovia. Samples of material were collected from animals with characteristic clinical signs and pathological changes: intoxication, diarrhea with signs of dehydration, subcutaneous infiltration in the back, abdomen, limbs with crepitation of tissues, gangrenous lesions of organs and tissues, and others.

Exudate in the abdominal and thoracic cavities, swelling and hemorrhagic inflammation of the small intestine, kidney softening were detected at autopsy of dead animals, which died with the signs of enterotoxaemia. Petechial hemorrhages were presented on the surfaces of

parenchymal organs. Meltdown tissues, the presence of exudate, gas bubbles, peculiar smell, in some animals - coated with capsule limited tissue sections of dark red or cherry color with an oily texture, ranging in size from 7 to 15 cm in diameter were observed in lesions of muscles.

Samples of material were examined microscopically by viewing smears stained by Gram after selection and delivery to the laboratory. Sowing material on the pre-reduced Kitt-Tarozzi medium, Schaedler blood agar, BEA, MPB, Sabouraud agar was performed at presence in the smears of large gram-positive rods with size $4 \dots 8 \times 0.6 \dots 1.5 \mu\text{m}$.

Cultures grown in anaerobic jars for 24-48 h at 37°C were used for identification of microorganisms. Specific to clostridia colonies were subcultured into 2 tubes on slant blood agar, one of them was cultured in anaerobic, and the other - under aerobic conditions (control). After 24-48 hours, smears from the culture were prepared and stained by Gram in the presence of microflora growth on agar, cultivated in anaerobic jars, and absence growth in the control. Further studies were performed at the detection of gram-positive rods with morphology characteristic for clostridia, which are not contaminated with extraneous microflora.

Identification of microorganisms was carried with the set of «RapIDANAll», for which purpose bacterial suspension was prepared with a concentration of 3 units on McFarland. The resulting suspension was uniformly distributed in the wells and cultured in a thermostat at 37°C for 6 hours. Further reagents «RapID ANAll Reagent» and «RapID Spot Indole» were added to the wells. Analysis of results was performed for 2 minutes, after which the results were added to the computer program and confirmation of the identification of microorganism species was obtained.

Typification of the isolates of *Cl. perfringens* was carried out by setting neutralization reaction using commercial antitoxic serums to the various types of *Cl. perfringens*. Results obtained during the studies are presented in Table 1.

Table 1 – Species of *Clostridium* isolates, which were allocated from pathological material of cattle

№	Animals, age	<i>Cl. perfringens</i>			<i>Cl. septicum</i>	<i>Cl. sordellii</i>	<i>Cl. novyi</i>
		type A	type C	type D			
1	Calves (1-10 days)	5	1	-	-	-	1
2	Calves (10-30 days)	-	3	1	-	-	1
3	Young animals (1-12 months)	-	3	-	-	2	2
4	Cows	1	3	1	13	6	3
5	Total	6	10	2	13	8	7

Presented in Table 1 data show that from the animals *Cl. septicum* were isolated most frequently - in 13 cases, *Cl. rerfringens* type C - 10, *Cl. sordellii* - 8, *Cl. novyi* - 7, *Cl. rerfringens* type A - 6 and the D type - only in 2 cases.

Infection of guinea pigs and rabbits by diurnal, actively growing cultures of clostridia intramuscularly in a volume of 0.5-1.0 ml suspension (500 mln of microbial cells on the optical turbidity standard) was carried for study the virulence of isolates. Strains of clostridia possessing virulent properties caused the death of animals within 24-72 hours. During these studies we have found that from the number of allocated isolates (n = 46) 25 were virulent for laboratory animals.

Inspection showed that the most virulent for laboratory animals were isolates of *Cl. septicum*, *Cl. sordellii*, *Cl. rerfringens* types C and A, somewhat less *Cl. rerfringens* type D.

All 25 cultures of clostridia, which caused the death of laboratory animals, were used to test toxicity. To obtain culture liquid with toxin content, isolates were grown on the already mentioned scheme and then they were centrifuged to pellet the cells and filtered through sterilizing filters. The resulting liquid was intravenously administered to white mice weighing 16-18 g using two mice for each isolate. Cultures that caused death of white mice within 24 hours were recognized as toxigenic. As a result of these experiments, we found that in a varying degree all selected cultures of *Cl. rerfringens* type C were toxigenic, slightly less - *Cl.*

rerfringens types A and D. One isolate of *Cl. sordellii* and one of *Cl. novyi* were also toxigenic, among the isolates of *Cl. septicum* toxigenic cultures have not been identified.

Conducted researches have allowed to select for further work eight most pathogenic and toxigenic strains of *Cl. septicum*, *Cl. sordellii*, *Cl. perfringens* types A, C, D, *Cl. novyi*, which can be used for vaccine production. The strains have been certified, their depositing as production strains is preparing.

DISCUSSION OF RESULTS

According to the obtained results, clostridiosis is widespread in the livestock farms of the various subjects of the Russian Federation, so the problem of effective struggle against them in cattle breeding is actual. In this regard, we were tasked to distinguish from pathological material from the fallen and slaughtered animals the causative agents of anaerobic infections – clostridiosis; to study their biological properties, virulence and toxigenicity for the purpose to select them for depositing as the production strains.

Study of 276 samples of pathological material from 46 corpses of the cattle of different age groups with the characteristic clinical, pathological and anatomical signs was conducted during the work. As a result of studies 46 isolates of clostridia were allocated, 18 of which belong to *Cl. rerfringens* that is 39%. Meanwhile type A dominated in the etiological structure of the anaerobic enterotoxaemia of calves, type C was prevalent in young animals of older age and type D – in cows. The obtained results are not fully consistent with the published data:

- Spiridonov G.N. and coauthors, who in 2010-2013 conducted a study in the Republic of Tatarstan, in which they allocated *Cl. perfringens* type D from the calves in 7 cases and type C - only in one. But the data on the predominant serotype A (15 cases) are completely consistent with the results of our studies [8]. Unfortunately, in the article of Spiridonov G.N. and coauthors the exact age of the calves is unknown, and, perhaps, our results complement the data of Spiridonov and actualize the problem of anaerobic enterotoxaemia in calves caused by *Cl. perfringens* of three serotypes: A, D, C.
- In the studies of Moskalyova N.V., conducted in the farms of the Republic of Belarus in 1989-1998, it is noted that most common type of *Cl. perfringens* is type A (40.5%), followed by type D - 35,1% of cases, the share of C type accounts for only 24.3% of the obtained cultures [5].

Clostridia isolates, allocated by us, had a morphological, tinctorial and enzymatic properties characteristic for family. Further studies was interesting for us in identifying the most virulent isolates, assuming their high immunogenic properties, for further research on the development of vaccine against anaerobic enterotoxaemia of cattle. It was found that the most virulent were *Cl. septicum*, *Cl. sordellii*, *Cl. novyi*, *Cl. perfringens* type C. Isolates of *Cl. perfringens* type C and *Cl. perfringens* type A have toxigenic properties, less toxic - *Cl. perfringens* type D.

These studies made it possible to select and to certify eight strains that will be used as the production strains in the manufacture of the series of experimental vaccines against anaerobic enterotoxaemia of calves.

CONCLUSION

Clostridiosis is widely distributed on the territory of the Russian Federation, whereas it is characterized by the stationarity and high mortality.

As a result of studies 46 isolates of clostridia were allocated from 276 samples of pathological material from 46 corpses of the cattle of different age groups from 11 regions of the Russian Federation, 18 of which belong to *Cl. rerfringens* that is 39%.

Cl. perfringens types A, C, D are the most important causative agents in the etiology of the anaerobic enterotoxaemia of cattle. Meanwhile type A dominated in the newborn calves, type C was prevalent in young animals of older age and type D – in adult cattle.

Eight strains of clostridia with highest virulent and toxigenic properties: *Cl. septicum*, *Cl. sordellii*, *Cl. perfringens* types A, C, D, *Cl. Novyi*, which can be used for vaccine production were certified.

REFERENCES

1. Kazimir A.N., 1997. Epizootologiya, etiologiya, fagoterapiya i spetsificheskaya profilaktika anaerobnoy enterotoksemii telyat v khozyaystvakh Ul'yanovskoy oblasti [Epizootology, Etiology, Phage Therapy and Specific Prophylaxis of Anaerobic Enterotoxaemia of Calves in the Farms of the Ulyanovsk Region] (PhD Thesis), Kazan.
2. Kapustin A.V., Motorygin A.V., Bukova N.K., 2013. Vidovoy sostav klostridiy krupnogo rogatogo skota [The Species Composition of Clostridia of Cattle]. Vestnik Veterinari, no 64, pp. 71-73.
3. Kolesnikova Y.N., Pimenov N.V., Kapustin A.V., 2016. Etiologiya anaerobnykh infektsiy u krupnogo rogatogo skota i sravnitel'naya kharakteristika vydelennykh shtammov klostridiy [The Etiology of Anaerobic Infections in Cattle and Comparative Characteristics of the Isolated Strains of Clostridia]. RJOAS, no 8 (56), pp. 39-48.
4. Kurlovich D.V., Karpovich V.K., Moskaleva N.V., 2013. Razrabotka i aprobatsiya vaksiny assotsiirovannoy protiv kolibakterioza i anaerobnoy enterotoksemii telyat [Development and Testing of an Associated Vaccine against Colibacillosis and Anaerobic Enterotoxaemia of Calves]. Biotekhnologiya: real'nost' i perspektivy v sel'skom khozyaystve [Biotechnology: Reality and Perspectives in Agriculture], pp. 108 – 113.
5. Moskaleva N.V., 2001. Diagnostika i profilaktika anaerobnoy enterotoksemii telyat, obuslovennoy enterotoksinom *Cl. perfringens* tipa A [Diagnosis and Prevention of Anaerobic Enterotoxaemia of Calves Caused by Enterotoxin *Cl. Perfringens* Type A] (PhD Thesis), Minsk.
6. Nesterov I.A., 2011. Epizootologicheskiy analiz faktorov patogennosti vzbuditelya perfringeoza zhivotnykh [Epizootological Analysis of the Pathogenicity Factors of the Causative Agents of Anaerobic Enterotoxaemia of Animals]. Vestnik Veterinari, no 2. pp. 23 – 27.
7. Spiridonov A.G., 2013. Razrabotka i otsenka effektivnosti vaksiny assotsiirovannoy protiv anaerobnoy enterotoksemii i esherikhioznoy diarei telyat [Development and Evaluation of Associated Vaccine Efficacy against Anaerobic Enterotoxaemia and Escherichiosis Diarrhea of Calves] (PhD Thesis), Kazan.
8. Spiridonov G.N., Makhmutov A.F., Spiridonov A.G., Nasretdinov D.D., 2013. Anaerobnaya enterotoksemiya i esherikhioznaya diareya telyat: etiologiya, lechenie i spetsificheskaya profilaktika [Anaerobic Enterotoxaemia and Escherichiosis Diarrhea of Calves: Etiology, Treatment and Specific Prevention]. Biotekhnologiya: real'nost' i perspektivy v sel'skom khozyaystve [Biotechnology: Reality and Perspectives in Agriculture], pp. 123 – 125.
9. Pimenov N.V., Kolesnikova Y.N., Laishevtsev A.I., Mohammad Ali Shariati, Glinushkin A., Goncharov A., 2016. Etiology and clinic-morphological manifestation of anaerobic enterotoxaemia of young cattle. International Journal of Research in Ayurveda & Pharmacy, no 7 (2), pp. 228 – 231.

DOI <https://doi.org/10.18551/rjoas.2018-11.49>

THE EFFECT OF SEXUAL DUE TO THE PRODUCTION OF SEMEN ON ONGOLE CROSSBRED

Sholikhah Nisa'us*, Patguri Mayova, Yekti Aulia Puspita Anugra, Kuswati, Wahjuningsih Sri, Susilawati Trinil

Faculty of Animal Husbandry, University of Brawijaya, Indonesia

*E-mail: nislaus.sholikhah@gmail.com

ABSTRACT

Ongole crossbred (CO) is a local cow that has long been bred in Indonesia. One strategy to increase population is to produce frozen semen with good quality. Semen production is influenced by libido which is known through male sexual behavior. The purpose of this study was to determine the effect of sexual behavior on semen production. The research material included 3 OC cattle studs aged 4-5 years with a body weight of 500-600 kg. Semen is collected twice a week using the artificial vaginal method. The method used in the study was observational. Sexual behavior parameters include libido and ejaculation duration. Semen production variables are known by calculating total spermatozoa and total motile spermatozoa. Data were analyzed using Randomized Block Design (RBD) consisting of 3 treatments and 10 replications. If there is a difference, continue with Duncan's Multiple Distance Test. The relationship between sexual behavior and semen production was calculated by Pearson correlation and its effect was calculated by linear regression. The results showed that the length of libido was not significant ($P > 0.05$), the duration of ejaculation was significantly ($P < 0.01$), the total spermatozoa was significantly ($P < 0.01$), and the total motile spermatozoa was significantly ($P < 0.01$) in all three male males. The relationship between the duration of libido and semen production was insignificant ($P > 0.05$), while the duration of ejaculation had a significant relationship ($P < 0.05$) to total spermatozoa with $R^2 = 22.15\%$ and total motile spermatozoa with $R^2 = 25.84\%$. The conclusion of the study was that there was an influence on sexual behavior on semen production in OC cattle.

KEY WORDS

Ongole crossbred, libido, sexual behavior, semen production

Ongole crossbred (OC) cattle are local cows produced by crosses that are cultivated for quite a long time in Indonesia. In 1991 the OC cattle population reached 4.6 million head and in 2001 the population dropped by 874,000 by concentration on Java (Astuti, 2004). The increased population of OC cattle used to increase the potential of existing local cattle. One way to increase OC cattle population is to produce frozen semen with very precise and reproductive requirements and have a good appearance (Susilawati, 2017c).

The Center for Artificial Insemination (BBIB) located in Singosari, Malang, East Java is a hall that provides frozen semen and has several local or exotic cattle countries. The process of selecting superior males is done by holding semen and testing the quality of spermatozoa to semen to determine the fertility level.

The quality and production of semen by genetic and environmental factors. Genetic factors include libido, nation, scrotal circumference, and age. Environmental factors include feed, temperature, and shelter (Susilawati et al., 2017). Spermatozoa with good quality and quantity can be obtained by male regulation, adequate feed, male health, and generation of sexual behavior before copulation.

Sexual behavior can refer to livestock libido which influences semen production and quality (Arman, 2014 and Herwijanti, 2004). The more often we do the behavior, the production of spermatozoa increases but the volume per ejaculation decreases. Sexual behavior includes the duration of libido, false installation, thrust, pinching, long ejaculation and erectile quality (Herwijanti, 2004). Ismaya (2014) explains libido also by heredity or genetics. Sexual behavior needs to be considered to bring up relevant signs of behavior in

predicting activities so that they can be visited early (Solano et al., 2005). The aim of this study was to publish the results of spermatozoa production in PO cow males used for frozen semen production.

MATERIALS AND METHODS OF RESEARCH

The research material used included OC cattle with an age of 4-5 years as many as 3 with a body weight of 500-600 kg. Semen is collected twice a week using the artificial vaginal method. Tools and materials used in semen storage and semen production observations are as follows:

- Semen shelter. Tools include artificial vagina, storage tube, protector jacket, corn, black cloth cover, thermometer and clamp enclosure with materials used include anglers, *ky jelly*, warm water and tissue.
- Observation of semen production. Tools include microscope, osse, glass cover, glass object, socorex pipette, litmus paper, spectrophotometer and cool top with materials used including semen

The method used in this study was observational with 3 treatments and 10 replications. The research treatment was individual 1 (Bromo), individual 2 (Alindo) and individual 3 (Akbar) with 10 replications namely semen storage. Variables observed in sexual behavior include libido duration and ejaculation duration according to Herwijanti (2004). The duration of libido is the first time the male rises to the teaser, calculated from the male close to the teaser until the first false mounting, the calculation using a stopwatch. The duration of ejaculation is calculated from the time the male is brought close to the teaser until the ejaculation occurs in the artificial vagina, the calculation using a stopwatch.

Variables observed for semen quality including volume, concentration, and motility of spermatozoa individuals were observed to semen production, namely total spermatozoa and total motile spermatozoa per ejaculate according to Ax et al (2008) and Susilawati (2013), namely:

- total spermatozoa = volume x concentration;
- total motile spermatozoa = volume x concentration x individual motility.

The data obtained were analyzed using statistical analysis of Randomized Block Design (RBD) to determine differences between individuals. If there is a difference followed by Duncan's Multiple Distance Test (UJBD). Duration of ejaculation and duration of libido were correlated with total spermatozoa and total motile spermatozoa.

Table 1 – Correlation Coefficient Value

R Value	Interpretation
0,00 – 0,199	Correlation is very weak
0,20 – 0,399	Weak correlation
0,40 – 0,599	Medium correlation
0,60 – 0,799	Strong correlation
0,80 – 1,000	Correlation is very strong

Source: Sugiyono, 2007.

RESULTS AND DISCUSSION

Sexual behavior reflects the ability of males to initiate sexual activity that gives an idea of the reproductive performance of a livestock so that it can be used as a seed for Artificial Insemination purposes (Salim, 2017).

Long libido. Libido is the desire of males to mate. The duration of libido can be measured by calculating the time when the male is brought close to the angler until the first false mounting. The results of the variance analysis showed that each individual did not give a significant difference ($P > 0.05$) to the duration of libido.

Table 2 – Average libido duration of Ongole crossbred

Individual	Long libido (minute) \pm SD
Bromo	0,61 \pm 0,89
Alindo	0,68 \pm 0,83
Akbar	0,21 \pm 0,24

The mean value lies in (0.21 \pm 0.24) to (0.68 \pm 0.83). The highest duration of libido is in the individual Alindo and the lowest in the individual Akbar. Good libido is indicated by the rapid response when brought near to the angler. The duration of libido under 60 seconds is categorized as good (Herwijanti, 2004). The three individuals still have libido that is not much different.

Based on the results of field observations the shelter process carried out on the three OC cattle has the same angler and location according to the preferences of each individual. The atmosphere in the shelter is made calm so that individuals are not disturbed by the surrounding environment. This can be applied with the collector's position on the individual side and not standing in front of the individual because it can disturb the concentration and direct the restraint rope towards the back of the angler to focus the livestock. This is in accordance with Sumeidiana et al (2007) that creating a calm atmosphere around shelters, feed factors, and conditions for the same shelter can be done to increase libido.

Long Ejaculation. Ejaculation is the release of semen from the penis during the peak of libido. The duration of ejaculation is the time when the male is brought near the angler until the ejaculation occurs. The results of the variance analysis showed that each individual gave a significantly difference ($P < 0.01$) for the duration of ejaculation.

Table 3 – Average Ejaculation Length of Ongole Crossbred

Individual	Long Ejaculation (minute) \pm SD
Bromo	3,80 \pm 1,51 ^a
Alindo	3,07 \pm 0,99 ^a
Akbar	7,28 \pm 4,15 ^b

The mean value lies in (3.07 \pm 0.99) to (7.28 \pm 4.15). The highest duration of ejaculation lies in the Akbar individual and the lowest among Alindo individuals. Table 3 shows that Akbar individuals have ejaculation duration of 7.28 minutes. This value is different from the other three individuals, because when the conditions in the field occur collector turnover and angling in Akbar's individual causes the level of preference for habits decreases along with the expertise of officers at the shelter which affects whether or not the male is to be accommodated.

This agrees with Susilawati (2013b) that the nation, age, scrotal circumference, adaptability, and environmental situation when accommodated and the expertise of officers influence the quality and quantity of semen produced.

The process of ejaculation according to (Waluyo, 2014) spermatogenesis that occurs in the seminiferous tubules will be channeled by cilia which move the spermatozoa to the rete testes, vas deferens epididymis, vas efferens and finally in the urethra; the process of transportation when flowing into the vas deferens, contraction of the seminal vesical smooth muscle and prostate secreting seminal plasma (Ax et al., 2008) so that the spermatozoa with the seminal plasma form semen out through the ejaculatory duct and urethra then emitted through the penis.

Total Spermatozoa. The results of the variance analysis showed that each individual gave a significantly ($P < 0.01$) to total spermatozoa.

Table 4 – Average Total Spermatozoa of Ongole crossbred

Individual	TS (Million) \pm SD
Bromo	7.892,28 \pm 2.476,04 ^a
Alindo	6.729,93 \pm 2.305,49 ^a
Akbar	10.787,38 \pm 2.542,86 ^b

The mean value is located at $(6,729.93 \pm 2,305.49)$ to $(10,787.38 \pm 2,542.86)$. The highest total spermatozoa lies in the Akbar individual and the lowest in Alindo individuals. Field results showed total spermatozoa in all three individuals categorized accordingly according to Garner and Hafez (2008) who argued that semen concentrations varied from 1,000-1,800 million spermatozoa per milliliter.

Total Spermatozoa Motil. The results of the variance analysis showed that each individual gave a significantly difference ($P < 0.01$) to the total motile spermatozoa.

Table 5 – Average Total Spermatozoa Motil of Ongole crossbred

Individual	TSM (Million) \pm SD
Bromo	$5.145,19 \pm 1.765,76^a$
Alindo	$4.893,48 \pm 1.645,06^a$
Akbar	$7.182,72 \pm 1.843,39^b$

The mean value lies in $(4,893.48 \pm 1,645.06)$ to $(7,182.72 \pm 1,843.39)$. The highest total motile spermatozoa lies in the large individual and the lowest in Alindo individuals. The results showed that the three individuals had total spermatozoa above the average in the study. Sholikhah et al (2016) argue that total progressive spermatozoa per ejaculate will determine success in fertilization. Ax et al (2008) and Susilawati (2011a) argue that the older cows will result in improved quality but after 7 years it will decline. In puberty animals, abnormal spermatozoa are found. In young animals the volume of semen is less. It also affected the total motile spermatozoa in Akbar individual semen which had a different age from other individuals, namely 5 years with the highest total spermatozoa.

Relationship between Old libido and Spermatozoa Production. Based on the regression relationship obtained a value that is not real ($P > 0.05$) with a positive correlation coefficient (r) of 0.04. The correlation shown proves the degree of closeness between the two very low variables between the duration of libido and the total spermatozoa.

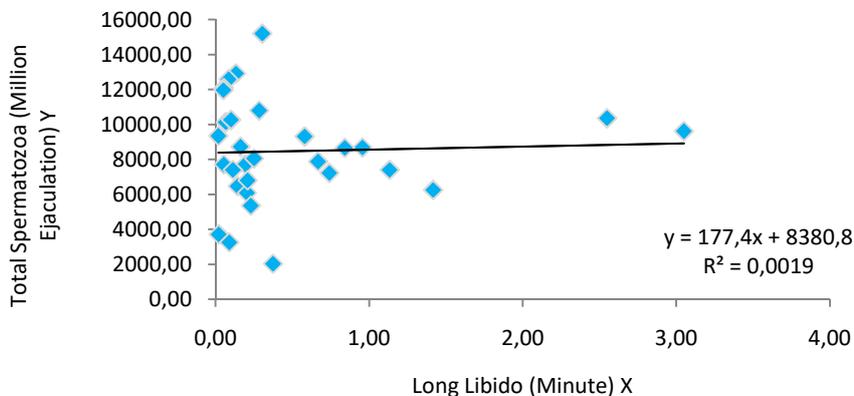


Figure 1 – Relationship between libido duration and total spermatozoa in OC cattle

The effect of the duration of libido on total spermatozoa is illustrated by the coefficient of determination R^2 of 0.001%, meaning that the length of libido affects the total spermatozoa by 0.001% and the rest is influenced by other factors. The third individual regression equation is $y = 177.4x + 8,380.8$ which means that if the length of libido increases every unit, it will increase the total number of spermatozoa by 177.4. Sumeidiana et al (2007) argue that high libido will produce high accessory glands and high plasma seminal production, which will squeeze the spermatozoa stored in the epididymis during ejaculation which causes high production of spermatozoa produced.

Relationship between Long libido and Spermatozoa Motil Production. Based on the regression relationship, the values that were insignificant ($P > 0.05$) between the length of libido and total motile spermatozoa with a positive correlation coefficient (r) of 0.08. The correlation shown proves the degree of closeness between the two very low variables between the duration of libido and the total spermatozoa.

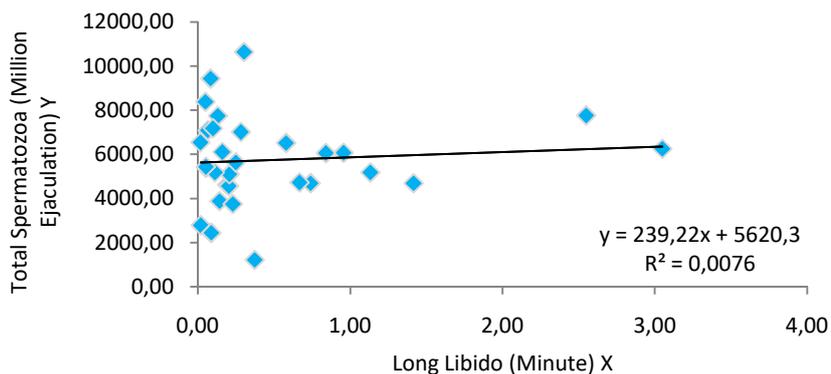


Figure 2 – Relationship between libido duration and total Spermatozoa Motil OC cattle

The effect of the duration of libido on total spermatozoa is illustrated by the coefficient of determination R^2 of 0.007% meaning that the length of libido affects the total spermatozoa by 0.007% and the rest is influenced by other factors. The third individual regression equation is $y = 239.22x + 5,620.3$ which means that if the length of libido increases every unit, it will increase the total number of motile spermatozoa by 239.22. Brito et al (2002) stated that total motile spermatozoa was influenced by age. In all three individuals having different ages, Akbar's individuals have 5 years of age and the other two individuals have 4 years of age.

Relationship between Ejaculation and Spermatozoa Production. Based on the regression relationship obtained value ($P < 0.05$) between the duration of ejaculation and total spermatozoa with a positive correlation coefficient (r) of 0.47. The correlation shown proves a moderate correlation between the duration of ejaculation and total spermatozoa.

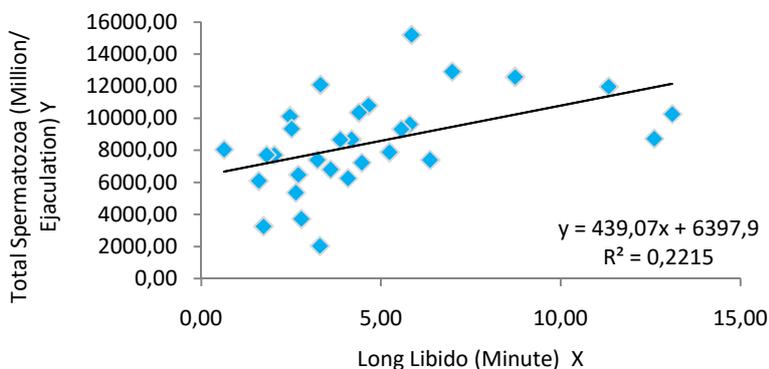


Figure 3 – Relationship between Ejaculation and Total Spermatozoa

The effect of ejaculation duration on total spermatozoa is illustrated by the coefficient of determination R^2 of 0.2215% meaning that the length of libido affects the total spermatozoa by 22.15% and the rest is influenced by other factors. The third individual regression equation is $y = 439.07x + 6,397.9$ which means that if the duration of ejaculation increases every unit, it will increase the total number of spermatozoa by 439.07. Prolonged ejaculation distance, causing the semen results in many abnormal spermatozoa because they are piled up in the epididymis and vas deferens (Susilawati et al., 2017).

Relationship between Ejaculation Duration and Spermatozoa Motil Production. Based on the regression relationship obtained a value ($P < 0.05$) between the duration of ejaculation and total motile spermatozoa with a positive correlation coefficient (r) of 0.50. The correlation shown proves a moderate correlation between the duration of ejaculation and total motile spermatozoa.

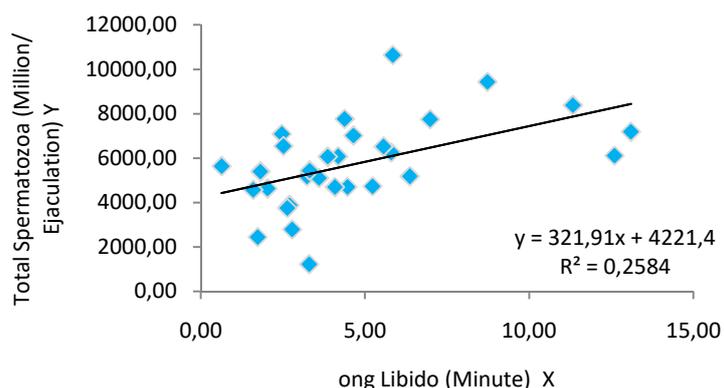


Figure 4 – Relationship between Ejaculation Duration and Total Spermatozoa Motil

The effect of ejaculation duration on total motile spermatozoa is described by the coefficient of determination R^2 of 0.2584%, meaning that the length of libido affects the total spermatozoa by 25.84% and the rest is influenced by other factors. The third individual regression equation is $y = 321.91x + 4,221.4$ which means that if the duration of ejaculation increases every unit, it will increase the total number of motile spermatozoa by 321.91. Komariah et al. (2013) argue that many factors influence the difference in motility values of spermatozoa including age, nation, maturity of spermatozoa, and the quality of plasma spermatozoa.

CONCLUSION

Based on the results of research and discussion, it can be concluded that:

- The duration of libido and duration of ejaculation in OC cattle has a positive correlation with total spermatozoa and total motile spermatozoa. The higher the duration of libido and the longer the ejaculation, the more total spermatozoa and total motile spermatozoa.
- The average length of libido in OC cattle is 0.48 minutes; duration of ejaculation 4.11 minutes; total spermatozoa 7,755.8 million / ejaculate; total motile spermatozoa 5,271.33 million/ejaculate.

ACKNOWLEDGMENTS

Thank you to the Education Fund Management Institute (LPDP) of the Ministry of Finance of the Republic of Indonesia for funding research and the Singosari Malang Institute for Artificial Insemination which provides a place of research.

REFERENCES

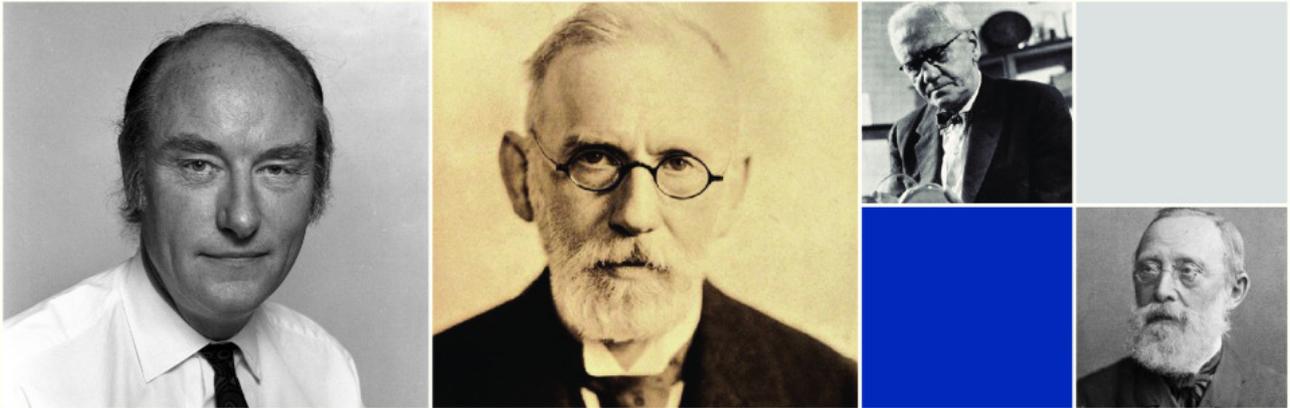
1. Arman, C. 2014. Reproduksi Ternak. Graha ilmu. Yogyakarta.
2. Astuti, M. 2004. Potensi dan Keragaman Sumberdaya Genetik Sapi Peranakan Ongole (PO). Jurnal Wartazoa. 14(3) : 98-106.
3. Ax, R. M., Dally., B. Didion., R. Lenz., C. Love., D. Vaner., Hafez and M. Bellin. 2008. Semen evaluation in reproduction in farm animal. 7th Edition Edited by Hafez, E.S.E. Co Director. Reproductive Health Kiawah Island. South Carolina. United States of America: 365-370.
4. Brito, L.F.C., A. E. D. F. Silva., L. H. Rodrigues., F. V. Vieira., L. A. G Deragon and J. P. Kastelic. 2002. Effects of environmental Factors, Age and Genotype on Sperm Production and Quality in *Bos indicus* and *Bos taurus* ARTIFICIAL INSEMINATION bulls in Brazil. Animal Reproduction Science. 70: 181-190.

5. Garner, D.L and E.S.E. Hafez. 2008. Spermatozoa and Plasma Semen In Reproduction in Farm Animal. Hafez, E.S.E. and B. Hafez (eds). 7th ed. Lippincott & Williams. Baltimore, Maryland, USA: 82-95.
6. Herwijanti, E. 2004. Pengaruh Tingkah Laku Seksual Terhadap Kualitas Semen Pada Berbagai Artificial Insemination Bangsa Sapi Potong. Tesis. Malang : Universitas Brawijaya.
7. Ismaya. 2014. Bioteknologi Inseminasi Buatan pada Sapi dan Kerbau. Universitas Gadjah Mada Press (UGM Press). Yogyakarta.
8. Komariah, L., Arifiantini dan F.W. Nugraha. 2013. Kaji Banding Kualitas Spermatozoa Sapi Simmental, Limousin, dan Friesian Holstein Terhadap Spermatozoa Kambing Boer Setelah Penyimpanan Dingin. Buletin Peternakan. 37(3) : 143-147.
9. Salim, M. A. 2017. Evaluasi Tingkah Laku Sexual Kambing Kacang Jantan di Unit Pemukiman Transmigrasi (UPT) Desa Bina Gara Kabupaten Halmahera Timur. Jurnal Agripet. 17(1): 7-14.
10. Sholikah, N., N. IsnArtificial Inseminationni., A.P.A. Yekti dan T. Susilawati. 2016. Pengaruh Penggantian Bovine Serum Albumin (BSA) dengan Putih Telur pada Pengencer CEP-2 terhadap Kualitas Semen Sapi Peranakan Ongole pada Suhu Penyimpanan 3-5°C. Jurnal Ilmu-Ilmu Peternakan. 26(1): 7-15.
11. Solano, J., A. Orihuela., C.S. Galina., F. Montiel and F. Galindo. 2005. Relationship between social behaviour and mounting activity of Zebu Cattle (*Bos indicus*). Journal Applied Animal Behaviour Science 94:197-203
12. Sumeidiana, I., S. Wuwuh dan E. Mawarti. 2007. Volume Semen dan Konsentrasi Sperma Sapi Simmental, Limousin dan Brahman di Berbagai Artificial Insemination Inseminasi Buatan Ungaran. Jurnal Indon.Trop.Anim.Agric Semarang. 32 : 2.
13. Susilawati, T. 2011^a. Spermatology. Universitas Brawijaya. (UB) Press. Malang.
14. Susilawati, T. 2013^b. Pedoman Inseminasi Buatan Pada Ternak. Universitas Brawijaya. UB Press. Malang.
15. Susilawati, T. 2017^c. Sapi Lokal Indonesia (Jawa Timur dan Bali). Universitas Brawijaya. UB Press. Malang.
16. Susilawati, T., A.P.A. Yekti., M.N. Ihsan dan S. Wahyuningsih. 2017. Fisiologi Reproduksi Ternak. UB Press. Malang.
17. Waluyo, S.R. 2014. Reproduksi Aplikatif pada Sapi. Srikandi Empat Widya Utama. Bandung.

Find us on  facebook:

<http://www.facebook.com/pages/Russian-Journal-of-Agricultural-and-Socio-Economic-Sciences/336145216497494>

OPEN  **ACCESS**



They didn't have it in their time...



...imagine what **you** could achieve with it now

Images of Francis Crick and John Kendrew courtesy of MRC Laboratory of Molecular Biology. All other images courtesy of Wellcome Library, London

UK PubMed Central

A unique, free, information resource for biomedical and health researchers

ukpmc.ac.uk

UK PubMed Central brought to you by:



A service of the National Library of Medicine and the National Institutes of Health

