

# RUSSIAN JOURNAL OF AGRICULTURAL AND SOCIO- ECONOMIC SCIENCES

ISSN 2226-1184



#2(86)

February 2019

"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](http://www.rjoas.com)

**OPEN**  **ACCESS**

TABLE OF CONTENT

**Suwanda R.P., Prihandono I., Herlambang R., Wiratraman P.**

ACHIEVING SINGLE IDENTITY THROUGH FAMILY CARD UPDATING PROGRAM  
"KAKEK KU DATANG"; pp. 3-7

Crossref DOI: 10.18551/rjoas.2019-02.01

**Setyadi H., Wijoyo S.**

IMPLEMENTATION OF TENTARA MANUNGGAL MEMBANGUN DESA PROGRAMS  
TO ACHIEVE FOOD SECURITY IN DISTRICT OF GRESIK; pp. 8-11

Crossref DOI: 10.18551/rjoas.2019-02.02

**Indayani L.**

EFFECT OF COMPETENCE OF THE AUDIT COMMITTEE AND AUDITORS OF THE BIG  
FIVE PUBLIC ACCOUNTING FIRM ON TAX AVOIDANCE; pp. 12-17

Crossref DOI: 10.18551/rjoas.2019-02.03

**Zainurossalamia S., Yahya M.F.**

IDENTIFICATION OF ATTITUDES SUPPORTING TOURISM DEVELOPMENT: A CASE  
STUDY OF THE DERAWAN ISLAND PEOPLE, BERAU OF EAST BORNEO; pp. 18-25

Crossref DOI: 10.18551/rjoas.2019-02.04

**Fattah M., Purwanti P., Handayani W.**

FACTOR FORMATION ANALYSIS OF COASTAL COMMUNITY PREFERENCE  
IN MAINTAINING MANGROVE FORESTS AT LEMAH KEMBAR, EAST JAVA, INDONESIA;  
pp. 26-32

Crossref DOI: 10.18551/rjoas.2019-02.05

**Arta I G.S., Yasa N.N.K.**

THE ROLE OF PURCHASE INTENTION ON MEDIATING THE RELATIONSHIP OF E-WOM  
AND E-WOM CREDIBILITY TO PURCHASE DECISION; pp. 33-39

Crossref DOI: 10.18551/rjoas.2019-02.06

**Purwanti S., Mas'ud M.**

CONSUMPTION PRATICE IN THE BAUDRILLARD PERSPECTIVE; pp. 40-50

Crossref DOI: 10.18551/rjoas.2019-02.07

**Indriani A.S., Panjaitan N.K., Kuswanto S.**

THE EFFECT OF JOB SATISFACTION ON GENERATION Y EMPLOYEES'  
PERFORMANCE WITH MOTIVATION AS THE INTERVENING VARIABLE AT THE  
GENERAL SECRETARIAT OF THE MINISTRY OF AGRICULTURE; pp. 51-61

Crossref DOI: 10.18551/rjoas.2019-02.08

**Mardjudo A., Atlas U., Yahya F.A.**

REVIEW ON THE INVESTMENT EVALUATION OF DEPARTMENT OF MARITIME  
AFFAIRS AND FISHERIES ASSET (COLD STORAGE) AT PARIGI MOUTONG REGENCY,  
CENTRAL SULAWESI, INDONESIA; pp. 62-71

Crossref DOI: 10.18551/rjoas.2019-02.09

**Pabiban D., Namas M., Therik J.W.D.**

DESIGN OF MOTOR CONTROL SYSTEM ON THE SOLAR DISTILLATION  
OF PARABOLIC TYPE TO REDUCE SALINITY LEVELS OF SEA WATER; pp. 72-79

Crossref DOI: 10.18551/rjoas.2019-02.10

**Lika E., Sasongko, David K.**

DETERMINANTS OF FARMERS' DECISIONS IN THE TAKING OF AGRICULTURAL SECTOR CREDIT: A STUDY IN LAMAKNEN SUBDISTRICT OF BELU REGENCY, EAST NUSATENGARA PROVINCE, INDONESIA; pp. 80-85

Crossref DOI: 10.18551/rjoas.2019-02.11

**Kuswanto**

ANALYSIS OF RUBBER FARMERS' WELFARE IN JAMBI PROVINCE, INDONESIA; pp. 86-93

Crossref DOI: 10.18551/rjoas.2019-02.12

**Shiferaw-Mitiku-Tebeka, Addis Y.**

CHALLENGES AND CRITICAL SUCCESS FACTORS FOR E-PROCUREMENT ADOPTION IN ETHIOPIA; pp. 94-108

Crossref DOI: 10.18551/rjoas.2019-02.13

**Ridwan, Wijaya C., Kasim A.**

CONSTRUCTION OF COLLABORATIVE GOVERNANCE MODEL OF INDONESIAN OVERSEAS GRADUATE STUDY SCHOLARSHIP PROGRAM; pp. 109-122

Crossref DOI: 10.18551/rjoas.2019-02.14

**Juwita R.**

THE PUBLIC RELATIONS PRACTICE AS DISCOURSE TECHNOLOGY FOR ORGANIZATION'S HEGEMONY THROUGH CORPORATE SOCIAL RESPONSIBILITY PROGRAMS IN COAL MINING INDUSTRY OF EAST KALIMANTAN, INDONESIA; pp. 123-136

Crossref DOI: 10.18551/rjoas.2019-02.15

**Sinambela M.W.C., Panjaitan N.K., Dirdjosuparto S.**

THE EFFECT OF NURSE PERCEPTION IN WORK INCENTIVE AND SATISFACTION SYSTEMS ON ORGANIZATIONAL CITIZENSHIP BEHAVIOR: A CASE STUDY AT GOVERNMENTAL HOSPITAL; pp. 137-147

Crossref DOI: 10.18551/rjoas.2019-02.16

**Irmayani N.W.D., Purbawangsa I.B.A.**

THE IMPACT OF EVENTS AROUND OPENING OF ASIAN GAMES 2018 ON MARKET REACTIONS OF GOOD INDUSTRY CONSUMER SECTORS IN INDONESIA STOCK EXCHANGE; pp. 148-154

Crossref DOI: 10.18551/rjoas.2019-02.17

**Mesak D., Sukartha I M.**

FINANCIAL RATIO ANALYSIS IN PREDICTING FINANCIAL CONDITIONS DISTRESS IN INDONESIA STOCK EXCHANGE; pp. 155-165

Crossref DOI: 10.18551/rjoas.2019-02.18

**Sianipar R.H., Wiksuana I.G.B.**

THE STUDY OF EFFECT OF GOOD CORPORATE GOVERNANCE ON FINANCIAL PERFORMANCE; pp. 166-170

Crossref DOI: 10.18551/rjoas.2019-02.19

**Abednego A., Syah T.Y.R.**

IMPLEMENTATION OF SWOT ANALYSIS IN HOSPITAL MANAGEMENT USING THE JKN-KIS SERVICE CONCEPT; pp. 171-176

Crossref DOI: 10.18551/rjoas.2019-02.20

**Syaifullah A.**

THE ROLE OF INVESTOR PROTECTION MODERATION IN THE EFFECT OF CORPORATE GOVERNANCE ON EARNINGS QUALITY; pp. 177-188

Crossref DOI: 10.18551/rjoas.2019-02.21

**Malika U.E., Wijaya J.C.A.**

STRATEGIES FOR IMPROVING DAIRY MILK QUALITY CONDUCTED BY INDONESIAN PRIVATE COOPERATIVE; pp. 189-193

Crossref DOI: 10.18551/rjoas.2019-02.22

**Sukowijoyo N., Herdinata C.**

PLANNING THE OUTSOURCING SYSTEM TO IMPROVE PERFORMANCE OF CV HK MOJOKERTO COMPANY; pp. 194-202

Crossref DOI: 10.18551/rjoas.2019-02.23

**Wardhana Y.A.V.W.**

THE EFFECT OF MANDATORY IFRS ADOPTION ON EARNING MANAGEMENT AND POLITICAL CONNECTION AS MODERATION VARIABLES IN COMPANIES LISTED IN INDONESIA STOCK EXCHANGE; pp. 203-215

Crossref DOI: 10.18551/rjoas.2019-02.24

**Wirawati N.G.P., Putra I N.W.A.**

ANALYSIS OF FACTORS THAT INFLUENCE THE COMPLIANCE OF TAX AND RESTAURANT TAXES IN TABANAN REGENCY OF BALI, INDONESIA; pp. 216-227

Crossref DOI: 10.18551/rjoas.2019-02.25

**Septiana B., Yazid M., Hakim M.M.**

ANALYSIS OF FACTORS INFLUENCING THE PRODUCTIVITY OF LOWLAND RICE DURING THE SECOND PLANTING SEASON IN PALEMBANG CITY, INDONESIA; pp. 228-231

Crossref DOI: 10.18551/rjoas.2019-02.26

**Riyanto S., Ambayoen M.A., Hardana A.E.**

DECREASED SOCIAL CAPITAL IN MARKETING VEGETABLES IN EAST JAVA; pp. 232-235

Crossref DOI: 10.18551/rjoas.2019-02.27

**Hardana E.A., Haryati N., Dewi H.E.**

FOOD CONSUMPTION DIVERSITY BASED ON LOCAL RESOURCES IN DEALING WITH FOOD SECURITY IN INDONESIA; pp. 236-241

Crossref DOI: 10.18551/rjoas.2019-02.28

**Pranoto Y.S., Purwasih R.**

FACTORS THAT INFLUENCE THE PRODUCTION RISK OF WHITE PEPPER IN BANGKA BELITUNG PROVINCE, INDONESIA; pp. 242-247

Crossref DOI: 10.18551/rjoas.2019-02.29

**Hatu D.R.R., Wisadhirana D., Susilo E.**

THE SHACKLES OF POVERTY OF THE FARMERS IN THE ISOLATED AND VULNERABLE COMMUNITY; pp. 248-252

Crossref DOI: 10.18551/rjoas.2019-02.30

**Kharisma Y., Hartoyo S., Maulana T.N.A.**

THE IMPACT OF FINANCIAL PERFORMANCE AND MACROECONOMICS ON THE STOCK RETURNS OF THE COMPANY IN CONSTRUCTION AND BUILDING SUBSECTORS; pp. 253-257

Crossref DOI: 10.18551/rjoas.2019-02.31

**Adhelia S., Tjaraka H.**

THE ROLE OF EMOTIONAL QUOTIENT TO MODERATE EFFECT OF ROLE STRESS ON EXAMINER JOB PERFORMANCE IN AUDIT BOARD OF THE REPUBLIC OF INDONESIA; pp. 258-266

Crossref DOI: 10.18551/rjoas.2019-02.32

**Limbong R.P., Syah T.Y.R., Anindita R., Moelyono**

RISK MANAGEMENT FOR START-UP COMPANY: A CASE STUDY OF HEALTHY KITCHEN RESTAURANT AND CATERING; pp. 267-272

Crossref DOI: 10.18551/rjoas.2019-02.33

**Dwiastuti M.E., Wuryantini S., Sugiyatno A., Supriyanto A.**

SEED HEALTH EVALUATION IN THE PROCESS OF FREE-VIRUS CITRUS SEED PRODUCTION ON KAMPAR REGENCY, RIAU PROVINCE OF INDONESIA; pp. 273-282

Crossref DOI: 10.18551/rjoas.2019-02.34

**Aryunis, Nurdiansyah F.**

THE EVALUATION OF CHARACTERISTICS OF JAMBI LOCAL RICE (ORYZA SATIVA L.) TOWARD THE AGROECOSYSTEM OF LOWLAND SWAMP FIELDS ON THE VEGETATIVE GROWTH STADIA; pp. 283-287

Crossref DOI: 10.18551/rjoas.2019-02.35

**Sulistiyono A.A., Narsa I M.**

THE MEDIATION EFFECT OF WORK STRESS ON WORKLOAD, WORK CONDITION, AND LOAN COLLECTION PERFORMANCE; pp. 288-296

Crossref DOI: 10.18551/rjoas.2019-02.36

**Husin L., Yulius, Bidarti A., Antoni M.**

DEVELOPMENT AND SUBJECT FOR PARTNERSHIP BETWEEN STALLHOLDERS AND CRUMB RUBBER FACTORIES IN INDONESIA RUBBER MARKETING; pp. 297-302

Crossref DOI: 10.18551/rjoas.2019-02.37

**Hamid W., Tangalayuk A.**

KNOWLEDGE AND FAITH VALUES AS PART OF EMPLOYEES' PERCEIVED VALUE IN ISLAMIC BANKS AND THEIR EFFECTS ON SATISFACTION AND PERFORMANCE; pp. 303-308

Crossref DOI: 10.18551/rjoas.2019-02.38

DOI 10.18551/rjoas.2019-02.01

## **ACHIEVING SINGLE IDENTITY THROUGH FAMILY CARD UPDATING PROGRAM “KAKEK KU DATANG”**

**Suwanda R.P., Prihandono I., Herlambang R., Wiratraman P.**

Postgraduate School, University of Airlangga, Indonesia

\*E-mail: [dreamletter02@gmail.com](mailto:dreamletter02@gmail.com)

### **ABSTRACT**

E-KTP implementation in Gresik regency, until 2014, found various problems involved Double Data Recorded up to 23,765 inhabitants; Anomalies or substantial deviations of data elements as 69,230 inhabitants; only 20% children Birth Certificate were Recorded, issuance of Death Certificate was never implemented. The best alternative to solve this problem is to update the attribution of Family Card which encompasses most data element of the resident identities. Family card updating program named as Kakek Ku Datang (Kartu Keluarga Ku Data Ulang), an innovation program of Gresik. The purpose of this study is to analyze the implementation of Kakekku Datang to improve the ease of service and data validity in order to achieve single identity in Gresik. This study is observational through discussion forum to evaluate program innovation as a human-centred design. Population of the study is village register officials, sub-district officials, and resident and civil registry officials in Gresik. The results indicate that during the implementation from January 2015 - December 2017, Kakek Ku Datang has successfully achieved updating of 229.332 KK Count 0; recording of birth certificates as 85%; recording of death certificates as 13.510 inhabitants; recovery of double & anomalies data as 46% (2017), and recording of e-KTP massively increased to 88.9%. Kakek Ku Datang potentially achieves single identity through the combination between inclusive service and technology in human-centred design.

### **KEY WORDS**

Single identity, family card updating, data validity, human centred design, inclusive service, technology.

In 2012, the Ministry of Home Affairs recorded resident's identity to electronic National Identity Cards (e-KTP) which include iris, signature, fingerprint, & other identities. Its main goal is to establish the Single Identity through the issuance of 1 (one) Resident National Identity Number (NIK) for 1 (one) resident. Until 2014, e-KTP implementation in Gresik regency was founded various problems involved Double Data Recorded as 23,765 inhabitants; Anomalies or substantial deviations of data elements as 69,230 inhabitants; only 20% Birth Certificates recorded of 0-18 years population aged, issuance of Death Certificate was never implemented or 0 (Ministry of Home Affairs, 2016). The problems in Gresik scope also occur in the national constellation that the birth certificate record is still very low followed by the recording of death certificate & millions of people identified as double data or anomalies recorded. Indonesia has more children without a birth certificate than the entire population of Australia (Summer, 2015).

The various problems present a huge gap in an effort to create the single identity. The best alternative to solve this problem is updating the attribution of Family Card (Kartu Keluarga-KK) which encompass the most complete identity of the resident including name, NIK, gender, date of birth, religion, occupation, marital status, family relationship status, citizenship, & name of the parent. KK updating is considered as a bridge to cross the gap (Ahmadi, 1982).

Unfortunately, 69.37% of 369,120 KK (1,332,972 inhabitants) in Gresik Regency at June 2015 is categorized as KK Count 0. KK Count 0 is extracted from National Information System of Resident & Civil Registry (SIAK), count 0 means it hasn't been updated since it was published in 2008. Stagnation of KK data element's for more than 7 years, 2008-2015,

was definitely opposed to the population dynamics & directly generates the invalidity of resident data.

Based on this problem, the Official of Resident & Civil Registry (Dinas Kependudukan dan Catatan Sipil- Dispendukcapil) of Gresik Regency held the service of Kakek Ku Datang (Kartu Keluarga Ku Data Ulang - Family Card Updating). The main goal of Kakek ku Datang is to achieve Single Identity through the validity of resident data. It was delivered to all of the community. The strategy of Kakek Ku Datang is inclusive implementation, not only the beneficiary but also the official. It is completed with direct service, interactive approach through talk show & easily accessible information. It is supported by educational service which is complemented by a list of unmet service, simple guidance, & supporting file of KK updates as evidence. Through human-centred design approach which divided in to three main perspectives: desirability (demand), feasibility (eligibility) and viability (sustainability). Based on its perspective, program development improves the ease of service includes time, requirements, and accessible service by combining direct service and technology (Ideo, 2012).

### **METHODS OF RESEARCH**

This study is observational through discussion forum to evaluate program innovation as a human-centred design involved the process of program implementation, ease of service centred on the experience of the community, and the usefulness of data validity. The evaluation of program aims to describe an inclusive implementation process involving government officials and community, program philosophy, the uniqueness of innovation, and, funding resources. Furthermore, the observation was conducted by providing a closed questionnaire of 201 samples determined by multi-stage random to analyse information clarity on the interactive approach of educational services undertaken by the government officer and experience on ease of service, timeliness, service simplicity and accessibility. In addition, using a combination of discussions, interviews, and open questionnaires aims to analyze the validity of data and usefulness for the implementation of local development programs.

The population of the study is village register official, sub-district official, and resident and civil registry official in the Gresik district.

### **RESULTS AND DISCUSSION**

Kakek Ku Datang creates single identity through the combination of inclusive and technology with the human-centred design approach. During implementation since January 2015 – December 2017, this program successfully updating 229,332 Family Card (KK) Count 0 or 89.57%. KK updating is the main result but it simultaneously resolves various problem involved recording birth certificates as 85% far exceeding national targets, recording death certificates as 13,510 inhabitants, recovering double & anomalies data as 35,656 inhabitants (2015-2016) & 104,785 of 228,464 data element or 46% (2017), and recording of e-KTP massively increased to 88.9%.

Resolving the various problems with optimum results on data updating at the family level as well as on individual scopes such as anomalies, doubles, birth or death certificates and e-KTP cards made Kakek Ku Datang innovation come as a key alternative to achieve a single identity in Gresik even national scopes.

Strategy implementation for Kakek Ku Datang programs started by extracting Family Card (KK) Count 0 from National Information System of Resident & Civil Registry (SIAK) as a key step which is show 69,37% of 369,120 KK is categorized as KK Count 0. Based on KK count 0 lists, the Official of Resident & Civil Registry (Dispendukcapil) printed form of KK updating followed by information / data needs of Resident & Civil Registry that must be met. Furthermore, KK updating is carried out inclusively by the official in any level of local government. Through this program, local government deliver an inclusive service by

involving 8,000 RTRW's (smallest community in the village) (Nugroho, 2013), 356 Village Register Officers, & 18 districts through Gresik administrative.

As an inclusive service, KK updating is complemented by the registration of birth & death certificates, double data & anomalies recovery, & e-KTP recording. Integration of service is an obligatory consequence because each of KK data element's updated was directly followed by the change of the individual data of each family member.

As a responsive service, it was held a pick up services in order to reach disabled people, children which is have an identity crisis in orphanages, students at the school, & general public in a village. It's supported by interactive dialogue forum through Talk Show in Suara Giri Radio, popular information media in Gresik. The dialogue is also an open public consultation forum to obtain public complaints & strengthen education to the community especially to change the mindset of KK.

Learning on the urgency of resident data, Resident and Civil Registry of Gresik Regency held the service of Kakekku Datang which is an extension of "Kartu Keluarga Ku Data Ulang - Family Card Updating". This program simultaneously increasing birth & death registration, electronic National Identity Card (e-KTP) record, recovering double & anomaly data. It is the key to achieve Single Identity. The distinct point of this innovation is inclusively implementation which involves resident & officer, the combination of direct service & technology, improving the ease of service & data validity.

This section must be in one column. Kakek Ku Datang has the phrase "Kakek (grandfather)" which is philosophically interpreted as an elder who knows every single detail of his family. It also symbolized by Semar as a wise Punakawan figure in Java's Wayang. As Kakek, the government set as an elder to reach the community in all of the generations with no one left behind to improve genealogy (updating data), share learning (education) & experience (ease of service).

The main source of innovation idea is the attribution of Family Card (KK) which encompass the most complete identity of the resident but 256,047 or 69.37% of 369,120 KK (June 2015) is categorized as KK Count 0 or never updated for more than 7 years, 2008-2015. In another side, various problems of Resident & Civil Registry is can't be solved as a separate unit. For example, birth certificate's services aren't always recovering double/anomaly data & vice versa. But KK updating is an inclusive approach, each data element of KK updated was directly followed by the change of each family member data's. It means every KK updates is obligatory followed by birth certificate (for newborn), death certificate (for the death of family member), recover double/anomaly data (by updating element data of KK), & record family member data into electronic (e-KTP).

Moreover, the idea of innovation came from the gap between proxy data & registration data that led to the discrepancy of the beneficiary list of development programs. An invalidity of resident data is the main cause of inaccuracy of basic services. For example, in 2010, at the head of Gresik regency election appeared a conflict due to multiple voter lists even falsified, in 2015, there many people who died/migration but still listed as a beneficiary of rice aid program (Raskin). In 2016, many families have to pay national health insurance premiums (BPJS) for family members who have died/migration. Invalidity data is also caused by the urban sprawl phenomenon in Gresik as an Industry City with rapid urbanization (Dobbins,2009). It also causes difficulties to register the identity of the migrating population. It is absolutely difficult to develop human beings in the term of development if the human data is in invalidity (Slamet, 2003).

The main difference value on "Kakek Ku Datang" implementation is the extraction of KK count 0 from SIAK system. 69.37% KK categorized as KK Count 0 which shows a massive invalidity resident data are determined as a leverage point of single identity. The KK Count 0 updating approach simultaneously improves other resident & civil administration issues & it drives all of the core business of Resident & Civil Registry Services.

Another uniqueness of Kakek Ku Datang, it was implemented inclusively with no one left behind, not only the beneficiary but also the official. This service reaches all levels of society & is implemented by involving 8,000 RTRW, 356 Village Register Officers, 18 Sub-districts through Gresik administrative. Despite the large human resources at the village

officials, these inclusive services are financially non-costly because village-level financing utilizes the national policy of budget allocations to villages (Dana Desa).

In the implementation of this program, the procurement of KK forms utilizes funds from the central government (APBN), the funding of official & service supporting (tools, pick-up service, & talk show) utilizes local government funds (APBD), while funding for village services utilizes Village Fund. Furthermore, for the development of innovations, it utilizes NGO aid funds (GIZ).

Kakek Ku Datang has involved 8,000 RTRW & 356 village officials, 18 district operators & 36 service officers. Cost of the officer at the village level using national policy of village budget allocations, the average cost of village official honorariums as \$19 per month. At the sub-district & district levels are use local government funds, \$45,692/year to hire 36 officers, \$ 38,500 for tools includes 26 computers, 1 KVM, 4 Modems, 19 Hub, 20 Scanners, 1 router during the implementation of 2015-2017. Cost of 30 pick-up service per year is US\$ 111/service. Cost of 6 talk shows per year is \$461/show & socialization to the village & sub-district official is \$ 16,547/year. Procurement of KK Form is used central government funds of \$170,645.30 during 2015-2016.

For innovation development such as dashboard2.0 is utilized fund from GIZ for \$7,500. It is used for incubation of service improvements & dashboard production in 2016 which is then used for the development of application such as Dr.Kepo, Laperde, LIKE & Check NIK.

Gresik District is one of the districts located in the Java Province. Gresik the northwest of Surabaya City which is the Capital of East Java Province, with an area of 1,191.25 km<sup>2</sup>. Gresik divided into 18 sub-districts and consists of 330 rural and 26 urban area (Central Bureau of Statistics, 2017). The sample of 201 consisted of 16 officers in Dispendukcapil, 4 officers in local board, 18 officers in Sub-District, 36 Village Register Officers, 36 RTRW Officers, 91 Community who use Kakek Ku Datang service. Average correspondence age is 32.1 years with age range from 16.2 to 64.4 Years. It consists of 82 are men and 119 women with the highest average of education is senior high school.

Based on the results of the recapitulation of closed questionnaires distributed during January-February 2018 obtained various things as follows:

First, Referring to the interactive approach of Kakek Ku Datang which is using a variety of popular media such as talk shows in Suara Giri Radio, Facebook, Official Website, and SMS Gateway to socialize the program as well as an open consultation forum. The results obtained that 80.6% of respondents have understood the explanation of the program, 14.9% quite understand, and 4.48% do not understand. The platform that is the favourite of the respondents to interact with the program is a talk show conducted at Suara Giri Radio with a percentage of 40.8%. Despite being a favourite media but the intensive platform is used to obtain program information is Facebook with a percentage of 51.2% and Official Website as much as 33.83%. While SMS Gateway is considered less attractive with a percentage of 3%. The interaction between community and officers in implementing a program becomes very important in the development of Kakek Ku Datang in the future to create a better service mechanism with technology penetration and inclusive approach.

Second, Referring to the development in early 2016, Kakek Ku Datang produced a subsequence innovation labelled Dashboard 2.0. It is capable of real-time measuring of the performance of the agency. It helps the officer to supervise & evaluate the service progress, to take policy in the determination of service & budget allocation. Not only the internal improvements, but the external sector of service is also carried out by strengthening the education to the community through various tools such as dr.Kepo (Kependudukan Online) in web/android version. It provides service information, resident administration problem (unmeet service) for each family member, and facilitates the online services by transforming 116 forms into digital. All are accessible by inputting KK serial number or NIK. Laperde helps village official to report. Check NIK & LIKE for resident private or public institutions to check the validity of resident identity.

A total of 72.6% of correspondents expressed satisfaction on the ease and timeliness of service, as many as 20.9% said quite satisfied but still recorded 6.47% said not satisfied. This satisfaction is influenced by the fact that the accuracy & acceleration of KK updating

performance time increases from 2 weeks to 1 day with a simpler requirement. While accessibility to services obtained data that 60.7% correspondence states easily accessible, 23.9% quite easy to rise, and 15.42% said not reachable. Accessibility is highly influenced geographical fact where there are 2 districts of Sangkapura and Tambak with a total of 30 villages located in the Bawean islands. In addition, accessibility is greatly influenced by the level of computer literacy although 100% of villages throughout Gresik have been connected to the internet (Diskominfo, 2017).

The validity of resident data which is generated by Kakek Ku Data isn't only as a key alternative to solve the single identity issues. It is easily replicated in Indonesian cities because of SIAK are used as the national resident & civil registry database. In 2017, Kakek Ku Datang is the case study of national KK updating that planned in 2018-2019. This can also be replicated in all cities of the world that apply family-based data registry & especially with the urban sprawl phenomenon to facilitate the recording of population migration.

In another side, the single identity as a "clear data" generated by Kakek Ku Datang is a potential solution for the discrepancy of the beneficiary list of development programs which is caused by the gap between proxy data & registration data. It has been incorporated in other public services such as updating poverty eradication database (2016-2017), e-voting implementation in 20 villages (2017), updating health protection & education incentives (2016-2017), checking the validity of bank customer identity (2017) & database of development planning toward Gresik Big Data (2017-...) (Bappeda,2016).

## CONCLUSION

Kakekku Datang Program is the key alternative to achieve the single identity which simultaneously solves the various kinds of administrative and civil registry problems. Using human centred design, an inclusive approach that integrates communities and governments, Kakek Ku Datang as a basic service which has been able to reach all levels of society, no one left behind. It has mobilized the human resources in stages at every level of the government. The government has become an active system while the service not only completes the procedure but also provides a strong education for the community & implementers. This combination has a great impact to improve the ease of service, simplicity, timeliness, and service access.

## REFERENCES

1. Ahmadi, Abu H & H, D Kelany, 1982. Kependudukan di Indonesia dan berbagai Aspekny, Semarang: Mutiara Permata Widya.
2. Bappeda Kabupaten Gresik., 2017. RPJMD Kabupaten Gresik 2016-2021. Bappeda: Gresik.
3. BPS Kabupaten Gresik, 2017. Gresik Dalam Angka. BPS: Gresik.
4. Diskominfo Kabupaten Gresik., 2017. Masterplan Smart City 2018-2021. Diskominfo: Gresik.
5. Dobbins, Michael, 2009. Urban Design & People. John Wiley & sons, Inc: USA.
6. Electronic Source: <http://gis.dukcapil.kemendagri.go.id/peta/> cite 28 January 2018.
7. Ideo, 2012. HCD-Human Centered Design Toolkit 2nd Edition.
8. Nugroho, Setyo., 2013. Demokrasi dan Tata Pemerintahan dalam Konsep Desa dan Kelurahan, Jurnal Cita Hukum Vol. I No. 2.
9. Slamet., 2003. Pembangunan Masyarakat Berwawasan Partisipasi. Surakarta: Sebelas Maret University Press.
10. Summer, Cate. 2015., Jurnal Proof of Birth, Chapter 11 "Lesssons from Indonesia's Missing Millions". Future Leader.

DOI 10.18551/rjoas.2019-02.02

## **IMPLEMENTATION OF TENTARA MANUNGGAL MEMBANGUN DESA PROGRAMS TO ACHIEVE FOOD SECURITY IN DISTRICT OF GRESIK**

**Setyadi Hendro, Wijoyo Suparto**

Postgraduate School, University of Airlangga, Indonesia

\*E-mail: [setyadihendro730@gmail.com](mailto:setyadihendro730@gmail.com)

### **ABSTRACT**

The complexity of food security development with the various constraints requires a cross-sectoral approach and partnership at the national, regional, and district/city levels. The involvement of the TNI-AD (Army) in supporting national development priorities to achieve food self-sufficiency is encouraged by the President of the Republic of Indonesia. The purpose of this study is to analyze the principles of national and regional food security in Indonesia and the form of cooperation and implementation of the “TNI Manunggal Membangun Desa” to realize food security in Gresik Regency. This study is observational through the discussion forum and document study. The results indicate that during the implementation of “TNI Manunggal Membangun Desa” program since 2012 has been achieved development that supports food security such as the development of village embung, village barns, farm roads, agricultural irrigation, and other supporting infrastructure to empower communities in the management of major food agriculture.

### **KEY WORDS**

Food security, Tentara Manunggal Membangun Desa program, agricultural village, public service.

The State shall be obliged to realize the availability, affordability, and fulfilment of adequate, safe, quality and balanced nutritious food consumption both national, regional, and personal evenly throughout the territory of the Unitary State of the Republic of Indonesia at all times by utilizing resources, institutions and culture local. Considering the obligation, Law No. 18 of 2012 on Food mandates the implementation of food as a form of planning, implementation and supervision activities in the provision, affordability, fulfilment of food, nutrition, and food security by involving the coordinated and integrated community participation in order to fulfil basic human needs that provide benefits equitably, evenly and sustainably based on Food Sovereignty, Food Self-Reliance, and Food Security (Maxwell, 1992).

Reviewing national development planning based on Presidential Regulation No. 29 of 2014 National Medium Term Development Plan (RPJMN) 2015-2019 has set priority development goals in realizing production security for self-reliance and diversification of food consumption.

In line with the dimension of food security development, efforts to achieve food security must be supported through the role of various development stakeholders who must contribute in an integrative way, synergize in managing resources, and play a real role in implementing food security programs (Infid, 2015). One of the stakeholders of food security development that has contributed widely is the Army through a territorial assistance program implemented in the scope of the district/city.

The involvement of the Indonesian Army in supporting the national development priority to achieve self-sufficiency in food is encouraged by the President of the Republic of Indonesia as presented to the participants of the Central Dandim-Danrem Meeting on December 2nd, 2014, in Sulung Village, South Arut Subdistrict, Kotawaringin Barat, Central Kalimantan. In the meeting, the President instructed Army officers, Danrem, Dandim, Pangdam, to assist the burden of the duty of the city, district, province and ministry, especially in achieving food self-sufficiency.

This presidential instruction was welcomed by the Minister of Agriculture to invite the TNI-AD especially Bintara Pembina Desa (Babinsa) to engage in agricultural extension and oversee local food security. This cooperation was welcomed by TNI-AD as explained by Kapuspen TNI Maj. Gen. Fuad Basya that the TNI will deploy the Babinsa as agricultural extension agents and motivate the farmers to accelerate the process of achieving national food security at the Centralized Unit Commander Apples in 2014 in Pangkalan Bun, Central Kalimantan 2-5 December 2014 (Puspen TNI, 2014).

## **METHODS OF RESEARCH**

This study is observational through the discussion forum and document study. The approach used in this research is socio-legal. The socio-legal approach is a combination of approaches within the social sciences, including political, economic, cultural, historical, anthropological, communications and other sciences combined with a recognized approach to law, such as learning about principles, doctrines and hierarchy of legislation. This research was conducted through observation of KODIM 0817/Gresik and Government of Gresik Regency in this case related Device during the implementation of TNI Manunggal Membangun Desa program. The data collection is done through interviews and reviewing the administrative documents produced during the implementation of TNI Manunggal Membangun Desa program.

## **RESULTS AND DISCUSSION**

The National Medium Term Development Plan (RPJMN) 2015-2019 prioritizes the improvement of food sovereignty as one of the priority sub-agendas to realize the national development agenda of economic independence by mobilizing the strategic sectors of the domestic economy. In order to improve and strengthen food sovereignty, the general policy in the RPJMN 2015-2019 is directed at: (1) strengthening food security towards food self-sufficiency by increasing staple food production; (2) stabilization of food prices; (3) improving the quality of food consumption and community nutrition; (4) mitigation of disruption to food security; and (5) improvement of prosperity of food business actors. In line with the RPJMN's general policy, the Ministry of Agriculture as the main stakeholder in the framework of strengthening food security. It focuses on improving the strategic staple food production and other agricultural commodities to meet domestic food needs as contained in the Strategic Plan of the Ministry of Agriculture 2015-2019. Strengthening food security, it's must be based on independence and food sovereignty supported by subsystems of availability, distribution and consumption of integrated food. The achievement of steady food security is a vehicle for strengthening economic and political stability and ensuring the availability of food at affordable prices (Wiesma, 2000).

In line with the national priorities, the development of food sovereignty development, food self-sufficiency and food security in the province of Java East Java has become one of the regional strategic issues as contained in Regional Regulation of East Java Province No. 1 of 2017 on the amendment of Regional Regulation of East Java No 3 of 2014 About East Java Medium-Term Development Plan of 2014-2019, it states that rice dependence as staple food commodity is still high (Ariani, 2003) while society consumption pattern is not yet diverse, nutritious, balanced and safe although East Java has wide of rice field of 1.017549,73 hectare and distribution of potential utilization that manifested in the form of food commodity surplus of 4.48 million tons of rice. In more detail, the target of food sovereignty development as one of the leading sectors of East Java is targeted by realizing the availability of food covering of 9,035,000 tons of rice, 6.5 million tons of corn, and 360,000 tons of soybeans. The growth of subcategory of a plantation to Gross Regional Domestic Product (PDRB) reaches 2,25-308%, the growth of livestock subcategory to PDRB reach 2,94%, while the growth of subcategory of the fishery to PDRB reaches 5,3% in the year 2019.

The availability of primary food in the region in order to achieve the independence of sovereignty and national food security is one of the main agenda of national development and East Java Province. In harmony with this, the development of Food Sovereignty, Food Self-Reliance, and Food Security is also one of the priorities of Gresik Regency development. As stated in the Regional Regulation of Gresik Regency No.10 of 2017 regarding the Amendment of Regional Regulation of Gresik Regency No.09 of 2016 regarding Regional Medium Term Development Plan (RPJMD) 2016-2021 that the strategic issue of food security in terms of the availability of main food per capita per year. In the year 2013 to 2014 decreased the availability of food to be 176.36 kg/ capita/year. While the year 2016 increased to reach 202,21kg / capita / Year. By 2017, the main food availability ratio increased significantly to 300.84 kg/ capita/year.

The decline in the availability of primary food is not a single indicator that affects the achievement of regional food self-sufficiency but there is still food insecurity, food diversification, and the area of crop production (Nuhfill, 2012). In terms of food insecurity, Gresik Regency does not yet have an optimal food insecurity mitigation system without the availability of food insecurity maps although the supporting infrastructure of agricultural production has been built and developed during 2011-2017. The mastery of adaptive cultivation technology to climate change is still not implemented while the conventional agricultural culture still dominates. In addition, the welfare of farmers and farm labourers who are still left behind by the lack of standard and added value that raised the living standard of farmers and farm workers, although agriculture gives the second largest contribution in GRDP Gresik Regency.

Food expectation is a diverse array of foods based on major food group energy contributions (both absolute and from a pattern of availability and/or food consumption). In the context of diversification of main food consumption, indicated by the level of caloric consumption in 2014 reached 91.32 kg/capita/year. This achievement continues to decrease when compared with the level of caloric consumption in 2012 which reached 95.40 kg/capita/year. In the case of plotting area or agricultural land, it is explained that the area of Sustainable Agriculture Farming Area (LP2B) as stipulated is 24.716 Ha and spread throughout the Regency of Gresik, the extent is based on the study of the determination of area and delineation maps. On the other hand, the area of Sustainable Agricultural Reserve Land is set as wide as 3,005 Ha and spread throughout the Regency of Gresik, the extent is based on the study of area determination and delineation map. The establishment of LP2B is aimed at the field of agricultural land that is set to be protected and developed consistently to produce basic food for national food self-sufficiency, resilience and sovereignty.

The cooperation between Ministry of Agriculture and TNI in realizing food security has been stated in the Memorandum of Understanding between the Minister of Agriculture of the Republic of Indonesia and the Commander of the TNI No. 03 / MoU / PP.310 / M / 4/2012 and NK / 8 / IV / 2012 on April 13 2012 on cooperation to realize national food security. Furthermore, both parties through the Directorate General of Preparation and Agriculture Facility of the Ministry of Agriculture and the Armed Forces have signed a Cooperation Agreement No. 836 / RC.120 / 11/2012 and KERMA / 9XI / 2012 on 30 November 2012 on Cooperation Program in support of increasing food security which ends on 31 December 2013. In 2014, the Directorate General of Preparation and Facility of Agriculture of the Ministry of Agriculture and the Army again agreed to cooperate on the Cooperation Program to Support Food Security Enhancement on January 29, 2014, in Jakarta.

In order to support the national development priority to achieve food security and the commitment of TNI-AD in supporting the task of governance, KODIM 0817/ GRESIK cooperates with the government of Gresik Regency to initiate the program of territorial assistance to be more optimal in developing of food security. One of the TNI AD assistance program in terms of KODIM 0817 / GRESIK is the cooperation with government of Gresik Regency through the Department of Community Empowerment and Village of Gresik Regency (Dinpemas) to projected the development of food security through the program of unity army build the village or Tentara Manunggal Membangun Desa (TMMD). TMMD Program has been implemented in Gresik Regency since 2012 in 8 (eight) Villages and 8

(eight) Districts such as Village Lundo (sub-district Benjeng), Cermelerek (Kedamean), Ngabetan (Cerme), Ngampel (Balongpanggang).

Based on the cooperation, the two sides agreed on the scope of cooperation include (1) Wetland expansion activities are undertaken on farmers' land beneficiaries of social assistance; (2) Land optimization activities carried out on the farmers' land as a beneficiaries of social assistance program; (3) Development activities of the method of System Rice of Intensification (SRI) implemented on the farmers' land of beneficiaries of social assistance program; (4) Planting Brigade activities carried out in order to support the acceleration of processing and simultaneous planting; and (5) Activities of water resources utilization infrastructure and facilities implemented in the farmers' lands of beneficiaries of social assistance.

Implementation of the Tentara Manunggal Membangun Desa program since 2012 has achieved development that supports food security such as the development of village embungs, village barns, farm roads, agricultural irrigation, and other supporting infrastructure to empower communities in the management of major food agriculture, horticulture, and medicine. It was in line with the concept of development mandated in Law Number 06 of 2014 on Village Article 83 that Rural Area Development is implemented in an effort to accelerate and improve the quality of service, development and empowerment of village communities in Rural Areas through participatory development approach.

Although it has made a tangible contribution, implementation of the program meet various obstacles in realizing food security entirely include: (1) agricultural land is increasingly limited due to efforts to expand agricultural areas more difficult while conversion of productive agricultural land to other agricultural and non-agricultural continue to occur; (2) the availability of water resources to support reduced food production as a result of damage to the watershed ecosystem (DAS) and competition for water use for other sector needs, and damage to irrigation networks. The achievement of the program has not been optimal includes the development of food security in rural areas.

## CONCLUSION

Tentara Manunggal Membangun Desa Program is a form of commitment and cooperation between TNI-AD and local government to realize food security in the local sphere. This cooperation is realized as a mentoring of the territory of Gresik under KODIM 0817 / GRESIK which is held every 2 (two) years. This program supports the achievement of several aspects of food security such as the development of village barns, farm roads, agricultural irrigation, and other supporting infrastructure to empower communities in the management of agriculture. However, this program has not optimally supported overall food security dimension due to the scope of the program that is not widespread, limited agricultural land, and water resources. Although not yet optimal, the Tentara Manunggal Membangun Desa Program is one of the best practices for the empowerment of village communities in the Rural Areas through a participatory development approach.

## REFERENCES

1. Ariani, M. and Rachman, H.P.S., 2003. Analisis Tingkat Ketahanan Pangan Rumah Tangga. *Media Gizi and Keluarga*. 27 (2). 1-6.
2. Hanani, Nuhfil., 2012. Strategi Pencapaian Ketahanan Pangan Keluarga, Perhimpunan Ekonomi Pertanian Indonesia, Bogor.
3. International NGO Forum on Indonesian Development (INFID) 2015. Outcome Document Transforming Our World: The 2030 Agenda For Sustainable Development. INFID.
4. Maxwell, 1992. Household Food Security Concepts, Indicator, and Measurement. IFAd.
5. Puspen TNI., 2014. Keterangan Pers Apel Komandan Satuan secara Terpusat (Dansat) tahun 2014 di Pangkalan Bun, Kalimantan Tengah 2-5 Desember 2014.
6. Wiesma.,D., L. Weingartner, Schoninger. 2000. The Challenge of Hunger: Global Hunger Index: Fact, Determinant, And Trend: Deutsche Wlthugerhilfe: Washington DC.

DOI 10.18551/rjoas.2019-02.03

## **EFFECT OF COMPETENCE OF THE AUDIT COMMITTEE AND AUDITORS OF THE BIG FIVE PUBLIC ACCOUNTING FIRM ON TAX AVOIDANCE**

**Indayani Lis**

Faculty of Economics and Business, University of Airlangga, Indonesia

E-mail: [lisindayani048@gmail.com](mailto:lisindayani048@gmail.com)

### **ABSTRACT**

Research this aiming for knowing the influence of the competence of the audit committee and auditor of the Big 5 Public Accountants Office on tax avoidance. Research conducted using a quantitative approach with data analysis using multiple linear regression. The research sample used by manufacturing companies listed on the Indonesia Stock Exchange in 2013-2017. Results research shows that the competence of the audit committee has no effect on corporate tax avoidance. Similarly, the auditors of the Big 5 Public Accounting Firm also have no influence on corporate tax avoidance.

### **KEY WORDS**

Taxation, competence, audit, committee, auditor.

Indonesia was ranked the 11th largest in terms of corporate tax avoidance with a value estimated at 6.48 billion US dollars. This is based on a report made by Ernesto Crivelly and investigators from the IMF in 2016. The report was based on a survey which was then re-analyzed by the United Nations University using a database of the International Center for Policy and Policy (ICPR) and the International Center for Taxation and Development (ICTD) then 30 state tax avoidance data appeared ([www.tribunnews.com](http://www.tribunnews.com)).

In a company, to determine the amount of tax to be paid to the state treasury is influenced by many factors. Among them is corporate governance or generally called corporate governance, is a mechanism that regulates and controls a company through relationships between other internal and external stakeholders so as to increase the value of the company (Darmawan and Sukartha, 2014). In its own corporate governance, supervision is the most important part so that the company can run well. In order for supervision to be effective and efficient, the company forms an audit committee.

According to Robinson, Xue, and Zhang (2012) the audit committee's accounting or financial expertise is positively related to low risk tax avoidance and is negatively related to high risk tax avoidance. The same thing was also revealed by Hsu, Moore and Neubaum (2018) that audit committees that are independent and have financial expertise are negatively related to corporate tax avoidance. But it is different from Puspita and Harto (2014), found that the audit committee's accounting or financial expertise background did not influence tax avoidance. This finding is the same as that expressed by Mahidi and Danastri (2015) and Wijayanti et al (2016).

In addition to internal supervision, supervision is also carried out from external companies. Supervision from external companies can be done by KAP in the big 5 category. McGuire, Omer, and Wang (2012) say that the expertise of external auditors influences corporate tax avoidance. H al Similar dikemukakan Taylor and Richardson (2013) that the big four auditors negatively affect the company's tax evasion. But this is different from the findings of Hartadinata and Tjaraka (2013) who say that audit quality has no effect on tax avoidance.

### **THEORETICAL REVIEW**

Agency relationship occurs when one or more people, called principals, employ other individuals or organizations, called agents to carry out a number of services and delegate authority to make decisions to the agent. According to Eisenhardt (1989), agency theory has

three assumption of human nature, namely: general human selfishness (self-interest), humans have the power of thought is limited regarding the perception future (bounded rationaliy), and human beings always avoid the risk (risk averse). Thirdly it causes management to take action to tax evasion, but the legal way by exploiting loopholes of tax laws that exist.

Fritz Heider developed an attribution theory which states that "a person's behavior is determined by two combinations of internal and external forces. Internal strength is a factor that comes from within the person himself while external forces are factors that come from outside" (Suartana, 2010). Whereas Robbins (2008) concluded that "behavior caused internally is a behavior believed to be influenced by an individual's personal control. Behavior caused externally is considered as the consequences of external causes, the individual is considered to have been forced to behave accordingly by the situation".

Behavior caused externally is considered as a result of external causes, where management is considered to have been forced to carry out tax avoidance activities. External factors here, for example, are the encouragement of shareholders to maximize profits, so management is forced to take advantage of tax regulations so that the tax burden is relatively small, because basically no company voluntarily willing to pay taxes.

Tax evasion or tax avoidance is one part of the tax management. Tax management is a way to fulfill tax obligations but by reducing the amount of tax paid to be as small as possible to obtain the desired profit and liquidity (Suandy, 2011: 6). There are three functions of tax management, namely: tax planning tax implementation and tax control.

According to Brown (2012: 1), tax avoidance is a " arrangement of a tax advantage, benefit or reduction in manner is unintended by the tax law ". That is, regulating transactions to get tax benefits, benefits or deductions in a way that is not desired by law per tax.

From the definition above it can be concluded that tax avoidance is an effort made by taxpayers to minimize payment of their tax due to the loopholes contained in the tax law. Businesses carried out can be said not to violate the law because they are still within the corridor of tax law.

The audit committee is part of corporate governance that was formed with the aim of assisting the board of commissioners in supervising the company's performance. Audit Committee responsible and responsible for providing professional and independent opinions to the board of commissioners on reports or matters submitted by the board of commissioners, and carrying out other tasks related to the duties of the board of commissioners.

The number of audit committee members consists of at least 3 (three) people from independent commissioners and parties outside the company. Audit committee members must have 1 (one) member who has an accounting education background or has expertise in finance (the Financial Services Authority, 2015). Accounting education background or expertise in finance is related to the competencies that must be possessed by audit committee members.

Big 5 KAP auditors are related to auditor quality. KAP that is included in the ranks of the big 5 certainly has no doubt quality. The quality of auditors also supports the application of the principles of good corporate governance, namely transparency and accountability. This is expected to help management not to avoid unwanted tax evasion.

According to De Angelo (1981) audit quality can be seen from the size of the KAP that conducted the audit, which is believed that KAP included in the Big 5 rank has good quality and reputation because of the large amount of training provided to its employees. Big 5 KAP auditors are more competent and professional than non big 5 auditors so companies that use big 5 KAP services will tend to be smaller in cheating. The competencies possessed by big 5 KAP will help make it easier to detect if there is fraud or data manipulation so that the quality of financial statements audited by KAP big 5 is much better than those audited by non-big 5. This certainly will also make it difficult for management to avoid tax evasion unwanted.

Research Robinson et al., (2012) showed that the company's audit committee that has the accounting skills associated with the level of tax evasion. Audit committee accounting expertise is positively related to low risk tax avoidance and negatively related to high risk tax

avoidance. McGuire et al., (2012) found that the expertise of external auditors in the field of taxes had an effect on corporate tax avoidance.

Then there was research from Taylor and Richardson (2013), research shows that corporate governance is related to the independence of the board of directors, the level of constitutional ownership, the use of big 4 external auditors negative effect related to corporate tax avoidance. In 2015 research from Armstrong, Blouin, and Jagolinzer (2015), corporate governance is specifically examined using two supporting variables from the board, namely financial expertise (knowledge of costs and benefits of tax avoidance) and independence (ability and incentives to monitor tax avoidance decisions made by managers). The latest research was conducted by Hsu et al., (2018) that shows that an independent audit committee members with expertise finance related negative with tax evasion.

The results of the study from Robinson et al. (2012) found a positive influence of the competence of the audit committee on low-risk tax avoidance. Then Armstrong et al., (2015) said that the board of directors who are independent and have knowledge in the financial field have an influence on corporate tax avoidance. Hsu et al., (2018) also found that the audit committee is independent and has financial expertise related to corporate tax avoidance. M aka the hypothesis put forward by the researchers:

H<sub>1</sub>: Competence of the audit committee has a positive effect on corporate tax avoidance.

Research conducted by McGuire et al. (2012) found that the expertise of external auditors plays an important role in corporate tax avoidance. Furthermore, Taylor and Richardson (2013) with the findings of the use of big 4 external auditors have a negative effect on corporate tax avoidance. So the researcher makes a hypothesis:

H<sub>2</sub>: The use of big 5 external auditor services has a negative effect on corporate tax avoidance.

## **METHODS OF RESEARCH**

Quantitative research approach using descriptive analysis method was chosen in this study. In this study there are three research variables, namely tax avoidance (Y) as the dependent variable and the independent variable consists of the competence of the audit committee (X<sub>1</sub>) and the big external auditor 5 (X<sub>2</sub>).

The competence of the audit committee is calculated by comparing the number of members who have an accounting education background or experience in finance with the total number of members of the audit committee as a whole. Like research conducted by Puspita and Harto (2014).

Then for the big 5 external auditor variables seen from the auditors who audited the financial statements came from KAP which entered the top five best KAP.

### Population and Samples

The research sample used is a manufacturing industry company listed on the Indonesia Stock Exchange. The sampling method that will be used is non-probabilistic sampling, more specifically the purposive sampling method because this study has certain sample criteria that are tailored to the research objectives.

This research is quantitative by using secondary data in the form of financial reports and related research documents. The data used in this study was obtained from the IDX website ([www.idx.co.id](http://www.idx.co.id)).

Hypothesis testing is done by using a multiple linear regression analysis model which aims to predict the effect of independent variables on the dependent variable (Ghozali, 2011: 82). The results of data processing will be presented in tables and descriptive. The regression equation is:

$$Y = b_0 + b_1 X_1 + b_2 X_2 + e$$

Where: Y = Tax Avoidance; X<sub>1</sub> = Audit Committee Competence; X<sub>2</sub> = External Auditor big 5.

## RESULTS AND DISCUSSION

In this study, the population used was manufacturing companies listed on the Indonesia Stock Exchange in 2013 - 2017. The company samples that were successfully obtained were 513 companies from 707 manufacturing companies listed on the IDX.

Multiple linear regression analysis is used to test the effect of two or more independent variables on one dependent variable. In this study used the t test and coefficient of determination (Ghozali, 2011: 127). The multiple linear regression equation in this study is formulated by the equation:

$$Y = b_0 + b_1 X_1 + b_2 X_2 + e$$

Table 1 – Multiple Linear Regression Test Results

	Model	B	T	Sig	Information
1	Constant	0.040	4,127	0,000	Not supported
	KKA	-0,022	-1,553	0.121	Not supported
	Big 5	-0.002	-0,263	0.793	Not supported
a. Dependent Variable: Tax Avoidance					
F = 1,210 Sig. F = 0.299					
R <sup>2</sup> = 0.005 Adjusted R <sup>2</sup> = 0.001					

Source: SPSS Processed Products (2019).

From the table data, we can compile multiple linear regression equations as follows:

$$Y = 0,040 - 0,022X_1 - 0,002X_2$$

Based on the equation of the results of multiple linear regression, the constant value for the regression equation shows 0.040. That is, when the competence of the audit committee and the *big 5* KAP auditors is considered constant, the amount of tax avoidance will increase by 0.040 cases.

Partial hypothesis testing in this study was carried out using the t test. By using the SPSS program and a 5% significance level the partial test results can be shown in the table.

- The results of the t test for H<sub>1</sub> obtained t count -1.553 with a significance value of more than 0.05, which is 0.121 and has a negative coefficient direction of -0.022. Negative values indicate the opposite direction of the dependent variable and a greater significance value means that the independent variable has no influence on the dependent variable. So H<sub>1</sub> is rejected because the t test shows a negative direction and has no influence;
- The results of the t test for H<sub>2</sub> obtained the value of t count -0.263 with a significance value of more than 0.05, which is 0.793 and has a negative coefficient direction of -0.002. Negative values indicate the opposite direction of the dependent variable and a greater significance value means that the independent variable has no influence on the dependent variable. So H<sub>2</sub> is also rejected because the t test shows that the independent variable has no influence on the dependent variable even though it has a negative direction.

The test results of the coefficient of determination indicate that the value is adjusted R<sup>2</sup> amounting to 0.001. This number indicates that it is 0.1% variation the dependent variable (tax avoidance) which can be explained by variation of independent variables (competence of the audit committee and auditor KAP *big 5*) in this study. This indicates the ability of the independent variable is not strong in explaining the dependent variable.

The results of the testing of the first hypothesis indicate that the audit committee competency variable which is defined as KKA has a p-value of 0.121 that has no effect on tax avoidance. H<sub>1</sub> may also be due in carrying out its duties and responsibilities, the audit committee restricted their authority, such as cannot access the documents, data or information about the company and the difficulty berkomin IKASI with employees including d

ireksi and others who carry out the audit function internal and audit committee also does not have the authority to make decisions. P establishes an audit committee of a company only to comply with applicable regulations. So with such conditions, the competence of the audit committee in processing data for tax purposes has no effect on tax avoidance.

The results of the study which said that the competence of the audit committee had no influence on tax avoidance had also been raised by Puspita and Harto (2014), then Mahidin and Danastri (2015). Thus the first hypothesis which states that the audit committee competency has a positive effect on corporate tax avoidance is not proven.

Results of testing the second hypothesis indicates that the variable auditor KAP *big 5* d iprosikan *big 5* have a p-value of 0.793 has no influence on tax evasion, because there penin gkatan audit quality at KAP *non big 5* as the implications of increasingly strict regulations issued by Bapepam and Financial Institutions concerning Registration of Accountants Who Conduct Activities in the Capital Market (Kep-41/BL/2008). Then the regulations issued by Bapepam and Financial Institutions were issued No. Kep 431/BL/2012 concerning Submission of Annual Report of Issuers or Public Companies. This regulation is issued considering the Public Company Annual Report is an important source of information about performance and prospects companies for shareholders and the public for investment decision making, and in order to improve the quality of information disclosure in the annual reports of public companies, so that it can indirectly improve audit quality.

Research conducted by Hartadinata and Tjaraka (2013) said that audit quality had no effect on tax avoidance. This is in accordance with the results of the study which shows that the *big 5* KAP auditors have no effect on tax avoidance. So that the second hypothesis which says that the *big 5* KAP auditors have a negative effect on tax avoidance is not proven.

## CONCLUSION

The results of the study indicate that the audit committee's competency variable has no effect on tax avoidance. This may be because in carrying out their duties and responsibilities, the audit committee is limited by its authority, such as not being able to access company documents, data or information and the difficulty of communicating with employees including directors and other parties who carry out internal audit functions as well as the audit committee.

Then for the results of the research the *big 5* KAP auditor variables on tax avoidance also showed no influence. This may be a result of the increasingly stringent regulations issued by Bapepam and Financial Institutions concerning Registration of Accountants which Conduct Activities in the Capital Market (Kep-41/BL/2008). Then the regulations issued by Bapepam and Financial Institutions were issued Kep 431/BL/2012 concerning Submission of Annual Report of Issuers or Public Companies.

The results of the coefficient test ( $R^2$ ) itself indicate that the value is adjusted  $R^2$  amounting to 0.001. This means that variations in tax avoidance variables that can be explained by variations in the audit committee's competency variables and KAP auditors *big 5* are only 0.1%.

## REFERENCES

1. Armstrong, C.S., Blouin, J.L., & Jagolinzer, A. D. (2015). Corporate Governance, Incentives, and Tax Avoidance. *Journal of Accounting and Economics*.
2. Brown, K. B. (2012). *A Comparative Look at Regulation of Corporate Tax Avoidance*. New York: Springer.
3. Darmawan, I. G. H., & Sukartha, I. M. (2014). Pengaruh Penerapan Corporate Governance, Leverage, Return on Assets, and Ukuran Perusahaan Pada Penghindaran Pajak. *Jurnal Bisnis Manajemen and Ekonomi*.
4. DeAngelo, L. E. (1981). Auditor Size and Audit Quality. *Journal of Accounting Economics*, Vol 3: 183-199.

5. Eisenhardt, K. (1989). Agency Theory: An Assesment and Review. *Academy of Management Review*, Vol 14: 41-53.
6. Ghozali, I. (2011). *Aplikasi Analisis Multivariate Dengan Program SPSS*. Semarang: Badan Penerbit Universitas Diponegoro.
7. Hartadinata, O., & Tjaraka, H. (2013). Analisis Pengaruh Kepemilikan Manajerial, Kebijakan Hutang, and Ukuran Perusahaan terhadap Tax Aggressiveness pada Perusahaan Manufaktur di Bursa Efek Indonesia Periode Tahun 2008 - 2010. *Jurnal Ekonomi and Bisnis*, XXIII (3): 48-59.
8. Hsu, P.H. (2018). Tax Avoidance, Financial Experts on The Audit Committee, and Business Strategy. *Journal of Business Finance and Accounting*.
9. Mahidin, I., & Danastri, N. D. (2015). Analisis Komisaris Independen, Komite Audit, Kepemilikan Keluarga, and Ukuran Perusahaan Terhadap Penghindaran Pajak (Tax Avoidance). *Journal of International Accounting, Auditing and Taxation*.
10. McGuire, S. T., Omer, T. C., & Wang, D. (2012). Tax planning: Does Tax-Specific Industry Expertise Make a Difference? *The Accounting Review*, Vol 87 No. 3: 975-1003.
11. Otoritas Jasa Keuangan (2015). Peraturan Otoritas Jasa Keuangan No. 55 Tahun 2015.
12. Pohan, C. A. (2016). *Manajemen Perpajakan Strategi Perencanaan Pajak and Bisnis*. Jakarta: PT. Gramedia.
13. Puspita, S.R. (2014). Pengaruh Tata kelola Perusahaan Terhadap Penghindaran Pajak. *Diponegoro Journal of Accounting*.
14. Robbins, S. P., & Judge. (2008). *Perilaku Organisasi*, Buku 2. Jakarta: Salemba Empat.
15. Robinson, J. R. (2012). *Tax Planning and Financial Expertise in The Audit Committee*.
16. Suandy, E. (2011). *Hukum Pajak*, Edisi 5. Jakarta: Salemba Empat.
17. Suartana, I. (2010). *Akuntansi Keperilakuan Teori and Implementasi*. Penerbit Andi.
18. Taylor, G., & Richardson, G. (2013). The Determinants of Thinly Capitalized Tax Avoidance Structures: Evidence from Australian Firms. *Journal of International Accounting, Auditing and taxation*.
19. Wijayanti, A. (2016). Pengaruh Karakteristik Perusahaan, Gcg and Csr Terhadap Penghindaran Pajak. *Seminar Nasional IENACO 2016*.
20. Windarti, A. (2017). Book Tax Difference and Struktur Kepemilikan Sebagai Upaya penghindaran Pajak. *Journal of Applied Business and Economics*, Vol 4 No. 1: 1-16.

**IDENTIFICATION OF ATTITUDES SUPPORTING TOURISM DEVELOPMENT:  
A CASE STUDY OF THE DERAWAN ISLAND PEOPLE, BERAU OF EAST BORNEO**

**Zainurossalamia Saida\*, Yahya Muhammad Farid**

Faculty of Economics and Business, Mulawarman University, Indonesia

\*E-mail: [saida.zainurossalamia.za@feb.unmul.ac.id](mailto:saida.zainurossalamia.za@feb.unmul.ac.id)

ORCID: 0000-0002-8046-0343

**ABSTRACT**

This study aims to analyze the influence of residents' welcome to the tourists, state of the local economy, and personal economic benefits to the pro-tourism behavior of the people of Derawan Island, Berau of East Borneo. This research is an explanatory research; i.e. a research that finds out and explains the influence among variables that aims to test a theory or hypothesis. It applies the Smart-PLS 3.0 analysis tool and quantitative path analysis as the research method. The samples of this study were 120 local residents of Derawan Island who were asked to respond to the questionnaire and were also involved in the interview. The findings show that residents' welcome to the tourists, the state of the local economy, and personal economic benefits have positive influence on the Pro-Tourism Behavior of the people of Derawan Island, Berau, East Borneo, with a contribution of R-square value of 37.3%. It means that the Pro-Tourism Behavior is affected by residents' welcome to the tourists, state of the local economy, and personal economic benefits of 37.3%.

**KEY WORDS**

Residents' welcome to the tourists, state of the local economy, personal economic benefits, pro-tourism behavior.

The Indonesian state has an abundant geography bonus that stretches from the tip of Sumatra Island to Papua Island. This makes Indonesia known as a maritime country and also the largest archipelagic country in the world which has a sea area of 5.8 million km<sup>2</sup> and around 17,504 islands which are surrounded by a coastline of 81,290 km. The potential of coastal resources owned by Indonesia, among others, are the beauty of coral reefs in shallow sea water, mangrove forests that have biodiversity and various other marine resources such as fish, minerals and high-value mining materials. This huge potential provides considerable opportunities in the development of tourism because it will increase the country's foreign exchange and help economic growth for local residents.

According to Murphy & Price (2005) tourism is a journey from one place to another, is temporary, and is carried out by individuals or groups as an effort to find balance or harmony and happiness with the environment in the social, cultural, natural, and scientific dimensions. In addition, tourists are every person who travels from their place of residence to visit other places by enjoying the trip from that visit.

Ribeiro et al., (2017) mentioned that tourism has a role as a means to increase contributions in infrastructure development and create jobs where other industries have fewer jobs, especially when unemployment is at a high level. This is certainly in line with the conditions experienced by Indonesia, which has a high unemployment rate. However, Indonesia has a great opportunity for the tourism industry and many natural attractions from the regions or islands in Indonesia, especially tourism maritime or archipelago in all regions of Indonesia, especially on Borneo Island, precisely in Berau Regency, East Borneo Province.

One of the leading tourisms for Berau Regency is Derawan Island. Derawan Island is an island located in Berau Regency, East Borneo. In this archipelago, there are a number of charming marine tourism objects, one of them is the Underwater Park which is in great demand by local and foreign tourists, especially world-class divers. Basically, the desire to

support tourism from the local population is based on the positive or negative impacts resulted from tourism. Ribeiro et.al., (2017) also explained that tourism also has the potential to trigger changes in community behavior, waning social values and norms, loss of identity, social conflict, shifting livelihoods and environmental pollution.

These things are susceptible to occur in the community as a result of tourism development, but the various negative impacts arising from tourism development can be anticipated by the community itself. These things not only occur in the development of tourism in rice fields, forests, and mountains, but can also occur in coastal tourism areas which are currently focused on becoming tourist destinations by the Regional Government. Determination of the coastal area as a tourist destination is inseparable from the natural beauty and sea charm that most of the sea in Indonesia has; especially Derawan Island, East Borneo.

Tourism development in coastal areas directly or indirectly will have a positive or negative impact. The development of tourism in coastal areas will directly involve coastal communities who mostly work as fishermen. The social characteristics possessed by fishing communities differ from other communities in general. This is caused by differences in the characteristics of the resources faced. This attitude towards positive and negative impacts will determine whether or not local residents will support and tourism.

The attitude of the local population needs to be considered by the parties concerned. This attitude includes an emotional feeling between residents and tourists, reciprocal relationships that do not harm each other, and the extent of involvement of local residents in efforts to develop tourism in their environment. In addition to the positive and negative impacts, the attitude of pro-tourism is also based on how much economic impact is obtained by the local environment in general as well as by each individual.

*Research Problems:*

- Is Residents' Welcome to the Tourists influencing the Pro-Tourism Behavior of the people in Derawan Island, Berau, East Borneo?
- Is State of the Local Economy influencing the Pro-Tourism Behavior of the people in Derawan Island, Berau, East Borneo?
- Is Personal Economic Benefit influencing the Pro-Tourism Behavior of the people in Derawan Island, Berau, East Borneo?

*Research Objectives:*

- To find out the influence of Residents' Welcome to the Tourists toward Pro-Tourism Behavior of the people in Derawan Island, Berau, East Borneo;
- To find out the influence of State of the Local Economy toward Pro-Tourism Behavior of the people in Derawan Island, Berau, East Borneo;
- To find out the influence of Personal Economic Benefit toward Pro-Tourism Behavior of the people in Derawan Island, Berau, East Borneo.

## **LITERATURE REVIEW**

Derawan Island is one of the villages located in the Derawan Island District, Berau Regency, East Borneo Province. Geographically, Pulau Derawan village has administrative boundaries or is surrounded by several sub-districts and also districts; the north of Derawan Island is immediately bordered by Bulungan Regency, the south is bordered by Talisayan District, while the East is bordered by Maratua District and in the west is Tanjung Batu Village of Derawan Islands District. The total area of the Derawan Island village area is approximately 43 hectares in which the majority of its area is sand. Derawan Island village is a village that has an archipelago's topographic form, so that the village itself uses more of its territory for fisheries and tourism.

In 2012, the Indonesian Ministry of Tourism and Creative Economy set Derawan Island as one of the Tourism Villages in Indonesia. With the determination of the status of this Tourism Village, it is expected that the community will be actively involved in the tourism development, which will cause the preservation of ecosystems that live in tourist areas and

attract tourists to come. Therefore, it requires good synergy from the government, local residents and tourism actors themselves.

However, quoted from [www.prokal.berau.com](http://www.prokal.berau.com) in 2016, tourists coming to Derawan Island experienced a decline. Some hotel and lodging managers claimed that the number of visitors decreased compared to the long Eid holiday in 2015. The decline in the number of visitors even reached 40 to 50 percent. This is certainly a work to think about by the government, the managers of Derawan Island and local residents to re-increase the tourist visit.

One reason of the decreasing numbers of visitors to Derawan Island is the lack of response and awareness of the management and local residents in an effort to support the tourism development in their environment. As quoted from [www.beraunews.com](http://www.beraunews.com) in 2016, it shows that many tourists feel dissatisfied with the services shown by the Human Resources businessmen on Derawan Island. This resulted in many tourists who then disseminated their complaints through social media so that poor information quickly spread to the general public.

For local residents, welcoming tourists who come to tourism destinations has become commonplace (Bimonte & Punzo, 2016). Basically, every local resident will certainly welcome the tourists. It is because the tourists who come will cause a lot of interactions and exchange effects between local residents and tourists, both positive and negative impacts. Therefore, local residents will welcome tourists who come.

Ribeiro et. al., (2017) argues that tourism should focus on the emotional interaction between local residents and tourists and also examine the influence of residents' feelings on the attitude of tourists. It should be carried out so that the tourists feel that there is good interaction from local residents which finally they will feel comfortable.

According to Ribeiro et. al., (2017) many developing countries in the world do not have abundant natural resources and are required to face so many challenges of changing times and economic development challenges that are constantly demanded to make changes to suit the conditions of the times. Therefore, many developing countries then look to the tourism sector as a solution. The thing that is not much different is experienced by East Borneo Province. Basically, East Borneo Province is a rich province in Indonesia from its abundant mining sector, but eventually the mine runs out and currently one of the sectors developed by East Borneo Province is the tourism sector.

According to Stylidis & Terzidou (2014) the economic state was depressed with a high unemployment rate. Local residents care about the local economic state which is perceived to have a more positive attitude about the impact and support of the tourism industry. Stylidis & Terzidou (2014) also stated that State of the Local Economy is one of the factors that can influence the attitude of residents both positive and negative toward the tourism development. Many residents obtain the economic benefits provided by the tourism. This will certainly create local economic conditions that are good for the environment around tourism.

Table 1 – Indicators of the Research Instrument

Variables	Indicators
Pro-Tourism Behavior (Y)	The intensity of the hospitality of the people, the preservation of natural resources of tourism, the provision of information and experience, becoming a tourism promotion agent, and the acceptance of negative impacts
Residents' Welcome to the Tourists (X <sub>1</sub> )	Sense of pride, good treatment and economic contribution
State of the Local Economy (X <sub>2</sub> )	Government contributions, high taxes, improvement in living standards
Personal Economic Benefit (X <sub>3</sub> )	Economic benefit for family, large economic benefits, and income dependence from tourism

Source: Ribeiro et al., (2017).

Personal Economic Benefit, according to McGehee & Andereck (2004), is the benefit that each individual receives which is then enjoyed by the individuals themselves. That is, the attitude of supporting tourism for residents is also influenced by how much economic benefits

are received by each resident in the tourism environment. People who obtain more economic benefits from tourism tend to have a greater positive attitude toward tourism development compared to people who obtain lower economic benefits.

*Hypotheses Development.* Woosnam (2012) stated that the Residents' Welcome to the Tourists is one of the important indicators that are needed in pro-tourism residents. It is an emotional solidarity relationship between tourists and local residents that serves to measure the attitude of supporting citizens towards tourism development.

Residents' Welcome to the Tourists has three indicators in their measurement; including the existence of a sense of pride, good treatment and economic contribution. It becomes the background of the research to prove the influence of Residents' Welcome to the Tourists towards Pro-Tourism Behavior on Communities around Derawan Island, Berau, East Borneo

H1: It is assumed that the Residents' Welcome to the Tourists variable influences the Pro-Tourism Behavior in Communities around Derawan Island, Berau, East Borneo.

According to Styliadis and Terzidou (2014), State of the Local Economy is one of the important things in the factor of residents' supporting attitude toward the tourism development. Styliadis and Terzidou (2014) stated that the economy is depressed by high unemployment. In addition, the existing population is more concerned with the perceived local economic situation so it has a more positive attitude about the impact and support for tourism development.

The State of the Local Economy has three main indicators to measure it; including government contributions, high taxes, and improvement in living standards. It becomes the background of the research prove the influence of State of the Local Economy on Pro-Tourism Behavior in Communities around Derawan Island, Berau, East Borneo

H2: It is assumed that the State of the Local Economy variable influences the Pro-Tourism Behavior in Communities around Derawan Island, Berau, East Borneo.

Boley et. al., (2014) stated that Personal Economic Benefit is also an indicator to assess whether the community supports tourism development in their region or not; the greater the individual obtains a big economic benefit, the greater their supporting attitude toward tourism development.

Personal Economic Benefit has three main indicators to measure it; including the economic benefits for families, the creation of large economic benefits, and the existence of income dependence from tourism. It becomes the background of the research to prove the influence of Personal Economic Benefit on Pro-Tourism Behavior in Communities around Derawan Island, Berau, East Borneo.

H3: It is assumed that the Personal Economic Benefit variable influences the Pro-Tourism Behavior in Communities around Derawan Island, Berau, East Borneo.

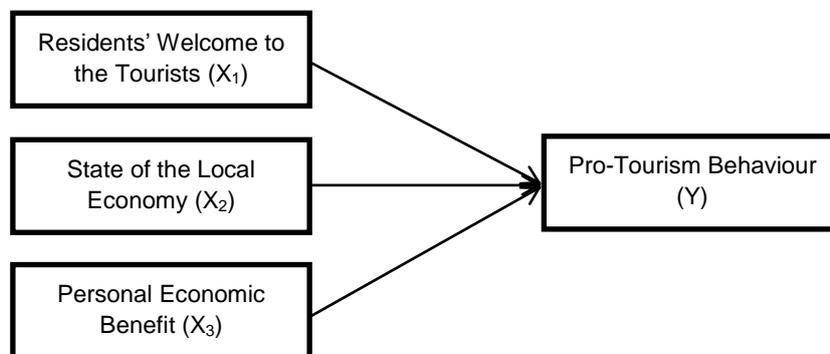


Figure 1 – Conceptual Framework

## METHODS OF RESEARCH

This research is an explanatory research; i.e. a research that finds out and explains the influence among variables that aim to test a theory or hypothesis in order to strengthen or

reject the empirical theories or studies that have been conducted before. It was continued by testing the hypothesis which means that this study explains causal relationships among variables. This study uses survey techniques by distributing questionnaires and giving them values based on Likert scales with 1-5 value intervals. The research variables consist of three independent variables (X): Residents' Welcome to the Tourists ( $X_1$ ), State of the Local Economy ( $X_2$ ), Personal Economic Benefit ( $X_3$ ), and one dependent variable (Y): Pro-Tourism Behavior.

The sampling was carried out using a multi-purposive sampling technique that is sampling based on research considerations or based on desired elements or based on certain criteria (Sugiyono, 2009). The population used in this study is the local residents in Derawan Island, Berau, East Borneo, while the sample used is 120 respondents.

This study uses the Smart-PLS 3.0 analysis tool and path analysis method. According to Ghozali & Latan (2015), path analysis itself consists of two models: the structural model (inner model): a model that explains the correlation between latent variables and measurement models (outer model): a model that explains between indicators with their latent variables. Before conducting the test phase of the two models, the estimation step was carried out by an iteration process to achieve convergent conditions where each indicator of the latent variable has a value of loading factor  $<0.05$ .

## RESULTS AND DISCUSSION

Based on the iteration process, the Y.4 indicator is 0.399 and the Y.5 indicator is 0.174, in which both are  $<0.50$  so they need to be eliminated.

Table 2 – Loading Factor for Each Construct

Variables	Construct	Loading Factor	Description
Residents' Welcome to the Tourists ( $X_1$ )	Sense of Pride (X1.1)	0.640	$>0.50$
	Good Treatment (X1.2)	0.777	$>0.50$
	Economic Contribution (X1.3)	0.755	$>0.50$
State of the Local Economy ( $X_2$ )	Government Contribution (X2.1)	0.737	$>0.50$
	Improvement in Living Standard (X2.2)	0.837	$>0.50$
	High Taxes (X2.3)	0.782	$>0.50$
Personal Economic Benefit ( $X_3$ )	Economic Benefits for Family (X3.1)	0.902	$>0.50$
	Large Economic Benefits (X3.2)	0.907	$>0.50$
	Income Dependence from Tourism (X3.3)	0.884	$>0.50$
Pro-Tourism Behavior (Y)	The intensity of the hospitality of the people (Y.1)	0.716	$>0.50$
	The preservation of natural resources of tourism (Y.2)	0.742	$>0.50$
	The provision of information and experience (Y.3)	0.801	$>0.50$
	Becoming a tourism promotion agent (Y.4)	0.399	Eliminated
	The acceptance of negative impacts (Y.5)	0.174	Eliminated

Source: Smart-PLS 3.0.

Table 3 – Loading Factor for Each Construct in the Second Iteration

Variables	Construct	Loading Factor	Description
Residents' Welcome to the Tourists ( $X_1$ )	Sense of Pride (X1.1)	0.695	$>0.50$
	Good Treatment (X1.2)	0.744	$>0.50$
	Economic Contribution (X1.3)	0.737	$>0.50$
State of the Local Economy ( $X_2$ )	Government Contribution (X2.1)	0.748	$>0.50$
	Improvement in Living Standard (X2.2)	0.839	$>0.50$
	High Taxes (X2.3)	0.770	$>0.50$
Personal Economic Benefit ( $X_3$ )	Economic Benefits for Family (X3.1)	0.884	$>0.50$
	Large Economic Benefits (X3.2)	0.934	$>0.50$
	Income Dependence from Tourism (X3.3)	0.849	$>0.50$
Pro-Tourism Behavior (Y)	The intensity of the hospitality of the people (Y.1)	0.757	$>0.50$
	The preservation of natural resources of tourism (Y.2)	0.808	$>0.50$
	The provision of information and experience (Y.3)	0.829	$>0.50$

Source: Smart-PLS 3.0.

Based on the results of the second iteration it was found that all indicators of latent variables had fulfilled the requirements for convergent conditions which were >0.50 so that the study could continue analysis to the measurement model (outer model) and structural model (inner model).

Table 4 – Outer Model Test

Variables	AVE	Composite reliability	Cronbach Alpha
Residents' Welcome to the Tourists (X <sub>1</sub> )	0.526	0.769	0.551
State of the Local Economy (X <sub>2</sub> )	0.619	0.829	0.696
Personal Economic Benefit (X <sub>3</sub> )	0.792	0.919	0.833
State of the Local Economy (X <sub>2</sub> )	0.637	0.840	0.716

Source: Smart-PLS 3.0.

In addition to the convergent value, the construct is also assessed from the Average Variance Extracted (AVE) in which the expected AVE value is >0.5. From table 4, it is known that all AVE values of the research variables meet the requirement because they have values above 0.5. Furthermore, the Reliability Test is carried out in which the expected value in this test is above 0.7. From table 4, it is known that all variables have a Composite Reliability value above 0.7. Reliability Tests can also be strengthened by Cronbach Alpha in which the expected value is above 0.6. From table 4, it is known that all variables have Cronbach Alpha values above 0.6 except for the Residents' Welcome to the Tourist variable which has a Cronbach Alpha value of 0.551.

This analysis is carried out with the aim of obtaining accurate results so that hypothesis testing can be done appropriately. The inner model test is carried out in several steps.

Table 5 – The Coefficient of Determination

Construct	R <sup>2</sup>
Pro-Tourism Behavior	0.373

Source: Smart-PLS 3.0.

Calculating Predictive Relevance (Q<sup>2</sup>) can be carried out by:

$$Q^2 = 1 - (1 - R^2) = 0.373$$

The magnitude of Q<sup>2</sup> has a vulnerable value of 0 < Q<sup>2</sup> <1, in which the closer it is to 1, the better the model is.

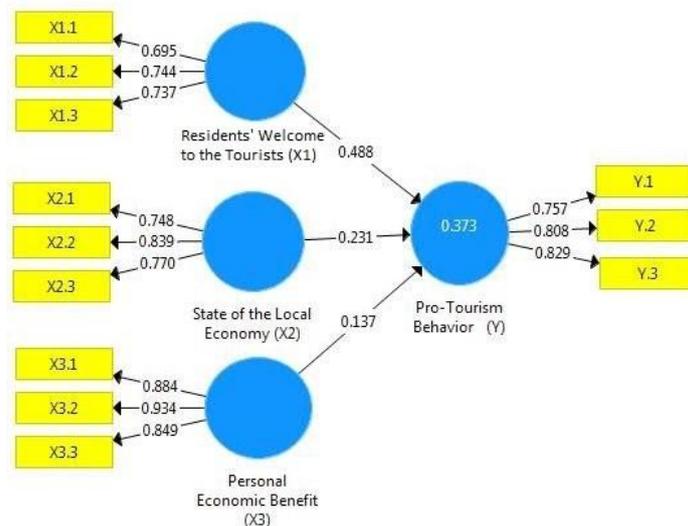


Figure 2 – Structural Model (Source: Smart-PLS 3.0)

Testing the hypothesis can be seen from the t-statistics and the probability values. Testing hypotheses, with the statistical values, uses alpha 5% and t-statistics value of 1.96 (Hussein, 2015).

Table 6 – Path Coefficient

Hypotheses	Original Sample	Standard Deviation	t-statistics
H1 Residents' Welcome to the Tourists has influence toward Pro-Tourism Behavior	0,488	0,094	5,169
H2 State of the Local Economy has influence toward Pro-Tourism Behavior	0,231	0,099	2,330
H3 Personal Economic Benefit has influence toward Pro-Tourism Behavior	0,137	0,078	1,768

Source: Smart-PLS 3.0.

The correlation between Residents' Welcome to the Tourist and the Pro-Tourism Behavior is significant with a statistic score of 5.169 ( $>1.96$ ). The Original Sample value is positive that is equal to 0.488 which indicates that the Residents' Welcome to the Tourist has positive and significant influence on the Pro-Tourism Behavior. It means that Hypothesis 1 which states "Residents' Welcome to the Tourists influences the Pro-Tourism Behavior in Communities around Derawan Island, Berau, East Borneo" is accepted.

The correlation between State of the Local Economy and the Pro-Tourism Behavior is significant with a statistic score of 2.330 ( $>1.96$ ). The Original Sample value is positive that is equal to 0.231 which indicates that the State of the Local Economy has positive and significant influence on the Pro-Tourism Behavior. It means that Hypothesis 2 which states "State of the Local Economy influences the Pro-Tourism Behavior in Communities around Derawan Island, Berau, East Borneo" is accepted.

The correlation between the Personal Economic Benefit and the Pro-Tourism Behavior is not significant with the T-statistic score of 1.768 ( $<1.96$ ). The Original Sample value is positive that is equal to 0.231 which indicates that the Personal Economic Benefit has positive and insignificant influence on the Pro-Tourism Behavior. It means that Hypothesis 3 which states "Personal Economic Benefit influences the Pro-Tourism Behavior in Communities around Derawan Island, Berau, East Borneo" is accepted.

## CONCLUSION AND SUGGESTIONS

Residents' welcome to the tourists has positive and significant influence on pro-tourism behavior on communities around Derawan Island, Berau, East Borneo. It shows that if there is an increase in residents' welcome to the tourists, the pro-tourism behavior will also increase; the higher the residents' welcome to the tourists, the higher the pro-tourism behavior. Good treatment from residents to the tourists has been proven to be an indicator that has the strongest value to explain the pro-tourism behavior (the attitude of supporting the tourism) by local residents. Suggestion from the author is that the community or local residents of Derawan Island are expected to continue to be friendly in welcoming and serving the tourists who make a visit. Therefore, it is expected to increase the number of tourist visits to Derawan Island.

State of the local economy has positive and significant influence on pro-tourism behavior on communities around Derawan Island, Berau, East Borneo. It shows that if there is an increase in the State of the local economy, pro-tourism behavior will also increase; the higher the State of the local economy, the more pro-tourism behavior will be. The improvement in living standards, experienced by the resident as a result of tourism and a good local economy, has proven to be the strongest indicator to explain the pro-tourism behavior by local residents. The suggestion from the author for the government is that the government should make a legal provision to set the standard price of tour packages. Later,

it is expected to reduce the intervention of outsiders who like to change the price of tour packages that burden local business people or residents of Derawan Island.

Personal economic benefit has positive but not significant effect on pro-tourism behavior on communities around Derawan Island, Berau, East Borneo. It shows that if there is an increase in the economic benefits, the pro-tourism behavior will also increase, but it will not affect the pro-tourism behavior. Communities that get more economic benefits from tourism have proven to be one of the most powerful indicators to explain the pro-tourism behavior by local residents. Suggestion from researchers for the government and local residents is to hold socialization or soft skills training about how good ways to be able to utilize the existing tourism resources. Thus, it will again create new jobs and business opportunities for local residents.

Based on the observations, local residents really expect that tourism in Derawan Island will become a destination for both local and foreign tourists. Local residents strongly support tourism development because most of the income and economic future depend on the tourism sector. The residents are willing to provide information to tourists who make a visit and contribute to improving their experience. Therefore, mutual synergy between Local Residents, Village Government, City Government as well as business people and tourists is needed to promote Derawan Island as a tourist destination and also jointly support the development of Derawan Island tourism sector.

## REFERENCES

1. Bimonte, S., Punzo, L. F. (2016), Tourist development and host–guest interaction: An economic exchange theory. *Annals of Tourism Research*, 58, 128-139.
2. Boley, B.B., McGehee, N.G., Perdue, R.R., Long, P. (2014), Empowerment and Resident Attitudes toward Tourism: Strengthening the Theoretical Foundation Through a Weberian Lens. *Annals of Tourism Research*. 33-50.
3. Ghozali, I., Latan, H. (2015), Partial least squares: Konsep, teknik dan aplikasi menggunakan program SmartPLS 3.0 untuk penelitian empiris. Semarang: Badan Penerbit UNDIP.
4. McGehee, N. G., Andereck, K. L. (2004), Factors predicting rural residents' support of tourism. *Journal of travel research*, 43(2), 131-140.
5. Murphy, P. E., & Price, G. G. (2005). Tourism and sustainable development. *Global tourism*, 3, 167-193.
6. Prokal Berau. (2016), Jumlah kunjungan Pulau Derawan Menurun, penginapan banyak kosong. <http://berau.prokal.co/read/news/44332-jumlah-kunjungan-pulau-derawan-menurun-penginapan-banyak-kosong.html>. Accessed on November 17th, 2017.
7. Ribeiro, M. A., Pinto, P., Silva, J. A., Woosnam, K. M. (2017), Residents' attitudes and the adoption of pro-tourism behaviours: The case of developing island countries. *Tourism Management*, 61, 523-537.
8. Sawega, A. (2016), Wisatawan keluhkan SDM pelaku wisata Derawan <http://www.beraunews.com/wisata-budaya/wisata/2122-wisatawan-keluhkan-sdm-pelaku-wisata-derawan>. Accessed on November 17th, 2017.
9. Stylidis, D., Terzidou, M. (2014), Tourism and the economic crisis in Kavala, Greece. *Annals of Tourism Research*, 44, 210-226.
10. Sugiyono. (2009), *Metode Penelitian Kuantitatif, Kualitatif dan R&D*. Bandung: Alfabeta.
11. Woosnam, K. M. (2012), Using emotional solidarity to explain residents' attitudes about tourism and tourism development. *Journal of Travel Research*, 51(3), 315-327.

DOI 10.18551/rjoas.2019-02.05

## **FACTOR FORMATION ANALYSIS OF COASTAL COMMUNITY PREFERENCE IN MAINTAINING MANGROVE FORESTS AT LEMAH KEMBAR, EAST JAVA, INDONESIA**

**Fattah Mochammad\*, Purwanti Pudji, Handayani Wahyu**

Faculty of Fisheries and Marine Science, University of Brawijaya, Indonesia

\*E-mail: [mochammadfattah@ub.ac.id](mailto:mochammadfattah@ub.ac.id)

### **ABSTRACT**

The sustainability of mangrove forests benefits the organisms in the surrounding area, because mangrove forests have three main functions, namely physical, biological and economic functions. The purpose of this study is to analyze the most important factors in coastal communities in maintaining the sustainability of mangrove forest ecosystems. Research on the preferences of coastal communities in preserving mangrove forests uses correlational research factor analysis. Lemah Kembar community uses mangrove forests either directly, where they hunt oysters and crabs, or indirectly as a wave retardant and sea water intrusion. Calculation of factor analysis resulted in four main factors formed in preserving mangrove forests including local agreements (eigenvalue = 3.339), regulation and government protection (eigenvalue = 1.904), mangrove forest location (eigenvalue = 1.205), and livelihood (eigenvalue = 1.122). Local agreements are the most important consideration in realizing the sustainability of mangrove forests, because people are more obedient to the rules determined and agreed upon together.

### **KEY WORDS**

Mangrove forest, coastal community, forest sustainability, factor analysis.

Indonesia is one of the tropical countries possessing a diversity of types and structures of mangrove vegetation. Saparianto (2007) stated that mangrove is forest vegetation that grows between tidal lines. Nevertheless, it is capable to grow on coral shores, dead coral land on which a thin layer of sand is overgrown or covered with mud or muddy beaches.

Mangrove forests have three main functions for the preservation of resources, namely physical, biological and economic functions. Mangrove forests physical function maintains and stabilizes coastlines as well as river banks, protects against waves and currents, accelerates the formation of new land. Mangrove forest biological functions serve as a place of care, a place to find food, a breeding ground for various types of crustaceans, fish, birds, monitor lizards, snakes, epiphytic and parasitic plants, and a nutrient producer. Mangrove forest economic function serves as a recreation site, farmland, and generates foreign exchange using industrial raw material products (Saparianto, 2007). In addition, mangroves growing at the end of large rivers act as the final reservoir for industrial waste from urban areas and upstream villages. The mangrove forest area is capable to accumulate heavy metals contained in the growing ecosystem or mangrove forests in the pond environment which act as Cu pollution biofilter (Kariada and Andin, 2014).

Most of these environmental problems are caused by community behavior (Akhtar and Helly, 2014). Illegal logging and conversion of mangrove forests are the main factors in mangrove forest degradation (Muryani et al., 2011). In this case, the community merely assesses mangrove forests in terms of economic benefits, regardless of the physical and biological benefits (Suzana et al., 2011). Nevertheless, the community has begun to grow awareness in preserving mangrove forests. According to Harahab and Graziano (2011), community participation in managing mangrove forests is influenced by management, knowledge, and attitudes factors.

Lemah Kembar Village, Sumberasih Subdistrict, Probolinggo Regency possess mangrove forest ecosystem. The community has an awareness to preserve the mangrove forest ecosystem. Community awareness on the sustainability of mangrove forests is exhibited by establishing groups. Most of the group members are the fish farmer or

POKDAKAN (Fish Cultivator Group which was established on May 26, 2010, under the name POKDAKAN Mina Mas). POKDAKAN "Mina Mas" in 2011 founded POKDAKAN Sumber Vanamey. The purpose of establishing POKDAKAN Sumber Vanamey is cooperating with Japan to implement the Silfishery system. POKDAKAN Mina Mas and Sumber Vanamey empower the community on fish and shrimp cultivation, as well as management and utilization of mangrove forests. Each group member has an obligation to participate in planting and maintaining forest sustainability. The community is aware of the importance of the existence of mangrove forests for the sustainability of aquaculture business, the majority of which are POKDAKAN Mina Mas traditional pond members.

Fish farmers "Mina Mas" have planted 1,072,555 trees from 1985 to 2012 with a mangrove forest area of 43.7 hectares. Some seeds for planting mangrove forests were received from ISME-Japan (5,750 stems of mangrove seedlings). In addition, there were 28,000 mangrove seeds provided by the Provincial Government. The 2013 development plan for an area of 11.6 hectares with 150,000 mangrove seedlings was planted on the west coast of the Bibis River estuary and riversides. Based on the description of the background, this study aims to analyze the most important factors determining the preferences of coastal communities in maintaining the sustainability of mangrove forest ecosystems. This preference research produced the most important factor in the Lemah Kembar community in maintaining the sustainability of the mangrove forest ecosystem.

### METHODS OF RESEARCH

The research location was in Lemah Kembar Village, Sumberasih District, Probolinggo Regency. Research on the preferences of coastal communities in maintaining the sustainability of mangrove forests used a type of correlational research. Correlational research is a type of research that observes the relationship between one or several variables with one or several other variables (Yusuf, 2014). Respondents were used as samples for research on the analysis of community factors safeguarding the coastal environment using a purposive sampling technique. According to (Sugiyono, 2009), purposive sampling is a technique of determining samples with certain considerations. The object of research is people who carry out activities in the mangrove forest area of Lemah Kembar Village. These are crab and shellfish gatherer, cultivator, and activities that affect the presence of mangroves.

Respondents in this preference analysis study were 40 people. Determination of the number of respondents according to Suliyanto (2005), the number of samples at least four times the number of variables. Data collection techniques utilized were: interviews, observation, and documentation. The measurement scale used a score of 1 to 4 or four answer choices to avoid respondents' tendency to eliminate neutral choices in the questionnaire (Arikunto, 2006). The choice contained in the questionnaire are Strongly Agree (SS) with a value of 4, Agree (S) with a value of 3, Disagree (TS) with a value of 2, and Strongly Disagree (STS) with a value of 1.

Table 1 – KMO Accuracy Table

KMO Size	Recommendation
0.9	Very good
0.8	Good
0.7	Medium
0.6	Adequate
0.5	Bad
<0.5	Rejected

Source: Suliyanto, 2005.

Stages in analyzing factors (Suliyanto, 2005), include problem formulation and factor analysis. The variables studied based on the results of preliminary research are mangrove forest benefits (P1), livelihoods (P2), prohibitions and legal sanctions (P3), prohibitions and

religious sanctions (P4), local agreements (P5), awareness and knowledge (P6), socialization and training (P7), experience of environmental change (P8), rehabilitation time (P9) and location (P10). The process of factor analysis is based on the correlation matrix between one variable with another variable, to obtain a factor analysis that all variables must correlate. Model accuracy assessment used Kaiser-Mayer-Olkin (KMO).

Determination of the number of factors needed to represent the variables to be analyzed is based on the amount of eigenvalue and the percentage of the total variance. Factors that have an eigenvalue equal to or greater than 1 (one) are maintained in the factor analysis model, while others are excluded from the model. The results of extraction in the factor matrix identify the relationship between factors and individual variables. Nevertheless, these factors variables are correlated. Therefore these variables were difficult to interpret. Through the rotation of matrix factors, these are converted into simpler matrices to ensure easier interpretation. Factor rotation used the varimax procedure. Factor interpretation was conducted by classifying variables possessing a minimum loading factor of 0.4. Should the variable possess resulting loading factor less than 0.4 then it is removed from the model. The final stage of factor analysis is to determine the accuracy in choosing the Principal Component Analysis (PCA) factor analysis techniques. It is conducted to determine the residual number (difference) between correlations observed with the produced correlation. The smaller the percentage, the more precise the technique is.

## RESULTS AND DISCUSSION

*Lemah Kembar Village Community Characteristics.* The majority of the people of Lemah Kembar Village, Sumberasih Subdistrict, Probolinggo Regency, Indonesia, are Madurese. The means of communication uses the Madurese language. The chosen respondents were directly related to the utilization and management of mangrove forests, namely oyster and crab gatherer, farmer groups around mangroves and surrounding communities.

Based on respondents' gender, there were 28 men and 12 women utilizing the mangrove forest. The composition of female respondents is lower because women in the Lemah Kembar Village area use mangrove forests merely to improve the family economy. The respondent age range was 25 years to 60 years. Field result exhibited those respondents who used mangrove forests at productive age. 39 respondents are within the age range of 25-55 years. Respondents level of education ranges from not taking education to high school graduates. The level of education was 8 uneducated, 18 elementary school graduate, 7 middle school graduate, and 7 high school graduates. Mangrove forests provide direct and indirect benefits to the community. Based on field study, 16 respondents' uses oysters, 4 utilize rebon shrimp, 10 uses crabs, and 15 utilize water around the mangrove.

*Factors Forming Coastal Community Preferences in Maintaining the Conservation of Mangrove Forests.* The adequacy of samples in the used statistical tests: Kaiser Mayer-Olkin (KMO) and Barlett's Test Sphericity. Data analysis obtained a sampling adequacy measure of 0.617. The adequacy value of the variable sample at the measure of KMO accuracy is adequate, and then the research can be continued and feasible to carry out factor analysis. According to Melati and Basu (2011), should the value of KMO is more than 0.50, the process of factor analysis can be conducted.

Statistic tests for existing variables used Barlett's Test of Sphericity to determine whether there is a correlation or not. Barlett's Test value through a chi-square value of 154.920 with a degree of freedom of 45 and significance <0.05 ensure there is a correlation between variables and feasible to conduct factor analysis.

The initial value was used to determine variable variants before extracting. All initial values produce a value of 1 as before the variable extraction is determined, 100% form the factor or the factor before extraction is equal to the variable as much as 10 factors.

Extraction value is a value that describes the percentage of a variable that can be explained by forming factors (Suliyanto, 2005). The extraction value exhibited in Table 2 produces an average value greater than 0.6. This exhibits that the greater the communalities,

the stronger the relationship with forming factors. The P1 variable produces an extraction value of 0.695, therefore this value indicates 69.5% of the variant of variable P1 can be explained by the forming factors.

Table 2 – Commuality Value

	Initial Value	Extraction Value
P1	1.000	0.695
P2	1.000	0.777
P3	1.000	0.753
P4	1.000	0.756
P5	1.000	0.633
P6	1.000	0.649
P7	1.000	0.825
P8	1.000	0.848
P9	1.000	0.863
P10	1.000	0.773

Determination of community preference factors in maintaining the sustainability of mangrove forests through the Total Variance Explained (Table 3). The eigenvalue is a value that indicates the number of variants associated with each factor. Factors that have an eigenvalue of 1 (one) are included in the model, while those with values less than 1 (one) are excluded (Yunitasari and Edwin, 2013). Based on the results of the calculation, 4 factors were formed. These factors were chosen because it produces an eigenvalue equal to or greater than 1 (one).

The first factor produced a value of 3.339; the second factor produced a value of 1.904; the third factor produced a value of 1.205, and the fourth factor produced a value of 1.122. Based on the calculation, it produced a percentage of variance value 33.390; 19.044; 12.051 and 11.222% for example  $(3.339 / 10) \times 100\% = 33.390\%$ . The total percentage of all four factors is 75.707%. Thus 75.707% of all variables can be explained by 4 factors formed.

Table 3 – Value of Total Diversity

Component	Initial Eigen Value		
	Total	% Diversity	% Cumulative
1	3.339	33.390	33.390
2	1.904	19.044	52.434
3	1.205	12.051	64.485
4	1.122	11.222	75.707
5	0.842	8.424	84.130
6	0.586	5.858	89.989
7	0.404	4.036	94.025
8	0.285	2.849	96.874
9	0.177	1.772	98.646
10	0.135	1.354	100.000

Table 4 – Component Matrix

	Component			
	1	2	3	4
P7	0.740	0.472		
P4	0.726			
P8	0.661			
P10	0.628	0.419		
P1	0.592		0.407	0.412
P6		0.628		
P3		0.595		
P2		0.404	0.693	
P5	0.525			0.587

Table 4 is used to distribute the variables extracted into 4 (four) factors formed by entering the factor loading value (the degree of closeness of a variable to a variable is

formed). The greater the loading factor (greater than 0.4), the more real the variable is included in one of the four factors formed.

Variables possessing a factor loading value of  $<0.4$  are considered to have a weak contribution to the factors formed, therefore they must be excluded from the forming factors (Suliyanto, 2005). Table 4 exhibits that the factor loading value in accordance with the provisions is P1, P2, P3, P4, P5, P6, P7, P8, and P10. P9 does not fulfill the conditions, therefore, it is excluded from the factor. Based on component matrix calculation, the spread of variable factor loading values into the factors formed is not evenly distributed therefore it needs to be rotated.

Factor rotation is a simplification of the factor matrix possessing a difficult to interpret structure (Karyasa et al., 2014). The spread of variants is evenly distributed after rotated using the Varimax method. It is a method used to maximize the number of loading variants on each factor but does not change the value of communality. Factor rotation is a step to maximize the loading factor value of each variable in order to facilitate the determination of the factors.

Table 5 – The matrix of Rotation Components

	Component			
	1	2	3	4
P5	0.778			
P1	0.736			
P7	0.699		0.489	
P3		0.851		
P9		0.646		0.533
P10			0.767	
P6			0.740	
P4			0.536	
P2				0.860

The results of rotation with using the Varimax method based on Table 5 produce a more evenly distributed factor loading value into each factor. The distribution produces four factors, including the first factor formed from the rotation results, P5, P1, and P7. The second factor is formed from the results of rotation namely P3 and P9. The third factor is formed from the results of rotation, namely P10, P6, and P4. The fourth factor formed from the rotation results is P2. P8 was excluded from the factor.

Table 6 – Coastal Community Preference Factors

Factor	Eigenvalue	Variable	Loading
Local agreement	3.339	Agreement of local communities not to damage mangrove forests (P5)	0.778
		Mangrove forests provide enormous benefits for the community directly or indirectly (P1)	0.736
		Socialization and training to maintain the sustainability of mangrove forests (P7)	0.699
Government regulation and protection	1.904	Prohibition and legal sanctions to deter damage the environment. especially mangrove forests (P3)	0.851
		Requires a long time to repair/reforest mangrove forests (P9)	0.646
		The location of nearby mangrove forests makes it possible to preserve mangrove forests (P10)	0.767
Location of mangrove forests	1.205	The community possess awareness and knowledge to protect mangrove forests (P6)	0.740
		Religion prohibition and sanction to deter damage the environment. especially mangrove forests (P4)	0.536
	1.122	Mangrove forests provide employment/income for the community (P2)	0.860

The value of factor analysis concluded that there are four main factors considered most important by the community in maintaining the sustainability of mangrove forests. The four new factors will be a factor in maintaining the sustainability of mangrove forests, namely local

agreements, regulations and government protection, the location of mangrove forests and livelihoods (Table 6 and Figure 1).

The appropriate strategy for forestry development must be based on socio-cultural wealth and local wisdom in maintaining, utilizing, and protecting forest functions for future generations (Salosa et al., 2014). Local wisdom is the first factor needed by the community in maintaining the sustainability of mangrove forests. Local agreement generates binding rules on the community to comply with the applicable rules.

The government has made regulations and protected mangrove forests in writing, therefore coastal communities are obliged to preserve mangrove forests. One example of a written rule is the ban on cutting down or damaging mangrove trees along the coast of Probolinggo Regency delivered by BLH Probolinggo Regency based on Law number 32 of 2009 article 67, 69 and 98. Sanctions given to violators are threatened with the shortest imprisonment 3 years and a fine of at least Rp. 3,000,000,000.00 (Three Billion Rupiah).

People influencing the sustainability of mangrove forests are people who live close to mangrove forests or who have direct contact with mangrove forests. The closeness of this location has a relationship that the community at all times can maintain sustainability both directly by maintaining mangrove forests and indirectly when utilizing the economical organisms of mangrove forests.

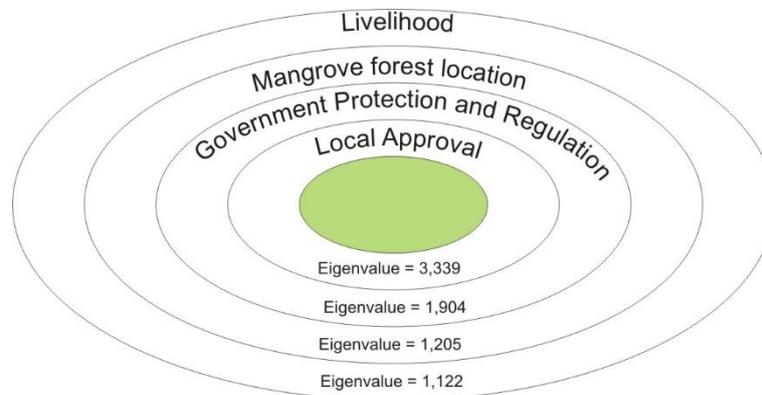


Figure 1 – Community Factors in Maintaining the Conservation of Mangrove Forests

The direct benefits value is generated from direct use of mangrove forests, namely the potential of wood (building wood and firewood), Nipah leaf craftsmen, fishing, shrimp and crabs (Suzana et al., 2011). The income of coastal communities who depend on mangrove forests or use the value of direct benefits has a responsibility to preserve mangrove forests. If the mangrove forest is damaged, the community will lose their livelihood. According to (Erwiantono et al., 2013), motivation to conserve resources is also caused psychologically. People experience emotional and social ties to the existence of fisheries resources - because their livelihoods depend on the existence of resources.

## CONCLUSION AND SUGGESTIONS

Communities that are directly related to the use and management of mangrove forests, namely: oyster and crab gatherer, farmer groups, and surrounding communities. The results of factor analysis resulted in 4 (four) main factors formed in maintaining the sustainability of mangrove forests, namely local agreements, regulations and government protection, the location of mangrove forests, and livelihoods.

The sustainability of mangrove forests benefits the community directly or indirectly. The main consideration in reforestation and mangrove forest conservation to realize the sustainability of mangrove forests is the involvement of the community in the preparation and ratification of local agreements so that the community will comply with the rules that have been determined and agreed upon together. In order to support local agreements, it requires government support by making policies, regulations, and laws that regulate the use and

management of mangrove forests. In addition, the existence of coastal communities closest to mangrove forests is expected to have a sense of awareness and concern for mangrove forests because the community is at all times and can directly monitor mangrove forests. The preservation of mangrove forests may encourage coastal communities being aware of the sustainability of their livelihoods.

## REFERENCES

1. Akhtar H. and Helly P.S. 2014. Peran Sikap Dalam Memediasi Pengaruh Pengetahuan Terhadap Perilaku Minimisasi Sampah Pada Masyarakat Terban, Yogyakarta. *J. Manusia and Lingkungan* 21 (3) 386-392.
2. Arikunto. 2002. *Prosedur Penelitian Suatu Pendekatan Praktek*. PT Melton Putro. Jakarta.
3. Erwiantono, Siti A., Pang S. A., Rilus A. K. 2013. Partisipasi Masyarakat Dalam Pengelolaan Areal Perlindungan Laut – Berbasis Masyarakat Di Kabupaten Administrasi Kepulauan Seribu, Dki Jakarta. *J. Sosek KP* 8 (2) 201-216.
4. Harahab N. and Graziano R. 2011. Analisis Indikator Utama Pengelolaan Hutan Mangrove Berbasis Masyarakat Di Desa Curahsawo, Kecamatan Gending, Kabupaten Probolinggo. *J.Sosek KP* 6 (1) 29-37.
5. Kariada N. and Andin I. 2014. Peranan Mangrove Sebagai Biofilter Pencemaran Air Wilayah Tambak Bandeng Tapak, Semarang. *J. Manusia and Lingkungan* 21 (2) 188-194.
6. Karyasa I.N.R., Alit K.I.M.S., and Mayun N. 2014. Analisis Faktor-Faktor Yang Mempengaruhi Gagal Lelang Pengadaan Barang and Jasa Pemerintah Secara Elektronik (E-Procurement) Di Kabupaten Badung. *J.Spektran* 2(1) 19-27.
7. Muryani C., Ahmad, Setya N and Trisni U. 2011. Model Pemberdayaan Masyarakat Dalam Pengelolaan and Pelestarian Hutan Mangrove Di Pantai Pasuruan Jawa Timur. *J. Manusia and Lingkungan* 18 (2) 75 -84.
8. Melati and Basu. 2011. Pengaruh Persepsi Tentang Advertorial Produk Kesehatan Di Koran Pada Sikap Konsumen. *J. Manajemen and Pelayanan Farmasi* 1 (2) 111-117.
9. Salosa S.T., San A. A., Priyono S. and Ris H. P. 2014. Hutan Dalam Kehidupan Masyarakat Hatam Di Lingkungan Cagar Alam Pegunungan Arfak. *J. Manusia and Lingkungan* 21 (3) 349-355.
10. Suliyanto. 2005. *Analisis Data Dalam Aplikasi Pemasaran*. Ghalia Indonesia. Bogor.
11. Sugiyono. 2009. *Metode Penelitian Kuantitatif, Kualitatif and R & D*. Alfabeta. Bandung.
12. Saparianto. 2007. *Pendayagunaan Ekosistem Mangrove Dahara Prize*. Semarang.
13. Suzana B.O., Jean T., Rine K. Fandi A. Valuasi Ekonomi Sumberdaya Hutan Mangrove Di Desa Palaes Kecamatan Likupang Barat Kabupaten Minahasa Utara. *J. ASE* 7 (2) 29 – 38.
14. Yusuf M. 2014. *Metode Penelitian Kuantitatif, Kualitatif & Gabungan*. Prenadamedia Group. Jakarta
15. Yunitasari C. and Edwin J. 2013. Analisa Faktor-Faktor Pembentuk Personal Branding dari C.Y.N. *Jurnal Manajemen Pemasaran Petra* 1 (1) 1-8.

DOI 10.18551/rjoas.2019-02.06

## THE ROLE OF PURCHASE INTENTION ON MEDIATING THE RELATIONSHIP OF E-WOM AND E-WOM CREDIBILITY TO PURCHASE DECISION

Arta I Gede Subana\*, Yasa Ni Nyoman Kerti

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

\*E-mail: [subanaarta@gmail.com](mailto:subanaarta@gmail.com)

### ABSTRACT

The aim of this study is explaining the impact of E-WOM (e-WOM) and e-WOM credibility towards purchase decision, with purchase intention as a mediator variable. There is a total response of 115 people collected by using purposive sampling technique. Furthermore, the selected respondents have the following criteria: (a) actively using social media, such as Facebook and Instagram; (b) read the testimonials, photos, and location of a restaurant on social media; (c) have experienced the previously described restaurant; and (d) have graduated from high school. The hypothesis in this study was prepared with Generalized Structured Component Analysis (GeSCA) technique. From the research that has been carried out, it is possible to conclude that: (a) e-WOM has positive and significant influence towards e-WOM credibility; (b) e-WOM encourages the purchase intention; (c) e-WOM has no direct positive and significant effect towards restaurant customers' purchase decision in Bali, but it affects indirectly through their purchase intention; (d) e-WOM credibility has positive and significant influence towards purchase intention; (e) e-WOM credibility has positive and significant influence towards purchase decision, directly and indirectly; and (f) purchase intention has a positive relationship with purchase decision.

### KEY WORDS

E-WOM, e-WOM credibility, purchase intention, purchase decision.

Internet users in Indonesia make up for information updates as the main reason for their use, which are 31.3 million users. The same data also found that 97.4% or 129.2 million internet users were social media users. There are lots of social media in the world, starting from Facebook, Twitter, Instagram, and many more that already exist and will still develop. The development of social media certainly can be used as one of the promotional media for a business, such as a restaurant business for example. For social media content that is most frequently visited by Indonesian internet users, it is still led by Facebook with 71.6 million users or 54%, then Instagram with 19.9 million users or 15%.

Seeing the large number of social media users, it is possible for someone to get information, both positive information and negative information from social media. Through this social media, information can spread rapidly and widely repeatedly from one user to another social media user, which might unwittingly trigger the emergence of E-WOM (E-WOM). Through this social media, customers can express what they feel and what they want. Potential customers can read this and allow for a purchase intention to arise from what the customer previously felt.

Companies will increasingly benefit from this situation. Companies can take advantage of interactive communication between customers. They can build networks to create E-WOM that is good about their product offerings. Today many restaurants in Bali are starting to grow and benefit from this situation. Customers begin to share their experiences with the restaurant often in the form of writing and photos that they upload on their personal social media such as using social media Facebook and Instagram. Customers share their impressions of the convenience of the place, the variety of menus and taste of the restaurant, and often also share the location of restaurants. So that new potential customers can indirectly experience the restaurant and allow it to arise to try to experience directly at the restaurant.

Purchase intention is a process of deciding whether to use or not a product. According to Murwatingsih and Apriliani (2013) purchase intention is generally used to understand the purpose of consumers in making a purchase decision. Purchase intention arises after an alternative evaluation process and in the evaluation process, someone will make a series of choices regarding the product to be purchased on the basis of brand and intention. The customer evaluation process starts when they see someone else's writing or photo about a restaurant. Prospective customers will sort out a lot of the information they get through other people's social media and adjust which restaurant is according to their intentions based on the information they get.

Schiffman and Kanuk (2009) state that purchase decisions are a process of determining choices from two or more alternative choices of purchase decisions. From the statement, it can be interpreted that someone or prospective customer must get a lot of information choices through social media which will cause purchase intention towards a restaurant product which will then continue to be the restaurant product purchase decision.

Communication Word of mouth (WOM) is informal communication between customers about a product or service that is considered the most important information in a purchase because it has a strong impact on customer behavior Jeong et al. (2011). Word of mouth plays a big role in its influence on consumer purchase decisions in the formation of consumer behavior patterns (Jalilvand, 2012). With the advancement of internet technology, web-based WOM (E-WOM) has expanded widely, where unlike traditional WOM, E-WOM can spread faster and wider and have a stronger impact.

In E-WOM, source credibility can be considered an important factor in decision makers (Park and Lee, 2009). In one study, Lopez and Sicilia (2014) emphasized that expertise and trust are most often used to test the credibility of sources. when customers read product information, reviews, and recommendations, they must rely on their own expertise and involvement to determine E-WOM credibility. E-WOM credibility is the extent to which customers feel that product information, reviews, or recommendations are factual, correct, or reliable (Cheung et al., 2009).

Seeing the reality that exists in the community in Bali, it will be tested whether E-WOM influences the purchase intention of someone who has seen E-WOM on social media, and later n whether this purchase intention will change into a purchase decision. E-WOM is also linked to E-WOM credibility, which will then be tested for its influence on purchase intentions and purchased ecisions. This study will also examine whether there is a mediating role of purchase intention between E-WOM and purchase decisions, and between E-WOM credibility and purchase decisions and the mediating role of E-WOM credibility between E-WOM and purchase decisions. This phenomenon is raised because it needs to be measured whether E-WOM can be used as a good marketing medium for restaurants in Bali. As is known, marketing is something that often burdens a company's budget because of the high cost. But with E-WOM in place, there will be an increase in budget effectiveness in the company. In addition to the cost problem, in previous studies there were also positive and negative results between E-WOM's relationship with the intention to buy. One negative result is in the study of Shahrinaz et al., (2016) who conducted research in Sarawak, obtaining a negative relationship between E-WOM and purchase intention for consumers of smart phones. In this study also carried out testing with integrated variables which are the renewability of this study.

## LITERATURE REVIEW

*The Effect of E-WOM on E-WOM Credibility.* Hennig-Thurau et al. (2004) state that E-WOM is unsolicited, that is, it can be sent to those who are not in need of any information about a product or service and do not necessarily want to receive such information, and E-WOM allows communication without face to face between the two parties. In E-WOM, source credibility can be considered an important factor in decision makers (Park and Lee 2009). In one study, Lopez and Sicilia (2014) emphasized that expertise and trust are most often used to test the credibility of sources. Doh and Hwang (2009) who investigated how consumers

evaluate E-WOM messages, some negative messages can help in promoting a positive attitude towards the website and the credibility of E-WOM messages.

H1: E-WOM has a positive and significant effect on E-WOM credibility.

*The Effect of E-WOM on purchase intentions.* Elseidi et al. (2016) who conducted research in Egypt, found that there was a positive influence from E-WOM on purchase intentions on smartphone consumers. Hennig-Thurau et al. (2004) state that E-WOM is unsolicited, that is, it can be sent to those who are not in need of any information about a product or service and do not necessarily want to receive such information, and E-WOM allows communication without face to face between the two parties. The study conducted by Elseidi et al. (2016); Jang (2011) and Hennig-Thurau et al. (2004) stated that E-WOM had a positive and significant effect on purchase intention.

H2: E-WOM has a positive and significant effect on purchase intention.

*The Effect of E-WOM on purchase decisions.* Senecal and Nantel (2004) examined how E-WOM influences product choices using experimental studies regarding the use of online recommendation sources by consumers. Some related studies also show that E-WOM is an important means by which consumers can obtain information about the quality of products or services (Chevalier and Mayzlin, 2006). In addition, this kind of message can effectively reduce the risks and uncertainties that are recognized by consumers when buying products or services, so that their purchase intentions and decision making can be more influenced (Chatterjee, 2001).

H3: E-WOM has a positive and significant effect on purchase decisions.

*The Effect of E-WOM credibility on purchase intentions.* Sharif et al. (2016) who conducted a study of the effect of E-WOM credibility on purchase decisions found positive and significant results in the study. In one study, Lopez and Sicilia (2014) emphasized that expertise and trust are most often used to test the credibility of sources. Doh and Hwang (2009) who investigated how consumers evaluate E-WOM messages, some negative messages can help in promoting a positive attitude towards the website and the credibility of E-WOM messages. This might be quite reasonable, because some consumers might suspect the credibility of a website or a collection of several E-WOM messages if they barely find a negative message. Engagement is associated with motivation to process information.

H4: E-WOM credibility has a positive and significant effect on purchase intention.

*The Effect of E-WOM credibility on purchase decisions.* E-WOM acceptance is based on social norms or opinions in the virtual community. Readers build E-WOM credibility at the beginning of the evaluation process (Wathen and Burkell, 2002). If the reader determines that reviews or opinions can be trusted, they are more confident to receive E-WOM contained in reviews or opinions (Sussman and Siegel, 2003). They are also more confident to use E-WOM to make purchase decisions.

H5: E-WOM credibility has a positive and significant effect on purchase decisions.

*The Effect of purchase intentions on purchase decisions.* Khandelwal et al. (2013) who conducted research in India on online travel consumers found that there was a significant effect of purchase intention on purchase decisions. Likewise, the study conducted by Mramba (2015); Prasad et al. (2014) and Simpson & Mortimore (2015) state that purchase intention has a positive and significant effect on purchase decisions.

H6: Purchase intention has a positive and significant effect on purchase decisions.

*The role of purchase intention as a mediating E-WOM and purchase decisions.* Jang (2011) in research focusing on restaurant customers who spread E-WOM positively, there were three dimensions of E-WOM, namely concern for others, expressing positive feelings, and helping the company. Whereas Hennig-Thurau et al. (2004) found eight dimensions in E-WOM, namely platform assistance, Venting negative feelings, concern for the others, extraversion / positive self-enhancement, social benefits, economic incentives, helping the company, and advice seeking. In this research, it will only focus on three dimensions, namely economic incentives, expressing positive feeling, and concern for the others.

Consumer purchase intention can also be caused by external influences, awareness of needs, product introduction, and alternative evaluations of Schiffman & Kanuk (2007). Super and Crities (1998) state that intention is something personal and related to attitude. Someone

who is interested in something will have the urge to take a series of actions to get it. Purchase decisions are actions of consumers to buy a product. Purchase decisions are a process of determining choices from two or more alternative choices (Schiffman and Kanuk, 2009). The study conducted by Jang (2011) and Hennig-Thurau et al. (2004) stated that economic incentives, positive expression of feeling, concern for the others had a positive and significant effect on purchase intention. The study conducted by Kassim and Abdullah (2010) states that there is a positive and significant influence on purchase decisions. Likewise, the study conducted by Mramba (2015); Prasad et al. (2014) and Simpson and Mortimore (2015) state that purchase intention has a positive and significant effect on purchase decisions.

H7: Purchase intention acts as a mediating variable between E-WOM and purchase decisions.

*The role of purchase intention as a mediating variable between E-WOM credibility and purchase decisions.* Consumer purchase intention can be caused by external influences, awareness of needs, product introduction, and alternative evaluations of Schiffman and Kanuk (2007). According to Murwatingsih and Apriliani (2013) purchase intention is generally used to understand the purpose of consumers in making a purchase decision. Purchase decisions are actions of consumers to buy a product. Purchase decisions are a process of determining choices from two or more alternative choices (Schiffman and Kanuk, 2009). In E-WOM, source credibility can be considered an important factor in decision makers (Park and Lee 2009). In one study, Lopez and Sicilia (2014) emphasized that expertise and trust are most often used to test the credibility of sources. Based on the previous description, the following hypotheses can be arranged:

H8: Purchase intention acts as a mediating variable between E-WOM credibility and purchase decisions

*The role of E-WOM credibility as a mediating variable between E-WOM and purchase decisions.* Senecal and Nantel (2004) examined how E-WOM influences product choices using experimental studies regarding the use of online recommendation sources by consumers. In E-WOM, source credibility can be considered an important factor in decision makers (Park and Lee 2009). In one study, Lopez and Sicilia (2014) emphasized that expertise and trust are most often used to test the credibility of sources. Some related studies also show that E-WOM is an important means by which consumers can obtain information about the quality of products or services (Chevalier & Mayzlin, 2006).

H8: E-WOM credibility acts as a mediating variable between E-WOM and purchase decisions.

## METHODS OF RESEARCH

*Population and Samples.* The population in this study is all restaurant customers in Bali who are actively using social media that is not known in exact numbers. Samples in this study were determined by non probability sampling methods. In this study there were 21 indicators, so that the good sample size range was 5-10 times the number of samples which was  $105 \leq n \leq 210$ . Based on that range, by considering the available resources, the sample size was determined in 115 people.

*Data collection technique.* In this study, data collection used a questionnaire, namely data collection techniques carried out with a questionnaire or a list of written statements distributed to all respondents.

*Data analysis technique.* This study will use the GeSCA data analysis method. The use of GeSCA as an analytical tool is as a renewal in this study, besides that the GeSCA analysis tool also facilitates reading the results.

## RESULTS OF STUDY

Based on the estimated model value that has been formed from the results of the analysis, it can be seen that the E-WOM and E-WOM Credibility variables play a role in

influencing purchase intention so that restaurants that have high E-WOM and E-WOM credibility can effect consumers in making purchase decisions.

The estimate value and standard error (SE) of E-WOM variables are 0.576 and 0.100 with a critical point value of 5.79, which is significant at the 95 percent confidence level. Thus H<sub>0</sub> is rejected. This means that E-WOM has a positive and significant effect on E-WOM credibility. This is consistent with the research of Lopez and Sicilia (2014) and Sharif et al. (2016) who found a positive correlation between E-WOM and E-WOM Credibility.

The estimate value and standard error (SE) of E-WOM variables are 0.447 and 0.085 with a critical point value of 5.23, which is significant at the 95 percent confidence level. Thus H<sub>0</sub> is rejected. Means E-WOM has a positive and significant effect on Purchase Intentions. This is consistent with research from Hennig-Thurau et al. (2004) and Elseidi & Dina (2016).

The estimate value and standard error (SE) of E-WOM variables are 0.168 and 0.087 with the critical point value of 1.94, not significant at the 95 percent confidence level. Thus H<sub>0</sub> fails to be rejected. Means that E-WOM has no significant effect on Purchase Decisions. This is contrary to the results of research from Matute Et al. (2016) and research from Hafsa et al. (2017) in his research entitled impact of social networking sites on consumer purchase intention: an analysis of restaurants in karachi, where they found that E-WOM had a significant effect on purchase decisions.

Estimated values and standard error (SE) of E-WOM Credibility variables are 0.484 and 0.092 with a critical point value of 5.29, significant at the 95 percent confidence level. Thus H<sub>0</sub> is rejected. This means that E-WOM Credibility has a positive and significant effect on purchase intention. The better E-WOM Credibility, the greater the purchase intention of the customer is to choose the restaurant. This is consistent with research from Sharif et al. (2016) as well as research by Doh and Hwang (2009) who investigated how consumers test and evaluate source credibility.

The estimate value and standard error (SE) of E-WOM Credibility variables are 0.393 and 0.106 with a critical point value of 3.72, which is significant at the 95 percent confidence level. Thus H<sub>0</sub> is rejected. It means that E-WOM Credibility has a positive and significant effect on the Purchase Decision. The better the E-WOM Credibility, the greater the customer's decision to choose the restaurant. This is consistent with research from Sharif et al. (2016) and research from Park and Lee (2009) who consider source credibility as an important factor in decision making.

The estimate value and standard error (SE) of purchase intention variables are 0.332 and 0.111 with a critical point value of 3.00, significant at the 95 percent confidence level. Thus H<sub>0</sub> is rejected. It means that purchase intention has a positive and significant effect on the Purchase Decision. The higher the purchase intention, the greater the customer's decision to choose the restaurant. This is consistent with research from Simpson and Mortimore (2015) and Matute et al. (2016) which states that purchase intention has a positive and significant effect on purchase decisions.

Based on the results of data analysis it was found that intention to mediate E-WOM's influence on purchasing decisions. This is indicated by the value of Z is 5.696. A value of 5.696 is greater than the critical value of 1.96. This means buying intention acts as a variable that mediates the relationship between E-WOM and purchasing decisions. This result is also in accordance with the research conducted by Sharif et al. (2016) and Hennig-Thurau et al. (2004) entitled Electronic Word-of-mouth via consumer opinion platforms.

Based on the results of data analysis, it was found that intention to mediate the effect of E-WOM credibility on purchasing decisions. This is indicated by the value of Z is 4.175. The value of 4.175 is greater than the critical value of 1.96. This means that purchase intention acts as a variable that mediates the relationship between E-WOM credibility and purchasing decisions. This result is also in accordance with the research conducted by Lopez and Sicilia (2014) and the research conducted by Park and Lee (2009).

Based on the results of data analysis, it was found that E-WOM Credibility can mediate the effect of E-WOM on purchasing decisions. This is indicated by the value of Z is 5.041. The value of 5.041 is greater than the critical value of 1.96. This means that E-WOM credibility acts as a variable that mediates the relationship between E-WOM and purchasing

decisions. This result is also in accordance with the research conducted by Park and Lee (2009) and Lopez and Sicilia (2014) which together emphasize the credibility of the source.

### **CONCLUSION**

E-WOM has a positive and significant effect on E-WOM credibility for restaurant customers in Bali. E-WOM has a positive and significant influence on buying intention for restaurant customers in Bali. E-WOM has no significant effect on purchasing decisions on restaurant customers in Bali. E-WOM Credibility has a positive and significant effect on buying intention for restaurant customers in Bali. E-WOM Credibility has a positive and significant effect on purchasing decisions on restaurant customers in Bali. Buying intention has a positive and significant effect on purchasing decisions on restaurant customers in Bali. Buying intention acts as a variable that mediates fully or perfectly the relationship between E-WOM and purchasing decisions at restaurant customers in Bali. Buy intention acts as a variable that mediates the relationship between E-WOM credibility and purchasing decisions at restaurant customers in Bali. E-WOM credibility acts as a variable that mediates relationships between E-WOM and purchasing decisions for restaurant customers in Bali.

### **SUGGESTIONS**

The suggestion that can be conveyed in this research is that restaurant is very important to pay attention to E-WOM credibility because it plays a very important role in determining purchasing decisions. From the results of the study, buyers were very concerned about the taste of the food served, as well as the comfort of the restaurant. If the restaurant succeeds in providing a good experience of this, it will also produce good E-WOM credibility so that it can increase customer confidence in deciding to shop at the restaurant so that it will have an impact on sales volume. It should also be noted by restaurant owners that interaction with social media accounts gets little results in this study, so that if it is successfully upgraded, it might provide better results for restaurants.

Future research can do research by dividing the respondent's area according to the regencies / cities in Bali. Subsequent research can also narrow down the types of social media used as indicators of research.

### **REFERENCES**

1. Chatterjee, P. 2001. Online reviews: do consumers use them? *Advances in Consumer Research*, Vol. 28 No. 1, pp. 129-33.
2. Cheung, M., Luo, C., Sia, C. and Chen, H. 2009. Credibility of electronic word-of-mouth: Informational and normative determinants of on-line consumer recommendations. *International Journal of Electronic Commerce*, Vol. 13, No. 4, pp. 9-38.
3. Chevalier, J.A. and Mayzlin, D. 2006. The effect of word of mouth on sales: online book reviews. *Journal of Marketing Research*, Vol. 43 No. 3, pp. 345-54.
4. Doh S.-J. and Hwang, J.-S. 2009. How Consumers Evaluate E-WOM (Electronic Word-of-Mouth) Messages. *CyberPsychology & Behavior*. Vol. 12, No. 2, pp. 193-197
5. Elseidi, R. I. and Dina, E. 2016. E-WOM effects on consumers' brand attitudes, brand image and purchase intention: an empirical study in Egypt. *The Business & Management Review*. London. Vol. 7, Iss. 5, pp. 268-276
6. Hennig-Thurau, T., Gwinner, K.P., Walsh, G. and Gremler, D.D. 2004. Electronic word-of-mouth via Consumer Opinion Platforms: What Motivates Consumers to Articulate Themselves on the Internet. *Journal of Interactive Marketing*. Vol. 18, No. 1, pp. 38-52.
7. Kassim, N. and Abdullah, N. A. 2010. The Effect of Perceived Service Quality Dimensions on Customer Satisfaction, Trust, and Loyalty in E-Commerce Settings, *Asia Pacific Journal of Marketing and Logistics*, Vol. 22 No. 3, pp. 351-371.
8. Khandelwal, U., Bajpai, N. and Sharma, J. P. 2013. Purchase Intention of Indian Consumers on Online Travel Buying Decision: A Comparative Study on Metro and Non-

- Metro City. *International Journal of Hospitality and Tourism Systems*. Vol. 6, Iss. 1, pp 13-22.
9. Lopez, M. and Sicilia, M. 2014. Determinations of E-WOM Influence: The Role of Consumers' Internet Experience. *Journal of Theoretical and Applied Electronic Commerce Research*, Vol. 9, No. 1, pp. 28-43. Mangold, Glynn. 1999. *Word of Mouth Communication in the Service Marketplace*. The Journal of Services Marketing. Santa Barbara.
  10. Mramba, N. 2015. Does the Brand Name Matter to Purchase Decision? The Case of Mobile Phone. *European Journal of Business and Management*, Vol.7, No.4, pp.1905-2222.
  11. Murwatiningsih dan Apriliani, E. P. 2013. Pengaruh Resiko dan Harga Terhadap Keputusan Pembelian Melalui Kepercayaan Konsumen. *Jurnal Dinamika Manajemen*.
  12. Park, C. and Lee, T. M. 2009. Information Direction, Website Reputation and E-WOM Effect: A Moderating Role of Product Type, *Journal of Business Research*, Vol. 62, pp. 61-67
  13. Prasad, Shantanu., Totala, N.K., & Gupta, I.C. 2014. Social Media and Customer Purchase Decision. *American International Journal of Research in Humanities, Arts and Social Sciences*, 2328-3090. <http://www.iasir.net>.
  14. Schiffman, L. And Kanuk, L. L. 2009. *Consumer Behavior*, Edisi Ketujuh. Patience Hall International, inc. New Jersey.
  15. Senecal, S. and Nantel, J. 2004. The influence of online product recommendations on consumers' online choices. *Journal of Retailing*. Vol. 80 No. 2, pp. 159-69.
  16. Shahrinaz, I. 2016. Relationship and impact of e-WOM and brand image towards purchase intention of smartphone? *Journal of Scientific Research and Development* 3 (5): 117-124.
  17. Sharif, M. A., Ahmad, W. and Ahmad, A. 2016. E-WOM: investigating the influence of electronic message source credibility, message appeal and brand equity on consumer purchase intention. *City University Research Journal*, Vol. 6, Iss. 1, 151-165.
  18. Simpson, J. and Mortimore, H. 2015. The Influence of direct mail marketing on buyer purchasing decision: A qualitative analysis of perception by age group. *JRSBM*: 1/1 pp 119-142.
  19. Sussman, S. W. and Siegel, W. S. 2003. Informational influence in organizations: An integrated approach to knowledge adoption inform. *Systems Research*, Vol. 14, No. 1, pp. 47-65
  20. Wathen, C. N. and Burkell, J. 2002. Believe it or not: Factors influencing credibility on the Web. *Journal of the American Society for Information Science and Technology*, Vol. 53, No. 2, pp. 134-144.

DOI 10.18551/rjoas.2019-02.07

## CONSUMPTION PRATICE IN THE BAUDRILLARD PERSPECTIVE

Purwanti Silviana<sup>1\*</sup>, Mas'ud Mustain<sup>2</sup>

<sup>1</sup>Student, Postgraduate Program, University of Airlangga & Lecturer, Faculty of Social and Political Science, University of Mulawarman, Samarinda, Indonesia

<sup>2</sup>Head of Study Program, Postgraduate Program, University of Airlangga, Surabaya, Indonesia

\*E-mail: [silviunmul123@gmail.com](mailto:silviunmul123@gmail.com)

### ABSTRACT

This research is a review of consumption practice with the underlying assumption of advanced post-industrial capitalist or postmodern as the consumptive society. This research tries to review the consumption practice and pattern of material goods or symbolic activity. Consumption in this research is the whole type of social events done by everyone so that the operation can be used to characterize and recognize him. The effort to acquire the knowledge on consumption practice of the modern society also includes the debate on a more philosophical epistemological aspect of the 'modernity' or even 'postmodernity' terminologies. Consumption, in Baudrillard, is radicalized into the consumption of sign. It means that the consumption society is no longer bound to a morality and habit they once held, but they see the existence from the aspect of how many signs they can consume. In this kind of society, consumption is no longer seen as an activity to consume the object but as a systematic action to manipulate the object. The consumption referred to in this study is no longer of use (usability) or exchange value but more about symbolic value. Consumption rationality diverted its path as an effort to fulfill desire instead of needs. This research also uses the qualitative approach of phenomenology. The subject of this study is the members of Ganbattearisangroup (regular revolving savings social gathering) in Samarinda consist of 10 upper-middle-class women who work as entrepreneur and professional. This research uses an approach in the cultural perspective as a way of life in reviewing a problem.

### KEY WORDS

Arisan, Baudrillard, consumption, qualitative approach, culture, consume.

This research is a review of consumption practice with the underlying assumption of advanced post-industrial capitalist or postmodern as the consumptive society (Featherstone, 2001; Ritzer, 2012). The term 'consumptive society' refers to the condition where the practice has, uses, and spends the value of a product done by human become a significant activity with a particular socio-cultural meaning. Referring to Baudrillard in his book titled *Consumption Society* (2004) one of the phenomena in the consumption society that what we are consuming is a sign (message, image) rather than a commodity. It means that we need to "read" the consumption system to know what to consume. Furthermore, we all know that the "code" of the meaning of consumption of a commodity over another. This research turns arisan of women in the city in Samarinda, as the subject of the study.

Referring to the thought of Mark Patterson (2006) on consumption in everyday life, consumption is not a new thing, but the birth of a consumer society is a matter of debate. How about the time when Queen Elizabeth who highlighted the nobility status of the fashionable and new dress. The consumer society appears in the modern sense; there are two general things to note. First, the emergence of the consumer society occurs in all phases of capitalism, even in the early stage. Second, every time the 'modern' consumption indeed happens, whether in the sixteenth, seventeenth, eighteenth or nineteenth centuries. We assume that the birth of consumer society is destroying workers and what is being produced. In short, the emergence of consumer society is often seen as something negative, unnatural and inharmonious, causing damage to the relativity and injecting alienation between producer and product.

In this study, the researcher tries to review the consumption practice and pattern of material goods or symbolic activity. Consumption in this research is the whole type of social events done by everyone so that the action can be used to characterize and recognize him. The activity here includes the practice of spending the time in his way so that it has its meaning for him. The object of the consumption as a symbolic form indicating “who I am” or self-status found by consuming a product where its outer image can elevate his identity.

This topic is considered necessary because the practice of consumption is not only happening in big cities like Jakarta, Surabaya, and others, which is often referred to as the ‘orientation’ of lifestyle. This phenomenon also occurs in a small town such as Samarinda which becomes the location of the research in this paper. It can be identified with the development of news in the media social about the lifestyle of the local community. As reported by Tempo online, a woman named Amelia Masniari or Miss Jinjing claims herself as the lifestyle expert. She often tells about the lifestyle of new rich (OKB) in the inland of Indonesia and these people do not live in Jakarta or Java Island, but they live in inland, in a new regency and city of Indonesia.

“...there are a lot of new rich come from rural areas of Indonesia. At first, she was surprised by the request of 2,000 books with the price of Rp. 178 thousand per-exemplar. The result of multiplying the price of the book and the number of requests is quite fantastic. And what makes it more fantastic is that the consumer paid it in cash. What’s more confusing is that the delivery of the books she wrote addressed to rural areas with the uncommon names such as Nunukan, Pulau Rote, Kutai, Luwuk or other inlands with mining, wood and others type of business. Some of the inhabitants own luxury cars such as Jaguar, Lamborghini, and others, although they live in rural area. Furthermore, some houses have its private jet area. Most of them are low profile; they don’t act like celebrity or socialite who likes to show off in media social. They don’t have the urge to be popular because of the money, and the reason is that in the social circle they are already popular. Miss Jinjing also tells that there are a lot of new rich from inland who like to bring cash both in rupiah and dollar to do any transaction. Not to mention to pay branded bag, luxury car, diamond jewelry, and even property such as home and apartment. According to the Miss Jinjing community, they (new rich in inland) buy property and land in Jakarta with corrupting price because they are bold enough to pay a higher price and in cash comparing to rich people in Jakarta and Java Island who mostly pay through credit. Another fact is that if the former new rich usually come to community health center, most of them now like to fly to Singapore, Australia, China and Europe even when they only have a cough. What’s more interesting from this phenomenon is that the number of the world-class diamond shop such as Frank & Co, Felice, D&C trying to sneak in the rural areas, to come to the consumer of new rich and sell their diamonds there. Most of them are selling very well like selling hotcakes, and most of the costumers pay in cash with rupiah or dollar. The presence of outlet in Jakarta is just a storefront. The reason is that most of their actual consumers are the new rich living in the inland. Miss Jinjing also wrote about several new rich communities who live in inland and owning Lexus, Land Cruiser, Jaguar and other luxury cars and even jet. However, they chose these type of cars not to show off but to support their business, so it has functional nature instead of showing off. The reason is that they don’t need to show off to others, they have unlimited money and wealth...” (Tempo, 06/08/2014).

The consumption value practice of similar marks of the above exposure is also indicated in the Ganbattearisan group, the arisan group that the participants are the women of the upper middle class and the research location in this study is in the city of Samarinda. In Indonesia, Arisan is like a social gathering, usually done by housewives or female members of a community. Arisan becomes the medium for women to gather, share stories and as means to “save money” in different ways. Arisan is usually formed by profession, family relationship, age hobby, and others. Thus, in connection with this study, the contradictive development patterns fill in both social and cultural change and exhibit powerful influencers with so-called global models of society's life and become the global culture, to the point in which they accept the way of life, the lifestyle and life perspective. On the other hand,

it has threatened the existence of various forms of traditional inheritance, customs, values, identities and symbols derived from local culture.

The act of determining Samarinda as the research location cannot be separated from the fact that Samarinda is the most expensive city in East Kalimantan and it's the ninth major city in Indonesia. It is not surprising because the consumption pattern of community in Rural Area is quite high. Starting from the seafood, new gadget to luxury car become the hunting objects of the upper-middle-class society.

It can be interpreted that the consumption community puts meaning in themselves by differentiating its consumption activity with others. Ironically, the purpose of the sign consumed by the individual is not derived from the value of the commodity he or she has consumed, but through its sign system and develop a culture. In this study, the researcher wants to know what kind of identity presented by Ganbattearisan group to show its existence and how the consumption practice and lifestyle of Ganbattearisan group in the Baudrillard's perspective.

The result of the early observation of the material object in this research is that the arisan group in Samarinda named Ganbatte referring to Soekanto (1987) that this group belongs to the upper-middle-class consisting of entrepreneur and professional.

The concept model used as the subject of this study is the concept of arisan utilized for 'identification' of this group. The members of this arisan are hard working women, thinker with good social interaction skills. This arisan started since January 2012, initiated by Dr. ME, Assistant I Provincial Government, the initial members amounted to 10 people, and now they have 15 members. However, they have a different concept of arisan, unlike a collection of beautiful women who like to lend money from their husband. This arisan consist of hard-working women, thinker with good social interaction skills. They also call it as Ganbattearisan group. Japanese school teachers often speak this word by the end of the lesson. The word "GANBATTE" means "SPIRIT," although most of Indonesian often use "CAYO!!!" Ganbatte can be translated to "Never Give Up," and it has profound meaning. Spirit is a picture where human still have a life expectancy, hope to struggle, to survive in daily life. Japanese school teachers often say it to encourage their students to keep studying and never give. This is in line with the spirit of the members of Ganbattearisan consisting of women with full of enthusiasm in each of their field. This social gathering can only be held once a month because most of the members are very busy. The members will pick the date between 10 and 11 every month depending on the availability of the members. They always hold this social gathering in Boncafe, Samarinda to honor the social interaction in arisan. Also, they will have specific dress code every month according to the agreement.

One of the arisan groups that will be analyzed in this research is Ganbattearisan group. For the members of this group, fashion is one of the ways to show their constructed class of identity and fashion can also have political sense. It means that one of the ways used to show positions and class of identities. In their opinion, fashion cannot be separated from the development of history of human life and culture. The importance of fashion in social context becomes more explicit about the status itself. Besides, clothing is an expression of personal identity, thus "selecting clothes either in-store or at home, means defining and describing ourselves" (Lurie, 1992: 5). For example, the recent event in Samarinda titled "Festival KemilauSarungSamarinda" where Ganbatte became the only arisan group to be awarded as a group that has helped to preserve the Samarinda culture.

The upper class used to consume an excessive amount to distinguish themselves from the lower levels of the social hierarchy. Meanwhile, the lower classes try to imitate the upper-class lifestyle. However, when the lower classes manage to emulate the objects of upper-class status, then those who are in upper class will try to remove those objects and seek for new objects to distinguish themselves from the lower classes. (Veblen in Ritzer, 2014)

The problem is that what kind of identity expected by the Ganbattearisan group to show its existence and how the consumption practice and lifestyle of Ganbattearisan group in the Baudrillard's perspective. Piliang (2004:150) recommends that the use of Jean Baudrillard's perspective to understand consumption in relation to the consumption practice and lifestyle will form individual or group identity that always disseminate and create signs to be

consumed by the consumption society so that it can no longer distinguish between truth and fake or issue and reality. According to Baudrillard, consumption is radicalized into consumption of sign. This means that the consumption society is no longer bound to a morality and habit they once held, the community lives in new culture where they see the existence from the aspect how many signs they can consume. In this kind of society, consumption is no longer seen as an activity to consume the object but as systematic action to manipulate the object.

*Baudrillard's theory of the Consumption Society.* Baudrillard, argues that at this moment we have entered the life of postmodern and we are no longer in the era of existing modernity. This is marked by the concept of "simulation of society." The simulation process leads to simulacra. Simulacra can be interpreted as space where the simulation mechanism takes place. Referring to Baudrillard, there are three levels in the simulacra process (Baudrillard, 1983:54). The first simulacra that took place in the era of renaissance until the beginning of the industrial revolution. Simulacra in this stage are the representation of the natural relationship of various elements of life. Second, the simulacra that go along with the development of industrialization era. At this level, there has been a shift in the mechanism of representation due to the adverse impact of industrialization. The third stage, simulacra is born as a consequence of the development of science and information technology.

In term of simulation, humans inhabit a reality, where the difference between real and fantasy, between original and fake are very slim. These worlds can be illustrated as Disneyland, universal studio, China Town, Las Vegas and Beverly Hills. The world of simulation looks perfect through media information such as advertising, television, and film. The world of simulation can then be said to be no longer concerned with the reality or categories of truth, deceit, right, wrong, reference, representation, fact, image, production or reproduction merged into the chaos of sign. Besides, it cannot be separated from authentic and false. In the end, it becomes part of the reality which is lived by western society today. This unit is then called as simulacra by Baudrillard; it means a world constructed from the mixing of value, fact, sign, image, and code.

The Baudrillard's concept of simulation is about the creation of reality through the conceptual model or something related to "myth" which cannot be seen in reality. This model becomes the determinant factor of our perspective of reality. Everything that attracts people's attention – such as art, house, household needs and so on – are projected through various media with ideal models. Here, the boundary between simulation and reality mix up creating a hyperreality where real and imaginary become unclear.

In Ritzer (2003:164) Simulation is conceptually a creation of models of reality without the reference to reality. As well as hyperreality, Baudrillard views the era of simulation as part of series of evolving phase of images.

Simulation is different from the representation. Representation presupposes the existence of an unseparated relation between the sign and the reality of the reference. Representation is a symbol or sign that serves as the presentation of reality. Representation re-represents the reality in another appearance; meanwhile, the simulation represents another appearance as reality. It serves as a sign in the representation of an object, but it serves as an object in the simulation of the sign. In the simulation, there is no re-imagery of reality. Simulation forms a camouflage of reality to serve as a real-factual (Suyanto 2013: 208).

In the Consumer Society, Jean Baudrillard outlines how consumers buy into the "code" of signs rather than the meaning of the object itself. His analysis of the process by which the sign ceases pointing towards an object or signified which lies behind it, but rather to other signs which together constitute a cohesive yet chaotic "code", culminates in the "murder of reality". The rupture is so complete, the absence so resounding, and the code so "totalitarian" that Baudrillard speaks of the combined "violence of the image" and "implosion of meaning". Politics, religion, education, any human undertaking is swept up and absorbed by this process and ultimately neutralized; any liberating activity becomes complicit in the reproduction of its opposite. "The code is totalitarian; no one escapes it: our individual flights do not negate the fact that each day we participate in its collective elaboration".

The point is that Baudrillard tries to describe how consumer buying “code” from the signs and meaning of the object itself. Analysis of the process where the sign stops referring to the direction of the object or signified that lies behind it, but for other signs that mix and culminate in the “murder of reality” are very chaotic, invisible, and the code becomes very “totalitarian” and Baudrillard also talks about the merger of “violence on pictures” and “explosion of meaning”.

The above terminology refers to anything that is “beyond reality.” According to Baudrillard, hyperreality is the most noticeable feature of the simulacra. For example, deodorant advertisement used by a woman with smooth white skin in an airport. With her style, she raises her hand while looking for the intended passengers and all of the men’s eyes is directed at the woman’s armpit until they almost collide and fall. Another example is a refrigerator advertisement where the mother is busy looking for stuff in the small fridge that she did not realize that her toddler can already learn how to dribble a ball. Finally, the mother decides to replace the old refrigerator with a wider refrigerator of brand “A” so that she can have more time to watch her baby dribbling the ball. These examples are only to satisfy the hyperreality, namely the subject of the unreal of possible in everyday life. Roughly speaking, it can be said that hyperreality is the “lie” brought by simulacra.

Hyperreality creates a condition in which falsity mixed with the authenticity; the past mixes with the present; the fact is confused with the engineering; sign melts with the reality; lie unites with the truth/ the categories of truth, falsehood, originality, issue, reality seem to be no longer valid in such world.

“Baudrillard accepts the radical consequence of what he sees as immensely pervasive code in the late modern period. This code is clearly related to the computerization and digitization, also quite fundamental in physics, biology, and other natural sciences in which it allows for the perfect reproduction of an object or situation; this is why code can pass the real thing and open up the opportunity for the emergence of a reality called Baudrillard as hyperreality” (Lechte, 2001: 352).

The circumstance of hyperreality makes the modern society becomes excessive in the pattern of eating something with unclear essence. Most of these communities consume not because of their economic needs but because of the influence of simulation models that cause people’s lifestyle to be different. They become more concerned with their lifestyle and value they uphold. Rojek (2001) in his book titled *Celebrity* explains that one of the changes occur in celebrity and social media is that how capitalist market turns the celebrity to be a commodity due to the society’s desire as the consumer to know and ‘own’ everything about the celebrity. This fact is then used by the consumer society to justify whatever they do relating to the consumption practice.

Industry dominates many aspects of life; the industry produces a myriad of products ranging from primary, secondary, to tertiary. Accompanied by the power of semiotics and simulations, the distribution of product advertising becomes more vigorous, and the information technology that enables the entrepreneur to get information about what the society is currently facing, and the consumer receives information about the needs they want, but they do not need. The assumptions formed in human thought and this desire make the man cannot escape from this hyperreality state. There is a phenomenon revealed in this hyperreality term about the front stage and backstage that the individual plays a role in a drama where he plays two different properties that when met with the public will show the front step, but he will show his backstage if he is not in the public space. It can be explained that commodity products dominate the society or the individual can influence and to show the class and socioeconomic status. Today, it is considered necessary because social stratification is determined regarding each economic power.

The application of signs is always ambivalent, always functioning to avoid the dual meaning of a term: by raising other terms to bind through the signs (strength, reality, luck and so on) and to bring something to be denied and pushed back. We know that magical thinking in their myth is aimed at preventing change and history. Through the certain way, consumption that is generalized with pictures, actions, information also aim at removing the fact of signs, and to get rid of history in the signs of change and so on.

One of the examples is an Advertisement, according to Baudrillard, destructive advertisement intensity of meaning and without clear territory. The presence of advertisements in every media either in the intersection of roads, radio, television, newspapers, magazines, and others will form an awareness of information that only occurs only on the surface. However, today's society remains fascinated by its presence. The fascination presented is related to the consumption mark, without necessarily reflecting it.

Baudrillard, as it is known in various phenomena of life (media, commodity, fashion, sexuality, music, object, art) can be interpreted in term of semiotics as a condition of the dominance of sign in various aspects of reality. Sign dominates reality as it defines the reality itself. This means that the sign as the representation if reality precisely controls the reality and claims the truth in it based on its mechanism, which is independent of the truth of reality itself. Through the free play of signs, a painting of reality is built as if it is a truth where the real truth is hidden behind it. The very dominant of sign causes the reality as its reference to sink Piliang, 2004:76).

Even now consumption can no longer be based on material activities. As in Saussure's thought of the bond between marker and sign. The point at which these sign and marker escape causing the movement of meaning to become unlimited and wild. Everything in the world has the potential to stand on its own and can exchange meaning to each other. The originality of the material becomes something that no longer needs to be pursued. In Baudrillard's thought, consumption can occur on every sign. The abundance of existing signs has the potential to be interchangeable to be attributed to the abundance of commodities present in society. Consumption has nothing to do with what we perceive as a reality, but consumption relates to systematic and unlimited ownership as a sign of the object of consumption, and in a consumer society controlled by the code of human relations is transformed into the object, especially the consumption of the object. These objects have no meaning because of their usefulness and necessity but have their meaning as a sign rather than use value or exchange rate and consumption of the signs of this object using the language we understand. Commodities are purchased as a style of expression and sign, prestige, luxury, power and so on.

So, the value of exchange in the object of consumption is no longer valid. It turns into the symbolic exchange. Signs presented in an object exchanged with another thing closer to the environment of those who consume those objects. This can be seen when the competition that occurs among upper-middle-class society.

Jean Baudrillard says that the current social order has been based on the rationality of hedonism based on the satisfaction of need and pleasure through consumption. This means that the present life of the society who have been exposed to the influence of modernization and globalization that have created a hedonistic culture in which community will perform various ways and activities that aim to give priority to pleasure in their lives. People will work to find money that will be used to buy goods that they think can satisfy the needs.

Also, those who have money will spend it for useless stuff such as organizing a party with glamorous style, doing plastic surgery so that their face will look prettier and so on. Thus, the traditional life full of the teachings about piety, simplicity, altruistic, attitude and suppression of the desire or lust has undergone many shifts in life that is based on hedonistic morality that prioritizes on excessive consumption previously known to be spread by the mass media.

## **METHODS OF RESEARCH**

The type of the research used is qualitative research with phenomenology approach. The qualitative analysis tries to explain how people catch the meaning of an event and learn to see an event from the various perspectives (Neuman, 2000).

Phenomenology focuses its study on meaning-based society attached by the member.

There are three stages of reduction according to Husserl (Hendrik, 2010:119) namely:

- Phenomenological reduction is the screening of everyday experience of the world, to see the world in its original meaning. Or in other words, this decline is “self-cleaning” of all subjectivity that can interfere with the journey of reaching that reality;
- Eidetic reduction, according to him this stage is nothing but to discover the Eidos or the essence of hidden phenomena;
- The transcendental reduction is excluding and filtering out all observed phenomena from other phenomena. Transcendental reduction intends to find pure consciousness by eliminating empirical knowledge so that self-awareness is no longer grounded in connection with other events.

Phenomenology attempts to reveal the phenomenon as it is (to show itself) according to Ellson's self-explanation, "according to Elliston's explanation," phenomenology can mean: to let what shows itself to be seen through itself and within its boundaries, and it shows through itself "(Elliston, 1977: 279).

## RESULTS AND DISCUSSION

In this research, identity does not stand alone but an integrated form of personal identity. Furthermore, characters of individual are different from each other, the uniqueness that carried by each of it shows the integrity. There are no two individuals who have the same personality even if they are twins. It is found that identity presented by Ganbattearisan group to show its existence is with its fixed members of the upper middle class with the existence demonstrated in the public sphere and the uniqueness they possess, because the specificity arises from the existence of professionalism which necessarily gives space and time which cannot be seized by anyone, indeed, in fact, this arisan is quite famous in Samarinda because its members are women who are known in the public and mass media.

Simply search on google with keyword Ganbattearisan then several profiles about them will appear immediately. They are not only advertising through online media but also offline. This group consists of various races, ethnicities, religions, and ages from different fields and settings. This group simply looks very colorful. The conversation finally came true and formed a group called "Ganbatte." A short word that is nice to hear from the Japanese term of "GanbatteKudasai" which means "Spirited up." The reason is that they are the beginning of arisan group with characters in Samarinda and similar arisan groups formed with the diverse concept.

Dr. ME, Assistant to the Provincial Secretariat is the Captain of the arisangroupd. If someones wants to join this arisan group she will be selected by her because Dr. ME has the job to maintain the exclusivity of this arisan group. According to her "Selecting good and bad friend is like selecting perfume seller and a blacksmith. Perfume seller may give your more perfume, or you can buy it from her, even if you don't buy anything you will still smell good because of her. Meanwhile, a blacksmith can give your trouble of the sparks of fire, even so, you will still get the smell of the smoke which is unpleasant most of the time." Other members are NR, the Consultant/Advisor and professional/certified translator in English and Japanese. TP, the fashion designer. The Chairman of the Organization. drg. IC, Practitioner drg, former Princess beauty. MM, the owner of Salon Japan, wife of the police office, LS, the owner of House of Beauty and Boutique. EL, the owner of Hair and makeup salon. IP, the owner of the most prominent Phone store in Samarinda. FK, Personal Assistant and Secretary of the Governor. IS, a financial officer in the State Office of Samarinda. They are all professionals in their field, and for them, arisan is the way to gather and save money in another form.

According to Imey and other members, Ganbatte is not only a group of arisan but a group of women who are active, resilient and optimistic. These are the characteristics they are expecting as self-reflection. Although they come from a various background such as beauty expert, salon owner, doctor, businesswoman, lecturer, they feel connected to each other. The members think that it is fun to hang out with friends who are the expert in different fields so that they can exchange information with each other.

Ganbatte is not an ordinary group; this is not a group where most of the members like to gossip or talk about negative things of others. Ganbatte's activity is more than just that.

Also, the rule of this group is “not allowing its members to talk or gossip about other people, they are encouraged to come and bring happiness to others”.

As already stated, no one is exclusively in only one identity. Personal identities described throughout this paper are part of the group identity. Although everyone has his or her uniqueness in their personality, she or he will keep the interest between one and another in the group whether it be cultural, hobby, life plan, and other emotional boundaries.

Every personal identity is part of the group identity. Meanwhile the group identity is the sole single identity for an individual. There is an Indonesian proverb “When in Rome, do as the Romans do.”, this saying means that we should not only show someone’s culture, but we also have to adapt ourselves to the culture where we currently live in because the culture has its own identity.

Concerning the consumption and lifestyle practices of the Ganbattearisan group in Baudrillard’s perspective. The consumption practices done by the members are about the needs of food, fashion, electrical fashion, recreation as done by LS and IP one of the members of Ganbatte. Top class beauty treatment is done to support the appearance such as Botox Injection and increase the volume of eyelids because IP has slit eyes and she wanted to have eyelid. Some members also like to do Dental Veneer routine to boost their confidence when meeting the customers. Another case is the IS about fashion shopping; she loves to buy branded goods because she thinks that it is better to buy an expensive but durable product than purchasing cheap goods with low quality. But these members are more frugal in terms of expenses. For Indun, she likes to wear shoes and slippers, she wants to wear the Everbest brand, Bonia watches, and for hijab, she usually wears Dian Pelangi, and she trusts Erha Clinic for her cosmetics. Another member of Ganbatte named EL prefers the vehicle, and she thinks that car is the ultimate satisfaction for the one who owns it. Thus, she uses Lexus for his daily activity because it is more classy for the car category in the city. To support her appearance, she likes to wear watches, because according to EL, successful people appreciate the time and she often wears Rolex brand watch. For holidays, she rarely prefers Indonesia as the tourist destination; she likes to go to locations that are not usually visited by the tourists. For example, she just recently visited Bhutan, a country located in the valley. She even had to hire her plane to go to that country, and it cost her almost IM. There should be an exceptional pilot because the airstrip in Bhutan can only be used by the pilot with unique specification who can fly the plane to that country. EL’s goal was to do devotional act in Butan because she is a Buddhist. She also often visits India, in her opinion going to India is like going to “umrah” for his Buddhist.

Another example is NR who always trusts Channel as her cosmetics derived from his grandmother and her mother. TP prefers Japanese cosmetics named Menard, and she also prefers Hammer as her car. For the members of Ganbatte, Hermes brand remains a favorite because according to them the quality is excellent and it is quite classy.

For them, fashion is one of the ways to show the constructed class identity and style is also political, in the sense that it is one of the ways in which positions and characters of are used. According to them, fashion cannot be separated from the development of the history of human life and culture. The importance of fashion in social context becomes more explicit about the status itself. Besides, clothing is an expression of personal identity, thus “selecting clothes either in-store or at home, means defining and describing ourselves” (Lurie, 1992: 5). For example, the recent event in Samarinda titled “Festival KemilauSarungSamarinda” where Ganbatte became the only arisan group to be awarded as a group that has helped to preserve the Samarinda culture.

Baudrillard explains that the current consumption practices are not only influenced by purely economic factors or based on rational choice, but there is also a cultural system and social meaning system that can direct the individual's choice of a particular commodity and show the identity. About the explanation put forward by Baudrillard and the above informant statement, it shows that to join the Ganbattearisan there must be a standard to be made by what has been chosen by ME as the Chairman of Ganbattearisan group. The selection of a member of Ganbattearisan group is part of the social meaning system that can direct the individual choice of a particular group.

Consumer pattern caused by capitalism gives impact to mass production which then creates a culture. The culture is so attached to the community over the possession of over-production goods raising the popular culture. Then, popular culture is already seen as a distributed sign. In his book titled *The Consumer Society: Myth and Structures*, Baudrillard tries to explain that the existing social structure refers to a collective social structure without neglecting individual differentiation. It is seen when the ownership of an object determines the identity of a particular individual.

The object becomes a determinant of identity that is presented through a sign that has been created. Therefore, every member of Ganbatte who wants to have a character, inevitably, consume the goods to get the built sign. The purpose of consumption is no longer to spend or utilize the use of consumer goods but to use the signs that are deliberately entered into the consumer goods by the producers through a conscious manipulation effort that is assisted by the sophistication of the mass media. For example is what has been done by IP, Baudrillard says that the consumption society is related to what they have as a sign of consumption object and the consumption society is controlled by the sign because the object is used as a sign, not as a consuming part.

### **CONCLUSION**

Everyone always wants to show his or her existence by showing off his identity. The ultimate human personality is the identity as a human. This point is depicted in various other characters that lead to personal identities. Therefore, the identity of a person does not consist of a single identity but multi identities (Molan, 2015: 68). A person's identity becomes an issue when being exclusively singled out, and the individual will deny the other identities. The identity shown by Ganbattearisan group is the life of a narcissistic woman such as the mutual attitudes of freedom, and the implementation and consumption practices of Ganbatte's members emphasize more on the 'mark value' of the objects of industrial construction.

Martin Lindstrom in his book titled *Buy Ology* explains that advertisers have long assumed that logo is everything. Companies have spent thousands of hours and millions of dollars creating, engineering, sharpening, testing, and making sure their logos are stamped on our face, head and under our feet. Indeed they have been focusing on directing and motivating consumers visually for a long time. Ganbatte members always put the logo in the purchase decision because visual images will be much more efficient and memorable when combined with other senses, such as hearing and smell. It suits where they gather at Boncafe or The Grill because the two restaurants serve great views to be seen and the lively atmosphere and the aroma of the food that is present can make consumers imagine the fancy taste.

Indeed companies find something that they think is better than just throwing logos at us, involving the scent into our nose and ears. This is called Sensory Branding. Overall, it cannot be separated from the name of imaging. Imaging is the most urgent thing in the community's life covering all of the surrounding behaviors. Thus, Ganbatte members that consist of women should utilize the branding of occupation, an activity that creates money and comes from the result of their work. The reason is that all of the effort related to that thing, without going through the medium of imaging, will be perceived as something bland and futile. Thus, what is considered to be essential and unimportant to be known by everyone as the target will be become increasingly blurred. Therefore they are pleased when talking about their occupation because through this profession their image is lifted. Although they are fond of makeup, shopping and hanging out, they still have a steady job, and it makes them more confidence. If they have saved enough money or achieve enough wealth, they will have more time to have fun. Thus, in today's society, the ability to live by having fun is used as the tool to show of someone's degree or status. The more she is unbaled to work in productive tasks (leisure), the higher her degree in the society.

Ultimately the existing imagery no longer speaks of right and wrong or worthy and unworthy. But the most important of the depicted image is part of the representation of the

happening events. Thus, in such an imaging model, any analysis or interpretation can be right and even wrong, and further mislead the public opinion goes on at the same time.

Based on the overall explanations above, those things we are consuming is not the object of consumption itself but the meaning and value of the sign. Baudrillard's ideas open up a complicated question of the role of commodities play as a matter of daily living culture. However, the Baudrillard's statement that demand in a modern consumer society is merely a product of the manipulation of commodity-value signs done by the institutions through advertising and mass media, and those needs are always 'immanent' and premature.

Ganbatte with some of its members who come from the same class always share about their day-to-day life in every meeting, and they also talk about new items they have bought and the price of it. Most of the topic of the conversation includes only these things. They want to show their class to the public or their fellow members in the Ganbatte group directly. According to Assael's (1984: 252) explanation of the behavior of the Ganbatte group, that "A mode of living is identified by how people spend their time (activities), what they consider important in their environment (interest), and what they think about themselves and the world around them (opinions)". Ganbatte group implements how people from the same sub-culture, social class, and job can have different lifestyles

This is in line with Baudrillard's explanation that consumption has become "...a process of significance and communication, based on the rules (code) in which consumption practices enter and take their meaning. Here, consumption is an exchange system, and correspond with language. Only the discussion of structure that can enter this stage... besides, consumption as a process of social classification and differentiation, whereby these objects/marks are ordained not only as significant differences in one code but as a corresponding value (rule) in the hierarchy... being the object of determining strength, especially the distribution of values" (Baudrillard, 2004: 61).

Thus, he wants to say that in today's society the object of consumption controls us, not the other way around. Consumers are stuck in the rhythm they make. Instead of the symbols, the prestige that we can even dissolve in the system. We often assume that consumers have the freedom to use the object, but it works the other way around now.

## REFERENCES

1. Assael, H., 1984. *Consumer Behavior and Marketing Action*. (Second edition). Boston: Kent Publishing Company.
2. Baudrillard, J.P. 1983. *Simulation*, terjemahan Paul Foss, Paul Patton and Phillip Beitchman. Press Cambridge.
3. Baudrillard, J.P 2004. *Masyarakat Konsumsi*. Bantul: Kreasi Wacana.
4. Chaney, David. 2008. *Lifestyles*. Sebuah Pengantar Komprehensif. Yogyakarta: Jalasutra
5. Featherstone, Mike. Misbah Zulfa Elizabeth (Translator). 2008. *Posmodernisme and Budaya Konsumen*. Yogyakarta: Pustaka Pelajar.
6. Gane, Mike. 1993. *Baudrillard Live*. Selected Interview. London. Routledge.
7. Gilbert, Alan and Gugler J. 2007. *Urbanisasi and Kemiskinan di Dunia Ketiga*. Yogyakarta: PT Tiara WacanaYogya.
8. Hewwit, John P. 1984. *Self and Society: A Symbolic Interactionist Social Psychology*. 3rd ed. Boston: Allyn and Bacon.
9. Hjorth, Larissa. 2009. *Mobile Media in the Asia-Pacific, Gender and the art of Being Mobile*. London. Routledge.
10. Horkheimer and Adorno. 2007. *Introduction to critical theory*. Yogyakarta: Pustaka Pelajar,
11. Ibrahim, Idy Subandi. 2009. *Lifestyles Ecstasy: Kebudayaan Pop dalam Masyarakat Komoditas Indonesia*, Yogyakarta, Jalasutra.
12. Ida, Rachmah. 2014. *Metode Penelitian*. Studi Media and Kajian Budaya. Jakarta. Prenada Media Group.
13. Kasali, Reinald. 2001. *Membidik Pasar Indonesia: Segmentasi, Targeting and Positioning*. Jakarta: Gramedia Pustaka Utama.

14. Kellner, Douglas. 2010. Budaya Media. Cultural Studies, Identitas and Politik,. Antara Modern and Postmodern. Yogyakarta. Jalasutra.
15. Lamb, Hair & Mc. Daniel. 2001. Pemasaran. Jakarta. Salemba Empat.
16. Lechte, John. 2001. 50 Filsuf Kontemporer. Yogyakarta: Penerbit Kanisius.
17. Michel de Certeau, 1984. The Practice of Everyday Life, trans, Steven Rendall. Berkeley. University of California Press.
18. Neuman, Lawrence W. 2000. Social Research Methods. USA: Allyn and Bacon.
19. Piliang. A. Yusuf. 2004. Dunia Yang Dilipat. TamasyaMelampauiBatas-batasKebudayaan. Bandung: Penerbit Matahari.
20. Ritzer, George, & Barry Smart. 2014. Handbook Teori Sosial. Bandung: Nusa Media.
21. Ritzer, George. 2010. Teori Sosial Postmodern. Bantul: Kreasi Wacana.
22. Ritzer, George. 2012. Teori Sosiologi.Dari Sosiologi Klasik sampai Perkembangan Terakhir Postmodern. Yogyakarta. Pustaka Pelajar.
23. Seidman. Irving. 2006. Interviewing As Qualitative Research: A Guide for Researchers in Education and the Social Sciences. NY. New York: Teacher College Press.
24. Soemardjan, Selo and Soelaeman Soemardi. 1964. Setangkai Bunga Sosiologi. Jakarta: LP FE-UI.
25. Soerjono, Soekanto. Prof. Dr. 1987. Sosiologi Industri. Suatu Pengantar. Bandung. CV. Remaja Karya.
26. Soembodo, Benny. 2012. Ekologi Kota. Surabaya. PT. Revka Petra Media.
27. Susanto. Alfonsus.B. 2001. Potret-Potret Gaya Hidup Metropolis. Jakarta: Penerbitan Buku Kompas.
28. Sulistyono-Basuki. 2006. Metode Penelitian. Jakarta: Wedatama Widya Sastra and Fakultas Ilmu Pengetahuan Budaya Universitas Indonesia.
29. Veblen, Thorstein.1994. Teori Kelas Kenyamanan: sebuah studi ekonomi lembaga, Mineola, NY: Dover Publications.
30. Bagus, A.Laksana. 2013. Ribetnya Hidup Sehari Hari; Menafsir Hidup Harian Sebagai Teks Budaya.[journal.unpar.ac.id/index.php/melintas/article/download/267/252](http://journal.unpar.ac.id/index.php/melintas/article/download/267/252). Melintas. Faculty of Theology Sanata Dharma. Yogyakarta.
31. Gordon, Ian. Life is not complete without shopping: Consumption culture in Singapore. *Journal of Southeast Asian Studies* / Volume 37. 2003.
32. Kushendrawati, Selu Margaretha. Masyarakat Konsumen Sebagai Ciptaan Kapitalisme Global: Fenomena Budaya Dalam Realitas Sosial. *Makara, Sosial Humaniora*, Vol. 10, No.2, Desember 2006. FIB. UI.
33. Krishnan, Jayasree, Lifestyle – A Tool for Understanding Buyer Behavior *Int. Journal of Economics and Management* 5(1): 283 – 298 (2011).
34. Lawson, Rob and Sarah Todd. Consumer lifestyles: a social stratification perspective. *Volume 2(3): 295–307, Journal of Marketing*. London, Thousand Oaks, CA and New Delhi.
35. Plummer, Joseph T., The Concept And Application Of Life Style Segmentation. *Journal of Marketing*, Vol 38(1), Jan 1974, 33-37.
36. Todd, Danielle. 2012. You Are What You Buy: Postmodern Consumerism And The Construction Of Self. Hohonu. University of Hawai'i at Hilo.
37. Data penduduk kota Samarinda.<http://bappeda.samarindakota.go.id/berita/baca/57>, diakses 25 Februari 2016
38. Orang kaya Baru Indonesia tersebar di pedalaman. <https://gaya.tempo.co/read/news/2014/08/07/108597866/orang-kaya-baru-indonesia-tersebar-di-pedalaman>, diakses 20 Februari 2015.
39. <http://infed.org/mobi/jean-baudrillard/>, diakses Desember 2016.
40. Termahal di Kaltim, Pemkot Tak Kaget. <http://www.kaltimpost.co.id/berita/detail/12955/sebulan-2-mobil-mewah-melenggang.html>, diakses pada 20 Februari 2015.
41. Publikasi Arisan Ganbatte. <http://samarinda.prokal.co/read/news/48-geliat-wanita-wanita-metropolis-samarinda.html>.
42. <http://kaltim.prokal.co/read/news/69013-artisan-ganbatte>, diakses pada 20 Februari 2015.

DOI 10.18551/rjoas.2019-02.08

## **THE EFFECT OF JOB SATISFACTION ON GENERATION Y EMPLOYEES' PERFORMANCE WITH MOTIVATION AS THE INTERVENING VARIABLE AT THE GENERAL SECRETARIAT OF THE MINISTRY OF AGRICULTURE**

**Indriani Ayu Septi<sup>1\*</sup>, Panjaitan Nurmala K.<sup>2</sup>, Kuswanto Sadikin<sup>1</sup>**

<sup>1</sup>School of Business, Bogor Agricultural Institute, Bogor, Indonesia

<sup>2</sup>Faculty of Human Ecology, Bogor Agricultural Institute, Bogor, Indonesia

\*E-mail: [ayusepti.indriani@gmail.com](mailto:ayusepti.indriani@gmail.com)

### **ABSTRACT**

In order to achieve an organization' goal, the employees should provide maximum performance. Instead of only one generation, an organization is usually filled with several generations; one of them is the generation Y. More generations Y start to enter the job world while bringing values different from their previous generation. In order to overcome such problem, human resource development should be prepared soon, in which the excessive number of productive age population can be used to improve the development. Based on the facts above, this research aimed to analyze the effect of Job satisfaction on performance with motivation as the intervening variable. The respondents of this research are the General Secretariat of The Ministry of Agriculture employees who belong to the generation Y with the age range of 23-37 years old. There were 74 employees act as the respondents of this research taken from the accidental sampling method. The method used in this research was Structural Equation Model (SEM) through Partial Least Square (PLS) approach using the application of Smart PLS 2.0. The result of this research obtained that the employees' job satisfaction positively and significantly affect the employees' performance through their motivation. Motivation can function as an intervening variable to affect the employees' job satisfaction on their performance in which the higher the generation Y employees' job satisfaction, the more increase their motivation which gives positive and direct effect on improving their performance in the Secretariat General of the Ministry of Agriculture.

### **KEY WORDS**

Generation Y, employees, job, satisfaction, motivation, performance.

Human resources play an important role in all business operational activities starting from the planning, implementation, and evaluation. One of the roles of the human resources is to relate the strategy and the business activities as a whole (Marhari et al. 2013). Sustainable management of human resource must be conducted through the planning of the organization which involves the human resources from various generations. This is such an important thing to be considered by an organization, since an organization is not filled with one generation only, but several generations. The differences between the generations also become a problem encountered by the management of human resources (Sajjadi et al. 2012).

According to the Statistics Indonesia (2017) workers are dominated by generation X by 43.28%, generation Y by 40.77% and baby boomers by 15.95% of the total workers' population. Such composition explains sufficiently how the current condition of the government agencies is. However, the generation Y involvement in the government agencies will continuously to grow along the acceptance of Indonesian Government Officer candidates which have a classification of age limits ranging of 18-35 years. Currently, the proportion of generation Y entering the job world starts to increase who at the same time also bringing their distinctive values different from their previous generation. Such problem must be immediately overcome through human resources management in which the excessive number of productive age population can be used to increase the development.

The goal of the Secretariat General of the Ministry of Agriculture is to improve the performance accountability of the Ministry of Agriculture as well as coordinating, developing

and supporting the administrative environment of the Ministry of Agriculture. The research result of the performance accountability evaluation in 2016 in the form of LAKIP conducted by the Ministry of Administrative and Bureaucratic Reform obtained that the Ministry of Agriculture is still in the BB value category meaning that it the employees still need to improve their performance. The following are the achievements of the Performance Accountability of the Government Agency of the Ministry of Agriculture in the past five years:

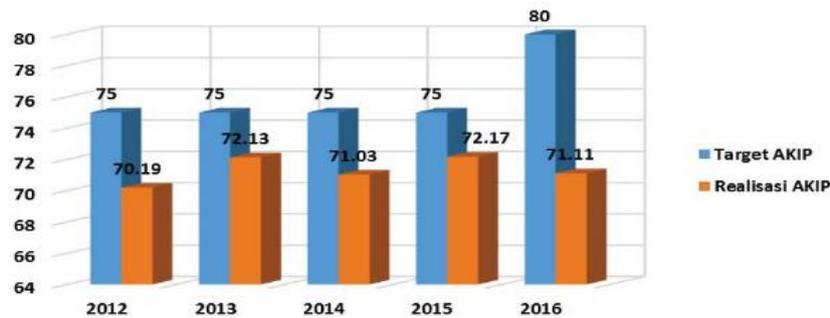


Figure 1 – Target and realization of the Ministry of Agriculture AKIP value in 2012-2016  
(Source: Performance Report of the Secretariat General of the Ministry of Agriculture, 2017)

The performance report of the Secretariat General of the Ministry of Agriculture (2017) shows that the Ministry of Agriculture has not been able to achieve their intended AKIP value for the last five years (Fig 1). In addition, as one of the government agencies in the field of agriculture which focuses on serving the public, the quality value of the public service of the ministry should be paid attention. The Quality Score Indicator of Public Service achieved by the Ministry of Agriculture in 2017 obtained a result of 79.83 or 97.35% of 82 as the target, which means that the achievement of the Performance Indicator of the Public Service Satisfaction value of the Secretariat General of the Ministry of Agriculture has not achieved the target yet. Based on the preliminary observation and interview with the Organizational and Personnel Bureau of the Secretariat General of the Ministry of Agriculture, it indicates that the accumulation of employees' resignation and termination for the employees who belong to generation Y has increased slightly. The cause can be in the form of less certainty that the generation Y employees' characteristics or values systems are different from the previous generation so that it also requires different employees' policies.

Generation Y is often considered as a job hopper or someone who likes to change jobs. In Gallup survey (2016), it was stated that millennial actually does not want to change their jobs, however, they often consider that their agency or company does not have any certain reason for them to keep working and giving the best performance on the same workplace. Generation Y is a young generation who pays attention more on the job's comfort working life balance. They have different characteristics, beliefs, work ethics, values, behavior, and work expectations in performing their roles in an agency or company (Niemiec 2000).

A government agency leader can make an effort to improve his human resources' performance by paying attention to the employees' job satisfaction and motivation. Job satisfaction is the starting point of the problems arise in the organization such as worker-leader conflict and employees' turnover, while motivation can encourage oneself to manage their behavior in performing their duties and responsibilities (Panggalih and Zulaicha 2012). Therefore, it is necessary to conduct a further research on Generation Y. The objective of this study is to analyze the effect of generation Y employees' job satisfaction on their performance with motivation as the intervening variable.

## LITERATURE REVIEW

Human resources in an organization is basically a complicated problem since it involves individual problems. One of the characteristics which can cause poor working

conditions in an organization is low job satisfaction. Gibson et al (2009) stated that job satisfaction is the employees' attitude resulting from their perceptions towards their work by considering the factors they found in the workplace environment such as supervisor style, policies and procedures, work group affiliation, working condition, and other benefits for the employees. According to Robbins (2006), job satisfaction is the employees' general attitude on their job. Robbins and Judge (2009) stated that there are five job satisfaction factors, including; (1) Satisfaction on the Job, (2) Satisfaction on the Rewards, (3) Satisfaction on the Supervision, (4) Satisfaction on the Colleagues, and (5) Opportunities or promotion.

Motivation is a condition where one makes an effort and willingness to directly achieve a certain result or goal (Sopiah 2008). Work motivation is a desire or encouragement from oneself which can cause, link, and support the employees' behavior to work diligently and enthusiastically in order to achieve their goals and perform well at work. Another important concept of motivation theory is based on the human's strength which is the achievement motivation. According to McClelland (1961), someone is considered to have motivation if he has a desire to perform better than the others. The aspects of achievement motivation include; (1) responsibility, (2) considering risks, (3) creative and innovative, (4) paying attention to feedback, (5) time to complete tasks, and (6) desires to be the best. An individual is more successful than the other individuals because they have a higher desire to achieve something. This desire gives them motivation to work more diligently (McClelland et al. 1953).

Employees' performance (work performance) is the quality and quantity result achieved by an employee in performing his duties and responsibilities (Mangkunegara 2009). Rivai and Basri (2005) provided an explanation that performance or work achievement is the result or the success level of a person as a whole during a certain period in performing his tasks compared in spite of various possibilities, such as work result standards, or targets that have been established and agreed previously. Performance assessment is a formal system in checking and reviewing employees' performance regularly. According to Barnard (1938) in Prawirosentono (2008), the employees' performance indicators include; (1) Effectiveness and Efficiency, (2) Authority and Responsibility, (3) Discipline, (4) Initiative.

According to Kopperschmidt (2000), generation Y is persons who born in the same time range sharing the same historical experience and significant social life that shapes views and perspectives. Referring to the theory built by Oblinger and Oblinger (2005), generation Y is a generation born in 1982-1999. Every generation in its era has its own natures and characteristics. Various similarities or differences between the generations can be used as a general description of how they behave. One of the most striking generations known for its diversity is Generation Y. Beu and Buckley (2001) explained that the generation Y characteristics including of being creative and continuously learning aim to maintain their competitiveness, freedom, balance between the work life and personal life, work which is truly in accordance with his wishes and opportunities to develop their selves.

## **METHODS OF RESEARCH**

This research was carried out from May to July 2018 at the Ministry of Agriculture Building A. The research method used in this research is qualitative and quantitative analysis through a case study approach. This research's sampling method used was accidental sampling. According to Nawawi (2001), accidental sampling is a technique where the sampling is not predetermined, but directly collecting the data from the sampling unit encountered. After the number of samples is sufficient, the researcher stopped the data collection. The research samples were obtained from the employees who are in accordance with the criteria and found during the research at the Secretariat General of the Ministry of Agriculture. This technique was chosen by the researchers because researchers have limited time and funds. The respondents of this research were the Generation Y employees of the Secretariat General of the Ministry of Agriculture. Thus, the total respondents of this research were 74 employees. In addition, the researchers use Generation Y employees with the age ranges between 23-37 years old (Oblinger and Oblinger 2005) as the research samples.

The questionnaire consists of 4 divisions by using a Likert scale. The first part is the respondents' characteristic. The second part consists of 5 indicators which reflect the job satisfaction factors (Robbins and Judge 2009). The third part consists of 6 indicators which reflect the employees' motivation (McClelland 1961). The fourth part consists of 4 indicators which describe the employees' work results (Barnard 1938 in Prawirosentono 2008). The analysis technique used was two different tests (ANOVA and t-test) to determine the scores' difference for each dimension in generation Y as well as Partial Least Square-Structural Equation Modeling (SEM-PLS) using Smart PLS 2.0 software, a statistical technique that allows testing of a relatively complex set of relationships simultaneously. The implication of the research results is used as the basis for organizational management policy recommendations at the Secretariat General of the Ministry of Agriculture. The conceptual framework of this research can be seen in the following figure:

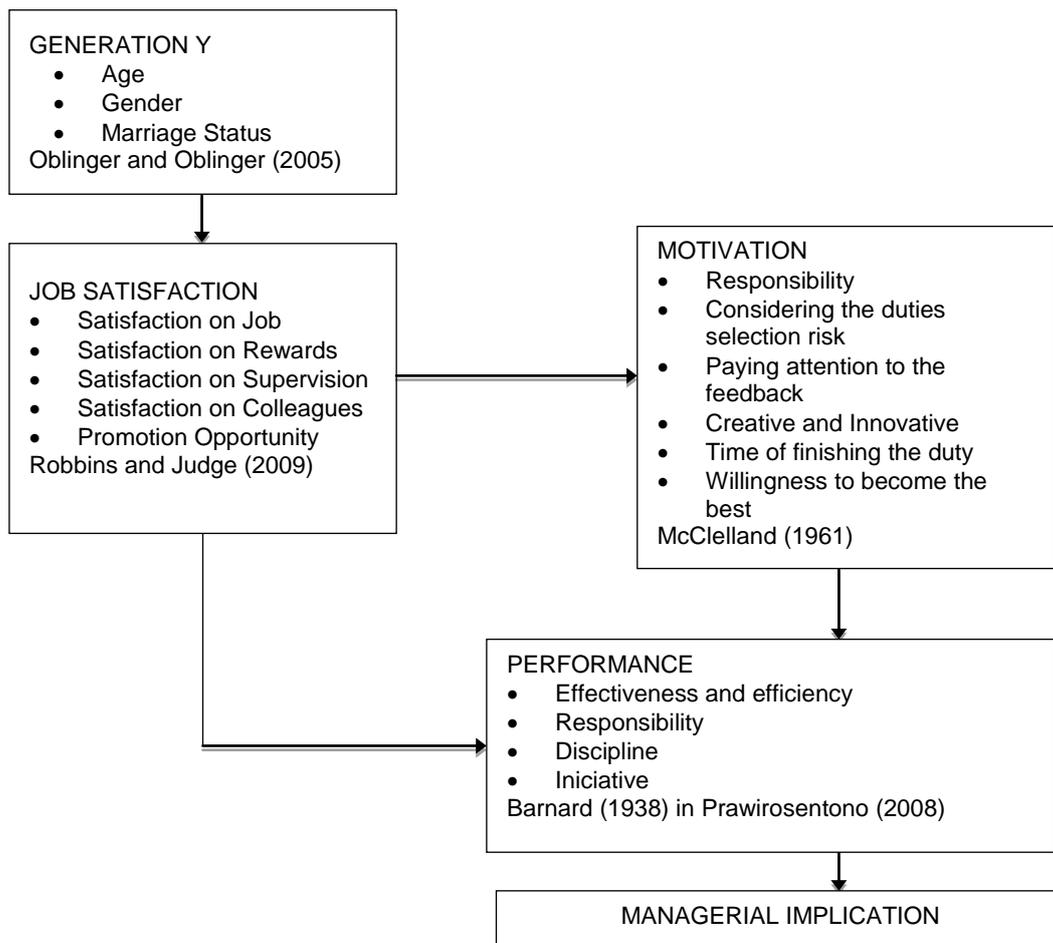


Figure 2 – Conceptual Framework of the Research

The research hypothesis proposed is:

- Hypothesis 1: Job satisfaction positively and significantly affects the motivation;
- Hypothesis 2: Job satisfaction positively and significantly affects the performance;
- Hypothesis 3: Motivation positively and significantly affects the performance;
- Hypothesis 4: Job satisfaction positively and significantly affects the performance through motivation.

## RESULTS AND DISCUSSION

*Respondents' Characteristics.* Table 1 shows the profile of 74 respondents. Respondents in this research were 51.35% male and 48.65 % female. This was not obtained

intentionally, because the respondents were obtained not based on the gender differences. Based on the marriage status of the respondents, 81.08% is married, while the rest of 18.92% is unmarried. This is in line with BKN that the average age of Indonesians is married at 25 years (BKKBN 2013).

Table 1 – Respondents' Characteristics from Generation Y

Respondents' Characteristics		Frequency (people)	Percentage (%)
Age	23-25 years old	5	6.76
	26-30 years old	15	20.27
	31-35 years old	43	58.11
	36-37 years old	11	14.86
Gender	Man	38	51.35
	Women	36	48.65
Marital status	Single	14	18.92
	Married	60	81.08
Total		74	100.00

The distribution of the respondents' age of 31-35 years old dominates the respondents for about 58.11 % of the total respondents. Then, the age group of 26-30 years old is dominating with a percentage of 20.27%, the age group 36-37 years old is around 14.86%, and followed by the percentage of respondents in the age group of 23-25 years old in the least domination by around 6.76%. It shows that the generation Y of the age group of 31-35 years old is dominating the respondents compared to the other age groups. According to informant opinion in the Secretariat General of the Ministry of Agriculture, generation Y employees in this age group have more experience and expertise at work. Thus, it is expected that they will contribute their best performance for the Secretariat General of the Ministry of Agriculture. According to Zemke in Tolbize (2008) opinion, he suggested that Generation Y is considered has the ability to work in teams better, more cooperative, and more optimistic in the future.

*The Effect of Job Satisfaction on Performance with Motivation as the Intervening Variable.* Structural Equation Modeling Partial Least Square (SEM-PLS) consists of two sub-models, those are the measurement model that shows how the manifest or observed variable represents a latent variable to be measured. Meanwhile, the structural model shows the estimation strength between the latent variables or constructs.

*Measurement Model Evaluation.* The measurement model in this study uses 15 indicators. If there are indicators that have a loading factor value of <0.5, a recalculation must be conducted of the initial model so that the loading factor of all reflective indicators is > 0.5 as the criteria of the latent constructs convergent validity test (Ghozali 2008).

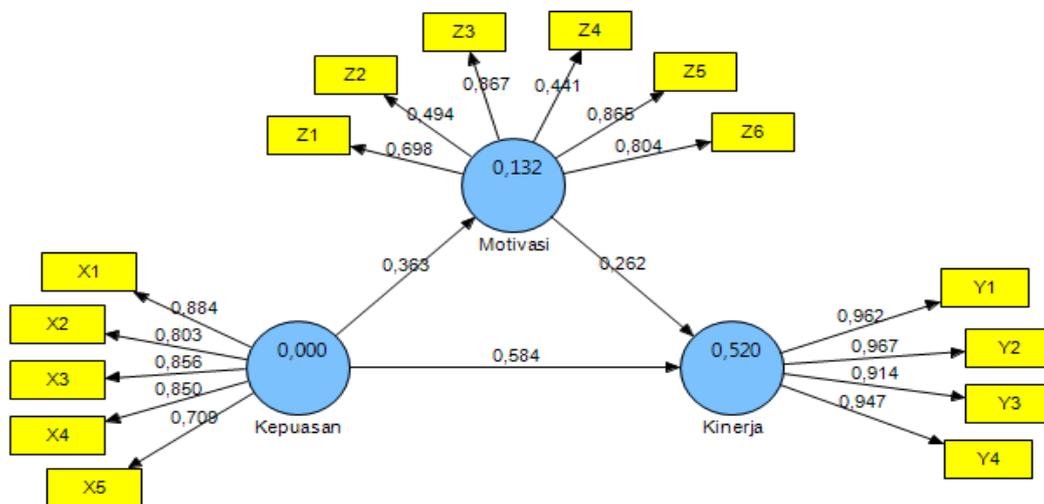


Figure 3 – The loading factor on the initial measurement model

Figure 3 shows that there are indicators which have loading factor value  $< 0.5$ , those are the loading factor value of considering the duties selection risk indicator which shows  $Z_2$  of 0.494 and loading factor value of creative and innovative indicator which shows  $Z_4$  of 0.441. Therefore, it was necessary to do a recalculation on the model. After some calculations were done, the final SEM model obtained in Figure 4 shows that all indicators have a loading factor  $> 0.5$  and the convergent validity test for the latent constructs is fulfilled.

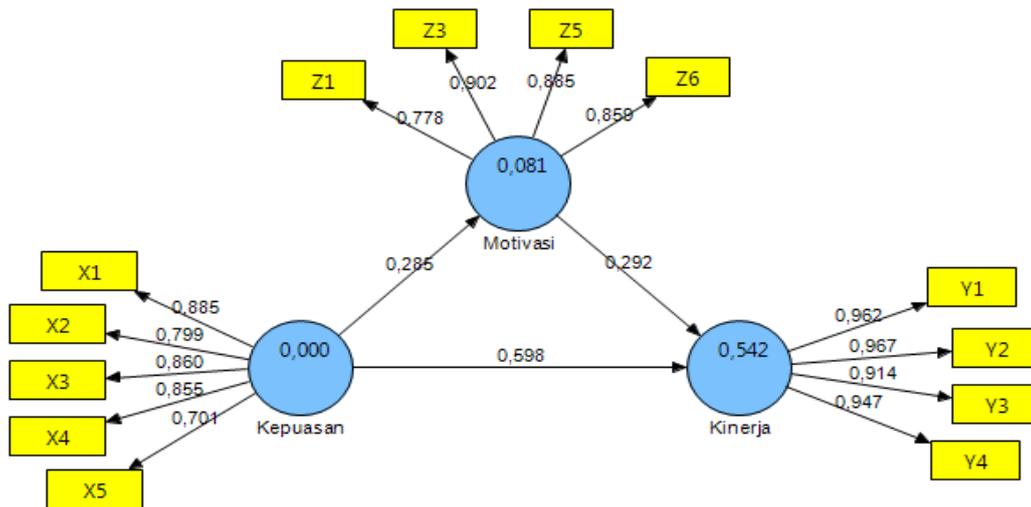


Figure 4 – The Loading factor in the final measurement model

Loading factors of the final measurement model shows that the indicators of the satisfaction on work and supervision are the highest two indicators reflecting that job satisfaction affecting the motivation and performance with the value of  $X_1$  (0.885) and the indicator of  $X_3$  (0.860). According to Jobplanet Indonesia in Triwijarnako (2016), employees who work in the government agencies are the employees who are the most satisfied with their type of work. Generation Y also hopes that the leaders of the agencies can involve generation Y, leaders have openness to them and can guide them in their work (Ohlrich 2011).

The Loading factor of the final measurement model shows that the indicators of paying attention to feedback and time of finishing the duties are the two highest indicators reflecting the motivation affecting the performance with the value of  $Z_3$  (0.902) and indicator  $Z_5$  (0.885). The generation Y characteristics in the scope of work delivered by Solnet and Hood (2008) revealed that generation Y employees want direct feedback. Brown et al. (2008) stated that 90% of generation Y want jobs which offer flexible work schedules, has the spirit and energy to work, and has a passionate enthusiasm to complete their duty.

The two highest indicators that reflects performance are the responsibility as well as the effectiveness and efficiency with the  $Y_2$  value of 0.967 and  $Y_1$  of 0.962. Luntungan et al. (2014) suggested that Generation Y is a generation who are very expensive, but at the same time they also have very high performance (high maintenance, high performance). It means that the generation is very independent and expecting their performance to be assessed based on the results, rather than only based on the routines at the office since they master technology and use process effectiveness.

The requirement for the model to be considered to have a good validity if each latent variable with a reflective indicator has  $AVE > 0.5$ . The analysis result shown in Table 2 shows the AVE value of each latent variable has a value of  $> 0.5$  and it can be considered that the PLS model meets good convergent validity requirements.

The next measurement is reliability test on the model used to prove the accuracy, consistency, and appropriateness of the instrument in measuring the construct. The reliability test by measuring composite reliability on the latent variables which have a value  $> 0.7$  is considered to be reliable. The research result based on Table 2 shows that all latent

constructs have good, accurate and consistent reliability because they meet the requirements with composite reliability values for each latent construct more than 0.7.

Table 2 – The value of average variance extracted (AVE), composite reliability

n/n	AVE	Composite Reliability
Job Satisfaction	0.677	0.912
Performance	0.898	0.972
Motivation	0.735	0.917

Table 3 – Crossloading values

n/n	Job Satisfaction	Performance	Motivation
X1	0.885	0.582	0.252
X2	0.799	0.421	0.066
X3	0.860	0.668	0.253
X4	0.855	0.622	0.191
X5	0.701	0.441	0.371
Y1	0.645	0.962	0.500
Y2	0.644	0.967	0.457
Y3	0.643	0.914	0.375
Y4	0.650	0.947	0.414
Z1	0.166	0.235	0.778
Z3	0.254	0.426	0.902
Z5	0.333	0.499	0.885
Z6	0.158	0.332	0.859

Discriminant validity testing was done on the principle that the constructs manifest variable should not be high correlated (Ghozali 2008). The discriminant validity testing in Table 3 shows that all indicators have greater crossloading values for latent variables compared to other latent variables. It can be considered that the model has met the requirements of discriminant validity.

Table 4 – Correlation value between latent variables and  $\sqrt{AVE}$  values

n/n	Job Satisfaction	Performance	Motivation
Job Satisfaction	$\sqrt{AVE} = 0.823$		
Performance	0.681	$\sqrt{AVE} = 0.948$	
Motivation	0.285	0.462	$\sqrt{AVE} = 0.857$

Table 4 above shows that the  $\sqrt{AVE}$  value > the correlation value between latent variables which means that the model has met the discriminant validity.

*Structural Model Evaluation.* The bootstrapping result in Table 5 shows that satisfaction has a significant effect on the motivation at the level of 5% because the t-statistics value > t-table (1.96). Motivation also has a significant effect on performance at the level of 5% because the t-statistics value > t-table (1.96).

Table 5 – R-square values

n/n	R-square
Motivation	0.081
Performance	0.542

The structural model of Motivation produces an R- square value of 8.1%, which means that the motivation diversity that can be explained by the model is 8.1%, while the remaining 91.9% is explained by other factors outside the model. The structural model of performance produces an R- square value of 54.2%, which means that the performance diversity which can be explained by the model is 54.2%, while the remaining 45.8% is explained by other factors outside the model.

*Hypothesis Testing.* The next test in the evaluation of the inner model or structural model was conducted to see the significance of the path coefficient which shows relationship

or effect between the latent variables in the research. In PLS, testing each relationship is done using a simulation with the bootstrapping method for path coefficients from the PLS SEM analysis which can be seen in Table 6.

Table 6 – Path coefficient and t-statistics Values

	Path coefficient	T-statistic
Job Satisfaction -> Motivation	0.285	2.830*
Job Satisfaction -> performance	0.598	4.572*
Motivation -> Performance	0.292	2.642*
Job Satisfaction -> Motivation -> Performance	0.681	5.748*

Note: \*) significantly affect at the level of 5% ( $T\text{-statistic} > T\text{-table} (1.96)$ ).

The analysis result in Table 6 shows that job satisfaction has a positive or direct effect on motivation with the path coefficient value of 0.285. This result is significant at the level of 5% because the t-statistic value (2.830) > t-table (1.96). This shows that the better the generation Y employees' job satisfaction, the more increase the employees' motivation. In line with research conducted by Grenway (2008) which stated that there is a relationship between job satisfaction and motivation, where generation Y employees who have job satisfaction will have high motivation in achieving and supporting the achievement of agency goals. Based on the results of the path coefficients, the first hypothesis in this study which states that the job satisfaction can affect the motivation in the Secretariat General of the Ministry of Agriculture is accepted.

Job satisfaction also positively and directly affects the employees' performance with a coefficient of 0.598. This result is significant at the alpha level of 5% for the value of t-statistic (4572) > t-table (1.96). This shows that job satisfaction directly affects the performance which means that it is not intervened by the motivation. The higher the level of Generation Y employees' job satisfaction, the higher the level of employees' performance given. This finding is in line with the previous research conducted by Sarittama and Noerman (2017) which stated that there is an effect of job satisfaction on the generation Y employees' performance. Based on the results of the path coefficients, the second hypothesis in this study which states that job satisfaction affects the performance of the Secretariat General of the Ministry of Agriculture is accepted.

Motivation positively and directly affects the performance with a coefficient of 0.292. This result is significant at the alpha level of 5% for the t-statistic value of (2642) > t-table (1.96). It indicates that the higher the Y generation employees' motivation, the more increase the employees' performance level. This finding is in accordance with the previous research conducted by Sarittama and Noerman (2017) which stated that there is an effect of motivation on the generation Y employees' performance. Based on the results of path coefficients, the third hypothesis of this research stating that motivation affects performance in the Secretariat General of the Ministry of Agriculture is accepted.

Job satisfaction on performance also has positive and direct effect with the coefficient value of 0.681. These results are significant at the alpha level of 5% for the t-statistic value (5.748) > t-table (1.96). Thus, in improving the generation Y employees' performance, there must be a close relationship between job satisfaction and motivation and between motivation and performance so that the generation Y employees can provide a better performance. It shows that motivation can be used as an intervening variable to affect the employees' job satisfaction in which the higher the generation Y employees' job satisfaction, the more increase their motivation will be since it gives a positive and direct effect on the performance. This finding is in line with the previous research conducted by Sudrajat and Yuniawan (2016) which also showed that motivation can be act as an intervening variable to affect the job satisfaction on the employees' performance. Based on the results of the path coefficient value, the second hypothesis in this study stating that job satisfaction affects the generation Y employees' performance through motivation is accepted.

## **MANAGERIAL IMPLICATIONS**

Based on the analysis result of the effect of generation Y employees' job satisfaction on the employees' performance with motivation as intervening variable, employees' performance can be increased through job satisfaction and motivation. Some ways that can be done to improve the employees' performance are as follows:

Based on job satisfaction, the generation Y employees' performance can be improved through job satisfaction by trying to increase the facilities according to the benefits and needs of Y generation, especially on technology in order to obtain information about their work. Agencies can create a bookkeeping system of incoming and outgoing letters for secretariats in each bureau. Agencies can also try to create a system for employees who want to apply for leave or other employees' needs such as changes in family status, application of mutations, and application of scholarships.

Based on the motivation, employees' performance can be improved by paying attention to feedback. Agencies can create a meeting or briefing in the morning of both the scope of the agency or work unit that aims to build communication among the employees since the superior and subordinates can provide feedback or criticisms and suggestions to the problem encountered. The superior can give opportunities to the employees to share their ideas or inputs that can be useful in order to achieve the work programs that have been well-developed at this time.

In completing their work, the generation Y employees have a responsibility not only on the process but also at the end and the implementation of the duty. In addition, generation Y employees can give more attention to the work provided by reporting to the superiors if there is any problem in the work and handling the work effectively and efficiently. Such thing should be implemented in order to build a good two-way communication system between superiors and subordinates especially for Y generation employees. Thus, generation Y employees have space to express their opinions. Two-way communication also applies confirmation system that all things that involve decision-making must be confirmed by superiors and subordinates.

## **CONCLUSION**

In improving the generation Y employees' performance, there must be a strong relationship between the job satisfaction and motivation in order to produce the best performance from these employees. Results from this research showed that job satisfaction affects the employees' performance through motivation, resulting in an improved job satisfaction which will increase the employees' motivation. This will lead to the improved generation Y employees' performance at the Secretariat General of the Ministry of Agriculture. Motivation can function as an intervening variable to affect the employees' job satisfaction on their performance where the higher the generation Y employees' job satisfaction, the more increase their motivation since it has a direct effect on the generation Y employees' performance at the Secretariat General of the Ministry of Agriculture.

## **RECOMMENDATIONS**

Future research can add samples besides the generation Y, such as to generation X in order to find out the differences of the characteristics in working expectations of generation X and generation Y in government agencies and analyzing the characteristics of generation X and Y to know what is the dominant thing about job satisfaction and motivation of the two generations.

Adding other variables outside the variables that have been studied that affect the employees' performance, such as leadership style and organizational culture. In addition, the same research can be done with different objects, such as in private companies because private companies are more varied in terms of human resources than the government agencies.

## REFERENCES

1. [BKKBN] Badan Kependudukan dan Keluarga Berencana Nasional. 2017. Usia Pernikahan Ideal 21-25 tahun. [diakses pada tanggal 8 Mei 2018].
2. [BPS] Badan Pusat Statistik. 2017. Jumlah Angkatan Kerja Diatas Usia 15 Tahun. [diakses 10 Desember 2017].
3. Barnard CI. 1938. *The Functions of The Executive*. Cambridge (US): Mass Harvard University Press.
4. Beu D and Buckley MR. 2001. The Hypothesized Relationship Between Accountability and Ethical Behavior. *Journal of Business Ethics*. 34: 57-73.
5. Brown et al. 2008. Generation Y in The Workplace. *Journal of HR Management*. Texas (US): The Bush School Texas University.
6. Gallup. 2016. *State of the American Workplace*. New Jersey (US): Gallup, Inc.
7. Ghozali I. 2008. *Aplikasi Analisis Multivariate dengan Program SPSS*. Semarang (ID): Badan Penerbit Universitas Diponegoro.
8. Gibson, Ivancevich dan Donnelly. 2009. *Organisasi*. Terjemahan Edisi Ke Lima. Jakarta (ID): Erlangga.
9. Grenway B. 2008. *The Relationship Between Employee Motivation and Job Satisfaction of African-American Human Service Employees*. ProQuest Dissertations and Theses, UMI Number: 3291476.
10. [KEMENPAN RB] Kementerian Pendayagunaan Aparatur Negara dan Reformasi Birokrasi. 2016. *Laporan Akuntabilitas Kinerja Instansi Pemerintah (LAKIP) Tahun 2016*. Jakarta (ID): Kemenpan & RB.
11. [KEMENTAN] Kementerian Pertanian. 2017. *Laporan Akuntabilitas Kinerja Sekretariat Jenderal Tahun 2017*. Jakarta (ID): Kementerian Pertanian.
12. Kupperschmidt BR. 2000. Multigeneration employees: Strategies for Effective Management. *The Health Care Manager*. 19:65-76.
13. Luntungan IA, Hubeis VS, Sunarti E, dan Maulana A. 2014. Strategi Pengelolaan Generasi Y di Industri Perbankan. *Jurnal Manajemen Teknologi*. 13(2): 219-240.
14. Mangkunegara AP. 2009. *Manajemen Sumber Daya Manusia*. Bandung (ID): PT. Remaja Rosdakarya.
15. Marhari FJ, Amin HS, dan Utomo. 2013. Faktor-Faktor yang Berpengaruh Terhadap Kinerja Pegawai Badan Lingkungan Hidup Provinsi Kalimantan Timur. *Jurnal Administrasi Reform*. 1(2): 402-412.
16. McClelland DC. 1961. *The Achieving Society*. New York (US): D. Van Nostrand Company, Inc.
17. McClelland, Atkinson, Clark, and Lowell. 1953. *The Achievement Motive*. New York (US): Halsted Press.
18. Nawawi H. 2001. *Manajemen Sumber Daya Manusia untuk Bisnis yang Kompetitif*. Cetakan Keempat. Yogyakarta (ID): Penerbit Gajah Mada University Press.
19. Niemiec S. 2000. Finding Common Ground For All Ages. *SDM: Security Distributing & Marketing*. 30 (3): 81.
20. Oblinger D and Oblinger J. 2005. Is It Age or IT: First Steps Toward Understanding the Net Generation, dalam DG. Oblinger dan JL. Oblinger (ed.). *Educating the Net Generation*. (US): EDUCAUSE.
21. Ohlrich K. 2011. *Analysing Corporate Social Responsibility's Impact on Employee Attraction and Retention With a Focus on Generation Y*. [Dissertation]. Fielding Graduate University.
22. Panggalih B dan Zulaicha R. 2012. Pengaruh Kepuasan Kerja Terhadap Organizational Citizenship Behavior dengan Motivasi Kerja Sebagai Variabel Intervening Pada Karyawan PT. Telkom Tegal. *Performance Business and Mngagement Journal UNSOED*. 16(2): 1-6.
23. Prawirosentono S. 2008. *Manajemen Sumber Daya Manusia Kebijakan Kinerja Karyawan*. Yogyakarta (ID): BPF.

24. Rivai V dan Basri AFM. 2005. Performance Appraisal; Sistem yang Tepat Untuk Menilai Kinerja Pegawai dan Meningkatkan Daya Saing Instansi Pemerintah. Cetakan Pertama, PT Raja Grafindo Persada, Jakarta.
25. Robbins SP and Judge TA. 2009. Organizational Behavior. 13<sup>th</sup> Edition. New Jersey (US): Pearson Education, Inc., Upper Saddle River.
26. Robbins SP. 2006. Perilaku Organisasi. Edisi Bahasa Indonesia (alih bahasa Drs. Benjamin Molan). Klaten (ID): PT Int An Sejati.
27. Sajjadi A, Cen SB, and Castillo LC. 2012. Generational Differences in Work Attitudes. [thesis]. Swedia (SE): Jonkoping University.
28. Sarittama NT dan Noerman. 2017. Strategi Kepemimpinan, Motivasi Kerja dan Kompensasi terhadap Kepuasan Kerja serta Dampaknya pada Kinerja Karyawan Generasi Y PT. Bank BRI Wilayah I Jakarta. Jurnal Riset Perbankan Manajemen dan Akuntansi. 1(1): 45-53.
29. Solnet D and Hood A. 2008. Generation Y as Hospitality Employees: Framing a research agenda. *Journal of Hospitality and Tourism Management*. 15: 59–68. Doi 10.1375/jhtm.
30. Sopiha. 2008. Perilaku Organisasi. Yogyakarta (ID): Andi Offset.
31. Sudrajat WA dan Yuniawan A. 2016. Analisis Pengaruh Kepuasan Kerja Terhadap Kinerja Karyawan Dengan Motivasi Kerja Sebagai Variabel Intervening. *Diponegoro Journal of Management*. 5(3): 1-9.
32. Tolbize A. 2008. Generational Differences in The Workplace. Research and Training Center on Community Living. Minnesota (US): University of Minnesota. 1-21.
33. Triwijarnako R. 2016. Benarkah PNS Merupakan Karyawan Paling Puas Dengan Pekerjaannya. (July 22, 2016). Retrieved September 16, 2018 from Marketeers.com: <http://marketeers.com/benarkah-pns-merupakan-karyawan-paling-puas-dengan-pekerjaannya/>.

DOI 10.18551/rjoas.2019-02.09

**REVIEW ON THE INVESTMENT EVALUATION OF DEPARTMENT OF MARITIME AFFAIRS AND FISHERIES ASSET (COLD STORAGE) AT PARIGI MOUTONG REGENCY, CENTRAL SULAWESI, INDONESIA**

**Mardjudo Ahsan\*, Alatas Umar, Yahya Fachrudin A.**

Study Program of Fisheries Agribusiness, Faculty of Fisheries, University of Alkhairaat, Palu, Indonesia

\*E-mail: [ahsan.mardjudo@gmail.com](mailto:ahsan.mardjudo@gmail.com)

**ABSTRACT**

In general, this research aims to examine and analyze the investment evaluation on the development of cold storage as the local government asset. This research also aims to give suggestion to the Government of Parigi Moutong Regency in policy making that supports the asset utilization process in the economic development in Parigi Moutong Regency region, Central Sulawesi Province, Indonesia. Data collection in this study is done by conducting the direct survey in the location of cold storage development in Bolano Tengah Village regarding its existence and capacity and also by interviewing the related local government regarding capitalization and operational cost, as well as the impact of cold storage development in that region. The data is processed using financial and socio-economic analysis. The research results show that the value of NPV amounted to Rp20,601,212,191., Internal Rate of return (IRR) amounted to 47%., Net B/C Ratio 2.11., and a Payback period of 8.2 years. Hence, the development of cold storage is feasible and prospective to be carried out economically and financially. Socio-economically, the existence of the facility like cold storage in an area will affect the level of the community's income because it will encourage the economic activities. One of the real things is that the infrastructure development project in that region will attract the community to do economic activities such as selling crops or other food ingredients. These kinds of activities will add the value as well as increasing the community's income in that area. It will also open employment for the community around the area.

**KEY WORDS**

Investment evaluation, cold storage, community, development.

Cold storage is a room exclusively for storing goods that require cold temperature. The existence of cold storage is an inseparable part of a series of fishery activities in a primary sub-system, secondary sub-system, and tertiary sub-system. The tertiary sub-system is a fishery system that carries out handling, storage, transportation, and selling activities. This sub-system does not make any change to the fishery products but only held the products until there is the consumer who wants to buy it. Cold Storage for fishery has the functions as follows: a) Center for collecting fishery that will be marketed, b) Processing and/or preservation place of frozen fishery products that will increase the economic added value for business actors, c) Stabilizer for the price of fishery commodity in their region, d) The existence of Cold Storage create employment such as seller, labor, and staff, e) Means of training, internship, and development for students or community, f) Improve the regional economy through centrifugal effect that triggers the productivity of other sectors. Hence, it creates an income multiplier effect for Gross Regional Domestic Product/GRDP.

The Government of Parigi Moutong Regency, Central Sulawesi Province, Indonesia, through Department of Maritime Affairs and Fisheries has implemented several strategic steps through the program to improve the competitiveness of marine and fishery products. One of the strategies for the government to encourage the economic growth of the coastal community is by establishing infrastructures close to each other to be used to maintain the quality of the catch. The solution is cold storage. The development of cold storage program is a form of or part of the government investment that expect economic growth in the form of the increase of coastal community's income and the establishment of employment for the

community. The development of cold storage is expected to influence the economic changes for the coastal community (fisherman and cultivator in the sea).

The development of this facility is to provide fish storage needs for the fisherman and seller before it is marketed. The purpose of this storage is to keep the quality of catch as well as to guarantee their goods during the handling and marketing processes. In general, the establishment of fish cold storage factory is expected to increase the sales value of fisherman's catch and the seller. This will automatically improve the welfare value and standard of living of coastal community where most of its people work as a fisherman. The effort to develop fishery business through the improvement of marketed product quality in the regional level up to international requires the support of the existence of various fishery facilities (infrastructure) such as cold storage facility.

Establishment and development of fishery infrastructure in every region are expected to be the center of the economic center in order to improve production, processing, and marketing in local, national, and international scales. Furthermore, Lubis (2002) explained that the development of the fishery economy should be supported by the fishery industry both in the upstream and downstream. In addition, there should be the development of human resources, especially the coastal community.

The realization of cold storage that is capable to play its role maximally is not a burden of one party. In this case, the local government is the sole party. More likely it is a synergistic effort from various parties such as Government (center, province, and regency/city) as the administrator and/or donor. Private party as the donor and stakeholder on this fishery facility, the community as its economic units and University as the contributor for opinion/analysis on the step/strategy to be taken to achieve optimum cold storage function. Related to the effort in realizing the cold storage facility in Parigi Moutong Regency, the study on "the Investment Evaluation of Department of Maritime Affairs And Fisheries Asset (Cold Storage) In Parigi Moutong Regency Sulawesi Tengah" is important to do because the review on the level of operationalization feasibility of cold storage currently and in the future include various main aspects such as environment, social, and economy (financial) technical. The purpose of investment evaluation on the development of cold storage as the local government asset is to give input to the Government of Parigi Moutong Regency in the decision making that supports the utilization process of the asset in the economic development in Parigi Moutong Regency area.

## METHODS OF RESEARCH

*Theoretical Framework.* Based on Law No, 31 of 2004 which is amended in Law No 45/2009 Fishery is all activities related to the management and utilization of fish resources and their environment ranging from preproduction, production, processing to marketing carried out in a fishery business system. Meanwhile, the fish resources are the potential of all types of fish. Fish itself is all types of organisms that where its life cycle is in the aquatic environment is wholly or partly (cited from Primyastanto, 2011).

One of the absolute needs required to encourage fishery industry activity and realize the program of improving the welfare of the coastal community is by providing adequate facility and infrastructure. The facility and infrastructure here are fishery ports equipped with other supporting facilities as the basis of activities to procure fisheries production on the coast and become the center of communication between activities in the sea and land area (Murdiyanto, 2002).

The establishment of the fish port or fish catch landing dock (PPI) in an area is expected to anticipate the development of existing fisheries activities in an effort to improve the economy of the fisheries sector (Directorate General of Fisheries, 1981). According to Rukhimat (1992), fish catch landing dock (PPI) is a place for fishermen to collect their catch or as the fish port in a smaller scale.

According to Bagakali (2000), the building facility for fish auction plays an important role because it can increase the economic value of fishery production landed in the port. The auction building is a core part of all facilities in the fishing port and supporting facilities and

infrastructure. The success of fisheries activities, especially fishery catch, cannot be separated by the availability of adequate supporting facilities and infrastructure. Some of the facilities that are closely related to the development of special fisheries for marine fisheries are Fisheries Port (PP) and Fish Catch Landing Dock (PPI).

According to Sunariyah (2003), investment is capital investment in one or more owned assets. It usually has a long-term period in the hope of gaining profits in the future." Today, many countries carry out policies to increase both domestic and foreign investment. This is done by the government because investment activity will encourage the economic activities, employment, improvement in the generated output, exchange saving or exchange improvement of the country.

According to Husnan (1996), the investment project is a plan to invest resources both in large and small projects to obtain benefits in the future. In general, these benefits are in the form of the value of money. Meanwhile, capital can be in the form other than money such as land, machinery, building, and others. However, both the investment expenditure side and the obtained benefits must be converted into the value of money. An investment plan should be analyzed thoroughly. The analysis of the investment plan is basically research concerning whether a project (either large or small) can be implemented successfully or not. It can also be stated as an exploratory method of a business idea about the possibility of whether the business idea is feasible or not.

An investment project generally requires large fund and it will affect the company in the long term. Therefore, careful investment planning is required to avoid investing in an adverse project.

According to ([www.sinarharapan.co.id/ekonomi/eureka/2003/021/eur1.html](http://www.sinarharapan.co.id/ekonomi/eureka/2003/021/eur1.html)), some of the reasons to invest are (a) Productivity of a person that keeps declining (b) the uncertainty of the economic environment that allows the possibility where income is much smaller than expenditure (c) Basic needs that tend to increase.

Investment for business will face two alternatives namely profitable investment and adverse investment. Therefore, a feasibility study must be done before making the decision to invest in a certain amount of funds. The purpose of this feasibility study is to find out whether the business carried out is feasible or not. Investment assessment functions as a planner as well as an evaluation of a project or work carried out in accordance with the planning (Riyanto, 2002). Furthermore, investment is the entire planning and decision-making process regarding the expenditure of funds where the period of return of the funds exceeds a year.

According to Fattah (2002), investment or capital budgeting put by someone or company is the policy taken to issue a number of funds both for business development and to get certain benefits. And good planning process should be carried out to ensure that the fund will quickly return to the case within a certain period of time. A certain level of profit from the results of the business can be used as working capital.

The existing investment in the company should be utilized at best. The reason is that the wrong use of investment can be detrimental to a business that will be carried out. This means that investment is always oriented to the profits derived from a business or company. Hence, the issued investment not only can be returned on time but can also provide certain benefits for the company.

In the calculation of national income and statistics, investment covers a wider range. In the calculation of national income, investments cover: "The whole purchasing value of entrepreneur on capital goods and spending to establish industry, public expenditure to build houses and residences, increase in the value of the stock of goods in the form of raw materials, unprocessed goods, and finished goods. (Sukirno, 1994)

In the Keynesian model, it is assumed that all income must be spent for consumption or must be saved, and the amount of economy can be divided into two which are between expenditure on consumer goods and capital goods, and the position of balance in the economy is determined when the amount of revenue equals the amount of expenditure. Hence, investment is equal to saving.

In relation to the company where it makes an investment to get the maximum profit, where one of the investment funds comes from public funds that are deposited in financial institutions, it can be stated that: Investment is the overall expenditure of the company which includes expenditures to buy raw materials, machinery and factory's equipment and all other capital needed in the production process. The expenditures are for office building utilities, factory where employees live and other construction buildings. The changes in stock value or reserve goods are the results from the changes of amount and price". (Deliarnov, 1995)

In carrying out company activities, investment is one of the things that have a very important role. The reason is that investment is related to how a group of people or organization will make a business or company. Hence, it requires the fund to support its business operations. In this case, the fund is a very important part to finance the operational activity of the company.

To analyze the purpose of this research, several approaches or methods are carried out in the investment evaluation. Application of investment evaluation method as an analytical tool is to determine the level of business feasibility in investing. The purpose of this assessment is to avoid wasting the budget and it can also assist in the use of fixed capital and current capital to avoid payment for substantial capital interest expenses. The feasibility of an investment can be assessed by equipment or profitability method, revenue cost ratio (RC ratio) and Break Event Point (BEP) analysis for a short-term period. Long-term analyses are Payback Period (PP), Net Present Value (NPV), Internal Rate of Return (IRR) and Profitability index (PI) or Benefit Cost Ratio (BCR).

*Research Site.* Review on the Investment Evaluation of the Department of Maritime Affairs and Fisheries Asset (Cold Storage) In Parigi Moutong Regency, Central Sulawesi Province, Indonesia. The research site was in Bolano Tengah Village at Parigi Moutong Regency.

*Data Collection Method:*

Literature study is conducted by a team to get a theory that can help in analyzing the investment feasibility and the renting fee of cold storage asset of the Department of Maritime Affairs and Fisheries Parigi Moutong Regency.

Conducting a direct survey in the cold storage development location in Bolano Tengah Village concerning its existence and capacity it has

Conducting interviews with the government regarding business processes related to capital and operating costs needed, interview with the fishermen to find out the revenue and income from the fishing business they carry out an interview with the community related to the impact of the construction of existing cold storage.

Taking pictures at the study location used camera equipment. The images include: cold storage infrastructure, the condition and activities of the fishing community, the condition of fisheries and marine resources and others.

*Data Analysis.* Data to be analyzed come from the secondary and primary data that were collected during the field survey. Data analysis was carried out qualitatively for socio-economic and cultural aspects of data. Meanwhile, data on economic/financial aspects will be analyzed quantitatively with economic tools. They are income analysis, Payback Period (PP), Net Present Value (NPV), Internal Rate of Return (IRR) and Benefit Cost Ratio (BCR), as well as socio-economic impact analysis towards the coastal community.

## **RESULTS AND DISCUSSION**

*Analysis on the Potential of Fishery Resources and Marketing Pattern of the Catch.* The potential of fishery resources in Parigi Moutong Regency is quite big both for catch fishery or the cultivation. According to the Agency for Marine and Fisheries Research (2004), Parigi Moutong Regency has a coastline of 472 kilometers and a catch area of  $\pm 28,208$  km<sup>2</sup>. With such potential, it is estimated that it has a sustainable potential of catch fisheries of 587,250 tons per year, consisting of large pelagic fish of 106,000 tons, small pelagic fishes of 379,440 tons, demersal fish of 83,840 tons and other fish species of 17,970 tons. In term of fishpond products according to the Department of Maritime Affairs and Fisheries of Sulawesi

Tengah (2006), Parigi Moutong Regency is the milkfish producer area with a harvest area of 3,362 ha and production of 12,335.3 tons and productivity of 3.6 tons/ha. But over time, the harvest area for fishponds (milkfish and shrimp) spread throughout the sub-district area of 6,875.7 ha in 2017. Most of the land is productive land to be developed. Hence, people in Parigi Moutong Regency continue to strive to increase the productivity of milkfish pond cultivation.

The fishery resource is one of the national assets that must be managed properly. Improvement in the science and technology fields is expected to be able to support the management of fisheries resources. Hence, it can improve the quality and quantity of fisheries production as a foreign exchange earner. The fishery is an economic activity where humans seek their fishery natural resources sustainably in order to get the maximum benefit for the welfare of mankind. The development of the fisheries sub-sectors aims to improve the welfare of fishermen and fish farmers towards the realization of a fair and prosperous society. According to Law of Republic of Indonesia No. 31 of 2004 jo. Law No. 45 of 2009 concerning Fisheries stating that activities that are included in the fisheries start from preproduction, production, processing to marketing, which are carried out in a fisheries business system.

In order to utilize the existing natural resources potential, especially the one concerning the development of fisheries in a broader meaning, an approach through the product is carried out. That is planning the development of catch fisheries and aquaculture areas. Conception about the development of aquaculture areas in spatial planning is more directed to how to provide spatial management direction for a fishery area, especially the regional fisheries production center area. Planning for development of catch fisheries and aquaculture areas is an effort to utilize the existing land/potential in overcoming the problems faced in the management and arrangement of fisheries in rural areas. Management of catch fisheries and aquaculture space is the direction of policy and strategy for spatial use for fisheries and other fisheries-based businesses on a

An aquaculture area that has been developed should have the following characteristics:

1) Most community activities in a coastal area are dominated by fishing and aquaculture activities in a whole and integrated system starting from:

a. Upstream minabusiness subsystems include: research and development, fishery facilities, capitalization, and others;

b. Catch/aquaculture business subsystem which includes the business of: fish seeding, fish enlargement and provision of aquaculture facilities;

c. Downstream minabusiness which includes: processing industries (freezing, fumigation, scanning) and marketing includes trade for export activities,

d. Subsystem support services (activities that provide services for minabusiness) such as: credit, insurance, transportation, education, counseling, infrastructure, and government policy.

2) There is a connection between urban and rural linkages that are reciprocal in which they need each other, where aquaculture area in the countryside develop cultivation (on farm) and processed products on a household scale (off farm), on the contrary the city provide facilities for the development of cultivation and business activities such as the provision of fisheries facilities such as: capital, technology, information, fishing equipment and so on;

3) The activities of most of the community in that area are dominated by aquaculture activities, including industrial business (processing) of fishery products, trade in fishery products (including trade for export activity), upstream trade minabusiness (fisheries and capital facilities), mina tour and services.

*Analysis on the Socio-Economy Condition of the Community.* The existence of the facility like cold storage in an area will affect the level of the community's income because it will encourage the economic activities. One of the real things is that the infrastructure development project in that region will attract the community to do economic activities such as selling crops or other food ingredients. These kinds of activities will add the value as well

as increasing the community's income in that area. Mardjudo A., and Yasin Muhammad (2017) stated that the activities of the coastal community including fishermen who can bring household income are activities in the field of fisheries and non-fisheries. Fishery business includes all of the activities related to the catching fish and processing of catch fish. Whereas non-fisheries are all activities related to the activities of selling agricultural products, becoming construction workers and becoming security in the company in coastal areas which is not engaged in fisheries.

The development of cold storage by the Department of Maritime Affairs and Fisheries as the asset of the local government of Donggala Regency receives a good response by the surrounding community and community in general in that region. The survey results show that the cultivating and fishing communities strongly support the existence of cold storage on the grounds that it makes it easier for them to sell fishpond and catch fish. On the other hand, they revealed that the cold storage factory (local reading) was very good because it was clear about the market and the price at which we brought the existing production.

In this social impact sub-chapter, direct observation in the field shows that the construction of cold storage from environmental aspects will not cause pollution because there is no waste from activities in cold storage that can cause environmental pollution. As a brief description of the activities in the processing process including the stages of measurement of the size, product weighing, entering in ABF until the packing process almost do not create any waste that can pollute the environment.

Analysis of the economic impact on the development of cold storage is expected to give the chance or opportunity to the community in this area such as being the workers. In reality, the workers who are involved in cold storage processing consist of permanent and temporary workers. Permanent workers are recruited from the qualification requirements of having a high school education, Diploma, and Bachelor degree. Meanwhile, non-permanent staff or freelancers are recruited from those who have a junior high school, elementary school, and even elementary school qualifications. In this study, we need to explain briefly that the task of non-permanent staff is a measurement of size (there is already a standard for it), weighing, and laying down and processing the product in maintaining the quality of fish with ice that has not been entered into the ABF.

In the economic aspect of natural resources, the existence of cold storage encourages the community to have production equipment and patterns of use or utilization of fish cultivation land specifically for community fish cultivation business. The ownership pattern of production tools or technology becomes very important in improving the production as well as improving the community's household income. According to Mardjudo A., et.,al (2016), the improvement of coastal community or fishermen household income can be done through the improvement of husband's efforts in the fisheries field. Therefore, the existence of cold storage as the government program has generally encouraged the improvement and welfare of the community.

The purpose of the government in investing or developing the asset in an area is expected to be the center of economic growth. One of the indicators as the center of economic growth is that every infrastructure facility has always been proven by the opening of production roads which can be followed by the desire of the community to build settlement house in the region. By using this, the construction of public facilities such as educational infrastructure and religious service are the priority of the government in that region. The expectation for contribution to the income of local revenue (PAD) will be realized when there are economic activity and growth.

The construction of cold storage in the Parigi Moutong Regency can be realized and it has environmental social economic benefits in a sustainable manner by considering the following matters.

Given the huge amount of costs needed in the construction of cold storage facilities and the operationalization of daily activities, there should be a capital sharing between local government and business actors who have a high interest in investing in fisheries Even if this facility is fully funded and run by the private sector, there must be coordination and monitoring by local government and the community to avoid monopolistic phenomena that

can have a major impact on community fisheries business (for example, stagnancy in fisheries product distribution and various expensive retribution which ultimately affect the reduction in profit).

At the beginning of the year of the construction of cold storage until the end of the business period ended, it was ensured to be able to overcome unfavorable conditions as presented in the financial sensitivity analysis

Managers and the Department of Maritime Affairs and Fisheries must be able to maintain the continuity of fish raw materials per month. Efforts that can be made are to establish cooperation or partnership with producers of milkfish/shrimp/tuna (farmers, fishermen, and collectors) in and outside Parigi Moutong Regency by paying attention to several things, namely:

- Purchasing of tuna/milkfish/shrimp at prices that are in accordance with local collectors or fisheries agents in the city of Surabaya. Shrimp purchase is made in cash and a delay in payment should not exceed 1 day;
- Providing incentives for each quantity of tuna/milkfish/shrimp sold by producers to managers in the form of money, prices, goods, and others as bonuses;
- Provision of price information on a regular basis which can foster a sense of trust in producers of cold storage managers;
- Providing socialization and information on business development;
- If the cold storage has been able to achieve the desired profit, there should be an effort for lending or capital strengthening credit to producers (fishermen/cultivators), this can provide a social bond between the producers and cold storage managers;
- Stipulated rent cost as an attraction for prospective cold storage users, as well as the benefits they get from the existence of this facility;
- It is necessary to do socialization on the existence of cold storage facilities in Bolano Tengah to sellers in the Parigi region and its surroundings. Thus, they can utilize these facilities to maintain the quality of goods in the form of fish for a certain period of time to be sold the next day. Hence, the level of loss of traders due to unsold goods can be kept to a minimum.

Table 1 – Operational and Maintenance Cost of Cold Storage per Month

No	Component	Total (Rp.)
	Capital Modal	
A.	Non-Fixed Cost	
1.	Milkfish Purchase	
	- Size 5 – 10	143,000,000
	- Size 11 – 12	77,000,000
	- Size U – 12	24,000,000
2.	Transportation cost (Bolano-Pantoloan)	5,000,000
3.	Freelance worker salary (30 people)	6,300,000
4.	Electricity	14,000,000
5.	Ice	1,500,000
6.	Dos	1,500,000
7.	Raffia Rope	500,000
8.	Plastic Wrap	750,000
	Total Cost (A)	273,550,000
B.	Fixed Cost	
	- Fuel	2,000,000
	- Labor	11,250,000
	- Maintenance	5,000,000
	- Depreciation	16,291,238
	Total Cost (B)	28,826,238
C.	Total Cost (A+B)	308,091,485

Source: Primary processed data, 2018.

*Economic and Financial Analysis.* Input that is distinguished by fixed input and variable input is required to get frozen fish production. Fixed input is input in which its amount does not depend on the amount of output of catch and aquaculture fish commodities. Meanwhile,

variable input is the input that only depends on the number of entered or supplied fish from producers (fishermen or fish farmers).

**Investment Fee.** The survey results show that cold storage factory is very suitable to be built in Bolano Tengah Village Parigi Moutong Regency with a land area of 2,500 m<sup>2</sup> which is owned by Department of Maritime Affairs and Fisheries of Parigi Moutong Regency. This factory is equipped with facilities and infrastructure and other supporting facilities such as processing rooms, frozen fish storage, sources of clean water, security fences, and electricity using PLN and/or generators. It is estimated that the amount of investment fee required for the construction of Cold Storage Rp. 1,544,550,532 (Bolano Tengah Village).

**Operational and Maintenance Cost.** The operational activity of cold storage, especially in terms of purchasing fish raw materials, freezing process and selling outside the area requires operational and maintenance costs for the assets owned. The amount of operational and maintenance costs for each month is estimated at Rp.308,091,485. With the highest operational costs absorbed by the procurement (purchase) of fish raw materials at an average price of Rp. 10,500, - per kilogram an average of 30 tons per month amounting to Rp. 244,000,000. Electricity supply is assumed to come from PLN and Generator. The need for operational and maintenance costs is shown in Table 1.

**Production and Revenue from Frozen Fish Processing Facilities.** Production capacity is carried out by approaching the availability of raw materials, assuming that the establishment of cold storage is intended to absorb the production of milkfish/tuna and shrimp produced by fishermen and cultivators in the Parigi Moutong Regency without ignoring the requirements of the Good Aquaculture Product. Production generated from the Cold Storage (capacity of 30 tons) includes monthly sales of fish for an average of Rp. 432,000,000 with the following assumptions: frozen fish production takes 10-12 hours (ABF process) as much as 1-3 tons. Hence, in a month (30 days) it ranges from 20-30 tons per month for the first year to the third year with estimates of production of both marine and ponds products that are still fluctuating and the assumption of revenue and sales in a year is only 10 months.

Table 2 – Estimated Production and Annual Cold Storage Revenues

Year	Month	Production (kg)	Price average	Income
1	10	210,000	13,333	2,799,930,000
2	10	240,000	13,333	3,199,920,000
3	10	300,000	13,333	3,999,900,000
4	10	400,000	13,333	5,333,200,000
5	10	600,000	13,333	7,999,800,000
6	10	700,000	13,333	9,333,100,000
7	10	800,000	13,333	10,666,400,000
8	10	900,000	13,333	11,999,700,000
9	10	1,000,000	13,333	13,333,000,000
10	10	1,200,000	13,333	15,999,600,000

Source: Primary Processed Data, 2018.

Table 3 – Net Cash Revenue of Cold Storage Utilization

Year	Income	Depreciation	Net Cash (Process)
1	19,085,147	162,914,853	182,000,000
2	99,085,147	162,914,853	262,000,000
3	284,085,147	162,914,853	447,000,000
4	559,085,147	162,914,853	722,000,000
5	3,399,085,147	162,914,853	3,562,000,000
6	5,059,085,147	162,914,853	5,222,000,000
7	6,239,085,147	162,914,853	6,402,000,000
8	7,754,085,147	162,914,853	7,917,000,000
9	9,339,085,147	162,914,853	9,502,000,000
10	9,339,085,147	162,914,853	9,502,000,000

Source: Primary Processed Data, 2018.

*Projection of Profit and Loss.* The projection of profit and loss shows that the first year of this business has obtained Net Cash (Profit) of Rp. 182,000,000. The acquisition of details of operating profit losses from the sale of frozen fish from fish processing can be shown in the following table 3.

*Projection of Financial Feasibility.* Business cash flow projection of fish freezing for 10 years can be shown in the table. Business feasibility can be analyzed by analyzing return period, Internal Rate of Return, Net Benefit Cost Ratio, and Net Present Value. The results of the analysis using the Excel Finance program is shown in table 4.

Table 4 – Business Feasibility of Cold Storage Utilization

No	Feasibility criteria	Value	Description
1	NPV DF 12 %	20,601,212,191	feasible
2	IRR (%)	47	Feasible
3	Net B/C Ratio	2.11	Feasible
4	Payback Period	8.2	Feasible

Source: Primary Processed Data, 2018.

The existence of cold storage facilities in Parigi Moutong Regency is estimated to be able to produce a total discounted benefit of 10 years for its managers amounted to Rp. 1,450,415,385.20 with a net value (NPV) of Rp. 20,601,212,191. This provides an interpretation that net profit accumulation will be obtained during the period of the project in the future with the present value at the amount of that NPV. Financially, the development and utilization of cold storage are feasible and prospective to be implemented because the NPV value is above 0.

Internal Rate of Return (IRR) Based on the internal rate of return, the existence of prospective cold storage is carried out because the investment invested in the initial year is able to provide a profit of 47% (IRR > OCC 12.00%) during the operation (10 years). Owned investment capital will be more effective in generating economic benefits if it is invested in the construction project and utilization of cold storage compared to when the capital must be deposited in commercial banking. While in the implementation of cold storage operational activities, especially in the case of fish freezing, a Net BC value ratio of 2.11 is produced. It means that the generated profit during the cold storage business operational has amounted to 2,11 times of the total investment costs incurred. For the return on investment in operational use of cold storage, it shows that the payback period is 8.2 years. Hence, it is feasible to be implemented before the management period of 10 years. After the Payback period, the fish freezing facility will provide benefits for 1 year 10 months for the manager.

## CONCLUSION

The feasibility and business financial analysis of the cold storage is used to obtain a financial picture of business income and costs, business capacity and feasibility. These calculations require basic calculations based on the results of the survey and observation in the field.

Cold Storage Factory in Bolano Tengah Village Parigi Moutong Regency has a land area of 2,500 m<sup>2</sup>. This factory is equipped with facilities and infrastructure and other supporting facilities such as processing rooms, frozen fish storage, sources of clean water, security fences, and electricity using PLN and/or generators. It is estimated that the amount of investment fee required for the construction of Cold Storage Rp. 1,544,550,532.

The operational activity of cold storage requires operational cost and maintenance cost for its assets. The amount of operational and maintenance costs for each month is estimated at Rp. 308,091,485 consisting of fixed cost amounted to Rp. 34,541,485, - and non-fixed cost amounted to Rp. 273,550,000. With the highest operational costs absorbed by the procurement (purchase) of fish raw materials at an average price of Rp. 10,500,- per kilogram.

Frozen fish production takes 10-12 hours (ABF process) as much as 1-3 tons. Hence, in a month (30 days) it ranges from 20-30 tons per month for the first year to the third year with estimates of production of both marine and ponds products that are still fluctuating and the assumption of revenue and sales in a year is only 10 months. Production generated from the Cold Storage (capacity of 30 tons) includes monthly sales of fish for an average of Rp. 432,000,000. Commodity needs of fish to be frozen depending on the availability of catch production and cultivation from the community, the readiness of the fish freezing factory and the market in receiving the product.

The existence of cold storage facilities in Parigi Moutong Regency is estimated to be able to produce a total discounted benefit of 10 years for its managers amounted to Rp. 1,927,930,343, - with a net value (NPV) of Rp. 18,708,257,250 ,-. This provides an interpretation that net profit accumulation will be obtained during the period of the project in the future with the present value at the amount of that NPV. Financially, the development and utilization of cold storage are feasible and prospective to be implemented because the NPV value is above 0.

The investment invested in the initial year was able to provide a profit of 47% and 38% (IRR > OCC 12.00%) during the operational operation (10 years). The average Net BC ratio is 1.76. It means that the generated profit during the cold storage business operational has amounted to 1,76 times of the total investment costs incurred. For the return on investment in the operation of cold storage utilization, it is illustrated that the average return time for 2 locations for cold storage construction is 7.4 years. Thus, it is feasible to be implemented before the management period of 10 years. After the Payback period, the fish freezing facility will provide an average profit of 2.8 years for its managers.

## REFERENCES

1. Bagakali, 2000. Pedoman Pengoperasian, Pengelolaan and Perawatan Pelabuhan Perikanan. Pusat Kajian Sumberdaya Pesisir and Lautan, IPB Bogor.
2. Dinas Kelautan and Perikanan Sulawesi Tengah, 2006. Annual Report.
3. Ditjen Perikanan, 1981. Standar Rencana Induk and Pokok-pokok Desain Untuk Pelabuhan Perikanan and Pangkalan Pendaratan Ikan. Jakarta: PT. InconeB.
4. Lubis E, 2002. Pengantar Pelabuhan Perikanan. Teaching Handbook, Mata Kuliah Pelabuhan Perikanan, Fakultas Perikanan and Kelautan IPB.
5. Mardjudo A., Koestiono., Mustadjab, Hanani., 2016. Simulation of Household Economic Policy to Improve Small-Scale Fisherman's Income, Using Rural Rice-Fish Development Program in Donggala, Indonesia. International Jurnal of Management and Administrative Sciences (IJMAS).
6. Mardjudo A., and Yasin Muhammad., 2017. Household Economic Model to Improve small-scalale Fisherman Income at Rural Minapadi (Rice-Fish System) Development Program In Donggala, Central Sulawesi. Russian Journal of Agricultural and Socio-economic Sciences. DOI: <https://doi.org/10.18551/rjoas.2017-10.35>.
7. Murdiyanto, B. 2002. Pelabuhan Perikanan. Bandung: Fakultas Perikanan and Kelautan IPB.
8. Primyastanto, M. 2011. Feasibility Usaha Perikanan sebagai Aplikasi dari Teori Studi Kelayakan Usaha Perikanan. Malang: UB Press.
9. Riyanto B., 2002. Pembelanjaan Perusahaan edisi ke empat. Yogyakarta: Penerbit Yayasan Gadjah Mada.
10. Rukhimat E., 1992. Studi Pengembangan Pangkalan Pendaratan Ikan and Kemungkinan Pengembangannya. Bandung: Fakultas Perikanan and Kelautan IPB.

DOI 10.18551/rjoas.2019-02.09

## **DESIGN OF MOTOR CONTROL SYSTEM ON THE SOLAR DISTILLATION OF PARABOLIC TYPE TO REDUCE SALINITY LEVELS OF SEA WATER**

**Pabiban Duma\*, Namas Mikael, Therik Johannis W.D.**

State Polytechnic of Kupang, Indonesia

\*E-mail: [hendromeda@gmail.com](mailto:hendromeda@gmail.com)

### **ABSTRACT**

The purpose of this research are: 1) designing a motor control system to drive the parabolic type solar distillation by utilizing 2 pieces of time sensor and a light sensor to obtain the more result of seawater distillate into fresh water; 2) To get the results of distillate (freshwater) in the amount/volume from the evaporation results; 3) the final result of this study is a parabolic type product that is controlled by a motor. The place to conduct this research was conducted at the Physics Lab of Kupang State Polytechnic. The research method used in this study is the method of experimental and action (action research). Research material: 1 solar unit of parabolic type; The research tool consists of: Arduino Uno, 1 piece; Limit Switch, 2 piece; Light sensor (LDR), 2 piece; Real Time Clock DS1307, 1 piece; Driver Motor H-Bridge Module, 1 piece; Motor DC (Actuator Linear, stroke 65 cm), 1 piece; Power supply 12 V 10 A, 1 piece; Switch power, 1 piece; Pushbutton, 2 pieces. The results of this study were obtained in 2 system modes designed, namely automatic solar tracking based on time and automatic solar tracking based on detection by light sensors. The solar tracking system on this system uses an axis horizontal system, namely the parabolic type of solar moves one direction from east to west and vice versa. Automatic solar tracking based on the time in this system, the parabolic direction movement mode is based on the parabolic time moved from east to west in line with the direction of the solar movement designed to switch direction every 15 minutes. The output target produced by this research is to produce a product/model of motor control system to drive the parabolic type solar distillation so that obtained the parabolic focus point of sunlight reflection towards evaporation container so that in the end it produces freshwater distillates.

### **KEY WORDS**

Distillation, parabolic type, salinity, motor control system.

The availability of clean water is a rare item and is a major problem in coastal areas. The supporting of clean water availability in coastal areas of the city, such as the city of Kupang is by consuming water from wells, PDAM/local Water Company and reverses osmosis, which now has spread around the edges of the road. In order to get clean water to meet their daily needs for cooking, drinking water, washing and bathing, the community must pay high costs, (Kupang City Statistical Center Agency, 2013).

The effort that can be made to provide clean water is by utilizing existing water sources, one of them is sea water. Sea water is water that comes from the sea, has a salty taste and has a high salinity. To treat the seawater so that it can be used as drinking water, then need to be conducted by designing a parabolic type solar distillation system model tool so as to reduce the salinity level of seawater to be used as drinking water.

The research results from Duma P. et al (2016) known that the average result of distillates is 160,71 ml, temperature 90,33°C and solar heat intensity 664,52 w/m<sup>2</sup>. The weaknesses during the implementation of research activities are the presence of weather factors such as cloudy, rain, wind and how to focus the parabolic on the focal plane (heating container) resulting in reduced volume of distillate (fresh water). Although this research has been conducted to distill sea water into fresh water with a volume that is still lacking due to disturbing factors, further research is needed by means of a solar parabolic control system towards sunlight to obtain a larger volume of distillate results. In this follow-up research is conducting research to use a motor and sensor control system as a solar tracker so that

solar parabolic gets higher solar exposure throughout the working day. So that obtained constant reflection result towards the container of seawater.

In the past research, the results of distillates have been given even though the distillate volume is still small because it is influenced by weather, wind and rain factors, and how to focus on heating containers. Although the tool designed has produced distillate (freshwater) but has not provided maximum results (distillate results are still lacking), this is due to how to focus the solar parabolic on the evaporation container still in manual condition. When using a motor control system and sensors, it is expected that the device will provide distillate results or increase the volume of fresh water.

Based on the description of the background, the problem formulated in this study is: 1) how to design a motor control system to drive a parabolic type of solar distillation to produce sea water distillate into fresh water?; 2) how to design a motor control system to drive parabolic solar distillation to get distillate (fresh water) results. While the purpose of this study are: a) designing motor control systems to drive parabolic solar distillation with 2 automatic solar tracking systems using 2 light sensors and automatic solar tracking based on time (*Time Limit Swicth*); b) with the design of the control system it is expected to produce sea water distillate into fresh water from the evaporation container; c) the final result of this study is a parabolic type product which is controlled by an electric motor. The benefits of this study are: a) making this parabolic type solar product to distill sea water into fresh water by utilizing a solar tracking system; b) creating the parabolic solar products to distill seawater into fresh water driven by a motorized control system automatically; c) these products can be used by people who live around the coast by utilizing sea water as fresh water as a quality standard for drinking water.

## METHODS OF RESEARCH

This research is a type of action and experimental research. Action research includes several stages, namely the approach of the tool design, the stage of tool making and stage of tool testing and testing of seawater samples.

The location for conducting this research activity is carried out at the Physics Laboratory, State Polytechnic of Kupang. Adisucipto Penfui Street, Kupang Municipality. East Nusa Tenggara Province.

This research activity lasted for 4 months , This research consists two stages, namely: The preparation stage includes: inventory of materials and equipment; design of parabolic type solar distillation devices; The implementation stage includes: parabolic distillation mechanical work; program making; motor installation; as well as measurement; measurement of solar intensity; measurement of sea water distillation results (distillate results); data collection; data analysis; report/seminar results; and publication.

The type of data in this study consists of primary data and secondary data. Primary data namely data that is directly obtained from the field in the form of results of data measurements from the distillation process result data and other supporting data. Secondary data are the documented stored data and data derived from previous research, from journals and other books.

Data analysis techniques in the study are:

- Measuring the volume of results of distillate (fresh water) in the evaporation container during the research takes place using a motor control system and light sensors starting from 6:00 to 18:00 p.m.;
- Conducting measurement (distillation result) in the parabolic type solar distillation system from 6:00 a.m. to 18:00 p.m.;
- Data processing;
- Conclusion.

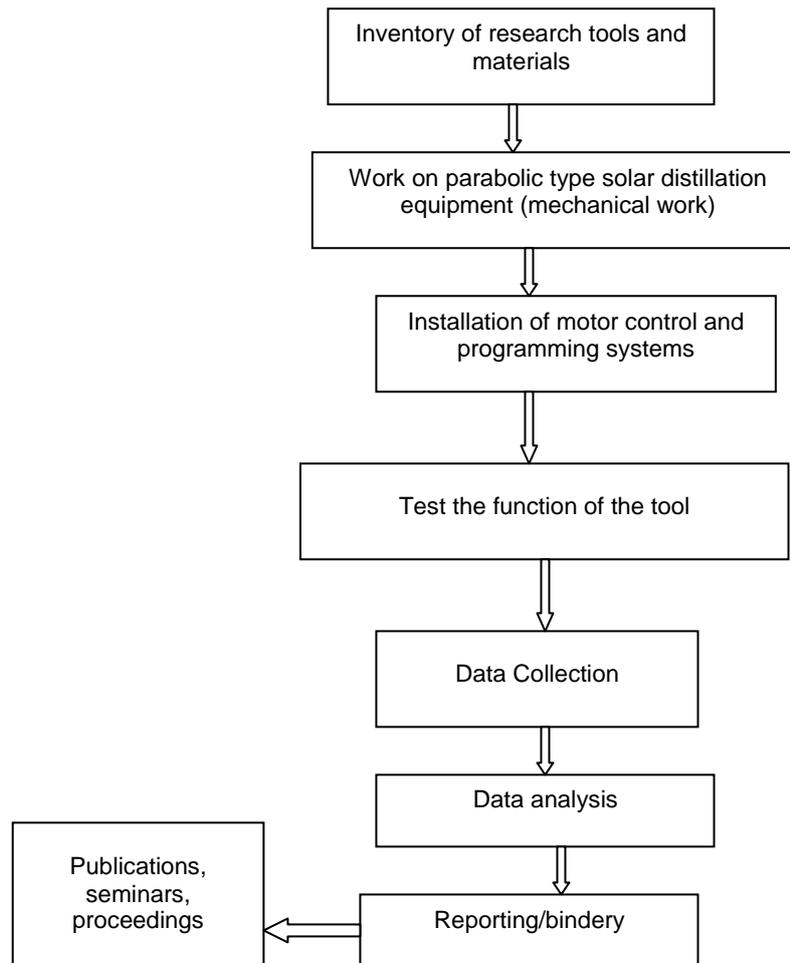


Figure 1 – Research Design

## RESULTS AND DISCUSSION

The implementation of mechanical work begins with the work of welding the iron profile frames as a stand from parabolic type solar distillation. The work on parabolic welding is made in a circle form. Above a parabolic surface, a flat mirror is installed by attaching all the parabolic surfaces evenly; this mirror serves to reflect sunlight towards the evaporation container so that it can accelerate heating in the container. As for the specifications/sizes obtained namely: a) parabolic diameter 1,86 cm; b) height 1,55 cm; c) the maximum volume of the evaporation container up to 2 l; d) the parabolic surface area 2,72 m<sup>2</sup>; e) surface area of the evaporation container 0,0394 m<sup>2</sup>.

To drive the parabolic type solar distillation is used a linear actuator with the solar tracking system method, on this system using a horizontal axis system that is parabolic solar distillation moves 1 direction from east to west and vice versa. The system designed can work in 2 modes, namely: Tracking the solar automatically based on time; Tracking the solar automatically based on detection by sensors.

The purpose of making these 2 modes, so that the system can still work if one mode is interrupted.

Broadly speaking, the control system components that are used in this system: Arduino Uno, 1 piece; Limit Switch, 2 pieces; Light sensor (LDR), 2 pieces; Real Time Clock DS1307, 1 piece; Driver Motor H-Bridge Module, 1 piece; Motor DC (Actuator Linear, stroke 65 cm), 1 piece; Power supply 12 V 10 A, 1 piece; Switch power, 1 piece; Push Button, 2 pieces.

The figure below shows the relationship among the components that build the control system. Details can be seen in Figure 2.

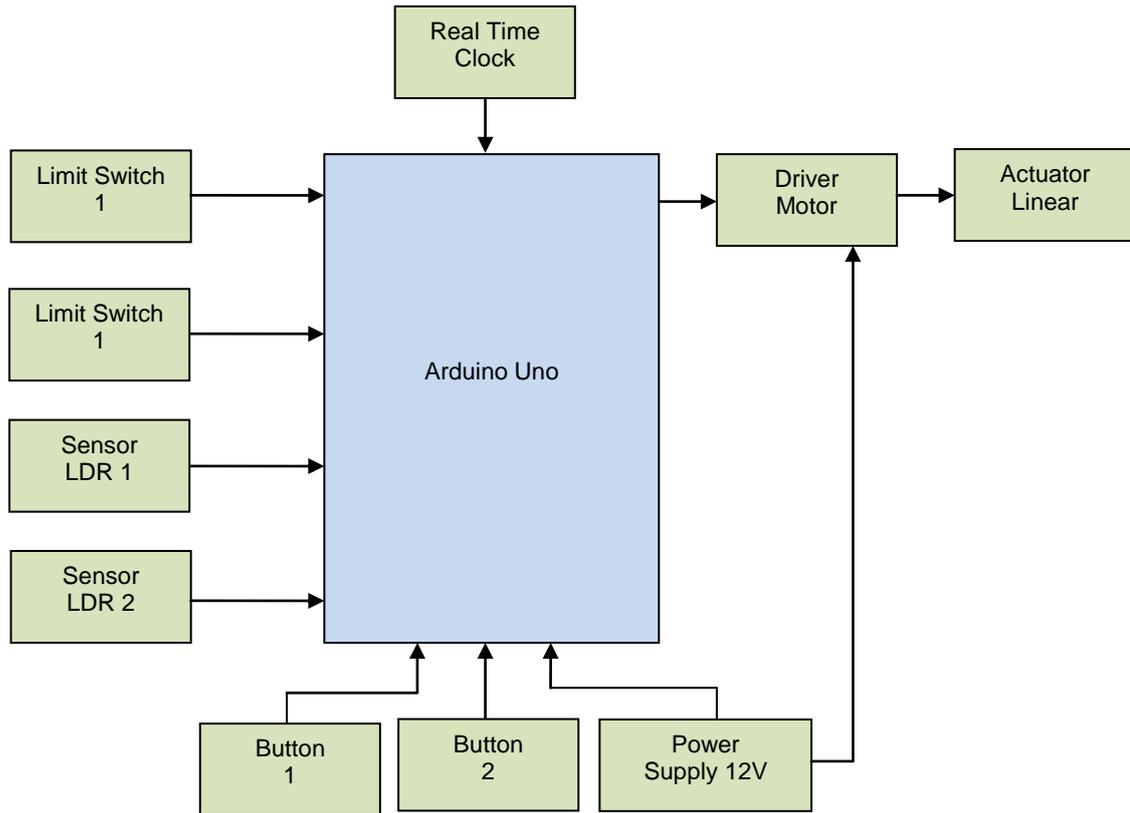


Figure 2 – Block diagram of the Solar Tracking Control System

Description of block diagrams and the circuits:

a. Arduino Uno: An electronic circuit board, with the main component of the ATmega 328 microcontroller chip. Its function here as the brain or processor of the control system.

b. Actuator linear: the output from the system which functions to push or pull down the parabolic face according to the system command. Actuator work after receiving an order from the microcontroller. The working principle of an actuator is to change the motor rotation into a forward (push) and reverse (pull) lever movement in a linear manner.

c. Light Dependent Resistor (LDR): A sensor to measure light intensity,. The sensor function in this system, detects the difference in light intensity, so that when there is a difference in light intensity between the two sensors it will be input for the microcontroller to give commands to change the direction of the parabolic face.

d. Limit switch: Used to border the maximum limit of parabolic movement either to the east or west direction. When the actuator is working conducting push/pull, and the limit switch is pressed, then the system will automatically give an order to the microcontroller to stop the actuator from working.

e. Driver Motor: The driver motor functions to adjust the direction of rotation of the motor rotating towards the left / right. In this case an actuator linear works to push / pull.

f. Real time clock: function for setting the time according to real time, whether the system starts working in the morning until the afternoon.

g. Power supply 12 Volt: as a supply voltage for the control system and actuator linear.

Button 1 and 2: The button here is a button to select the system mode that will run, whether based on time or based on commands from the sensor.

The programming system of motor control system based on time in the form of Algorithms. For Tracking Mode Based on Time, detailed can be seen in Figure 3.

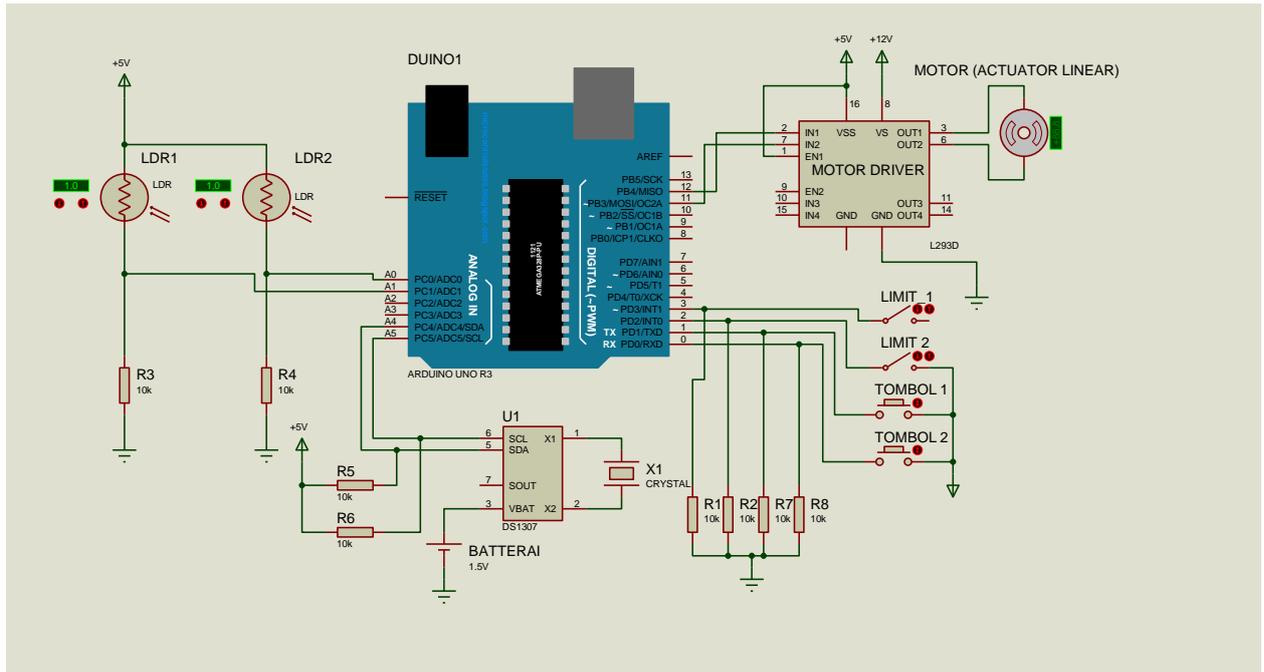


Figure 3 – The Circuit of Solar Tracking Control Systems

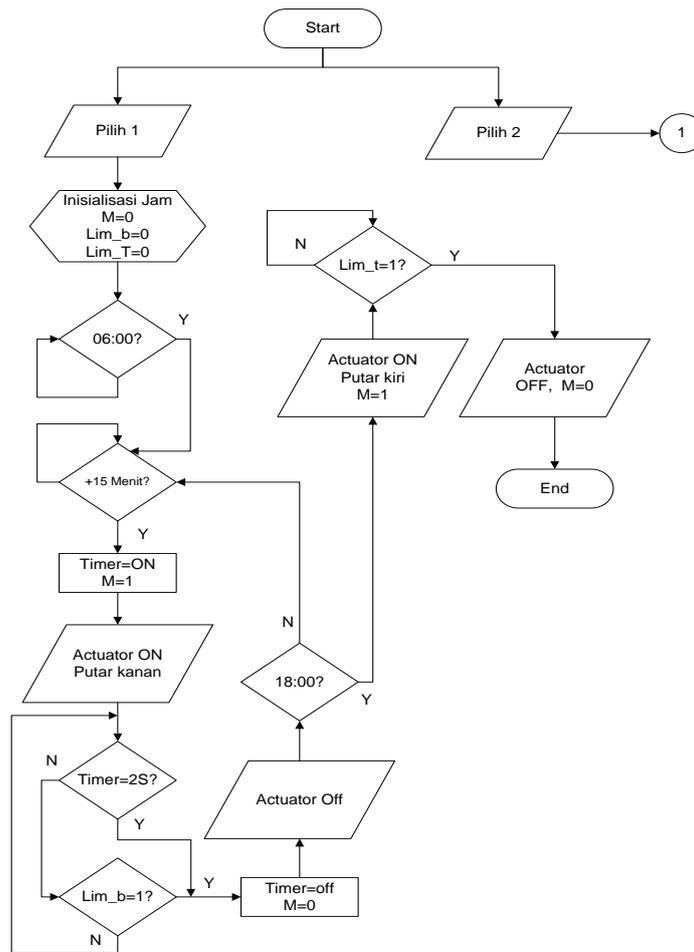


Figure 3 – Algorithm for Tracking Mode Based on Time

By the time the system will be run, first press button 1 or button 2 as a menu to select what system mode will run.

*Principle of the System Working Based On Time Management.* in line with the direction of the solar movement. While the degree of movement will be adjusted to the results of the field survey, so that it can be adjusted to how long it takes for the actuator linear to work. In the algorithm above, the researcher gave the time as a sample  $\pm 2$  seconds.

The system will start working automatically at 06:00 AM WITA and stop at 18:00 WITA. When the clock shows at 18:00 WITA, the parabolic direction will automatically move back to the starting position facing east. As a timer on the system, it uses a real-time clock (RTC) from the type of DS1307.

To limit the direction of the parabolic movement, so that it does not exceed the slope limit both east and west, then two limit switches will be installed on the east and west sides, according to the direction of the parabolic movement.

The programming system of the motor control system based algorithm for tracking mode based on sensor more detailed can be seen in figure 4.

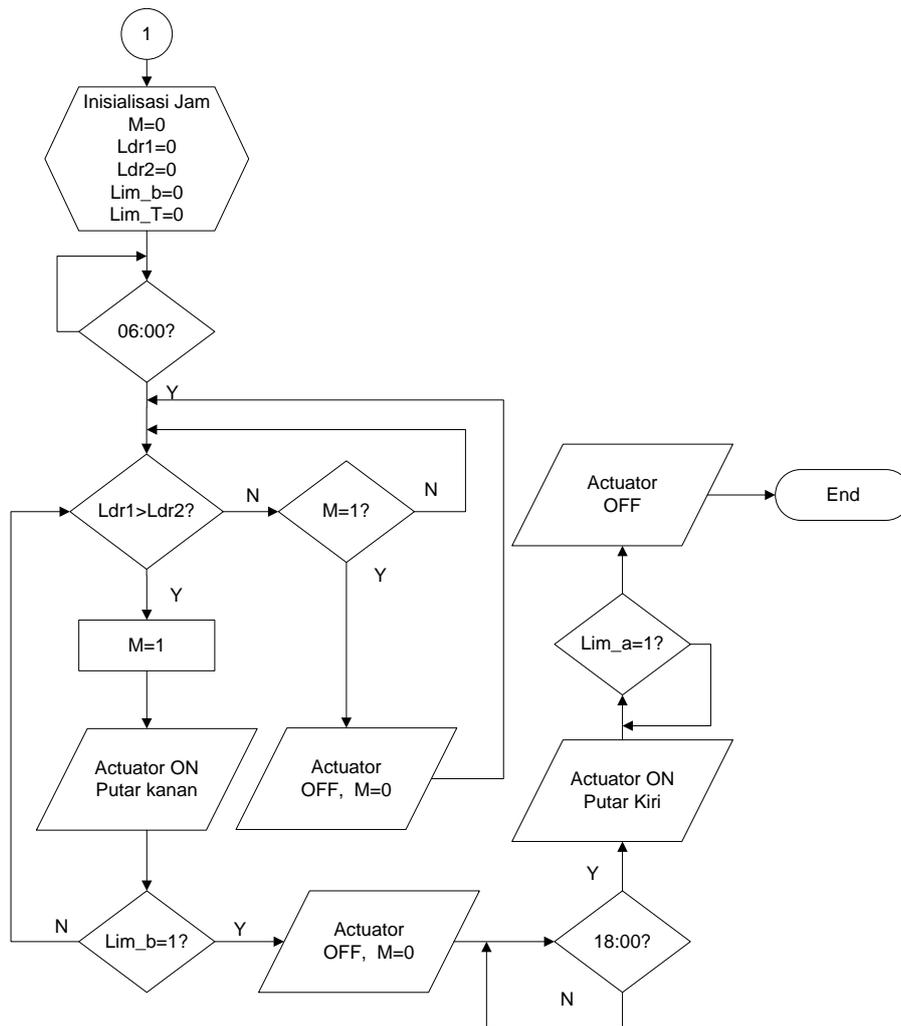


Figure 4 – Algorithms for Tracking Mode Based on Sensors

*The working principle of the system based on the searching by sensor.* In a system with a parabolic direction movement mode based on searching by a sensor, each of these movements always depends on the sensor. The sensor used is the type of *Light Dependent Resistor (LDR)* 2 pieces. The sensor will be installed on the east and west side. In accordance with the working principle of the LDR sensor, that the higher the intensity of sunlight the lower the resistance value, so the output voltage of the sensor will also be greater. Based on the LDR principle, the programming algorithm will compare the amount of the output voltage from the two sensors. If the output voltage on Sensor 2 on the west side

(Ldr\_2) is greater than Sensor 1 on the east side (Ldr\_1), this indicates that sensor 1 has been blocked by the sun. Thus the actuator will work to move the direction of the parabolic face to the west. When the sensor 2 values are smaller or equal to sensor 1, the actuator linear will stop rotating. The *Limit switch* function in this system mode is also the same as in time-based mode.

The system will start working when the time shows 06:00 WITA and will stop searching direction of the sun at 18:00 WITA. At 18:00 the system will return the direction of the parabola towards the east and will stand by to work the next day.

The programming language used is C language, while the compiler uses the IDE Arduino. After the program is based on the algorithm in the IDE Arduino, the results of the compiler will be uploaded to the microcontroller on the Arduino Uno board.

## CONCLUSION AND SUGGESTIONS

Based on the results of the discussion in the previous chapter, some conclusions can be drawn as follows:

- To drive the parabolic type solar distillation using solar tracking control system automatically based on time (limit switch), and based on the detection of light by the sensor (*LDR / Light Dependent Resistor*). The controller of this parabolic type control system is Arduino Uno as an electronic circuit board; with the main component is the ATmega 328 microcontroller chip;
- To limit the direction of the parabolic movement, so that it does not exceed the slope limit either to east and west directions, then 2 pieces limit switch will be installed on the east and west sides, according to the direction of the parabolic movement;
- In a system with a parabolic direction movement mode based on the searching by a sensor, each movement is always dependent on the sensor. The sensor used is the type of Light Dependent Resistor (LDR) 2 pieces. The sensor will be installed on the east and west side. In accordance with the working principle of the LDR sensor, that the higher the intensity of sunlight the lower the resistance value, so the output voltage of the sensor will also be greater;
- Based on the LDR principle, the programming algorithm will compare the amount of output voltage from the two sensors. If the output voltage on Sensor 2 on the west side (Ldr\_2) is greater than Sensor 1 on the east side (Ldr\_1), this indicates that sensor 1 has been blocked by the sun. Thus the actuator will work to move the direction of the parabolic face to the west. When the sensor 2 values are smaller or equal to sensor 1, the actuator linear will stop rotating.

After conducting this research, the writer suggests:

- Further research is needed to find out more in detail about the synchronization between the motor and the mechanical workload of the designed parabolic solar distillation system;
- Determination of slope angle at each location will be different; therefore it is recommended that data collection/research should be conducted at different locations.

## REFERENCES

1. Aba, L., 2007, Karakteristik Permukaan Absorber Radiasi Matahari pada Solar Still and Aplikasinya sebagai Alat Distilasi Air Laut menjadi AirTawar, J. Sains MIPA, 13, 201-205.
2. Abdullah, S., 2005, Pemanfaatan Distilator Tenaga Surya (Solar Energy) untuk Memproduksi Air Tawar dari Air Laut, Laporan Penelitian, UGM, Yogyakarta.
3. Afrianto, E. 1991, Teknik Pembuatan Tambak Udang, Kanisius, Yogyakarta.
4. Alamsyah, S., 2007, Merakit Sendiri Alat Penjernih Air untuk Rumah Tangga, PT. Kawan Pustaka, Jakarta.
5. Arief, D., 1984, Pengukuran Salinitas Air Laut and Peranannya dalam Ilmu Kelautan, jurnal oseana, 9 (1), 3-10.

6. Arismunandar, W., 1995, Teknologi Rekayasa Surya, PT. Pradnya Paramitha, Jakarta.
7. Astawa, K., 2008, Pengaruh Penggunaan Pipa Kondensat sebagai Heat Recovery pada Basin Tipe Solar Still Terhadap Efisiensi, *J. Ilmiah Teknik Mesin Cakram*, 2(1), 34-41.
8. Astawa, K., Sucipta, M. and Gede, I., 2011, Analisa Performansi Distilasi Air Laut Tenaga Surya Tipe Prismatik Menggunakan Penyerap Radiasi Surya tipe Bergelombang Berbahan Dasar Beton, *Jurnal Ilmiah Teknik Mesin Cakram*, 5 (1), 7-13.
9. Aprialdi Pangemenu, 2012 <http://pagemenu.blogspot.co.id/>
10. Badan Pusat Statistik Indonesia, 2013, Perkembangan Beberapa Indikator Utama Sosial-Ekonomi Indonesia, Badan Pusat Statistik, Jakarta.
11. Badan Pusat Statistik Kota Kupang, 2013, Profil Kesehatan Kota Kupang, Badan Pusat Statistik, Kupang.
12. Budiana, I.G.M.N., 2008, Dasar-Dasar Pemisahan, Universitas Nusa Cendana, Kupang.
13. Catrawedarma, I.G.N.B., 2008, Pengaruh Massa Air Baku terhadap Performansi Sistem Destilasi, *Jurnal Ilmiah Teknik Mesin Cakram*, 2 (2), 117 – 123.
14. Dahuri, R., Rais, Y., Putra, S.G. and Sitepu, M.J., 2001, Pengelolaan Sumber Daya Wilayah Pesisir and Lautan Secara Terpadu, PT Pradnya Paramita, Jakarta.
15. Hidayat, R.R., 2011, Rancang Bangun Alat Pemisah Garam and Air Tawar dengan Menggunakan Energi Matahari, Skripsi, Institut Pertanian Bogor, Bogor.
16. Irianto, A., 2003, Probiotik Akuakultur, Gadjah Mada University Press, Jogjakarta.
17. Kreith, F., 1991, Prinsip-Prinsip Perpindahan Panas, diterjemahkan oleh Arko Prijono, Erlangga, Jakarta.
18. Lakitan, B., 2002, Dasar-Dasar Klimatologi, PT Raja Grafindo Persada, Jakarta.
19. Larasati, D.A., 2013, Analisis Pengaruh Reduksi Suhu terhadap Efisiensi PhotovoltaicModule, Skripsi, Fakultas Teknik Universitas Jember, Jember.
20. Linsley, R.K. and Franzini, J.B., 1995, Teknik Sumber Daya Air, Erlangga, Jakarta.
21. Meyers, R.A., 1992, Encyclopedia of Physical Science and Technology, 2nd edition Volume 5, Academic press, New York.
22. Muhammad, E.W., 2008, Membuat Kompor Tenaga Matahari, <http://www.kamase.org/>
23. Mulyanef, Marsal, Arman, R. and Sopian K., 2006, Sistem Distilasi Air Laut Tenaga Surya menggunakan Kolektor Plat Datar dengan Tipe Kaca Penutup Miring, Laporan Penelitian, Fakultas Teknologi Industri, Universitas Bung Hatta, Padang.
24. Nanawi, G., 2001, Kualitas Air and Kegunaannya di Bidang Pertanian, Direktorat Pendidikan Menengah Kejuruan, Jakarta.
25. Pabiban, D., Namas, M., dan Sarifudin, K. 2016. Model Sistem Distilasi Surya Tipe Parabolic Untuk Menurunkan Kadar Salinitas Air Laut. Laporan Penelitian Hibah Bersaing. Politeknik Negeri Kupang, Kupang.
26. Pabiban, D., Namas, M., 2017. Perancangan Sistem Distilasi Surya Tipe Parabolic Untuk Menurunkan Kadar Salinitas Air Laut Sebagai Baku Mutu Air Minum. Laporan Penelitian Rutin Politeknik Negeri Kupang, Kupang.
27. Peraturan Menteri Kesehatan Republik Indonesia Nomor 416/Menkes/Per/IX/1990 Tentang Syarat-Syarat and Pengawasan Kualitas Air Minum, Depkes RI, Jakarta.
28. Peraturan Menteri Kesehatan Republik Indonesia Nomor 492/MENKES/PER/IV/2010 Tentang Persyaratan Kualitas Air Minum, Kementerian Kesehatan Republik Indonesia.
29. Sanropie, D., 1984, Buku Pedoman Study Penyediaan Air Bersih, Akademi Penilik Kesehatan Teknologi Sanitasi, Pusdiknakes Depkes RI, Jakarta.
30. Santosa, I., Wibowo, A. and Wilis, G.R., 2010, Pengaruh Kemiringan Kaca pada Alat Basinsolar Still Terhadap Kapasitas Air Hasil Distilasi, Laporan Penelitian, Fakultas Teknik Universitas Pancasakti, Tegal.
31. Soetrisno, 2004, Teknik Sumber Daya Air, Erlangga, Jakarta.
32. Suhada, H., 1995, Energi Regeneratif sebagai Pilihan Energi Masa Depan, Dimensi vol 20/EMTI.
33. Undang-Undang Republik Indonesia Nomor 7 tahun 2004 Tentang Sumber Daya Air.
34. Wikipedia.com, 2008, Radiasi Surya, Dikutip dari <http://www.wikipedia.com>, akses tanggal 16 Maret 2014.
35. Wikipedia.org, Intensitas Cahaya, Dikutip dari, akses tanggal 20 Juni 2014.

DOI 10.18551/rjoas.2019-02.11

**DETERMINANTS OF FARMERS' DECISIONS IN THE TAKING OF AGRICULTURAL SECTOR CREDIT: A STUDY IN LAMAKNEN SUBDISTRICT OF BELU REGENCY, EAST NUSATENGARA PROVINCE, INDONESIA**

**Lika Ernestina\***

Master's Program, Faculty of Economics and Business, University of Brawijaya, Indonesia

**Sasongko, David Kaluge**

Faculty of Economics and Business, University of Brawijaya, Indonesia

\*E-mail: [ernestinalika@gmail.com](mailto:ernestinalika@gmail.com)

**ABSTRACT**

The development of the agricultural sector has limitations in increasing production. At this time, the productivity of the agricultural sector is still low; one of them is caused by capital constraints, both internal and external. This study aims to examine the influence of land ownership area ( $X_1$ ), education ( $X_2$ ), income ( $X_3$ ), and counseling service ( $X_4$ ) to the decision-making of agricultural credit ( $Y$ ) in Lamaknen Subdistrict Belu Regency East Nusa Tenggara Province. This study uses a quantitative method with the population namely all farmers in Lamaknen Sub-district consisting of 10 village units. Furthermore, the samples studied namely all farmers in Makir Village. The sampling technique used is probability sampling. Primary data was obtained using a questionnaire and then tested with the Logistic Regression analysis method. The results of the analysis show a significance value  $< \alpha$  (0,05) with the *Negelkerke R Square* value equal to 0,617. Thus, it can be concluded that the area of land ownership ( $X_1$ ), education ( $X_2$ ), income ( $X_3$ ), and counseling service ( $X_4$ ) had a significant influence on the decision making of agricultural credit ( $Y$ ) with an influence of 61,7%. The right credit decision making also contributes to an increase in agricultural production, so that needed cooperation between village government and credit institutions to provide socialization to farmers related to agricultural business credit.

**KEY WORDS**

Determinants, agricultural credit, farmers' decisions, public service.

Agriculture is one of the main sectors for the people of Indonesia. Physioculturists argue that the agricultural sector is the only basic productive activity in developing countries, where rural and remote communities are able to escape from difficulties and poverty (Gounder and Xing, 2012; Oduol et al., 2017). One of the regions in Indonesia that has a productive agricultural sector is East Nusa Tenggara Province, with the majority of the population being farmers (53.32%) based on 2017 survey data. Agriculture in East Nusa Tenggara Province consists of several sub-sectors, namely food crops, plantations, livestock, fisheries, and forestry. From these sub-sectors, food crops are the most attractive sub-sector to be explored because it is the main source of life for the people of East Nusa Tenggara.

As a potential agricultural area, the development of the agricultural sector in East Nusa Tenggara is very necessary to be developed by seeking to increase the agricultural production result. According to Priyanto (2015), the productivity of the agricultural sector in East Nusa Tenggara consists of upland rice, lowland rice, corn, peanuts, green beans, cassava, and sweet potatoes. Agricultural productivity in East Nusa Tenggara in 2013 was still far from the national average agricultural productivity (55,90%), which only reached 26,40%. Subsequently, in 2014 increased to 40,60%, while in 2015 it declined slightly to 40,10%. This shows that agricultural productivity in East Nusa Tenggara Province is still volatile and requires attention to be able to increase agricultural productivity. The low development of productivity in the agricultural sector is caused by various obstacles, such as natural conditions, markets and institutions, government policies, and so forth.

One of the factors that can affect the productivity of the agricultural sector is capital. Capital is the main and most important asset in developing a farmer's business (Soekartawi, 2002). Mubyarto, 1977(in Mulyaqin, 2016), explained that capital is an important production factor after land in agricultural production in a broad sense and greatly affected the value of production. In this case, there are often found farmers who have limited capital in running their agricultural businesses so that farming activities are limited to existing financial capabilities. This capital problem can be solved by applying for agricultural credit, but on the other hand, not all farmers are aware and want to apply for credit for agricultural activities. Based on the Regional Financial Economics Study / Kajian Ekonomi Keuangan Regional (KEKR) of Indonesian Bank from East Nusa Tenggara Branch, Credit growth in the East Nusa Tenggara Province sectorally in 2016-2018 are as follows:

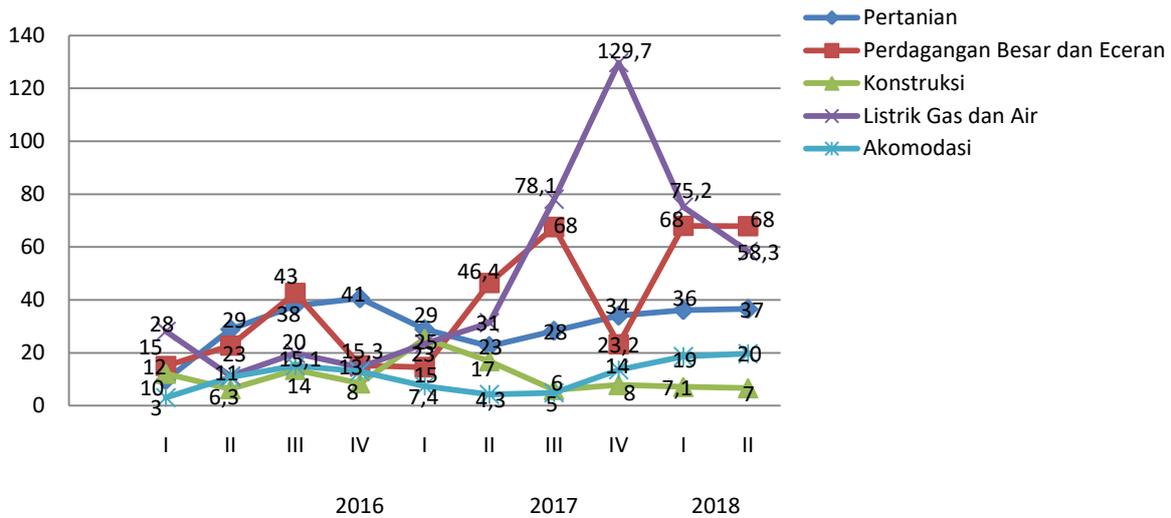


Figure 1 – Development of Sectoral Loan/Credit Distribution in NTT Province (KEKR NTT, 2018)

Based on these data, it can be seen that the average development of sectoral credit distribution from the first quarter of 2016 to the second quarter of 2018 experienced an increasing trend. This was due to growth in the sector of electricity, gas and water, wholesale and retail trade. Furthermore, when viewed from the average lending/credit distribution, the agricultural sector is above the average sectoral lending/credit distribution. Nevertheless, the increase in the distribution of the agricultural sector was driven by other subsectors, namely livestock. So it can be stated that the development of the credit distribution in the agricultural sector is still below the average sectoral credit development. Along with the slow growth of credit in the agricultural sector, the government through banks has allocated credit in various regencies or regions in East Nusa Tenggara Province. Data shows that lending/credit distribution is still concentrated on the island of Timor with a rate of 18%. However, developments on other islands are still relatively good compared to Timor Island. The same thing happened to Third Party Funds (TPF)/Dana Pihak Ketiga (DPK) where the highest growth was found on Flores Island with a nominal of TPF/DPK 5,45%, meanwhile credit growth is greater on Timor Island because economic growth is concentrated on Timor Island.

Belu Regency is one of the areas on the island of Timor, where the majority of the population is farming. Belu Regency is considered potential because it has a strategic location, which is bordered with Timor Leste. The need for economic development in the agricultural sector is very needed to create market competition. On the other hand, in increasing agricultural yields, the capital needed is more, depending on the area of land managed by farmers. Mulyaqin (2016) explained that the more land managed by farmers, the greater the effort to utilize available capital resources. Credit is one of the sources of capital that can drive an increase in agricultural products. Hernanto (1992) added that capital factors play an important role and must be considered by farmers before conducting farming. Capital

is needed to procure production facilities, such as seeds, fertilizers and pesticides, but the price of these facilities is increasingly expensive.

Previous research conducted by Ciaian (2012) shows that developing the agricultural sector requires an increase in farmer inputs, one of which is capital. The existence of credit and input subsidies for farmers in the agricultural sector will be followed by an increase in productivity if improvement efforts are targeted at each farmer. Furthermore, Fahad's research (2018) found that in Pakistan there was crop insurance for farmers, but in making decisions to use insurance, many obstacles related to climate risk or natural factors. In addition, the role of agricultural counselor to assist farmers is also not optimal. This finding explains that counseling services, age, income, land area affected the farmers' decisions in using crop insurance. Based on agricultural credit distribution which tends to decrease and the existence of gaps in the empirical results, then this study aims to examine the determinants of farmers' decisions in taking the credit in Lamaknen Subdistrict. The determinant factors in this study include the extent/area of land ownership, education, income, and counseling services.

## METHOD OF RESEARCH

The type of data used in this study is primary data taken using a questionnaire. Primary data consists of respondents' answers on a Likert scale that represent research variables. The respondents studied namely all farmers in Makir Village, Lamaknen Subdistrict Belu Regency East Nusa Tenggara Province. The sampling technique used is probability sampling. The secondary data consists of data from the department or relevant agencies as well as various literature that supports the study of research material. Data retrieval conducted in October - November 2018. Analysis of research data was carried out using the Logistic Regression analysis method with the assist of the SPSS 21 program. The variables analyzed among others the extent/area of land ownership ( $X_1$ ), education ( $X_2$ ), income ( $X_3$ ), and counseling service ( $X_4$ ) as an independent variable, as well as the decision-making of agricultural credit ( $Y$ ) as the dependent variable). In the decision making of the analysis results, this study uses a real level value / nilai taraf nyata ( $\alpha$ ) of 0,05 or 5%.

## RESULTS AND DISCUSSION

*Results of Logistic Regression Analysis.* In this study, to explain the presence or absence of the influence of the independent variable on the dependent variable is conducted by comparing the Wald statistical value with the Chi-square comparison value at the degree of freedom / derajat kebebasan ( $df$ ) = 1 at alpha 5%, which is equal to 3,841. If the Wald value is greater than the Chi-square value of the table or the significance value is smaller than alpha 5%, then it is concluded that there is a significant influence between the independent variable and the dependent variable. A summary of the results of the Logistic Regression analysis is shown in the following table 1:

Table 1 – Summary of Results of Logistic Regression Analysis

	n/n	B	S.E.	Wald	Df	Sig.	Exp(B)
Step 1 <sup>a</sup>	X1	,336	,102	10,790	1	,001	1,400
	X2	-2,903	1,023	8,047	1	,005	,055
	X3	5,6625E-7	2,178E-7	6,759	1	,009	1,000
	X4	,242	,099	5,897	1	,015	1,273
	Constant	-8,195	1,905	18,504	1	,000	,000

Source: Research data processed (2018).

The logistic regression equation formed based on the table above is as follows:

$$\ln \frac{p}{1-p} = -8,195 + 0,336 X_1 - 2,903 X_2 + 5,6625E-7 X_3 + 0,242 X_4$$

*The Area of Land Ownership (X1).* At the variable of The Area of Land Ownership (X1), obtained Wald value of 10,790 ( $> 3,841$ ) with significance value 0,001 ( $< \alpha 0,05$ ). So, it can be stated that there is a significant influence between the area of land ownership (X1) on the credit decision making (Y). The regression coefficient obtained has positive sign (+) indicating that the more land area that the farmer has, the higher the credit decision making.

*Education (X2).* At the variable of Education (X2), obtained Wald value of 8,047 ( $> 3,841$ ) with significance value 0,005 ( $< \alpha 0,05$ ). So, it can be stated that there is a significant influence between education (X2) on the credit decision making (Y). The regression coefficient of education (X2) variable which is negative (-) indicates that the higher the farmer's education, the lower the decision to take the agricultural credit.

*Income (X3).* At the variable of Income (X3), obtained Wald value of 6,759 ( $> 3,841$ ) with significance value ( $< \alpha 0,05$ ). Means that, there is a significant effect between the income variable (X3) on the variable of credit decision-making (Y). The regression coefficient obtained has positive sign (+), so that if farmers' income is higher, then the decision to take the agricultural credit will also be higher.

*Counseling Service (X4).* At the variable of Counseling Service (X6), obtained Wald value of 5,897 ( $> 3,841$ ) with significance value 0,015 ( $< \alpha 0,05$ ). Means that, there is a significant effect between counseling service (X4) to the credit decision-making (Y). The regression coefficient obtained has positive sign (+), so that it can be stated that the better the counseling service, the higher the decision to take the agricultural credit by farmers.

Furthermore, the results of the Logistic Regression analysis can also show how much influence of all the independent variables on the decision to take the agricultural credit. This assessment can be seen from the coefficient of determination.

Table 2 – Coefficient of Determination

-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
95,542	0,463	0,617

Source: Research data processed (2018).

Based on the table above, it can be seen that the value of *Nagelkerke R Square* obtained is 0,617. So that it can be stated that the amount of the influence of the variable of the Area of Land Ownership (X1), Education (X2), Income (X3) and Counseling Service (X4) on the Credit Decision Making (Y) is equal to 61,7%.

## DISCUSSION OF RESULTS

The results of the analysis show that the area of land ownership has a significant effect on credit decision making. Selain itu, the higher the area of land ownership, the higher the decision to take the agricultural credit. The results of this study are in line with the research of Murwiati (2007) where the extent/area of land ownership has a positive correlation with credit decision making. This is strengthened by Mulyaqin's research (2016) which found that the area of land ownership is one of the main factors in the utilization of the source of farming capital for farmers. In his research, it was stated that the area of land ownership also positively correlated on the credit decision making. In addition, the results of Ciaian's (2012) study also show that land area is one of the inputs for farmers, so it has a positive influence on credit decisions. Fahad's (2016) research also confirms that the wider the area of land ownership, the higher the farmer's decision to take the crop insurance. This finding is especially obtained for farmers who own land in areas with high climate risk.

In the education variable, it was found that there was a negative and significant influence between education and farmers' decisions in taking agricultural credit. The higher the education of farmers, the decision of farmers in taking the credit will tend to decrease. The results of this study contradicted with the results of the study of Ambarita (2016) which shows that education does not affect the decisions of farmers in using Credit Union (CU) as a farming finance institution. Furthermore, Mulyaqin (2016) also explained that education

does not affect the utilization of farmers' sources of capital. In general, it can be stated that even though the farmer has a high educational background, the farmer does not necessarily decide to take agricultural credit, and vice versa. On the other hand, farmers have a tendency to take credit because of the influence of family habits, and not because of their level of education. This makes the farmer already knows and understands about credit procedures and their benefits. Bauer's research (2016) also presents results that are not in line with this study, where education has a positive correlation to the rural farmers' credit access. In his findings, it was mentioned that internal factors are more important, where low educated farmers have the potential to lose land status so the probability of credit also tends to be low.

In the income variable, the results show that income has a positive and significant influence on the decision to take agricultural credit. This finding is in line with the results of Bauer (2016) and Ambarita (2016) research, that farmers' income has a positive correlation with credit loans. It is stated that farmers with high income will tend to take credit. In this study, the average income of farmers is less than Rp.2,000,000 per month. With the main job as a farmer and low income, the farmers will find it difficult to make the credit decisions with the main consideration namely whether they can afford to pay the loan installments. Furthermore, in Mulyaqin's study (2016), it was found that income did not affect the utilization of farming capital resources because farming was not the main source of income, but rather as a side business. The results of this study also found that respondents in taking credit always consider the good and bad credit. On the other hand, farmers prefer to obtain capital from other alternatives, such as livestock products. Respondents prefer to sell livestock for farming capital rather than applying for credit to credit institutions.

In the extension/counseling service variable, the results of analysis show that there is a positive and significant influence between counseling services and farmers' decisions in taking the agricultural credit. This finding is in line with Fahad's (2018) research that counseling service has a positive correlation with farmers' decisions regarding crop insurance. Extension/counseling service is the most important factor for farmers in improving farming, either counseling service from agriculture as well as financial institutions. The higher the counseling from related institutions, the higher the probability of farmers to take credit. Furthermore, the results of the Djoumessi (2017) study also emphasize that extension/counseling service has a positive and significant influence in improving farming efficiency and is one of the socio-economic factors that need to be considered. This means that good counseling services by agricultural officers will be able to increase farming productivity. The results showed that 30 from 125 respondents had never attended counseling in a year. Interviews with the Village Head and PPL officers show that agricultural counseling is held from various institutions more than 3 times a year. This is certainly very good for increasing farmers' understanding of the importance of applying for agricultural credit. Bauer (2016) explains that farmers who receive a lot of counseling services will tend to be more motivated to take credit to improve farming.

## **CONCLUSION AND SUGGESTIONS**

The probability of a farmer's decision to take credit is determined by the amount of the area of land ownership, education, income and counseling services. The results show that farmers who have large land, high educational background, high income, and the existence of good extension/counseling services will be more likely to take agricultural credit. The higher decision to take credit will later support an increase in farming productivity.

Based on the results of the study, the suggestions that can be given include the following:

- The need for control from the government on the price of agricultural products to maintain price stability and increase farmers' income;
- The need to increase the number of PPL in order to provide maximum extension/counseling services;

- Village governments and credit institutions work together in an effort to increase farm productivity in climate-prone areas;
- The next researcher is advised to investigate further related to other factors that are thought to influence farmers' decisions in taking credit.

### REFERENCES

1. Ambarita, D. M., & Chalil, E. (2016). Faktor-faktor yang Mempengaruhi Keputusan Petani dalam Menggunakan Credit Union (Cu) sebagai Lembaga Pembiayaan dalam Usahatani (Studi Kasus: Cu Sondang Nauli Kabupaten Karo and Kabupaten Simalungun). *Journal of Agriculture and Agribusiness Socioeconomics*, 5(1).
2. Bauer, S. 2016. Does Credit Access Affect Household Income Homogeneously Across Different Groups of Credit Recipients? Evidence From Rural Vietnam. *Journal of Rural Studies*, 47, 186-203.
3. Ciaian, P., Farkowski, J., & Kancs, D. A. 2012. Access to Credit, Factor Allocation and Farm Productivity: Evidence From the CEE Transition Economies. *Agricultural Finance Review*, 72(1), 22-47.
4. Djoumessi, Y., Afari-Sefa, V., Kamdem, C. B., & Bidogeza, J. C. 2018. Socio-Economic and Institutional Factors Underlying Efficiency of Smallholder Vegetable Farms in Southwest Region of Cameroon. *International Journal of Social Economics*, 45(1), 93-106.
5. Fahad, S., Wang, J., Hu, G., Wang, H., Yang, X., Shah, A. A. & Bilal, A. 2018. Empirical Analysis of Factors Influencing Farmers Crop Insurance Decisions in Pakistan: Evidence From Khyber Pakhtunkhwa Province. *Land Use Policy*, 75, 459-467.
6. Hernanto, 1992. Keragaman Penyaluran Kredit pertanian.: Suatu Analisis Data Makro, Monograph Series, 3: 63-85.
7. Kajian Ekonomi and Keuangan Regional. 2016 – 2018. Kantor Perwakilan Bank Indonesia Provinsi Nusa Tenggara Timur.
8. Murwiati, Asih. 2007. Analisis Faktor-Faktor Sosial Ekonomi yang Mempengaruhi Keputusan Petani Dalam Mengambil Kredit (Studi kasus di Desa Hargotirto Kecamatan Kokap Kabupaten Kulon Progo Propvinsi Daerah Istimewa Yogyakarta). Tesis. Universitas Brawijaya. Malang. 8-11.
9. Mulyaqin, T., Astuti, Y., & Haryani, D. 2006. Faktor Yang Mempengaruhi Petani Padi Dalam Pemanfaatan Sumber Permodalan: Studi Kasus Di Kabupaten Serang Provinsi Banten.
10. Priyanto, D., & Diwyanto, K. 2015. Pengembangan Pertanian Wilayah Perbatasan Nusa Tenggara Timur and Republik Demokrasi Timor Leste. *Pengembangan Inovasi Pertanian*, 7(4), 207-220.
11. Soekartawi, 2002. Faktor-faktor Produksi. Salemba Empat, Jakarta.

DOI 10.18551/rjoas.2019-02.12

## **ANALYSIS OF RUBBER FARMER WELFARE IN JAMBI PROVINCE, INDONESIA**

**Kuswanto**

Department of Economic Education, University of Jambi, Indonesia

\*E-mail: [kuswanto.fkip@unja.ac.id](mailto:kuswanto.fkip@unja.ac.id)

### **ABSTRACT**

Most of the people of Jambi Province work in the rubber plantation sector. The welfare of farmers is largely determined by rubber productivity and price levels. This study aims to analyze the level of income and expenditure ratios as a measure of the level of welfare of rubber farmer households. Data obtained by conducting a survey of 120 farmers in the central area of rubber plantations in Jambi Province. The welfare of farmers is analyzed using the Farmer Household Income Exchange (NTPRP) approach. The results of the analysis show that the average rubber farmer in Jambi Province is not as prosperous as indicated by NTPRP of  $0.97 < 1$ . Rubber farmers allocate more income to consumption needs compared to the needs of rubber farming. From the results of this study, it is expected that farmers make priority scale fulfillment of needs and do not neglect the financing of rubber farming and add other businesses, such as livestock and fisheries.

### **KEY WORDS**

Welfare, rubber, farmers, public service.

Jambi Province is one of the largest rubber producing regions in Indonesia. Based on data from DIRJENBUN (2017), there are 214,168 farmers or around 24.48 percent of the total households in Jambi Province working in the rubber plantation sector. Apart from being the main source of income for the community, rubber plantations are also the largest source of foreign exchange for Jambi Province. Thus, the existence of the development of rubber plantations greatly determines the economy of the community in particular and the regional economy in general.

The support of plantation estates on the community's economy is determined by the level of productivity and the competitiveness of products produced both in the local and international markets. This support has implications for the level of income obtained by farmers from the plantation sector developed. Income is the main capital for farmers to carry on business and family life. In various studies, such as BPS, BKKBN, and Sugiarto (2008), making income a benchmark for farmers' purchasing power towards family needs. The fulfillment of family needs for food, clothing, housing, and family needs that can be measured materially from income reflects family welfare (Sunarti, 2006). Systemically, well-being can be seen as an output/result of the use of available inputs (resources), where welfare as an output at a point and becomes an input to produce the level of family welfare in the next stage. In the long term, the level of welfare will further strengthen the position of farmers in developing rubber farming.

Measuring the welfare of farmers is needed as a correction of the sustainability of rubber plantations developed. Welfare measurements are carried out subjectively and objectively at the level of individuals, families and society. Subjectively, indicators of individual well-being are feelings of happiness or feelings of sadness, peace or mental anxiety, and satisfaction or dissatisfaction. Indicators of family welfare can be seen in family satisfaction with housing conditions. Objectively, indicators of family welfare can be seen in the adequacy of housing conditions (compared to standards), such as the availability of clean water, lighting, and so on. At the community level, welfare is based on infant mortality, unemployment and homelessness (Cambell in Sunarti, 2006).

Sajogyo (1997) measures welfare using the concept of minimum needs (calories) based on the conversion of rice consumed by the family. BKKBN measures family welfare by using 23 derivative indicators, while BPS measures welfare through minimum needs so that

the amount changes according to inflation rates or changes in prices of basic needs. The results of measurements of family welfare were conducted by Rambe, et al. (2008) using the BKKBN criteria, BPS, Food Expenditure, and Subjective Perception. The BKKBN criteria, BPS and Food Expenditure have an accuracy of 63% in identifying prosperous families while Subjective Perception is 22%.

The measurement of farmer family welfare was carried out by Sugiarto (2008) using the concept of Farmer Household Income Exchange (NTPRP), which is a measure of the ability of farmer households to meet their subsistence needs or also called Subsistence Term of Trade. The NTPRP method is a development of the NTP method used by BPS in measuring the level of welfare of farmers. In the BPS concept, which is formulated as a Subsistent Exchange Rate (NTS) is the exchange rate of all agricultural businesses, but it has not included farm hunting and non-agricultural sectors that are large enough to contribute to the household income of farmers (Rahmat et al., 2000). Therefore according to Rachmat et al., 2000; Basuki et al. (2001), Simatupang & Maulana (2007), which the concept of "Rural Household Income Exchange Value (NTPRP)" is the ratio between total household income and total household expenditure.

The welfare marker of farmers using NTP is the only approach for observers of agricultural development (Simatupang & Maulana, 2007). The approach used by Sugiarto (2008) in explaining the welfare of farmers using the concept of Farmer Household Income Exchange (NTPRP), which is a measure of the ability of households to meet their subsistence needs. The higher the exchange rate of farmers will further reflect the welfare of farmer households.

Based on the explanation above, it is necessary to study the level of welfare of farmers by analyzing the level of income generated from rubber farming and the level of household expenditure so as to produce information that is useful for making policies to strengthen rubber cultivation as a support for the community economy and regional economy.

## METHODS OF RESEARCH

The method used in this study is quantitative in the form of a survey. Data and information about income and expenditure of farmer households are obtained by using questionnaires. The population in this study were farmers as owners and cultivators of rubber plantations and made the farming as the main source of income for the family. Because rubber plantations in Jambi Province are very extensive, sampling area techniques are used to determine the number of samples to be examined, namely by determining several districts from the sample area from the district, sub-district and village levels. Respondents were randomly selected from each village with 120 farmers.

The family welfare of rubber farmers is analyzed using the concept of Farmer Household Income Value (NTPRP), which is the ratio between total household income and total household expenditure. The total income of agricultural households is the sum of income from rubber farming, other farming income and income from non-agricultural businesses. While the total expenditure of farmer households is the sum of expenses for farming or production costs (production costs of rubber farming, other farming costs and production costs of non-agricultural businesses) and expenditures for family consumption (food and non-food).

The income of rubber farmers comes from rubber farming and other farming and non-agricultural businesses. Mathematically the income is formulated in equation (1).

$$Y = Y_{pk} + Y_{pl} + Y_{np} \quad (1)$$

Where: Y - farmer's income;  $Y_{pk}$  - rubber farming income;  $Y_{pl}$  - Other farming income;  $Y_{np}$  - non-agricultural income.

Based on data from the National Farmers Panel (PATANAS) in 2005, the source of income of farmer household agriculture in addition to plantations is rice farming / farming,

livestock farming and farm labor. While non-agricultural businesses consist of trading businesses, industrial businesses, service businesses, transportation businesses and non-agricultural workers as well as civil servants / TNI. In this study, farmers who were sampled were farmers whose income was mostly (> 80%) originating from keretani farming. This is intended so that the effect of the efficiency of rubber production has a portion that is relevant in forming NTPRP.

Expenditures of rubber farmers constitute overall expenditure in farmer households. According to BPS (2015), the expenditure of farmer households consists of production costs (seeds, fertilizers, land rent, taxes, transportation) and additional capital and household consumption (food, processed food, housing, clothing, health, education, recreation, sports, transportation and communication. In accordance with the objectives of the research to be carried out, the expenditure of farmers is classified as expenditures for rubber farming, agricultural expenditure other than rubber, non-agricultural expenditure and expenditure for consumption of household consumption can be formulated mathematically as in equation (2):

$$E = E_{pk} + E_{pl} + E_{np} \quad (2)$$

Where: E - farmer expenditure; E<sub>pk</sub> - rubber farming expenditure; E<sub>pl</sub> - farming expenditure other than rubber; E<sub>np</sub> - expenditure on non-agricultural business.

By comparing the total income received by farmers with the total household expenditure, NTPRP will be generated as a measure of the level of welfare of farmers, as in the following equation (3).

$$NTPRP = \frac{Y}{E}$$

$$NTPRP = \frac{Y_{pk} + Y_{pl} + Y_{np}}{E_{pk} + E_{pl} + E_{np}} \quad (3)$$

If NTPRP > 1 shows that farm households have prospered. However, if NTPRP < 1, shows that farm households are not yet prosperous. That is, if NTPRP > 1 shows that in order to meet household welfare levels, farmers are relatively more allocated to meet consumption needs than business needs.

## RESULTS AND DISCUSSION

The use of NTPRP as an approach to measuring household welfare of farmers requires information or data on farmers' income and household expenditure, where NTPRP is the ratio between income and household expenditure of farmers. Farmer income is obtained from rubber farming run by farmers for one year. Household farmer expenditure consists of expenditure on rubber farming costs, food consumption expenditure and non-food expenditure.

The respondents chosen in this study were rubber farmers who made rubber farming the main source of income for the family. Thus farmers' income is obtained from the sale of production at a certain price level. As explained in Table 1, the following:

Table 1 – Rubber Farmer Income

No	Income Elements	Average	Maximum	Minimum
1	Production (kg)	3,876	18,000	1,200
2	Price (Rp)	7,403	9,000	6,500
3	Income (Rp)	25,247,100	81,600,000	8,400,000

Source: Primary data, 2017 (processed).

In Table 1, the average production produced by farmers for one year is 3,876 Kg and the average price received by farmers is Rp.7,403. On the level of production and price, the average income obtained by farmers from rubber farming for one year is Rp.25,247,100, while the highest income received by farmers is Rp.81,600,000 and the lowest income received by farmers is Rp.8,400,000. When compared with the level of per capita income in Jambi Province, there are only 4 percent of rubber farmers in the research area whose income is above the per capita income (Rp.54,366,369)

Household expenditure on rubber farmers consists of expenditures for rubber farming financing and expenditure for household consumption, as shown in Table 2, the following:

Table 2 – Household Expenditures for Rubber Farmers

No	Expenditures	Average	Max	Min
1	Production cost	1,116,033	21,710,000	261,000
2	Food material	14,053,250	34,392,000	6,630,000
3	Not Food	7,891,500	29,160,000	2,100,000
4	Energy	3,038,600	7,680,000	1,476,000
	total	26,099,383	92,942,000	10,467,000

Source: Primary data, 2017 (processed).

Expenditures for household consumption consist of food consumption and non-food consumption and energy expenditure. In Table 2, the average household expenditure of rubber farmers in the one year period in the study area is Rp.26,099,383, the highest expenditure of Rp.92,942,000 and the lowest expenditure is Rp.10,467,000. From the expenditure, expenditures for foodstuffs have a higher portion compared to other expenditures, namely an average of Rp.14,053,250, while the lowest portion is used for financing rubber farming, which is an average of Rp.1,116,033 and other expenditures for non-food items amounting to Rp.7,971,500 and expenditure for energy amounting to Rp.3,038,600.

Household expenditure on rubber farmers in financing rubber farming is determined by the level of use of inputs at a certain price level. The use of inputs that directly cause production costs is the use of fertilizers, herbicides and production equipment. The preference of farmers who consider the use of inputs as very important in rubber production and supported by the ability of income to finance inputs will increasingly determine the amount of production costs. There are several inputs that are produced from within the farmer's family, namely labour. So that its use does not directly lead to production costs, as explained in Table 3, the following:

Table 3 – Rubber Farming Financing Expenditures

Production cost	Average	Maximum	Minimum
Fertilizer	497,167	17,250,000	125,000
Herbicide	227,500	1,400,000	65,000
Equipment	391,367	3,060,000	71,000
total	1,116,033	21,710,000	261,000

Source: Primary data, 2017 (processed).

In Table 3, the average production cost in the study area for one year was Rp.1,116,033. The maximum production cost is Rp.21,710,000 and the minimum cost is Rp.261,000. From such funding, the financing for the procurement of fertilizers has the largest portion compared to the procurement of other inputs, which is an average of Rp.497,167 and the lowest portion for financing herbicide use is Rp.27,500.

Household expenditure on rubber farmers for consumption consists of food consumption, non-food consumption and energy sources. The largest portion of household rubber household consumption expenditure in the study area was used for food consumption, which was an average of one year in the amount of Rp.14,053,250, while the

lowest portion was used for energy expenditure in the amount of Rp.3,038,600 and Rp.7,971,500.

Household expenditure on rubber farmers for food consumption consists of energy sources, food ingredients, nuts, vegetables and fruits, vegetable oil, spices, tobacco and other consumption. The average household expenditure of rubber farmers for food consumption in the study area for one year was Rp.14,053,350. The highest household expenditure for food consumption is Rp.34,392,000 and the lowest is Rp.6,630,000. Of these expenditures, the largest portion (27%) was used for animal food consumption consisting of meat and fish of Rp.2,798,800 and eggs and milk of Rp.862,800. Another expenditure that also has a large share of food consumption expenditure is expenditure on carbohydrates, which consists of rice consumption of Rp.3,337,300 and non-rice for Rp.16,900.

Table 4 – Rubber Farmers Household Food Consumption Expenditures, 2017

FOOD CONSUMPTION TYPES	Average	Maximum	Minimum
A. Source of Carbohydrates			
1. Rice	3,337,300	6,000,000	1,800,000
2. Non Rice	16,900	600,000	0
B. Animal Food			
1. Meat + Fish	2,798,800	6,600,000	1,260,000
2. Eggs + Milk	862,800	2,136,000	90,000
3. Others	125,000	2,400,000	0
C. Nuts			
Tahu + Tempe + Others	716,450	2,160,000	60,000
D. Vegetables and Fruits	1,590,200	5,040,000	240,000
E. Oil and fat	610,150	1,680,000	144,000
F. Beverage Materials (White Sugar + Tea + Coffee)	913,050	2,928,000	168,000
G. Spices	1,250,800	3,600,000	240,000
H. Tobacco	1,509,900	14,400,000	0
I. Other consumption	321,900	4,800,000	0
TOTAL	14,053,250	34,392,000	6,630,000

Source: Primary data, 2017 (processed).

In Table 4, expenditures on vegetables and fruits have a sizeable portion in food consumption expenditures, which is 11.32 percent or Rp.1,590,200. Other consumption expenditures that have a large portion are tobacco consumption expenditures, reaching 10.74 percent or Rp.1,509,900.

Non-food consumption expenditures of rubber farmer households consist of expenditures for health care, consumption, communication and transport which are issued for one year. Expenditures for health care in the household of rubber farmers, including the cost of medical treatment and the purchase of food / beverage health supplements. Expenditures for education are carried out as funding for education for members who attend PUD to tertiary education. In general, rubber farm households have communication equipment in the form of mobile phones. Its use is a source of household expenditure for communication. Expenditures for transportation are carried out by rubber farm households as an effort to finance transportation needs related to rubber farming and others. In detail, household expenditure on rubber farmers for non-food consumption is shown in Table 5, as follows:

Table 5 – Household Expenditures for Rubber Farmers for Non-Food Consumption

NOT FOOD MATERIALS	AVERAGE	MAXIMUM	MINIMUM
1. Health Care	1,451,600	3,600,000	480,000
2. Education	2,358,000	22,080,000	0
3. Communication	1,078,300	2,700,000	240,000
4. Transportation	3,003,600	9,600,000	768,000
TOTAL	7,891,500	29,160,000	2,100,000

Source: Primary data, 2017 (processed).

In Table 5, the average household expenditure of rubber farmers for non-food consumption is Rp.7,891,500. The highest expenditure is Rp.29,160,000 and the lowest expenditure is Rp.2,100,000. The biggest portion of non-food expenditure is for transportation expenditures, which is Rp.3,003,600 and education expenses are Rp.2,358,000, while other expenses such as health care amount to Rp.1,451,600 and expenditures for communication amounting to Rp.1,078,300.

The high expenditure of farmer households for transportation is characterized by the level of mobility of farmers and family members in carrying out day-to-day activities. Mobilization of farmers which raises transportation costs related to their efforts in managing rubber plantations and other family businesses. Family member affiliation which also contributes to family expenses related to transportation fulfilment of learning needs.

Expenditures of farmer families for education are indirect education for family members, such as the cost of school uniforms, shoes, bags, books, pens and other equipment. While direct education funding (SPP) in general has been borne by the government. Especially for family members who are in higher education, education expenses include direct and indirect costs. Thus, the high family expenses for education are determined by the large number of family members attending school at the tertiary level.

The use of fuel or energy in the household of rubber farmers in general is to fulfil lighting needs, turn on electronic equipment and cooking needs. The average household size of rubber farmers in the study area uses electricity and gas to support family life activities. The ease of access to electricity and gas by farmer households has reduced the use of kerosene as an energy source for farmer households, as shown in Table 6, the following:

Table 6 – Household Expenditures of Rubber Farmers for Fuel / Energy

Type of Fuel	Average	Maximum	Minimum
Kerosene	94,600	960,000	0
Electricity	2,162,300	5,400,000	900,000
Solar	23,700	2,700,000	0
LPG	758,000	3,480,000	264,000
TOTAL	3,038,600	7,680,000	1,476,000

Source: Primary data, 2017 (processed).

In Table 6, the average annual household expenditure of rubber farmers for fuel / energy is Rp.3,038,600, the maximum expenditure of Rp.7,680,000 and a minimum of Rp.1,476,000. From the various fuels used by the rubber farmer households, electricity is the biggest energy source utilized by the farmer family to support family activities. The average farm household expenditure for electricity sources for one year is Rp.2,162,300, the highest expenditure is Rp.5,400,000 and the lowest expenditure is Rp.900,000. This condition shows that access to electricity as a family energy ingredient has reached most of the respondents' agricultural areas.

The family expenditure for the next energy material which is of considerable value is the use of gas / LPG, which is an average of one year of Rp.758,000, the highest is Rp.3,480,000 and the lowest is Rp.264,000. The high expenditure of farmer families for energy gas materials indicates that most families of rubber farmers in the study area have converted the use of kerosene and firewood as energy materials to gas energy sources. While the use of diesel fuel as an energy material is only carried out by some rubber farming families for the benefit of alternative energy fuels, such as Diesel.

The level of welfare of rubber farmer families is measured using the Farmer Household Income Exchange (NTPRP) approach. Where NTPRP is the ratio between income and household expenditure of rubber farmers. Households of rubber farmers are considered prosperous if  $NTPRP > 1$ . However, if  $NTPRP < 1$ , then the rubber farmer household is not considered prosperous. The results of the analysis of farmers' welfare are explained in Table 7, as follows:

Table 7 – Exchange of Farmer Household Income (NTPRP) Rubber

DESCRIPTION	AVERAGE / FARMERS (Rp.)
A. INCOME	25,247,100
B. PRODUCTION COSTS	1,116,033
C. CONSUMPTION	24,983,350
1. Food Consumption	14,053,250
2. Non-Food Consumption	7,891,500
3. Fuel consumption	3,038,600
D. TOTAL EXPENDITURE	26,099,383
E. VALUE OF EXCHANGE INCOME	
1. Against Total Expenditures	0.97
2. Against Production Costs	22.62
3. Against Food Consumption	1.80
4. Against Non-Food Consumption	3.20
5. Against Fuel Consumption	8.31
6. Against Total Consumption	1.01

Source: Primary data, 2017 (processed).

From the results of the analysis in Table 7, the NTPRP average of total expenditure is smaller than one, which is 0.97. This explains that the average rubber farmer household is not yet prosperous. This condition occurs because the amount of expenditure for both food and non-food consumption has a greater effect on the amount of income compared to other NTPRP formation components. The amount of NTPRP to total consumption (1.01) is smaller than NTPRP to total production costs (22.62). This condition explains that to achieve the level of household welfare, rubber farmers allocate more income for consumption needs compared to the needs of rubber farming.

If viewed from the level of household consumption of rubber farmers, NTPRP on food consumption (1.80) is smaller than NTPRP on non-food consumption (3.20), as well as NTPRP on fuel (8.31). This condition explains that the achievement of farmer household welfare is done by allocating more income for food consumption needs compared to non-food and fuel consumption needs.

Based on the results of the study, it was explained that the issue of farmers' welfare was not only determined by rubber production and the level of consumption of farmer households. The factor that cannot be controlled by farmers to achieve family welfare is rubber prices and prices of goods for household consumption needs. In Thailand, the welfare of rubber farmers is largely determined by the price level that develops in the rubber market. If the price of rubber increases, the welfare of farmers will increase and vice versa if the price of rubber falls, the welfare of farmers will decrease (Yamaka, at all. 2017).

## CONCLUSION

Based on the results and discussion above, it can be concluded that the average rubber farmer in Jambi Province has not been prosperous as indicated by NTPRP of  $0.97 < 1$ . To achieve the level of household welfare, rubber farmers allocate more income to consumption needs compared to farming needs rubber. Achieving household welfare of farmers is done by allocating more income for food consumption needs compared to non-food and fuel consumption needs.

## SUGGESTIONS

The low allocation of income towards farming finance has an impact on the low production of rubber. Costs are a consequence of farming run by farmers. Therefore, farmers must make a priority scale on financing household consumption so that their income can be allocated to rubber farming which is more beneficial. Besides that, other businesses are needed to support the family economy, such as livestock, fisheries and other farming.

## REFERENCES

1. [DIRJENBUN]. Direktorat Jenderal Perkebunan (2017). Statistik Perkebunan Indonesia. Dirjenbun. Jakarta. Retrieved from: <http://ditjenbun.pertanian.go.id/tinymcpuk/gambar/file/statistik/2017/Karet-2015-2017.pdf>
2. Basuki, R., Hadi, P., U., Panaji, T., Ilham, N., Sugiarto, Hendiarto, Winarso, B., Hartoyo, D., Setiawan, I. 2001. Pedoman Teknis Nilai Tukar Nelayan. Dirjen Pesisir dan Pulau-pulau Kecil. Departemen Kelautan dan Perikanan. Jakarta, Indonesia
3. Rachmat, M., Supriyati, D., Hidayat dan Situmorang, J. 2000. Perumusan Kebijakan Nilai Tukar Petani dan Komoditas Pangan Pertanian. Laporan Hasil Penelitian. Badan Pusat Penelitian Sosial Ekonomi Pertanian. Departemen Pertanian. Bogor.
4. Rambe, A., Hartoyo & Karsin, E., S. 2008. Analisis Alokasi Pengeluaran dan Tingkat Kesejahteraan Keluarga (Studi di Kecamatan Medan Kota, Sumatera Utara). *Jurnal Ilmu Keluarga & Konsumen* 1:16-28
5. Sajogyo, T. 1997. Garis Kemiskinan dan Kebutuhan Minimum Pangan. LPSB-IPB. Bogor, Indonesia. Retrieved from: <https://repository.ipb.ac.id/handle/123456789/24089>
6. Simatupang, P. & Maulana, M. (2007). Kaji Ulang Konsep Nilai Tukar Petani Tahun 2003-2006 [Review the concepts and developments of farmer exchange rates in 2003-2006]. *Journal of Economics and Development*. LIPI. Jakarta, Indonesia. Retrieved from: [http://pse.litbang.pertanian.go.id/ind/pdf/Anjak\\_2007\\_IV\\_05.pdf](http://pse.litbang.pertanian.go.id/ind/pdf/Anjak_2007_IV_05.pdf)
7. Sugiarto. 2008. Analisis tingkat kesejahteraan petani menurut pola pendapatan dan pengeluaran di pedesaan. Pusat Analisis Sosial Ekonomi dan Kebijakan Pertanian. Badan Litbang Pertanian. Bogor, Indonesia. 248-260. Retrieved from: [http://pse.litbang.pertanian.go.id/ind/pdf/MS\\_B6.pdf](http://pse.litbang.pertanian.go.id/ind/pdf/MS_B6.pdf)
8. Sunarti, E. 2006. Indikator kesejahteraan keluarga: sejarah perkembangan, evaluasi dan keberlanjutan. IPB. Bogor, Indonesia. Retrieved from: <http://dp2m.umm.ac.id/files/file/Dr-Euis-Sunarti-Indikator-Keluarga-Sejahtera.pdf>
9. Yamaka, W., Sriboonchitta, S., Phochanachan, P., & Pastpipatkul P. 2017. Welfare Measurement on Thai Rubber Market. *International Journal of Applied Business and Economic Research*. 15 (7): 209-221.

DOI 10.18551/rjoas.2019-02.13

## **CHALLENGES AND CRITICAL SUCCESS FACTORS FOR E-PROCUREMENT ADOPTION IN ETHIOPIA**

**Shiferaw-Mitiku-Tebeka**, Assistant Professor  
**Addis Yessuf**, Lecturer

Addis Ababa University, College of Business and Economics, School of Commerce,  
Addis Ababa, Ethiopia

\*E-mail: [shiferaw.mitiku@aau.edu.et](mailto:shiferaw.mitiku@aau.edu.et)

### **ABSTRACT**

To ensure public procurement process fair, transparent, efficient and ethical, the Ethiopian Government implemented e-procurement adoption in selected pilot public organizations. This study intended to identify the major perceived challenges and critical success factors for e-procurement implementation and to ascertain strategies to mitigating the existing perceived challenges for e-procurement implementation in nine federal level organizations IN Ethiopia, selected as pilot scaled-down e-procurement implementation sites. Interview and structured questionnaire were used to collect primary data from purposively selected top managements and experts with directorate position from Finance, Procurement and ICT department from a total of 27 and 54 employees, respectively and carried out analysis with 89 percent response rate. The result revealed that, man-power retention, inconsistent and disruptive infrastructure, integration with the legacy system, top management and employees' commitment and attitude, supplier integration, security fear, weak and inconsistent support, poor monitoring and evaluation practices were found as the major challenges. While, training given to employees on how to use e-procurement tools and best procurement practices, the existence of change management programs for users on implementation of e-procurement through effective consultations and the high skill of procurement employees with IT perspective were found to be the major critical success factor.

### **KEY WORDS**

Challenges, e-procurement, procurement, Ethiopia.

The key competitive priorities for the 21<sup>st</sup> century in the Supply Chain Management is to embrace the emerging internet-based information and communication technologies such as e-procurement, to transform traditional procurement to continually find solution to reduce costs, increase efficiency, and to reduce the longest lead time across the supply chain actors. Procurement now is seen as a core player in supply chain focus on time to market, product quality based competition, cost efficiency, inventory management, and customer uncertainty (Monczla and Morgan, 2000). The practice of e-procurement is changing the way businesses purchase goods, hence, it make purchasing activities more effective in terms of both time and cost being responsive and ensuring efficiency. Nowadays, most of private and public owned organizations, and manufacturing and services rendering companies procure products and services using electronic data interchange and the internet, the application of e-procurement is inevitable. However, the implementation of e-procurement is not a guarantee for success for every organization since; some of the companies all over the world implement e-Procurement and succeed while some companies failed.

According to the FDRE Public Procurement and Property Administration Agency (2014), expenditure on public procurement takes the lion share from the annual Government budget; 64 percent of the annual budget, 14 percent of the GDP of Ethiopia. Considering its share in the economy, the implementation of e-procurement in Ethiopia seeks to support the country's economic development by ensuring efficiency and effectiveness in the execution of public procurement, to serve as a policy instrument in terms of encouraging and enhancing the capacity of local producers small and micro-enterprises, suppliers, contractors and consultants, to build trust between government and donors and increase the flow of official

development assistance through bilateral and multilateral channels, to create a conducive environment for various partnership arrangements between the government and the private sector, to reduce trade and non trade barriers within the framework of enhancing the competition policy and to protect the environment by encouraging the purchase of environmental friendly goods only.

In order to achieve transparency and modernization in public procurement, the Ethiopian Federal Government Procurement and Property Administration Proclamation No. 649/2009 and article 31 emphasizes on Electronic Procurement and it gives mandate to the Ministry to authorize the use of electronic means as a method of procurement. In order to implement this: 1) the Agency shall conduct a study and submit proposal on a system of conducting procurement by means of electronic exchange of information which is appropriate to the level of development of the country; 2) the Agency shall ensure that public bodies, suppliers and supervising entities develop the capacity required to implement the system; 3) upon due consideration of the proposed system of effecting procurement by means of electronic exchange of information and where he is satisfied that the overall system and capacity of public bodies and suppliers allows the carrying out of procurement through electronic exchange of information, the Minister may authorize the implementation of the electronic system in all or certain public procurement proceedings by establishing the appropriate framework for the operation of the proposed electronic system (Federal Negarit Gazeta September, 2009).

In this regard, considering its vitality, the Ethiopian government took the initiative to implement e-procurement at selected pilot government organizations. However, there are limited empirical studies in the literature on the challenges of implementing e-procurement in the country. Such a study will help the country to develop as well as refine the e-procurement policies, strategies, and procedures to implement e-procurement at national level, in all sectors of the economy. Hence, this study sought to ascertain the major perceived challenges and critical success factors exhibited during the pilot stage of e-procurement implementation in Ethiopia.

*Problem statement.* The benefits of e-procurement implementation in the public sector where much of the GDP is spent will only be gained if the challenges, that will hinder the pre-implementation and post- implementations milestones, are addressed well.

M.V. Jooste and C. de W. van Schoor (2003) put forward that countries implemented e-procurement like South Africa has very unique problems in implementation of e-procurement, which attributed to limited and monopolized supply base, limited bandwidth, social responsibilities, and e-procurement affordability. In this regard, the attempt by the Ethiopian government to implement e-procurement solutions in a few governmental organizations is met with various challenges such as failing to retain properly trained procurement officers, e-procurement solutions that are chosen to best fit the procurement process in Ethiopia, less supplier participation, limited top management supports, lack of employee and top management commitment, poor infrastructure and suppliers integration are few among others based on the informal pilot preliminary interview made with a total of fifteen employees, who attended Integrated Financial Management Information Systems implementation training from the Addis Ababa University. This calls for the intervention of research and policy options for proper e-procurement implementation in public organizations at national level. Hence, the challenges do come in various forms and categories. Accordingly, identifying the challenges and critical success factors will help the implementation of e-procurement solutions to be successful and ultimately to reap the benefits of those solutions at large.

*Research questions.* This study intended to answer the following specific research questions:

- What are the perceived critical success factors for effective implementation of e-procurement in Ethiopia?
- What are the major perceived challenges hindering the proper e-procurement implementation in Ethiopia?

- To what extent the selected pilot organizations have adopted e-procurement and realized its benefits?

The general objective of this study is identifying the major critical success factors and challenges exhibited in the pilot implementation of e-procurement solution in Ethiopia.

*Specific objectives:*

- To identify the perceived critical success factors for the implementation of e-procurement in Ethiopia;
- To identify the major perceived challenges for proper e-procurement implementation in Ethiopia;
- To ascertain the extent to which the selected pilot organizations have adopted e-procurement and realized its benefits.

*E-procurement implementation.* A pilot implementation of a software solution named Integrated Financial Management Information Systems (IFMIS) in seven to ten governmental organizations in an attempt to test the integration of finance, procurement and inventory processes.

## LITERATURE REVIEW

The ever increasing trend of e-business practices in the late 1990's led to the development of new opportunities related to procurement like e-procurement; spend management, outsourcing and joint product design (Lancioni, Smith, and Oliva, 2000). The advent of the internet as a business systems platform has been a channel for major changes in the operation; the way organizations and governments operate and change the status of organizational procurement, which attributed to the adoption of Information Technologies. This section covers the review of related literatures mainly empirical literature and conceptual framework of the study where the study is based on and the identified literature gap, for which the present study will contribute to the existing literature.

There are studies undertaken by different scholars related to identifying the critical success factors for e-procurement adoption from different countries perspective. However, to the knowledge of the researchers, no prior study has been conducted from Ethiopia perspective as adoption of e-procurement solution is at the pilot stage of its implementation in Ethiopia. Hence, major critical success factors were drawn from the exiting body of literature.

*Empirical reviews on critical success factors for e-procurement adoption.* Deployment of technology alone does not ensure the success of technological intervention and a public sector e-Procurement initiative depends on users and buyers making use of the new process and system. The solution must attract end users to view e-Procurement as the preferred means by which to purchase goods and services (KPMG, 2001). The success of the e-procurement solution/project also depends on communication to the users (Birks, Bond, & Radford, 2001). According to the CGEC (2002), the two major obstacles to increasing support among users are their level of technological awareness and acceptance, and their willingness to change long-established internal business processes. As the implementation process develops, periodic user satisfaction surveys may identify the possible need for additional training (OSD, 2001).

With an empirical research conducted by Gunasekaran and Ngai (2008) indicated that, there are several factors that are critical to the success for any e-procurement initiative either in the public sector, which need to be addressed for successful implementation of e-procurement in an organization Viz., the users acceptance of new systems of information, the quality of information that would be obtained, trust in the new systems, perceived risks, skills that staffs have and the training they would require, support from the top management at the organization, benefits that would be obtained from implementing the new system and continuous assessment of the benefits, benchmarking and compliance to best practices and factual selection of e-procurement solution.

Similarly, Mose (2012) conducted a study on the impact of e-procurement on the operations of Kenya Commercial Bank, noted five critical factors that had the greatest impact

on e-procurement namely., user acceptance of e-procurement systems, reliability of information technology and supplier performance, top management and employees' commitment to success of adoption, monitoring the performance of e-procurement systems and senior management support to e-procurement implementation process. The same study identified that, resistance to change by employees, lack of management support to the new changes, existence of old information technology systems and equipment; and lack of board approval to using e-procurement system were found to be the major challenges for e-procurement adoption. However, the aforementioned critical success factors were sub-categorized and split into different component to determine the critical success factors for implementation of e-procurement system. For example, a study conducted by Paniand Kar (2011) stated that training and capacity building of staff in procurement practices is a critical factor for successful e-procurement implementation. The staff needs to be well trained and equipped so as to be well conversant with the e-procurement systems. Considering that the success of e-procurement is dependent on the users who are part of the implementation process. These two sub-components considered as a critical success factor for e-procurement implementation are regarded as top management and employees' commitment in a study conducted by Mose (2012). Similarly, Stenning and Associates (2003) highlighted the need for transactions between different systems to be exchanged in secure ways with absolute assurances regarding the identities of the buyers and suppliers. In order to encourage buyers and suppliers to engage in e-Procurement, it is critical that both parties have complete confidence and trust in the underlying security infrastructure. While, in a study conducted by Mose (2012), this component was considered as the reliability of Information Technology and infrastructure for e-procurement adoption. This indicates, despite the different views exhibited among and between different scholars in determining the critical success factors for e-procurement adoption, their major concern area found to be similar. Hence, to avoid redundancy of the different variables considered by different researchers, the different critical success factors extracted from the existing literature were merged in to five major variables on the basis of their degree of similarity as described below under the conceptual framework of the study.

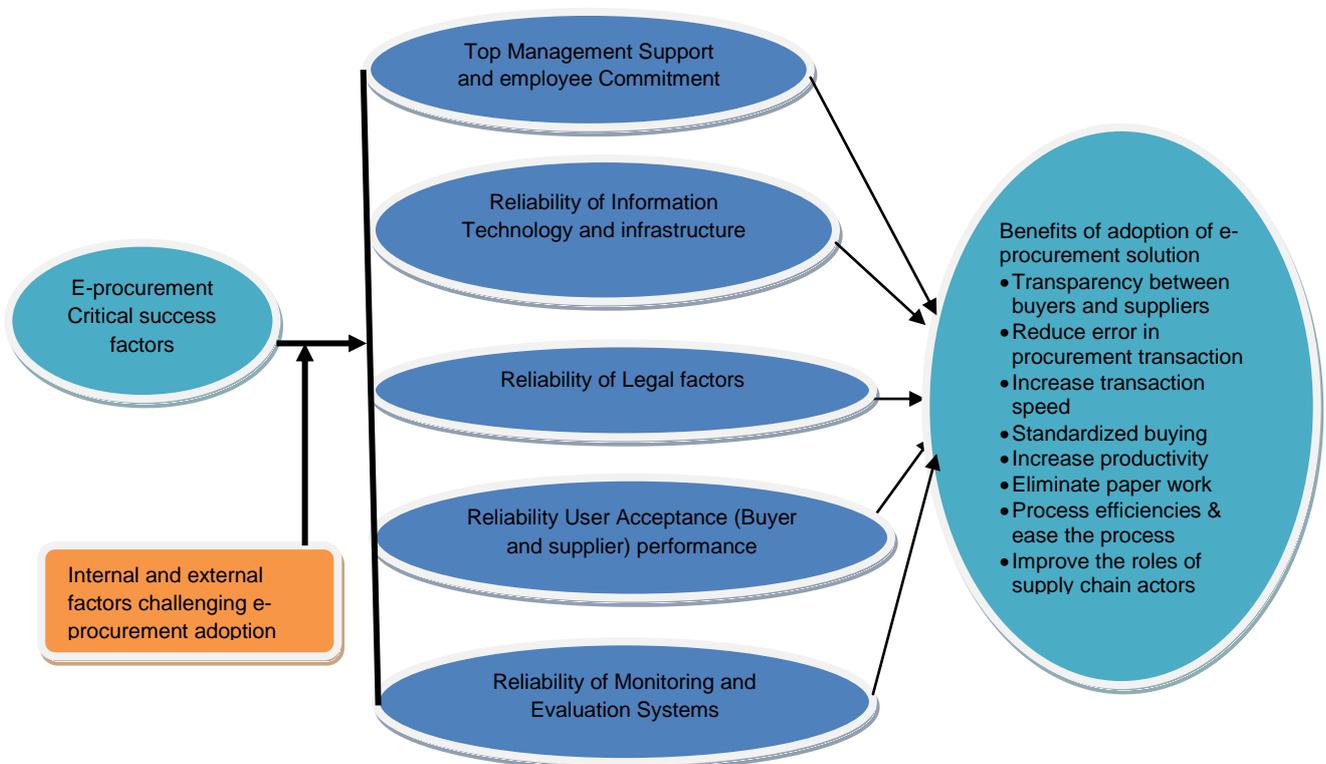


Figure 1 – Conceptual framework of the study (Source: Self depicted, and partially adopted from Mose, 2012)

Based on the empirical reviews made above, the conceptual framework of the present study considered five major critical success factors which were considered in several studies undertaken in different countries viz., top management support and employee commitment, reliability of information technology and infrastructure, reliability of legal factors, reliability of user acceptance (buyer and supplier) performance and the reliability of monitoring and evaluation systems for e-procurement adoption (see fig. 1). However, prior to the adoption of the conceptual framework and distribution of the data collection instrument (questionnaire) content validity was checked with experts with trust area of logistics and supply chain management. Accordingly, the experts' reflections were incorporated in the data collection instrument.

*Identified Literature gap.* To the knowledge of the researchers, no prior study has been conducted as far as the study target area is concerned; hence, the present study will bridge the existing literature gap to the Ethiopian e-procurement related literature perspective. Additionally, this study will give an insight to policy makers and practitioners in the area to pay due attention to those perceived critical success factors, which impact e-procurement implementation.

## **MATERIALS AND METHODS OF RESEARCH**

*Description of the study area.* Governmental organizations namely, the FDRE Ministry of Education, FDRE Ministry of Finance and Development, FDRE Ministry of Health, National Planning Commission, FDRE Public Procurement and Disposal Services, FDRE Public Procurement & Property Administration Agency, Ethiopian Road Authority, the Integrated Financial Management Information Systems (IFMIS) project office and the Addis Ababa University were selected for the study, which were selected as pilot e-procurement implementation sites. These are the hotbeds of the implementation where, the success or the failure of the implementation is going to have serious implications on the future of e-procurement in Ethiopia.

*Study population, Sample frame and Method of data collection.* Since e-procurement brings a platform for experts from different departments, hence, structured questionnaires were used to collect primary data from purposively selected employees in the department of Finance, Procurement and ICT of the selected organizations.

In order to triangulate the findings of the data collected using questionnaire, interviewees were purposively selected from Finance, Procurement and ICT Directorate/experts those who use the e-procurement system specially, leading, implementing and supporting the IFMIS solution in their respective organizations

*Sample size determination technique.* A study by Sarah Elsie Baker and Rosalind Edwards [n.d], on quantifying the sample size required for qualitative interviews concluded that, the number of people required to make an adequate sample for a qualitative research project can vary from one to a hundred or more. However, considering the length of time this type of research often takes, the difficulty of gaining entrée to even the most mundane group or setting, the difficulty in transcribing thousands of hours of interviews, and the "publish or perish" world in which we live, the best bet is to consider in the broad range of between a dozen and 60, with 30 being the mean.

Hence, this study is qualitative in nature, hence unstructured interview was used as the main data collection instrument, generally accepted rule of thumb dictates that 5-10 people are appropriate as a sample size for a interviewing. A total of sample size of 27 employees were purposively selected from the nine selected public organizations to undertaking interview with top managements, with directorate position and experts in the functional areas of Finance, Procurement and ICT. Besides, questionnaire was employed using census method, as there has been high employee turnover exhibited on those selected organizations, implemented the e-procurement systems. Hence, primary data were collected using unstructured in-depth-interview and questionnaire to elicit the major challenges they face and they think should be addressed in their e-procurement implementations and critical success factors to be considered at the full implementation stage of e-procurement.

A total of 54 questionnaires were distributed to employees involved in the aforementioned three functional areas (a minimum of two employees were drawn from each functional areas of the nine selected organizations) and 44 valid questionnaires were collected and retained for final analysis with 81.5% response rate. It is possible that, the response rate was affected by the fact that the survey was only relevant to employees using e-procurement solution in the functional areas of procurement, finance and ICT and the selected organizations were experiencing high employee turnover in the selected functional areas.

*Method of data analysis.* As the research is a qualitative one, non-parametric statistical analysis was used. Challenges exhibited in e-procurement implementation were descriptively analyzed using content analysis approach and simple statistical tools like mean, frequency and percentage; and Critical success factor analysis was made using non- parametric test mainly Kendall's W. Coefficient of Concordance model, to measure association with the N blocks representing N independent judges, each one assigning ranks to the same set of K applicants (Kendall, M. G., and Babington-Smith, B., 1939). Kendall's W measures the extent to which the N judges agree on their rankings of the K respondents. Kendall's W bears a close relationship to Friedman's test; Kendall's W is in fact a Scaled version of Friedman's test statistic:

$$W = TF / N (K-1) \quad (1)$$

The scaling ensures that  $W=1$  if there is perfect agreement among the N judges in terms of how they rank the K applicants. On the other hand, if there is perfect disagreement among the N judges  $w = 0$ . The fact that the judges don't agree implies that they don't rank the K applicants in the same order. So each applicant will fare well at the hands of some judges and poorly at the hands of others. Under perfect disagreement, each applicant are fare the same overall and will thereby produce an identical value for  $R_j$ . This common value of  $R_j$  will be  $R$ , and as a consequence,  $W=0$ . Thus, the inferential statistical test-Kendall's W Test (coefficient of concordance) was fitted to determine if there is any significant difference in the various rankings of variables to be considered in measuring the critical success factors for e-procurement implementation in Ethiopia.

## RESULTS AND DISCUSSION

This section presents the demographic profile of the respondents, critical success factors for e-procurement adoption, major roles (benefits) of e-procurement adoption, level of e-procurement adoption and challenges for e-procurement adoption in the selected public organizations in Ethiopia, implemented e-procurement solution called IFMIS.

Table 1 – Reliability Statistics of the model

Items	Cronbach's Alpha	N of Items	Number of cases	Excluded <sup>a</sup> Cases
CSF 1: Top Management Support and employee Commitment for e-procurement adoption	.897	9	44	0
CSF 2: Reliability of Information Technology and infrastructure for e-procurement adoption	.875	9	43	1
CSF 3: Reliability of Legal factors in e-procurement adoption	.933	6	44	0
CSF 4: Reliability User Acceptance (Buyer and supplier) performance of e-Procurement adoption	.905	7	44	0
CSF 5 : Reliability of Monitoring and Evaluation Systems for e-procurement adoption	.906	4	44	0
Extent of Perceived benefits derived from e-procurement adoption	.915	11	36	8
Challenges hindering the adoption of e-procurement	.956	20	31	13
Level of e-procurement adoption	.983	20	32	12
Over all Reliability Statistics of the model	.934	86	24	20

a. Listwise deletion based on all variables in the procedure.

In order to distinguish those variables (questions) which reflect different underlying variables (like CSF for e-procurement adoption, challenges of e-procurement adoption and the level of e-procurement adoption) the Principal Component analysis test was computed and then the overall reliability test was checked using Cronbach's Alpha. Accordingly, the

reliability statistics of the model indicates, Cronbach's Alpha is 0.934, which indicates a high level of internal consistency is secured, with an overall reliability of coefficients for a set of variables of 86 items.

Table 2 – Respondents' Level of education

What is your highest level of education?		Frequency	Percent
n/n	Diploma	4	9.1
	Bachelor Degree	28	63.6
	Masters Degree and above	12	27.3
	Total	44	100.0

Source: Own survey, December 2017.

The findings from Table 3 indicated that more than half of (63.6%) the respondents were Bachelor Degree holders, 27.3% had a Graduate Degree and 9.1% of the respondent obtained diplomas. Therefore, the respondents had attained the necessary education and knowledge to implement e-procurement in the selected public entities in Ethiopia.

A list of five success factors in the implementation of e-procurement in selected public organizations in Ethiopia namely; the FDRE Ministry of Education, FDRE Ministry of Finance and Development, FDRE Ministry of Health, National Planning Commission, FDRE Public Procurement and Disposal Services, FDRE Public Procurement & Property Administration Agency, Ethiopian Road Authority, the Integrated Financial Management Information Systems (IFMIS) project office and the Addis Ababa University were identified and respondents were requested to indicate the extent to which they agreed or disagreed with each factor. A five point Likert scale was used where: 1= strongly disagree, 2= disagree, 3= moderately agree, 4= agree, and 5= strongly agree. From the responses, Rank of Kendall's Coefficient of Concordance model and descriptive measures of central dispersion: mean and frequency were fitted to analyzing the data (Table 2).

Mose (2012) did a research on the impact of e-procurement on the operations of Kenya Commercial Bank (KCB). The study noted five critical factors that had the greatest impact on e-procurement. These five factors are user acceptance of e-procurement systems, reliability of information technology and supplier performance, top management and employees' commitment to success of adoption, monitoring the performance of e-procurement systems and senior management support to e-procurement implementation process.

Accordingly, the results revealed that, among the five critical success factors the reliability of Information Technology and infrastructure was ranked first being the key critical success factors for e-procurement implementation in Ethiopia.

The provision of reliable monitoring and evaluation systems ranked as the second most critical success factor and the reliability of user acceptance (buyer and supplier) for implementation of e-procurement ranked third and the fourth and fifth critical success factors for e-procurement implementation were found to be the top management support and employee commitment; and the availability of reliable legal environment for e-procurement adoption with Kendall's Coefficient of Concordance of 0.035, indicating respondents level of agreement over the 54 items were not consistent in their ranking.

The reliability of Information Technology and infrastructure was ranked as the first most critical success factors with a mean value of 3.08, being a key to implementation of e-procurement solution. The reliability of Information Technology and infrastructure as a key critical success factor attributed to the functional integration of the e-procurement system with other business processes (such as finance and inventory or IFRS, and ERP), the supply of high band width internet connection for e-procurement implementation, the high usability of the system to suppliers having features like friendly interfaces, document uploads, integration with invoice systems, etc), the compatibility of the e-procurement implementation systems with the existing hard ware and software followed by and the availability of security and authentication measures considering the sensitivity of data and legal nature of accountable documents with mean value of 3.48, 3.27, 3.23, 3.16, 3.16 and 3.05, respectively.

Table 3 – Critical success factors for e-procurement adoption

CRITICAL SUCCESS FACTORS	Attributes of CSF for e-procurement adoption	Strongly disagree	Disagree	Moderately agree	Agree	Strongly agree	-	Mean Rank of Kendall's w. Coefficient of Concordance
Factor 1: Top Management Support and employee Commitment for e-procurement adoption (Mean of Mean=2.80)	There is staff training/capacity building on how to use e-procurement tools and best procurement practices.	5	12	10	6	11	3.14	21.0
	There is change management programs for users on implementation of e-procurement through effective consultations	9	9	8	11	7	2.95	18.8
	There is provision of adequate resources necessary for e-procurement implementation	10	12	6	13	3	2.70	18.4
	There is top management leadership to e-procurement implementation	6	15	10	9	4	2.77	17.9
	Employees' commitment to the implementation of e-procurement is high	11	6	14	9	4	2.75	17.5
	There is risk management practices (contingency approach to practice e-procurement)	7	9	15	12	1	2.80	17.6
	Senior managers organizes a training on e-procurement adoption	10	13	11	8	2	2.52	16.1
	Top management gives due care about e-procurement and willing to invest on e-procurement adoption	11	9	9	12	3	2.70	16.1
Factor 2: Reliability of Information Technology and infrastructure for e-procurement adoption (Mean of Mean=3.08)	The skill of procurement employees with IT perspective is high	10	8	8	14	4	2.86	18.8
	The security and authentication measures are in place, considering the sensitivity of data and legal nature of accountable documents.	7	7	11	15	4	3.05	19.5
	Availability of a reliable internet service to facilitate the e-procurement implementation process is not a problem	14	7	6	12	5	2.70	17.5
	Availability of a reliable ICT infrastructure within my organization to facilitate the e-procurement implementation process is not a problem	8	11	8	14	3	2.84	18.7
	e-procurement implementation systems are compatible with existing hard ware and software	5	5	15	16	3	3.16	21.0
	The functional integration of the e-procurement system with other business processes such as finance and inventory or IFRS, ERP is strong	5	3	7	24	5	3.48	22.5
	Usability of the system to suppliers is high having features like friendly interfaces, document uploads, integration with invoice systems, etc)	8	6	7	19	4	3.16	19.7
	There is no inconsistency of internet connection and power outages hindering the successful adoption of e-procurement	13	5	7	14	5	2.84	16.9
Factor 3: Reliability of Legal factors in e-procurement adoption (Mean of Mean=2.61)	The e-procurement implementation demands high band width on the internet connection	7	2	14	14	7	3.27	20.4
	Reliable information is available on the website in the adoption of e-procurement	7	7	8	13	9	3.23	19.8
	There is documented e-procurement policy manual within the organization to guide the implementation process	16	7	6	12	3	2.52	16.2
	There is legal and administrative procedure for e-procurement adoption	15	5	11	10	3	2.57	15.9
	There is e-procurement operations instruction	13	9	8	12	2	2.57	16.0
	There is legal framework that incentivizes suppliers to use e-procurement	16	7	8	11	2	2.45	15.0
	There is changing manual procedures, policy, and legal framework in favor of e-procurement	12	8	6	12	6	2.82	18.0
	There is up-to-dated procurement information in e-procurement implementation	10	10	10	10	4	2.73	16.6
Factor 4: Reliability user acceptance (Buyer and Supplier) performance of e-Procurement adoption (Mean of Mean=2.83)	Training is offered to suppliers on e-procurement adoption	13	7	8	13	3	2.68	16.2
	The system involves most of stakeholders mainly buyers & suppliers in e-procurement adoption	12	8	9	12	3	2.68	16.2
	Employees are willing to use e-procurement system	6	6	15	11	6	3.11	19.3
	Legal traders (suppliers)are willing to use e-procurement	6	8	20	8	2	2.82	17.3
	New processes are designed for automation of e-procurement	7	9	16	10	2	2.80	17.8
	Both buyers and suppliers are willing and ready to make e-procurement adoption succeed	6	9	16	10	3	2.89	18.1
	Both buyers and suppliers have developed trust on the system (e-procurement)	10	6	13	10	5	2.86	17.5
	Factor 5 : Reliability of Monitoring and Evaluation Systems for e-procurement adoption (Mean of Mean=2.90)	Existence of a project management team to spearhead, monitor and evaluate progress of e-procurement implementation is in place	9	10	13	9	3	2.70
There is practices of improving the performance of e-procurement adoption through continuous evaluation and feed back		8	8	16	7	5	2.84	17.3
Compliance with rules and regulations is ensured		5	10	15	10	4	2.95	18.4
Observation of procurement guidelines is being practiced and monitored		6	6	15	12	5	3.09	19.6

Kendall's Wa =0.035, Chi-Square =51.601, df = 34, Asymp. Sig.= 0.027 N=44, a = Kendall's Coefficient of Concordance. Source: Own Survey, December 2017.

The finding proved that, the implementation of e-procurement solution is dependent on the features of the e-procurement solution itself to accommodate the users' (buyers and sellers) service requirements and the access to high bandwidth internet service in a consistent basis and the security and authentication measures that can guarantee safe transactions of a user.

The finding is consistent with a study conducted by Naveed Sarwar (2017) in Assessing e-procurement success factors in telecommunication organizations in Pakistan affirmed that, Top management support, Transparency of a system and availability of ICT Infrastructure were found as the top three critical success factors for e-procurement adoption.

The respondents also moderately agreed that, provision of reliable of monitoring and evaluation systems necessary for implementation of e procurement ranked as the second key critical success factors to the implementation of e-procurement with a mean of 2.90. The result was mainly attributed to the compliance of e-procurement implementation with rules and regulations with a mean value of 3.09 followed by the availability of the practices of observation of procurement guidelines with a mean value of 2.95.

The reliability of user acceptance (buyer and supplier) for implementation of e-procurement ranked third with a mean of 2.83, considering that buyer and supplier are major stakeholders in the procurement process to successfully implement e-procurement. The reliability of user acceptance is attributed to willingness of employees to use e-procurement system, willingness of legal traders (suppliers) to use e-procurement, willingness and readiness of both buyers and suppliers to make e-procurement adoption succeed and the trust developed by both buyers and suppliers on the system (e-procurement) with a mean value of 3.11, 2.82, 2.89 and 2.86, respectively.

Top management support and employee commitment for e-procurement adoption was found to be the fourth critical success factors with a mean of 2.80. Among the major variables attributed for top management support and employee commitment are the availability of staff training on how to use e-procurement tools and best procurement practices with mean of 3.14, followed by the availability of change management programs for users on implementation of e-procurement through effective consultations and the high skill of procurement employees with IT perspective with a mean of 2.95 and 2.86, respectively.

A study conducted by Pani and Kar (2011) claimed that, training and capacity building of staff in procurement practices is a critical factor for successful e-procurement implementation. The staffs need to be well trained and equipped so as to be well conversant with the e-procurement systems. Hence, considering that the success of e-procurement is dependent on the users who are part of the implementation process.

Similarly, the finding is consistent with a study conducted by Kevin George Obat(2016) on critical success factors in the implementation of e-procurement in public entities in Kenya found that, staff training on use of e-procurement tools and best procurement practices, the provision of adequate resources necessary for implementation of e-procurement systems and top management leadership and commitment to e-procurement implementation were the top three key critical success factor for e-procurement adoption

The availability reliable legal factors in e-procurement adoption ranked as fifth critical success factor with a mean of 2.61, being the least among the given factors determining the successful implementation of e-procurement in Ethiopia. The availability of changing manual procedures, policy, and legal framework in favor of e-procurement implementation, the up-to-datedness of procurement information during the e-procurement implementation, the availability of legal and administrative procedure for e-procurement adoption ; and the availability of e-procurement operations instruction were found to be the major sub-factors attributed to the availability of reliable legal factors in e-procurement adoption as the fifth least critical success factor with mean of 2.82, 2.73, 2.57, and 2.57, respectively.

Respondents were asked to rank the extent to which e-procurement adoption benefited the public organization where they are working (Adoption of e-procurement benefited to a great extent "5: to a no extent "1").

Table 4 – Benefits of e-procurement adoption

Major roles (benefits) derived from the adoption of e-procurement solution	N	Missing	To no extent	To a little extent	Moderate extent	Great extent	Very great extent	Mean	Kendals Mean Rank, N=36
To what extent does the e-procurement implementation bring transparency between buyers and suppliers?	44	0	3	8	9	9	15	3.57	5.56
To what extent does the e-procurement implementation reduce error in procurement transaction?	44	0	2	3	11	18	10	3.70	5.83
To what extent does the e-procurement implementation increase transaction speed?	44	0	2	1	16	11	14	3.77	6.68
To what extent does the e-procurement implementation bring standardized buying?	42	2	1	5	4	17	15	3.95	6.54
To what extent does the e-procurement implementation increase productivity?	40	4	1	3	13	9	14	3.80	6.58
To what extent does the e-procurement implementation eliminate paper work?	43	1	7	3	8	12	13	3.49	5.54
To what extent does the e-procurement implementation bring process efficiencies?	42	2	2	6	10	12	12	3.62	6.08
To what extent does the e-procurement implementation ease the process like common process, standardization, visibility and efficient invoice settlement	41	3	1	10	5	12	13	3.63	6.32
To what extent does the e-procurement implementation improve the roles of supply chain actors like knowledge sharing, more value-added activity, and productivity	43	1	1	8	12	11	11	3.53	5.83
To what extent does the e-procurement implementation improve supplier management and selection, reduce supplier number and improve supplier integration?	43	1	5	7	11	10	10	3.30	5.33
To what extent does the e-procurement implementation improve control and compliances	42	2	1	11	5	17	8	3.55	5.69

Source: Own Survey, December 2017.

The result revealed that, public organizations implemented e-procurement solution affirmed that the adoption of e-procurement solution led them to exhibit transparency between buyers and suppliers as the major benefit followed by reduce error in procurement transaction, increase transaction speed, bring standardized buying, increase productivity, eliminate paper work, bring process efficiencies, ease the process like common process, standardization, visibility and efficient invoice settlement, improve the roles of supply chain actors (like knowledge sharing, more value-added activity, and productivity), improve supplier management and selection, reduce supplier number and improve supplier integration and improve control and compliances to the level of between moderate to a great extent. However, the existing system doesn't let supplier to participate.

This indicates that the adoption of e-procurement served major expected benefits that can be derived out of the e-procurement solution. A good procurement system should be guided by the principles of good governance and values such as transparency, accountability and integrity (Wittig, 2003). More to that, a study conducted by Gunasekaran & Ngai (2008), affirmed that the quality of information that would be obtained, trust in the new systems, perceived risks, skills that staff have and the training they would require, support from the top management at the organization, benefits that would be obtained from implementing the new system and continuous assessment of the benefits, benchmarking and compliance to best practices and factual selection of e-procurement solution

Respondents were asked to indicate the extent to which their organization has adopted those key activities in the procurement function through e-procurement system. A five point Likert scale was used to measure the level of e-procurement adoption where: 1= Not available; 2 = adopted to small extent; 3 = adapted to a moderate extent; 4= adapted to great extent 5= adapted to very great extent. From the responses, a descriptive measure of central dispersion mean was fitted to analyzing the data.

The finding revealed that, the level of e-procurement adoption for most of the procurement processes expected to be handled between small to a moderate extent. The

level of adoption of e-procurement practices mainly advertising tenders online was calculated a mean value of 2.66, registering suppliers and manage suppliers information accounted a mean of 2.62, suppliers are able to access the bid information with mean of 2.59, existence of functioning website ranked below moderate level of adaption with mean value of 2.53 followed by call for proposals done through company website, the system is capable of handling bid award management, short listing of suppliers online, Company staffs make requisitions online the system is capable of integrating with the internal and external stakeholders' system with a mean value of 2.45, 2.38, 2.32, 2.32, and 2.30, respectively. While, the level of e-procurement adoption specifically, bid opening and closing features and online submission of bids by supplier were not available on the existing e-procurement adoption as the current implementation doesn't register suppliers online.

Table 5 – Level of e-procurement adoption

E-Procurement adoption levels (Using a five point Likert scale: 1= Not available; 2 = adopted to small extent; 3 = adopted to a moderate extent; 4= adopted to great extent 5= adopted to very great extent, hence, Minimum =1 and Maximum=5)	N	Missing	Mean
Advertising tenders online	38	6	2.66
Online submission of proposals	37	7	2.05
Short listing of suppliers online	37	7	2.32
Company staffs make requisitions online	37	7	2.32
Call for proposals done through company website	38	6	2.45
Existence of functioning website	36	8	2.53
Posting item specifications on company website	36	8	2.17
Procurement Process (availing bids documents and bid information online)	37	7	2.19
Suppliers are able to access the bid information	37	7	2.59
Registering suppliers and manage Suppliers information	34	10	2.62
The system is capable of playing bid opening and closing features	36	8	1.89
Suppliers are able to submit their bids online	36	8	1.94
Suppliers are able to trace the online status of their application	37	7	2.00
The system is capable of evaluating the bids received	37	7	2.05
The system is capable of ranking the bid result	36	8	2.11
The system is capable of handling Bid award management	37	7	2.38
The system is capable of contract management with the supplier	37	7	2.08
The system is capable of monitoring and follow-up the progress of the suppliers to meet their deadline (notification)	37	7	2.00
The system is capable of auction management system	37	7	2.14
The system is capable of integrating with the internal and external stakeholders' system (Bank, Inventory Management, Finance Department)	37	7	2.30

Source: Own Survey, December, 2017.

From the findings in table 5 above, public organizations in Ethiopia, implemented e-procurement solution below a moderate extent with a mean < 3 for the different types of e-procurement related activities as listed in the table above like advertising tenders online, online submission of proposals, short listing of suppliers online, company staffs make requisitions online, call for proposals done through company website, existence of functioning website, posting item specifications on company website, procurement process (bids documents and bid information online), suppliers are able to access the bid information, registering suppliers and manage suppliers information, suppliers are able to submit their bids online, suppliers are able to trace the online status of their application, the system is capable of evaluating the bids received, capability of the system to play bid opening and closing features and evaluating the bids received, ranking the bid result, handling Bid award management, contract management with the supplier and monitoring and follow-up the progress of the suppliers to meet their deadline, auction management system and integrating with the internal and external stakeholders' system.

The result contradicts against with the observations by Croom and Brandon-Jones (2004) who assert that e-procurement systems enable organization to carry out individual or all stages of the procurement process such as searching for suppliers, sourcing, negotiation, ordering and posting of purchase review using internet-based (integrated) information and communication technologies. However, this may be attributed to challenges like usage of decades-old equipment and parts whose documentation is paper-based and lacks the digital

format necessary for e-Procurement systems as noted by Moore (2003). Hence, this study proved that, despite the major benefits realized through the adoption of e-procurement solution, most of the public organizations involved with pilot implementation were failing to utilize the solution to full-fledged extent by reaching every supply chain actors through electronic transaction.

Respondents were asked to rank challenges hindering the adoption of e-procurement with a five point liker scale where, 1 =Not challenging factor, 2 = Least challenging factor, 3= moderately challenging factor, 4= Challenging, 5 = Very challenging factor.

Table 6 – Challenges hindering the adoption of e-procurement

Challenges to e-procurement adoption	N	Missing	Not challenging factor	Least challenging factor	Moderately challenging factor	Challenging	Very challenging factor	Mean
Making equipment compatible is expensive	37	7	9	7	3	12	6	2.97
Lack of regular use by employees	37	7	7	6	10	7	6	3.35
e-procurement adoption is not cost effective approach	36	8	3	7	11	10	8	2.97
Lack of finances to adopt e-procurement	39	5	2	5	12	7	13	3.33
Old IT equipment that needs overhaul	39	5	6	3	8	8	14	3.62
Resistance to change	39	5	5	3	7	11	12	3.54
Lack of e-procurement implementation capacity by small suppliers	38	6	7	0	12	5	14	3.58
Lack of internet access by small suppliers	38	6	5	1	16	7	10	3.50
Lack of company board approval	39	5	1	8	12	8	10	3.41
Lack of managerial support	39	5	2	8	9	8	13	3.46
Availability of consistent follow up and support to employees' training	39	5	3	7	7	13	9	3.33
Inefficient infrastructure framework to facilitate procurement transactions (making payments such as bid guarantees, CPOs, etc on the suppliers' side using the e-procurement system and making payments to the supplier on the buyers' side)	39	5	3	7	7	13	9	3.46
Insufficient top Management Support for e-procurement adoption	40	4	4	7	9	8	12	3.43
Less employee Commitment for e-procurement adoption	40	4	3	9	7	12	9	3.38
Poor IT infrastructure for e-procurement adoption	40	4	4	8	6	7	15	3.53
Unavailability of legal frameworks for e-procurement adoption	39	5	3	7	12	4	13	3.44
Resistance to adopt e-Procurement from buyers' side	38	6	0	8	11	8	11	3.58
Resistance to adopt e-Procurement from suppliers' side	38	6	1	8	7	8	14	3.68
Poor monitoring and evaluation Systems for e-procurement adoption	38	6	3	6	13	7	9	3.34

Source: Own Survey, December 2017.

Among the major challenges for the adoption of e-procurement in the selected public organizations were found to be resistance to make use of e-procurement on the suppliers' side with a mean of 3.68, old IT infrastructure that needs overhaul with a mean of 3.62, resistance to adopt e-procurement adoption from buyers' side (3.58), lack of e-procurement implementation capacity by small suppliers with a mean of 3.58 followed by resistance to change with a mean of 3.54 and poor IT infrastructure for e-procurement adoption with a mean of 3.53. In addition to the data collected using questionnaire, in-depth unstructured interviews were made with a total of 27 employees of the selected organizations with Directorate and senior expert position with functional areas of procurement, finance and ICT. Add to this, experts from MOFED, which controls and facilitates the adoption of the e-procurement (IFMIS), were also interviewed. Accordingly, the following are found to be the major challenges hindering the adoption of the e-procurement in Ethiopia.

Manpower retention: High turnover rate in departments of procurement, finance and inventory is a real threat pointed out in all of the pilot organizations. It has been mentioned that, this is attributed to the small salary scheme of the government. The Ethiopian government's failure to give special attention to the trained and skilled officers of the aforementioned departments had led to the high turnover rate that left many organizations

not to make full use of the pilot implementation. The e-procurement implementation software system works in assigning accounts to different employees in different departments. Therefore, if a trained employee with a privilege leaves that department, the particular work of the department won't be carried out unless someone else with similar access privilege is hired and trained. Thus, where there is no enough manpower to work on the system, the system wouldn't be used completely. The only option available will be falling back to the manual system and integration to the IFMIS that piles unnecessary work overhead to employees.

**Inconsistent and disruptive infrastructure:** It has been noted that the inconsistent internet connection throughout a year has proved itself to be a nightmare for any internet based implementation such as this pilot implementation. A number of days pass without doing anything on the system while there are urgent procurements, inventories and financial activities to be conducted. This is infuriating department directors and discouraging employees as they have to go back to the manual system and integrate back to the pilot implementation of IFMIS taking lots of their valuable work hours. Power outages and slow internet connections do contribute a lot for the poor performance of the infrastructure. Many of the interviewees raised their concerns on how the full implementation of e-procurement system roll out would ever be successful with the ever inconsistent and poorly performing infrastructure of the country.

**Top management commitment and attitude:** Top managers do still favor paper works than digital systems. Many of them wouldn't want to believe what the pilot implementation can accomplish and they only consider legitimate and correct what is done on papers. This attitude brings a negative impact on their commitments towards trainings of employees, incentives and supports to the e-procurement adoption. In a few occasions, it has been pointed out that legal framework is compulsory for the top management to take the system seriously. **Integration with the legacy system:** It is not easy to add works done via the manual system due to different system problems. Previous works can't be recorded as easy as possible. A few operations in the system are not in line with the working of Ethiopian financial operations which calls for customizations.

**Employee capacity, commitment and attitude:** Some employees don't want to leave the comfort zone of the manual system where they have been working on for years. Commitment to trainings and working on IFMIS are affected directly by the attitude towards a new system where they feel the new system introduces new practices which are not in line with their preferred old way of conducting tasks. Resistance to the pilot system stems from this fear and anxiety. In a few departments, capacity of employees to make use of a digital system is so limited and that calls for consistent capacity building efforts to be well planned and conducted.

**Supplier integration and supplier culture:** Interviewees opened about their fear of the fact that suppliers would be suspicious of conducting their works online. A few even mentioned how suppliers are reluctant in getting registered in the supplier list of the system. They have the tendency of considering the software system as something that spies on behalf of the government. If a full e-procurement implementation is to be rolled out where suppliers are going to participate, the attitude of suppliers to work on a digital environment should be worked on and legal frameworks that would enhance the integration of suppliers to the digital systems should be in place and enforced well.

**Inconsistency of reforms made on procurement solution systems by the Government:** This pilot adoption is regarded as one of the futile attempts on the side of the Ethiopian government to introduce a new system or practice in governmental offices. Various inconsistent efforts that ended up the way they were supposed to be paved the way for this particular adoption effort to be considered as one of them. Even those who are enjoying the pilot adoption feared the end of this attempt.

**Security fear:** Officers and directors do fear about the access their usernames and passwords by other actors so that approvals that they don't know about will be conducted on behalf of them. This fear lets them not to commit them towards the full adoption of the system and stay suspicious of the e-procurement adoption. However, an intensive interview

made with ICT experts and Directorate across the selected organizations on the same regard, they proved that those ICT support experts have the privilege to reset the passwords of any user in the organization whenever the user is short of accessing their account but not approving any financial transaction. Hence, strict tracing and tracking mechanism is required to strike the balance between the privilege given to the ICT support experts and the fear exhibited on those users/decision makers across e-procurement implementing organizations

Support, monitoring and evaluation: Timely support from those in charge is one of the specially noted subjects during the interviews. Without the timely and proper support, days will go on without working on the system.

Partial implementation and lack of mobile integration: The pilot implementation named IFMIS has a focus on financial procurement affairs that accommodates often the final results of procurement; it doesn't cover the bid processes of procurement. Many employees fail to see its operational and managerial benefits due to this incomplete implementation of e-procurement system. Since the paperwork is also together with the sample implementation, a few employees fail to see the benefits of the sample e-procurement implementation. If the system had been workable on smart phones, it would have been more usable, appealing and trust worthy to users as pointed out in one particular instance.

Similarly, a study conducted in Mauritania by Nazima B. and Vani R., (2017), found that, inadequacies in government policies and legislation can affect the uptake of an ICT system. The lack of standards in the development of e-procurement system, lack of comprehensive technology development and standards to implement the system especially in developing countries often, lack of human resource with technical expertise or knowledge of e-procurement systems as well as lack of financial capacity to risk such as absorb e-Procurement system failure.

## **CONCLUSION**

The study concluded that the five major critical success factors for e-procurement implementation in Ethiopia are the reliability of Information Technology infrastructure followed by provision of reliable of monitoring and evaluation systems, reliability of user acceptance (buyer and supplier), top management support and employee commitment; and the availability of reliable legal environment for e-procurement adoption. While, major perceived challenges exhibited during the adoption of e-procurement solution in Ethiopia as identified by top level managers (interviewees) of public organization are manpower retention, inconsistent and disruptive infrastructure, top management commitment and attitude, integration with the legacy system, employee capacity, commitment and attitude, supplier integration and supplier culture, inconsistency of reforms made on procurement solution systems by the government, security fear, support, monitoring and evaluation; and partial implementation and lack of mobile integration. Add to this, data collected using questionnaire on the same regard, revealed that major challenges hindering the smooth implementation of e-procurement solutions are found to be old IT equipment that needs overhaul, resistance to change, lack of e-procurement implementation capacity by small suppliers, lack of internet access by small suppliers, poor IT infrastructure for e-procurement adoption, resistance to adopt e-Procurement from buyers' side and resistance to adopt e-Procurement from suppliers' side. Hence, government should develop a legal framework and motivational scheme to create interest on legal traders (suppliers) and enforce them to actively play in the e-procurement adoption role as they are the major actors to realize the major benefits (fair public procurement process, transparent, efficient and ethical) that can be derived from e-procurement adoption. The study is limited in that; no attempt was made to examine the relationship between the use of the various e-procurement applications and business outcomes. Instead it was limited to an application called IFMIS. Hence, future research could examine the relationship between the use of integrative e-procurement applications and business outcomes such as increased communication and integration (vertical and horizontal and forward and backward), operational agility, improved product/service design, and overall supply chain performance.

## REFERENCES

1. Birks, C., Bond, S. & Radford, M. (2001). Guide to e-Procurement in the Public Sector: Cutting through the Hype. London, UK: Office of Government Commerce, HMSO.
2. Consortium for Global Electronic Commerce (CGEC) (2002, October). Measuring and Improving Value of E-procurement Initiatives. Madison, WI: University of Wisconsin-Madison, Consortium for Global Electronic Commerce.
3. Croom, S. & Brandon-Jones, A. (2004). "E-Procurement: Key issues in e-Procurement implementation and operation in the public sector", 13th International Purchasing & Supply Education & Research Association (IPSERA) Conference, April 4-7, Italy.
4. Federal Negarit Gazeta of the Federal Democratic Republic of Ethiopia. (2009). Proclamation No. 649/2009. The Ethiopian Federal Government Procurement and Property Administration Proclamation. p. 4858. No.60 ADDIS ABABA September, 2009.
5. Gunasekaran, A., & Ngai, E. W. (2008). Adoption of e-procurement in Hong Kong: an empirical research. *International Journal of Production Economics*, 113(1), 159- 175.
6. James Mauti Mose (2013). The critical success factors and challenges in e-procurement adoption among large scale manufacturing firms in Nairobi, Kenya. *European Scientific Journal* May 2013 edition vol.9, No.13 ISSN: 1857 – 7881 (Print) e - ISSN 1857- 7431.
7. Kendall, M. G. (1939). The problem of rankings. *Ann. Math. Statist.*, 10: 275–287.
8. Kevin George Obat (2016). On critical success factors in the implementation of e-procurement in public entities in Kisumu County, Kenya. Master Thesis Submitted To School Of Business, University Of Nairobi.
9. KPMG (2001). University of California Office of the President System- Wide E-Procurement Assessment and Strategy Recommendation. KPMG Consulting.
10. M.V. Jooste and C. de W. van Schoor. (2003). A framework for the implementation of e-procurement. Department of Industrial and Systems Engineering. University of Pretoria, South Africa. *The south african journal of industrial engineering*. Vol 14, No 2.[Available] Online: <http://sajie.journals.ac.za/pub/article/view/262> [15 October 2017].
11. Monczka (2000). What will happen and what you should know: purchasing, 124(1), 78-83
12. Moore, J. (April 1, 2007). E-Procurement Pays Its Own Way: Strategic Sourcing and e-Procurement Transform Purchasing in DeKalb County, GA." FCW.COM
13. Mose, W. N. (2012). Impact of Electronic Procurement on The Operations of Kenya Commercial Bank (Doctoral dissertation, University of Nairobi).
14. Nazima B., 2017. The Challenges and Benefits of Adopting E-procurement – Reference to Mauritian Economy. *International Journal of Management and Applied Science*, 3(5).
15. Naveed S. (2017). Assessing e-procurement success factors in telecommunication organizations. Thesis submitted to the Capital University, Islamabad.
16. Operational Services Division (OSD) (2001). Critical Success Factors and Metrics: Enhanced Comm-Pass Initiative. Boston, MA: Commonwealth of Massachusetts.
17. Pani, A. K., & Kar, A. K. (2011, January). A study to compare relative importance of criteria for supplier evaluation in e-procurement. In *System Sciences (HICSS)*, 2011 44th Hawaii International Conference on (pp. 1-8). IEEE.
18. Pani, A.K. (2011). A study to compare relative importance of criteria for supplier evaluation in e-procurement. In *System Sciences*, 44th Hawaii Int. Conf. (pp. 1-8). IEEE.
19. Sarah Elsie Baker and Rosalind Edwards [n.d]. How many qualitative interviews is enough? Expert voices and early career reflections on sampling and cases in qualitative research. National Centre for Research Methods Review Paper [Available] Online: [http://blog.soton.ac.uk/dissertation/files/2013/09/how\\_many\\_interviews.pdf](http://blog.soton.ac.uk/dissertation/files/2013/09/how_many_interviews.pdf) [10/Oct 2017].
20. Stenning & Associates Pty Ltd (S&A) (2003). Final Report: Evaluation and Review of the e-Procurement Pilot Project, Version 1.2, Hobart, Australia.
21. The FDRE Public Procurement & Property Administration Agency (2014). The Ethiopian procurement system. The FDRE Public Procurement & Property Administration Agency.

DOI 10.18551/rjoas.2019-02.13

## **CONSTRUCTION OF COLLABORATIVE GOVERNANCE MODEL OF INDONESIAN OVERSEAS GRADUATE STUDY SCHOLARSHIP PROGRAM**

**Ridwan\*, Wijaya Chandra, Kasim Azhar**

Department of Public Administration, Faculty of Administrative Sciences,  
University of Indonesia, Indonesia

\*E-mail: [ridwananzib123@gmail.com](mailto:ridwananzib123@gmail.com)

### **ABSTRACT**

The aim of this paper is to construct collaborative governance model of the Indonesian Overseas Graduate Study Scholarship Program (IOGSSP) managed by the Directorate General of Higher Education at the Ministry of Education and Culture of the Republic of Indonesia. Using the framework of Ansell & Gash (2007), this paper aligns the strategic plan of IOGSSP with the strategic plan of Talent Management of University Lecturers (TMUL). This alignment is a precondition (critical variable) in constructing the model.

### **KEY WORDS**

Overseas graduate study, scholarship program, collaborative governance, strategic plan, talent management, soft systems methodology, action research.

IOGSSP is currently growing rapidly and competitively, involving an ever-increasing and unprecedented number of students. The program encourages student and faculty collaboration across international borders, creating human capital in developing countries. Higher education scholarship programs encourage countries and individuals to build capacity and alleviate poverty (Turner & Robson in Medica, 2010).

The Government of Indonesia through the Directorate General of Higher Education of the Ministry of Education and Culture since 2008 seeks to enhance academic qualifications of university lecturers by providing overseas postgraduate scholarships funded through State budgets, especially at Doctoral level. The number of recipients taking master and doctoral degrees abroad increased to 3,803 in 2012, across 27 countries (Kemdikbud, 2013).

The governance of IOGSSP tends to be hierarchical, authority-based, and marked by command and control (Yong-duck et al., 2009: 4). The challenge in addressing the issues of interconnectivity and inter-agency alignment in any program of governance (Nee, 2005) is to find common ground and to set goals through interactive, flexible, inclusive, non-hierarchical cooperation between all those involved. Communication barriers, conflict, lack of commitment, proud stakeholders each with their own motivation and goals, and no roadmap of the intentions of the program regrettably characterise program governance managed by authority-based mechanisms (<http://studi.dikti.go.id/forum>).

Surveys by the Program Overseas Students Association (POSA) reveal multiple problems. Due to the limited human resources of the office of IOGSSP, failures of communication lead to suspicion and distrust between scholarship recipients and the program managers (Kemdikbud, 2013).

The lack of commitment of stakeholders reveals itself in late payment of scholarship funds. In order for payments to flow smoothly, each party must perform their duties and meet their obligations (Kemdikbud, 2013). Any disbursement of government money requires a certain time and bureaucracy process. IOGSSP funds come from the State Revenue Budget, which is a component of the budget of the Directorate General of Higher Education, and complete documentation is required for the audit trail (Kemdikbud, 2013).

Each university's strategic plan depends on the lecturers' availability, requirements, and existing expertise. The strategic plan of IOGSSP must align with that of TMUL as well (Kemdikbud, 2013). Talent management says Riccio (2010: 1) will greatly help in planning, in recruiting lecturers, in improving their quality, and in advancing their careers.

The purpose of this research is to construct collaborative governance model of IOGSSP through alignment of its strategic plan with the strategic plan of TMUL, improvement of communication as well as commitment among the program stakeholders.

### LITERATURE REVIEW

**Collaborative Governance.** Collaboration, the noun, is working (Latin labor) together (Latin co-) across organizational boundaries in multi-sectoral relationships to achieve a common goal, while to govern, the verb, is “to direct processes to influence decisions and actions within the public, private, and civil sectors” (Eppel, 2013: 27).

Lynn, Heinrich, & Hill (2001: 7) in Ansell & Gash (2007: 545) interpret governance as “the legal regimes, rules, judicial precedents, and administrative practices that limit, regulate, and enable the provision of public goods and services.” Stoker (2004: 3) in Ansell & Gash (2007: 545) defines it as “the rules and ordinances that direct collective decision-making”; governance, they say, is not about an individual making decisions but rather about organizations operating a system.

Collaborative governance involves people constructively across borders to implement a public goal (Emerson, Nabatchi & Balogh, 2011). It is also defined as an arrangement whereby one or more public agencies directly engage non-state stakeholders in a collective decision-making process that is formal, consensus-oriented, and deliberative and that aims to make or implement public policy or manage public programs or assets (Ansell & Gash, 2007). Figure 1 below shows their model.

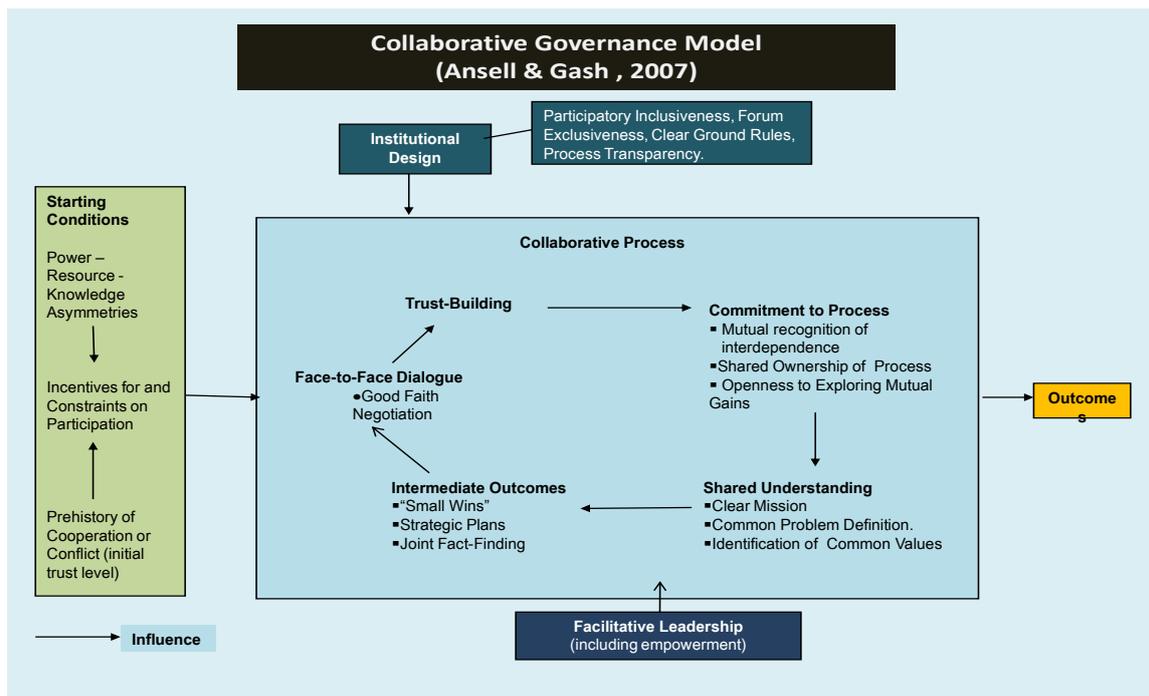


Figure 1 – Collaborative Governance Model (Ansell & Gash, 2007)

Four variables make up the model, namely (1) the starting conditions, (2) the institutional design, (3) the leadership, and (4) the collaborative process, where process variables form the core of the model. Initial conditions, institutional design, and leadership variables contribute either as critical determinants or as contextualizes (Ansell & Gash, 2007).

Collaboration is a gradual process. Susskind & Cruikshank (1987: 95) describe a consensus-building process: the pre negotiation phase, the negotiation phase, and the implementation phase. Gray (1989) also defines three steps of a collaboration process: (1) problem setting, (2) directional setting, and (3) implementation. Again, Edelenbos (2005:

118) identifies three steps – preparation, policy development, and decision making – with each step having several stages. Ansell & Gash conclude that collaborative processes are non-linear and cyclic, and progress depends on communication, trust, commitment, understanding, and positive outcomes for reinforcement (Huxham 2003; Imperial 2005 in Ansell & Gash, 2007: 55).

Lack of communication and coordination between stakeholders and between internal departments and offices can lead to wasteful duplication, unmet needs, ill-feeling, conflict, and reduced synergy. On a more positive note, dialogue between stakeholders is intended to open communication channels, facilitate shared vision, and elicit positive feedback on the evolving programs, services, and decisions (Catmur, A, 2008). In collaborative governance it is very important to pay attention to communication, for example by arranging meetings in which each person takes a turn as facilitator. Communication may be face-to-face or by electronic means like email or telephone. Some internet video communications are themselves face-to-face to a certain extent. Thus, the meeting agenda can be led by the place and type of communication process used. Agreement on purpose, shared vision, communication, accountability, the existence of user communities, individual capabilities, and clarity of governance arrangements are key factors of successful collaboration (O'Flynn, J. & Wanna, J., 2008).

All Collaborative Governance practices are built on face-to-face dialogue to identify what opportunities are mutually beneficial to the stakeholders. Face-to-face dialogue is more than just a negotiating medium and is at the heart of the stereotypical liquefaction process and other barriers to communicate and prevent any joint profit exploration (Bentrup 2001). Face-to-face dialogue is at the heart of the process of building trust, mutual respect, mutual understanding, and commitment to processes (Gilliam et al., 2002; Lasker & Weiss 2003; Plummer & Fitzgibbon 2004; Schneider et al., 2003; Tompkins & Adger 2004; 2006; in Ansell & Gash, 2007: 558).

Lack of trust is the spur to collaborative governance at all (Weech-Maldonado & Merrill, 2000 in Ansell & Gash, 2007: 558), but the process must immediately foster and continue to build trust among stakeholders (Alexander, Comfort, & Weiner, 1998; Beierle & Konisky, 2001; Brinkerhoff, 1999; Glasbergen & Driessen, 2005; Imperial, 2005; Murdock, Wiessner, & Sexton, 2005; Tett, Crowther, & O'Hara, 2003; Vangen & Huxham, 2003b in Ansell & Gash, 2007: 558-559). When there is historical antagonism, building trust is crucial and often very difficult (Murdock, Wiessner, and Sexton 2005 in Ansell and Gash, 2007: 558-559).

Although the terminology varies in Ansell & Gash (2007: 559), it is clear that on the level of stakeholder commitment depends the ultimate success or failure of the collaboration. Commitment mirrors genuine motivation to participate in collaborative governance. Of course, some stakeholders participate initially just to ensure that their perspectives are not overlooked, to secure the legitimacy of their position, to fulfil legal obligations, and for other subjective considerations. Burger et al. (2001) in Ansell & Gash (2007: 559) explain that true commitment comes from realising – perhaps only after a cycle or two of negotiations – that the goodwill of bargaining for mutual benefit is the best way to achieve it.

At some point of the collaborative process, stakeholders develop a shared understanding of what they can achieve collectively. This is described as “sharing the same mission” (Alexander, Comfort, & Weiner, 1998; Roussos & Fawcett, 2000), as “commonality” (Wondolleck & Yaffee 2000), as “common goals” (Walter & Petr, 2000; Wondolleck & Yaffee 2000), as “common ideology” (Waage, 2001), as “the common vision” (Mana & Pearsall, 2004; Walter & Petr, 2000; Glasbergen & Driessen, 2005; Roberston & Lawes, 2005), as “clear and strategic directions” (Margerum, 2002), and as “core values alignment” (Heikkilä and Gerlak, 2005).

Collaboration is more likely to occur (a) when goals are likely to be achieved, and (b) when the benefits of collaboration are relatively achievable, and (c) when small wins of collaboration accrue quickly. Although intermediate outcomes may show real benefit, the critical process is cyclic, and reiterated outcomes build the momentum of success. “Little victories” encourage subsequent cycles to build trust and commitment (Rogers et al., 1993; Vangen & Huxham, 2003b in Ansell & Gash, 2007: 561).

*The Concept of Alignment.* Skinner (1974) speaks of *strategic consensus*, Porter (1996) and Venkatraman (1989) refer to it as *fit*, and Henderson & Venkatraman (1993) use *alignment*. Each of these phrases encompasses a concept of alignment. According to Porter (1996), strategy means making the activities of an organization fit each other. In other words, activities must cooperate and support and strengthen each other. Boyer & McDermott (1999; in Salimian, H., et. al., 2012) state that strategic alignment means that individuals at various organizational levels agree on the issues of cost, quality, delivery and flexibility, all of which are important for success.

Other writers agree (Hayes & Wheelwright, 1984; Hill, 1988; Voss, 2005). According to Venkatraman (1989), six types of alignment are possible in two dimensions: (1) relating alignment to a specific criterion, and (2) the degree of accuracy in forming alignment relationships. The model assumes that the greater the number of equation variables, the lower the degree of accuracy in alignment relations will be. In the viewpoint of alignment which considers it as a *moderator*, the effect of an independent variable (such as strategy) on a dependent variable (such as performance) depends on another variable (such as environment) which is known as the moderator. In the alignment approach as *mediation*, a variable such as organizational structure affects the relationship between a primary variable (such as strategy) and a consequent variable (such as performance). The alignment approach expresses coordination between two variables.

What distinguishes this approach from previous approaches is that in this approach, a criterion variable such as performance is not considered. Nevertheless, even in this approach the effect of coordination of two variables on one or more criterion variables selected by the researcher is measured. A famous example of this approach is Chandler's study on the relationship between structure and strategy. Two dimensions appear – alignment of the strategy of functional units and business strategy (vertical alignment), and alignment of functions (horizontal alignment). Functional strategies shape the business-level strategy; in the words of Beckman & Rosenfield (2008), decisions made at functional units *become* the business strategy. A window of alignment can be defined whose panes comprise the functional strategies and whose frame is the business strategy. From this we conclude that functional strategies provide necessary elements for gaining competitive advantage. However, each unit pursues its own strategy, and each unit's strategy must fit with the strategies of other units as well as with the business-level strategy. Fitness of small windows with one another is defined as horizontal alignment and fitness of small windows with the window frame is defined as vertical alignment. Alignment enhances performance and misalignment degrades performance (Salimian, H., et. al., 2012).

## METHODS OF RESEARCH

We use a Soft Systems Methodology (SSM), as is appropriate for a study looking at the world as a complex, problematic, mysterious theatre, characterized by opposing viewpoints and clashes of *Weltanschauung* (world view) (Checkland & Poulter, 2006; Checkland, 1981). SSM facilitates experience-based knowledge (Checkland and Scholes, 1990), moving between reality (or perceived reality) and subjective actuality, that is, feelings about the real world (Uchiyama, 1999). In our case, reality is the Indonesian overseas graduate study scholarship program (IOGSSP).

A researcher declares their theoretical framework (F) and method (M) used to formulate and guide their study (Checkland, 1991). A reflection of the F, M, A, or the theme of the research should be made to the invention of the results achieved. In the end, the design cycle and problem-solving research interest – as in this study, will give birth to new knowledge, modifying the questions that have been there, or get a new question be produced at A or F.

We gather data in accordance with the seven-stage principle of SSM. Results at an early stage are realized in the form of a Rich Picture (Checkland & Scholes, 1990).

The seven stages appear in Figure 2 above. Those are (1) finding an unstructured problem, (2) determining the structure of the problem, (3) making root definitions of relevant

systems, (4) developing conceptual models, (5) comparing conceptual models with structured problem situations, that is, comparing stage 2 and stage 4, (6) considering feasible changes acceptable to stakeholders, and (7) taking action to improve the situation.

Table 1 – Research Framework

n/n	Explanation
F	Collaborative governance (Ansell & Gash, 2007)
MPS	Action Research Methodology – Soft Systems Methodology
P	Construction of collaborative governance model of IOGSSP

Source: Adapted from McKay & Marshall (2001).

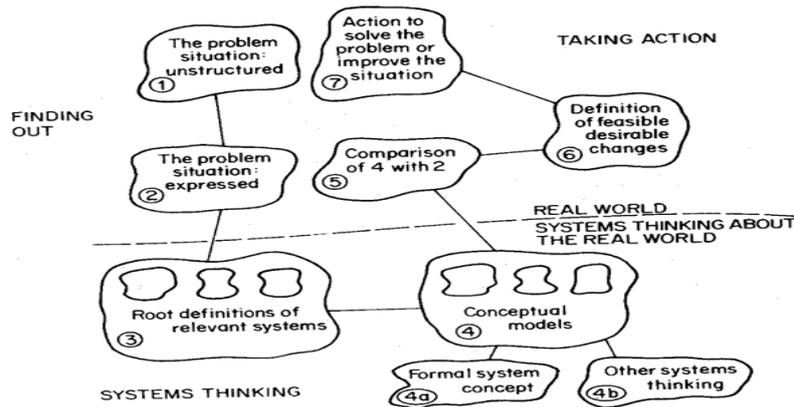


Figure 2 – Framework of SSM (Source: Checkland & Poulter, 2006)

Our data collection follows Checkland & Poulter (2006; in Hardjosoekarto 2012). Their approach is: 1) an informal talk, 2) reading documents, 3) chairing meetings, 4) conducting interviews, and 5) hosting informal “tea parties” or similar social events, while simultaneously taking note of all things related to roles (actual and assumed), norms (societal and individual), and values (again, both societal and personal). Primary data is collected at deep interviews, through focus group discussions, and by observation. Secondary data comes from the literature and related documents. Deep interviewees include: 1) lecturers or working student candidates, program participants (working students), and program alumni (graduates), and 2) Indonesian overseas graduate study scholarship program managers at native (home) universities, and 3) policy makers in native universities (for example related Vice Rectors), and 4) representatives of Ditjen Dikti, the top-level of IOGSSP management, and 5) relevant parties at the destination (host) universities abroad (supervisors and international student officers).

## RESULTS OF STUDY

As we show in detail below, in this research, we act along with the promoter and co-promoter (academic advisors) in order to align the strategic plan of IOGSSP with the strategic plan of TMUL.

*Stage One - The Problem Situation Unstructured.* Three problems present themselves: 1) misalignment of the strategic plan of IOGSSP with the strategic plan of TMUL (planning, recruitment and career development of lecturers), 2) miscommunication among stakeholders (face-to-face dialogue, and trust building being faulty or entirely absent), and 3) isolation of stakeholders (no commitment to process, no shared understandings, and no dialogue).

*Stage Two - The Problem Situation Expressed.* The second stage of the SSM uses three analyses. Analysis one is of intervention (clients, practitioners and problem owners of the issues addressed), Analysis Two is of social roles, norms, and values, and Analysis Three is wholly political. The Rich Picture of collaborative governance of IOGSSP makes up Figure 3 below.

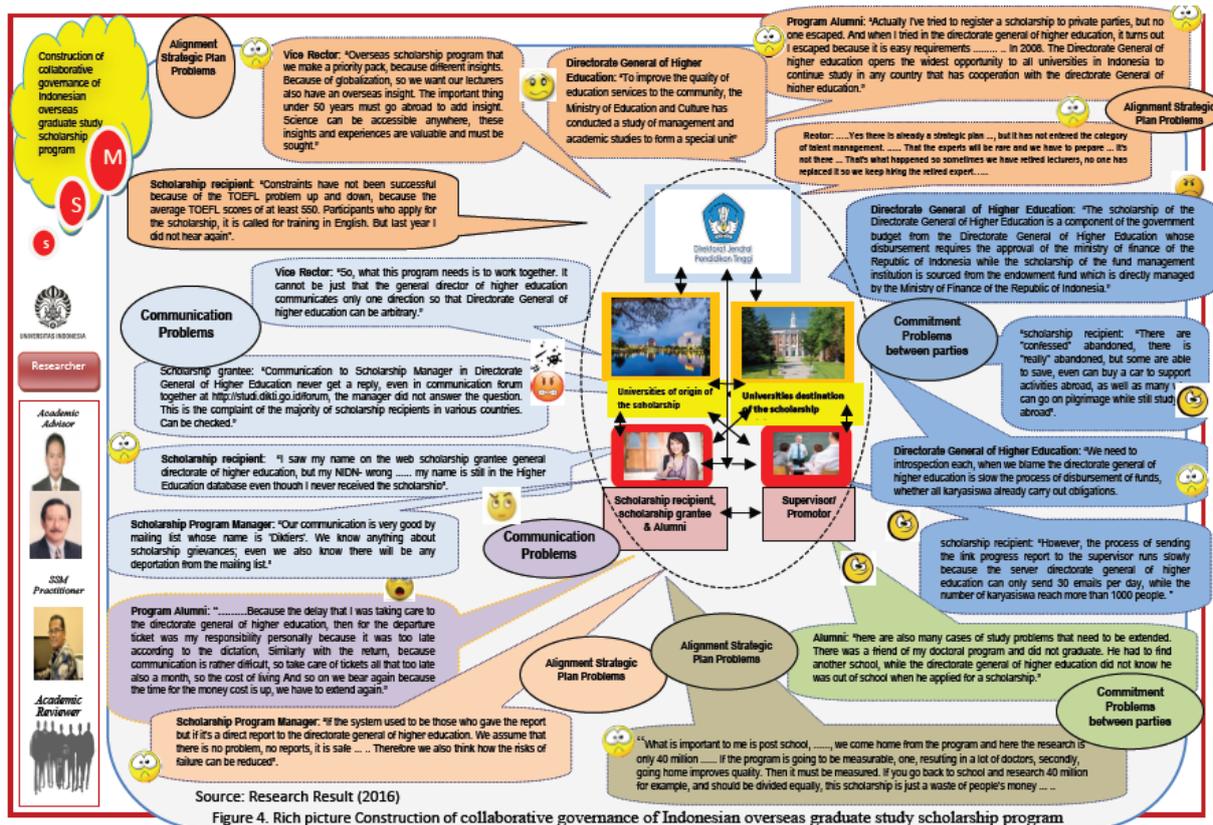


Figure 3 – Rich Picture Source: Research Result (2016)

*Stage Three - The Development of a Root Definition from the Rich Picture.* The Root Definition (RD) to construct the conceptual model of IOGSSP is “The system owned and operated by researchers and promoters and co-promoters (academic advisors) to explore the alignment of the strategic plan of IOGSSP with strategic plan of TMUL, stakeholder communication, and stakeholder commitment (P) using Soft Systems Methodology approach (Q) in order to construct models of overseas governance study scholarship program (R).”

To construct a conceptual model of IOGSSP we used CATWOE Analysis (Checkland, 1990: 70) as shown in Table 2 following:

Table 2 – CATWOE Root Definition

Customers	Candidates for scholarships, scholarship recipients, alumni of the program, home universities, host universities, and student supervisors.
Actors	Directorate General of Higher Education, scholarship recipients, universities and supervisors.
Transformation Process,	Input conversion becomes the output of IOGSSP process – from being antagonistic to becoming collaborative
World view	Implementation of transformation of better IOGSSP so as to achieve the program strategic objectives.
Owners	Ministry of Education & Culture, Directorate General of Higher Education, University Rectors
Environmental constraints	Those who do not want the transformation of IOGSSP, both within the Directorate General of Higher Education and outside it. Time constraints in the form of deadlines to complete the doctoral program. Possible changes in policy at the Directorate General of Higher Education.

Source: Research Result (2015).

*Stage Four - Conceptual Models.* In accordance with the system which has been named in the RD, a Conceptual Model of IOGSSP was created. Conceptual Model Construction refers to CATWOE and is analyzed according to the 3E criteria (Efficacy, Efficiency, and Effectiveness) related to three important elements: input, transformations, and output to assess the reliability of the conceptual model. The model includes processes

by which the actors can work together to achieve the objectives, that is, that IOGSSP should produce overseas universities doctoral programs on time as well as earn respect at an international level.

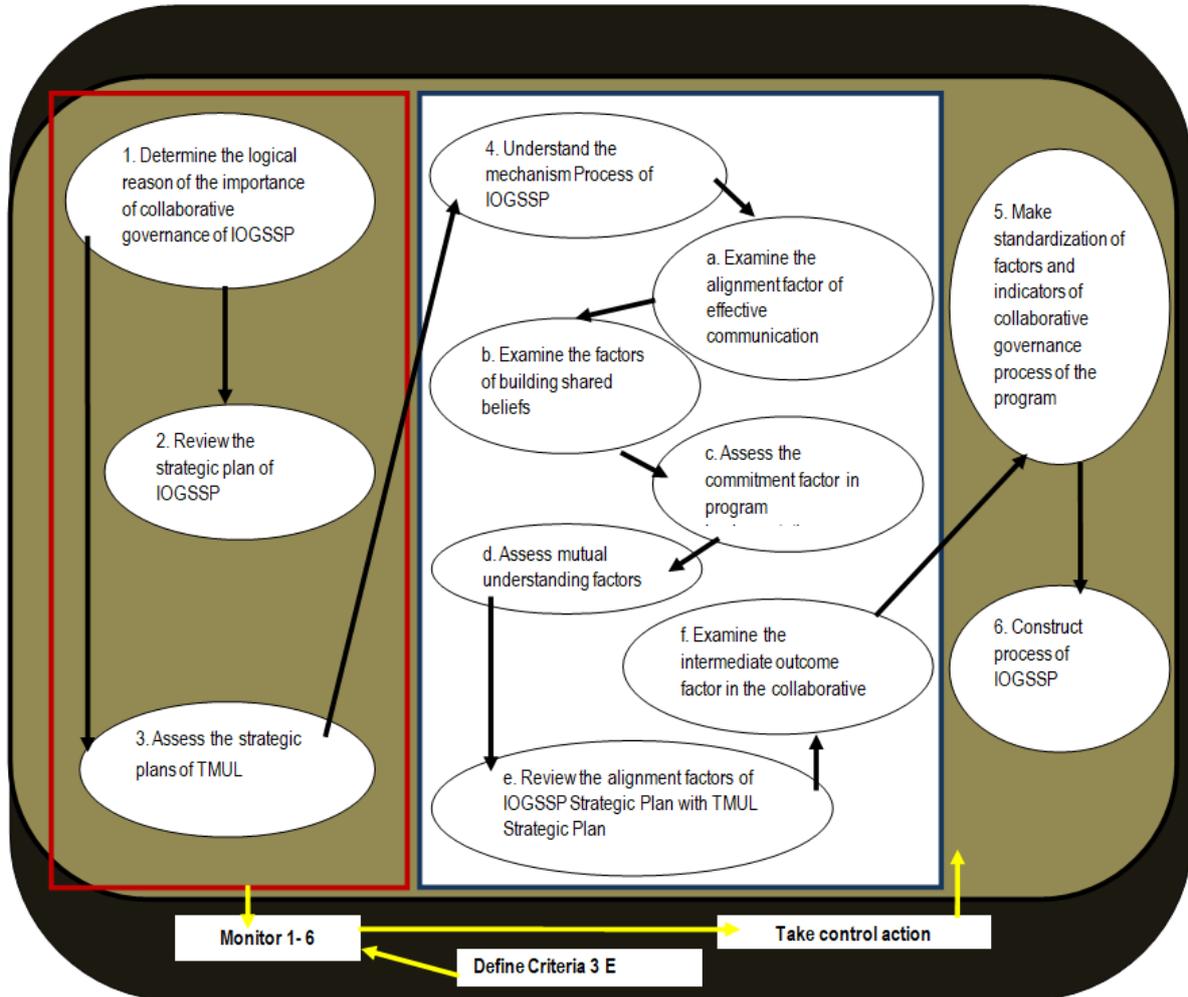


Figure 4 – Conceptual Model of IOGSSP (Source: Research Result, 2016)

*Stage 5 - Comparison of the Conceptual Model with Real World (Perceived Reality).* We compare conceptual models with the real world by creating Table 3 below, consisting of conceptual model activity, its presence in reality, and comments. The results of this SSM fifth stage analysis form the basis for determining changes in the collaborative governance model (Ansell & Gash 2007).

*Stage Six - Systemically Desirable and Culturally Feasible Changes.* The results from stage five lead naturally into discussions of the future. There are various ways to proceed at this stage. One way, for example, is to have a structured discussion with everyone involved, leading to agreement on changes which are both systemically feasible and culturally acceptable, possibly even desirable.

Already we obtain a clear picture through group discussions, interviews, direct observations, and notes taken at each of the campuses and stakeholders visited – a picture of ineffective and inefficient communication, lack of commitment, misalignment, and ill feeling. All agree that these challenges require resolution: the Directorate General of Higher Education, scholarship recipients, home universities, destination universities, student supervisors, and the students themselves.

Table 3 – Comparison of the Conceptual Model with Real World

No.	Activities in conceptual model	Presence in real world situation	Comments
1	Determine the logical reason for the importance of collaborative governance of IOGSSP	Ineffective and inefficient communication among stakeholders; Lack of commitment among stakeholders or actors; The strategic plan of IOGSSP has not been aligned with that of TMUL.	The need for improved communication, stakeholder commitment and alignment of IOGSSP strategic plan with TMUL strategic plan.
2	Review the Strategic Plan of IOGSSP	No national human resource development plan yet exists; There is no strategic plan for the resources of the Ministry's lecturers; No strategic plan of the program yet exists.	We need a national human resource development plan.
3	Assess the Strategic Plan of TMUL	There is no strategic plan for TMUL	We need a strategic plan for TMUL.
4	Understand the mechanism of governance of IOGSSP	Poor communication among stakeholders; Mistrust in IOGSSP management; Lack of commitment ; Frequent misunderstandings; Misalignment of IOGSSP strategic plan with TMUL strategic plan	We need to establish communication among stakeholders; We need to build mutual trust in management; We need commitment to the program; We need to build mutual understanding ; We need alignment between IOGSSP strategy and that of TMUL.
4.a.	Examine the alignment factor of effective communication among stakeholders	Unreliable IT systems (websites, forums, mailing lists, and e-mail); Ineffective use of IT systems; Mismanagement of records and incomplete documentation; Ineffective face-to-face meetings and pointless dialogue; The absence of a common understanding of work.	The need for improvement of information technology governance system programs (websites, forum mailing lists, and e-mail); The need for improvement of online communication (information technology-based communication); The need for improved archive management and documentation; The need for clarity in face-to-face dialogue; The need for mutually agreed goals.
4.b.	Establish the level of mutual trust in the governance of the program	Lack of mutual understanding of working together	The need to improve shared understanding of work.
4.c	Assess the commitment factor in program implementation	Lack of transparency in the process of program delivery; Lack of faith in mutual benefits; Failure to comply with collective agreements; Lack of respect for the interests of each stakeholder; Lack of good faith in collective decision-making ; Lack of targeted responsibility (accountability) for the process.	The need for increased transparency in the process of program delivery; The need for faith in mutual benefits; The need to improve compliance with collective agreements; The need to increase respect for the interests of each stakeholder; The need for good faith in collective action; The need for accountability for the process.
4.d.	Assess mutual understanding factors in program implementation	The absence of clarity of program mission The absence of a common problem definition Lack of common values that want to be developed.	The need to clarify the mission of the program The need to define shared problems The need to elicit common values.
4.e.	Review alignment of IOGSSP with TMUL	Unsynchronized design and program planning ; The strategy does not exist to achieve all actors' objectives of IOGSSP; Monitoring and evaluation are not yet aligned with strategy.	We must harmonize design and planning; We must harmonize strategies to achieve the shared goals of IOGSSP stakeholders; We must develop joint monitoring and evaluation mechanisms.
4.f.	Examine the intermediate outcome factors that can drive the collaborative process.	Ineffective performance of boundary spanners (individuals capable of carrying out cross-border collaboration work); Ineffective follow-up of monitoring and evaluation (monev), and Failure to share information and learning opportunities.	The need to improve the performance of boundary spanners; The need for follow-up of monitoring and evaluation (monev), and The need to generate mutual learning between parties to solve common problems.
5	Standardize factors and indicators of the collaborative governance process of IOGSSP	The lack of measurable indices of the collaborative governance of IOGSSP	The need to measure progress in collaborative governance of IOGSSP
6.	Construct a collaborative governance model of IOGSSP.	The absence of collaborative governance of IOGSSP.	The need for collaborative governance of IOGSSP.

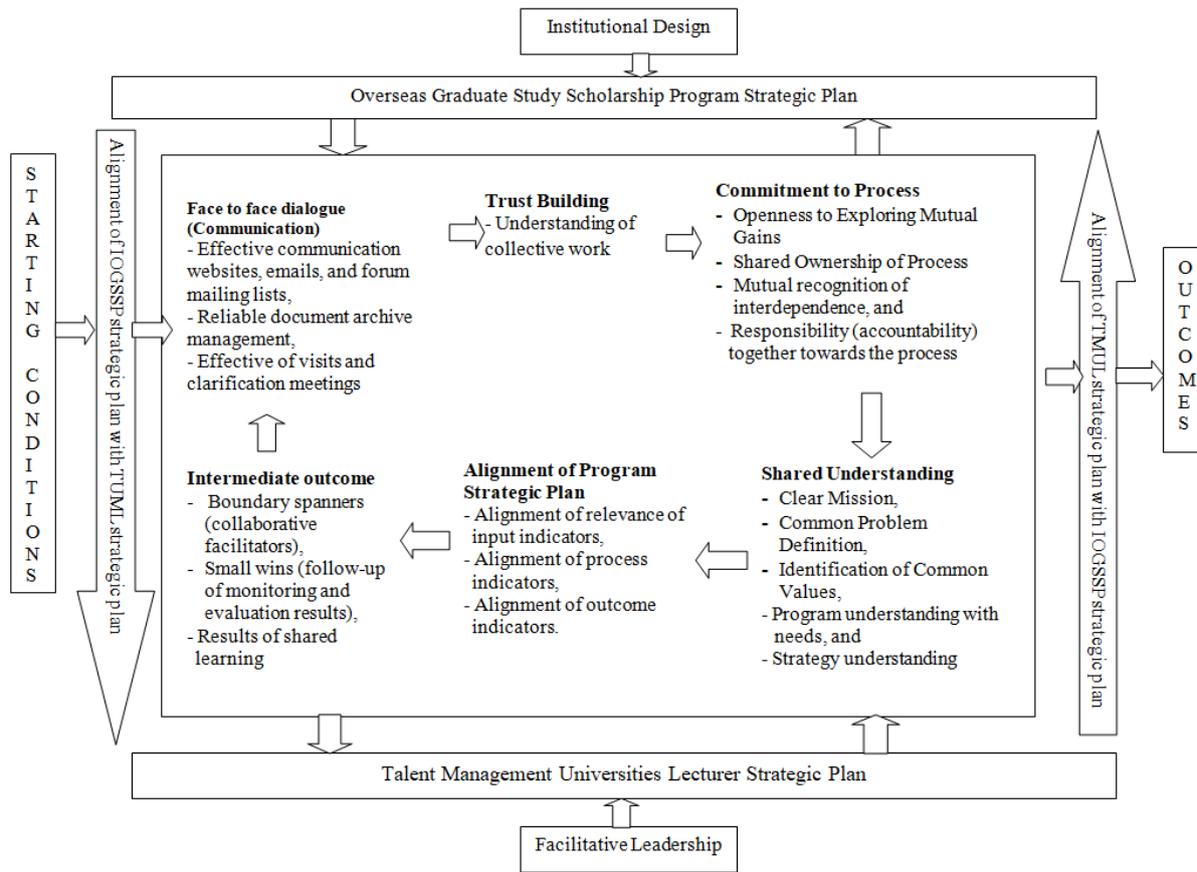


Figure 5 – Collaborative Governance Model of IOGSSP

Even before someone applies to IOGSSP, we find that only a few universities in Indonesia have a structured TMUL plan, and none necessarily observe the IOGSSP guidelines offered by the DGHE. So, in some cases the students' existing competencies and skills are not formally recognised, and their future study depends entirely upon their own judgement. Accordingly, we posit the alignment of IOGSSP and TMUL as a general variable of the model of collaborative governance.

### CONCLUSION AND RECOMMENDATIONS

Using frameworks from Ansell & Gash (2007) to construct our model of collaborative governance for IOGSSP reveals that their factors and indicators are not entirely sufficient. We propose an additional critical variable, that is, alignment of the strategic plan of IOGSSP with the strategic plan of TMUL. This alignment is a precondition for successful governance.

The standard process consists of:

- Communication (face to face dialogue, websites, e-mail, and forum mailing lists; management of document archives, visits and clarification meetings);
- Commitment (openness, shared ownership, interdependence, shared responsibility, trust, shared understanding, mission clarity, and equality of issues);
- The program's strategic alignment factors including alignment of input indicators, processes, outputs;
- Intermediate outcomes including collaborative facilitators, follow-up on monitoring and evaluation results, and joint learning outcomes.

As we explain above, it is necessary to modify the Ansell & Gash collaborative model by adding a critical variable, that is, the alignment of IOGSSP with TMUL. Therefore we recommend a further in-depth study of the effectiveness of any collaborative governance model of IOGSSP.

Practically, the collaborative governance model of IOGSSP can be used to assess the synergy of actors and institutions in the implementation of public policy in Indonesia. The results of the study can contribute and references to the Directorate General of Higher Education, scholarship Home University, scholarship Host University and can be used as a reference for reviewing collaborative governance on programs and other organizational activities.

## REFERENCES

1. Alexander, Jeffery A., Maureen E. Comfort, Bryan J. Weiner. 1998. Governance in public-private community health partnerships: A survey of the Community Care Network: SM demonstration sites. *Nonprofit Management & Leadership* 8:231–332.
2. Ansell, Chris & Alison Gash. 2007. "Collaborative Governance in theory and practice." *Journal of Public Administration Research and Theory*. Vol 18. pp 543-571.
3. Aubyn, Miguel St., Alvaro Pina, Filomena Garcia, & Joana Pais. (2009). Study on the efficiency and effectiveness of public spending on tertiary education. *European Economy. Economic Papers* 390| November 2009. Technical University of Lisbon: December.
4. Barton J, Stephens J, & Haslett T (2009) Action research: its foundation in open systems thinking and relationship to the scientific method. *Syst Pract Action Res* 22:475–488.
5. Beckman S, & Rosenfield D (2008). *Operation Strategy*. McGraw-Hill Press.
6. Beierle, Thomas C. 2000. The quality of stakeholder-based decisions: Lessons from the case study record. Discussion Paper 00-56, Resources for the Future.
7. Boyer K K, & McDermott C (1999). Strategic consensus in operations strategy. *J. Oper. Manag.* 17:289-305.
8. BPMA-UI, 2007.
9. Bradley, Andrew P. (2016). Talent Management for University. *Australian Universities Review*, vol. 58, no. 1.
10. Brew, Angela. (2011). Higher Education Research and the Scholarship of Teaching and Learning: The Pursuit of Excellence. *International Journal for the Scholarship of Teaching and Learning*. Vol. 5, No. 2 (July).
11. Brinkerhoff, Derick W. 1999. Exploring state-civil society collaboration: Policy partnerships in developing countries. *Nonprofit and Voluntary Sector Quarterly* 28 (Suppl. 1): 59–86.
12. Bryson, John. M, Barbara Crosby, & Melissa Middleton Stone. 2006. "The design and implementation of cross-sector collaboration: propositions from literature." *Public Administrative Review*. 66:44.
13. Burger, Joanna, Michael Gochfeld, Charles W. Powers, Lynn Waishwell, Camilla Warren, and Bernard D. Goldstein. 2001. Science, policy, stakeholders, and fish consumption advisories: Developing a fish fact sheet for Savannah River. *Environmental Management* 27: 501–14.
14. Catmur, Allison. (2008). *The Strategic Social Plan in Labrador: A Case Study in Collaborative Governance*. A thesis submitted to the School of Graduate Studies in partial fulfillment of the requirements for the degree of Master of Arts Sociology, Memorial University, St. John's, Newfoundland and Labrador, May 2008.
15. Checkland, P. & Poulter, J. (2006). *Learning for Action, A Short Definitive Account of Soft Systems Methodology and Its Use for Practitioners, Teachers and Students*. West Sussex: John Wiley & Sons, Inc.
16. Checkland, P. & Scholes, J. (1990). *Soft Systems Methodology in Action*. New York: John Wiley & Sons.
17. Checkland, P. (1999). *Systems Thinking, Systems Practice, Includes a 30-year retrospective*. New York: John Wiley & Sons, Inc.
18. Checkland, Peter. (1981). *Systems Thinking, Systems Practice*: Chichester, West Sussex, UK: John Wiley & Sons.

19. Cronholm S, & Goldkuhl G (2003). Understanding the practices of action research. In: The 2nd European conference on research methods in business and management (ECRM 2003), Reading, 20–21 March 2003.
20. Edelenbos, Jurian. 2005. Institutional implications of interactive governance: Insights from Dutch practice. *Governance: An International Journal of Policy, Administration and Institutions* 18:111–34.
21. Emerson, Kirk; Nabatchi, Tina; & Balogh, Stephen. 2011. An Integrative Framework for Collaborative Governance. *Journal of Public Administration Research and Theory Advance Access* 2 May 2011.
22. Eppel, Elizabeth. 2013. Collaborative Governance: Framing New Zealand Practice. Institute for Governance and Policy Studies Working Paper 13/02, April.
23. Flood RL, & Jackson MC (1991) *Creative problem solving: total systems intervention*. Wiley, Baffins Lane.
24. Gilliam, Aisha, David Davis, Tracey Barrington, Romel Lacson, Gary Uhl, and Ursula Phoenix. 2002. The value of engaging stakeholders in planning and implementing evaluations. *AIDS Education and Prevention* 14 (Suppl. A): 5–17.
25. Glasbergen, Pieter, and Peter P. J. Driessen. 2005. Interactive planning of infrastructure: The changing role of Dutch project management. *Environment and Planning C: Government and Policy* 23: 263–77.
26. Gray, Barbara. 1989. *Collaborating: Finding common ground for multi-party problems*. San Francisco, CA: Jossey-Bass.
27. Hardjosoekarto S (2012b) Construction of social development index as a theoretical research practice in action research by using soft systems methodology. *Syst Pract Action Res* 25(6):493–509. doi:10.1007/ s11213-012-9237-9.
28. Hardjosoekarto S (2013) Dual imperatives of action research: lessons from theoretical research practice to construct social development index by using soft systems methodology. *Human Resource Management Research, Scientific and Academic Publishing*, pp 49–53. doi:10.5923/j.hrmr.20130301.10.
29. Hardjosoekarto, S & Yovani, N & Santiar, L. (2013). Institutional Strengthening for the Role of Mass Media in Disaster Risk Reduction in Japan and Indonesia: An Application of SSM-Based Action Research. *Syst Pract Action Res* DOI 10.1007/s11213-013-9282-z.
- Hardjosoekarto, S. (2012a). *Soft Systems Methodology (Metode Serba Sistem Lunak)*. Jakarta: Penerbit Universitas Indonesia dan LabSosio Pusat Kajian Sosiologi.
30. Hayes RH, & Wheelwright SC (1984). *Restoring Our Competitive Edge: Competing Through Manufacturing*. John Wiley and Sons. New York.
31. Healey, Mick. (2000). Developing the Scholarship of Teaching in Higher Education: a discipline-based approach. *Higher Education Research & Development*. Vol. 19, No. 2, 2000.
32. Heikkila, Tanya, and Andrea K. Gerlak. 2005. The formation of large-scale collaborative resource management institutions: Clarifying the roles of stakeholders, science, and institutions. *Policy Studies Journal* 33:583–612.
33. Henderson JC, Venkatramen N (1993). Strategic Alignment: leveraging Information Technology for Transforming Organizations. *IBM Syst. J.* 32(1):4-16.
34. Hill C (1988). Differentiation vs. low cost or differentiation and low cost: A contingency framework. *Acad. Manag. Rev.* 3(3):401-412.
35. Hossler, Don; Mary Ziskin, Sooyeon Kim, Osman Cekic, & Jacob P. K. Gross. (2008). in Sandy Baum, Michael McPherson & Patricia Steele, Editors, *What Do We Know About the Impact of Grants to College Students? The Effectiveness of Student Aid Policies: What the Research Tells Us*. 2008. Lumina Foundation for Education.
36. Huxham & Vangen. 2003. Enacting Leadership for Collaborative Advantage: Dilemmas of Ideology and Pragmatism in the Activities of Partnership Managers. *British Journal of Management*, Vol. 14, S61–S76.
37. Huxham, Chris. 2003. Theorizing collaboration practice. *Public Management Review* 5:401–23.

38. Imperial, Mark T. 2005. "Using Collaboration as a Governance Strategy: Lessons from Six Watershed Management Programs." *Administration and Society* 37(3): 281-320.
39. Issel, L. Michele. 2013. Program Theory and Logic Models, CHSC 433. Module 2/Chapter 5 Part 1UIC School of Public Health. <http://www.uic.edu/sph/prepare/courses/chsc433/chsc433mod02ch051.p>
40. Kane L, & Del Mistro R (2003) Changes in transport planning policy: changes in transport planning methodology? *Transportation* 30:113–131.
41. Kementerian Pendidikan dan Kebudayaan ((Kemendikbud). (2013). Pedoman Beasiswa Pendidikan Pascasarjana Luar Negeri. Direktorat Pendidik dan Tenaga Kependidikan Direktorat Jenderal Pendidikan Tinggi. Jakarta: Kementerian Pendidikan dan Kebudayaan.
42. Kementerian Pendidikan dan Kebudayaan (Kemendikbud). (2013). Pedoman Beasiswa Pendidikan Pascasarjana Luar Negeri. Jakarta: Direktorat Pendidik dan Tenaga Kependidikan Direktorat Jenderal Pendidikan Tinggi, Kementerian Pendidikan dan Kebudayaan.
43. Kementerian Pendidikan dan Kebudayaan. (Kemendikbud) (2010). Rencana Strategis Kementerian Pendidikan dan Kebudayaan 2010-2014. Jakarta: Kementerian Pendidikan dan Kebudayaan.
44. Khan, Muhammad Ehsan. 2015. Program Governance. CRC Press Taylor & Francis Group, Boca Raton, Florida, USA.
45. Lasker, Roz D., and Elisa S. Weiss. 2003. Broadening participation in community problem-solving: A multidisciplinary model to support collaborative practice and research. *Journal of Urban Health: Bulletin of the New York Academy of Medicine* 80:14–60.
46. Lynn, Lawrence E., Carolyn J. Heinrich, and Carolyn J. Hill. 2001. Improving governance: A new logic for empirical research. Washington, DC: Georgetown Univ. Press.
47. Manring, Susan L., and Sam Pearsall. 2004. Creating an adaptive ecosystem management network among stakeholders of the Lower Roanoke River, North Carolina, USA. *Ecology and Society* 10 (2): 16. <http://www.ecologyandsociety.org/vol10/iss2/art16>.
48. Margerum, Richard D. 2002. Collaborative planning: Building consensus and building a distinct model for practice. *Journal of Planning Education and Research* 21:237–53.
49. McKay, J. & P. Marshall. (2001). The dual imperatives of action research. *Information Technology & People*. Vol. 14 No. 1, 2001, pp. 46-59.
50. McLaughlin, John A., & Gretchen B. Jordan. (2010). Using Logic Model, in, Wholey, Joseph S., Harry P. Hatry, & Kathryn E. Newcomer (Editors). Third Edition. *Handbook of Practical Program Evaluation*, Jossey-Bass. A Wiley Imprint, San Francisco:USA.
51. Medica, Karen. (2010). International Students – Understanding the Motives for Higher Education as Development Aid. ISANA. Australia.
52. Morse, R. S. & Stephens, J. B. (2012). Teaching Collaborative Governance: Phases, Competencies, and Case-Based Learning. *Journal of Public Affairs Education*, Vol. 18, No. 3, pp. 565-583
53. Munns, A..K. & B F Bjeirmi. (1996). The role of project management in achieving project success. *International Journal of Project Management*. Vol. 14 No. 2 pp. 81-87.
54. Murdock, Barbara, Carol Wiessner, and Ken Sexton. 2005. Stakeholder participation in voluntary environmental agreements: Analysis of 10 Project XL case studies. *Science, Technology & Human Values* 30:223–50.
55. Nee, Victor. (2005). The New Institutionalism in Economic Sociology. in "The Handbook of Economic Sociology, pp.49-74". New York: Princeton University Press.
56. O'Flynn, J. & Wanna, J. (2008). Collaborative Governance A new era of public policy in Australia. Canberra: ANU Press.
57. Osborne, David & Gabler, Ted. 1999. Mewirusahaakan Birokrasi, Reinventing Government, Mentransformasi Semangat Wirausaha ke dalam Sektor Publik. Jakarta: Pustaka Binawan Pussindo.
58. Peraturan Menteri Pendidikan Nasional Nomor 42 Tahun 2007 tentang Sertifikasi Dosen.
59. Peraturan Menteri Pendidikan Nasional Republik Indonesia, Nomor 48 Tahun 2009, tentang Pedoman Pemberian Tugas Belajar bagi Pegawai Negeri Sipil di Lingkungan Departemen Pendidikan Nasional.

60. Peraturan Pemerintah Nomor 37 Tahun 2009 tentang Dosen.
61. Plummer, Ryan, and John Fitzgibbon. 2004. Co-management of natural resources: A proposed framework. *Environmental Management* 33:876–85.
62. Porter ME (1996). What is Strategy? *Harv. Bus. Rev.* 74(6):61-78.
63. Rencana Pembangunan Jangka Menengah Nasional Republik Indonesia 2015-2019
64. Rencana Pembangunan Jangka Panjang Republik Indonesia 2005-2025
65. Riccio, S. (2010). *Talent Management in Higher Education: Developing Emerging Leaders Within the Administration at Private Colleges and Universities*. Lincoln: University of Nebraska, Educational Administration: Theses, Dissertations, and Student Research.
- Roberston, John, and Michael J. Lawes. 2005. User perceptions of conservation and participatory management of iGxalingenwa Forest, South Africa. *Environmental Conservation* 32:64–75.
66. Rogers, Todd, Beth Howard-Pitney, Ellen C. Feighery, David G. Altman, Jerry M. Endres, and April G. Roeseler. 1993. Characteristics and participant perceptions of tobacco control coalitions in California. *Health Education Research, Theory & Practice* 8:345–57.
67. Roussos, Stergios Tsai, and Stephen B. Fawcett. 2000. A review of collaborative partnerships as a strategy for improving community health. *Annual Review of Public Health* 21:269–402.
68. Salimian, H; Khalili, S; Nazemi, J & Alborzi, M. (2012). Alignment in the organization's strategy window (concentration on business strategy and operations strategy). *African Journal of Business Management* Vol. 6(51), pp. 12016-12022.
69. Schneider, Mark, John Scholz, Mark Lubell, Denisa Mindruta, and Matthew Edwardsen. 2003. Building consensual institutions: Networks and the national estuary program. *American Journal of Political Science* 47:143–58.
70. Senge, P.M. (1990). *The fifth discipline: The art and practice of the learning organization*. New York: Doubleday.
71. Skinner W (1974). The focused factory. *Harv. Bus. Rev.* 52(3):113-121.
72. Sterman, J. D. (2000). *Business Dynamics, Systems Thinking and Modeling for a Complex World*. Boston: Irwin McGraw-Hill.
73. Stoker, Gerry. 2004. Designing institutions for governance in complex environments: Normative rational choice and cultural institutional theories explored and contrasted. *Economic and Social Research Council Fellowship Paper No. 1*.
74. Susanto, Heru., A. Subekti, D. Santoso, & S.Rustad, (2013). Scientific publication of Indonesian Higher Education: Unraveling the causes of current low achievement and their implication for government policy making. Jakarta: Directorate General of Higher Education.
75. Susskind, Lawrence, and Jeffrey Cruikshank. 1987. *Breaking the impasse: Consensual approaches to resolving public disputes*. New York: Basic Books.
76. Tett, Lynn, Jim Crowther, and Paul O'Hara. 2003. Collaborative partnerships in community education. *Journal of Education Policy* 18:37–51.
77. Tompkins, Emma L., and W. Neil Adger. 2004. Does adaptive management of natural resources enhance resilience to climate change? *Ecology and Society* 9 (2): 10. <http://www.ecologyandsociety.org/vol9/iss2/art10> (accessed October 31, 2007).
78. Turner, Y. and S. Robson (2008). *Internationalizing the university*. London ; New York, Continuum.
79. Uchiyama, Kenichi (2009). *Concise Theoretical Grounding of Action Research: Based on Checkland's Soft Systems Methodology and Kimura's Phenomenological Psychiatry*. Daito Bunka University, Japan.
80. Undang-Undang Nomor 14 Tahun 2005 tentang Guru dan Dosen.
81. Undang-Undang Nomor 20 Tahun 2003 tentang Sistem Pendidikan Nasional.
82. Vangen, Siv, and Chris Huxham. 2003. Nurturing collaborative relations: Building trust in interorganizational collaboration. *Journal of Applied Behavioral Science* 39:5–31.
83. Venkatraman N (1989). The concept of fit in strategy research: towards verbal and statistical correspondence. *Acad. Manag. Rev.* 14(3):423-444.

84. Venkatraman N, & Remanujam V (1986). Measuring of Business Performance in Strategy Research: Comparison Approaches. *Acad. Manag. Rev.* 11:801-814.
85. Voss CA (2005). Paradigms of manufacturing strategy re-visited. *Int. J. Oper. Prod. Manag.* 25(12):1223-1227.
86. Waage, S. A. 2001. (Re)claiming space and place through collaborative planning in rural Oregon. *Political Geography* 20:839–57.
87. Walter, Uta, and Christopher Petr. 2000. A template for family centered interagency collaboration. *Families in Society: The Journal of Contemporary Human Services* 81:494–503.
88. Weech-Maldonado, Robert, and Sonya Merrill. 2000. Building partnerships with the community: Lessons from the Camden Health Improvement Learning Collaborative. *Journal of Healthcare Management* 45:189–205.
89. Wilson B (1990) *Systems: concepts, methodologies and application*. Wiley, Chichester.
90. Wondolleck, Julia M., and Steven L. Yaffee. 2000. *Making collaboration work: Lessons from innovation in natural resource management*. Washington, DC: Island Press.
91. Yong-duck, Jung, Mazmanian, Daniel & Tang, Shui-Yan. 2009. *Collaborative Governance in the United States and Korea: Cases in Negotiated Policymaking and Service Delivery*. University of Southern California, WP-April-1.

DOI 10.18551/rjoas.2019-02.15

**THE PUBLIC RELATIONS PRACTICE AS DISCOURSE TECHNOLOGY  
FOR ORGANIZATION'S HEGEMONY THROUGH CORPORATE SOCIAL  
RESPONSIBILITY PROGRAMS IN COAL MINING INDUSTRY  
OF EAST KALIMANTAN, INDONESIA**

**Juwita Rina**

Faculty of Social and Political Science, University of Mulawarman, Indonesia

E-mail: [rinajuwita@fisip.unmul.ac.id](mailto:rinajuwita@fisip.unmul.ac.id)

ORCID: 0000-0003-3133-3919

**ABSTRACT**

It is well emphasized in the literature that PR practice is largely determined by the socio-political and economic context in which it works. However, it is argued that PR practice is slowly changing to adapt to specific contexts and needs, especially for the elite groups it serves. This study discusses how PR practice as a discourse technologist through CSR initiatives programs works in the coal mining industry in East Kalimantan, Indonesia. By using Foucauldian Discourse Analysis, this article assesses the dominant themes that arise from the interview with PR and CSR practitioners and the CSR Reports from two coal mining companies which awarded several CSR awards in national and international level. The study found two dominant PR practices as corporate discourse technologists, which are to promote CSR to improve corporate competitiveness and to act as CSR programs advisor that are subjected to PR ethical standards dilemma.

**KEY WORDS**

PR practice, discourse technologist, mining industry, program.

The Public Relations (PR) involvement as the company's representation plays an important role in maintaining the organization's reputation, one of which is through the Corporate Social Responsibility (CSR) initiatives. CSR is also considered by many as one of the strategies implemented by business actors as a solution to the existing socio-economic problems, such as the high rate of poverty, hunger and poor quality of education particularly in developing countries. However, along with global developments, public awareness is also increasingly overseeing business behaviour that is often irresponsible and creates more social and environmental scandals.

There is a number of examples that show the adverse effects of unethical and irresponsible corporate practices that implicates not only to internal but also external stakeholders that trigger public demands of the ethical and socially responsible business practices. In Indonesia, the impact of the hot mudflow in Sidoarjo, East Java due to the operation of PT Lapindo Brantas since 2006 ago have inundated residential, agricultural and industrial areas until present time; the ongoing social conflict of the Papuan with PT Freeport Indonesia Incorporation since 1974; and the environmental pollution in Buyat Bay conducted by PT Newmont Minahasa Raya in 2004 ago are some of the serious problems that show the ugly face of corporate practice. East Kalimantan is also known for its natural resources and hosts many large corporations operating at both national and international levels. This condition makes this area is also inseparable from social and environmental polemics due to corporate operations that merely consider the business interests. One of the growing industry is coal mining as it contributes as one of the biggest income which produces around 82.87 million tons in 2017 (Republika, 20/02/2018). This increasing coal production process has caused a lot of dilemmas as it increases the damage to the biodiversity of the forest and creates environmental disasters due to land expansion form mining activities. Many water sources are reported the loss and more frequent droughts and natural disasters happened (Fitryarini, Juwita & Purwaningsih, 2015; VOA Indonesia, 2013). The death of 32 children in the last three years who freely played in the ex-mining area that were not reclaimed by the

company has attracted a lot of public attention (Apriando, 2018). Not to mention the industrial waste that impairs the communities surround the sites, and disrupts the economic and social activities of the locals (Suastha & Kandi, 2016). Even the problem of life inequality between the mining workers and local communities creates another issue of injustice due to a large number of people lost their livelihoods and then forced to become labourers in their own villages often caused particular sustainable social problems (JATAM, 2016).

As much as mitigation efforts carried out by corporations always involve PR practitioners as well as assisted by other elements in the organization. In doing so, to keep the social acceptance and to maintain the company existence as part of the community entity, CSR initiatives emerge to compensate and to overcome such problems. However, a number of studies claim that majority of CSR initiatives implemented by the company is merely a charity program designed to cushioned public debate on the dark side of this coal mining industry (Tribun Kaltim, 2016). CSR, therefore, did not to purely empower the community as the essence of CSR that many experts claim, but merely to treat the social and environmental damage occurred in place.

By referring to Foucault which later conceptualized by Motion and Leitch, it is assumed that PR practitioner oft to act as discourse technologist whom actively play in particular discourse transformation through the texts production and distribution for the sake of the company (Motion & Leitch, 1996; Motion & Weaver, 2005). PR involvement in CSR programs is quite dilemmatic as PR works to support the hegemonic power of the corporate system. This later impacts on the failure to implement their professional ethics as CSR turned out to be a means of promotion that pictured the company have acted ethically, and the CSR also just become a strategic medium of PR in strengthening corporate power in society. This is what this paper attempts to explore the issue of public relations practices as a discourse technologist to perpetuate the organizational hegemony through CSR programs in the coal mining industry in East Kalimantan, Indonesia. The two Foucauldian themes on power and knowledge are the subject matter of this article. Drawing on the concept, this research will utilize Foucault's concept to examine the practitioners' experiences on the discourse of corporate social responsibility.

*Public Relations in Foucauldian Perspective.* Foucault brings such different nuances in the study of public relations related to the issue of power. As Trujillo and Toth (1987) state that organizations are an ideological arena for power, influence and control so that public organizations are defined as a coalition as well as constituents who shared the same needs, values and perspectives. Foucault critical approach investigates how political, socio-cultural and economic conditions shape the practice of PR (Holtzhausen, 2002) and determines the source of power and influence (Mickey, 1998) represented by PR practitioners. So it can be said that the PR practice itself is promoting certain values that in turn leads to the question on the PR involvement and its responsibilities they have within and to the democratic societies.

Therefore, the key to understanding how PR represents and promotes certain truths and powers is by examining the discourse strategies carried out by PR practitioners. In PR practice, discourse is mobilized as a political resource to influence public opinion as well as to achieve political, economic and socio-cultural transformation. In other words, a discourse can be considered as a series of statements, which according to Foucault (1996) consists of 'the existence of the rules of formation for all its objects, for all its operations, for all its concepts, and for all its theoretical options' (p.35). Hence, discourse is something that is both symbolic and constitutive in its arrangement of what we know, understand, talk about, and do in this world. As described by Fairclough (1992), discourse is a practice that not only represents the world but signifies the world in meaning (p. 64). Although not all experiences are explained through and by discourse (Finlayson, 2001), the main activity of public relations is to provide and to shape the meaning for social, cultural, politics, and economic experiences for the benefit of the organization it represents.

Public relations practitioners strategically disseminate certain text that facilitates certain socio-cultural practices and nothing else (Motion & Leitch, 1996). Thus, based on Foucault framework, PRs are assumed to be trying to gain power for their clients by building a truth

regime. The main strategic goal of becoming a 'voice of truth' is to get public approval for certain practices. So that the formation of a truth regime is related in a circle of relations with the power system that produces and maintains it, as well as the effects of power that causes and extends it (Foucault, 1972). Therefore, truth and power are closely related and function to strengthen one another.

*Foucauldian Discourse Analysis.* This study uses Foucauldian critical discourse to analyze data derived from interviews with public relations practitioners. Foucault considers his thoughts and research to be an attempt to open up the possibility of thinking in new ways: 'Writing in orders to change myself and in order not to think the same thing as before' (Foucault, 2001, p. 240). In other words, this Foucauldian discourse analysis is not an integrated or single approach as it does not have a fixed method such as other traditional experiments or content analysis. Potter and Wetherell (1987) stated that what researchers have is a broad theoretical framework related to the nature of discourse and its role in social life, along with various suggestions on how discourse can be learned.

Although this approach looks flexible, the flexibility itself means nothing. This is because the right approach requires a proper understanding of which tools to choose from Foucault's idea to be applied in certain fields. In this study, the researcher explores how PR practices as a discourse technologist constructed by informants during interviews on CSR programs to shape company reputation by referring to the concept of discourse and Foucault's power-knowledge relationship. Based on Bowen (2008), this analysis emphasizes on how the conversation is produced. This is in line with Fontana and Prokos (2007) which underline the importance of understanding what is said as it relates to the experience of the informants and the context of the event.

As any other qualitative research, the personal assumption, knowledge, culture and experience of the researcher might influence the interview results. As well as the social role, social context, knowledge, culture, experience, and other values of the informants in their responses during the interview. Therefore, the active involvement of researchers with informants during data collection is particularly required to have a more reflective process when data is analyzed so then all possibilities that might affect the result construction. The dominant themes emerged from the interviews are given special attention, and at the same time, the analysis focuses on negative cases or unusual themes that offer alternative explanations.

It has been described how the analysis of the PR practices on the CSR programs will be approached; it is time to turn our attention to the substance of the analysis. However, it is necessary to provide some detailed background regarding the two mining companies subjected to this study and understanding its CSR programs as well as its social, economy, and political landscapes.

*Coal Mining Industry in East Kalimantan, Indonesia.* East Kalimantan, one of the richest province in Indonesia is currently supported by 45 per cent of the extraction industry, especially coal mining. This means that almost half of the economy driver and regional income are significantly influenced by the ups and downs of the coal production. When the coal prices skyrocketed like in 2011-2012 ago, the regional budget was like in its golden era. Conversely, when the coal prices declined, the development budget charts followed the same thing. The central, provincial and district governments have issued more than 1,400 mining licenses with an area of around 5.2 million hectares. Of this total, 506 mining licenses are already in the production stage and another 406 licenses are later revoked due to administration issues.

However, the negative impact is still running with the opening of the catchment area, the mine pits require billions of rupiah recovery funds while the reclamation guarantees had not run well before. The potential for flooding and death in the pit is very detrimental to the community living around, it goes beyond the regional expenditure budget in handling it. Whereas East Kalimantan statistically produces an average of 200 million metric tons of coal per year or around 40 per cent of national production. If 200 million metric tons are multiplied by medium coal prices of US\$ 45 per ton, then the gross revenue will be of US\$ 9 billion or around IDR 126 billion (with the exchange rate of 14,000 = US\$ 1). Assuming a net profit of

20 per cent, it is estimated that it will reach around IDR 25,2 trillion or six times of the provincial income budget). However, from this huge income plus oil and gas as well as others, East Kalimantan only receives IDR 4 trillion funds on average for each year, while the rest is donated to the state. Yet the environmental impact is only felt by the locals, and the development has not been fully prospered the community.

On the other hand, two of the largest coal producer companies in Indonesia, are located in East Kalimantan. Namely, PT Kaltim Prima Coal (KPC) located in East Kutai District, and PT Berau Coal Energy which is in Berau District. These two coal mining companies are considered as the role model in CSR initiatives due to various CSR award that they have received both at national and international levels. In 2017 the two companies are among the three recipients that received the GOLD PROPER award from the East Kalimantan provincial government which is the highest category for the implementation of corporate sustainability programs. Meaning both companies have a comprehensive policy framework related to CSR initiatives compare to other coal mining companies in the place. They have a number of policies covering various subjects such as environmental policy, health and safety, energy use and communication which are the core business of CSR.

*PR Practice: Promoting CSR for the Existence and Power of the Company.* In the context of PR practices as a discourse technologist, it can be summarized from the shared agreement of the 12 informants of the two companies that the main task of PR practitioners is to promote their CSR programs. Repetition of these keywords found in existing texts to describe the importance of these practices such as 'highlighting' 'telling', 'talking', 'campaigning', 'celebrating', 'communicating', 'introducing', and 'repeating'. Those terms are used by a majority of informants to describe the urgency of public relations practice to promote the CSR programs implemented by companies. In this context, promotional repertoires are used to emphasize PR practices in promoting CSR programs messages to convey information to stakeholders, including the public that the companies have done good deeds through the initiatives.

In addition, it is important to underline that the enthusiasm of the informants to promote the companies' CSR programs were also very apparent during interviews. The researcher feels that majority informants are very passionate about the subject being discussed. The informants used every opportunity to explain various CSR programs initiated by the companies. The promotion practice appears through various repetitions through the terms 'communicating', 'sharing', and 'marketing'. The first two keywords explain the act of sharing information by providing information to other parties. Nevertheless, according to Kasabov (2004) who was inspired by Foucault, the term 'market' historically tended to describe a form of power because it is an instrument of social control that seizes attention discipline through spectacle, sensations and repetitive information conveyed. This can later be interpreted that PR is strategically spreading CSR discourse so it produces positive impacts on the interests of the company, such as generating media coverage or building a reputation which is profitable for the companies. In this case, the PR practice on promoting CSR programs aim to advance the companies' mission as interpreted as one of the main functions carried out by the informants.

There are a number of promotional markers that illustrate the act of promoting CSR programs done by the informants during interviews. The Acting Manager of Community Empowerment KPC for example started by showing the PR obligation to communicate CSR programs by expressing 'PR is the party who should always use every opportunity so that the CSR programs we have is known by the public!'. A variety of different communication methods were later raised to describe the strong and persuasive intentions to promote CSR programs. The act of promoting CSR seems to be echoed, with terms such as 'to be known' and 'to be acknowledged', all of which are framed mainly to attract public attention regarding CSR programs in order to achieve certain goals. This shows that PR is in a position to exploit CSR programs to create greater awareness to a wider audience on behalf of the company. On the other hand, the phrase 'to report' is relatively similar to the keywords used by PR officer of Berau Coal Energy such as 'to tell', 'to talk', and 'to share information' which emphasise the information dissemination to inform the public. Such communication model is

alike to Grunig's public information model (1992) where the main goal is to inform corporate stakeholders about CSR programs although not persuasively. This shows that PR uses various types of communication media to spread certain discourses in order to reach the companies' stakeholders. To this point, it is argued that the PR practice is largely constructed to create greater awareness than just announcing all things related to corporate responsibility practices, which most of it aims to create benefits for the companies.

The creation of awareness regarding CSR programs to pursue corporate interests has been discussed in various works of literature. A number of studies reveal that the low awareness of stakeholders on the company's CSR programs might hinder the efforts to gain strategic benefits (Sen, Bhattacharya & Korschun, 2006; Singh, Sethuraman & Lam, 2017; Wong & Danesh, 2017). However, they also stress that stakeholders sometimes respond skeptically to the aggressive CSR program promotions done by the company. In this case, it is important to ensure that CSR programs carried out bring substantive changes in accordance with the needs and expectations of constituents, and not merely symbolic to control public perceptions.

Furthermore, the implication if not involving PR in the CSR programs also draws the researcher's attention. Community Development Manager BCE stated that CSR could actually be carried out without any PR intervention but it seems to be such the 'unsung heroes' who did not receive any recognition for what has been done. In this context, the 'unsung heroes' will depend on the third parties to appreciate the good that has been done. In other words, the corporate active involvement in CSR initiatives that are not known by the public will become an initiative that does not provide any benefits to the company.

On the other hand, External Relations Manager KPC marks another effect that might be presented when the company did not publish their CSR programs to the public. He expresses his belief in the ability of PR in communicating CSR-related information through phrases such as 'we must spread' and 'we can bring up'. Even so, the word 'bring up' sometimes has a negative connotation because it is considered as a manipulative or hyperbolic type of communication. In addition, the term 'bringing up' implies the PR practice as a communication technologist is the one responsible for selecting and designing CSR-related messages to take advantage of the CSR program impacts and represent the unethical communication practice. Meanwhile, the phrase 'So when we do a good thing, at the same time we need to spread it out so people know that we are doing good, you know' shows the great desire for the CSR programs to be acknowledged by other parties. In addition, he supports the notion that CSR programs must be implemented explicitly to avoid company being considered to be selfish or merely wishing to generate financial profit and not truly want to give back to the community. In other words, the company is only 'doing good to look good'. He illustrates this in the following expression: 'If not, the public will say that KPC is just like other mining companies and never gives anything'. The term 'public' used in the quotation represents the community or company stakeholders who are considered to be more likely making accusations as stated by the informant.

Up to this point, the PR practices in promoting CSR programs are used to recognize the importance of doing good things that later explicitly used to ensure public recognition for the benefit of the company. At the same time, PR practice in promoting CSR is to make their responsible practice more explicit and thus helps counteract the negative public perception. By showing off the company's contribution made for the community, in other words, will prevent the public from having negative respond. This is in line with Orlitzky, Schmidt and Rynes (2003) statement which emphasise that the lack of effort in communicating the company's social initiatives will eventually create a negative perception on the company's activities.

The promotional practices are constructed as an attempt to build a positive image in order to maintain the company's existence as desired as described by the Specialist Reporting and Data Management KPC. Some expressions such as 'want to be highlighted' and 'tell to all parties' illustrate the informant's desires to promote CSR programs to the public at large. He firmly separates the intention to promote good deeds (in this case is CSR) by merely boasting '..has implemented this and that kind of CSR program, but not in the context

of boasting, you know..but to show them that we are different'. This shows that PR practitioners are well aware that corporate programs such as CSR can easily be misinterpreted as mere show-off activities which later create public skepticism. This is important for the company to note since the public skepticism tends to create a negative response to other activities implemented by the company (Elvig, 2010) which of course can be detrimental to the company's image. Community Development Manager BCE also emphasizes the intention to do good things on the phrase 'to states that we are responsible' and 'that we actually help'. Those expressions try to emphasize their noble intention to meet the need of other parties and not just the pursuit of their interests.

The statement of the Specialist Reporting and Data Management KPC also explained the PR practice in promoting CSR programs illustrate how the programs were implemented to secure the image as expected. This was clearly stated in his sentence: "...with the existence of PR, of course, to promote the company's CSR programs so that it can get a place that is expected for the company's sustainability". The informant very clearly illustrates the PR practices utilising the CSR program' discourse to acquire a particular image as desired for the company's interests. This practice is a clear example of how PR uses CSR merely as a tool to improve reputation. Some scholars argue that CSR becomes an important element that contributes to the formation of company's positive reputation (Schnietz & Epstein, 2005; L'Etang, 2009; Du, Bhattacharya & Sen, 2010; Mackey, 2013) thus they emphasise the importance of CSR discourse. Michaelson and Stacks (2014) further affirm that reputation is formed through words and actions both individually and organizationally, as well through relationship and experiences possessed by other people related to such individual or organization. In this case, promoting responsible practice then becomes an integral part of the process. This is in line to what is argued by the researcher that PR acting as a discourse technologist is substantively and actively involved in the production and distribution of the discourse texts, as well as serves in the interest of the organization in which s/he works for. Up to this point, this case affirms that the PR practitioners work in the coal mining industry in East Kalimantan are positioned in a strategic one serve to spread CSR discourse to construct a favorable image for the sake of maintaining the companies existence and power.

In the context of critical PR, its authority to create and control information should be accompanied with ethical considerations which include providing balanced and accurate information that helps all stakeholders make the right decisions. There are a number of ethical debates related to company activities in communicating a truth by saving other ones. L'Etang (2004) states that holding back information clearly violates the public interest and clearly shows that PR ethics is largely governed by those who pay them. Furthermore, L'Etang (2009) and Mackey (2013) also argue that using programs just to achieve company goals, making PR practices immoral since they are considered disrespectful to the beneficiaries (which in this context can be interpreted as the society). This certainly raises particular concern for the imbalance profits acquired by the company and the share received by the targets of CSR programs. Therefore, it is argued that the CSR program use only as a tool for PR practice might create a negative impact on the recipients, as well as the lack of attention that should be given to addressing their actual needs at the first place. This is because the plans made by the company could be more devoted to simply generate publicity for the sake of the company's image.

In addition, PR practitioners on many occasions also acknowledge their involvement in CSR promotion more like the strategic matter as they work for the benefit of those who pay them. Then it can be said that PR serves more as a strategic resource to help organizations achieve their only interests. The strategic Relations Officer of BCE affirms that making CSR programs popular among the public was very important to produce a positive business outcome. He states this statement very clearly in his answer by saying "Particularly the public at large, they should know that we have done good things. So our potential investors are sure about our company. Or how can we assure the government as well that we have already helped them?". In this context, this informant does not really believe that company might gain benefit from their CSR programs if it does not know by their strategic publics,

such as investors and government. This text gives the impression that PR practice in the context of CSR promotion is very strategic as it is used to maximise the value for the company, especially to gain trust among potential investors and the government. In other words, PR plays a strategic role while dealing with various efforts that might produce a particular impact aimed by the company.

Likewise with the term 'strategic' which is repeatedly used by the External Relations Supervisor of KPC to emphasize that PR works for the interests of the company. He states that PR ability is to create a positive impact on the company and it includes a strategic value of media coverage. According to Foucauldian, PR should make a number of efforts to evaluate their strategic actions to show their true value not only for the management but also to the public as PR is actually considered as a social activist (Coombs & Holladay, 2012). In this case, this situation makes them a real discourse technologist serve for the company only, as in most of the interviews done throughout the study the majority of informants describe the PR practice more about promoting CSR and left the issue of the actual needs of the external public.

At the macro level, CSR is generally constructed as a business component that helps the company remain competitive in its business. Making CSR programs reports also serves more as an indirect approach to instilling responsible behaviour among business actors. This is because this corporate responsibility practice is perceived as an important element to attract potential investors and get larger valued business contracts. As a number of institutions at national and international levels award companies that continuously implementing CSR programs (such as Asia Responsible Entrepreneurship Award, Indonesia Corporate Social Responsibility Award, Global CSR Award, Sustainable Development Goals Award, Nusantara CSR Award, and Environmental Award), it then creates a competition between companies to publish their social performance programs. The recognition and spotlight given by media are considered playing as an active driver for the company promoting their CSR to external public. Therefore, it is becoming important for the public is critical to watch on the CSR programs since according to Sandoval (2013) in many cases the CSR actual practices do not correspond to the company's reputation built in the media.

Gaining recognition from the stakeholders related to CSR programs is considered crucial for the existence and reputation of mining companies. This is particularly true since the high criticism pointed to the mining industry which is vulnerable to conflict as well as environmental and social issues. The award and publication of CSR programs received by the mining companies are explained by Jenkins and Yakovleva (2006) as a way to overcome negative public discourse on the mining industry. For functionalist scholars, this matter shows that mining companies seek to be part of good corporate citizens through their CSR programs (Ranangen, 2015). However, in Foucauldian perspective, public attention and news exposure on the company's CSR programs are often associated with the power to build an image of success. In this case, these two mining companies persistently promote their social responsibility practices to create positive discourse for their competitive advantage. In doing so, it is found that the PR practice in promoting CSR programs is largely influenced by the pressures and expectations indirectly made by the CSR proponents, namely the government and other CSR implementing agencies. So the CSR programs as part of PR practices were initiated to compromise with the interests of the dominant groups over the interests of other parties.

Up to this point, it can be said that the PR practice in promoting CSR largely led to the company's interests and not truly true in the public interest. This study found that the majority of informants of both coal mining companies in East Kalimantan is rarely talked about their position in the CSR promotion in order to help to cope with the actual needs of the community. PR practitioners generally act as institutional texts that present to teach corporations on how to create its identity for the sake of getting a positive image from the public and to gain legitimacy by using a variety of strategies, including its social programs as well as the creation of corporate narratives.

*PR Practice: Playing Advisory Role for the Social Programs.* The other dominant patterns found in the texts indicate that PR plays an advisory role in CSR-related programs.

This practice arose because PR in both companies were not in a pioneer position in CSR programs. Some key phrases such as 'giving consent', 'monitoring', 'being approved by PR', and 'PR present to give advice' indicate that PR has a certain level of expertise and power in CSR implementation. PR practitioners exercise certain powers related to the access they have to scarce resources and the closeness of network with the organizational management as confirmed by Grunig, Grunig and Dozier (2002). These rare resources are communication and environmental scanning skills that make PR involvement is perceived as crucial. In this case, PR practitioners are considered to have a level of expertise that is difficult for others to replace. This ability is similar to the term power in Foucault (1980) political discourse which often brings the meaning of domination. The knowledge possessed by PR on communication management of CSR programs is something that creates both the power and the creator of power itself, as Foucault states that the exercise of power perpetually creates knowledge and conversely, knowledge constantly induces effects of power (Foucault, 1980, p. 52). From this perspective, PR is clearly regarded as the main actors in the power/knowledge process and through their role as discourse, technologist PR plays a strategic discourse related to CSR programs to achieve hegemonic status among the external public.

PR practice as an advisor in CSR programs emerged from the interview conducted both with PR and CSR practitioners. PR Officer of BCE acknowledged that her PR Division was not the spearhead of the CSR programs in the company where she worked. However, she identified that PR is considered to play an important role in CSR programs implementation. She acknowledges PR as the party responsible for giving approval for CSR programs when she stated 'our division only approves of what needs to be done'. The term 'approve' in this context implies that PR has the power to authorise the CSR programs which in this case, its approval is requested before the programs are organised, specifically ones that related to company image and identity. This is evident when the informant asserted that PR responsibility was to ensure that every aspect of CSR programs depicted the company's image as expected.

The Specialist Reporting & Data Management of KPC also stresses the importance of PR practices in providing input related to CSR programs in line with the company's image. He emphasizes that the corporate's image and identity would be neglected if PR did not participate in the program. Negative phrases like "they will not be concerned to the issue of corporate image or identity" describe that CSR practitioners are not paying attention to image and identity when implementing CSR programs. In this case, based on the power of that provided by management, PR is responsible to guard the corporate image and reputation.

The Specialist Reporting & Data Management of KPC also stresses the importance of PR practices in providing input related to CSR programs in line with the company's image. He emphasizes that the corporate's image and identity would be neglected if PR did not participate in the program. Negative phrases like "they will not be concerned to the issue of corporate image or identity" describe that CSR practitioners are not paying attention to image and identity when implementing CSR programs. In this case, based on the power of that provided by management, PR is responsible to guard the corporate image and reputation. This belief is also clearly reiterated by PR officer of BCE that PR was involved in decision making regarding CSR programs even though they did not lead the program implementation. This involvement is based on the trust given by the top management that always emphasises that "all programs must be discussed with PR" which indicates that PR is in a position to give 'approval' to CSR programs. This trust implies the attribution of power given to PR by the higher level of organization to PR to decide on various issues related to CSR. This is possible because of the involvement of PR is considered important in order to direct the CSR programs to fit the corporate image and identity. This reinforces the statement of Heller (2016) that PR uses a discursive strategy by creating narratives related to companies to create a positive corporate image and to deflect criticism by integrating the concept of corporate responsibility and goodwill discourses. The PR officer of BCE statement illustrates the PR involvement in CSR programs by saying "whatever the content of the programs must get approval from PR", "we were involved in many meetings", and "our input is needed" which mostly show that PR practice in CAR programs is considered significant per se.

PR practice as an advisor in CSR programs was also acknowledged by BCE's CSR Manager. In the interview, he concedes the importance of PR in giving advice regarding CSR programs. His recognition of PR involvement in CSR programs is illustrated in the following phrase: "We need PR to be part of our team and to provide input on implementing these activities and projects...", and "PR must be there". In this case, PR involvement is perceived as crucial to ensuring the success of CSR programs. This shows that PR skills in managing programs, particularly when they involve public cannot be replaced by other parties. The power given to PR implies that other departments are considered less able to provide the same skills and advice. This is in line with Foucault that discourse is the centre of power and knowledge as well as influence the historical development of society, including corporations.

The interview with the Media Relations Supervisor of KPC likewise showed a strong dependence on public relations expertise, especially related to the communication things. The dependence of Sustainable Development Division conducting CSR to PR skills are described in the following phrase, "they need our help to communicate CSR", and "...we give advice on how they should relate with media". Those all show that the CSR Division seems to have less 'knowledge' or skills to communicate with the public, including the media. In addition, he also acknowledged the strong attachment between PR and the community when he stated, "We tell them what the community actually needs", and "We are considered to know the community and what they want". These words indicate the recognition of PR knowledge related to community relations and PR ability to identify what is needed by the community.

The BCE CSR-Community Plan and Control Supervisor also identified the importance of PR involvement in giving advice, specifically related to the field of communication. He acknowledges that there is a cooperative relationship between CSR and PR divisions, particularly related to the field of communication. He stated there is always a representative from PR department to be part of CSR team when he stated, "Our PR friends are also part of the CSR committee in Berau Coal". This explicitly illustrates that PR skills related to communication matter are highly valued and considered essential to ensure the success of CSR programs. At the same time, this response also shows that the CSR division' personnel have shortcomings in terms of communications skills, so they need PR assistance.

The PR practice as an advisor reveals the CSR division's dependence on PR, especially related to communication skills to the external public including the media. Allen (2016) argues that PR practitioners are the one who has communications skills and competencies related to CSR issues. He also stresses several reasons why PR should have a number of competitive advantages when compared to other scientific disciplines in terms of communicating CSR. One of them is their educational background and experience in communicating complex problems in various ways to diverse stakeholders, as well as personal knowledge related to stakeholders; "As boundary spanning is part of the daily routine of PR" (Allen, 2016, p. 66). In this case, unlike other workers, PR practitioners are considered capable of integrating diverse values and interests in the decision making process. Such special abilities are emphasized by Hargie and Tourish (2009) in his article that the thing distinguished a PR when he meets other professionals is his ability to bring up discussions regarding broader social issues, and the appropriate approaches to overcome these problems to the level of their implications in organizational behaviour and in the public sphere.

Mykkanen and Vos (2015) assert that corporate consulting services is one of the main functions performed by PR. This is associated with the PR function at a managerial level which provides the opportunity for practitioners to be involved in the decision-making process. Similarly, this study shows the PR practice as CSR advisor reveal a strong dependence on PR, especially in matters relating to communication problems and image building. It is assumed that the PR presence is considered important in terms of their involvement in CSR programs in both coal mining companies. As Pieczka (2006) emphasizes that PR expertise arises as a practical knowledge generated from the experience of these practitioners. This is what makes PR is regarded as a reliable discourse technologist who manages the company's public opinion.

This shows that the reliance on PR regarding communication and image building issues implies that CSR programs might only be about creating a positive organizational image for the sake of the company, and not really aims to generate positive impacts on external stakeholders. This impacts on PR-related functions that it is so hard to dodge when many define PR as a corporate tool devoted to controlling information (Davis, 2002), or even equating them as propaganda machines (Sullivan, 2011) just to maintain clients' reputation. This is particularly true since most discussions to PR-related functions are more on image construction than other strategic activities. Therefore, PR should dare to take initiative to establish a responsible or a fairer communication related to both interests of the company and the community through appropriate research and evaluation related to various communication strategies implemented, including CSR programs. To prove that PR is not only a discourse technologist that works solely for the corporate's image and reputation.

*Challenges for PR Practice.* The importance of PR practice in promoting CSR and giving advice on CSR programs also raises some challenges in PR practice within the existing texts. This issue describes various factors explaining the limitations of current PR practice as CSR initiatives in Indonesia continues to grow beyond the social, politic and cultural dimensions. In February 2018 ago, the East Kalimantan Mining CSR Forum was inaugurated and then identified five key areas that should be emphasised, such as infrastructure, education, health, environment, and community economy as the company' priorities framework related to their social performance. Therefore, the terms such as corporate responsibility and social empowerment appear to represent a more holistic dimension that surpasses such existing issues. This is certainly posse a major challenge in PR practice related to CSR programs as well as criticism from Foucauldian on PR performance if the results obtained from the public involvement process has been predetermined. This is because in the end the efforts are done by the company only show a fierce manifestation of power designed to legitimise the discourse and position of the dominant coalition (in this case is the corporation).

The limited PR practice only as a discourse technologist in the context of CSR programs is illustrated by the Strategic Relations Officer of BCE and the Acting Manager of Community Empowerment of KPC in their interviews. Both informants somewhat describe the PR limitations on the CSR programs-related issues. he Strategic Relations Officer of BCE emphasises that the strategic function of PR in relations to CSR is related only on attracting more investment from shareholders. He firmly acknowledges that it is his division's responsibility to undertake this task when he stated that, "that is our responsibility!". He also gave an impression that there were limitation regarding to PR practice in CSR programs when he said: "Our CSR programs are devoted to activities and strategies to gain trust from the government and community, to attract more attention from the investors, potential investors, and other stakeholders so they will trust us more". This implies that PR practice on CSR programs is limited only to matters relating to stakeholders and reputation management to maintain the company's legitimacy and power. This also shows that the CSR programs implementation in coal mining companies in East Kalimantan, Indonesia is still subjected to large imbalances and structural misalignment, which although wrapped in corporate goodwill through PR discourse but are actually part of the global hegemony construction.

In addition, the Community Empowerment Acting Manager of KPC considers that the PR practice is only part of perceptual management when he stated: "PR is related to the problem of perceptual control". In this case, the dynamic of PR practice related to CSR programs is seen only as part of the organization's communication effort in managing relationships with its environment to achieve certain goals. The informant described a collaborative approach with other divisions to gather other information so that it could be further integrated into CSR programs. He also made it clear when he said "...we usually work together with all divisions for technical inputs for the progress of the company. Let's say, for example, HSES division told us that maybe we could do something for this community". In this case, PR actually needs to begin playing their social roles in a professional manner so that they would be acknowledged and considered capable of the creation and maintenance of a more prosperous society.

Another interview also illustrates the informant's perception related to PR practice which may affect either the relationships with the company or the community. The Specialist Reporting & Data Management KPC implicitly identifies PR as a division that costs money, and not a division that generates direct profits. The informant firmly stated that this ability through his phrase: '...a department that works on service functions of the company, not one that generates financially...'. This assumption is a bit much further undermine the PR contribution in providing benefits to the company value or their ability to contribute strategically. Their inability to carry out these strategic functions prevents PR from giving more significant implications, not only to management but also to the wider community.

This idea led to another challenge that overshadows the PR practice related to their involvement in CSR programs implementation. This is related to the lack of resources, such as personnel number, time and financial factors that hinder the PR practice in the long term. The PR Officer of BCE indicated the PR commitment to be actively involved in PR programs even though the company has a separate CSR division. The fact that such CSR programs are recognised to have been implemented since the company's inception, she identifies a number of challenges if PR become the pioneers of CSR programs by saying "these kinda programs take a lot of our time", and "there are many programs to be implemented". Related to this statement, this informant acknowledges the limited resources of PR to overcome the high intensity of CSR programs. The PR limitations to be able to really focus on CSR programs are probably one of the reasons why the management separates the CSR division from PR. As illustrated by the Supervisor Media Relations of KPC, the lack of energy and time are some important issues that challenge the PR to be fully involved in CSR programs effectively. Such challenges arose in the following phrases: "It is important to have a fully dedicated staff", "we don't always have time to sit together and draw up a strategy", and "sometimes it seems we are becoming very ad-hoc". In this case, limited personnel are considered to influence strategic CSR program planning. This further implies that CSR programs are considered significant for the existence of coal mining companies, where the modest and well-turned programs actually do not adequately reflect CSR initiatives that are relevant to contemporary social change. Therefore, the large coal mining companies such as BCE and KPC have a separate department that is specifically responsible for managing CSR programs.

Apart from the main idea underlying CSR movement as one form of corporate responsibility to pursue their financial goals, the CSR programs' success themselves must be supported by adequate resources. The PR Superintendent of BCE uses the term 'sincere' and 'truthful' which describes the amount of commitment they have in carrying out CSR programs. He also stated that the pure CSR requires continuous and long-term involvement with different stakeholders which creates a particular obstacle for PR division if they have to handle it all alone. He acknowledged that this challenge is related to the limited number of PR personnel who are able to carry out all matters related to corporate communication in the company he works for. At the same time, he also admits the importance of stakeholder involvement in CSR program implementation which requires intense and long-term communication. Whereas according to Pieczka (2006), the PR ability to engage in a dialogue effectively is considered as the major activity that requires stakeholder involvement. Pieczka (2006) emphasises that in many situations the dialogue conducted by PR is difficult to understand, and then also followed up in a limited manner both theoretically and practically. In the end, it can be affirmed that CSR programs, in the long run, require more resources, financially and non-financially, which is also considered as another big challenge for the PR division. Therefore, it is argued that PR does not merely considered CSR as part of the company publication, but also have to ensure that all stakeholders (both internal and external) are aware of the commitments and efforts made by the corporations. In other words, PR practice is supposed to be a vehicle capable of enlightening and sharing information the progress made by companies that embrace CSR programs in a strategic and integrated manner.

## CONCLUSION

This article discusses the dominant themes that arise in the study conducted with PR and CSR practitioners in two major coal mining companies in East Kalimantan, Indonesia related to PR practice as a discourse technologist in CSR programs implementation. The discussion above help explains the PR practices as a discourse technologist that manifests in the form of intense CSR programs campaign that are implemented for the sake of companies that appear dominantly in the existing interviews. Although in both companies CSR was managed by a specific division, the PR practice manifests in through the CSR division' needs for PR advice related to CSR' decision making and promotion as revealed by the informants.

As a discourse technologist, the most sought-after from PR is certainly some advice related to communication as well as the formation of identity and image related to CSR programs, which seems to undermine other PR analytical skills. This illustrates that PR should try more to show their actual contribution both to the company and society. The dynamic development of CSR and the vulnerability of the coal mining industry make PR work by playing a discourse on CSR programs. This is done to demonstrate the public that the companies commitment are not only limited to matters related to profit. However, this is also a challenge for PR if it is not considered a threat related to PR function which should spearhead the creation of CSR initiatives that are in accordance with business ethics standards.

The discussion above shows the tendency of PR to reduce their professional values related to the implementation of CSR programs to main the dominant power, namely corporate interests which affect the scope of PR practices. For example, the PR practice is often equated with PR strategies and limited only to control the perception so that it hardly sees how PR might contribute to the company and society at large. It then weakens the real PR values in the context of organizational functions, including CSR-related programs. Therefore, it is strongly encouraging to PR practitioners to demonstrate their value by providing evidence of concrete work capabilities and not only being trapped in the management function of CSR discourse for the benefit of the company. It is however important for PR to be able and be brave to implement CSR that benefits both the corporation and the society. Hence, it is time for PR to reflect their practices for every action taken both for the company, the community and their profession as a whole.

## REFERENCES

1. Allen, M. (2016) *Strategic Communication for Sustainable Organization*, Heidelberg, Springer.
2. Apriando, T. (2018), 'Nyawa Hilang di Lubang Batubara Bertambah, Aktivis Lingkungan Dapat Teror and Serangan', MONGABAY, accessed 10/11/2018 at <http://www.mongabay.co.id/2018/11/29/nyawa-hilang-di-lubang-batubara-bertambah-aktivis-lingkungan-dapat-teror-dan-serangan/>
3. Bowen, S.A. (2008) 'A State of Neglect: Public Relations as 'Corporate Conscience' and Ethics Counsel', *Journal of Public Relations Research*, Vol. 20, pp. 271-296.
4. Coombs, W. & Holladay, S. (2012) 'Fringe public relations: How activism moves critical pr toward the mainstream', *Public Relations Review*, Vol. 38, No. 5, pp. 880-887.
5. Davis, A. (2002), *Public Relations Democracy: Politics, Public Relations and the Mass Media in Britain*, New York, Manchester University Press.
6. Fairclough, S. (1992) 'Discourse and Text: Linguistic and Intertextual Analysis', *Discourse & Society*, Vol. 3, No. 2, pp. 193-217.
7. Finlayson, A. (2001) 'Philo and Miller's metaphysical media studies', *Media, Culture & Society*, Vol. 23, Iss. 5, pp. 679-687.
8. Fitryarini, I., Juwita, R. & Purwaningsih (2015), *Manajemen Komunikasi Konflik Paska Tambang Batubara di Kalimantan Timur*, Hibah Penelitian DIKTI, Universitas Mulawarman.

9. Fontana, A. & Prokos, A.H. (2007) *The Interview: From Formal to Postmodern*, Left Coast Press Inc., California
10. Foucault, M. (1972) *Archeology of Knowledge: And The Discourse on Language*, New York, Pantheon Books.
11. Foucault, M. (1996) *Discipline and Punish: The Birth of the Prison*, New York, Vintage Books.
12. Foucault, M. (1980) *Power/Knowledge: Selected Interviews and Other Writings 1972-1977*, New York, Pantheon Books.
13. Foucault, M. (2001) *Power: Essential Works of Foucault 1954-1984 Vol. 3*, Faubion (Ed.).
14. Grunig, J. (1992) *Excellence in Public Relations and Communication Management*, New York, Routledge.
15. Grunig, L., Grunig, J. & Dozier, D. (2002) *Excellent Public Relations and Effective Organizations*, London, Routledge.
16. Heller, M. (2016) 'Foucault, Discourse, and the Birth of British Public Relations', *Enterprise & Society*, Vol. 17, No. 3, pp. 651-677
17. Holtzhausen, D. (2002) 'Towards a Postmodern Research Agenda for Public Relations', *Public Relations Review*, Vol. 28, No. 3, pp. 251-264.
18. Jaringan Advokasi Tambang (JATAM) (2016) 'KemenATR/BPN Dituntut Terbuka', diakses pada 28 Januari 2017 di <https://www.jatam.org/kemenatrbpn-dituntut-terbuka-2/>
19. Jenkins, H. & Yakovleva, N. (2006) 'Corporate Social Responsibility in the Mining Industry: Exploring Trends in Social and Environmental Disclosure', *Journal of Cleaner Production*, Vol. 14, pp. 271-284.
20. L'Etang, J. (2004) *Public Relations in Britain: A History of Professional Practice in the 20th Century*, New Jersey, Lawrence Erlbaum Associates Publishers.
21. L'Etang, J. (2009) 'Public Relations and Diplomacy in a Globalised World: An Issue of Public Communication', *American Behavioural Scientist*, Vol. 53, no. 4, pp. 607-626.
22. Mackey, S. (2013) 'A Sophistic Rhetorical Approach to Public Relations', *PRism*, Vol. 10, No. 1, pp. 1-14.
23. Michaelson, D. & Stacks, D. (2014) *A Professional and Practitioner's Guide to Public Relations Research, Measurement, and Evaluation*, New York, Business Expert Press.
24. Mickey, T. J. (1998) 'Selling the Internet: A cultural studies approach to public relations', *Public Relations Review*, Vol. 24, pp.. 335-349.
25. Mykkanen, M. & Vos, M. (2015) 'The contribution of Public Relations to Organizational Decision Making: Insight from the Literature', *Public Relations Journal*, Vol. 9, No. 2, pp. 1-17.
26. Motion, J. & Leitch, S. (1996) 'A Discursive Perspective from New Zealand: Another World View', *Public Relations Review*, Vol. 22, No. 3, pp. 297-309.
27. Motion, J. & Weaver, C.K. (2005) 'A Discourse Perspective for Critical Public Relations Research: Life Sciences Network and the Battle for Truth', *Journal of Public Relations Research*, Vol. 17, No. 1, pp. 49-67.
28. Orlitzky, M., Schmidt, F. & Rynes, S. (2003) 'Corporate Social and Financial Performance: A Meta-Analysis', *Organization Studies*, Vol. 24, No. 3, pp. 403-441
29. Potter, J. & Wetherell, M. (1987) *Discourse and Social Psychology: Beyond Attitudes and Behaviour*, London, SAGE.
30. Pieczka, M. (2006) 'Paradigms, System Theory and Public Relations' dalam L'Etang, J. & Pieczka, M. (Eds.) *Public Relations Critical Debates and Contemporary Practice*, London, Lawrence Erlbaum, pp. 331-358.
31. Ranangen, H. (2015) 'Corporate Social Responsibility Practice in Mining Industry', Tesis Master of Industrial Environmental Management, Lulea University of Technology.
32. *Republika* (20 Februari 2018) 2017, Produksi Batu Bara di Kaltim Mencapai 82 Juta Ton, diakses pada 4 Mei 2018 di <https://www.republika.co.id/berita/ekonomi/migas/18/02/19/p4e1zd368-2017-produksi-batu-bara-di-kaltim-mencapai-82-juta-ton/>
33. Sandoval, M. (2013) 'Corporate Social (IR)Responsibility in Media and Communication Industries', *Javnost - The Public*, Vol. 20, No. 3, pp. 39-57.

34. Schnietz, K. & Epstein, M. (2005) 'Exploring the Financial Value of a Reputation for Corporate Social Responsibility During a Crisis', *Corporate Reputation Review*, Vol. 7, No. 4, pp. 327-345.
35. Sen, S., Bhattacharya, C. & Korschun, D. (2006) 'The Role of Corporate Social Responsibility in Strengthening Multiple Stakeholder Relationships: A Field Experience', *Journal of the Academy of Marketing Science*, Vol. 34, No. 2, pp. 158-166.
36. Singh, P., Sethuraman, K. & Lam, J. (2017) 'Impact of Corporate Social Responsibility Dimensions on Firm Value: Some Evidence from Hongkong and China', *Sustainability*, Vol. 9, pp. 15-32.
37. Suastha, R.V. & Kandi, R.D. (2016) 'Eksplorasi Batubara, Kutai Kartanegara Rugi Rp581 Triliun', *CNN Indonesia*, diakses pada 27 Januari 2017 di <http://www.cnnindonesia.com/nasional/20160907001450-20-156556/eksplorasi-batubara-kutai-kartanegara-rugi-rp581-triliun/>
38. Sullivan, J. (2011), 'PR Industry Fills Vacuum Left by Shrinking Newsrooms', *ProPublica*, accessed 02/05/2018 at <http://www.propublica.org/article/pr-industry-fills-vacuum-left-by-shrinking-newsrooms>
39. *Tribun Kaltim* (2016, 20 Juli) 'CSR Sektor Batubara di Kaltim Mencapai Rp 240 Miliar', accessed 29/01/2017 di <http://kaltim.tribunnews.com/2016/07/20/csr-sektor-batubara-di-kaltim-mencapai-rp-240-miliar>
40. Trujillo, N. & Toth, E.L. (1987) 'Organizational Perspectives for Public Relations Research and Practice', *Management Communication Quarterly*, Vol. 1(2), pp. 199-231
41. *VOA Indonesia* (2013, 4 Desember) 'Eksplorasi Batu Bara Rusak Kalimantan', diakses pada 28 Januari 2017 di <http://www.voaindonesia.com/a/eksplorasi-batu-bara-rusak-kalimantan/1803156.html>
42. Wong, J. & Dhanesh, G. (2017) 'Communicating Corporate Social Responsibility (CSR) in the Lux Industry', *Management Communication Quarterly*, Vol. 3, No. 1.

DOI 10.18551/rjoas.2019-02.16

**THE EFFECT OF NURSE PERCEPTION IN WORK INCENTIVE AND SATISFACTION SYSTEMS ON ORGANIZATIONAL CITIZENSHIP BEHAVIOR: A CASE STUDY AT GOVERNMENTAL HOSPITAL**

**Sinambela Metti Wiradika Charolyna\***

Business School, Bogor Agricultural Institute, Bogor, Indonesia

**Panjaitan Nurmala K.**

Faculty of Human Ecology, Bogor Agricultural Institute, Bogor, Indonesia

**Dirdjosuparto Sukiswo**

Faculty of Economics and Management, Bogor Agricultural Institute, Bogor, Indonesia

\*E-mail: [mettiwiradika@gmail.com](mailto:mettiwiradika@gmail.com)

**ABSTRACT**

Hospital is a health service provider organization which always strives to provide satisfactory services so that customers continue to seek the Hospital's services to obtain the required health services. A hospital also demands loyalty from its employees. Therefore, behavior outside the job description (extra role) of the nurse is necessary in a hospital. One of the extra-role behaviors expected of the nurse by the hospital is organizational citizenship behavior (OCB). This study aims to analyze the influence of nurses' perceptions on incentive systems and job satisfaction on OCB. The number of respondents studied was 100 nurses in the inpatient care using a purposive sampling method. The method used in this study was structural equation model (SEM) with the partial least square (PLS) approach using SmartPLS 3.0 software. The results has shown that the perception of the nurses on the incentive system had an effect on the OCB through job satisfaction, so that a positive perception of the nurses on the incentive system would result in higher job satisfaction that would improve OCB.

**KEY WORDS**

Job, satisfaction, nurses, nurse perceptions, incentive system.

Increasing competition in the service businesses is a challenge for companies to continue to develop and innovate. In order to compete, companies must have better performance. Improving company performance can be done by managing human resources (HR) so that they are interrelated with every part of the company. HR also has a very important role to play in a company. HR with good and reliable performance can make or break a company in competing and maintaining its existence in the business world. Continuous improvement in employee performance is also applied to companies engaged in services, such as hospitals.

The increasing intensity of competition and the number of competitors requires hospitals to always pay attention to the needs and desires of customers by providing more satisfying services than their competitors. Thus, only quality companies can compete and dominate the market (Atmawati and Wahyuddin 2007). Therefore, a hospital seeks to provide satisfactory services so that customers continue to seek the Hospital's services.

Service quality is a measure of how precise the level of service offered by a company or service provider can meet customer service standards. This is because the performance of the company at that time is entirely determined by employee performance in determining whether customers will seek the service again at the next opportunity (Gronroos 2000).

In the hospital industry, nurses are the largest human resource that organizes health services in the form of nursing care in hospitals. The nursing team is a prominent aspect of healthcare that cannot be excluded from all forms of the hospital services. Nurse's

performance plays an important role in the success of a hospital in providing quality and satisfying services to customers. The success of the company in achieving its goals is not only determined by employee behavior towards the tasks in their job description (in role behavior), but also the behavior of employees towards tasks outside of their job description (extra behavior). The demand for nurses to achieve these tasks has made nurses one of the elements of the hospital that desperately needs organizational citizenship behavior (Runtu and Widyarini 2009). Organizational Citizenship Behavior (OCB) according to Organ et al. (2006) is the behavior of employees serving well based on a voluntary action, done sincerely and happily, without having to be governed or controlled by the company. OCB is reflected through employee behavior that is not required in their job description (in role behavior) and is not compensated by the company's management (Podsakoff et al. 2009).

One of the things that can trigger OCB is the job satisfaction felt by employees. Organ and Ryan (1995) emphasized job satisfaction as one of the variables affecting OCB. According to Wexley and Yuki (1988) job satisfaction is the feeling or sentiment of an employee regarding his work, encapsulating everything he faces in his work environment. Job satisfaction reflects the feeling of being happy or unhappy about an employee's work and can affect employee motivation to attend and mobilize their energy, mind, and time in carrying out their work. One factor that could maintain job satisfaction and OCB is compensation. Compensation is the main factor in motivation that supports job satisfaction and OCB because compensation is something that employees receive as a substitute for their service and contribution to the company (Rivai 2004). One form of compensation provided by the company is by providing incentives to encourage employees to keep on achieving better. Employees work because they are encouraged to make ends meet, so they will work to get rewards in the form of incentives provided by the company. With the provision of incentives, employees feel that they get the attention and recognition of their accomplishments so that their morale and loyalty can be improved.

A hospital generally consists of various units with a multitude of job description and workload. One of such unit at the hospital is the inpatient care unit. Inpatient care is a work unit that has a relatively greater burden than the other work units, because patients who stays for more than a day at the hospital will increase the amount of responsibility for the nurses. These nurses will have to take care in managing their patient's treatment, hygiene, and administration. The difference in the workload of this unit with the other units sometimes results in differences in the amount of incentives actually given to the nurses and the magnitude of the nurses' expectation of their own incentives. The nurses' acceptance in getting their incentives, which differ from their expectations, can affect the nurses' job satisfaction. Therefore, it is necessary to examine whether differences in incentive systems will affect job satisfaction and can affect OCB. The purpose of this study was to analyze the effect of nurses' perceptions on the incentive system and job satisfaction on OCB.

## **METHODS OF RESEARCH**

This research was conducted in a Government Hospital in Bogor City which was conducted in August 2018 - October 2018. Primary data was obtained from questionnaires on 100 nurses who were selected purposively under the criteria that the nurses had worked for more than a year. Primary data is also obtained from in-depth interviews with many informants who knows about the incentive system at the hospital. Secondary data is obtained from the institution concerned.

Data processing and analysis is done by instrument testing, descriptive analysis, and PLS to analyze SEM models. The instrument test was conducted to determine the validity and reliability of the questionnaire, this was done by testing the items in the questionnaire given to the respondents. If declared valid, then the question is used for the next discussion. Based on the validity test, all of the questions in this study (43 indicators) are declared valid. The results of reliability testing on all indicators on the variables used in the study can be accepted at 0.975, so the reliability of the questionnaire questions is considered as good.

The study began by analyzing nurses' perceptions on the system of incentives, job satisfaction, and OCB. Indicators of nurse perceptions on the incentive system are also influenced by individual characteristics. Based on the aim of the study to analyze the effect of nurses' perceptions on the incentive system and job satisfaction on OCB, the following hypotheses were formulated. (H1) Nurses' perceptions of the incentive system had an effect on job satisfaction, (H2) Job satisfaction had an effect on OCB, (H3) Nurses' perceptions of the incentive system have an effect on OCB, and (H4) Nurses' perceptions of the incentive system have an effect on OCB through job satisfaction.

Analysis of the data used is Structural Equation Modeling (SEM) with the partial least square (PLS) approach using SmartPLS 3.0 software. PLS is a component or variant based model. According to Ghazali (2006), PLS is an alternative approach that shifts from a covariant-based SEM approach to a variant based approach. To analyze this research, several stages were conducted (Ghozali 2006), namely evaluation of the measurement model or outer model, evaluation of the structural model or inner model, and hypothesis testing.

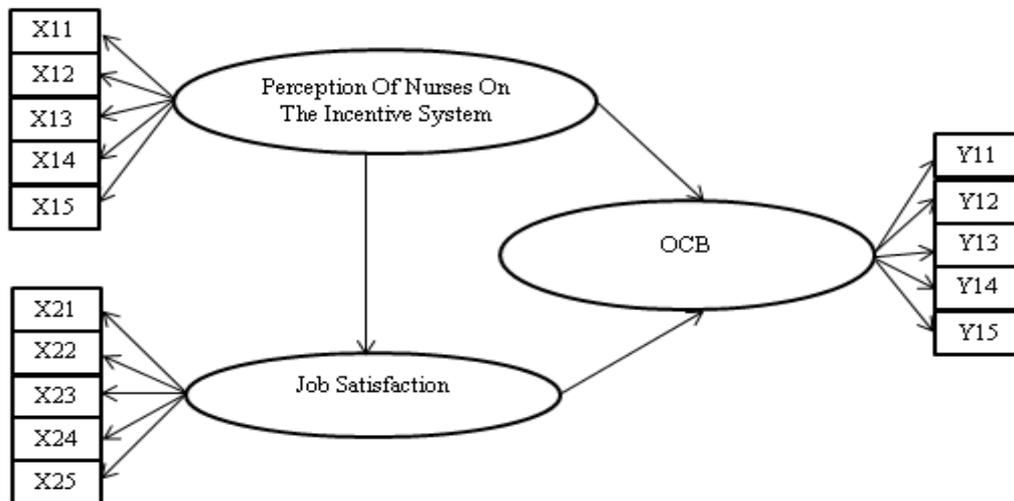


Figure 1 – Structural model

The variable perception of nurses on the incentive system with the forming component consists of: X11 = Magnitude, X12 = Justice, X13 = Requirement, X14 = Timeliness, and X15 = Increase in incentives.

Job satisfaction variables with forming components consist of: X21 = Payment, X22 = Promotion opportunity, X23 = Job, X24 = Supervisor, and X25 = Colleague.

OCB variables with forming components consist of: Y11 = Altruism, Y12 = Courtesy, Y13 = Civic Virtue, Y14 = Conscientiousness, and Y15 = Sportmanship.

## RESULTS AND DISCUSSION

According to the World Health Organization (WHO), hospitals are an integral part of a social and health organization with the function of providing comprehensive services, healing (curative), and disease prevention to the public. The hospital is also a training center for health workers and medical research centers. The Government of the Republic of Indonesia defines a hospital as a health service institution that organizes personal health services in a comprehensive manner that provides inpatient, outpatient, and emergency services (Government of the Republic of Indonesia 2009). Nurses are health workers. The nurse is someone who has completed a nursing education program both at home and abroad that is recognized by the Government of the Republic of Indonesia, registered and authorized to carry out nursing practices in accordance with the laws and regulations. The nurse in the hospital has a 24-hour shift system. The duties and responsibilities of a nurse include

nursing therapy, nursing observation, complementary therapy, health education, advice, and counseling (PPNI Center Management 2005).

The 2010 Minister of Health Regulation states that hospitals in Indonesia can be divided into two types based on ownership, namely:

Government-owned hospital, which includes:

- Central Hospital of the Ministry of Health;
- Regional Hospital belonging to the Provincial Government;
- Regional Hospital owned by the Regency / City Government;
- Hospital belonging to the Indonesian National Army (TNI);
- Hospital belonging to the Police of the Republic of Indonesia;
- Hospitals belonging to departments outside the Ministry of Health, including those belonging to State-Owned Enterprises.

Private hospitals, which include:

- Foundation-owned Hospital;
- Hospital owned by a Company;
- Hospital owned by investors (domestic and foreign);
- Hospital belonging to another Legal Entity.

The hospital in this study is classified as a government-owned hospital. At present, this hospital employ approximately 200 nurses for inpatient care. The working hours in this hospital are no different from other hospitals in general, divided into three shifts: 07.00-14.00, 14.00-21.00, and 21.00-07.00 (GMT+7). In between shifts, nurses are to voluntarily communicate in advance with other nurses. The break system applied on this hospital is 2 days, 2 noon, and 2 nights for every month. In each inpatient room, there is a group that consists of the head of the room, two team heads, and each team head has members. The inpatient room in the hospital is divided into 13 rooms, namely the obstetrics room, baby room, high care unit (HCU) room, operating room, guard post, USG, recovery room, and several other inpatient room (Wira, Hesti, Garuda Atas, Garuda Bawah, Cakti, and Kartika room). The results of data collection from the questionnaire has shown several characteristics based on the demographic data as shown in Table 1.

Table 1 – Distribution of respondents based on demographic aspects

Information	Respondent Group	Number of people	Percentage (%)
Age	≤25	21	21
	26-35	58	58
	>35	21	21
Gender	Man	25	25
	Women	75	75
Level of education	SMA	4	4
	Diploma	62	62
	S1	34	34
Years of service	1-5	42	42
	6-10	43	43
	>10	15	15
Position	Nurse section head	1	1
	Head of the room	11	11
	Head of the team	13	13
	Member	75	75

Based on Table 1, the distribution of the largest age of respondents is 26-35 years with a percentage of 58%. This shows that most respondents are nurses who are in their productive age. Based on the gender demographic aspect, the number of nurses was mostly women with a percentage of 75%. In the level of education, 62% of nurses have a Diploma background which shows that some nurse in the hospital have had fairly good education.

Then based on job tenure, 58% of nurses have a worked for more than 6 years. This shows that some nurses have good loyalty to the hospital. These nurses were divided into 4 groups of positions: nurse section heads (1%), room heads (11%), team heads (13%), and members (75%).

*Data Analysis with PLS-SEM.* The exogenous latent variable in this study consisted of two variables, namely the perception of nurses on the incentive system and job satisfaction. The perception of nurses in the incentive system is a variable that has 5 indicators (X11 to X112) and job satisfaction is a variable with of 5 indicators (X21 to X211). The endogenous latent variable in this study is OCB, with 5 indicators (Y11 to Y120). These indicators will later be developed into several questions arranged in the research questionnaire.

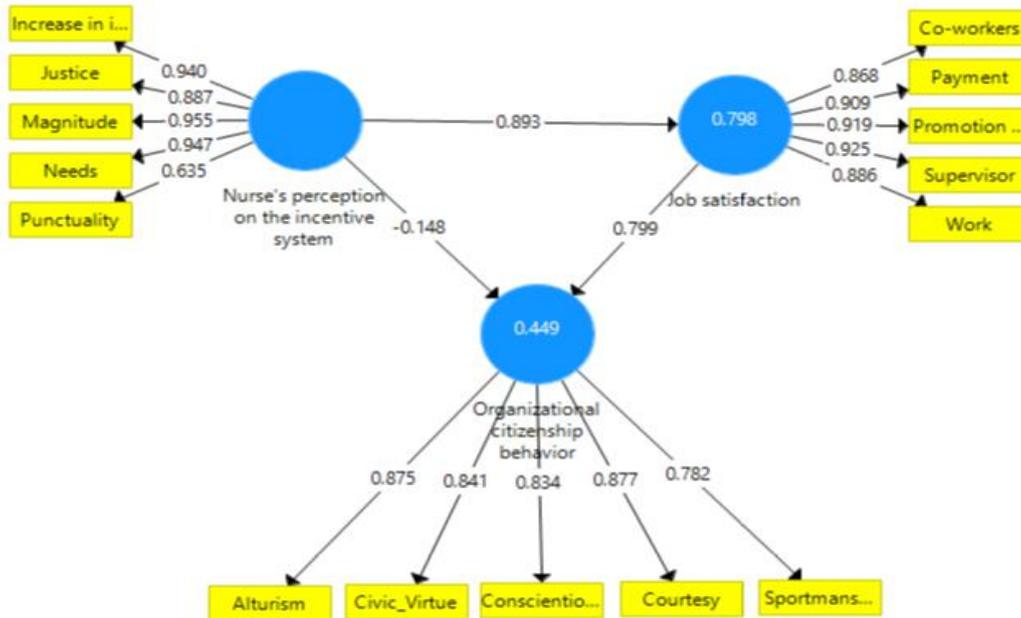


Figure 2 – Loading factor on the measurement model

According to Ghozali (2008), if there are indicators that have a loading factor value of <0.5, recalculation must be performed on the initial model so that the loading factor of all reflective indicators is > 0.5 as a criterion of the convergent construct validity test. The model in Figure 2 shows that there are no indicators that have a loading factor value of <0.5, which means that the indicators used have properly described latent variables.

Table 2 – Results of Iteration of Final Measurements of Nurse Perception Variables in Incentive Systems

Indicator	Loading Factor
Magnitude	0.955
Justice	0.877
Needs	0.947
Punctuality	0.635
Increase in incentives	0.940

Perception is someone's view of an event, where perception is formed by hope and experience. Individual perceptions in the same situation can be different. This happens because each individual is unique, has different sets of values, and differing life experiences, so that the reception and interpretation produced can be different. Nurse perceptions according to Potter and Perry (2005) are nurses' views, feelings, interpretations, and understanding of what happens to clients and the environment.

According to the Minister of Health Regulation No. 1199 of 2004 concerning guidelines for the procurement of health workers with work agreements, it was explained that incentives are meant to provide compensation to health workers for their work outcomes that exceeded the average, in order to increase the output of health facilities. The incentives are different from working overtime. Determination of incentives is not easy because it is difficult to measure the parameters for reward. Incentives are only given to certain personnel included in the incentive program. The criteria for providing incentives according to Minister of Health Regulation No. 1199 of 2004 is that there is a workload that must be resolved, which is set out in an incentive program to increase productivity within the time period, with clear parameters, and health workers who enter the program are selected individuals. Incentive payments are paid outside of salary payments.

According to Simamora (2006) the factors that influence the provision of incentives are the magnitude of incentives, increase in incentives, accuracy, fluency, fairness, and feasibility. Furthermore, according to Hasibuan (2013), the basic considerations for preparing incentives includes performance, length of work, seniority, needs, fairness, feasibility, and job evaluation. In order to provide incentives in accordance with the expectations of the desired perception of nurses, the indicators of nurses' perceptions of the incentive system were adapted from various experts and adjusted as magnitude, fairness, needs, time provisions, and increase in incentive.

The results in Table 2 shows that magnitude has the highest value at 0.955. This shows that the magnitude of the incentive system in a hospital plays an important and influential role in the assessment of nurses who are in the hospital. Magnitude and giving good incentives can help create a good work process and set achievements such as work goals, so that nurses can receive job satisfaction which will positively impact organizational citizenship behavior.

Table 3 – Final Iteration Results for Variable Measurement of Job Satisfaction

Indicator	<i>Loading Factor</i>
Payment	0.909
Promotion opportunity	0.919
Work	0.886
Supervisor	0.925
Co-workers	0.868

According to Kreitner and Kinicki (2014), job satisfaction is an affective or emotional response to various aspects of one's work. The level of work satisfaction of each employee is different, because the standard of satisfaction of each individual also differs from one another. Job satisfaction as an individual feeling can generally be associated with work (Robbins 2008). The positive and negative feelings of work is an evaluation process that happens internally within a person, therefore, job satisfaction can bring out a pleasant or unpleasant feeling that is felt by an individual to their working conditions. According to Colquitt et al. (2013) job satisfaction is a condition of emotional satisfaction from the results of one's assessment of work and work experience.

The measurement of job satisfaction has several views, according to Colquitt et al. (2013) there are two elements contained in job satisfaction, namely value fulfillment and satisfaction with the work itself. Employees feel satisfied if their work can provide something they can value, something that is valuable is something that will make people want to find or get it, both consciously or unconsciously. Job satisfaction will occur if workers feel that the value they want will be fulfilled which can be obtained, but different people appreciate different things and their value can change during life and work. The theory concerned with fulfilling this value is value-percept theory. Value-percept theory explains that someone evaluates job satisfaction based on certain aspects of work. Meanwhile, work is not only based on one aspect but is a collection of tasks, relationships, and awards. So to measure

job satisfaction according to value-percept theory is with payment satisfaction, promotion satisfaction, supervision satisfaction, coworker satisfaction, and job satisfaction.

Table 3 shows the results for the variable of job satisfaction, with supervisor having the highest value with 0.925. This shows that supervisor is the indicator that affects the variable job satisfaction the most, as a good supervisor will positively impact the job satisfaction that an employee gets, so that it will affect organizational citizenship behavior. The highest value of this indicator shows that employees are satisfied with the relationship between the supervisor.

Table 4 – Final Iteration Results for Organizational Citizenship Behavior

Indicator	<i>Loading Factor</i>
<i>Altruism</i>	0.875
<i>Conscientiousness</i>	0.834
<i>Sportmanship</i>	0.782
<i>Courtesy</i>	0.877
<i>Civic Virtue</i>	0.841

Organ (1994) states that OCB are behaviors carried out by organizational members or employees who are not expressly rewarded if they do so and are not punished if they do not do so, as the behavior carried out is not part of the job description of the employees, and it is the behavior of employees that they implemented without training in advance. Organ (1988) defines OCB as a behavior that is not related to the formal reward system of an organization but drives the organization effectively. Organ states that OCB may at some point encourage the occurrence of rewards, but these rewards are uncertain.

OCB consists of 5 dimensions (Organ et al 2006), namely altruism, conscientiousness, sportmanship, courtesy, and civic virtue. Altruism is a behavior that alleviates work aimed at colleagues. Courtesy is a behavior that prevents problems with colleagues. Civic virtue is the behavior of self-involvement and responsibility in the activities of the organization and care for the continuity of the organization. Conscientiousness is the behavior of doing things that benefit the organization beyond the minimum requirements needed. Sportsmanship is a behavior that tolerates situations that are less ideal or uncomfortable at work without complaining. The measurement results (Table 4) show that the courtesy indicator has the highest value that is equal to 0.877, making the indicator the most influential on OCB.

Table 5 – Average value of variance extracted (AVE) and composite reliability

Latent variable	AVE	<i>Composite Reliability</i>
Nurse's perception on the incentive system	0.776	0.945
Job satisfaction	0.813	0.956
Organizational citizenship behavior	0.710	0.924

Table 5 shows the AVE value and composite reliability. The model is said to be good if it meets the requirements of validity and reliability. The model has good validity if each latent variable with a reflective indicator has  $AVE > 0.5$ , while it will be reliable if the latent variable has a composite reliability value of more than 0.7. The analysis shows that the AVE value of each latent variable has a value  $> 0.5$  and all latent constructs have a composite reliability value of more than 0.7 so it can be said that the PLS model met a good convergent validity and has good, accurate, and consistent reliability.

In addition to testing validity and reliability, discriminant validity is also tested. Testing of discriminant validity is carried out by the principle that different constructs (manifest variables) should not be highly correlated (Ghozali 2008). One way to test discriminant validity is to compare the root values of average variance extracted (AVE) of each construct with a correlation between constructs and other constructs. The results of the analysis in

Table 6 shows that the AVE root value is higher for the correlation between constructs and other constructs, so that it can be said that the model meets the requirements of discriminant validity.

Table 6 – AVE values and AVE roots

Latent variable	AVE	$\sqrt{\text{AVE}}$
Nurse's perception on the incentive system	0.776	0.881
Job satisfaction	0.813	0.902
Organizational citizenship behavior	0.710	0.843

*Evaluation of Structural Models (Inner Model).* Testing the inner model or structural model is done by looking at the R-square of the research model. Data from the R-square estimation can be seen in Table 7.

Table 7 – R-square values

	<i>R-square</i>	<i>R-square Adjusted</i>
OCB	0.449	0.437
Job satisfaction	0.798	0.796

Job satisfaction and perceptions of nurses on the incentive system were able to explain OCB diversity by 43.7%, while 56.3% was explained by other independent variables outside the model. While the perception of nurses on the incentive system is able to explain the diversity of job satisfaction by 79.8%, the remaining 20.2% is explained by other independent variables outside the model.

*Hypothesis testing.* Subsequent tests in the evaluation of inner models or structural models are carried out to see the significance of the path coefficients that show the relationship or influence between latent variables in the study. In PLS, testing each relationship is done using a simulation with the bootstrapping method of the sample. The test results with the bootstrapping method for path coefficients from PLS SEM analysis can be seen in Table 8.

Table 8 – Path coefficients between latent variables

	<i>Original Sample (O)</i>	<i>Sample Mean (M)</i>	<i>Standard Deviation (STDEV)</i>	<i>T-Statistic</i>	<i>P-Values</i>
PPSI → KK	0.893	0.895	0.017	51.743	0.000*
KK → OCB	0.799	0.810	0.148	5.399	0.000*
PPSI → OCB	-0.418	-0.152	0.155	0.954	0.341
PPSI → KK → OCB	0.566	0.573	0.051	11.164	0.000*

Note: \*) significant influence on alpha level 5%.

The results of the analysis (Table 8) shows the perception of nurses on the incentive system to have a positive or direct effect on job satisfaction with a coefficient of 0.893. This result is significant at 5% alpha level because the p-value (0.000) is smaller than (0.05). This shows that the more positive the nurse's perception on the incentive system, the nurse's job satisfaction will increase. In line with research from Fitria (2017) which states that there is a positive and significant relationship between incentives and job satisfaction, where nurses who have a good perception of giving incentives will have high job satisfaction and work motivation in realizing and supporting the achievement of hospital goals. Based on the results of the path coefficients, the first hypothesis in this study states that nurses' perceptions of the incentive system have an effect on acceptable job satisfaction in hospitals.

Job satisfaction with OCB also has a positive or direct effect with a coefficient of 0.799. This result is significant at 5% alpha level because the p-value (0.000) is smaller than (0.05). This shows that the more positive the nurse's job satisfaction, the behavior of OCB on nurses will increase. In line with the research conducted by Fitriana, et al. (2013) from the results of the study there is a positive and significant influence between job satisfaction on OCB. Someone with a high level of job satisfaction shows a positive attitude towards work, so that nurses who do not get job satisfaction will never achieve psychological satisfaction and eventually negative behavior will arise which. Conversely, satisfied nurses can work well, full with enthusiasm. Based on the results of the path coefficients, the second hypothesis in this study which states that job satisfaction influences OCB in hospitals can be accepted.

The perception of nurses on the incentive system towards OCB has a negative or opposite effect with a coefficient of -0.418. This result is not significant at 5% alpha level because the p-value (0.341) is greater than (0.05). This shows that nurses' perceptions on the incentive system are not directly and in the opposite direction of their influence on OCB. Organ (1988) defines OCB as free behavior, not directly related to the reward system and can improve the effective functioning of the organization. This is in line with Hasibuan's research (2009) which states that there is no significant direct effect of incentive satisfaction on organizational commitment and OCB, except through job satisfaction. Based on the results of the path coefficients, the third hypothesis in this study which states that the perception of nurses on the incentive system has an effect on OCB in the hospital is rejected.

Nurses' perceptions on the incentive system towards OCB that are influenced by job satisfaction have a positive or direct effect with a coefficient of 0.566. This result is significant at 5% alpha level because the p-value (0.000) is smaller than (0.05). So, in building OCB behavior on nurses, there must be a close relationship between nurses' perceptions of the incentive system and job satisfaction, then job satisfaction with OCB, so that OCB will be done by the nurses. This shows that the more positive the perception of nurses on the incentive system, the higher job satisfaction that will increase OCB. Job satisfaction in this research is a variable that functions as an intervening variable. Based on the results of the path coefficients, the fourth hypothesis in this study states that nurses' perceptions on the incentive system have an effect on OCB through job satisfaction in hospitals can be accepted. This is supported by the results of interviews with nurses who has stated that there are some dissatisfaction with the incentive system in terms of timely payment. The delay in payment affects the job satisfaction of nurses, which in turn affects the behavior of OCB nurses.

*Managerial Implications.* Based on the results of the research that has been done, it is known that there is an influence between nurses' perceptions on the incentive system and job satisfaction towards OCB. The results showed that the more positive the perception of nurses on the incentive system, the higher the job satisfaction that would in turn increase OCB in nurses. Efforts can be made by the hospital's management to improve nurses' perceptions of the incentive system and job satisfaction so as to increase OCB, among others:

Hospital management should evaluate the incentive system periodically given to nurses by the hospital to be able to improve the nurses' perceptions of the incentive system. This is based on the results of loading factors that show aspects of magnitude with a high value in shaping the level of perception of nurses on the incentive system, so that the hospital can always strive for nurses to feel sufficient about the amount of incentives received in accordance with the performance achieved, the amount of incentives in accordance with the nurses' expectations, and incentives provided in accordance with applicable hospital regulations.

Hospital management conducts focus group discussion (FGD) activities routinely by involving leaders and employees so that leaders can conduct routine guidance, direction, and supervision of employees. This is based on the results of job satisfaction loading factor, where the supervisor's aspect turns out to have the highest influence on job satisfaction. The

leadership figure is instrumental in the application of OCB because the leader can be a role model for nurses and inspire OCB.

Open equal opportunities for all nurses to be promoted by increasing nurse competency through training and development. This is based on the results of loading factors, the promotion opportunity as an indicator of job satisfaction has the second highest value among other job satisfaction indicators, and doing so could increase nurses' job satisfaction and increase OCB.

Courtesy is the most influential indicator of OCB formation for nurses in hospitals, therefore hospital management needs to maintain it by giving instructions to nurses to always maintain the good name and image of the hospital, mutual respect for policies that are in the hospital, mutual respect between other nurses, and always maintain an attitude not to disturb the other nurses.

## CONCLUSION AND RECOMMENDATIONS

The nurses' perceptions on the incentive system had an effect on organizational citizenship behavior through job satisfaction. The more positive of a perception the nurses has on the incentive system, the higher job satisfaction would be, and that would improve organizational citizenship behavior in nurses.

Based on the results of the study, job satisfaction is an important thing that every nurse must have to increase their OCB. Job satisfaction can be achieved by an increase in payments, opportunities for promotions, supervisor, colleagues, and jobs. Then, future researches could expand the object of research on similar industries (hospitals) to be able to get an overview of organizational citizenship behavior in nurses in the industry. Further research may also consider other factors that influence organizational citizenship behavior such as employee recruitment systems, facilities available in hospitals, the relationship between nurses and patients, leadership style, organizational culture, and employee performance.

## REFERENCES

1. Atmawati R, Wahyudin M. 2007. Analisis pengaruh kualitas pelayanan terhadap kepuasan konsumen pada Matahari Departement Store di Solo Grand Mall. Surakarta: Jurnal Daya Saing, Program MM-UMS.
2. Colquitt J, Lepine J, Wesson MJ. 2013. Organization Behavior: Improving Performance and Commitment in The Workplace. New York (US): McGraw-Hill.
3. Depkes, RI. 2004. Petunjuk Pelaksanaan Kepmenkes No 1199/2004 Tentang Pedoman Pengadaan Tenaga Kesehatan Dengan Perjanjian Kerja. Direktorat Jenderal Pelayanan Medik, Direktorat Pelayanan Keperawatan.
4. Fitria, Jimmy. 2017. Pengaruh reward, insentif, pembagian tugas dan pengembangan karier pada kepuasan kerja perawat di Rumah Sakit Ortopedi Prof. Dr. R. Soeharso Surakarta. [tesis]. Surakarta (ID): Universitas Sebelas Maret.
5. Fitrianasari, Diana. Nimran, Umar. Utami, Hamidah Nayati. 2013. Pengaruh kompensasi dan kepuasan kerja terhadap organizational citizenship behaviour. Jurnal Profit Volume 7 No.1 Universitas Brawijaya.
6. Ghozali, Imam. 2006. Structural Equation Modeling, Metode Alternatif dengan Partial Least Square. Edisi 2. Semarang (ID): Badan Penerbit Undip.
7. Ghozali, Imam. 2008. Structural Equation Modeling, Metode Alternatif dengan Partial Least Square. Semarang (ID): Badan Penerbit Undip.
8. Gronross. 2000. Service Management and Marketing. London (EN): John Wiley and Sons Ltd.
9. Hasibuan, Rafika Siti. 2009. Pengaruh budaya organisasi dan kepuasan insentif terhadap komitmen organisasi, organizational citizenship behaviors dan kepuasan kerja karyawan Pusat Penelitian Kelapa Sawit Sumatera Utara. [tesis]. Bogor (ID): Institut Pertanian Bogor.

10. Hasibuan M. 2013. *Manajemen Sumber Daya Manusia*. Edisi Revisi. Jakarta (ID): PT Bumi Aksara.
11. Kreitner R, Kinicki A. 2014. *Perilaku Organisasi*. Buku ke 1. Biro Bahasa Alkemis, penerjemah. Jakarta (ID): Salamba Empat. Terjemahan dari: *Organizational Behavior*. Ed ke 9.
12. Organ, DW. 1988. *Organizational citizenship behavior: The good soldier syndrome*. Lexington MA (US): Lexington Books.
13. Organ DW. 1994. Personality and organizational citizenship behavior. *Journal of Management*. 20: 465-78.
14. Organ DW, Ryan K. 1995. A meta-analytic review of attitudinal and dispositional predictors of organizational citizenship behavior. *Personnel Psychology*. 48: 775–802.
15. Organ, DW, Podsakoff PM, MacKenzie SB. 2006. *Organizational Citizenship Behavior: Its Nature, Antecedents, and Consequences*. California (US): Sage Thousand Oaks.
16. Pemerintah Republik Indonesia. 2009. Undang-undang Republik Indonesia nomor 44 tahun 2009 tentang Rumah Sakit. Jakarta (ID): Sekretariat Negara.
17. Pemerintah Republik Indonesia. 2010. Peraturan Menteri Kesehatan (Permenkes) nomor 340 tahun 2010 tentang Klasifikasi Rumah Sakit Umum. Jakarta (ID): Sekretariat Negara.
18. Pengurus Pusat PPNI. 2005. *Standar Kompetensi Perawat Indonesia*. Jakarta (ID): Sekretariat PPNI. <http://www.inna-ppni.or.id>.
19. Podsakoff NP, Whiting SW, Podsakoff PM, Blume BD. 2009. Individual and organizational-level consequences of organizational citizenship behaviors: A meta analysis. *Journal of Applied Psychology*. 94(1): 122-141. doi: 10.1037/a0013079.
20. Potter dan Perry. 2005. *Fundamentals of Nursing: Concept, Proses, and Practice* (4<sup>th</sup> ed). Philadelphia (US): Mosby Year Book.
21. Rivai, V. 2004. *Manajemen Sumber Daya Manusia Untuk Perusahaan dari Teori ke Praktik*. Jakarta (ID): PT. Raja Grafindo Persada.
22. Robbins SP, Judge TA. 2008. *Perilaku Organisasi*. Edisi 12. Jakarta: Salemba Empat.
23. Runtu DYN, Widayarni MMN. 2009. Iklim organisasi, stress kerja dan kepuasan kerja pada perawat. *Jurnal Psikologi*. 2 (2).
24. Simamora H. 2006. *Manajemen Sumber Daya Manusia*. Edisi 2. Yogyakarta (ID): STIE YKPN Yogyakarta.
25. Wexley KN, Yukl LA. 1988. *Organizational Behavior and Personnel Psychology*. Boston (US): Richard D. Irwin, Inc.

DOI 10.18551/rjoas.2019-02.17

**THE IMPACT OF EVENTS AROUND OPENING OF ASIAN GAMES 2018  
ON MARKET REACTIONS OF GOOD INDUSTRY CONSUMER SECTORS  
IN INDONESIA STOCK EXCHANGE**

**Irmayani Ni Wayan Dian\***, Purbawangsa Ida Bagus Anom  
Postgraduate Program, University of Udayana, Bali, Indonesia  
\*E-mail: [dianirmayani51@gmail.com](mailto:dianirmayani51@gmail.com)

**ABSTRACT**

This study aims to determine the significant abnormal returns before and after the opening of the 2018 Asian Games in the stock of the Consumer Good Industry sector on the Indonesia Stock Exchange. The population in this study is the Good Industry Consumer sub-sector company on the Indonesia Stock Exchange. Determination of the sample using non-probability method with purposive sampling technique and obtained as many as 29 companies as samples in this study. Data were analyzed using one sample t-test and paired sample t-test. The results showed that there was a market reaction at t-4 and t-5, but it was suspected that there was information leakage indicated by the significance value at t-4 and t-5. The results of this study also indicate that there are significant differences before and after the opening of the 2018 Asian Games.

**KEY WORDS**

Abnormal returns, event studies, market efficiency, capital markets.

The main goal of investors in investing is to maximize returns, without forgetting the investment risk factors that must be achieved. Return is one of the factors that motivate investors to invest and also is the courage of investors to bear the risk of investments made. In essence, investors in investing will try to invest in the company's shares that are able to provide returns or profits that can be in the form of dividends and / or capital gains. Return is the main goal of an investor to invest because this is a maximization of prosperity with an increase in wealth.

Stock returns can be influenced by many things, one of which is an economic event. An economic event has an impact on investment both directly and indirectly. If an event results in an increase in stock returns, then the event is responded positively by economic actors or market players. Conversely, an event becomes ineffective if the event is responded negatively by the investor.

Research on market reactions is closely related to Market Efficiency. How a market reacts to information to achieve a new equilibrium price is important. If the market reacts quickly and accurately to achieve a new balance that fully reflects the information available, then such market conditions are called efficient markets (Jogiyanto, 2016). The relationship between market theory that explains the state of equilibrium with an efficient market concept that tries to explain how the market processes information to get to a new equilibrium position. Pangujian's impact on the 2018 Asian Games event on the Consumer Good Industry sector shares in the Indonesia Stock Exchange is an event study. Jogiyanto (2016) states that event studies (event study) are studies that study the market reaction to an event (event) whose information is published as an announcement. An event study can be used to test information content from an announcement.

Pangujian information content must be done to be able to see the reaction of an announcement. If the announcement contains information, it is expected that the market will react when the announcement is received by the market. Market reactions can be seen from changes in prices of the securities concerned. This reaction can be tested using abnormal return. Announcements are said to contain information content if one or several market participants can enjoy high abnormal returns or low returns from actual returns for a considerable period of time (Jogiyanto, 2016).

Abnormal return is the difference between actual return and expected return. The test will involve an estimation period which is generally the period before the event. The period of events is also called the observation period or event period. In this study, the event period used was 106 days, namely on February 23, 2018 to August 9, 2018.

This study uses the Consumer Good Industry sub-sector as a sample. The choice of research location is because the researchers see the contribution of the food and beverage industry to the economy is quite large, in addition to the phenomenon described, one reason behind this research is the existence of research research gaps that have examined market reactions due to the occurrence of sports competitions among other countries. Scholtens research (2007), Mirman and Sharma (2008), Palomino (2008), Dick and Wang (2008), Harahap (2010), Berument, (2012), Ehrman (2012), Bell (2010) and Jorgensen (2012) get the result that there is a significant abnormal return in the period after the event of the competition is examined. Different results were found in the study of Matheson (2006), Martins and Serra (2007), Obi et al (2009), Darne (2016) found that there were no significant abnormal returns in the period after the events of sports competitions between other countries.

## LITERATURE REVIEW

Investment is a commitment to a number of funds or other resources carried out at this time, with the aim of obtaining a number of future benefits (Tandelilin, 2010: 2). Sunariyah (2013: 15) associates investment with investment for one or more assets that are owned and usually have a long period of time in the hope of obtaining future profits. Efficient investment in production can be in the form of real assets (such as houses, land, and gold) or in the form of financial assets (securities) that are traded between investors (investors).

Investment in the form of financial assets can be in the form of direct investment and indirect investment. Direct investment is done by buying direct financial assets from a company either through intermediaries or in other ways while indirect investment is done by buying shares from investment companies that have financial asset portfolios from other companies.

A good capital market is an efficient capital market. In general, market efficiency is defined as the relationship between securities prices and information (Jogiyanto, 2016). Fama (1970) states that a market is said to be efficient if no one, both individual investors and institutional investors, will be able to obtain abnormal returns, after adjusting for risk, and by using existing trading strategies. An efficient market is a market whose securities prices reflect all information that is available and owned quickly and accurately (Jogiyanto, 2016).

Jogiyanto (2016) also defines that an efficient market if market conditions react quickly and accurately to achieve a new equilibrium price that fully reflects the information available. The faster the new information is reflected in the more efficient securities prices of the capital market, making it difficult and even impossible for investors to obtain a constant above normal level of income, namely the level of realized income higher than the expected level of income by carrying out trading transactions in the capital market.

The idea of efficient market efficiency testing is outlined in a hypothesis called the efficient market hypothesis (HPE) or efficient market hypothesis (EMH). To find out the truth of this hypothesis, it is necessary to do empirical testing for each form of market efficiency. Fama (1970) divided market efficiency into three categories, namely:

- Testing of weak form market efficiency or tests on Return estimation (test for return predictability);
- Tests for market efficiency in half-strong forms or event studies (event studies);
- Tests of strong market efficiency or testing of private information (test for private information).

Event Study is an observation of the movement of shares in the capital market to find out whether there are abnormal returns obtained by shareholders as a result of a particular event (Peterson, 1989). Jogiyanto (2016: 643) says the event (event) in question is an event whose information is published as an announcement. The event study can be used to

measure the information content of an announcement and can also be used to test the market for a half-strong form.

Jogiyanto (2016: 606) also said that testing information content and testing the market efficiency of a half-strong form are two different tests. Testing information content is intended to see the reaction of an announcement. If the announcement contains information, then the market is expected to react when the announcement is received by the market. This market reaction can be measured by using a return as a value of price changes or by using abnormal returns. If using abnormal returns, it can be said that an announcement containing information content will give an abnormal return to the market. Conversely, if it does not contain information, it will not give an abnormal return to the market.

The stock market does not always promise a definite return for investors, but several components of stock returns that allow investors to make profits are dividends, bonus shares and capital gains. Tandelilin (2010: 102) states that the return component consists of two types, namely yield (current income) and capital gain (profit price difference). Current income is profits obtained through periodic payments such as payment of deposit interest, bond interest, dividends and so on. Current income means that the profits received are usually in the form of cash or cash equivalents, so that they can be cashed quickly, for example a bond interest coupon paying interest in the form of demand deposits / checks, which are only cashed, as well as share dividends, which are paid in the form of shares, which are converted into cash by selling shares received (Ang, 2010: 10).

The second component of return is capital gain, which is the profit received because of the difference in selling price with the purchase price of the investment instrument. Of course not all investment instruments are able to provide a return component in the form of capital gains. Capital gain depends on the market price of the investment instrument in question, which means that the investment instrument is traded on the market. With the trade there will be changes in investment value. Investments that provide capital gains such as bonds and stocks, while those that do not provide components of return capital gains such as certificates of deposit, savings and so on.

Actual return or return is a return that has occurred which is calculated based on historical data (Jogiyanto, 2016: 206). Actual return is important because it is used as one measure of the performance of the company. This return realization is also useful as a basis for determining the expected return. Actual return is calculated by total return by using capital gain (loss). Capital gain or capital loss is the difference from the current investment price relative to the price of the past period, if the current investment price is higher than the investment price of the previous period, capital gains occur, but if the investment price is now lower than the investment price of the past period then there is a capital loss.

*Research Hypothesis.* The market reaction can be shown by changes in stock prices that can be measured using abnormal returns. Announcements that have information content will give abnormal returns (Jogiyanto, 2016: 392). Abnormal return is the excess of the actual return that occurs to the normal return which is the expected return of the investor (expected return). Abnormal return is the difference between the actual return that occurs with the expected return. Return realization or actual return is a return that occurs at t time which is the difference in current prices with the previous price and divided by the previous price, while the expected return is a return that must be estimated (Jogiyanto, 2016: 609). The opening of the Asian Games as an event is thought to have information content that can influence market reactions. Announcements that have information content will give abnormal returns to the market, whereas the Asian Games that do not contain information do not give abnormal returns to the market. The above statement in accordance with Lozano's (2009) research states that during the FIFA World Cup live broadcast there was a difference in activity by market players in the United States capital market compared to the usual years. Other results are also in line with research conducted by Palomino and Renneboog (2005) on 12 football teams listing on the London Stock Exchange found that soccer matches affect stock return movements.

H1: There is a significant abnormal return before and after the opening of the 2018 Asian Games.

## METHODS OF RESEARCH

This study uses a comparative approach to test hypotheses regarding the differences in abnormal returns before and after events around the opening of the 2018 Asian Games on August 18, 2018.

The time period of the study used is 121 exchange days divided into two periods, namely the estimation period and the window period. The estimation period is 100 days, i.e. from t-111 to t-10 before the day event. The window period is 21 days which consists of 10 days before the event (t-10), the day of the event (t0) and 10 days after the event (t + 10). Then the research period is from August 3, 2018 to September 4, 2018.

The reason for taking the 21-day event period is to see in detail whether there is a significant difference between the market reaction before and after the opening of the 2018 Asian Games, and to find out whether the opening of the 2018 Asian Games event affects market reactions in making investment decisions by investors or not.

## RESULTS AND DISCUSSION

The basis of decision making on hypothesis making is done by comparing the calculated value with the t-table value to see events having a significant impact on the Indonesian capital market, in testing the level of significance of abnormal returns used 5%. The value of t table is obtained  $\pm 2.0481$ .

Table 1 – Abnormal Return

Period	AAR	t value	T table	Description
-10	0.00581	0.710	$\pm 2,0481$	Not sig.
-9	0.00199	0.489	$\pm 2,0481$	Not sig.
-8	0.00364	0.934	$\pm 2,0481$	Not sig.
-7	0.00054	0.135	$\pm 2,0481$	Not sig.
-6	-0.0002	-0.062	$\pm 2,0481$	Not sig.
-5	0.01257	2.404	$\pm 2,0481$	Sig.
-4	0.00989	2.230	$\pm 2,0481$	Sig.
-3	0.00144	0.317	$\pm 2,0481$	Not sig.
-2	-0.0006	-0.134	$\pm 2,0481$	Not sig.
-1	-0.0022	-0.147	$\pm 2,0481$	Not sig.
0	0.00292	0.579	$\pm 2,0481$	Not sig.
1	0.00653	1.798	$\pm 2,0481$	Not sig.
2	0.00245	0.813	$\pm 2,0481$	Not sig.
3	0.00581	1.424	$\pm 2,0481$	Not sig.
4	0.0017	0.436	$\pm 2,0481$	Not sig.
5	-0.0073	-1.225	$\pm 2,0481$	Not sig.
6	0.18698	0.967	$\pm 2,0481$	Not sig.
7	-0.0092	-1.604	$\pm 2,0481$	Not sig.
8	0.00274	0.412	$\pm 2,0481$	Not sig.
9	-0.0023	-1.065	$\pm 2,0481$	Not sig.
10	0.0023	0.826	$\pm 2,0481$	Not sig.

Source: Primary Data, 2018.

Table 1 shows the results of the average abnormal return for 29 sample companies and t (t-value) tests in the days of events. Positive AAR in the event period only occurs 10 days before the event and 10 days after the event.

Significant reaction on the day before the opening of ASIAN Games namely t-4 and t-5 due to information leakage and used by market participants to obtain abnormal returns. This is evidenced by the highest abnormal return value at t-4 and t-5. Information leaks that occur before the event are caused by market participants or investors knowing in advance the company's activities in the future. A significant market reaction also indicates that the market is reacting to the events of the opening of the 2018 ASIAN Games. Positive reactions caused investors to make transactions and cause stock prices to rise.

Different test (t-test) is used to test the difference in average abnormal return before and after the opening of the 2018 Asian Games.

Table 2 – T-Test Of *Average Abnormal Return* After and Before Event

Pair 1	AARsebelum & AARsesudah	N	Correlation	Sig.
		10	.668	.035

Source: *Primary Data, 2018.*

Based on the results of processing data using SPSS 21.0 in table 5.4, it is known that Sig. is 0.035, which means that  $0.035 < 0.05$ , then H1 is accepted and H0 is rejected, there is a significant difference in average abnormal return before and after the opening of the 2018 Asian Games against the shares of the Consumer Good Industry sector on the Indonesia Stock Exchange.

*Average Abnormal Return Significant Before and After Around the Opening of the 2018 Asian Games.* A significant average abnormal return in the events around the opening of the 2018 Asian Games against the Indonesian capital market occurred at t-5 and t-4. The results of this study indicate that there is information content on the events around the opening of the 2018 Asian Games against the reaction of the capital market in Indonesia so that hypothesis 1 (H1) is accepted. At t-10 to t-9 statistically it shows insignificant results. The results of the study can be interpreted that the capital market players on t-10 to t-9 events prefer to take action before selling or buying. At t-8 to t-6 statistically it shows insignificant results. The results of the study can be interpreted that the capital market players on t-8 to t-6 events prefer to take action to wait before selling or buying. The average abnormal return value at t-5 to t-4 shows significant results. The results of the study can be interpreted that before the opening of the 2018 Asian Games event, the capital market players assumed that the information could provide benefits for the issuers of the Good Consumer Industry sector in Indonesia, then they took action so that the stock price rose. A significant market reaction also indicates that the market is reacting to events.

The average abnormal return value at t-3 shows insignificant results. The results of the study can be interpreted that after buying the previous day, the capital market players assumed that the stock price had risen too high, then they had to sell, causing the stock price to fall. The average abnormal return value at t-2 to t-1 shows the results of -0.0006 and -0.0002. The results of the study can be interpreted that information on the opening of the 2018 Asian Games has leaked and capital market players think that information has a negative impact, then they prefer to sell off, causing the stock price to fall. At t + 1 to t + 4 statistically it shows insignificant results. The results of the study can be interpreted that the capital market players at t + 1 to t + 4 events prefer to take action before selling or buying. The average abnormal return value at t + 5 shows the results of -0.0073. The results of the study can be interpreted that information on the opening of the 2018 Asian Games has leaked and capital market players think that information has a negative impact, then they prefer to sell, causing stock prices to fall. At t + 6 to t + 10 the results are not significant. The results of the study can be interpreted that the capital market players at t + 6 to t + 10 events prefer to take action before selling or buying.

The results of this study support the semi-strong form of efficient market theory where, there are abnormal returns obtained by capital market players around the occurrence of an event. The results of this study are in line with the research conducted by Palomino (2008) proving that the victory of the football team listing on the London Stock Exchange has a significant effect on the value of abnormal stock returns.

The impact of the opening of the 2018 Asian Games on the reaction of the Indonesian capital market as indicated by the abnormal return value states that there are significant differences in average abnormal returns before and after the opening of the 2018 Asian Games. This is indicated by a significance value smaller than 0.05 and t-value accepts H1.

The significant difference in average abnormal return before and after the opening of the 2018 Asian Games indicates that investors are interested in investing throughout the period.

Positive reactions caused investors to make transactions and cause stock prices, especially in the Consumer Good Industry Sector to increase. This positive reaction can also be caused by investors trusting the company's prospects in the future. The results of this study are in line with the research conducted by Pratiwi and Ahmar (2016). The results of different tests on Singapore and Thailand countries can be obtained Singapore p-value value of 0,000 and Thailand at 0,001, the p-value of the two countries is smaller than significance of 0.05 then  $H_0$  is rejected, this means that the average return generated is significantly different during the observation period, namely before, during and after the world cup in 2014. The results of this study are in line with the research conducted by Dohmen (2006) which found that the soccer team match in the FIFA World Cup 2006 could have an impact on the economic outlook and fluctuations in stock prices in Germany. This result is also in line with research conducted by Lozano (2009) revealing that during the FIFA World Cup live broadcast there was a difference in activity by market participants in the United States capital market compared to the usual years.

The results of this study are in line with Kaplanski (2013) which proves that non-economic factors such as sports have a significant effect on stock returns and risk expectations in the Dutch capital market.

## CONCLUSION

The results of testing the data using a different test (t-test) average abnormal return before and after the opening of the 2018 Asian Games show that there are statistically significant abnormal return differences before and after the opening of the 2018 Asian Games event. The test results also show that during the period Estimates have a consistent positive average abnormal return, this means that investors get a realization return that is greater than the expected return. The market has begun to react on H-5 and H-4 by showing the difference in abnormal returns with the day of the event.

## SUGGESTIONS

For stock investors in the Indonesia Stock Exchange (IDX) who have information about the events of the opening of the 2018 ASIAN Games so that in the future they can always make selling and buying decisions on stocks that have an impact on the Asian Games event. Research sites that are only examined in the Consumer Good Industry sector of the Indonesia Stock Exchange alone and focus on abnormal returns only, further research is expected to be able to examine the JCI and observe capital markets outside Indonesia such as the Nikkei 225 Index, the Hang Seng Index, the Shanghai Composite Index, The Straits Times Index, the FTSE 100 Index, the Dow Jones Index, the S & P 500 Index or the Nasdaq to see whether the foreign capital market has the same impact on Indonesia.

### *Research Limitations:*

- Research locations that are only examined in the Consumer Good Industry sector of the Indonesia Stock Exchange only and focus on abnormal returns;
- Calculation of abnormal returns in the event period using the market model.

## REFERENCES

1. Amélie Charles, Olivier Darné. Stock market reactions to FIFA World Cup announcements: An event study. *Economics Bulletin*, Economics Bulletin, 2016, 36 (4), pp.2028-2036.
2. Bell, Adrian. 2010. Over the Mean or Sick as a Parrot? The Effects of Football Results on a Clubs Share Price. *Journal of Applied Economic*.
3. Berument, M.H and Nildag B. 2012. *The Social Science Journal* 49, 368-374.

4. Ehrman, M and David J. 2012. Investor Inattention During FIFA World Cup Matches. Working Paper Series No 1424.
5. Harahap, ID. 2010. Analisis FIFA World Cup Effect terhadap Return and Volatilitas IHSG di BEI Periode 1994, 1998, 2002, 2006 and 2010. Jakarta: Program Pascasarjana Universitas Indonesia.
6. Jogiyanto, Hartono. 2016. Teori Portofolio and Analisis Investasi. Edisi ke 11. Yogyakarta: BPF.
7. Jorgensen, et al. 2012. The News Model of Asset Price Determination An Empirical Examination of The Danish Fotball Club. Discussion Paper No. 313. ISSN 1860 092.
8. Kaplanski, Guy, et all. 2013. Do Happy People Make Optimistic Investors?.Journal of Financial and Quantitative Analysis.
9. Lozano, Fernando. 2009. The Flexibility of the Workweek in the United States (AS) Evidence From the FIFA World Cup. IZA Discussion Paper No 4217.
10. Matheson. V.A. (2006). Mega-events: the effect of the world's biggest sporting events on local, regional, and national economies. College of the Holy Cross.
11. Martins, A.M., and A.P. Serra, 2007, Market impact of international sporting and cultural events, Working Papers 0720, International Association of Sports Economists.
12. Mirman, M., and R. Sharma, 2008, Stock market reaction to Olympic Games announcement, Applied Economics Letters 99999, pp. 1–4.
13. Nanda, Ramaditya Dwi. 2015. Reaksi Pasar Modal Indonesia Terhadap Kebijakan Tax Amnesty Indonesia pada Saham LQ45 Tahun 2016-2017. Jurnal Administrasi Bisnis Universitas Diponegoro. 1-13.
14. Obi, P., Surujlal, J. and O. Okubena (2009) "South African equity market reaction to the 2010 World Cup announcement" African Journal for Physical Health Education, Recreation and Dance 9, 284-296.
15. Pratiwi and Ahmar. 2016. World Cup 2014 and Return Saham Perusahaan Pada Pasar Modal ASIAN.Jurnal Politeknik Negeri Jakarta, Vol.6,pp . 470-475.
16. Pratiwi Ratih, Muhammad Yusuf. 2015.Reaksi Pasar Dalam Bentuk Return Sebelum, Selama, and Sesudah Peristiwa Piala Dunia Tahun 2014 pada Pasar Modal Asian. Jurnal Riset Akuntansi and Perpajakan JRAP Vol. 2, No. pp. 229 – 237.
17. Scholtens, B and Witje, P. Scoring on the Stock Exchange? The Effect of Football Matches on Stock Market Return: on Event Study. 2007. Journal Applied Economics.
18. Peša, A. R., and Brajković, A. 2016. Testing The 'Black Swan Effect'on Croatian Stock Market Between 2000 and 2013.Emerging Markets Journal, Vol.6, No.1, pp. 1-16.
19. Pratama, I G B. 2015. Reaksi Pasar Modal Indonesia Terhadap Peristiwa Politik. E-journal S1 Ak Universitas Pendidikan Ganesha, Vol. 3, No.1, pp. 1-11.
20. Purba, F., and Handayani, S. R. 2017. Analisis Perbedaan Reaksi Pasar Modal Indonesia Sebelum and Sesudah Peristiwa Non Ekonomi. Jurnal Administrasi Bisnis, Vol. 51, No.1, pp. 115-123.
21. Purba, S., and Silalahi, M. 2017. Dampak Quick Count Pilpres 2014 terhadap Harga Kurs Usd, Abnormal Return and Aktivitas Volume Perdagangan Saham di BEI. Jurnal Ilmiah Methonomi, Vol. 3, No. 1, pp. 134-142.
22. Rahmawati, I. Y., and Pandansari, T. 2016. Reaksi Pasar Modal dari Dampak Peristiwa Bom Plaza Sarinah Terhadap Abnormal Return Perusahaan Lq 45 yang Terdaftar di BEI. Riset Akuntansi and Keuangan Indonesia, Vol.1, No.2, pp. 126-133.
23. Ramesh, S and S. Rajumesh. 2015. Stock Market Reaction to Political Events: A Study of Listed Companies in Colombo Stock Exchange of Sri Lanka. Journal of Economics and Sustainable Development, Vol.6, No.3, pp. 131-139.
24. Rundengan, J. M., Mangantar, M., and Maramis, J. B. 2017. Reaksi Pasar Atas Pelantikan Sri Mulyani Sebagai Menteri Keuangan Pada 27 Juli 2016. Jurnal Riset Ekonomi, Manajemen, Bisnis and Akuntansi, Vol.5, No.3, pp. 2731-2741.
25. Scholtens, B and Witje, P. 2007. Scoring on the Stock Exchange? The Effect of Football Matches on Stock Market Return: on Event Study. Journal Applied Economics.
26. Tandellilin, Eduardus. 2010. Portofolio and Investasi. Edisi Pertama. Yogyakarta: Kanisius Najaf.

DOI 10.18551/rjoas.2019-02.18

## **FINANCIAL RATIO ANALYSIS IN PREDICTING FINANCIAL CONDITIONS DISTRESS IN INDONESIA STOCK EXCHANGE**

**Mesak Dance\*, Sukartha I Made**

University of Udayana, Denpasar, Indonesia

\*E-mail: [dames.j.hope@gmail.com](mailto:dames.j.hope@gmail.com)

### **ABSTRACT**

Financial distress is a condition where a company experiences financial difficulties, if these conditions cannot be overcome; it is possible that the company will experience bankruptcy. This research was conducted to reexamine some of the differences in the results of previous studies and models in identifying financial distress conditions, the phenomenon of delisting companies from the Indonesia Stock Exchange (IDX) and research objects, so researchers were interested in reexamining the effect of financial ratios on financial distress. The purpose of this research is to analyze the effect of liquidity ratios, profitability, financial leverage and operating cash flows on the condition of financial distress companies that listed on the Indonesia Stock Exchange. This research was conducted at companies listed on the Indonesia Stock Exchange (IDX) which provide annual financial report data by downloading on the official website of the Indonesia Stock Exchange (IDX) through the website [www.idx.co.id](http://www.idx.co.id). The type of data used in this research is Quantitative data is data in the form of numbers obtained from the Indonesia Stock Exchange such as the 2013-2017 financial statements. This study uses secondary data sources. The variables used in this study are liquidity ratios, profitability, financial leverage, and operating cash flows as independent variables and financial distress as dependent variable. Testing the hypothesis in this study uses logistic regression. Based on the results of logistic regression analysis with a significance level of 5%, the results of this study indicate that (1) the liquidity ratio measured by the current ratio (CR) has a negative effect on the condition of corporate financial distress listed on the Indonesia Stock Exchange; (2) profitability ratios measured by Return On Assets (ROA) negatively affect the condition of financial distress companies listed on the Indonesia Stock Exchange; (3) financial leverage ratio measured by Debt to Equity Ratio (DER) has a positive effect on the condition of corporate financial distress listed on the Indonesia Stock Exchange; (4) the ratio of operating cash flow has no effect on the condition of the company's financial distress listed on the Indonesia Stock Exchange.

### **KEY WORDS**

Financial distress, liquidity, profitability ratio, financial leverage ratio, operating cash flow.

Financial distress is a condition where a company experiences financial difficulties, if these conditions cannot be overcome; it is possible that the company will run into bankruptcy. Therefore by knowing the condition of the company's financial distress from the outset it is expected that actions can be taken to anticipate conditions that lead to bankruptcy. To measure the financial distress of a company is done by analyzing financial statements. According to Irahmah Fahmi (2015: 2), explained that: "Financial statements are information that describes the financial condition of a company, and further information can be used as an illustration of the company's financial performance. Financial statements can also be used as a tool in making projections regarding various financial aspects of a company in the future.

To find out the symptoms of bankruptcy, a model is needed to predict financial distress conditions to avoid losses in investing. One important aspect of the analysis of financial statements of a company is to predict the continuity or going concern of the company, therefore it is very important for management and company owners to anticipate the possibility of potential bankruptcy.

This research was conducted to reexamine several factors in previous research that influenced the condition of corporate financial distress because in previous studies the results obtained there were different as in the research from Platt and Platt (2002) showed that liquidity ratios had a negative relationship with the possibility of companies experiencing financial distress. Whereas in the Srikalimah (2017) study, liquidity has a positive effect on the company's financial distress. Because the greater the liquidity ratio, the smaller the company will experience financial distress. Research conducted by Wahyu Widarjo & Doddy Setiawan (2009) profitability (ROA) has no effect in predicting financial distress conditions while Imam Masud & Reva Maymi Srengga (2011) has an influence on predicting financial distress. while research from Imam Masud & Reva Maymi Srengga (2011) shows that leverage (DER) has no effect in predicting financial distress conditions while Tio Noviandri (2013) leverage (DER) influences predicting financial distress conditions. In the research of Imam Ma'ud Reva Maymi Srengga (2011) results show that operating cash flow has an effect on financial distress while according to Wahyuningtyas (2010) found that information on cash flow values has no effect in predicting financial distress conditions.

In addition, the previous research was different from this study, where previous research in identifying the causes of a company experiencing conditions of financial distress using the Neoclassical Model. In this model bankruptcy occurs if the allocation of resources is not appropriate. This case of restructuring occurs when a bankruptcy has a mixture of wrong assets. Estimating difficulties is done with balance sheet data and income statement. For example profit / assets (to measure profitability) and assets liabilities. While this research uses a Financial Model where this model estimates difficulties with financial indicators or performance indicators such as total assets, revenues / turnover, return on assets, return on equity, profit margins, stock turnover, receivables turnover, cash flow / total equities. , debt ratio, cash flow (liabilities-reserves), current ratio, acid test, current liquidity, short term assets / daily operating expenses, gearing ratio, turnover per employe, coverage of fixed assets, working capital, total equity per share, earnings per share ratio.

The condition of financial distress also occurs in companies listed on the Indonesia Stock Exchange (IDX). The phenomenon of delisting of companies from the Indonesia Stock Exchange (IDX) is analyzed from various sides, one of which is a model for predicting companies that experience financial difficulties up to the category of bankruptcy. One of the reasons for companies being delisted from the Indonesia Stock Exchange (IDX) is that the company suffered a loss of 2 (two) years in a row and was unable to pay short-term debt to investors or creditors. The reason that caused the company to experience financial distress. Companies that are delisted from the Indonesia Stock Exchange (IDX) up to 2018 are 39 companies. Companies that are delisted from the Indonesia Stock Exchange (IDX) are caused by several factors including through the voluntary company's wishes by reason of acquisitions, mergers.

## **LITERATURE REVIEW**

According to Husnan (2014: 7) interpreting the value of the company as the price that prospective buyers can afford when the company is sold. When a company has opened or has offered shares to the public, the company's value is interpreted as an investor's perception of the company itself. Investors can use company value as a basis to see the company's performance in the coming period, where company value is often associated with stock prices. A high corporate value will increase an investor's trust in the company.

Based on Jogiyanto (2000: 392) states that information published to the public as an announcement will provide a signal for users of financial information in decision making. Information received by investors is first translated as a signal that is good (good news) or a bad signal (bad news).

According to Irham Fahmi (2015: 2), explained that: "Financial statements are information that describes the financial condition of a company, and further information can be used as an illustration of the company's financial performance. Financial reports according to Kasmir (2012: 27) are "reports that show the company's financial condition at

this time or in a certain period". Based on the opinions of the experts, it can be seen that the financial statements provided by the management of the company are very helpful for those who need financial information to make decisions and further describe the company's financial performance.

According to Kasmir (2016: 104) financial ratio is an activity comparing the numbers in the financial statements by dividing one number by another. Comparisons can be made between one component and the components in one financial report or among components in the financial statements, then the comparable numbers can be in the numbers in a period or several periods. Based on the explanation above, financial ratios are a comparison of the number of components contained in financial statements, both in one period and several periods and then used as material for analysis. According to Kasmir (2016: 110-114), the forms of financial ratios are as follows: "Liquidity ratio, leverage ratio, activity ratio, profitability ratio, growth ratio and valuation ratio".

According to Darsono and Ashari in his book "Practical Guidelines for Understanding Financial Statements" (2005: 91), the ratio analysis tool for cash flow statements needed to assess the company's financial performance includes: Cash Flow Liquidity Ratios, and Cash Flow Flexibility Ratios.

Munawir (2004: 22) defines financial distress or bankruptcy as the failure of the company to carry out the operations of the company to generate profits and also as a liquidation of the company (closure of insolvency companies).

## **DEVELOPMENT OF HYPOTHESES**

The variable contribution of liquidity in the aspect current ratio (CR) in increasing the value of the company can be stated that, these ratios provide an overview of the company's ability to fulfill its short-term obligations, where the greater the percentage current ratio (CR), the company has a liquidation rate good and will increase the value of the company, thus the company will provide a positive signal to investors for the prospects of the company so that investors will be interested in investing their shares in the company. In a study conducted by Atika et al. (2013) on the Effect of Some Financial Ratios on Predictions on the Condition of Financial Distress (Study of Textile and Garment Companies Listed on the Indonesia Stock Exchange in the period 2008-2011), the results of the study showed that the liquidity ratio had a negative effect on financial distress condition. The greater the comparison of current assets with current debt, the higher the company's ability to cover its short-term liabilities and vice versa if the comparison is getting lower then the company cannot afford to pay its short-term debt.

*H<sub>1</sub>: liquidity has a negative effect on financial distress.*

The existence of ROA growth shows that the company's prospects are getting better because it means that there is a potential increase in profits gained by the company, this means it will increase the value of the company. This is captured by investors as a positive signal from the company so that it will increase investor confidence and will make it easier for company management to attract capital in the form of shares. If there is an increase in the demand for shares of a company, it will indirectly increase the price of the stock in the capital market. Orina Andre (2013), Effect of Profitability, Liquidity and Leverage in Predicting Financial Distress in Various Industry Companies on the IDX. The results of this study conclude: profitability has a negative and significant influence in predicting financial distress in various industrial companies listed on the Indonesia Stock Exchange. The greater the ROA results, the better the company's performance. The increasing ratio shows that management performance increases in managing operational funding sources effectively to generate net income (profitability increases). Based on these opinions, the hypothesis can be presented in this study:

*H<sub>2</sub>: profitability has a negative effect on financial distress.*

Based on signal theory According to Jogiyanto (2000: 392) states that information published to the public as an announcement will provide a signal for users of financial information in decision making. So the lower the Debt to Equity Ratio it will increase the

value of the company, this will provide a good signal for investors. Research conducted by Orina Andre (2013), Effect of Profitability, Liquidity and Leverage in Predicting Financial Distress in Various Industry Companies on the IDX. Based on the results of his research shows that leverage has a positive and significant influence in predicting financial distress. The higher the Debt to Equity Ratio, the smaller the profit distributed to shareholders, on the contrary the lower the Debt to Equity Ratio, the greater the profit received by the shareholders. A high Debt to Equity Ratio can reduce the value of the company, while a low Debt to Equity Ratio can increase the value of the company. Based on these opinions, the hypothesis can be formulated as follows:

*H<sub>3</sub>: financial leverage has a positive effect on financial distress.*

When the net cash flow ratio increases, the company's profits will increase and this will increase the value of the company and then also increase the company's profits so that the company will not experience financial distress, this will provide a good signal for investors. The ratio of net cash flow from operating activities divided by current debt can be used to predict the company's financial distress. The research conducted by Adinda Tria Ananda (2017) found that information on cash flow values had no effect in predicting financial distress conditions. This means that the lower the cash flow the company has, the more likely it is to experience financial distress. The higher the net operating cash flow value owned by the company, the company will not experience financial distress and will increase the value of the company and contrary if the lower the net cash flow value, the company will experience financial distress and will reduce the value of the company. Based on these opinions, the hypothesis can be presented in this study as follow:

*H<sub>4</sub>: Operating cash flow has a negative effect on the company's financial distress.*

## METHODS OF RESEARCH

The population in this study was all companies listed on the Indonesia Stock Exchange (IDX) in 2013-2017. The sampling technique in this research is sampling purpose with the following criteria:

- Companies that listed on the Indonesia Stock Exchange (IDX) in 2013-2017;
- The company that publishes annual reports with the reporting period per January to December year ends in a row from 2013-2017.

*Dependent Variable (Y).* Financial distress is one of the interesting studies that continues to be studied both in terms of financial management and accounting. In this research the dependent variable is financial distress (Y). This dependent variable is measured using the Zmijewski model. The formulas for this model are as follows:

$$X\text{-score} = -4,3 - 4,5X_1 + 5,7X_2 - 0,004X_3$$

The financial ratios analyzed are financial ratios contained in the Zmijewski model, specifically:

$X_1 = \text{EAT} / \text{Total Assets} \times 100\%$  (*Return On Asset*);

$X_2 = \text{Total Debt} / \text{Total Asset} \times 100\%$ ;

$X_3 = \text{Current Asset} / \text{Current Liabilities}$ .

The company classification of the Zmijewski model is based on a cutoff point of 0 (zero). If the X-Score value is below the cut-off point, the company is in a healthy condition. However, the X-Score is above the cut-off point, the company is in financial distress.

*Independent Variables (X):*

According to Fred Weston in the book Kasmir (2010: 129), said that liquidity (liquidity ratio) is a ratio that describes the company's ability to meet short-term obligations (debt). Current Ratio is a ratio that shows the extent to which current assets cover current liabilities. The greater the comparison of current assets with current debt, the higher the company's ability to cover its short-term liabilities (Sofyan Syafri Harahap, 2013: 301).

In the opinion of Kasmir (2010: 196), said that the ratio of profitability ratios is a ratio to assess the company's ability to seek profits. This ratio also provides a measure of the

management effectiveness of a company. Return on Assets (ROA) is one of the profitability ratios. In financial statement analysis, this ratio is most often highlighted, because it is able to show the success of the company to make a profit.

Financial leverage shows the company's ability to fulfill obligations both for short and long term. Analysis of this ratio is needed to measure a company's ability to pay debts (short and long term) if at one time the company is liquidated or dissolved (Sigit, 2008). The indicator used to measure the level of corporate financial leverage in this study is total debt divided by total capital (Debt to Equity Ratio).

The Operational Cash Flow Ratio calculates the ability of operating cash flows to pay current liabilities. This ratio is obtained by dividing operating cash flows with current liabilities.

Based on the explanation above, the research model is as follows:

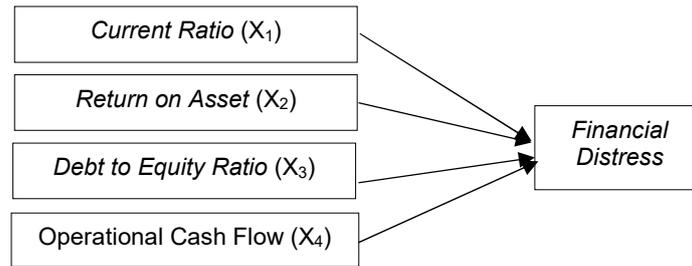


Figure 1 – Research Model

Data collection methods used in this study includes documentation, namely data collection techniques carried out by the author through documents relating to the problem under study such as financial statements. The type of data used in this study is secondary data. Secondary data is data collected in the form of documents or literature in the form of annual financial reports.

Testing the hypothesis in this study uses logistic regression to determine the predictive power of financial ratios and financial ratios, which are the most dominant in determining whether a company will going into financial distress or not. The use of logistic regression analysis is because the dependent variable is dichotomous (precise and inappropriate). The logistic regression equation model used in this study is as follows:

$$\ln \frac{p}{1-p} = \beta_0 + \beta_1LK + \beta_2Profit + \beta_3Leverage + \beta_4AKO + \epsilon$$

Where: Bo = constant; LK = Liquidity; Profit = Profitability; Leverage = Leverage; AKO = Operational Cash Flow;  $\epsilon$  = error standard.

## RESULTS AND DISCUSSION

*Descriptive Statistics Analysis.* Descriptive statistics explain the value of minimum, maximum, average and standard deviation for each variable. Descriptive statistical results can be seen in table 1 below.

Table 1 – Descriptive Statistic

	N	Minimum	Maximum	Mean	Std. Deviation
<i>Financial Distress</i>	323	0	1	0.8	0.27
Likuidity	323	0.15	4.90	1.57	1.11
Profitability	323	-0.13	0.45	0.03	0.05
<i>Leverage</i>	323	0.02	1.96	0.39	0.29
Operational Cash Flow	323	-5.15	9.31	0.39	1.26
Valid N (listwise)	323				

Source: processed data, 2018.

From the table above shows that the number of respondents (N) is 323, of the 395 respondents the value of each research variable is the Current ratio (X1) has a minimum value of 0.15 or 15% and a maximum value of 4.90 or 490% with an average amounting to 1.57 or 157% and standard deviation 1.11. Return On Asset (X2) has a negative minimum value of 0.13 or 13% and a maximum value of 0.45 or 45% with an average of 0.03 or 3% and a standard deviation of 0.05. Debt to Equity Ratio (X3) has a minimum value of 0.02 or 2% and a maximum value of 1.96 or 196% with an average of 0.39 or 39% and a standard deviation of 0.29. Operating Cash Flow (X4) has a negative minimum value of 0.15 or 15% and a maximum value of 9.31 or 931% with an average of 0.39 or 39% and a standard deviation of 1.26.

*Goodness of Fit Test.* This test is needed to ensure there are no weaknesses in the conclusions of the model obtained. A good logistic regression model is if there is no difference between the observational data and the data obtained from the predicted results.

Table 2 – Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	8.438	8	0.392

Source: Processed data, 2018.

From the table above the value of hosmer and glue test is greater than the value of 0.05, whereas the logistic regression model is able to explain the data and there is no difference between the model and the value of its observations. This means that the model is able to predict the value of its observations or it can be said that the model is accepted because the model matches the results of its observations.

Table 3 – Accuracy of Predictions

Step	Y	Observed	Predicted		Percentage Correct
			Y (Financial Distress)		
			Not run into Financial Distress	Financial distress	
1	Y	Not run into Financial Distress	295	1	99.3
		Financial Distress	23	3	11.5
		Overall Percentage			92.3

Source: Processed data, 2018.

From the table above shows the prediction model of the regression model to predict financial distress conditions at 92.3%. By using the regression model, there are 296 (99.3%) companies that do not need financial difficulties from a total of 323 companies sampled in the 2013-2017 research period while as many as 26 (11.5%) companies experience financial difficulties.

Table 4 – Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	141.801(a)	0.114	0.266

Source: processed data, 2018.

From the table above, it can be seen that the model by entering four independent variables turns out that there has been a change in parameter estimation with Log likelihood -2 value of 141,801. If seen from the value of Cox & Snell R Square 0.114 or 11.4% and the Nagelkerke R Square value of 0.266 or 26.6%. Thus it can be interpreted that with four variables, namely Current Ratio, Return on Asset, Debt Equity Ratio and Operating Cash Flow, the proportion in predicting financial distress conditions can be explained at 26.6% and the remainder is influenced by variables outside the study of 73.4%.

Table 5 – Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	39.065	4	.000
	Block	39.065	4	.000
	Model	39.065	4	.000

Source: Processed data, 2018.

From the table above, it can be explained that the omnibus test of model coefficient with the number of independent variables of four variables produces a significant value of 0.000 lower than 0.05. This shows that there is a significant effect of the independent variables simultaneously affecting the dependent variable.

*Hypothesis test.* Partial testing of the significance of predictors is done using the wald test and the chi square approach is obtained as follows:

Table 6 – Regression Analysis Results

		B	S.E.	Wald	df	Sig.	Exp (B)
Step 1(a)	Liquidity	-0.822	0.312	6.961	1	0.008	0.439
	Profitability	-30.591	6.675	21.005	1	0.000	0.000
	Leverage	2.381	0.820	8.434	1	0.004	10.818
	Operational Cash Flow	0.108	0.177	0.375	1	0.540	1.114
	Constant	-1.973	0.415	22.550	1	0.000	0.139

Source: processed data, 2018.

Based on the results of the logistic regression analysis above, the regression equation is obtained as follows:

$$\ln \frac{p}{1-p} = -1.973 - 0.822 \text{ LK} - 30.591 \text{ Profit} + 2.381 \text{ Leverage} + 0.108 \text{ AKO}$$

## DISCUSSION OF RESULTS

*Effect of Liquidity on Financial Distress Conditions.* The results of data analysis shown in table 6 indicate that liquidity as measured by Current Ratio has a negative effect on financial distress with a significant level of 0.008. This means that the greater the comparison of the value of current assets to current liabilities, the company will not experience financial distress. This shows that Hypothesis One (H1) states that liquidity has a negative effect on the condition of financial distress in companies listed on the Indonesia Stock Exchange (IDX) accepted. Thus the results support the theory which states that the greater the current ratio, the company will not experience financial distress. Therefore the company that is the sample in this study is able to properly manage current liabilities with current assets so that the company does not experience financial distress. Based on the results of the analysis and explanation above, it can be concluded that the higher the value of a company's liquidity ratio, the company will not experience financial distress and will increase the value of the company and provide a good signal to the capital market. The results of this study are consistent with the research conducted by Atika, et al. (2013) where the results of the study indicate that financial ratios that have an influence to predict financial distress conditions are Current ratios negatively affect financial distress with beta values of -8,939.

*Effect of Profitability on Financial Distress Conditions.* The results of the data analysis shown in table 6 indicate that the profitability measured by Return on Assets (ROA) has a negative effect on financial distress conditions with a significant level of 0.000. This means that the greater the value of profitability produced by the company, the company will not experience financial distress. This means that Hypothesis Two (H2) which states that profitability has a negative effect on the condition of financial distress in companies listed on the Indonesia Stock Exchange (IDX) is accepted. Thus the results support the theory which

states that the greater the value of profitability of a company, the company will not experience financial distress. It means that the greater the value of the profitability produced by the company will increase the value of the company and provide a positive signal for the capital market so that the company will not experience financial distress and vice versa if the profitability of a company decreases and reduces the value of the company and the company will experience financial distress. Based on the results of the analysis and explanation above, it can be concluded that the greater the value of profitability produced by a company, the company will not experience financial distress so that it will increase the value of the company and provide a good signal to the capital market. The results of this study are consistent with research conducted by Orina Andre (2013) where the results of this study conclude: profitability has a negative and significant influence in predicting financial distress in various industrial companies listed on the Indonesia Stock Exchange.

*The Effect of Financial Leverage on Financial Distress Conditions.* Based on the results of the analysis shown in table 3.6 Shows that financial leverage as measured by Debt to Equity Ratio (DER) has an effect on the condition of financial distress with a significant level of 0.004. This means that the greater the value of the Debt to Equity Ratio (DER) owned by the company, the better the company will experience financial distress conditions. This shows that the Third Hypothesis (H3) states that financial leverage has a positive effect on accepted financial distress. Thus the results support the theory which states that the greater the value of Debt to Equity Ratio (DER), the company will experience financial distress. It means that the higher the value of financial leverage that a company has will reduce the value of the company and provide a negative signal for the capital market so that the company will experience financial distress and vice versa if the value of financial leverage of the company decreases will increase the value of the company and provide positive signals for the capital market the company will not experience financial distress. Based on the results of the analysis and explanation above, it can be concluded that the higher the value of financial leverage of a company, the company will experience financial distress so that it will reduce the value of the company and provide a bad signal to the capital market. The results of this study are consistent with the research conducted by Luciana and Kristijadi (2003). The results of this study indicate that financial ratios mentioned that financial leverage ratios, namely the variable total debt divided by total capital (DER) can be used to predict financial distress of a company. Because the greater the ratio of financial leverage, the more likely the company experiences financial distress. The coefficient in this variable is positive, meaning that the DER variable has a positive influence on a company's financial distress.

*Effect of Operating Cash Flow on Financial Distress Conditions.* The results of data analysis shown in table 3.6 indicate that operating cash flows have no effect on financial distress conditions with a significant value of 0.540. Thus the fourth hypothesis (H4) which states that operating cash flow has a negative effect on the condition of corporate financial distress is rejected. This means that operating cash flow cannot be used in predicting the company's financial distress sample in this study. The results of this study are consistent with research conducted by Wahyuningtyas (2010) found that information on cash flow values has no effect in predicting financial distress conditions.

## **CONCLUSION AND RECOMMENDATIONS**

This study aims to examine the effect of financial ratios, namely liquidity ratios, profitability, leverage and operating cash flows on the condition of financial distress companies that are on the Indonesia Stock Exchange (IDX) in 2013-2017. From the total population, 323 were obtained as samples in this study. Based on the results of data analysis and discussion, conclusions can be drawn as follows:

- From the results of data analysis it can be concluded that the independent variable that is the most important and considered by each user and recipient of information is the variable profitability ratio. Where the ratio has a beta value (B), error standard and value greater than other variables and has a smaller significant value compared to other variables.

- The liquidity ratio measured using the current ratio (CR) has a negative effect on corporate financial distress on the Indonesia Stock Exchange (IDX) in 2013-2017 with a significant level of 0.008 greater than the value of  $\alpha$  ( $<0.05$ ). Thus the higher the value of liquidity of a company will increase the value of the company and will provide a positive signal for the capital market so that the company will not experience financial distress.
- Profitability ratio as measured by Return On Assets (ROA) has a negative effect on the condition of financial distress with a significant level of 0,000 on the condition of corporate financial distress in the Indonesia Stock Exchange (BEI) in 2013-2017 which is indicated by sig values from the results of logistic regression analysis found that sig ROA is smaller than  $\alpha$  ( $<0.05$ ). Thus the greater the value of profitability produced by the company will increase the value of the company and provide a positive signal for the capital market so that the company will not experience financial distress.
- The ratio of financial leverage as measured by Debt to Equity Ratio (DER) has a negative effect on the condition of corporate financial distress in the Indonesia Stock Exchange (IDX) in 2013-2017 with a significant level of 0.004 smaller than the value of  $\alpha$  ( $<0.05$ ). Thus the higher the value of financial leverage owned by a company will reduce the value of the company and provide a negative signal for the capital market so that it will cause the company to experience financial distress.
- The operating cash flow ratio (AKO) does not affect the company's financial distress on the Indonesia Stock Exchange (IDX) in 2013-2017 with a significant level of 0.373 greater than the value of  $\alpha$  ( $> 0.05$ ).

Based on the results of research, analysis, and discussion that has been described in the previous chapter regarding the effect of financial ratios, namely liquidity ratios, profitability, leverage and operating cash flows on the condition of corporate financial distress in the Indonesia Stock Exchange (BEI) in 2013-2017, suggestions can be taken as follows:

For the Company:

- Companies should be able to analyze financial distress conditions as early as possible from the company's financial ratio analysis to help company managers make new policies to prevent financial distress.
- The company management need to pay more attention to the financial leverage ratio in carrying out corrective actions, where this ratio proved to have a positive and significant effect in predicting financial distress and profitability and operating cash flow ratios, where the ratio has a negative minimum value which will cause the company to experience conditions financial distress.

For Researchers:

- Further research is expected to be able to use a more different combination of ratios and not only focus on financial ratios as a measure to predict the company's financial distress on the Indonesia Stock Exchange, but also use other factors that can predict financial distress conditions such as external factors, among others inflation, interest rates, exchange rates and economic growth.

For Practitioners:

- The results of this study are expected to provide input and help investors in investing their capital by looking at the condition of the company through financial ratios, especially financial leverage in carrying out corrective actions, where this ratio has a positive and significant effect in predicting financial distress and profitability and cash flow ratios operation, where the ratio has a negative minimum value which will cause the company to experience financial distress, so investors are not wrong in investing their capital into the company.
- It is expected that investors and potential investors to view financial statements are used as a basis in making decisions to invest in companies, especially financial leverage in carrying out corrective actions, where this ratio is proven to have a positive and significant effect in predicting financial distress conditions.

## REFERENCES

1. Almilia, L. S. 2006 'Prediksi Kondisi Financial Distress Perusahaan Go- Public Dengan Menggunakan Analisis Multinomial', *Jurnal Ekonomi and Bisnis*, XII(1), pp. 1–26.
2. Almilia, Luciana Spica and Kristijadi. 2003. Analisis Rasio Keuangan Untuk Memprediksi Kondisi Financial Distress Perusahaan MANufaktur Yang Terdaftar di Bursa Efek Jakarta. *Jurnal Akuntansi and Auditing Indonesia*. Vol. 7 No.2 2003.
3. Altman, E.I. 1968 'Financial Ratio, Discriminant Analysis, and the Prediction of Corporat Bankruptcy', *The Journal of Finance*, September (25). Vol. XXIII No. 4.
4. Andre, Orina. 2013. Pengaruh Profitabilitas, Likuiditas and Leverage dalam Memprediksi Financial Distress pada Perusahaan Aneka Industri di Bursa Efek Indonesia. *Jurnal Universitas Padang*. Vol. 1 No. 1 2013.
5. Atika, 2013 'Pengaruh Beberapa Rasio Keuangan Terhadap Prediksi Kondisi Financial Distress (Studi Pada Perusahaan Tekstil and Garmen yang Terdaftar di Bursa Efek Indonesia periode 2008-2011)', *Jurnal Administrasi Bisnis*, pp. 1–11.
6. Darsono and Ashari. 2005. *Pedoman Praktis Memahami Laporan Keuangan*. Andi. Yogyakarta.
7. Endang Afriyeni & Jumyetti. 2016. Pengaruh Rasio Keuangan dalam Memprediksi Kondisi Financial Distress pada Perusahaan Perbankan yang Terdaftar di Bursa Efek Indonesia. *National Conference of Applied Sciences, Engineering, Business and Information Technology*. Politeknik Negeri Padang, 15 – 16 Oktober 2016.
8. Evanny, Indri Hapsari. 2012. Kekuatan Rasio Keuangan Dalam Memprediksi Kondisi Financial Distress Pada Perusahaan Manufaktur di Bursa Efek Indonesia. *Jurnal Dinamika Manajemen*. Vol. 3 No. 2 2012.
9. Grice, J. S and Dugan, M.T. 2003. Re-estimations of Zmijewski and Ohlson Bankruptcy Prediction Model. *Journal of Advance in Accounting* Vol 20:77-83. Elsester, Ltd.
10. Harahap, Sofyan. 2013. *Analisis Kritis Atas Laporan Keuangan*. Yogyakarta: Raja Grafindo Perada.
11. Hidayat, Muhammad Arif and Meiranto, Wahyu. 2014. *Prediksi Financial Distress Perusahaan Manufaktur di Indonesia*. *Jurnal Akuntansi Universitas Diponegoro*. Vol. 3 No. 3 2014.
12. Husein, M., F., and Pambekti, G. T. (2014). "Precision of the models of Altman, Springate, Zmijewski, and Grover for predicting the financial distress". *Journal of Economics, Business, and Accountancy Ventura*. Vol 17 No 3. <https://doi.org/10.14414/jebav.14.1703010>
13. Husnan, Suad. 2014. *Manajemen Keuangan Teori and Penerapan (Keputusan Jangka Panjang)*. Edisi Keempat. Yogyakarta: BPFE.
14. Imam Ma'ud Reva Maymi Srengga (2011) 'Analisis Rasio Keuangan Untuk Memprediksi Kondisi financial distress Perusahaan Manufaktur yang Terdaftar di BEI', Program Studi Akuntansi Fakultas Ekonomi Universitas Jember.
15. Irham Fahmi, 2015, *Analisis Laporan Keuangan*, Alfabeta, Bandung
16. Jogiyanto, Hartono. 2000. *Teori Portofolio and Analisis Investasi*. Edisi Kedua. Yogyakarta: BPFE UGM.
17. Kalimah, Sri. 2017. Pengaruh Profitabilitas, Likuiditas and Leverage Dalam Memprediksi Financial Distress (Studi Empiris Pada Perusahaan Manufaktur yang Terdaftar di BEI Periode 2009-2013). *Jurnal Akuntansi and Ekonomi*. Volume 2 No 1 2017.
18. Kasmir, 2016, *Analisis Laporan Keuangan*, PT Raja Grafindo Persada, Jakarta.
19. Kasmir. 2010. *Analisis Laporan Keuangan*. Jakarta; PT. Rajawali.
20. Kasmir. 2012. *Analisis Laporan Keuangan*. PT. Raja Grafindo Persada. Jakarta
21. Layinginaturrobaniyah and Dewi, K., R. 2017. "Analisis Prediksi Financial Distress Berdasarkan Model Altman and Zmijewski Pada Perusahaan Manufaktur Yang Terdaftar Di Bursa Efek Indonesia". *Jurnal Ekonomi and Bisnis Terapan*. Vol 13 No 1.
22. Munawir, S. 2004. *Analisis Laporan Keuangan*. Yogyakarta: Liberty.

23. Noviandri, Tio. 2013. Peranan Analisis Rasio Keuangan Dalam Memprediksi Kondisi Financial Distress Perusahaan Sektor Perdagangan. *Jurnal Ilmu Manajemen*. Volume 2 Nomor 4 Oktober 2014.
24. Nurcahyono. 2014. Analisis Rasio Keuangan untuk Memprediksi Kondisi Financial Distress. *Management Analysis Journal*, 3.
25. Platt, H., and M. B. Platt. 2002. "Development of a class of stable predictive variable: the case of bankruptcy predictions". *Journal of Business Finance and Accounting*. Vol. 17: 31-51.
26. Robert Odero Otom (2014) 'Predicting Financial Distress Using Financial Ratios In Companies Listed In Nairobi Stock Exchange (2003-2011)', United States International University- Africa.
27. Sidik, Jamilah. 2003. 'Pengaruh Rasio Keuangan pada Kualitas Laba, Tesis, Magister Management', Universitas Gajah Mada, Jogjakarta.
28. Sigit, R. 2008. 'Pengaruh Rasio Likuiditas, Financial Leverage and Arus Kas Untuk Memprediksi Financial Distress Pada Perusahaan Real Estate And Property yang Terdaftar Di BEJ tahun 2004-2005', Skripsi Fakultas Ekonomi UNS.
29. Srikalimah. 2017. 'Pengaruh Profitabilitas, Likuiditas and Leverage Dalam Memprediksi Financial Distress', *Jurnal Akuntansi & Ekonomi FE. UN PGRI Kediri*, 2(1), pp. 43–66.
30. Subramanyam. 2010. Analisis Laporan Keuangan, Edisi 8, Jakarta: Salemba Empat.
31. Wahyuningtyas, Fitria. 2010. Penggunaan Laba and Arus Kas Untuk Memprediksi Kondisi Financial Distress (Studi Kasus Pada Perusahaan Bukan Bank yang Terdaftar di Bursa Efek Indonesia Periode Tahun 2005-2008). Skripsi. Fakultas Ekonomi, Universitas Diponegoro.
32. Widarjo, W. and Setiawan, D. 2009. 'Pengaruh rasio keuangan terhadap kondisi financial distress perusahaan otomotif', *Jurnal Bisnis and Akuntansi*, 11(2), pp. 107–119. doi: 10.1016/j.intele.2017.03.006.
33. Wijarnarto, H. and Nurhidayati, A. 2016. 'Pengaruh Rasio Keuangan Dalam Memprediksi Financial Distress Pada Perusahaan Di Sektor Pertanian and Pertambangan Yang Terdaftar Di Bursa Efek Indonesia (Hery&Anik) 86', 3(1), pp. 86–105.

DOI 10.18551/rjoas.2019-02.19

## THE STUDY OF EFFECT OF GOOD CORPORATE GOVERNANCE ON FINANCIAL PERFORMANCE

**Sianipar R.H.\*, Wiksuana I.G.B.**

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

\*E-mail: [robert\\_sianipar@ojk.go.id](mailto:robert_sianipar@ojk.go.id)

### ABSTRACT

Increasingly rapid economic development requires all companies to be more sensitive in reading situations and conditions both viewed from the internal and external sides of the company. The survival of a company depends on its corporate governance. This study aims to prove the significance of the effect of good corporate governance on financial performance in Regional Development Banks. The population in this study is all Regional Development Banks in Indonesia, which are 26 Banks. The method in determining the sample in this study used saturated samples. The data in the study are secondary data. The data analysis technique used is Simple Linear Regression. The results of this study found that corporate governance has a positive effect on the performance of Regional Development Banks. This study can provide information to consider the application of good corporate governance to the financial performance of Regional Development Banks. Regional development banks are still able to maintain financial performance standards that have been signaled by Bank Indonesia.

### KEY WORDS

Good corporate governance, bank performance, ROA.

Corporate Governance is corporate governance that explains the relationship between various parties in the company that determines the direction and performance of the company (Sutedi, 2012). The application of good corporate governance, known as good corporate governance, can help stakeholders to know the condition of the company through disclosure of accurate, timely and transparent financial performance.

The application of the concept of good corporate governance is also very important for the banking sector. The banking sector is a financial services industry that plays an important role in the development of the country's economy; moreover banks have more stringent regulations when compared to other industrial sectors. Banks must meet the minimum CAR conditions and be declared healthy by Bank Indonesia determined from their financial statements. To create a healthy, strong and trustworthy banking industry, banks must be professionally managed in terms of human resources and management. Banking deregulation in 1988 indirectly played a role in the economic crisis experienced by Indonesia in 1998. The crisis destroyed the country's economy, including the banking sector, which resulted in a decline in banking financial performance.

BPD has several problems including limited products and services, low human resources, lack of partnerships and lack of capital. In accordance with Joint Press Release No SP 43 / DKNS / OJK / 05/2015 explained that the Regional Development Banks throughout Indonesia (BPD-SI) continued to show that growth could be seen from their financial performance. In accordance with Indonesian Banking Statistics as of March 2015, BPD's total assets amounted to Rp 498,951 trillion or an increase of 22.39% compared to the position in March 2014 which reached Rp 407,669 trillion. BPD's credit performance also showed good growth, seen in March 2015, BPD's credit position reached Rp. 304,492 trillion, an increase of 13.02% compared to March 2014's position of Rp. 269,419 trillion. Third Party Funds (DPK) also increased in March 2015 by 28.15% from Rp. 320,552 in March 2014 to Rp. 410,781 trillion.

It can be concluded that with these fundamental problems, BPD still shows an increase in financial performance growth, even though the increase has not been able to overcome

the fundamental problems faced by BPD. So that the main goal of a company to get maximum profit has not been achieved. The application of the concept of good corporate governance in the BPD is expected to minimize risks and overcome problems with the BPD and can improve BPD performance. The main objective of the bank in its operational activities is to achieve a maximum level of profitability (Anggreni & Suardika, 2014).

Profitability is the company's ability to generate profits through all the capabilities and resources it has (Hery, 2014: 192). Profitability is an important indicator for investors in assessing the performance of a company because it shows the company's ability to obtain profits and the rate of return that investors will receive. Profitability describes whether a business entity has good opportunities or prospects in the future. The higher the profitability of the business entity, the more the company's ability to maintain its survival will be guaranteed (Hermuningsih, 2013). The profitability ratio used in this study is Return on Assets or ROA. ROA is chosen as an indicator to measure profitability ratios because ROA is the most frequently used profitability ratio and is able to show the success of a company in generating profits on the management of assets owned by the company (Muniroh, 2014).

Research on the effect of corporate governance on financial performance has been carried out as much as Zabri's research (2015) examined the effect of corporate governance on financial performance, in this study board size and board independence were used as corporate governance indicators. Financial performance indicators in research conducted in Malaysia use return on assets (ROA) and return on equity (ROE). The use of ROA and ROE as a financial performance indicator because the ratio is believed to be a ratio that truly shows the company's performance in a given year and is a very useful ratio for stakeholders or stakeholders.

In Indonesia, Arifani (2013) examined the effect of corporate governance on financial performance by using the variable number of audit committees, proportion of managerial ownership, proportion of institutional ownership, proportion of board of commissioners, and ROE. The results of this study indicate that there is an influence between the audit committee, institutional ownership, and independent commissioners on financial performance. Whereas in this study it was not found that managerial ownership has an influence on financial performance. Laksana (2015) also examined the effect of corporate governance on financial performance. The Laksana Research (2015) is almost the same as the research conducted by Arifani (2013) that differentiates is an indicator for financial performance where Laksana (2015) uses ROA for financial performance indicators.

## LITERATURE REVIEW

Based on agency theory explains the relationship between Good Corporate Governance (GCG) and profitability. This can be seen if the good corporate governance, the company can run its business efficiently, so that it can achieve the company's goals, namely maximum profit. Good governance can occur if the agent can manage the company properly according to what has been set by the regulator, so that it can increase the profitability of the company which is the main goal of the company and the principal.

GCG assessment aims to assess the adequacy of bank governance structure and infrastructure so that the process of implementing GCG principles can produce results that are in line with the expectations of bank stakeholders (Tjondro & Wilopo, 2011). The implementation of good corporate governance based on five basic principles in accordance with BI No. 15/15 / DPNP, namely openness, accountability, accountability, independency and fairness, is expected to provide a positive relationship to bank profitability. This can be caused, because the high value of profitability of a bank will reflect good corporate governance, and vice versa if the value of low profitability can be caused by the lack of good corporate governance (Suciati, 2015).

This statement is supported by the results of research conducted by Ajanthan (2013), Tjondro & Wilopo (2011), and Zabri (2015) Good Corporate Governance (GCG) has a significant positive effect on return on assets (ROA). Based on this hypothesis in this study are:

H<sub>1</sub>: Good Corporate Governance Has a Positive and Significant Effect on Financial Performance.

## METHODS OF RESEARCH

This research was conducted on the performance of 26 Regional Development Banks in Indonesia while the object of this research was reports on good corporate governance and bank performance (annual financial reports) in the period 2014 to 2016. The samples in this study were all BPDs in Indonesia, namely 26 BPDs. The method of data collection in this study is a non-behavioral observation method that is data collection by observing, recording, and studying the descriptions of journals, books and documents. In this study, data collection is done by observing, recording and studying scientific works in the form of journals, theses, books and documents in the form of reports on the implementation of good corporate governance and annual reports, which are obtained from the websites of each bank.

## RESULTS AND DISCUSSION

Table 1 – T-Test Result

Model	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1 (Constant)	,027	,001		23,474	,000
GCG	,000	,000	,309	2,829	,006

Source: Primary Data, 2018.

Based on the above table obtained sig value of 0.006 which is smaller than 0.05 with a regression coefficient of 0.000. This shows that the research hypothesis which states corporate governance has a positive effect on the performance of the BPD is accepted.

This study found that good corporate governance has a significant positive effect on financial performance. The implementation of good corporate governance in regional Development Banks in Indonesia is measured by GCG Self Assessment in accordance with Bank Indonesia Regulation Number 13/1 / PBI / 2011. The implementation of good corporate governance can make the management of the company more focused and clear in the division of tasks and authority and supervision. The right application of good corporate governance is the main capital of the company to gain the trust of customers, investors, prospective investors and stakeholders so as to enable the company to implement good corporate governance with high standards with business objectives and business growth, profitability, added value and increasing capability for sustainability company life can be achieved well. Return on Assets is used to evaluate whether management has received a reasonable return from the assets it controls. This ratio is the best measure if someone wants to evaluate how well the company has used the funds. Therefore, Return on Assets are often used by top management to evaluate business units within a company.

The findings of this study indicate that the implementation of GCG in Financial Institutions is very important in order to improve its financial performance. Sutedi (2012: 2-3), said that good corporate governance is a system that regulates and controls companies to create added value. The application of the principles of good corporate governance can consistently improve the quality of financial statements and hinder performance engineering activities that result in financial statements not describing the company's fundamental values.

The application of good corporate governance can make the management of the company more focused and clear in the division of duties and responsibilities and supervision. The right application of good corporate governance is the company's main capital to gain the trust of customers, investors, prospective investors and stakeholders so as to enable companies to implement good corporate governance with high standards with business objectives and business growth, profitability, added value and increased ability to sustain company life can be achieved well. If the company implements good corporate governance, then the corporate governance will be good. Good corporate governance makes

the company capable of carrying out its operational activities well so that the company produces good financial performance. The results of this statistical test are also supported by previous research. Research A. Ajanthan (2013), Tjondro & Wilopo (2011), and Zabri (2015) Good Corporate Governance (GCG) has a significant positive effect on return on assets (ROA).

## CONCLUSION

Based on the above research it can be concluded that corporate governance has a positive effect on BPD performance. With the implementation of good corporate governance as measured by Bank Indonesia Regulation Number 13/1 / PBI / 2011, it is able to improve BPD performance in Indonesia as measured by profitability.

## REFERENCES

1. Ajanthan. (2013). Impact of Corporate Governance Practices on Firm Capital Structure and Profitability: A Study of Selected Hotels and Restaurant Companies in Sri Lanka. *Journal of Finance and Accounting*, 4(10), Hal. 1-13.
2. Alamsyah, Halim, 2012. Kinerja Bank Pembangunan Daerah di Indonesia: Kontribusi untuk Pembangunan Daerah. Sambutan pada Seminar Nasional Kinerja Bank Pembangunan Daerah di Indonesia.
3. Anggreni, Made Ria., Suardhika, I Made Sadha. (2014). Pengaruh Dana Pihak Ketiga, Kecukupan Modal, Risiko Kredit and Suku Bunga Kredit pada Profitabilitas. *E-Jurnal Akuntansi Universitas Udayana*. 9(1), Hal. 27-38.
4. Arifani, Rizky. 2013. Pengaruh Good Corporate Governance Terhadap Kinerja Keuangan Perusahaan (Studi Pada Perusahaan yang Terdaftar Di Bursa Efek Indonesia). Skripsi. Malang: Universitas Brawijaya.
5. Bathala, C.T., et. Al, 1994, Managerial Ownership, debt policy, and the impact of institutional holdings; and agency perspective. *Financial Management* 23, pp. 38-50.
6. Besari, 2009. Pengaruh Kualitas Pelaksanaan GCG, Ukuran and Kompleksitas Bank Terhadap Fraud, Tesis, Program Pascasarjana, Universitas Diponegoro.
7. Brigham, E.F., Gapenski L.C. and Daves P.R., 1999, *Intermediate Financial Management*, Sixth Edition, the Dryden press, Harcourt Brace College Publishers.
8. Eka, 2011. Pengaruh Penerapan Corporate Governance Terhadap Kinerja Keuangan Pada Industri Perbankan Yang Terdaftar di BEI tahun 2006-2008, Fakultas Ekonomi, Universitas Diponegoro.
9. El-Chaarani, H. (2014). The Impact of Corporate Governance on the Performance of Lebanese Banks. *The International Journal of Business and Finance Research*, 8(5), 22-34. FCGI. (n.d.).p
10. Elizabeth Webb, (2008), "Bank stock repurchases extent and measures of corporate governance", *International Journal of Managerial Finance*, Vol. 4 Iss: 3 pp. 180 – 199.
11. Ghozali, Imam, 2016. *Aplikasi Analisis Multivariat dengan Program IBM SPSS 21*, Semarang, Badan Penerbit Universitas Diponegoro.
12. Haryono, Slamet, 2005. Struktur Kepemilikan Dalam Bingkai Teori Keagenan. *Jurnal Akuntansi and Bisnis*, Vol.5, No.1.
13. Hassan Al-Tamimi, Hassan, 2012. The Effects of Corporate Governance on Performance and Financial Distress: The Experience of UAE National Banks. *Journal of Financial Regulation and Compliance*, Vol. 20 Iss: 2 pp. 3 – 3.
14. Hastuti, Yenny Widya and Achmad, Tarmizi (2011). Pengaruh mekanisme Corporate Governance secara Internal and Eksternal terhadap kinerja keuangan: studi kasus di 20 Bank yang terdaftar di BEI 2006-2009", Undergraduate thesis, Universitas Diponegoro.
15. Hery. (2014). Analisis Kinerja Manajemen: The Best Financial Analysis, Menilai Menilai Kinerja Manajemen Berdasarkan Rasio Keuangan. Jakarta: PT. Grasindo.

16. Hermuningsih, Sri. 2013. Pengaruh Profitabilitas, Growth Opportunity, Struktur Modal terhadap Nilai Perusahaan pada Perusahaan Publik di Indonesia. Buletin Ekonomi Moneter and Perbankan.
17. Jatiningrum C. and Rofiqoh I, 2004, Struktur Kepemilikan and Manajemen Laba, paper unpublished, Simposium Dwi Tahunan the Center for Accounting and Management Development, Universitas Teknologi Yogyakarta.
18. Jensen, M and W. Meckling. 1976., "Theory of the firm; managerial behaviour, agency costs and ownership structure". *Journal of Financial Economics* 3, pp. 305-360.
19. Jumandani, Romi. 2012. Pengaruh Penerapan Good Corporate Governance Terhadap Kinerja Keuangan. Skripsi Sarjana Akuntansi pada Universitas Lampung. Lampung.
20. Laksana, Jaya. 2015. Corporate Governance and Kinerja Keuangan (Studi Pada Perusahaan Perbankan yang Terdaftar Di BEI Periode 2008-2012). *E-Jurnal Akuntansi Universitas Udayana* 11.1 2015.
21. Macey and O'Hara, 2003. The Corporate Governance of Banks. *Economic Policy Review*.
22. Margaritis and Psillaki, 2010. Capital structure, equity ownership and firm performance. *Journal of Banking & Finance*, Vol.34 pp. 621–632
23. Mehran, Hamid, 2003. Corporate Governance In the banking and financial services industries. *Journal of Financial Intermediation*, Vol.13.
24. Muniroh, D. M. (2014). Analisis Kinerja Keuangan menggunakan Metode RGEC (Risk, GCG, Earning, Capital) pada Sektor Keuangan Perbankan. *Jurnal Ilmu Manajemen*, 2(2), Hal.1-16.
25. Nurkhin, Ahmad, 2009. Corporate Governance and Profitabilitas; Pengaruhnya Terhadap Pengungkapan Tanggung Jawab Sosial Perusahaan, Tesis, Program Pascasarjana, Universitas Diponegoro.
26. Otoritas Jasa Keuangan. (26 Mei 2015). Siaran Pers No. SP 43/DKNS/OJK/05/2015. Presiden Joko Widodo Resmikan Program Transformasi BPD Menuju Bank yang Kompetitif, Kuat and Kontributif bagi Pembangunan Daerah
27. Suciati, N. (2015). Analisis Pengaruh Risk Based Bank Rating (RBBR) terhadap Kinerja Keuangan Perbankan (studi pada Bank Umum yang terdaftar di Bursa Efek Indonesia periode 2010-2014). *Jurnal Manajemen*, hal.1-18.
28. Sudarma, Made, 2003, Pengaruh Struktur Kepemilikan Saham, Faktor Intern, Faktor Ekstern terhadap Struktur Modal and Nilai Perusahaan, Desertasi Program Pascasarjana Universitas Brawijaya Malang.
29. Sujoko and Soebiantoro, 2007. Pengaruh Struktur Kepemilikan Saham, Leverage, Faktor Intern and Faktor Ekstern Terhadap Nilai Perusahaan, *Jurnal Ekonomi Manajemen*, Vol.9 No.1, Fakultas Ekonomi, Universitas Kristen Petra.
30. Sutedi, Andrian. 2012. *Good Corporate Governance*. Jakarta: Sinar Grafika
31. Tjondro, D., & Wilopo, R. (2011). Pengaruh Good Corporate Governance (GCG) terhadap Profitabilitas and Kinerja Saham Perusahaan Perbankan yang Tercatat di Bursa Efek Indonesia. *Journal of Business and Banking*, 1(1), Hal.1-14.
32. Undang-undang No.10 tahun 1998 tentang Perbankan.
33. Undang-undang No.8 tahun 1995 tentang Pasar Modal.
34. Zabri, Shafie Mohamed & Ahmad, Kamila. 2015. Corporate Governance Practices and Firm Performance: Evidence from Top 100 Public Listed Companies in Malaysia. *Procedia Economics and Finance* 35 (2016) 287 – 296.

DOI 10.18551/rjoas.2019-02.20

## IMPLEMENTATION OF SWOT ANALYSIS IN HOSPITAL MANAGEMENT USING THE JKN-KIS SERVICE CONCEPT

**Abednego Albert\*, Syah Tantri Yanuar Rahmat**

University of Esa Unggul, Jakarta, Indonesia

\*E-mail: [albert\\_abednego@yahoo.com](mailto:albert_abednego@yahoo.com)

ORCID: 0000-0003-4401-7931

### ABSTRACT

The hospital industry changed dramatically after the JKN program was implemented in 2014. This change should be well supported because the conventional system of health services (fee for service) makes it difficult for people to get good health service if they do not have enough money. Moreover, health is basically guaranteed by the government which is formulated in the Law. Finally, it was recently implemented and experienced many obstacles. Not many hospitals can quickly adapt to the changes in the health industry in Indonesia. Bundle budgeting is a very serious problem, so that many hospital cash flows are not appropriately maintained. There has often been news found in recent years about hospitals being sold because they were unable to adapt to these changes. The big change that must be made to survive in the JKN era is management of hospital operations with efficiency and effectiveness that does not exclude service quality. Operational excellence is the key to the success of hospital management. However, to achieve this success, a strong and accurate analysis is needed so that the changes are implemented correctly. Hospital management analysis can apply SWOT analysis. SWOT analysis is a tool commonly used in companies that is ultimately intended to get the best strategy.

### KEY WORDS

Bundle budgeting, operational excellent, service, quality.

*JKN-KIS refers to Jaminan Kesehatan Nasional - Kartu Indonesia Sehat (National Health Insurance - Healthy Indonesia Card).*

At the beginning of Indonesian Independence Day in the 1950s, all health expenditures came from out of pocket, which would later be replaced by the government. This method is known as restitution or reimbursement. In 1970, the claim system was imposed which caused waste in the financing of health. This financing method continues to grow and changes in each era to date. The improvement process continues to be pursued to get the ideal financing system.

National Health Insurance (JKN) is a government program that aims to provide overall health insurance certainty for all Indonesian people to live healthy, productive and prosperous lives. This program is a product of Law No.40 of 2004 concerning the National Social Security System and Law No.24 of 2011 concerning the Social Security Administrator (BPJS). The mandate of article 60 paragraph 1 states that starting January 1, 2014, Social Security Administrator for Health (BPJS Kesehatan) began operating to organize national health insurance.

The existence of the National Health Insurance (JKN) program is expected to make people more prosperous. The journey to the 4th year of the implementation of the National Health Insurance shows that most of the program participants were satisfied with the benefits of the National Health Insurance program. The report in 2017 shows a relatively high level of satisfaction and service for patients. However, there are some things that still need improvement; for instance, tiered referrals, patients having difficulty obtaining nursing beds, patients are not allowed to consult several doctors with different disciplines at one visit, patients are asked to control for trivial matters, queues of JKN patients are relatively longer

than general patients, and a relatively long waiting time for certain actions (Nofrizal, 2017; Nursafa & Balqis, 2015).

The JKN program increases the number of patients in government and non-government hospitals (Sastradimulya et. al., 2015). In addition, an increase in the number of patients also has a concomitant impact such as poor service quality. Disagreements in coding diagnoses and episodes in patient visits in hospitals often occur.

*INA-CBG's Tariff.* Indonesia Case Base Group is a benchmark tariff that is paid by the Social Security Administrator for Health (BPJS Health) to health facilities. INA-CBG's itself is determined by data from case mix and case mix is determined by data from the hospital. Disease making activities that have been handled with clinical pathways that are in accordance with INA-CBG's tariffs must be carried out. Socialization and implementation for all units and levels in health facilities is also needed. The review of INA-CBG's tariffs needs to be carried out continuously without differentiating hospital classes to become a necessity and the basis for calculations is based on the clinical pathway. For private hospitals, especially, higher rates from government hospitals need to be provided. It is a realistic thing because hospitals have to pay electricity bills and employee salaries, buy medical equipment, and so on.

Problems that are often experienced by hospitals in implementing National Health Insurance are the high bills that are rejected, the length of the verification process, and the determination of extra payment unilaterally (Feriawati & Kusuma, 2015).

Verification in the Social Security Administrator for Health (BPJS Kesehatan) consists of verification of administrative claims and verification of health services. The stages of claim verification include:

- Verification of Health Administration. It examines the suitability of claim documents consisting of Participant Eligibility Letters (SEP), inputted data in the INA-CBG's application, and other supporting documents;
- Verification of Service Administration.

The things that must be considered in service administration are:

- Endorsement from the medical committee for level 3 severity;
- The suitability of the doctor in charge of services (DPJP) with the diagnosis of the patient;
- The suitability of DPJP with operational actions;
- Suitability of the hospital type with the competence of doctors in the hospital;
- Prevention of unbundling in claims;
- Attention to readmission for the same disease.

Things to consider in the Case mix Main Group (CMGs):

- Severity according to the type and competence of the Hospital;
- Verifiers ensure compatibility of diagnoses and procedures in ICD 9 and ICD 10;
- Cases where the diagnosis is upright use control coding at the next meeting;
- Patients who received outpatient services and continued with hospitalization on the same day can pay for it in one episode of hospitalization.

One effort to accelerate the verification process is to rely on an IT system that is superior in terms of speed, accuracy and transparency. However, in an effort to build an integrated system, there are currently several obstacles, as follow:

- The JKN information system is not integrated with PCARE, SEP, SIMRS, LUPIS, and BPJS Verification;
- Not all hospitals are able to create integrated systems;
- Bridging activity between systems has not been carried out.

Delay verification consists of various problems in filing claims. Submission of claims is categorized in two types, consisting of good claims administration (non-problematic) and problematic claims administration (Nurdiah & Iman, 2016). In the good claims or non-problematic administration, settlement of claims can be carried out in accordance with the Service Level Agreement (SLA) in the contract.

Delay in hospital payments is caused by many problems; for example, irregular step carried out by hospital staff in filing claims, subsequent claims, incomplete files accompanying claims, disagreements in coding rules. There are 3 parties that can influence hospital claims which consist of hospital management, clinician, and hospital coder. Hospital management can issue internal policies that affect the clinician and coder in the form of regulations such as restrictions on measures, and restrictions on the types of drugs that indirectly can affect the clinical pathway. Management policies can affect coders such as policies in using certain codes (Putra & Kusumo, 2016).

All parties have a certain role in the smooth process of billing claims. The doctor is in charge of completing a medical resume. Next, the coder will translate the medical resume in the code that is available on ICD 10 and ICD 9 which will be translated by the coders into the INA-CBG's grouper code. The hospital claim officer ensures that the claim file is complete and then it will be verified by the hospital's internal verifier before being submitted to the verifier of BPJS Kesehatan.

*Case Mix Team.* It was a team consisting of several people who had different professional backgrounds in a hospital led by a doctor. In the JKN era, this case mix team will become an important pillar and source of information for other units and as a data analysis center for services, especially the rules of BPJS Kesehatan that can change rapidly.

The team's main task is to ensure that the hospital case flow can run smoothly. The team also educates medical and non-medical staff about the strategies that must be conducted to reduce waste so that services become effective and efficient. High authority is important in the success of carrying out their role because it will affect and even regulate other divisions. It will be difficult if the function is not supported by the authorities.

*Managerial Implications.* Managerial implications can be seen from the results of the SWOT analysis owned by ESUMMI Hospital. Based on the big picture of the strategy produced by the SWOT analysis, an important pillar in the implementation in the field is strengthening the case mix team, operational excellence, and service excellent. One method that can be used is using LEAN Management. It is conducted by eliminating waste/ work that has no benefits and making efforts to innovate continuously.

Leadership from the hospital leadership is also needed, because innovation and creativity will occur and grow if top-to-bottom is changed to bottom-to-top management. It becomes relevant because the one who understands the problems and solutions that occur in the field is the staff who work in the area itself. Therefore, if a head or leader gives freedom to staff to express solutions and ideas without feeling guilty when expressing that opinion with appreciation, then the company will develop.

The advantage for ESUMMI Hospital in implementing bottom-to-top management is to map the problems in each business process that exist by staff who are in charge of their respective units and make improvements to the problems found. Hospital operations will automatically continue to develop and innovate towards operational excellent.

Operational excellence is often associated with efficiency and ultimately sacrificing service. In this case, it does not happen because in the field of quality service, the quality of a service will be an absolute thing especially in terms of the service of living things. Excellent service and quality are serious concerns in the health industry. Management must be firm in analyzing useless things.

*SWOT Analysis.* SWOT analysis is a systematic identification of various factors to formulate a company's strategy (Kotler, 2000). This analysis is based on internal and external elements:

The strength possessed by a company in this case is the hospital industry including its resources, skills, and other advantages to competitors; for instance, technology and team case mix skills.

Weakness in this case is everything that can hinder or impede the company to achieve its objectives including the absence of skills or the leadership possessed by each unit in the hospital; for instance, there are specialist doctors who find it difficult to understand service concept in the JKN era.

Opportunity is everything that can help a company to achieve its vision and mission from outside the hospital environment; for instance, government policies and the increasing levels of economic growth.

Threat is everything that comes from outside the company or hospital environment that can prevent the hospital from achieving its objectives; for instance, the emergence of similar competitors who will become business rivals.

Data analysis of this study is descriptive research that aims to provide a description of the research subject based on the acquisition of variable data. The analysis technique used to assess ESUMMI Hospital is the SWOT matrix. Stages to determine the steps in determining the strategy are carried out by utilizing the strengths and opportunities to overcome the threats and weaknesses they have that include:

- Identification of internal and external factors. It is needed to assess to what extent the hospital's position on the SWOT analysis;
- Perform analysis using the SWOT matrix. It can clearly illustrate the opportunities and threats as the external factors, as well as strengths and weaknesses for internal factors to be adjusted when the strategy is implemented.

Table 1 – External Factors of ESUMMI Hospital

EXTERNAL STRATEGY FACTOR		WEIGHT	RATING	SCORE
NO	OPPORTUNITY			
1.	COB cooperation with private and insurance companies	0.15	4	0.6
2.	Specializing in becoming a BPJS Hospital (doing business in work volume)	0.10	4	0.4
3.	Patient plan therapy as a guide to services at the Hospital	0.10	4	0.4
4.	Utilization and optimization of BPJS patient services will get good benefits	0.05	3	0.15
5.	Government regulation regarding BPJS where the Hospital is a reference place for First Level Health Facilities	0.05	4	0.2
6.	The hospital that specializes in BPJS will get free advertising from the specificity of the business	0.05	3	0.15
TOTAL		0.5		1.90
THREAT				
1.	Low BPJS tariffs	0.15	1	0.15
2.	Hospitals must be accredited to join BPJS (need a big cost)	0.10	2	0.20
3.	Lots of competition to join BPJS	0.10	1	0.10
4.	Difficulty in getting a cooperative specialist doctor	0.05	1	0.05
5.	Technology turbulence in the medical industry	0.05	1	0.05
6.	Pending claim in BPPJS	0.05	2	0.10
TOTAL		0.5		0.65
O-T DIFFERENCE				1.25

Table 2 – Internal Factors of ESUMMI Hospital

INTERNAL STRATEGY FACTOR		WEIGHT	RATING	SCORE
NO	STRENGTH			
1.	Have competent labors	0.2	4	0.8
2.	Have a competent case mix team	0.2	4	0.8
3.	Service excellent	0.05	4	0.2
4.	Integration of First Level Health Facilities	0.05	3	0.15
TOTAL		0.5		1.95
WEAKNESS				
1.	The tariff of INA-CBG's BPJS is still not in line with health services in hospital	0.2	2	0.4
2.	The quality of patient safety	0.1	1	0.1
3.	Uncooperative specialist doctors	0.2	1	0.2
TOTAL		0.5		0.7
S-W DIFFERENCE				1.25

Table 3 – SWOT Matrix of ESUMMI Hospital

Internal Factors External Factors	Strengths (S): 1. Having management experience in the JKN era 2. Having a competent case mix team 3. Using the best operational management 4. Being integrated with First Level Health Facilities / Satellite Clinics 5. Service Excellent	Weakness (W): 1. Great effort to adapt to INA-CBG's tariffs 2. Quality of patient safety 3. Uncooperative specialist doctors
Opportunities (O): 1. COB cooperation with private and insurance companies 2. Specializing in becoming a BPJS Hospital (doing business in work volume) 3. Patient plan therapy as a guide to services at the Hospital 4. Utilization and optimization of BPJS patient services will get good benefits 5. Government regulation regarding BPJS where the Hospital is a reference place for First Level Health Facilities 6. The hospital that specializes in BPJS will get free advertising from the specificity of the business	S-O Strategy: - Specializing in becoming a hospital for participants of JKN service that has a competent case mix team (O2, S2) - Conducting cooperation with integrated first level health facilities so that it will improve utilization and optimization of services for JKN patients (S4, O4)	W-O Strategy: - Increasing networks of other funding sources such as private and insurance companies using COB (systems W1, O) - Educating the Hospital's internal medical personnel to strengthen the plan therapy (W1, O3)
Threats (T): 1. INA-CBG's tariffs will change every 2 years 2. Not many doctors understand the concept of JKN 3. Turbulence in the medical industry technology 6. JKN patients are increasing	S-T Strategy: - Implementing excellent Operational & Service so that it will be effective and efficient for each case of changing times (T1, S3) - Increasing the value proposition/ playing the volume (T6, S4)	W-T Strategy: - Conducting recruitment on a full timer doctor who understands the concept of JKN (T4, W3)

After looking at the table above, there are seven alternatives that the company can implement.

**SO Strategy:**

- Focusing on serving JKN patients by relying on competent case mix teams;
- Having collaboration with integrated first level health facilities to improve utilization and optimization of services to JKN participants.

**WO Strategy:**

- Increasing cooperation with other agencies such as private insurance, BPJS Ketenagakerjaan and other companies;
- Continually educating internal hospital staff including medical and non-medical staff so that they know and understand the concept of JKN services.

**ST strategy:**

- Implementing excellent operation and service at each service without ignoring service quality;
- Serving JKN participants in large quantities.

**WT Strategy:**

- Conducting recruitment on medical and non-medical staff who understand the concept of JKN.

The method used in this study is an evaluation of programs and management that currently have been running in most hospitals in Indonesia.

## CONCLUSION

SWOT analysis is a stage of matching the parts of the second stage in which the final result aims to determine the strategies used by companies that are considered to have a large leverage which is assessed objectively. Looking at strategies that can be used and matched using the SWOT matrix for the strategy of strengthening the case mix team and strengthening hospital services with operational and service excellence is very vital. It can be confirmed by using other tools in order to produce strategies that are related between the tools with each other. Strengthening the case mix team and excellent operations are two strategies chosen from many strategies aside from the objective results of the tool. However, it is also the most difficult thing to be imitated by competitors. Therefore, the sustainability of the ESUMMI Hospital business in this case is maintained more appropriately.

## REFERENCES

1. Feriawati, P., & Kusuma, A. P. (2015). Faktpr-Faktor Keterlambatan Pengklaiman BPJS di Rumah Sakit Bhayangkara Semarang Tahun 2015.
2. Kotler, P., 2000, Marketing Management Analysis, planning, implementation and control, 8<sup>th</sup> edition, Pearson Prentice Hall, New Jersey.
3. Nofrizal, N. (2017). Strategi Tumbuh and Bersaing Di Industri Asuransi (Studi Kasus Pada BPJS Ketenagakerjaan Pekanbaru). *Benefit: Jurnal Manajemen and Bisnis*, 2(1), 78-91.
4. Nurdiah, R. S., & Iman, A. T. (2016). Analisis Penyebab Unclaimed Berkas BPJS Rawat Inap di RSUD Dr. Soekardjo Tasikmalaya. *Jurnal Manajemen Informasi Kesehatan Indonesia*, 4(2).
5. Nursafa, A., & Balqis, S. P. (2015). Faktor Yang Berhubungan Dengan Pemanfaatan Pelayanan Kesehatan Pasien BPJS Kesehatan Di Puskesmas Jumpang Baru. *Jurnal Penelitian(Online)* <http://repository.unhas.ac.id/handle/123456789/14094>. Di akses pada, 26.
6. Putra, D. A. A., & Kusumo, M. P. (2016). Model Verifikasi Klaim BPJS Pasien Rawat Inap di RS PKU Muhammadiyah Gamping. In *Prosiding Interdisciplinary Postgraduate Student Conference*.
7. Sastradimulya, F., Nurhayati, E., & Susanti, Y. (2015). Hubungan tingkat pengetahuan pasien tentang Jaminan Kesehatan Nasional dengan status kepesertaan BPJS.

DOI 10.18551/rjoas.2019-02.21

## THE ROLE OF INVESTOR PROTECTION MODERATION IN THE EFFECT OF CORPORATE GOVERNANCE ON EARNINGS QUALITY

**Syaifullah As'ad**

Department of Accounting, Faculty of Economics and Business, University of Airlangga,  
Surabaya, Indonesia

E-mail: [asadsaifullah1@gmail.com](mailto:asadsaifullah1@gmail.com)

### ABSTRACT

This study aims to examine the role of investor protection moderation on the effect of corporate governance on the quality of earnings. The population of this study was 50 non-financial companies listed on the ASEAN country Stock Exchange covering the countries of Indonesia, Malaysia, Philippines, Singapore, and Thailand during 2011-2015. This study uses a purposive sampling method, with a total sample of 250 companies. The data analysis technique used is moderated regression analysis. The results of this study state that investor protection strengthens the influence of corporate governance on the quality of earnings that is proxied by earnings management. Based on the results of testing, it was found that moderation in protection of investors with corporate governance can improve supervision and monitoring of financial reporting policies carried out by management so that the better the legal system in a country and the better implementation of corporate governance in the company, the minority investors easier to control to the management of financial reporting policies and decision-making related to accounting policies so that it can put pressure on management and management to be careful in reporting company finances which in turn affect the quality of earnings.

### KEY WORDS

Investor protection, corporate governance, earnings, quality.

The purpose of investors in investing is to obtain continuous profits in the future, where profits motivate investors to invest in a certain investment. (Jakfar, 2012). Based on the investment period, long-term investment in the capital market can be done with two choices, namely bond or stock investment (Basalamah & Jermias, 2005).

In evaluating management's performance, predicting the flow and magnitude of cash in the future, and estimating the amount of earnings power, investors and creditors require profit information generated by financial statements, where profit is a measure of management performance in a company. Therefore company performance can actually be shown from the value of earnings quality so that it is not meaningful accounting value in the financial statements. So it is very important the quality of earnings from the company's annual report. Many investors are wrong in making investment decisions in allocating capital and misleading other users of financial statements due to the low value of earnings quality (Rinawati, 2011).

The quality of earnings information can come and be influenced by external and internal factors. Internal factors are related to the application of corporate governance while external factors are related to investor protection. The investor protection is related to the legal institutional environment that applies to a country. Following are some international studies that examine the relationship between investor protection and earnings quality from investor and manager interference in controlling the laws and politics of a country, based on research by La Porta et al. (2002) where in his research added capital market law (securities law) as a mechanism for implementing protection for investors. Protection mechanisms for investors are used as fundamental factors of capital market law, namely litigation standards, disclosure requirements, and public enforcement. Litigation standards are related to the level of difficulty in compensating for the errors in the presentation of annual financial reports and in the prospectus. While this public enforcement reflects the strength of institutions in the

capital market in implementing regulations such as central bank institutions. The characteristic size of the capital market supervisory institution includes the power to impose sanctions in the form of stopping the trading of company shares, the strength of conducting investigations, the power in making regulations, and giving criminal penalties when the information presented is not material. While disclosure requirements are fundamental factors regarding equipment requirements to present the company's prospectus.

While the study by Leuz et al. (2003) found a relationship between the protections of investors to the quality of earnings, in which the research linked earnings quality with dimensions earnings management as a measure to determine the quality of earnings. The basic understanding of this research is that insiders, namely the stockholders main and managers, have incentives in expropriating and taking private control benefits to minority shareholders through earnings management. However, the existence of a legal system that protects the rights of minority investors is able to limit the ability of these insiders. Minority investors can take legal steps when there is suspicion of opportunistic actions that are done by insiders. Therefore earning management will be smaller in companies in countries that apply high investor protection. The conclusion in this study is to state that there is a negative correlation between public enforcement and the rights of minority shareholders and earnings management and underlines the importance of the relationship between the quality of accounting earnings and protection for investors.

Wardhani (2009) in his research found that investor protection has a positive effect on earnings predictability coefficient. The financial statements disclosed will be even more informative when the stronger investor protection prevails in a country. Strong investor protection by a country shows that the quality of law enforcement and regulations that are owned by the state is strong so that company management will be required to apply high standards to avoid sanctions from the government, causing management to improve the quality of information from the company's financial statements.

From the explanation of some of the statements above shows that disciplining the law and legal system in the form of applicable accounting standards in a country provides increased pressure on company management in producing more qualified financial reports and is useful to provide increased protection for investors. While corporate governance is an internal factor that can motivate company management in preparing financial statements related to commitment in disclosing quality and quality financial statements.

In a company the application of corporate governance has an impact on the quality of earnings. Where in previous studies as in Xie et al. (2003); Marsia and Alan (2009); Jerry and Mark (2009) states that companies that implement good corporate governance will have an impact on the quality of reported earnings. In his research also found a positive correlation between the quality of earnings measured using earnings management with the steps of implementing corporate governance. In general, the conclusions in this study found a positive effect of the application of corporate governance on the quality of earnings.

Other research findings related to the application of corporate governance to earnings quality, Niu (2006) and Petra (2007), Dechow (1994), Klein (2002), Xie et al. (2003), Ahmed and Duellman (2007), and Ball et al. (2000) who concluded that the quality of earnings will increase when the implementation of corporate governance in the company is very good. The meeting shows that in addition to protection for investors, the application of corporate governance to companies also provides incentives to management in preparing financial reporting, which affects the quality of profits disclosed. Therefore the company will be more transparent and better in preparing its financial report when the company implements good corporate governance, so that the profit value presented will have higher quality.

Corporate governance according to Annisa and Kurniasih (2012) is a system that connects the interests of company management with stockholders to explain the direction of company performance. Implementation of corporate governance can minimize agency conflict as a result of differences in interests. Differences in interests that result in agency conflict are caused by not being able to keep up with what the shareholders want to achieve with the importance of company managers. Stockholders want the resulting profits to be distributed as dividends from invested capital. While managers want the profits generated for

retained earnings that can be used in the company's operational activities in the future. These differences in interests can affect financial reporting policies that are used to present company performance. The implementation of corporate governance greatly determines the company's financial reporting policies. The profits generated by the company will be used as a basis for financial reporting. Where a large profit will have an impact on the commission that will be received by management. So that the implementation of corporate governance will also reduce earnings management actions carried out by managers when the company has a large debt.

From some of the results of previous studies regarding investor protection of earnings quality and the effect of implementation corporate governance on earnings quality, it can be concluded that investor protection and implementation corporate governance have a significant influence but are still in the regression test phase which is still not connected with other variables where previous studies have not never conducted research in ASEAN countries, so this motivated the authors to do different tests by making investor protection as a moderating variable from the study. So that the authors more deeply examine the relationship between the applications of corporate governance towards profit quality that is moderated by investor protection for companies in ASEAN countries for the period 2011-2015. The reason researchers chose ASEAN countries is because the country is still in one region so that different cultural factors are minimized and these countries have also adopted IFRS since 2011. This research period in 2011-2015 was due to ASEAN countries adopting IFRS in 2011 so that they did not there is another influence on the accounting policy recording system of each company in ASEAN countries. So that the published financial statements are in harmony there is no difference.

## LITERATURE REVIEW

*Agency Theory.* G. Maharani and K. Suardana (2014) explain that there is an agreement between the agent and the principal to give authority to the agent to manage the principal source of capital to make policy in making decisions. In a long time the manager tends to take action in accordance with his interests and no longer follows the interests expected by the principal. Although the principal understands the differences in interests with the manager, the principal understands the limits so that the differences still have the same vision.

Agency theory informs the differences between agents and principals regarding conflicts of interest. In explaining the differences in conflicts of interest raises several costs, namely agency costs, monitoring costs, and costs bonding. Agency costs are costs that arise as a result of trying to equalize these interests. In equalizing these interests raises monitoring costs where the costs will be issued by the principal in providing compensation to the agent, the principal hopes that the compensation will minimize differences in interests that could lead to future losses. Whereas bonding costs are compensation costs by the agent as a result of the agent's actions that harm the principal. Bonding costs are often said to be a guarantee that the agent acts in accordance with the interests of the principal.

In addition to the decline in the number of principal resources resulting from the three agency costs, namely causing differences in decision making between agents and principals where agents as decision makers in companies and principals are the owners of capital. This reflects that the cooperation contract between agents and principals is equally very strong. Where this means that in order to be able to supervise all agency actions, the principal must give up some of his resources so that the agent can move according to the expectations of the principal's interests. While the agent must provide a guarantee to give trust to the principal in taking responsibility for the authority given by the principal.

Jensen and Meckling in (G. Maharani & K. Suardana, 2014) state that besides occurring at the management level in organizational structures from low level and from high level, agency conflicts occur in modern companies, so that the existence of conflict agencies is expected to minimize differences in interests at the level of company management. This agency conflict arises in the era of modern companies because there are opinions related to

supervision and ownership which are separated so that it is common in the corporate environment.

*Earning Quality.* Quality of earnings is the level at which earnings information is able to describe the actual economic influence of a transaction. So that it has a reflection in the presentation of earnings information in financial statements. The success of the company in a certain period can be seen from the results of the calculation of the loss report that provides information to creditors and investors in predicting the time, amount and certainty of future cash flows that can be obtained by the company (Warfield, 2010). Therefore, for the management of individual manager performance can be measured through the income statement. So that the income statement becomes a very important tool for assessing the performance of managers both the flexibility of managers in determining the policy of accounting methods to improve profit quality in the company's income statement which is certainly different between one company and another company. Therefore the conclusion that can be drawn is that earnings information is said to have quality when earnings information has forecasting abilities, honest and timely presentation, neutral in character, and prioritizing the principle of conservatism.

*Neutrality.* The dimensions for earnings quality neutrality are unbiased income information. Where the principle of neutrality is the principle that informs the existence of the condition of the company's financial performance and does not cause adverse managerial conflicts. The relationship of earnings and neutrality is described as a management action that expresses the company's financial condition in a neutral manner, where the profit value will automatically avoid bias. Many studies have correlated the relationship between neutrality and earnings management. According to Scott (2009) earnings management is an option for management to make decisions regarding accounting policies to achieve certain goals. The trigger factors for earnings management actions are CEO changes, political impulses, incentives for managers in the form of bonuses, communication links between investors, and so on. Where earnings management can occur due to a game of profit determination that is both biased and loss. Where from this explanation it can be concluded that maintained management neutrality will have a tendency to minimize earnings management actions.

*Protection for Investors.* When an investor funds a company, investors will get some rights and authority protected by law through the enforcement of laws and regulations. These rights include the right to sue for the law when detecting alleged expropriation by management, the right to call extraordinary meeting of shareholders, voting in the election of the board, the right to get a fair proportion in dividend distribution, buying new securities, and participating in meetings shareholders, (La Porta et al., 2002). When a company violates or does not fulfill these rights, investors can demand company in court to obtain their rights (Shleifer & Vishny, 1997).

The quality of financial information reported by companies is strongly influenced by the institutional structure of a country. The institutional structure has a relationship with the judicial system and legality as well as laws that bind companies in the capital market as well as law enforcers who have a purpose in providing protection for investors by creating an environment that can control the behavior and interests of regulators, investors, company executives and other participants.

Furthermore in the study of La Porta et al. (2002) added a mechanism for implementing protection for investors through securities law. Fundamental factors of capital market law that can be used as a protection mechanism for investors are standard litigation (litigation standards), disclosure requirements (disclosure requirements) and law enforcement by public (enforcement). Standard litigation in the capital market regarding the level of procedural difficulties in compensating for losses arising from errors in the company's financial statements and prospectus. While the disclosure requirements regarding the full disclosure in the company's prospectus. Meanwhile, law enforcement by the public reflects the strength of central bank, capital market, or other supervisory institutions in carrying out and implementing regulations in the capital market. The measure includes the characteristics of the capital market supervisory institution, the strength of conducting investigations, the

power in making regulations, granting criminal sanctions if financial statements do not present material information, and the power to provide sanctions in the form of dismissal of the company's stock trading.

Bushman and Piotroski (2006) examine how institutional structures related to protection for investors form accounting numbers in financial statements. In this study only focused on conservatism as one of the variables measuring the quality of earnings. The underlying idea in this study is that the institutional structure of a country such as the judicial / legal system, political economy, tax regime, capital market law will provide incentives that affect the behavior of investors, regulators, corporate executives, and other participants.

From the explanation of the research above, it can be concluded that companies will tend to be more conservative when in a country that has a better quality of judicial system. In addition, companies in the capital market have a very high level of conservatism with the existence of strong law enforcement by the public. Regarding the political economy conditions, the researchers concluded that countries that have a high risk of expropriation by the government and countries that have dominance in ownership of the company will be less conservative. So in general Bushman and Piotroski (2006) have proven that company managerial decisions related to the principle of conservatism are influenced by the institutional structure of a country.

*Corporate Governance.* Corporate governance is a concept that does not have a single meaning. In 1992 corporate governance was first introduced by the Cadbury Committee which was used as a term. In the report referred to as the Cadbury report, this report is seen as a decisive turning point for the implementation of corporate governance throughout the world. Corporate governance means Cadbury Report as the principle that controls and directs the company to achieve a balance between the authority and strength of the company in giving authority to shareholders and stakeholders.

The Organization for Economic Cooperation and Development (2006) defines that corporate governance is a relationship structure and its relation to responsibility among related parties consisting of managers, commissioners, shareholders, and members of the board of directors, which are designed to support the achievement of a performance competitive needed to reach the company's main goals.

Based on the National Committee on Policy Governance (KNKG), "Good Corporate is one of the pillars of the market economy system. Corporate governance is closely related to trust in both the companies that implement it and the business climate in a country. The implementation of Good Corporate Governance supports the creation of a conducive business climate and fair competition.

The definition of corporate governance is different but has the same purpose and purpose. The conclusion that can be drawn from the explanation above is a system and a set of rules that regulate, manage and supervise the relationship between company managers and those related to a company in achieving company goals.

*Leverage.* One important factor in the element of funding is debt (leverage). Solvency (leverage) is described to see the extent to which a company's assets are financed by debt compared to its own capital (Weston & Copeland, 1992). Whereas Kusumawati and Sudento (2005) describe leverage as the ability of a company to pay its debt by using its equity. Leverage can be understood as an estimator of the risks inherent in a company. That is, the greater leverage shows the greater investment risk. Companies with low leverage ratios have risk of leverage a smaller.

Aratio leverage high explains that a company has a higher debt compared to the total value of the company's assets (Horne, 1997). Where leverage is a ratio that compares the total debt of the company to the total value of the total assets of the company, then when investors analyze a company with a large number of assets and have a large risk of leverage, investors will move their investments to other companies, because large leverage will increase investment risk when the company is unable to repay the debt on time.

Debt may also have an ambiguous effect on earnings management. Some empirical research documents monitored by creditors enable better governance and thus contribute to reducing manager flexibility in terms of revenue management (Lee & Ng, 2006). In addition,

Jiang et al. (2008); Maria and Alves (2011) prove the existence of a negative relationship between leverage and earnings management. However, the debt hypothesis predicts that highly leveraged firms tend to be involved in increasing earnings management earnings to avoid violations covenant ((Watts & Zimmerman, 1986); (DeFond and Jiambalvo, 1994)).

*Company Size Company.* Size is a large small-scale classification of companies based on sales size, total equity, and total assets (Brigham & Houston, 2001). Classification of company size based on the value of total assets, the greater the value of total assets, the greater the size of the company. Large companies will be easy to make profits and relatively more stable than companies that have small asset values. Large companies tend to get more attention and control from the public or the government so that the company in presenting financial statements is more careful and will present a more transparent report so that management will avoid earnings management actions (Suryani, 2013). So from that it can be concluded that the greater the size of the company will have higher earnings quality information because it does not need to take profit manipulation or vice versa.

The relationship between company size and earnings management is still ambiguous. On the one hand, company size is often used as a proxy for political costs where the political cost hypothesis argues that large companies have greater incentives to avoid earnings management, because of the possibility of increased government control when the company is bigger and more profitable (Watts & Zimmerman, 1986). On the other hand, company size is often used as an indicator of the importance of the company's internal control system (DeFond and Jiambalvo, 1994). Indeed, some previous studies have found a positive relationship between firm size and reliability of financial statements (McMullen, 1996); (Bédard et al., 2004). In addition, Meek et al. (2007) argue that management earnings may be lower in large companies. In fact, compared to other companies, large companies have lower information asymmetry, stronger governance structures and stronger external controls. In this study, estimating that the level of earnings management is related to the size of the company. According to previous studies ((Street & Gray, 2002); (Othman & Zeghal, 2006); (Cheng et al., 2010); (Zeghal & Ahmed, 1990)), where using natural logarithms of total assets as a proxy for firm size (SIZE).

## RESEARCH HYPOTHESIS

*Effect of Implementation of Corporate Governance on Quality of Profit Moderated by Protection for Investors.* In agency theory, conflicts that occur according to Jensen and Meckling (1976) in the long term each investor (principal) and manager (agent) want to maximize their respective utilities so that it will affect the company's financial reporting policies where when the profits of large companies then managers will get a big bonus, in addition to the differences in access to information managers easily expropriate companies, then as a basis for a mechanism that protects minority investors where as outsiders, the implementation of corporate governance can prevent the act of exploration carried out by management or insiders. According to Ahmed and Duellman (2007), and Ball et al. (2000) explain that implementation corporate governance can improve the quality of earnings information. This finding informs that law enforcement from the outside, the legal system, and the application of corporate governance to the company has an impact on improving the quality of reported earnings.

Quality of earnings is a level of corporate earnings information that can describe the economic impact of a real transaction. Unbiased income information is a dimension of neutrality. Where neutral earnings information is profit information that shows actual conditions without any manipulation and does not result in managerial conflicts that harm the company. The description of the correlation between earnings and neutrality is management behavior that expresses the financial condition corporate in a neutral manner, where automatically the value of earnings will be free from bias. Based on research by Scott (2009) arguing about earnings management which is a decision taken by management to achieve certain goals related to accounting policy decision making. So that it has a reflection of the concept in reporting earnings in financial disclosures. Therefore it can be concluded in this

study that profit is said to have earnings quality when the earnings information is neutral in its nature.

The institutional structure owned by a country influences the quality of financial information disclosed by the company. The institutional structure has a connection with the judicial system and legality as well as the law both capital market law and law that binds companies and law enforcers with the aim of providing protection for investors by creating a legal environment that controls the interests and behavior of regulators, investors, corporate executives, and participants others. Previous studies have contributed to the findings of empirical evidence that concluded that protection for investors has a significant influence on earnings quality where previous researchers have not considered investor protection as a variable of moderation in the influence of the application of corporate governance in improving the quality of corporate profits.

The application of corporate governance to companies provides increased transparency in disclosure of information that will have an impact on improving the quality of corporate financial statements where this is also influenced by the better legal environment of a country. Therefore, it can be concluded that the effect of protection for investors strengthens the application of corporate governance to improve the quality of earnings. In addition, the findings of Klapper and Love (2002) prove that the state legal environment is related to protection for investors who will influence corporate governance in the company so that the report disclosed becomes more prime.

Previous research has not applied either directly or indirectly using the role of investor protection as a moderating variable in testing other variables that have an influence on earnings quality.

The results of previous studies found the effect of investor protection on earnings quality as well as the influence of implementation corporate governance on earnings quality where the findings were significant positional influences but still in the stage of regression testing where between variables are interconnected and such research has never been conducted in countries. ASEAN countries, therefore motivating researchers to carry out different tests of protection for investors as a moderating variable. So that researchers are deeper to examine the correlation between the application of corporate governance to the quality of earnings information that is moderated by investor protection in ASEAN countries.

H1: The effect of corporate governance on the quality of earnings is increasingly high for countries with strong investor protection.

## METHODS OF RESEARCH

In this study the design used was causal research. Based on Cooper and Emory (2015) explained that causal research is a study that examines the influence of the following variables: (1) Protection for investors on earnings quality; (2) Implementation of corporate governance on the quality of earnings for high investor protection countries. In this research, can also be said explanatory research. Where according to Kusumaningrum (2014) explains that explanatory research is research that seeks to explain the influence of variables through hypothesis testing.

Testing the effect of protection for investors and the application of corporate governance to earnings quality were tested using multiple regression models and moderation regression models. In this study using a measure based on its nature, namely neutrality as a measure of the quality of profits. In previous studies, many correlated earning management with profit neutrality, where the model of estimation of discretionary accruals is often used as a measure of earnings management. In this study the model Modified Jones that will be used in predicting discretionary accrual values (Jensen & Meckling, 1976). This Modified Jones model is the best model in detecting earnings management. The first step to get nondiscretionary accruals and discretionary accruals is to look for current accruals (CA).

$$CA_{it} = \Delta (\text{current asset} - \text{cash}) - \Delta (\text{current liabilities} - \text{current maturity of long term debt}) \quad (1)$$

Next is to calculate the value current accruals as follows:

$$CAit / TAit-1 = a_0(1 / TAit-1) + a_1(ALSALit / TAit-1) + \varepsilon it \quad (2)$$

To calculate nondiscretionary accruals (NDACC) used the regression coefficient above ( $a_0, a_1$ ) with the following formula:

$$NDACCit = a_1 (1 / TA_{t-1}) + a_2 (\Delta REV_t - \Delta REC_t) + a_3 (PPE_t) \quad (3)$$

Discretionary accruals (DACC) obtained from the formula:

$$DACCit = CAit / TAit-1 - NDACCit \quad (4)$$

Where:  $CAit$  = Current accruals company  $i$  in period  $t$ ;  $\Delta SALit$  = Change in net sales of company  $i$  in period  $t$ ;  $NDACCit$  = Non discretionary accruals company  $i$  in period  $t$ ;  $\Delta A / Rit$  = Change in net receivables of company  $i$  in period  $t$ ;  $TAit-1$  = Total assets of company  $i$  in period  $t-1$ ;  $DACCit$  = Discretionary accruals of company  $i$  in period  $t$ .

Investor protection is a set of legal systems related to the protection of investments in capital markets made by the government to protect the act of expropriation or opportunity carried out by company managers. Sources of investor protection value data use the strength of investor protection index from (World Bank, 2011-2015). The index describes eight characteristics of protection for investors include: Extent of disclosure index, extent of shareholder rights index, ease of shareholder suits index, extent of ownership and control index, extent of transparency index, extent of director liability, extent of conflict of interest regulation index, and extent of shareholder governance index. These indices have a range measurement of 0 to 10. The higher the index score indicates the stronger the protection of investors. In this study using variables dummy (number 1 for strong investor protection countries and number 0 for countries with low protection). The state is said to have strong investor protection if the average value of the strength protection investor index is 8.0-10.0 and the country is said to have low investor protection if the average protection index of the strength of investor index is 0-7.9.

Corporate governance is a system and a set of rules that regulate, manage and supervise relations between shareholders, administrators, creditors, governments, employees and external and internal stakeholders of the company that are interrelated in a company in achieving company goals. Data on Corporate Governance refers to data sources referring to data sources from the 2011-2015 ACGA (Asian Corporate Governance Association) survey that support the methodology used in the CSLA survey, which reflects the implementation of corporate governance in ASEAN countries, where reports include scores from each value index of corporate governance.

The relationship between company size and earnings management still has many dimensions. On the one hand, firm size is often used as a proxy for the political cost hypothesis where the political cost hypothesis argues that large companies have the pressure to avoid earnings management, because of the possibility of increased government control when the company is bigger and more profitable (Cheng et al., 2010). In this study using the natural logarithm of total assets as a proxy for company size (SIZE).

Maria and Alves (2011) found a negative relationship between leverage and earnings management. However, the debt hypothesis predicts that companies that have high leverage levels tend to be involved in increasing earnings management to avoid violations of covenants. Therefore, in this study the authors estimate that Management's income level is related to leverage company.

Leverage can be calculated using a ratio = Total Debt / Total Asset.

This study is subject to all companies in ASEAN countries which obtained data and sources that can be used in this study as follows:

1. Financial report data from companies listed on the stock exchange;
2. Investor protection data sources from the World Bank's 2011-2015 reference;

3. Data Corporate governance sourced from the reports of each company in 2011-2015;
4. Data on financial reports sourced from the ASEAN State Stock Exchange website and the web of each company.

In this study the population used is a company that is included in the ACGA survey list for 2011-2015 outside of financial industry companies in ASEAN countries. The population in this study was 50 companies in each of the ten companies. While the number of samples is 250. The company selection sample used in this study is using the purposive sampling method with the following criteria:

1. Registered on stock exchanges in countries in ASEAN, namely: Indonesia, Malaysia, Philippines, Singapore, and Thailand;
2. Included in companies that were surveyed consecutively during 2011-2015 by ACGA;
3. Not including the financial industry (banks, leasing, and insurance). This is because financial companies have a financial structure that is different from other industries, therefore the size of earnings quality cannot be equated with other industries;
4. There is complete data for the period 2011 to 2015.

Data analysis techniques used to answer problems and research are moderating regression analysis. Moderation regression analysis is an analysis that involves moderating variables in building a model relationship.

The model of this analysis is used to test the strength of the moderating variable is investor protection on the effect of Corporate Governance on Quality of Profit, the regression equation is:

$$Y_1 = a_1 + b_1 X_1 + b_2 Z + b_3 X_1 Z + b_4 X_2 + b_5 X_3 + e_1$$

Where: Y = Quality Profit; a = Value of regression constant in variable X;  $b_1$  = Coefficient Investor Protection;  $b_2$  = Coefficient of Corporate Governance; X = Investor Protection; Z = Corporate Governance; e = Error rate.

## RESULTS AND DISCUSSION

Based on the results of the moderation analysis in Table 2, it shows that investor protection can moderate the effect of corporate governance on earnings quality, the interaction of investor protection with corporate governance influences the quality of earnings with a regression coefficient of 0.022 and a significance value of 0.012. This significance value of 0.012 indicates that  $H_1$  accepted so that in this study the interaction of investor protection with corporate governance has an effect on the quality of earnings.

Table 2 – Moderate Regression Analysis

Variable	Coefficient regression	t <sub>count</sub>	Sig.
Constant	-0.356		
Corporate Governance (CG)	0,007	1.481	0,140
Protection Investor (PI)	2.182	2.823	0,005
PI_CG	-0.022	-2.526	0,012
Leverage (LEV)	0.050	0.441	0,660
Corporate size (SIZE)	-0.034	-2.734	0,007
F count	6.609		
Significant	0,000		
R Square	0,119		
Adjusted R Square	0,101		
Variable dependent	Earning Management (DA)		

Source: SPSS Processed.

This proves the influence of the application of corporate governance on improving the quality of earnings is higher in countries that provide high protection than countries that provide low investor protection. Protection interactions of investors with corporate governance can improve supervision and monitoring of financial reporting policies carried out

by management so that the better the implementation of corporate governance implemented by companies, the minority investors are easy to supervise management of financial reporting policies and decision making so that management will be careful in reporting financial conditions and will avoid earnings management actions (Houqe, et al 2014).

In this study supports the research conducted by Ahmed and Duellman (2007) which states that corporate governance will improve the quality of earnings. These results indicate that in addition to the legal system and outside law enforcement (investor protection), the implementation of corporate governance in companies also provides incentives to management in the financial reporting process, which affects the quality of earnings presented. So that the quality of earnings published has excellent and informative quality.

#### Effect of control variables on earnings quality

Based on the results of the analysis show that leverage does not significantly influence the quality of earnings. Companies with degree of leverage a high are more difficult to carry out earnings management actions because companies with high levels of leverage will result in a high level of suspicion in making earnings management from various parties involved so that they will report the financial conditions according to current company conditions. Therefore companies with a degree of leverage high to continue to get the trust of the parties concerned can be reported financially according to the circumstances of the company so that they still get hope when they want to get additional capital, because when they conduct profit management it will be fatal to the company's growth come (Lee and Ng 2006).

Furthermore, the variable size of the company, the results of the study in the moderation regression model indicate that the size of the company has a significant negative effect on earnings quality. This shows that the larger the company, the smaller the company conducts earnings management. This result is in accordance with the research of Mnif and Slimi (2016) which states that larger companies and their excellent performance tend to be careful in reporting their financial conditions and avoid earnings management, so that financial information is more transparent. This is also because large companies will be more concerned about investors as well as increased control from the public and the government.

## CONCLUSION

Investor protection interactions with corporate governance affect the quality of earnings. Protection interaction of investors with corporate governance can improve supervision and monitoring of financial reporting policies carried out by management so that the better the implementation of corporate governance implemented by companies, the minority investors are easier to supervise management of financial reporting policies and decision making so that management will be cautious. Company size control variables negatively affect the quality of earnings by earnings management, while the leverage variable does not affect the quality of earnings.

## REFERENCES

1. Ahmed, A. S., & Duellman, S. (2007). Accounting conservatism and board of director characteristics: An empirical analysis. 43(2-3), 411-437.
2. Annisa, N. A., & Kurniasih, L. (2012). Pengaruh corporate governance terhadap Tax avoidance. *Jurnal Akuntansi & Auditing*, 8(2), 95-189.
3. Ardyansah, D. (2014). Pengaruh Size, Leverage, Profitability, Capital Intensity Ratio and Komisaris Independen terhadap Effective Tax Rate (ETR). 3(2), 371-379.
4. Ashbaugh, H., LaFond, R., & Mayhew, B. W. (2003). Do nonaudit services compromise auditor independence? Further evidence. *The accounting review*, 78(3), 611-639.
5. Ball, R., Kothari, S., & Robin, A. (2000). The effect of international institutional factors on properties of accounting earnings. *Journal of accounting economics*, 29(1), 1-51.
6. Basalamah, A. S., & Jermias, J. (2005). Social and environmental reporting and auditing in Indonesia: maintaining organizational legitimacy? *Gadjah Mada International Journal of Business*, 7(1), 109-127.

7. Beaver, W. (1989). *Financial Reporting: An Accounting Revolution* Prentice Hall Inc Upper Saddle River. Accounting review.
8. Bushman, R. M., & Piotroski, J. D. (2006). Financial reporting incentives for conservative accounting: The influence of legal and political institutions. *Journal of accounting economics*, 42(1-2), 107-148.
9. Chambers, A. E., & Penman, S. H. (1984). Timeliness of reporting and the stock price reaction to earnings announcements. *Journal of accounting research*, 21-47.
10. Cheng, M.-Y., Lin, J.-Y., Hsiao, T.-Y., & Lin, T. W. (2010). Invested resource, competitive intellectual capital, and corporate performance. *Journal of intellectual capital*, 11(4), 433-450.
11. Cooper, D. R., & Emory, C. W. (2015). *Business Research Methods*, Chicago: Richard D. Irwin.
12. Dechow, P. (1994). Accounting earnings and cash flows as measures of firm performance: The role of accounting accruals. *Journal of accounting economics*, 18(1), 3-42.
13. DeFond, M. L., & Hung, M. (2007). Investor protection and analysts' cash flow forecasts around the world. *Review of Accounting Studies*, 12(2-3), 377-419.
14. Fadhillah, R. (2014). Pengaruh Good Corporate Governance terhadap Tax Avoidance (Studi Empiris Pada Perusahaan Manufaktur yang Terdaftar di BEI 2009-2011). *Jurnal Akuntansi*, 2(1).
15. Francis, J. R., & Wang, D. (2008). The joint effect of investor protection and Big 4 audits on earnings quality around the world. 25(1), 157-191.
16. Ghozali, I. (2013). *Aplikasi Analisis Multivariate dengan Program IBM SPSS 21 Edisi 7*. Semarang: Badan Penerbit Universitas Diponegoro.
17. Hung, M. (2000). Accounting standards and value relevance of financial statements: An international analysis. *Journal of accounting economics*, 30(3), 401-420.
18. 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.
19. Klapper, L. F., & Love, I. (2002). Corporate governance, investor protection, and performance in emerging markets. *Journal of corporate Finance*, 33(3), 703-728.
20. Klein, A. (2002). Audit committee, board of director characteristics, and earnings management. *Journal of accounting economics*, 33(3), 375-400.
21. La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. (2002). Investor protection and corporate valuation. *The journal of finance*, 57(3), 1147-1170.
22. Leuz, C., Nanda, D., & Wysocki, P. D. (2003). Earnings management and investor protection: an international comparison. *Journal of financial economics*, 69(3), 505-527.
23. Maharani, G., & Suardana, K. (2014). Pengaruh Corporate Governance, Profitabilitas, and Karakteristik Eksekutif pada Tax avoidance Perusahaan Manufaktur. *E-Jurnal Akuntansi*, 525-539.
24. Niu, F. F. (2006). Corporate governance and the quality of accounting earnings: a Canadian perspective. *International Journal of Managerial Finance*, 2(4), 302-327.
25. Raharja, R. S. P. (2014). Analisis Pengaruh Corporate Governance terhadap Nilai Perusahaan. *Diponegoro Journal Of Accounting*, Vol. 3(No. 3), Hal.1-13.
26. Scott, W. R. (2009). *Financial accounting theory*. NJ: Prentice hall Upper Saddle River.
27. Shleifer, A., & Vishny, R. W. (1997). A survey of corporate governance. *The journal of finance*, 52(2), 737-783.
28. Siagian, & Tresnaningsih, E. (2011). Manajemen laba pada perusahaan dengan permasalahan free cash flow and peran moderasi dari monitoring eksternal. *Jurnal Akuntansi and Keuangan Indonesia*, 5(1), 30-49.
29. Street, D. L., & Gray, S. J. (2002). Factors influencing the extent of corporate compliance with International Accounting Standards: summary of a research monograph. *Journal of International Accounting, Auditing Taxation*, 11(1), 51-76.
30. Velury, U., & Jenkins, D. S. (2006). Institutional ownership and the quality of earnings. *Journal of Business Research*, 59(9), 1043-1051. Wardhani, R. (2009). Corporate

- Governance Mechanism, audit quality, and accrual quality: Indonesia manufacturing company evidence. *International Journal of Business and Management* (3), 168-179.
31. Watts, R. L., & Zimmerman, J. L. (1986). *Positive Accounting Theory*. Contemporary Topics in Accounting Series. Edgewood Cliffs: NJ: Prentice-Hall.
  32. Weston, J. F., & Copeland, T. E. (1992). *Manajemen Keuangan Jilid II* (Y. Lamarto, Trans.). Jakarta: Erlangga.
  33. Xie, B., Davidson III, W. N., & DaDalt, P. (2003). Earnings management and corporate governance: the role of the board and the audit committee. *9*(3), 295-316.
  34. Zeghal, D., & Ahmed, S. A. (1990). Comparison of social responsibility information disclosure media used by Canadian firms. *3*(1).

DOI 10.18551/rjoas.2019-02.22

## **STRATEGIES FOR IMPROVING DAIRY MILK QUALITY CONDUCTED BY INDONESIAN PRIVATE COOPERATIVE**

**Malika Uyun Erma\*, Wijaya Jemi Cahya Adi**

Politeknik Negeri Jember, Indonesia

\*E-mail: [uyun@polije.ac.id](mailto:uyun@polije.ac.id)

### **ABSTRACT**

Milk is the result of the livestock subsector which has great potential to be developed in Indonesia. Development of dairy agribusiness is expected to be able to meet domestic milk consumption needs. The purpose of this study is to determine strategies that can be used as an effort to improve the quality of fresh milk, especially production managed by cooperatives. The location of the study was in Galur Murni Dairy Farmer Cooperative (KPGM) which is located in Jember Regency, East Java Province. This research was quantitative descriptive research. The research design deployed was case study to study intensively or deeply from the research target group. The analytical method used consisted of SWOT analysis, which was used to determine alternative strategies of the quality of dairy milk production at Galur Murni Cattle Breeder Cooperative. Based on the results of the SWOT analysis, it is known that the alternative strategy that gets the highest weight is Strength Opportunity (SO) of 7.6. The strategies referred to in SO include quality control, increasing the number of experts (recruitment of experts), conducting counselling, and optimizing forage land as forage feed supplies.

### **KEY WORDS**

Strategies, quality, dairy milk, food resilience.

Agribusiness development of dairy milk can be conducted in various ways. Cooperative repositioning is one of the ways in dairy agribusiness development. The existence of cooperatives is expected to be able to prosper its members and can create cooperative entrepreneurs. According to Soejono (1997; 177) the entrepreneurs should be born from a group of cooperative people, that are, people who understand, live the true nature and principles of cooperatives and try to develop consistently.

Galur Murni Dairy Farmer Cooperative is one of private cooperative in Indonesia that produces fresh milk and dairy products in Jember Regency, East Java, Indonesia. Its brand is "Best Cow". This cooperative is used as a forum for several dairy farmers in Jember Regency to learn and develop their businesses. Based on Java Pos Radar Jember July 19 2016, the number of cooperative members who have joined is forty seven (cattle breeders having 275 cattles).

The market share of Galur Murni Dairy Farmer Cooperative currently prefers the local market rather than establishing a contract with a milk factory. The problem is that there is no organization that experiences no change, meaning that the change is certain to occur, especially related to the target market intended by an organization/company. Galur Murni Dairy Farmer Cooperative needs to prepare itself to develop a strategy to increase the target market (bargaining position), where its dairy product has only competed at the regional level and is possible to compete at the national levels or even the multinational levels.

Improving the quality of products (fresh milk) is the most important thing in marketing, in this case milk which is a product of Galur Murni Dairy Farmer Cooperative. According to Kotler (2000: 748) product quality is a feature, namely the characteristics complementing the function of a product and can be in the form of capital or physical structure of a product that is better than other similar products. The product quality in this study is focused on the consumer's side. This is in line with the definition of quality proposed by Gaspersz (2008) that quality is anything that is able to meet customer's desires or needs (meeting the needs

of customers). Quality is even often regarded as a parameter of customer's satisfaction. Quality that refers to customer's satisfaction can later be used as an effort to change towards continuous improvement even as an effort to strengthen bargaining position. When a product has a good bargaining position, then an area can meet its population's needs for the product or can be said to have food resilience. Food resilience is the ability of a nation to ensure that all of its inhabitants obtain adequate, qualified, and safe food and things that are based on optimizing utilization and local resources (Soekartawi; 2008).

The purpose of this study is to determine strategies that can be used as efforts to improve the quality of fresh milk, especially production managed by cooperatives.

## **METHODS OF RESEARCH**

This research is a quantitative descriptive research. According to Silalahi (2010: 28), quantitative descriptive presents further data from observations, such as investigations and measure the magnitude or distribution of these traits among certain group members.

The sampling technique deployed in this study was purposive sampling. According to Silalahi (2010: 272), purposive sample selection, sometimes referred to as judgment sampling, is choosing the best possible subject to provide information needed. In this study, the selected informant was Galur Murni Dairy Farmer Cooperative. Respondents in this study were leader and manager of Galur Murni Dairy Farmer Cooperative, breeders who become members of the cooperative, consumers of the dairy milk product produces by the cooperative, and expert respondents from related agencies.

SWOT analysis was used to obtain alternatives of strategies that will be recommended to the company (cooperative). The stages of the SWOT analysis were:

**Data Collection Phase.** Data collection was done by analyzing and identifying the company's internal and external environments, and was continued with the evaluation process of the company's internal and external factors using IFAS and EFAS matrices.

**Analysis Phase.** After the data collection phase, the next stage was the analysis phase, which utilizes all information from the data collection stage in quantitative model. The analytical models used in this study were the IE matrix and SWOT matrix.

According to Rangkuti (2014), the IE matrix has nine cell strategies, which can be grouped into three main strategies, namely: (a) Growth strategy is the growth of the company itself or diversification efforts; (b) Stability strategy is a strategy that is implemented without changing the direction of the strategy; (c) Retrenchment strategy is an effort to minimize or reduce the efforts made by the company. Furthermore, the SWOT matrix is a matrix that clearly illustrates how the external opportunities and threats faced by the company can be solved by the strengths and weaknesses of the company. This matrix produces four sets of possible alternative strategies.

## **RESULTS AND DISCUSSION**

From in-depth interviews with expert respondents (the leader of Galur Murni Dairy Farmer Cooperative, breeders who become member of the cooperative, consumers, and experts from related agencies (Dinas Ketahanan Pangan and Peternakan Kab. Jember), it was obtained data which were categorized as strength, weaknesses, opportunities, and threats that affect the quality of dairy milk, especially in Jember Regency.

The strength possessed by the Galur Murni Dairy Farmers Cooperative in improving the quality of fresh milk is that it has several experienced experts in the field of dairy farming. These experts can direct farmers under the auspices of Galur Murni Dairy Farmer Cooperative to carry out dairy farming so that dairy farmers have a standard operating procedure in dairy farming. The farming starts from lust and mating time management, calf birth management, calf treatment management, feeding guidelines, water, cage hygiene, dairy cow hoof trimming, prevention of mastitis, heat stress management, management of storage of hazardous chemicals, etc. Correct dairy farming is the main thing that makes high quality fresh milk.

Another strength possessed by Galur Murni Dairy Farmer Cooperative is that it has an SOP in collecting fresh milk, has tools and equipment to control the quality of fresh milk and establishes cooperation with IPS. All fresh milk produced by its members' dairy farmings is centered in Sumberbaru Subdistrict before being sent to IPS. At that place, all milk is tested for its pH, bacteria and density to specify the low and high quality milk. Furthermore, fresh milk is accommodated in the cooling ice for a certain period of time. In the delivery of fresh milk, special treatment must also be given, aside from being transported using a cooling box, the delivery time must not exceed 6 hours. Establishing cooperation with IPS can have a positive impact on cooperatives, because basically IPS only receives high quality fresh milk. With this, quality control in Galur Murni Dairy Farmer Cooperative will always be maintained. The strength factors possessed by the Galur Murni Dairy Farmer Cooperative are summarized in Table 1 below.

Table 1 – Strength Factors in Galur Murni Dairy Farmer Cooperative

No	Strength	Weight	Rate	Score
1	Cooperative has experienced experts	0,10	3	0,3
2	Cooperative has an SOP in collecting fresh milk	0,2	4	0,8
3	Cooperative has standardized tools and equipment	0,2	4	0,8
4	Breeders who become member in Galur Murni Dairy Farmer Cooperative have an SOP in dairy farming technique	0,2	4	0,8
5	Galur Murni Dairy Farmer Cooperative cooperates with the milk receiving installation	0,3	4	1,2
	Sub Total	1,0		3,9

Source: Primary Data.

In Table 1, it can be explained that the weight of cooperation with IPS is the highest when compared to other strength factors, which is equal to 0.3. Then the rate in collaboration with IPS is also at level 4, which means it is very influential. This indicates that establishing cooperation with IPS can be used as the spearhead in terms of quality control. Thus, all elements in the KPGM become increasingly motivated to be better, especially in the quality of fresh milk produced.

This is in accordance with the statement of marketing expert Don Peppers and Martha Rogers in Kotler (2009: 134) that the only value that can be created in a company is the value that comes from the customer - that is all the values that you have now and the value that you will have in the future. A business is called successful if you succeed in getting, maintaining, and growing customers. The customer is the only reason that the company builds a factory, hires employees, schedules meetings, creates workflows, or engages in any business activity, in the sense that without customers, a business will not work well.

The weaknesses possessed are the infrastructure problems owned by KPGM and the dairy farmers and the tools and equipment used to milk fresh milk. The infrastructure is in the form of buildings for storing fresh milk that are not owned by Galur Murni Dairy Farmer Cooperative and standard cowsheds that have not been owned by the dairy farmers. These things are influential for the quality of fresh milk produced. Fresh milk is very sensitive to free air, so if it is slightly contaminated with pungent aroma, the taste and aroma of fresh milk will change and it can reduce the quality of fresh milk. Therefore in Table 1, the weight for infrastructure each gets a value of 0.3 and the rate gets a value of 3, which means it affects the production of high quality fresh milk. Then, the weight of the breeders' milking tools and equipment is 0,1 which means that it is less important but has an effect on the quantity and quality of milk produced. There were several breeders who had more than 15 cows and they used simple tools and methods in milking. However, the quantity and quality of the fresh milk produced is in accordance with the standard. It turns out that the farmer have nearly 20 years of experience in the dairy business, thus, they have mastered the technique of milking cows.

Another weakness is the lack of supervision to farmers. This is very important for the quality control of fresh milk produced. Even though they have an SOP in dairy farming, without any supervision, the farmers will implement the old method. Based on the statement from the manager of Galur Murni Dairy Farmer Cooperative, some of the fresh milk sent does not meet the quality standards and needs to be returned. Therefore, supervision is very

important for dairy farmers in operating the dairy farming SOP. The weakness factors are summarized in Table 2 below.

Table 2 – Factors of Weakness in Galur Murni Dairy Farmer Cooperative

No	Weakness	Weight	Rate	Score
1	The infrastructure owned by the cooperative has not been standardized	0,3	3	0,9
2	Dairy cow breeders' tools and equipment are still simple	0,1	4	0,4
3	Lack of supervision to farmers	0,3	4	1,2
4	The infrastructure owned by dairy farmers has not been standardized	0,3	3	0,9
Sub Total		1,0		3,4

Source: Primary Data.

The opportunity that Galur Murni Dairy Farmers Cooperative has in producing quality fresh milk is that there is still a lot of land for animal feed. Because most people in Jember Regency are farmers, there are many forage alternatives that can be utilized by dairy farmers. Based on a statement from the Head of the Livestock Division of Jember Regency, the price of dairy cattle in Jember is cheaper compared to that of other regions. Therefore, these opportunities need to be developed into a strategy so that it becomes useful for Galur Murni Dairy Farmer Cooperative in increasing the quality of fresh milk.

Table 3 – Opportunity Factors in Galur Murni Dairy Farmers Cooperative

No	Opportunity	Weight	Rating	Score
1	The forage area that can be utilized for dairy cattle is quite extensive	0,3	3	0,9
2	The price of feed is relatively cheap	0,3	4	1,2
3	Other forage alternatives for dairy cattle are available	0,4	4	1,6
Sub Total		1		3,7

Source: Primary Data.

The threats possessed by Galur Murni Dairy Farmer Cooperative are a disease that often attacks dairy cows and lack of water availability. KPGM needs to take into account the threats so that the threats do not disturb the production of high quality fresh milk.

Table 4 – Threat Factors in Galur Murni Dairy Farmer Cooperative

No	Threat	Weight	Rating	Score
1	Disease in dairy cows	0,5	2	1
2	Water availability	0,5	2	1
Sub Total		1,0		2

Source: Primary Data.

Table 5 – SWOT Analysis Matrix

n/n	<p>Strength (S)</p> <p>Galur Murni Dairy Farmer Cooperative has experienced experts</p> <p>The cooperative has an SOP in collecting fresh milk.</p> <p>Cooperative has standardized tools and equipment.</p> <p>Breeders who become member in Galur Murni Dairy Cooperative have an SOP in the dairy farming technique</p> <p>The cooperative cooperates with the milk receiving installation</p>	<p>Weakness (W)</p> <p>The infrastructure owned by the cooperative has not been standardized yet.</p> <p>Dairy cow breeders' tools and equipment are still simple.</p> <p>There is lack of supervision to farmers.</p> <p>The infrastructure owned by dairy farmers has not been standardized.</p>
<p>Opportunity (O)</p> <p>The vast area of forage that can be utilized for dairy cattle is quite extensive</p> <p>The price of feed is relatively cheap</p> <p>Other forage alternatives for dairy cattle are available.</p>	<p>Strategy (SO)</p> <p>7,6</p>	<p>Strategy (OW)</p> <p>7,1</p>
<p>Threat (T)</p> <p>Disease in dairy cows</p> <p>Water availability</p>	<p>Strategy (ST)</p> <p>5,9</p>	<p>Strategy (WT)</p> <p>5,4</p>

Based on the results of the SWOT analysis conducted, the position of Galur Murni Dairy Farmer Cooperative is in the strength-opportunity strategy. Galur Murni Dairy Farmer

Cooperative needs to optimize the strengths and opportunities in producing high quality fresh milk. Alternative strategies include counseling to dairy farmers intensively, controlling quality in terms of SOPs for dairy farming to SOPs for fresh milk collection, optimizing forage and forage waste, recruiting experts so that counseling and supervision to farmers can run well.

In summary, the results of the matrix formulation based on SO, WO, ST, and WT are weighted to determine the scale of priority. The alternative arrangements based on the priority sequence obtained from the SWOT matrix weighting are presented in Table 5 below.

Table 6 – SWOT Alternative Sequences

Priority	Strategy	Score
I	SO	7,6
II	WO	7,1
III	ST	5,9
IV	WT	5,4

Source: Primary Data.

Based on the alternative strategy sequence formed from the results of the SWOT analysis as seen in Table 5, it can be seen that the alternative strategy that gets the highest weight is Strength - Opportunity (SO) of 7.6. Thus, it can be interpreted as a strategy by using the power to make the most of opportunities. The strategies referred to in SO include quality control, increasing the number of experts (recruitment), conducting counseling, and optimizing forage land as forage feed supplies.

## CONCLUSION

Based on the results of the discussion in the study, it can be concluded that the alternative strategy in the SWOT analysis which gets the highest weight is Strength (Opportunity) (Opportunity) (SO) of 7.6. Thus, it can be interpreted as a strategy by using the power to make the most of opportunities. The strategies referred to in SO include quality control, increasing the number of experts (recruitment of experts), conducting counselling, and optimizing forage land as forage feed supplies.

## REFERENCES

1. Agustina, Titin. (2016). Outlook Komoditas Pertanian Subsektor Peternakan Susu. Pusat Data and Sistem Informasi Pertanian Sekretariat Jenderal Kementerian Pertanian.
2. Ariani, Dorothea Wahyu. (2002). Manajemen Kualitas: Pendekatan Sisi Kualitatif. Jakarta: Direktorat Jenderal Pendidikan Tinggi Departemen Pendidikan.
3. Gaspersz, Vincent. (2008). Total Quality Management (TQM). Jakarta: PT Gramedia.
4. Haming, Murfidin and Mahfud Nurnajamuddin. (2007). Manajemen Produksi Modern: Operasi Manufaktur and Jasa. Jakarta: PT Bumi Aksara.
5. Heizer, J. (2006). Operations Management (Manajemen Operasi). Salemba Empat.
6. Hidayat, A. (2009). Pengenalan Manajemen Mutu dalam Penerapan Jaminan Mutu Berlabelkan Tanda. Direktorat Jenderal Pengolahan and Pemasaran Hasil Pertanian.
7. Irawati, Dany Alifah dkk. (2017). Strategi Pengembangan Koperasi Peternak Galur Murni di Kabupaten Jember. Jurnal Aplikasi Bisnis and Manajemen Vol.3, No.1, Januari 2017.
8. Kotler, Philip. (2000). Manajemen Pemasaran. Edisi Milenium. Jakarta: Prehallindo.
9. Kotler, Philip. (2009). Manajemen Pemasaran Edisi 13. Jakarta: Erlangga.
10. Kusriani. (2009). Konsep and Aplikasi Sistem Pendukung Keputusan. Yogyakarta: Andi.
11. Oktaviani, Rsky. (2014). Analisis Kelayakan Finansial and Strategi Pengembangan Usaha Susu Sapi Perah Pada Koperasi Peternak Galur Murni Kecamatan Sumberbaru Kabupaten Jember. Ilmiah Pertanian, Juni 2014.
12. Rangkuti, Freddy. (2012). Analisis SWOT: Teknik Membedah Kasus. Jakarta: PT.
13. Silalahi, Ulber. (2010). Metode Penelitian Sosial. Bandung: PT.Refika Aditama.
14. Soedjono Ibnu. (1997). Koperasi and Pembangunan Nasional. Jakarta: PIP-Dekopin.
15. Soekartawi. (2008). Mewujudkan Kemandirian Pangan. Koran Jakarta, 31 Oktober 2008.

DOI 10.18551/rjoas.2019-02.23

## **PLANNING THE OUTSOURCING SYSTEM TO IMPROVE PERFORMANCE OF CV HK MOJOKERTO COMPANY**

**Sukowijoyo Natanael\*, Herdinata Christian**

Faculty of Management and Business, University of Ciputra, Surabaya, Indonesia

\*E-mail: [natanael.sukowijoyo@gmail.com](mailto:natanael.sukowijoyo@gmail.com)

ORCID: 0000-0001-7791-487X

### **ABSTRACT**

Productivity is the main key for manufacturing companies, especially for nail companies that have very low profit margins. Labor performance greatly influences the results that a company will obtain. If laborers produce substandard production, the company cannot run optimally. This study aims to design an outsourcing system that will replace the current old system run by CV HK Mojokerto. This study applies a qualitative approach. Data collection technique carried out in this study is semi-structured interviews with 3 speakers from the company's internal and 2 speakers from the experts. The interview results will be tested using the triangulation method. Based on the analysis results that have been obtained, it forms a framework for planning outsourcing system that can improve the company performance of CV HK Mojokerto. The outsourcing system is chosen because the packing work is not the company's core business. Therefore, it does not really need labors with high competence since it is more concerned with efficiency, neatness and speed. In the cost analysis stage, the company compares the cost of outsourcing system with the old system. It is concluded that the selection of outsourcing system has made the company only pay labor costs that are in accordance with productivity and the cost of insurance costs of IDR 15,000 per labor per month.

### **KEY WORDS**

Nail company, labor, outsourcing, productivity.

In this globalization era, competition between goods and services companies is getting tighter. All companies are competing to provide high-quality services and products so that customers increase and companies get high profits. Similarly, companies in Indonesia from time to time continue to develop and improve the quality of their products through increasing human resources. Human resources are the only resources that have a sense of mind, desire, skill, knowledge, encouragement, power, and work. All potential human resources affect the efforts of an organization in achieving its goals. Despite of technological progress, information development, and the availability of capital and materials, it is difficult for an organization to achieve its goals without human resources (Sutrisno, 2009).

Every company has a vision, missions, and goals that it wants to achieve. The achievement of these goals is determined by the human resource management who runs them. Human resources in the business strategic of a company generally consist of three parts that have different labor statuses. It consists of permanent employees, employees under work agreements for a certain time (contract employees), and outsourcing employees.

Tighter competition also requires companies to be more flexible in responding to market demands. Outsourcing strategy is one form of flexibility that needs to be considered. The use of outsourcing labor in developed and developing countries is a reasonable company policy and indeed must be carried out. It is due to the size of the company and the many types of jobs that certainly require many types of expertise. Thus, it is not possible for a company to provide labor as a whole.

Kremic et al (2006) stated that over the past ten years, there has been an evolution in the outsourcing process from traditional to strategic way. Traditionally, it relates to supporting activities such as cleaning, catering, security, and the like that do not require special

competencies from suppliers. Furthermore, it develops towards strategic activity when the outsourcer hands over some of its main activities to the vendor.

Indrajit & Djokopranoto (2004) explained that in general companies choose to outsource routine work that is less strategic. Outsourcing services do non-core business work. Meanwhile, core business work which is also the core competence of a company is still carried out on its own.

The motive for companies to carry out outsourcing strategies is to get cost benefits (efficiency), access to innovation, and a greater focus on core competencies that the company has (Pratap, 2014). Elmuti (2003) added that there are five main factors that influence a company's success in implementing an outsourcing project consisting of clear objectives and expectations of outsourcing activities, the right choice of outsourcing partners, adequate skills to negotiate contracts, good planning at all stages of outsourcing, and effective organizational communication.

CV HK Mojokerto is a company engaged in manufacturing with the main products of nails. The company's main products are wood nails with several variants including Plywood nails, Seri nails, Kalsi board nails, and Ship nails. The wood nails are produced through several stages of the process as presented in Appendix 2. The production process starts from supplying raw materials, drawing process, and then cutting and frying. The results of nail frying are then examined through Quality Control stage. If the product meets the qualifications, it will become a finished product. Furthermore, the nail products go to the packing process, are stored in the warehouse, and then they are ready to be distributed to customers.

Based on the researchers' evaluation results in the field, the company assessed that workers had not carried out their work optimally. It was proven that the packing results of the nail products of Chrome, CSB, Plywood, and Seri types were still not reaching the target. The company sets packing targets for each shift of 1,350 for Chrome products, 630 for CSB products, and 900 for Plywood and Seri products. During June 2018, it was found that the realization of packing results per shift still had not reached the set target. It shows that the packing division labor productivity is still not optimal.

The cause of labors not working optimally is the lack of initiative to immediately complete or make a report when they experience obstacles in their work. It might be caused by the salary system that the company applies. Currently, the company applies a daily salary system. By implementing this system, labors will get the same salary amount regardless how much work they have done. Thus, it causes labors to be less active in working, often lazing because they get the same salary; no matter how much results they produce every day.

Implementation of the outsourcing system is expected to improve employee performance and cost efficiency. Cost efficiencies that can be done due to the implementation of outsourcing systems include salary costs that are adjusted to productivity, no premiums on BPJS Kesehatan (Social Security Administrator for Health) or BPJS Ketenagakerjaan (Social Security Administrator for Employee), no pension fees or Old Age Guarantees, there are no meal costs, and there are no fees for holiday allowances.

## **METHODS OF RESEARCH**

This research applies descriptive qualitative approach. According to Moleong (2010), a descriptive approach is a method that aims to examine the status of a group of people, an object, a set of conditions, a system of thought, or a class of events in the present. Meanwhile, qualitative research is intended to understand the phenomenon of what is experienced by the research subject such as behavior, perceptions, motivations, actions, etc. in a holistic and descriptive manner in the form of words and language, in a specific natural context and by utilizing various natural methods. This study will describe and analyze the design of the implementation of outsourcing systems in improving the company performance of CV HK Mojokerto.

Data collection technique carried out in this study is semi-structured interviews with pre-determined informants to obtain the information that the researchers need. According to

Sugiyono (2013), semi-structured interviews are a type of interview in the category of in-depth interviews where the informants invited to discuss will feel more comfortable, free, and open to the types of questions the researchers give.

Data analysis is the process of systematically finding and compiling data obtained from interviews, field notes, and documentation by organizing data into several categories, describing it into units, synthesizing, arranging into patterns, choosing which ones are important and which will be studied, and drawing conclusions so that the data is easily understood by the researchers themselves and others (Sugiyono, 2013). In this study, data analysis technique applies qualitative analysis with the model approach proposed by Miles and Huberman (2005), as follows: Data Reduction; Data Display; Verification (Conclusion Drawing).

## RESULTS AND DISCUSSION

*CV HK Mojokerto's Motive in Implementing an Outsourcing System.* CV HK Mojokerto currently has approximately 600 employees consisting of 50 permanent employees and 550 contract employees. In this case, the salary system for contract employees is based on the number of their working days. In the packing section itself, there are 150 employees who are all contract employees who are paid daily; with the distribution of 120 people working on nail packing and the remaining 30 people on wire packing. Contract employees are paid daily for whatever quantity they produce. As long as they enter work, the salary earned by the labors will be the same.

Currently, the company needs an outsourcing system because the current increase in regional minimum wages is no longer in line with the performance in the field which results in higher production costs. In addition, the company assessed that workers had not carried out their work optimally. It was proven that the packing results of the nail products of Chrome, CSB, Plywood, and Seri types were still not reaching the target. The company sets packing targets for each shift of 1,350 for Chrome products, 630 for CSB products, and 900 for Plywood and Seri products. During June 2018, it was found that the realization of packing results per shift still had not reached the set target; Chrome products were still less than 285 kg, CSB products were still less than 174 kg, and Plywood and Seri products were still less than 135 kg.

The realization of work that still does not reach the target is caused by the lack of initiative to immediately complete or make a report when the labors experience obstacles in their work. Currently, the company applies a daily salary system. By implementing this system, labors will get the same salary amount regardless how much work they have done. Thus, it causes labors to be less active in working, often lazing because they get the same salary; no matter how much results they produce every day. This condition causes the achievement of targets not to be realized.

Through the implementation of an outsourcing system, it is expected that labors will work more actively so that the achievement of targets can increase. The application of this system is intended to provide motivation to workers, which with the increasing quantity of work produced, the more wages they will get. The challenge is the quality control of packing results that must remain in accordance with the standards. It is not only completing the work or achieving the pre-determined quantity, but also considering the quality.

*Division Determination.* Currently, the divisions in the company consist of raw material, production, packing, logistics, warehouse, admin, HRD, and finance divisions. Nearly all labors in each division use a contract system, for which payment of salary uses a daily calculation system. It means that the labors are paid as much as their working days.

Before choosing an outsourcing strategy, the company is actually faced with three choices of strategies which include adding labors, automation to the machine, and the outsourcing system itself. These three strategies can be carried out by the company to improve the labor performance of packing division with several advantages and disadvantages.

The strategy of adding labors has the advantage that the existing HR management system in the company does not change in which the management only continues the labor management system that has been implemented previously. However, this method has a weakness in terms of costs, because with the increasing number of labors, the company's expenditure for salary posts will be even greater. Furthermore, the automation method can also be carried out to improve the performance of the packing division. This method has advantages in terms of efficiency for a long period of time because the production process will be faster.

Division selection criteria:

1. Not the company's core competency;
2. The labor costs that can be minimized the most;
3. The easiest transfer of labor;
4. The skills needed are not difficult;
5. Functions that do not have much impact on the company's operations.

Based on the division criteria above, the choice of division to be outsourced is the packing division. The reason for choosing the packing division compared to other divisions is because the division has the most labors. Thus, the impact of cost savings and productivity impacts is greater than other divisions. In addition to the transition time needed is relatively short; it also does not require skills that are too high. Based on these conclusions, the packing division was chosen as the division to be handed over to the outsourcing party.

*Design of the Outsourcing System Implementation at CV HK Mojokerto.* The design of the system implementation is based on previous research which has 7 factors that must be considered. These factors do not have to be applied or followed sequentially but they can also be carried out according to the common norms.

At this stage, the company needs to set a target and the result of packing costs after using outsourcing labors. The results expected by the company are calculated based on historical data from the highest results of division packing during 2017-2018 as follows:

Table 1 – Achievement Targets of Outsourcing Labors

Product Type	Current Labor Work Results	Target of Outsourcing Worker Per Day		
		Month 1 and 2	Month 3 and 4	Month 5 onwards
Chrome	1,065	950	1,150	1,350
CSB	456	430	530	630
Plywood and Seri	765	600	750	900

Source: CV HK Mojokerto.

Table 2 – Current Composition of Labor Cost in Packing Division

n/n	Current Condition		
	Chrome	CSB	Plywood and Seri
Labor Salary/ Month	IDR 4,537,283	IDR 4,537,283	IDR 4,537,283
Labor Salary/ Day	IDR 181,491	IDR 181,491	IDR 181,491
Average Packing Ability	1,065	465	765
Packing Labor Cost/ Kg	IDR 170	IDR 390	IDR 237

Source: Processed Data.

Table 3 – Needs for Number of Labors

n/n		Current Condition		Outsourcing Target	
Nail Type	Production Capacity/ Day (Kg)	Packing Capacity/ Person	Number of People Needed	Packing Capacity/ Person	Number of People Needed
Chrome	20,000	1,065	19	1,350	15
CSB	7,500	456	16	630	12
Plywood and Seri	90,000	765	118	900	100
Total	117,500		153		127

Source: Processed Data.

The company sets lower targets (Table 1) in the first two months. We realize that they need time to adapt to this work before the speed of their work is in accordance with what the company expects. It is expected that their speed would increase so that the target in the next two months and in the fifth month onwards would be normal according to the previous target value.

Based on the calculation of labor costs in the packing division, the company hopes that later the implementation of the outsourcing system can reduce labor costs lower. Furthermore, after CV HK Mojokerto's production capacity was calculated (Table 3), the labor needed (if the specification of the labor is in accordance with expectations) is approximately 127 people, or reduced by 26 from the current number.

Outsourcing is divided into 2 broad categories consisting of Business Process Outsourcing (BPO) and Human Resource Outsourcing. CV HK Mojokerto chose to use outsourcing type of Business Process Outsourcing (BPO) because the company would divert 1 division—the packing division—to the outsourcing service provider. In addition, they will be paid based on the product they are packing.

At this stage, companies need to compare the cost of outsourcing system with the old system because the implementation of the outsourcing system is expected to improve labor performance and cost efficiency. Cost efficiencies that can be done due to the implementation of outsourcing systems include salary costs that are adjusted to productivity, no premiums on BPJS Kesehatan (Social Security Administrator for Health) or BPJS Ketenagakerjaan (Social Security Administrator for Employee), no pension fees or Old Age Guarantees, there are no meal costs, and there are no fees for holiday allowances.

The estimate of company's cost efficiency that use the outsourcing system is around 145.8 million rupiah per month for 150 labors or experiencing savings of 1.75 billion rupiah a year. If it is compared between the use of outsourcing system and the current system, it is known that the use of outsourcing systems makes the company do financial efficiency because it does not pay for BPJS Kesehatan, BPJS Ketenagakerjaan, meals, and holiday allowances with a total of IDR 972,283 per person per month.

The following is the company's assumption after the packing division was transferred to the outsourcing party, with an average monthly cost per person equivalent to the Mojokerto City Minimum Wage and with an additional insurance fee of IDR 15,000 per person per month which would be IDR 3,580,000 per person people per month. Thus, the labor costs that will occur in the packing division are as follows:

Table 4 – Composition of Labor Cost Target at the Packing Division during Outsourcing

n/n	Current Condition			Month 1-2 of Outsourcing		
	Chrome	CSB	Plywood & Seri	Chrome	CSB	Plywood & Seri
Labor Salary/ Month	IDR 4,537,283	IDR 4,537,283	IDR 4,537,283	IDR 3,580,000	IDR 3,580,000	IDR 3,580,000
Labor Salary/ Day	IDR 181,491	IDR 181,491	IDR 181,491	IDR 143,200	IDR 143,200	IDR 143,200
Average Packing Ability	1,065	465	765	950	430	600
Packing Labor Cost/ Kg	IDR 170	IDR 390	IDR 237	IDR 151	IDR 333	IDR 239
n/n	Month 3-4 of Outsourcing			Month 5 of Outsourcing Onwards		
	Chrome	CSB	Plywood & Seri	Chrome	CSB	Plywood & Seri
Labor Salary/ Month	IDR 3,580,000	IDR 3,580,000	IDR 3,580,000	IDR 3,580,000	IDR 3,580,000	IDR 3,580,000
Labor Salary/ Day	IDR 143,200	IDR 143,200	IDR 143,200	IDR 143,200	IDR 143,200	IDR 143,200
Average Packing Ability	1,150	530	750	1,350	630	900
Packing Labor Cost/ Kg	IDR 125	IDR 270	IDR 191	IDR 106	IDR 227	IDR 159

Source: CV HK Mojokerto.

Thus, even though in the first and second months the packing ability of the outsourcing company is lower than the old employee, the company still gets benefits in terms of cost per kg because salary costs are reduced due to the absence of benefits such as the previous contract employees. As for the calculation of savings over a period of 1 year, assuming 1 month is 25 working days multiplied by 12 months which can be calculated as follows:

Table 5 – Calculation of Benefits

Nail Type	Production Capacity Per Day (kg)	Production Capacity Per Year	Current Cost	Total Cost	Worst Cost	Total Cost	Worst Saving
Chrome	20,000	6,000,000	170	1,022,486,310	151	904,421,053	118,065,257
CSB	7,500	2,250,000	390	878,183,806	333	749,302,326	128,881,481
Plywood & Seri	90,000	27,000,000	237	6,405,576,000	239	6,444,000,000	(38,424,000)
Total	117,500	32,250,000		8,306,246,116		8,097,723,378	208,522,738
Chrome	20,000	6,000,000	170	1,022,486,310	106	636,444,444	386,041,865
CSB	7,500	2,250,000	390	878,183,806	227	511,428,571	366,755,235
Plywood & Seri	90,000	27,000,000	237	6,405,576,000	159	4,296,000,000	2,109,576,000
Total	117,500	32,250,000		8,306,246,116		5,443,873,016	2,862,373,100

Source: Processed Data.

Thus, following the above assumptions, even though the results of the outsourcing program did not run well, or like the assumptions of months 1 and 2 which were below current capacity, CV HK Mojokerto still benefited around 208 million rupiah due to cheaper labor costs. If this program can run according to the target, the savings obtained by CV HK Mojokerto are around 2.8 billion rupiah.

At this stage, the company needs to do the following steps:

- Conducting surveys to find the provider of outsourcing labor who have previously worked on similar work so that it facilitates the transition in system change;
- Conducting tender activity to find which company is the cheapest or the most suitable for the budget;
- Evaluating and discussing directly to find out the competencies and commitments of each provider of outsourcing labor, so that the trusted, honest, consistent, and easily invited provider of outsourcing labor will be selected.

Meanwhile, for the criteria of service providers, the results of management meetings for the required criteria and the weight of each criterion are as follows:

Table 6 – Criteria for Outsourcing Service Provider

Criteria	Weight
Have license from the Manpower Office	0.20
Have a competitive price	0.15
Have experience in the packing field for more than 10 years	0.12
Have labor according to specifications	0.12
Have more than 130 members who can be allocated to CV HK Mojokerto	0.12
Have a short transition time for maximum 2 months	0.1
Give a beneficial compensation for CV HK Mojokerto if their performance is not good	0.1
Have a minimum contract period of 2 years	0.09

Source: CV HK Mojokerto.

Based on the proposal submitted by the outsourcing company, the analysis was carried out to select which service provider would later become the partner of CV HK Mojokerto in the process of nail outsourcing division. Each service provider will be rated one to three in each category: Value 1 = not according to requirements; Value 2 = points must still be negotiated; Value 3 = very suitable with CV HK's needs.

Table 7 – Rating for PT BUS Mojokerto

Criteria	Rate	Weight	Total
Have license from the Manpower Office	3	0.2	0.6
Have a competitive price	2	0.15	0.3
Have experience in the packing field for more than 10 years	3	0.12	0.36
Have labor according to specifications	3	0.12	0.36
Have more than 130 members who can be allocated to CV HK Mojokerto	3	0.12	0.36
Have a short transition time for maximum 2 months	2	0.1	0.2
Give a beneficial compensation for CV HK Mojokerto if their performance is not good	2	0.1	0.2
Have a minimum contract period of 2 years	3	0.09	0.27
Total			2.65

Source: processed data.

Table 8 – Rating for PT KBM Sidoarjo

Criteria	Rate	Weight	Total
Have license from the Manpower Office	3	0.2	0.6
Have a competitive price	1	0.15	0.15
Have experience in the packing field for more than 10 years	3	0.12	0.36
Have labor according to specifications	3	0.12	0.36
Have more than 130 members who can be allocated to CV HK Mojokerto	3	0.12	0.36
Have a short transition time for maximum 2 months	3	0.1	0.3
Give a beneficial compensation for CV HK Mojokerto if their performance is not good	2	0.1	0.2
Have a minimum contract period of 2 years	3	0.09	0.29
Total			2.6

Source: Processed Data.

Table 9 – Rating for PT SKT

Criteria	Rate	Weight	Total
Have license from the Manpower Office	1	0.2	0.2
Have a competitive price	3	0.15	0.45
Have experience in the packing field for more than 10 years	1	0.12	0.12
Have labor according to specifications	1	0.12	0.12
Have more than 130 members who can be allocated to CV HK Mojokerto	1	0.12	0.12
Have a short transition time for maximum 2 months	1	0.1	0.1
Give a beneficial compensation for CV HK Mojokerto if their performance is not good	1	0.1	0.1
Have a minimum contract period of 2 years	1	0.09	0.09
Total			1.3

Source: Processed Data.

The maximum value that can be obtained by prospective service provider is 3. The service provider that will be considered is the one that accumulates the rate of more than 24 or 80% of the available rate. After analysis and comparison between the three service providers, it was decided that CV HK Mojokerto would negotiate with PT BUS Mojokerto because their work costs were lower than PT KBM Sidoarjo and had a relatively short transition time.

At this stage, CV HK Mojokerto and PT BUS Mojokerto will negotiate several matters. The first is about the price per kg proposed by PT BUS Mojokerto. Even though the price per kg they offer is below the costs currently borne by CV HK, the costs they submit are still below the costs expected by CV HK through this outsourcing process. CV HK Mojokerto will use the price obtained from the proposal submitted by PT SKT to begin negotiations with PT BUS Mojokerto. Thus, PT BUS Mojokerto understands if there are other service providers who can provide more value to CV HK Mojokerto at a more competitive price, so PT BUS Mojokerto can reduce the price they submit.

In addition to negotiations about costs, the matters to be negotiated are issues of time of adaptation and compensation. CV HK proposed to PT BUS to cut their adaptation time to one or two months. After the third month, the compensation promised by PT BUS would proceed.

At this stage, the company needs to do the following points:

Laborers whose contracts will expire in a period of three months, totaling 50 people, remain in the packing division. After their contract expires, their contract will not be extended. CV HK Mojokerto did not terminate their contract before the contract period expired because it would later bring up other costs in the form of compensation for premature termination of contracts. Therefore, it was decided that they would continue to work until the end of their contract. In addition, by continuing to place them in the packing division, CV HK Mojokerto expected that they could provide examples to laborers from PT BUS Mojokerto about how to work so far. Another reason why they are still placed in the packing division is to maintain if there are laborers of PT BUS Mojokerto who do not meet the company's expectations in terms of productivity in the first three months. In other words, there are still old laborers who can back up the performance of PT BUS Mojokerto.

For laborers whose contract period is still long, they will be transferred to other divisions which still need additional labor. That was because CV HK Mojokerto could not terminate their contract halfway. That will cause huge costs, considering the number is 150 people. In addition, they have enough knowledge about how companies operate so that if they are transferred to another division, the transition time is not as long as the company is looking for new laborers.

CV HK Mojokerto will send some expert laborers in the field of nail packing to PT BUS Mojokerto a week before the cooperation contract begins. The aim is to provide lessons or knowledge transfer to PT BUS Mojokerto so that they can prepare their laborers who will be placed in CV HK Mojokerto to work on nail packing.

During the transition time, CV HK Mojokerto will later place several old laborers to help PT BUS Mojokerto employees in the early months. Thus, difficulties they experience can be helped by old employees who already have experience in nail packing.

At this stage, the company needs to do the following points:

Conduct monthly meetings so that both parties can express their expectations. This meeting is an evaluation material for improvement and planning for the following months.

Keep each other's commitment to continuously work according to the agreed contract or agreement.

Based on the research findings, planning on the outsourcing system of packing division at CV HK Mojokerto can be concluded as follows:

Table 10 – Planning on the Outsourcing System of Packing Division at CV HK Mojokerto

Stage 1: Planning	CV HK Mojokerto determined the packing target of the outsourcing system and the amount of labor that must be provided by the outsourcing service provider
Stage 2: Strategy Selection	CV HK Mojokerto chose to use the Business Processing Outsourcing type and restructure the packing division
Stage 3: Cost Analysis	CV HK Mojokerto made projections of costs for the worst and best results and compared with current costs
Stage 4: Partner Selection	CV HK Mojokerto conducted tender activity to several service providers with criteria such as: price, experience, labor skills, compensation, and length of contract
Stage 5: Negotiation	CV HK Mojokerto negotiated with PT BUS Mojokerto related to price, transition time, and compensation to get the best deal
Stage 6: Human Resource Transition	CV HK Mojokerto would provide training to employees of PT BUS Mojokerto a week before starting work. Employees whose contract period is still long will be transferred to another division.
Stage 7: Management	CV HK Mojokerto and PT BUS Mojokerto will conduct meetings every month to ensure that everything runs according to expectations.

## CONCLUSION

Based on the results of the analysis and discussion of the design of the implementation of the outsourcing system of packing division in CV HK Mojokerto, it can be concluded as follows:

The company's motive in applying an outsourcing system is due to the current increase in regional minimum wages that is no longer in line with the performance in the field which

results in higher production costs and labor performance has not achieved the target optimally. The outsourcing system is chosen because the packing work is not the company's core business. Therefore, it does not really need labors with high competence since it is more concerned with efficiency, neatness and speed. Based on the design results at each outsourcing stage, it is concluded that:

- At the planning stage, the company needs to set the target for packing results and the desired number of packing targets;
- At the strategy selection stage, the company chose to use outsourcing with Business Process Outsourcing. It means that the company hands over 1 part of the process to the third party. Furthermore, the company compiled changes to the organizational structure by including outsourcing providers and moving employees whose contracts were still running;
- At the cost analysis stage, the company needs to compare the cost of outsourcing systems with the old system. It is concluded that the selection of outsourcing systems made the company only pay labor costs according to productivity and the cost of insurance costs of IDR 15,000 per person per month. Other costs are also calculated if the results of outsourcing do not match expectations and vice versa;
- At the stage of partner selection, the company conducts tender activities to find out outsourcing labor provider which is followed by evaluation;
- At the negotiation stage, the company negotiates the scope of work and the cost per kg, the transition time and compensation from the service provider;
- At the human resource transition stage, the company needs to conduct intensive training and control in the first three months
- In the relationship management stage, the company needs to conduct monthly meetings as evaluations for improvement and planning in the following months.

## REFERENCES

1. Elmuti, D. (2003) 'The Perceived Impact of Outsourcing on Organizational Performance', *American Journal of Business*, Vol.18 Iss 2, pp. 33 – 42.
2. Indrajit, R.E., and Djokopranoto, R. (2004) *Proses Bisnis Outsourcing*. Jakarta: Penerbit Grasindo.
3. Kremic, T., Tukul, O.I., and Rom, W.O. (2006) 'Outsourcing decision support: a survey of benefits, risks, and decision factors', *Supply Chain Management: An International Journal*, Vol. 11 No. 6, pp. 467–482.
4. Miles, Matthew B., and A. Michael Huberman. (2005). *Qualitative Data Analysis*. (terjemahan). Jakarta: UI Press.
5. Moleong, L.J. (2010) *Metodologi Penelitian Kualitatif*. Bandung: Remaja Rosda Karya.
6. Pratap, S. (2014) 'Towards a framework for performing outsourcing capability', *Strategic Outsourcing: An International Journal*, Vol. 7 Iss 3, pp. 226 – 252.
7. Sugiyono. (2013) *Metode Penelitian Kuantitatif, Kualitatif and R&D*. Bandung: Penerbit CV. Alfabeta.
8. Sutrisno, E. (2009) *Manajemen Sumber Daya Manusia*. Edisi pertama. Jakarta: Kencana Prenada Media Group.

DOI 10.18551/rjoas.2019-02.24

## **THE EFFECT OF MANDATORY IFRS ADOPTION ON EARNING MANAGEMENT AND POLITICAL CONNECTION AS MODERATION VARIABLES IN COMPANIES LISTED IN INDONESIA STOCK EXCHANGE**

**Wardhana Yogi Aris Vara Wisnu**

Department of Accounting, Faculty Economics and Business, University of Airlangga,  
Surabaya, Indonesia

E-mail: [yogiaris90@gmail.com](mailto:yogiaris90@gmail.com)

### **ABSTRACT**

This study aims to look at the effect of IFRS mandatory adoption role on earnings management and to see the effect of political connections in influencing IFRS adoption of earnings management. The data used in this study came from companies listed on Indonesia Stock Exchange in 2010-2015. This research uses a quantitative approach, using moderation regression and independent t-test to answer the research hypothesis. Discretionary accruals are used as earnings management proxies. To test the influence of political connections in strengthening IFRS adoption of earnings management, moderation regression was used as the model. The independent t-test results showed that there are insignificant differences in earning management after three years mandatory IFRS adoption in Indonesia. The first regression equation result shows that adoption of IFRS in companies listed on the IDX had a insignificant effect on earnings management. The results of the second regression equation show that political connections have a significant influence on management earnings. The third regression equation shows that political connection moderation variables significantly influenced IFRS adoption of earnings management.

### **KEY WORDS**

Adoption of IFRS, mandatory adoption, earning management, political connections, moderation variable, moderation regression.

The impact of globalization Era which increases affects the investment market in Indonesia from year to year. There are rapid growths of foreign companies investing in Indonesia, many MNC (Multi National Corporate) companies that open branches in Indonesia. There are difficulties arise due to differences in financial reporting standards used by foreign investors in Indonesia and in the country of origin of investors, which lead it to difficult situation for both parties involved in doing business in Indonesia.

The Comparability of a standard can be a comparable measure which is necessary, because it will have an impact on the effectiveness of a capital market activity, in this case if the standards apply internationally, the comparison of the company's financial performance can be compared, and international capital markets become more effective (Janjean, 2008).

The use of global standards is not a condition that can create a common business language, there are still several other important factors such as management incentives and related institutional factors that have an important role in forming financial reporting characteristics (Jeanjean & Stolowy 2008). In his research, Ball et al (2003) also stated that High quality standards might be the conditions needed to form high quality information, but this is not always be true.

IFRS refers more to the principle base, professional judgment, and more disclosure is required, IASB said that IFRS can improve the quality of financial statements (source: TOT FEB UGM Material). In its own practice there is research that states that adoption of IFRS is not as expected as in China, after harmonizing Chinese GAAP with IFRS the timeliness of reported earnings reports in China is getting worse than before harmonization, this happened because the future expected earnings which increased after the effective implementation of IFRS in 2009 in China (Wu, Li, & Lin, 2014).

The implementation of IFRS in several countries in Europe is different based on the

accounting system in each country, even though IFRS is applied in order to get comparable reports, the output results remain different because there are different cultures and environments in each country in Europe (Callao, Ferrer & Lainez, 2009).

Research conducted by Tendeloo & Vanstraelen (2005) in Germany states that there is no change in earnings management between companies using German GAAP and companies that adopt IFRS voluntarily, this is because the code-law country base where investor protection rights is still very low gives less reliable results.

Research related to IFRS adoption and earnings management occurs in various countries in the world such as in the Asian continent such as China, Malaysia and those in regions in various countries in continental Europe such as France, Americas such as Brazil. Europe is one of the continents where countries on the continent show a fundamental difference in results, that the results of IFRS are not necessarily the same in each country. These differences depend on the legal structure (common law or code law), accounting culture, politics, institutions and many other factors and this is supported by the statement of Ball et al. (2003) that high quality standards are a necessary condition to obtain high quality information, but this is not always true.

Facio (2010) explained in his research that companies are considered to have political connections if at least one of the major shareholders or one of the company's leaders, CEO, vice president and secretary are members of parliament, ministers or people related to politics or commonly referred to as Politically exposed person (PEP). Political connections also play an important role in explaining the variance in the selection of a company's earnings management strategy (Braam, Nandy, & Lodh, 2015, p. 26).

The use of politics in the accounting world is introduced through the political cost hypothesis in positive accounting theory (PAT), which states that high profitability can attract the attention of mass media and consumers, which in turn can trigger political heat. Political heat triggers the emergence of new regulations aimed at companies that have high profitability (Scott 2005). Corporate Social Responsibility (CSR) is an example of regulation that arises from the impact of company profitability, because profitable companies are considered to have social and environmental responsibilities in which the company is located.

All accrual accounting includes opinions regarding future cash flow which results in a lot of freedom in implementing accounting rules. Economists and local politicians who have power or influence can determine how managers, auditors, court regulations and other parties influence the implementation of regulations (Ball, 2006).

The idea to test political connections as a moderating variable refers to the statement of Baron & Kenny, (1986) which states that moderators and predictors are at the same level in their roles as causal variables, antecedent variables, or exogenous variables and moderating variables also always function as independent variables. Judging from the results of previous research Braam et al., (2015) and Harymawan et al., (2016) which state political connections have the effect of earnings management.

Based on the Positive Accounting Theory proposed by Watts and Zimmerman (1990), the selection of policies carried out by management is based on bonuses, debt contracts and political costs which are the motivations of management in earnings management.

## LITERATURE REVIEW

IASB or International Financial Standards Board (IASB) established in London in 1973 which was originally called IASC (International accounting standard committee) Natawidjaya (2008) states that most of the standards that were part of IFRS were from International Accounting Standards (IAS).

IFRS convergence in Indonesia is carried out in three ways, first through adoption, namely direct IFRS (standardization), adaptation, namely making its own standards that do not conflict with IFRS, and harmonization that is synergizing standards with international accounting standards or not fully complying with international standards.

Based on IAI (Ikatan Akuntan Indonesia) that, the full convergence of PSAK towards

IFRS will be carried out in three stages, namely the stages of IFRS adoption (2008-2010), the final preparation stage in 2011, and the implementation stage of IFRS (2012) by gradually implementing PSAK based on IFRS and comprehensive application of PSAK ([www.iaiglobal.or.id](http://www.iaiglobal.or.id)).

The Positive Accounting Theory is all things related to predicting situations, such as management's response in choosing policies and implementing new accounting standards (Scott p-304, 2005). Positive Accounting Theory or PAT has Three Hypotheses (Watts and Zimmerman, 1990):

The Bonus Plan Hypothesis - in the bonus plan hypothesis, management chooses accounting procedures that shift the existing profit in the future to be put at the moment. For example, management bonus increases with increasing net income, so that management gets a high bonus, management increases their bonus by increasing net income one of the efforts made by choosing accounting policies that increase current earnings reports which ultimately reduce profits existing in the future period.

The debt Hypothesis - in the corporate debt contract hypothesis that pays for accounting based on debt contracts has a tendency to choose accounting procedures that shift earnings in the current period. Future earnings shift to the current period will increase net income and will reduce the likelihood that the compliance will meet the loan obligations, because in a borrower's debt contract must meet the conditions of the agreement.

The Political Cost Hypothesis - in the political cost hypothesis, the more likely the political costs faced by the company this period, the manager will choose an accounting procedure that postpones / suspends the current period's earnings to the future period. Political costs arise due to the high profitability of the company (Scott 2005), for example high profitability can lead to the emergence of new regulations such as taxes etc, and companies that have high profitability are large companies that will be faced with high performance standards and responsibility for the environment around the company increase.

The company is said to have a political connection if at least one of the large shareholders (someone who directly or indirectly controls at least 10% of the total voting shares) or one of the leaders of the company (CEO, President Director, Vice President Director, or secretary) is a member of parliament or a minister or head of state or very closely related to the company.

Accrual methods are conceptually accruals whose values are determined by management (discretion) policies. Technically, accrual itself is the differences between profit and cash. Detection of the possibility of earnings management in financial statements is generally investigated through the use of accruals, because accruals themselves are the main components of profit making and their arrangement is based on certain estimates determined by management.

Accrual accounting attempts to record the financial impact on an entity of transactions and other events related to the consequences of cash for the entity in the period in which the related transactions and events arise rather than only in the period where cash is received and paid by the entity (FASB 1985, SFAC No. 6 Paragraph 139).

Nondiscretionary Accrual - Normal accrual or non-discretionary accrual is part of the accrual that is naturally available in the process of preparing financial statements. Non-discretionary accrual is a component of accrual that occurs along with changes in company activities (Jones, 1991).

Discretionary Accrual - Discretionary accrual is an accrual component derived from earning management by a manager. Discretionary accruals are equivalent to abnormal accruals or commonly referred to as unexpected accruals. Discretionary accrual is an option to choose the policy given to the manager.

Earning management is the selection of accounting policies or concrete actions that affect earnings by management, to achieve specific goals in earnings reporting (Scott, 2009). Earning Management arises when managers use valuation in financial reporting and in the formation of transactions to change financial reporting to mislead stakeholders regarding the performance of the company concerned or for contractual results that depend on the amount of accounting reported (Healy & Wahlen, 1999).

Modified Jones model derived from Jones model (Jones, 1991) is used to determine discretionary accruals, Modified Jones is a modification of the Jones model by adding changes in revenue as a deduction of changes in receivable.

## HYPOTHESIS DEVELOPMENT

Until now, more than 100 countries have adopted IFRS as an accounting standard and applied in companies in their country, even though there are used it voluntary or mandatory. IFRS is claimed by the IASB to improve the quality of financial statements, but in practice the use of IFRS in various countries has produced different results even though they are adopted IFRS. Previously several studies have been conducted to see the difference after adopting IFRS on earnings management. In his research, Capkun (2016) conducted research in 29 countries from 1994 to 2004 and the results showed no difference in earnings management before and after the adoption of IFRS. Different results are shown by research conducted by Lei Cai (2008). The study was conducted in 32 countries between 2000-2006 which stated that there were differences in earning management in countries adopting IFRS.

The difference in the results of IFRS adoption in various countries was explained by Barth in his research that the implementation of high quality standards such as IFRS also depends on political, legal and accounting systems to get the full benefits of IFRS adoption. Indonesia enforces mandatory IFRS adoption to be effective on 1 January 2012 but adoption of IFRS in Indonesia itself has been carried out in stages since 2008. After mandatory adoption of IFRS in 2012 is there a difference in earnings management after IFRS adoption took effect in 2012 for companies that which is listed on the Indonesia Stock Exchange. Based on the results of previous studies, the hypothesis can be made as follows:

H1: Earning management has changes after three years mandatory IFRS adoption enforces in 2012 for companies listed on the IDX (Indonesia Stock Exchange).

Earning management practices can work because of the freedom of policy selection made by management in making financial reports, but that freedom still refers to the applicable standards, because IFRS is a high quality standard it is considered able to improve the quality of financial statements.

Within a few years it was known that there was an increase in the quality of earnings which meant that earnings management practices had been reduced after several years of IFRS adoption in Malaysia (Adibah et al., 2013) and (Sellami et al., 2013), but this was different from the results of the study conducted by (Wu et al., 2014) in China after adopting IFRS the timeliness of earnings reporting worsened over time, this shows that the IFRS advertisement actually decreases the quality of earnings before the PRC GAAP period in China.

There are differences in results in some countries that adopt IFRS, there are countries that do experience an increase in the quality of earnings but there are also in some other countries that have not increased (Capkun et al., 2016) and (Daske et al., 2008). that the effect of IFRS Adoption on earnings management will be different from each country and the adoption period is carried out. Based on the results of previous studies, the hypothesis can be made as follows:

H2: Adoption of IFRS has an effect on earnings management.

Theoretical research on political connections shows that companies benefit from their connections because they can better understand the public policy process, gain direct access to politicians, bureaucracies, and decision makers who influence political decisions (Hillman, 2005).

In his research, Chaney et al. (2011) stated that the quality of earnings of companies that have political connections is worse than companies that do not have political connections. This happens because companies that have political connections do not respond too much to the pressure from the capital market to improve their earnings information quality and they also do not risk punishment because they show less quality accounting information to the public.

In his research Braam et al., (2015) stated that political connections can influence

earnings management practices more than the earnings management strategies used. The choice of strategy is more to when using accrual and real earnings management. In the research conducted by Harymawan & Nowland, (2016), it shows that the quality of earnings in companies that have a political relationship increases with increasing government effectiveness and will tend to decline when the political environment is stable. So it can be said that political connections have an influence on earnings management. Based on the results of previous studies, the hypothesis can be made as follows:

H3: Political connection influences earnings management.

In his research Soderstrom & Sun, (2007) states that the system of legality and politics affect accounting quality indirectly through accounting standards, which is explained that the preparation of accounting standards is a political process. In its efforts to reduce political influence, users of financial statements such as those authorized by tax, representatives of banks, share holders are also involved in the process. The political system can also directly affect the quality of accounting in countries that have a corrupt political system. Management can bribe politicians to request government purchases, lower tax payments, and monopoly status.

In a company in the ranks of top management the selection of policies regarding accounting standards is determined by the Board of Directors and the Board of Commissioners. Let's say that in one company, one of them is BOD and BOC has a political connection, so they have more access to regulators as suggested by Hillman et al (2005) in their research. This is of course a distinct advantage for companies that have political connections compared to companies that have no political connections.

One of the advantages of companies that have political connections is explained in his research Chaney et al (2011) that the company does not have the risk of penalties if it shows a lack of quality accounting reports., so it can be said that even though the adoption of high quality standards such as IFRS cannot be fully optimized because of the political connections that BODs and BOCs have because political connections can also intervene indirectly in the standard adoption process. If viewed from the results of the previous research had described above, it can be concluded that if IFRS adoption interacts with political connections it can be said that it can reduce the benefits of IFRS adoption in its objectives that improve the quality of financial statements. And in this case the context of the quality of financial statements is seen from earning management carried out by the company. Based on the results of the above research, the following hypotheses can be made:

H4: Political connection moderating IFRS adoption of earnings management.

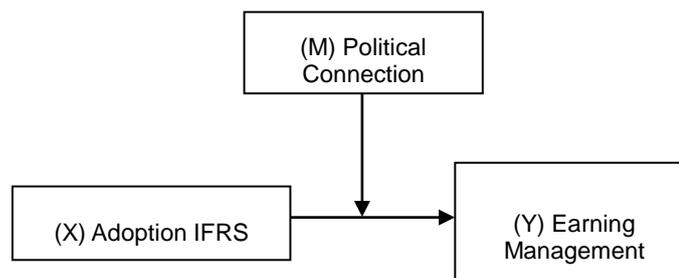


Figure 1 – Research Model

Regression Equation Model from the research model above:

$$EM = \text{AdoptionIFRS} + \text{FSIZE} + \text{LEV} + \text{GROWTH} + \text{YEAR} + \text{INDUSTRI} \dots (1)$$

$$EM = \text{AdoptionIFRS} + \text{PoliticalConection} + \text{FSIZE} + \text{LEV} + \text{GROWTH} + \text{YEAR} + \text{INDUSTRI} \dots (2)$$

$$EM = \text{AdoptionIFRS} + \text{PoliticalConection} + (\text{AdoptionIFRS} \times \text{PoliticalConection}) + \text{FSIZE} + \text{LEV} + \text{GROWTH} + \text{YEAR} + \text{INDUSTRI} \dots (3)$$

## METHOD OF RESEARCH

The type of research used in this study is quantitative research. Quantitative research focuses more on theories through testing variables with statistical procedures (Sekaran, 2006). The type of data in this study is secondary data because the data are financial reports from the Indonesia Stock Exchange to measure IFRS adoption, discretionary accruals, firm size, leverage, growth and summary financial statements to determine SIC (Sector Industry Code) and the type of measure used is nominal data source from the research in the form of audited financial statements obtained from the IDX website (www.idx.org). The research sample is all companies listed on the IDX (Indonesia Stock Exchange) except all financial sector companies such as the bank sub-sector, financial institutions, securities companies. The population in this study must meet several criteria to avoid incomplete data or misspecification. Criteria used include:

- There are no financial statement data lost during the study period;
- Companies that publish financial reports and annual reports in 2010-2015;
- There are no data from companies engaged in financial, bank sub-sector, securities companies (SIC 8);
- There are no BUMN company in list (State-Owned Enterprise);
- There are no new company was listed on the IDX in 2014 and 2015.

The independent variable in this study is IFRS adoption. The variables of IFRS adoption are measured as in the research of Wan Ismail et al., (2013) and Rudra & Bhattacharjee (2012) which are dummy variables consisting of values 0 and 1, worth 1 in financial statements after 2012, mandatory IFRS is applied and has a value 0 before 2012.

The dependent variable in this study is earnings management. Earning management variables were measured as in Dechow's research (1995) using discretionary accrual as earnings management proxy and using modified Jones models as discretionary accrual measurement models. Modified Jones models are the best testing model for measuring earnings management compared to Healy De Angelo, standard Jones models and industry models (Dechow et al 1995):

$$TA_i = NetIncome - CFO / ASSET_{t-1} \dots (4)$$

$$NDA_{it} = \alpha_1 (1 / ASSET_{t-1}) + \alpha_2 (\Delta REV_{it} - \Delta REC_{it} / ASSET_{t-1}) + \alpha_3 (PPE_{it} / ASSET_{t-1}) + e_{it} \dots (5)$$

$$DA_{it} = TA_{it} - NDA_{it} \dots (6)$$

Where:  $TA_{it}$  = Company Total accrual i in year t;  $ASSET_{t-1}$  = Total Asset in year t-1;  $\Delta REV_{it}$  = Changes of sales company i in year t;  $\Delta REC_{it}$  = change of receivable company i in year t;  $PPE_{it}$  = Property Plant and Equipment company i in year t;  $\alpha_1, \alpha_2, \alpha_3$  = firm-specific parameters;  $\Delta CFO$  = Cash Flow from Operation activities.

The moderating variable in this study is political connection. In research, measuring political connections is measured as in a study conducted by Harimawan et al (2017) using a politically exposed person (PEP). Exposed person politic is categorized as president, minister or equal position, governor, director of BUMN, head and political party, senior TNI or Police, senior judiciary, and relations with parties who have political connections with one line (parents, siblings, child). Value 1 if one of the BOD and BOC has one of the points above and vice versa is worth 0 if it does not have the above category.

Measured firm size as in the study of Daniel Zeghal (2011) by using natural logarithms from the total value of the company's assets:

$$FSIZE = \ln (\text{Company Total Assets})$$

Leverage is measured as in the Capkun (2016) study using a ratio by means of total liabilities (current and long-term) divided by the total assets of the company:

$$DER = \text{total liabilities} / \text{total equity}$$

Growth is measured as in Capkun research (2016) using the percentage change in sales by means of sales minus the previous year's sales, and divided by previous year's sales:

$$\text{Sales GROWTH} = \frac{\text{Sales}_t - \text{Sales}_{t-1}}{\text{Sales}_{t-1}}$$

Year is Year Fixed Effect is a fixed effect model in the formulation of regression. The existing intercept panel data varies for each subject, but the slope of each sub-object remains. So to distinguish one subject from another subject, dummy variables are used.

Industry is Industry fixed effect is a fixed effect model in the formulation of regression similar to the year fixed effect. The existing intercept panel data varies for each subject, but the slope of each subject remains. So to distinguish another subject, a dummy variable is used.

## RESULTS AND DISCUSSION

Descriptive statistics provide a general description of the variables tested in the study. Descriptive statistics provide information about the minimum, maximum, average and standard deviations of these variables. This descriptive statistic comes from 1652 observations over a period of 6 years.

Table 1 – Variable Description

Variable	N	Mean	Std. Dev	Min	Max
A_IFRS	1652	0.6658596	0.4718319	0	1
KP	1652	0.2748184	0.4465579	0	1
ABS_DA	1652	0.7705677	4.63825	0.0000253	76.04256
FSIZE	1652	17.60919	3.256142	6.512473	29.70149
LEVERAGE	1652	2170141	84411.38	-51.33274	3427959
GROWTH	1652	0.3042138	5.432928	-1.000	215.1378

Source: Data Processed with Stata 14.

Note: A\_IFRS is IFRS adoption, the value will be 1 if it has been adopted IFRS and has 0 vice versa; KP is a political connection referring to a PEP or political exposed person; ABS\_DA is the absolute value of discretionary accrual that refers to the modified Jones model; FSIZE is the size of the company referring to the value of the natural logarithm of company total assets; LEVERAGE refers to DER; GROWTH refer to sales Growth.

In table 1 is the result of the descriptive statistics of the research variables from the 2010-2015 year. There is 1652 Observation. Detail the results of descriptive statistics explained as follows:

- Variable A\_IFRS Adoption of IFRS is a dummy variable that has an average value of 0.665 with a range of minimum and maximum values of 0 and 1, and has a standard deviation value of 0.471;
- KP variable or political connection here is a dummy variable that has an average value of 0.274 and a standard deviation of 0.446 with a range of minimum and maximum values of 0 and 1;
- The average value of the ABS\_DA variable or discretionary accrual is 0.7705 with minimum and maximum values of 0.000 and 76.0425 with a standard deviation value of 4.6382;

- The average value of the firm size is 17.6091 and the minimum and maximum range values are 6.5124 and 29.7041, and have a standard deviation of 3.2561;
- The average value of leverage is 2170 with a minimum and maximum range of -51, 3327 and 3427, and has a standard deviation of 8441;
- The average value of growth is 0.3042 with a minimum and maximum range of -1,000 and 215,1378, and has a standard deviation of 5,4329.

Independent t-test is used to see the differences between two categories by comparing the mean values between variables. In this t-test the variables were categorized into two groups, namely the category of pre-mandatory IFRS Adoption and 2013-2015 post-mandatory IFRS Adoption.

Table 2 – Independent t-test

Period	N	Mean	Std. Dev	P-value
<i>Earning management</i>				
Pre Mandatory IFRS	551	0.5330	4.2707	0.1254
Post Mandatory IFRS	1101	0.8897	4.8095	

Source: Data Processed with Stata 14.

The statistical test of independent t-test on earning management variables has a probability value of 0.1254, this value is greater than 0.05 ( $0.0116 > 0.05$ ). These results indicate that H1 is rejected, meaning that there is no significant difference between earnings management before mandatory IFRS and after mandatory adoption of IFRS. Viewed from the mean (average) shows that after adoption, the mean is higher with a value of 0.8897 compared to before the mandatory adoption of IFRS with a value of 0.5330. The results of the Independent t-test above did not support H1, namely earning management experienced a difference after three years after the entry into force of IFRS in mandatory in 2012 for companies listed on the IDX (Indonesia Stock Exchange).

Based on the results of the independent t-test hypothesis one which states that there are differences in earnings management after IFRS mandatory adoption is rejected, because based on the results of the independent t-test there is no difference after mandatory IFRS adoption in 2012. These results are indicated by p-value values greater than 5% ( $0.125 < 0.05$ ) and the t value is smaller than the t-table value ( $-1.5337 < 1.960$ ) which is significant at the 5% level. The results of this study which showed no difference in the level of earnings management after mandatory adoption of IFRS as well as research conducted by Christensen (2008) and Van Tendeloo & Vanstraelen, (2005). This result is different from the previous research which states that there are differences in earnings management after adopting IFRS (Barth, Landsman, & Lang, 2008; Pelucio-Grecco et al., 2014; Zéghal et al., 2011). These results do not match what said by the IASB (International Accounting Standard Board) that the use of IFRS can improve the quality of earnings.

Moderation regression analysis is used to assess empirically the relationship between IFRS adoption towards earnings management, political connections to earnings management and the moderating effect political connection variables in influencing the influence of FIRS adoption on earnings management in listed companies on the Indonesian stock exchange in 2010-2015.

Based on the results of the one equation regression one which tested there was an effect of IFRS adoption on earnings management, indicating that the second hypothesis refer to IFRS adoption affected earnings management was rejected. It can be seen that the p value of IFRS adoption of earning management is smaller than 0.146 ( $0.146 > 0.01$ ) and the coefficient of -0.571. This indicates that IFRS adoption has a negative and insignificant effect on earnings management, which means that adoption of IFRS has no effect in reducing earnings management practices in companies listed on the IDX.

The results of the regression equation above show that IFRS adoption has no effect on earnings management after mandatory IFRS adoption implemented, this result is similar to the results of previous studies stating that there is no decrease in earnings management

after IFRS adoption (Christensen, 2008; Ahmed et al, 2010; Rudra et al., 2012). This result is different from the results of previous studies stating that IFRS adoption has an influence in reducing earnings management practices (Barth, Landsman, & Lang, 2008; Pelucio-Grecco et al., 2014; Zéghal et al., 2011).

Table 2 – Regression Equation

Variable	Equation 1 ABS_DA	Equation 2 ABS_DA	Equation 3 ABS_DA
A_IFRS	-0.572	-0.572	-0.628
	-0.146	-0.145	-0.110
KP	-	-0.771***	-1.484***
		-0,002	0
A_IFRSxKPs	-	-	1.072**
			-0,038
FSIZE	-0.297***	-0.308***	-0.309***
	0.000	0.000	0.000
LEVERAGE	0.000	0.000	0.000
	-0,945	0.000	0.000
GROWTH	-0.002	0,000	0,002
	-0.932	-0.991	-0.912
Constant	6.498***	6.809***	7.066***
Observation	1652	1652	1652
R-squared	0.102	0.108	0.11
Industry	Included	Included	Included
Year	Included	Included	Included
Adjusted R-squared	0.0937	0.0984	0.1003

Source: Data Processed with Stata 14.

Note: \*\*\*, \*\*, \* represent the statistical significance at the level respectively 1%, 5%, 10%.

#### Result of Regression Equation 1:

$$ABS\_DA = -0,016328 - 0,213 A\_IFRS - 0,171 FSIZE - 0,140 LEV - 0,006 GROWTH$$

The results of research by Barth et al (2008) in 21 countries stating that Adoption of IFRS succeeded in reducing earning management and recognition of losses more timely, the number of share prices and associated income was higher.

The results of research by Zéghal et al. (2011) in France state that mandatory adoption of IFRS reduces the level of earnings management of companies that have good corporate governance and those who depend on foreign capital markets. In the results of the research by Pelucio-Grecco et al., (2014), the success of IFRS adoption in reducing earnings management due to regulatory support that regulates investor protection, without regulations that regulate the adoption of IFRS will be successful in reducing earnings management practices.

Positive Accounting Theory is all things related to predicting situations, such as management response in choosing policies and applying new accounting standards (Scott, 2005). In accrual accounting, the accrual method in concept is determined by management discretion and earnings management estimation is generally examined through the use of accruals because accruals themselves are the main component of earnings earning. It can

be said that PAT and accrual accounting are interrelated because discretion or the selection of accounting policies can affect the value of earnings of the company. Adoption of IFRS affects earnings management not in theory because the management of IFRS-based policies by the management does not affect the company's earnings management. The results of this study differ may be influenced by other factors such as differences in legal and political systems (Ball, 2006).

Result of Regression Equation 2:

$$ABS\_DA = -0,0014269 - 0,213 A\_IFRS - 0,098 KP - 0,177 FSIZE - 0,77 LEV - 0,004 GROWTH$$

The results of the equation regression two which examined the effect of political connections on earnings management showed that the third hypothesis, refer to political connections affecting earnings management, was accepted. Political connections have a significant negative effect on earnings management. can be seen from the value of p value KP against ABS\_DA 0.002 smaller than 0.01 ( $0.002 < 0.01$ ), and the coefficient worth -0.770. this shows that political connections can reduce the level of earnings management.

The regression results of equation 2 shows that political connections can influence earnings management, these results are also obtained in previous studies (Faccio, 2010; Braam et al., 2015; Harymawan et al., (2016); Jin lao (2015). Bram (2015) said that political connections influence the selection of earnings management strategies used by companies. In his research, Harymawan et al (2006) stated that earnings management increases with government effectiveness, which means that regulations set by the government can affect earnings management. regression test equation 2 shows that the third hypothesis is accepted, because political connections affect earnings management significantly ( $0.002 < 0.01$ ) with a coefficient of -0.770.

The results of this study are different from the results of the research by Imashan (2017). In a study conducted by Imanshan (2017) stating that there is no influence of political connections on earnings management, the results of this difference may be due to differences in political connection proxies used in imashan's research (2017) where political connections are proxied through the government's share ownership of the company. The political connection proxies are different from the proxies used in this study that use political exposed person (PEP) as a proxy for political connections.

When the Board of Directors and Board of Commissioners have positions in the government or are state apparatus, as well as members of political parties that have influence in regulating regulations. Then the BOD or BOC has the advantage of making regulations which impact on policies that must be stabilized by company management which can benefit them and weaken their business competitors. Profitable policies will certainly affect the company's earnings. The strength of the political connection that BOD and BOC has is in accordance with the bonus plan hypothesis in positive accounting theory, where if earnings increase, bonuses also increase. It can be said that the bonus obtained by management depends on the way the management manages profits, which makes political connections influence the earnings management strategy used. So the political connection affects the earnings management in accordance with the results of this study.

Result of Regression Equation 3:

$$ABS\_DA = 0,2183 - 0,013 A\_IFRS \times KP - 0,218 A\_IFRS - 0,108 KP - 0,1769 FSIZE - 0,142 LEV - 0,003 GROWTH$$

Based on the results regression equations three were conducted to examine the effect of political connections in moderating the effect of IFRS adoption on earnings management, indicating that political connections weakened the effect of IFRS adoption on earnings management or moderated the effect of IFRS adoption on earnings management. Based on the results of the regression test equation three shows that the fourth hypothesis is accepted.

Based from the p value A\_IFRSxKP towards ABS\_DA greater than 0.038 ( $0.038 < 0.05$ ) and the coefficient vaue 1.0721, this indicates that the interaction variable A\_IFRSxKP has a

significant positive effect on earnings management so if there is a 1 point increase  $A\_IFRS \times KP$  then  $ABS\_DA$  will increase only the coefficient value. because political connections increase the influence of IFRS adoption on earnings management. This may be because the political connection strategy contradicts the objectives of IFRS adoption itself, it can be said that political connections can influence earnings management strategies used by companies (Braam et al., 2015). Adoption of IFRS is considered to reduce the practice of earnings management which limits the earnings management strategy that can be done (Braam et al., 2015). It can be concluded that political connections can weaken the effect of IFRS adoption on earnings management even though it is the same as IFRS adoption which can negatively affect earnings management which makes the fourth hypothesis accepted.

The results of this study are the same as Song et al., (2011) which also uses political connections as a moderating variable and where the results of research on political connections have been able to moderate IFRS adoption of earnings management. This result is the same even though there are differences in predictor variables used, in his study (Song et al., 2011) using  $EPS / Price$  which was interacted with political connections, his research results indicate that political connections moderate the influence of  $EPS / Price$  on earnings management while using this study IFRS adoption as a predictor variable which is a dummy variable. The results of this study indicate that political connections moderate the effect of IFRS adoption on earnings management. The results of this study are the same as the results of the research conducted (Song et al., 2011a) although there are differences in the object of research in this study the object of research is all companies listed on the IDX, namely companies that are open or open to the public. al., (2011) the object of research is a private company.

In PAT theory above, it has been explained that IFRS adoption can influence earnings management. The results of this research do not support the theory because the results of this study do not indicate the influence of IFRS adoption on earnings management. In contrast to political connections, the results of the study show that political connections can affect earnings management. When BOD and BOC companies have political connections they have the opportunity to regulate the regulations which make IFRS adjust to existing regulations and make the management of other companies follow standards that do not conflict with regulations and benefit BOC and BOD who have such political connections.

The results of the interaction between IFRS and political connections have an influence on earnings management. These results may be caused by differences in the objectives of each variable. IFRS adoption aims to reduce earnings management, while on political connections the effect on earnings management is more on the selection of strategies used in earnings management, which impacts on the higher earnings management by the company if the company has political connections. So it can be said that political connections have a role that can weaken the effect of adopting IFRS on earnings management in accordance with PAT theory. When BOD and BOC companies have political connections they have the opportunity to regulate regulations which make IFRS adjust to existing regulations and make the management of other companies follow standards that do not conflict with regulations and benefit BOC and BOD who have such political connections.

The results of the interaction between IFRS and political connections have an influence on earnings management. These results may be caused by differences in the objectives of each variable. IFRS adoption aims to reduce earnings management, while on political connections the effect on earnings management is more on the selection of strategies used in earnings management, which impacts on the higher earnings management by the company if the company has political connections. So it can be said that political connections have a role that can weaken the effect of adopting IFRS on earnings management in accordance with PAT theory.

## **CONCLUSION**

Based on the results of the tests that have been obtained and as the discussion that has been explained in the previous chapter, it can be concluded several things as follows: there is no significant differences in earnings management after three years mandatory IFRS

adoption in company listed in IDX this shows that adoption of IFRS still has not shown results in reducing earnings management in IDX-listed companies. IFRS adoption has no effect on earnings management. Adoption of IFRS has no effect on earnings management indicating that adoption of IFRS cannot reduce earnings management practices. Political connections have a negative effect on earnings management. This shows that political connections are influential in reducing the practice of earnings management. The moderating variable weakens the effect of IFRS adoption on earnings management. This shows that companies that have political connections have a tendency to do earnings management for their own benefit that make adoption of IFRS no fully optimal.

## REFERENCES

1. Adibah Wan Ismail, W., Anuar Kamarudin, K., Van Zijl, T., & Dunstan, K. (2013). Earnings quality and the adoption of IFRS-based accounting standards: Evidence from an emerging market. *Asian Review of Accounting*, 21(1), 53–73.
2. Ball, R., Robin, A., & Wu, J. S. (2003). Incentives versus standards: properties of accounting income in four East Asian countries. *Journal of Accounting and Economics*, 36(1), 235–270.
3. Barth, M. E., Landsman, W. R., & Lang, M. H. (2008). International accounting standards and accounting quality. *Journal of Accounting Research*, 46(3), 467–498.
4. Braam, G., Nandy, M., Weitzel, U., & Lodh, S. (2015). Accrual-based and real earnings management and political connections. *The International Journal of Accounting*, 50(2), 111–141. <https://doi.org/10.1016/j.intacc.2013.10.009>
5. C., Jarne, J. I., & Lainez, J. A. (2009). The impact of IFRS on the European Union: Is it related to the accounting tradition of the countries? *Journal of Applied Accounting Research*, 10(1), 33–55.
6. Capkun, V., Collins, D., & Jeanjean, T. (2016a). The effect of IAS/IFRS adoption on earnings management (smoothing): a closer look at competing explanations. *Journal of Accounting and Public Policy*, 35(4), 352–394.
7. Capkun, V., Collins, D., & Jeanjean, T. (2016b). The effect of IAS/IFRS adoption on earnings management (smoothing): a closer look at competing explanations. *Journal of Accounting and Public Policy*, 35(4), 352–394.
8. Chaney, P. K., Faccio, M., & Parsley, D. (2011). The quality of accounting information in politically connected firms. *Journal of Accounting and Economics*, 51(1-2), 58–76.
9. Daske, H., Hail, L., Leuz, C., & Verdi, R. (2008). Mandatory IFRS reporting around the world: Early evidence on the economic consequences. *Journal of Accounting Research*, 46(5), 1085–1142.
10. Dechow, P. M., Sloan, R. G., & Sweeney, A. P. (1995). Detecting earnings management. *Accounting Review*, 193–225.
11. Doukakis, L. C. (2014). The effect of mandatory IFRS adoption on real and accrual-based earnings management activities. *Journal of Accounting and Public Policy*, 33(6), 551–572.
12. Harymawan, I., Harymawan, I., Nowland, J., & Nowland, J. (2016). Political connections and earnings quality: How do connected firms respond to changes in political stability and government effectiveness? *International Journal of Accounting & Information Management*, 24(4), 339–356.
13. Healy, P. M., & Wahlen, J. M. (1999). A review of the earnings management literature and its implications for standard setting. *Accounting Horizons*, 13(4), 365–383.
14. Hillman, A. J. (2005). Politicians on the board of directors: Do connections affect the bottom line? *Journal of Management*, 31(3), 464–481.
15. Iatridis, G., & Rouvolis, S. (2010). The post-adoption effects of the implementation of International Financial Reporting Standards in Greece. *Journal of International Accounting, Auditing and Taxation*, 19(1), 55–65.
16. Jeanjean, T., & Stolowy, H. (2008). Do accounting standards matter? An exploratory analysis of earnings management before and after IFRS adoption. *Journal of Accounting*

- and Public Policy, 27(6), 480–494.
17. Jones, J. J. (1991). Earnings management during import relief investigations. *Journal of Accounting Research*, 193–228.
  18. Latan, H. (2014). *Aplikasi Analisis Data Statistik untuk Ilmu Sosial Sains dengan Stata*. Bandung: Alfabeta.
  19. Pelucio-Grecco, M. C., Geron, C. M. S., Grecco, G. B., & Lima, J. P. C. (2014). The effect of IFRS on earnings management in Brazilian non-financial public companies. *Emerging Markets Review*, 21, 42–66.
  20. Purwanto S.K, S. (2009). *Statistika: Untuk Ekonomi dan Keuangan Modern*. 2nd ed. Jakarta: Salemba Empat.
  21. Sellami, M., & Fakhfakh, H. (2013). Effect of the mandatory adoption of IFRS on real and accruals-based earnings management: Empirical evidence from France. *International Journal of Accounting and Economics Studies*, 2(1), 22–33.
  22. Sekaran, U. (2011). *Research Method For Bussines*. 4th ed. Jakarta: Salemba Empat.
  23. Soderstrom, N. S., & Sun, K. J. (2007). IFRS adoption and accounting quality: a review. *European Accounting Review*, 16(4), 675–702.
  24. Song, Y., Wang, L., & Yan, Z. (2011). Impacts of Political Connections on Earnings Quality of Chinese Private Listed Companies (Vol. 211).
  25. *Stata User Guide Release 15*. (2017). College Station, Texas: A Stata Press Publication.
  26. Van Tendeloo, B., & Vanstraelen, A. (2005). Earnings management under German GAAP versus IFRS. *European Accounting Review*, 14(1), 155–180.
  27. Wu, G. S., Li, S., & Lin, S. (2014). The effects of harmonization and convergence with IFRS on the timeliness of earnings reported under Chinese GAAP. *Journal of Contemporary Accounting & Economics*, 10(2), 148–159.
  28. Zéghal, D., Chtourou, S., & Sellami, Y. M. (2011). An analysis of the effect of mandatory adoption of IAS/IFRS on earnings management. *Journal of International Accounting, Auditing and Taxation*, 20(2), 61–72.

DOI 10.18551/rjoas.2019-02.25

## **ANALYSIS OF FACTORS THAT INFLUENCE THE COMPLIANCE OF TAX AND RESTAURANT TAXES IN TABANAN REGENCY OF BALI, INDONESIA**

**Wirawati Ni Gusti Putu\*, Putra I Nyoman Wijana Asmara**

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

\*E-mail: [ngpwirawati@unud.ac.id](mailto:ngpwirawati@unud.ac.id)

### **ABSTRACT**

This study aims to examine the effect of service quality, enforcement of tax sanctions, distributive justice and moral obligations of hotel and restaurant taxpayers on tax compliance. The study was conducted in Tabanan Regency, Bali, Indonesia with respondents to the owners or general managers of hotels and restaurants. The method of determining the sample with probability sampling using proportional stratified random sampling technique. So that 65 respondents were obtained. The source of research data is primary data collected by the method of Data analysis technique used is multiple linear regression. The analysis shows that distributive justice has a positive effect on hotel and restaurant taxpayer compliance, service quality has a positive effect, while enforcement of tax sanctions and moral obligations has no effect on hotel and restaurant taxpayer compliance in Tabanan Regency.

### **KEY WORDS**

Tax, quality, sanctions, distributive justice.

Regional autonomy opens opportunities to increase regional independence. Regions are given the authority to regulate and manage their own government affairs, including exploring the broadest potential of Local Revenue (PAD). Regional Original Income (PAD) is regional income derived from regional taxes, regional levies, separated regional wealth management, and other legitimate local revenue, which aims to provide flexibility to the region in exploring funding for the implementation of regional autonomy as embodied the principle of decentralization.

In general, taxes are defined as levies from the state to the people, which are compelling. Taxes are used to finance government expenditures including financing for development that is useful for mutual interests. Taxes cannot be separated from government; this is because taxes are an element of the implementation of government functions. Tax is one way to divert wealth from the private sector to the public sector needed to carry out government functions. Hotel and restaurant taxes can be classified as indirect taxes, where the tax is based on the services provided to these consumers, the burden is on consumers. The hotel and restaurant owner / entrepreneur are the party who collects and deposits the tax yield to the agency which authorized to receive the tax collection.

Regional taxes must also have a legal basis so that these levies can be forced. As with the central tax, regional taxes also have an element of coercion in their collection so that a legal basis is needed. However, the regional tax can be applied using a legal basis in the form of regional regulations. Hotel and Restaurant Taxes (PHR) include elements of Regional Tax which contribute to Locally-generated revenue (PAD).

The large contribution of hotel and restaurant taxes also occurred in Tabanan Regency. This is confirmed by the fact that the plan to build a hotel by the President of the United States, Donald Trump in the Pan Pacific Nirwana Bali Resort area, Tanah Lot, could directly threaten the finances of Tabanan's Government. That is because the development that is likely to be carried out for three years automatically eliminates hotel and restaurant taxes, whose annual value reaches Rp. 31 billion. (Tribun-Bali.com). Based on the results of hotel and restaurant tax audits, it shows that taxpayers are still found.

Compliance with hotel and restaurant taxpayers in Tabanan Regency is governed by Law No. 28 of 2009 concerning Regional Taxes and Regional Levy. The law stipulates that regional taxes are the contribution of taxpayers to regions that are forced by not receiving

direct compensation for regional needs and prosperity of the people. This provision confirms that hotel and restaurant taxpayers in Tabanan Regency must fulfill their tax obligations. Based on the background of the problem which is the main problem is what factors influence the compliance of hotel and restaurant taxpayers in Tabanan Regency?

Non-compliance of taxpayers can be caused by the absence of direct incentives felt by taxpayers or the existence of taxpayer dissatisfaction with public services. (Manurung, 2013) states that non-compliance of taxpayers in paying taxes can also be caused by tax penalties that are still mild. Compliance with compulsory hotel and restaurant tax is very important for the receipt of PAD. If taxpayer compliance does not increase, it can threaten regional revenues and threaten government efforts to improve people's welfare (Chau and leung, 2009, Faudi, 2013). A sense of justice for taxpayers can also affect taxpayer compliance. Quality of service is also very meaningful for taxpayers. Enforcement of sanctions can create tax compliance and is considered an effective policy to prevent non-compliance of taxpayers. Motivation from within the taxpayer is also very important, especially the moral obligations possessed by taxpayers. Based on the description, the purpose of the research specific research is as follows:

- provide empirical evidence of the effect of distributive justice on taxpayer compliance;
- provide empirical evidence of the effect of service quality on tax compliance;
- provide empirical evidence of the effect of sanction enforcement on tax compliance;
- provide empirical evidence of the effect of moral obligations on taxpayer compliance.

The obligation of hotel entrepreneurs to pay hotel taxes is regulated by the Regional Regulations of Tabanan Regency Number 24 Year 2011 About Hotel Taxes and regional regulations Number 23 of 2011 regulating restaurant taxes. In the regulation it is stated that an individual or entity buys food and / or drinks in a restaurant. The Hotel Tax subject is an individual or entity that makes payments to individuals or agencies that seek hotels. This regulation confirms that hotel and restaurant taxpayers in Tabanan Regency must fulfill their tax obligations.

## LITERATURE REVIEW

This study analyzes the factors that influence the compliance of hotel and restaurant taxpayers in fulfilling their tax obligations. Compliance with hotel and restaurant taxpayers for their tax obligations, in this study, viewed from two perspectives, namely from taxpayer external factors, namely perceptions of distributive justice, service quality and tax sanctions. While internal factors of taxpayers are a moral obligation. This study uses attribution theory and compliance theory as the theoretical basis.

Attribution theory studies the process of someone interpreting an event and learning how someone interprets the reason or cause of his behavior (Suartana, 2010). Attribution theory views individuals as amateur psychologists who try to understand the causes that occur in the various events they face. This theory tries to find out what causes what, or what drives who does what. The response given to an event depends on our interpretation of the event (Kelly, 1972, 1973).

Attribution theory states that individual behavior can arise internally and externally (Robbins, 2008). Behavior caused internally is believed to be under the individual's own control or comes from internal factors such as personality traits, awareness and abilities. This is referred to as internal attribution. Behavior caused by individual external factors is influenced by external factors such as equipment or social influences from others. This means that the individual is forced to behave in a situation, this is an external attribution.

Attribution theory is used in taxpayer compliance research related to the attitude of taxpayers in assessing tax obligations that must be done. Attribution theory states that related to one's behavior, individuals will try to classify the behavior caused by internal or external influences (Robbins, 2008).

Compliance comes from obedient words, according to the Indonesian General Dictionary, obedient means to like and obey orders or rules, and be disciplined. Compliance means obedience, obedience, submission to teachings or rules. Compliance with a system of

rules has a consequence on social interactions that run well, without the possibility of changing into open or veiled conflicts in chronic conditions (Ardani, 2010).

Compliance is the motivation of a person, group or organization to act or not in accordance with established rules. A person's obedient behavior is the interaction of the behavior of individuals, groups and organizations. Compliance is divided into two (OECD, 2001), namely:

- Administrative compliance is compliance with administrative rules such as timely payments, definitions contained in administrative compliance including reporting requirements, procedural compliance or compliance with regulations;
- Technical compliance, namely compliance with tax calculations in accordance with technical tax law or taxpayers pay the tax portion that they must pay in accordance with the provisions of the law.

Compliance with taxpayers is compliance with calculations, deposits and tax reporting. Distributive Justice. Ulupui (2005) states distributive justice is related to outcomes because the emphasis is on distribution received without considering how the distribution is done. This study explains distributive justice in the variable taxpayer compliance. Tjahyono's research (2008) revealed that distributive justice is more dominant in influencing individual satisfaction, because individuals have attention and interest in the location of goods and services for their welfare, so that the local government through the Dispenda needs to review the tax payment allocation aspects with general development.

Service quality is a comparison between what the customer wants about their assessment of the actual performance of a service provision. Tjiptono (2002: 70), states that there are five dimensions to evaluate the quality of services, namely:

- Physical evidence (tangibles), is a physical facility, employee, equipment and communication;
- Reliability, is the ability of officers to provide services that promise promptly and satisfactorily;
- Responsiveness is a characteristic of compatibility in human services, namely the desire of tax officials to assist taxpayers and provide responsive services;
- Assurance, which includes the ability, politeness and trustworthiness of the tax officer free from risk, danger, or doubt;
- Empathy, which includes the ease of officers in making good communication relationships and understanding taxpayers.

Taxation sanctions are a guarantee that the provisions of taxation laws (norms of taxation) will be obeyed (Mardiasmo, 2011: 47). In the tax law there are two kinds of sanctions, namely:

- Administrative sanctions, are payments for losses to the State, especially in the form of fines, interest, and increases;
- Criminal sanctions are a final tool or legal bastion used by tax authorities to comply with tax norms, in the form of criminal fines, confinement, and imprisonment.

Ajzen (2002) states that moral obligation is moral that comes from each individual, which is likely that other people do not have it. The moral aspect in the taxation field concerns two things, namely (1) tax obligations are moral obligations that must be prioritized by each taxpayer, and (2) concerning moral awareness related to the allocation or distribution of tax revenues (Troutman, 1993).

This study refers to several previous studies as a reference. Albari (2008) examined the effect of justice on taxpayer satisfaction and compliance. This study successfully proved the direct and indirect positive influence of justice on taxpayer compliance through a variable between satisfactions. One dimension of justice in this study is interactional justice which partially has no significant effect on taxpayer compliance.

The effect of distributive justice and sanction enforcement on the level of hotel and restaurant taxpayer compliance with taxpayer satisfaction as moderating, in Tabanan Regency was tested by Budhiarsana (2015). This study found that distributive justice, enforcement of sanctions and satisfaction of taxpayers partially had a positive effect on

mandatory compliance hotel and restaurant tax. The satisfaction of taxpayers strengthens the effect of enforcing sanctions on hotel and restaurant taxpayer compliance. Although taxpayer satisfaction directly affects taxpayer compliance, taxpayer satisfaction does not strengthen the influence of distributive justice on hotel and restaurant taxpayer compliance.

Sukarma (2015), examined the locus of control as moderating the effect of service quality and tax sanctions on compulsory compliance with rural and urban land and building tax in Tabanan Regency. The results of this study show a positive influence on service quality and tax sanctions on the compliance of PBB-P2 tax credit, while local of control does not strengthen the influence of service quality on PBB-P2 tax compliance.

The influence of understanding taxation, service quality, firmness of tax sanctions and tax audit on tax compliance with the level of education as a moderator (Harmawati (2015) This study was conducted in the State District with compulsory land and urban taxpayers and urban respondents. The results of this study showed a positive effect understanding of taxation, service quality, firmness of tax sanctions and tax audit on PBB-P2 compulsory tax compliance. The results of the study also show that the level of education is able to moderate the influence of understanding taxation and the firmness of tax sanctions, but the level of education is not able to moderate service quality and tax audit on compliance taxpayer.

Factors influencing taxpayer compliance pay hotel tax, restaurant tax and entertainment tax in Denpasar City (Trisnawati (2015). The results of the study show the effect of tax, service quality and tax audit have a positive effect on the awareness of paying taxpayers and have a positive effect on hotel taxpayer compliance, customer tax and entertainment tax in Denpasar City Knowledge of tax, service quality, and tax audit has significant indirect effect on taxpayer compliance through awareness of taxpayers paying hotel tax, restaurant tax and entertainment tax in Denpasar City. taxpayers partially mediate the effect of tax, service quality, and tax audit on tax compliance.

Jatmiko (2006) examined the effect of taxpayer attitudes on the implementation of fines, tax services and tax awareness of taxpayer compliance. This study found that the attitude of taxpayers to the implementation of witnesses' fines, attitudes of taxpayers on fiscal services and attitudes of taxpayers to tax awareness had a significant positive effect on tax compliance.

Factors influencing hotel taxpayer compliance in making hotel tax payments were tested by Sanjaya (2014). From the results of research and discussion, it can be concluded that service quality, moral obligations, and tax sanctions partially have a positive and statistically significant effect on taxpayer compliance in paying hotel taxes in the Denpasar City Revenue Service.

Layata (2014) examined the effect of moral obligations, service quality and tax sanctions on corporate taxpayer compliance at South Badung Primary Tax Office. Moral obligation has a positive effect on corporate taxpayer compliance in KPP Pratama South Badung, Service Quality of KPP Pratama South Badung has a positive effect on corporate taxpayer compliance at KPP Pratama Selatan Badungf and tax sanctions have a positive effect on corporate taxpayer compliance at South Badung KPP.

The difference between this research and previous research is that this research was conducted in Tabanan Regency. This study measures the variable taxpayer compliance using documentation techniques, while the independent variables are measured using questionnaire techniques. The respondent is the owner (owner) or General Manager of hotel and restaurant taxpayers.

Based on the results of previous studies, the research hypothesis is as follows.

H1: Distributive justice has a positive effect on hotel and restaurant taxpayer compliance;

H2: Service quality has a positive effect on hotel and restaurant taxpayer compliance;

H3: Enforcement sanctions have a positive effect on hotel and restaurant taxpayer compliance;

H4: Moral Obligations have a positive effect on hotel and restaurant taxpayer compliance.

## METHODS OF RESEARCH

This research was conducted in Tabanan Regency, Bali. The research subjects were hotel and restaurant taxpayers (WP PHR). The variables studied were as follows:

- Compliance with taxpayers is compliance with rules and technical compliance. Compliance indicators are timely tax reporting, namely deposits (Regional Tax Returns-SPTPD) no later than the 15th of the following month. Timely depositing the Regional Tax-SSPD Deposit Letter no later than the 20th of the following month;
- Distributive justice is the level of feasibility of the end result of the activities perceived by customers from their complaints; although that does not mean that they have to be profitable or unfavorable to the customer. Indicator of distributive justice is justice in paying taxes;
- Service Quality is the taxpayer's perception of the comparison between desired expectations and their assessment of the actual performance of a service provider. Indicators of service quality are physical condition, reliability, responsiveness, assurance and empathy;
- Enforcement of sanctions is a guarantee that the provisions of tax laws and regulations (taxation norms) will be obeyed;
- Moral Obligation is the principle of life, feeling guilty if it does not carry out voluntary tax obligations that can be associated with fulfilling tax obligations, especially hotel and restaurant taxpayers.

The type of data used is quantitative data, namely data in the form of numbers or qualitative data that are predicted. The quantitative data in this study were the number of WP PHR registered in Taban Regency and the respondent's answer to the questionnaire was measured by a Likert scale.

Data sources are primary data and secondary data. Primary data is data obtained directly from the results of the respondent's answer to the statement in the questionnaire factors that influence the compliance of WP PHR. Sampling is done by Proportional Stratified Random Sampling technique. The method used to determine the number of samples is slovin formula.

The data in this study were tested using multiple linear regression. Before being used to test hypotheses, classical assumptions were tested first. Classic assumption test includes normality test, multicollinearity and heteroscedasticity test. The regression model used is as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

Where  $\alpha$ : constant,  $X_1$ : Distributive Justice,  $X_2$ : Service Quality,  $X_3$ : Enforcement of Tax Sanctions,  $X_4$ : Moral Obligations,  $Y$ : Taxpayer Compliance,  $\beta$ : Regression coefficient,  $\epsilon$ : Error.

The research hypothesis is accepted if the probability value (P-Value)  $t$  is smaller or equal to 0.05 (5 percent).

## RESULTS AND DISCUSSION

Respondents used in this study are the owners (owners) of hotels and restaurants in Tabanan regency. For hotels and restaurants whose ownership is determined by the number of shares owned, then the respondent is the general manager. This study uses Proportional Stratified Random Sampling, namely the number of Hotel and Restaurant Taxpayers determined by proportion. The number of respondents who were asked to fill out the questionnaire was 65 respondents. The questionnaire was distributed in April 2018 until June 2018. The questionnaire was delivered directly to each hotel and restaurant determined randomly. Sixty-five questionnaires distributed all returned with complete answers. The sample profile in this study is shown in Table 1.

Table 1 – Sample Profile

Category	Amount	Percentage (%)
Hotel Bintang	2	3,80
Hotel Melati / Pondok wisata	43	66,15
Restaurant	20	30,05
Amount	65	100

Table 1 shows that of the 65 samples used in the study, as many as 3.80 percent were starred hotels, 43 samples were budget hotels / tourist hotels and as many as 30.05 percent were in the category of restaurants. The profile of 65 respondents by sex, education level and position is shown in Table 2.

Table 2 – Respondents Profile

Descriptions	Amount	Percentage (%)
Gender		
Male	50	76,92
Female	15	23,08
Amount	65	100
Last Education		
Graduate (S2)	1	1,50
Undergraduate (S1)	10	15,38
Diploma	30	46,15
Others	24	36,97
Amount	65	100
Position		
Owner	55	84,61
General Manager	10	15,39
Amount	65	100

Based on Table 2, it can be seen that of the 65 respondents, 50 were men and 15 were women. Judging from the level of education, there are 1 master, 10 undergraduate students, 30 diploma students and 24 other senior high school and vocational high school students. 55 direct owner managers and 10 general managers.

Before being disseminated the research instruments were tested using validity test and reliability test with respondents in testing the instrument were 30 undergraduate students of the Faculty of Economics and Business, Udayana University. Validity test serves to measure the validity or not the questions in the questionnaire. Validity test is used by testing the correlation between the scores of each question item and the total score of the questionnaire. A questionnaire is said to be valid if the correlation coefficient between the scores where the correlation must be positive and is  $> 0.3$  and significant at 0.05. From Statistical Package for the Social Sciences (SPSS) calculations, the results of each variable are valid because they show a correlation value of  $> 0.3$  and a significance level of  $< 0.05$ .

The reliability test results show that the value of Cronbach's Alpha distributive justice variable = 0.844, service quality = 0.902, enforcement of tax sanctions = 0.804, and moral obligation = 0.807. All of these values are greater than 0.6 so it can be concluded that all questions related to this research variable are reliable. The results of the validity and reliability tests are presented in Table 3 below.

Descriptive statistics are presented in providing information about the characteristics of the research variables. A summary of the results of descriptive statistics can be seen in Table 4.

Regression analysis using Ordinary Least Square (OLS) techniques requires a classical assumption test. The classic assumption test that will be carried out in this study is the test for normality, multicollinearity, and heteroscedasticity. This test is conducted to obtain the confidence that the regression model obtained has the ability to predict in decision making. The normality test is carried out using the Kolmogorov-Smirnov test. The results of the normality test indicate that Asymp. Sig. (2-tailed) in the One-Sample Kolmogorov-Smirnov Test is 0.200. This value is greater than the significance of 0.05, so the data tested

is normally distributed. Heteroscedasticity test aims to find out whether in the regression model variance of the residuals occurs in an observation to another observation (Ghozali, 2013). Heteroscedasticity testing is done using the Glejser test, namely by regression of the absolute residual value of the model estimated on the independent variable. Test results show that none of the independent variables have a significant effect on the absolute residual dependent variable. The multicollinearity test aims to test whether the regression model found a correlation between independent variables. A good model does not have a correlation between independent variables. The results of the multicollinearity test show that the four independent variables have tolerance values  $> 0.10$  and the Variance Inflation Factor (VIF) value  $< 10$ . This indicates that this regression equation meets the multicollinearity test requirements.

Table 3 – Validity and Reliability Test Results

Variable	Indicator	Validity Test		Reliability Test
		Correlation Coefficient (r)	Sig.	Cronbach's Alpha
Distributive Justice (X <sub>1</sub> )	X <sub>1.1</sub>	0,881	0,000	0,844
	X <sub>1.2</sub>	0,714	0,000	
	X <sub>1.3</sub>	0,836	0,000	
	X <sub>1.4</sub>	0,653	0,000	
	X <sub>1.5</sub>	0,858	0,000	
Service Quality (X <sub>2</sub> )	X <sub>2.1</sub>	0,808	0,000	0,902
	X <sub>2.2</sub>	0,790	0,000	
	X <sub>2.3</sub>	0,750	0,000	
	X <sub>2.4</sub>	0,836	0,000	
	X <sub>2.5</sub>	0,719	0,000	
	X <sub>2.6</sub>	0,760	0,000	
	X <sub>2.7</sub>	0,701	0,000	
Enforcement of Tax Sanctions (X <sub>3</sub> )	X <sub>2.8</sub>	0,824	0,000	0,804
	X <sub>3.1</sub>	0,763	0,000	
	X <sub>3.2</sub>	0,824	0,000	
	X <sub>3.3</sub>	0,852	0,000	
Moral Obligation (X <sub>4</sub> )	X <sub>3.4</sub>	0,732	0,000	0,807
	X <sub>4.1</sub>	0,741	0,000	
	X <sub>4.2</sub>	0,836	0,000	
	X <sub>4.3</sub>	0,876	0,000	
	X <sub>4.4</sub>	0,723	0,000	

Table 4 – Descriptive Statistic Test Results

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Distributive Justice (X <sub>1</sub> )	65	11,00	20,00	17,569	2,7441
Service Quality (X <sub>2</sub> )	65	17,00	32,00	27,507	4,0701
Enforcement of Tax Sanction (X <sub>3</sub> )	65	8,00	16,00	13,646	2,1023
Moral Obligation (X <sub>4</sub> )	65	8,00	16,00	13,584	2,0531
Taxpayer Compliance (Y)	65	1,00	16,00	12,446	4,6031

The t test is used to show the effect of independent variables on variations in the dependent variable individually. The t test is done by comparing the results of the p-value significance value of the influence of the independent variable and interaction of variables on the dependent variable with  $\alpha = 0.05$ . If the p-value is smaller equal to  $\alpha = 0.05$  then the independent variable has an effect on the dependent variable and vice versa if the p-value is greater equal to  $\alpha = 0.05$ , then the independent variable has no effect on the dependent variable.

The results of multiple regression analysis with the help of the SPSS program ver.22 for windows show that the four independent variables of distributive justice, service quality, enforcement of tax sanctions and moral obligations each influence the compliance of hotel and restaurant taxpayers. The full results are shown in Table 5.

Table 5 – Multiple Regression Analysis Results

Variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	$\beta$	Std. Error	Beta		
(Constant)	-13,792	3,118		-4,423	0,000
Distributive Justice (X1)	0,440	0,216	0,262	2,035	0,046
Quality Service (X2)	0,297	0,147	0,262	2,014	0,048
Enforcement of Tax Sanction (X3)	0,429	0,278	0,196	1,546	0,127
Moral Obligation (X4)	0,330	0,275	0,147	1,200	0,235
Adjusted R <sup>2</sup>	0,519				
F test	18,289				0,000

Based on Table 5, we can summarize the regression equation model of the influence of distributive justice, service quality, enforcement of tax sanctions and moral obligations on tax compliance as follows:

$$Y = -3,792 + 0,440X_1 + 0,297X_2 + 0,429X_3 + 0,330X_4$$

Based on Table 5, the regression test results obtained partial effects of independent variables of distributive justice, service quality, enforcement of tax sanctions, and moral obligations on tax compliance with the following details:

- Regression test of distributive justice variables on taxpayer compliance is obtained  $\beta = 0.440$  with p-value of 0.046 which is smaller than  $\alpha = 0.05$ . This means that distributive justice has a positive effect on tax compliance. Thus the results of this hypothesis test accept the H1 hypothesis which states that distributive justice has a positive effect on tax compliance;
- Test regression variable service quality on taxpayer compliance obtained  $\beta$  coefficient = 0.0297 with p-value of 0.048 which is smaller than  $\alpha = 0.05$ . This means that service quality has a positive effect on tax compliance. Thus the results of this hypothesis test accept the H2 hypothesis which states that service quality has a positive effect on taxpayer compliance;
- Test the regression of tax sanction enforcement variables on taxpayer compliance obtained  $\beta$  coefficient = 0.429 with p-value of 0.127 which is greater than  $\alpha = 0.05$ . This means that enforcement of tax sanctions does not have a significant effect on tax compliance. Thus the results of this hypothesis test reject the H3 hypothesis which states that enforcement of tax sanctions has a positive effect on taxpayer compliance;
- Test the regression of moral obligation variables on taxpayer compliance obtained  $\beta$  coefficient = 0.330 with p-value of 0.235 which is smaller than  $\alpha = 0.05$ . This means that moral obligations have no significant effect on tax compliance. Thus the results of this hypothesis test reject the H4 hypothesis which states that moral obligations have a positive effect on taxpayer compliance.

## DISCUSSION OF RESULTS

The one hypothesis states that distributive justice has a positive effect on hotel and restaurant taxpayer compliance in Tabanan district. The results of the analysis show that distributive justice has a positive effect on tax compliance. This result implies that the higher distributive justice felt by taxpayers, will tend to encourage hotel and restaurant taxpayers to comply with their tax obligations.

This result shows that the general manager and hotel and restaurant owners as respondents supported by their educational backgrounds have very good perceptions of the fairness of the hotel and restaurant tax system and the utilization of hotel and restaurant taxes conducted by the Tabanan Regency Government. The existence of a very good perception is able to increase their obedient behavior in carrying out hotel and restaurant tax obligations in accordance with applicable regulations.

This result is in accordance with attribution theory which states that individual obedient behavior is supported by internal factors. In this study distributive justice is felt by hotel and restaurant taxpayers. This finding supports the study of Albari (2008) who found distributive justice to have an effect on tax compliance. These results also support the results of the study by Budhiarsana (2015). Based on the theoretical study of the theory of attribution which states that the behavior shown by a person can be caused by external factors, namely behavior influenced from the outside. External factors can be in the form of distributive justice given by the regional government. Taxpayers who are treated fairly by the government even though they will not directly feel happy and valued so they tend to increase compliance. These results support the theory of justice proposed by Robbins (2008) which states that individuals compare the input and results of their work with the input and results of the work of others and then respond to eliminate injustice. Distributive justice perceived by taxpayers encourages taxpayer compliance.

The second hypothesis states that service quality has a positive effect on hotel and restaurant taxpayer compliance in Tabanan Regency. The results of the analysis show that service quality has a positive effect on taxpayer compliance. These results imply that the better the quality of service received by taxpayers, will tend to encourage hotel and restaurant taxpayers to comply with the obligation to pay taxes. This finding supports the research by Sukarma (2015) who found service quality had an effect on tax compliance. This result also supports the research results of Harmawati (2015) and Trisnawati (2015).

Attribution theory which states the behavior shown by a person can be caused by external factors, namely behavior that is influenced from the outside. External factors can be in the form of services provided by tax officials. Taxpayers who get good quality services will feel happy and facilitated and helped in completing their obligations. Service quality which is an external factor of taxpayers can encourage tax compliance. Five dimensions to evaluate the quality of services, namely tangibles, reliability, responsiveness, assurance, and empathy.

Physical evidence includes facilities, employees, equipment and communication. Special services for hotel and restaurant tax are incorporated in the Tabanan Regency Revenue Service. The amount of taxpayers who carry out obligations requires a waiting room and a large parking lot so that taxpayers feel comfortable. In addition, sufficient numbers of employees and computer equipment are needed so that services can run faster. Reliability is the ability of tax officers to provide services that promise immediately and satisfactorily. The Tabanan Regency Revenue Service in the process of completing hotel and restaurant tax services takes 5 to 10 minutes from reporting to payment of hotel and restaurant taxes. For hotel and restaurant taxpayers who are barred from coming to the Tabanan Regency Revenue Service, they can ask tax officers both data officers and collectors to help take and process their tax obligations to taxpayers. Responsiveness is a characteristic of compatibility in human services, namely the desire of tax officials to help taxpayers and provide responsive services. In the Tabanan Regency Revenue Service, there is a section that handles complaints and problems with hotel and restaurant taxpayers.

Guarantees include the ability, politeness and trustworthiness of the tax officer. The Tabanan Regency Revenue Service in providing guarantees to taxpayers continues to improve both from going to online tax payments to all hotel and restaurant taxpayers to provide study permits and study assignments for tax officers. Empathy is related to the ease of officers in making good communication so that taxpayers will feel cared for.

The third hypothesis states that enforcement of tax sanctions has a positive effect on hotel and restaurant taxpayer compliance in Tabanan Regency. The results of the analysis show that the enforcement of tax sanctions does not affect taxpayer compliance. This result implies that the perception of hotel and restaurant taxpayers regarding the determination and application of hotel and restaurant tax sanctions by the Tabanan Regency Government does not cause hotel and restaurant taxpayer compliance to be more obedient in carry out its obligations.

These results indicate that even though hotel and restaurant general managers and owners as respondents on average state enforcement of strict sanctions, they tend to feel

that implementation of sanctions by tax officials is not timely, a 2 percent interest penalty tends to be mild. The tendency of these perceptions is not able to increase their obedient behavior in carrying out hotel and restaurant tax obligations in accordance with applicable regulations.

These results do not support the Attribution theory. Based on Attribution theory, enforcing tax sanctions is an external factor that can affect taxpayer behavior. The enforcement of strict tax sanctions will make taxpayers forced to behave obediently because of the situation. Taxpayers will fulfill their tax obligations by considering the administration of interest (interest, penalties and increases) given to the taxpayer's financial burden in paying off his tax obligations.

The results of this study are not consistent with the Sukarma study (2015) which concluded that there was a positive influence between tax sanctions and compulsory compliance with Rural and Urban Land and Building tax in Tabanan Regency. The results of this study support the results of research from Harmawati (2015), Budhiarsana (2015), Sanjaya (2014), Layata (2014) and Jatmikon (2014) who found a positive effect of taxation sanctions on taxpayer compliance.

Explained in the Act and regulations outline contains rights and obligations, actions that are permitted and not permitted by the community. In order for these laws and regulations to be obeyed, there must be sanctions for violators, as well as for tax law. Enforcement of tax sanctions is needed to provide a deterrent effect for violators, so that tax sanctions will encourage taxpayers to comply.

The fourth hypothesis states that moral obligations have a positive effect on hotel and restaurant taxpayer compliance in Tabanan Regency. The results of the analysis show that moral obligations have no significant effect on taxpayer compliance. The moral obligation of hotel and restaurant taxpayers will tend to be unable to encourage hotel and restaurant taxpayers to comply with their tax obligations.

Moral obligations are internal factors of taxpayers in compliance with hotel and restaurant tax obligations. The results of this study do not confirm attribution theory. Attribution theory states that to be able to behave certain a taxpayer is driven by internal factors of the taxpayer itself. This finding does not support the study by Sanjaya (2014) who found a moral obligation influential on hotel taxpayer compliance in Denpasar City. These results also support the results of Layata's research (2014).

Understanding of hotel and restaurant taxpayers in Tabanan regency for the importance of taxes for State administration tends to be less. Taxpayers tend to disagree with the anxiety that is felt when they do not carry out tax obligations and do not feel comfortable doing tax evasion and respondent respondents do not agree that they pay hotel and restaurant taxes with full awareness.

## **CONCLUSION AND SUGGESTIONS**

Based on the results of the analysis it can be concluded that distributive justice has a positive effect on hotel and restaurant taxpayer compliance in Tabanan district. This shows that the fairer tax base felt by general managers and hotel and restaurant owners causes taxpayer compliance to increase. Service quality has a positive effect on hotel and restaurant taxpayer compliance, meaning that the better the quality of service of the Great Revenue and Housing Service in Tabanan Regency, causing taxpayer compliance to increase.

Enforcement of tax sanctions does not affect taxpayer compliance and moral obligations also have no effect on hotel and restaurant taxpayer compliance in Tabanan Regency. These results indicate that enforcement of sanctions against hotel and restaurant taxpayers tends not to be on time, so taxpayers feel enforcement of sanctions is less assertive. This also affects the perception of the moral obligations of hotel and restaurant taxpayers tend to be less.

Suggest that it can be given to the Office of Revenue and Supreme Court in Tabanan Regency, so that it is more intensive to provide counseling and guidance to hotel and

restaurant taxpayers, so as to increase awareness of taxpayers. If the awareness of taxpayers increases, they will obey their tax obligations.

The research model used has not been able to fully explain the variability of variable hotel and restaurant taxpayer compliance. One of these limitations can be caused by sampling not being distinguished between taxpayers who have arrears and not on hotel and restaurant taxes. Taxpayer compliance indicators used in this study are new tax reporting compliance and tax deposit compliance not yet up to tax calculation compliance, this is due to tax calculation compliance data must wait for the results of tax audits by the Office of Revenue and Regional Administration of Tabanan Regency.

## REFERENCES

1. Ajzen, Icek. 2002. Constructing a YBP Questionnaire: Conceptual and Methodological Considerations. September (Revised January, 2006)
2. Albari, 2008. Pengaruh Keadilan Terhadap Kepuasan and Kepatuhan Wajib Pajak. Jurnal UNISIA. Vol. XXXI No 69 September 2008. Hal: 280-293.
3. Ardani, Mira Novana. 2010. "Pengaruh Kebijakan Sunset Policy Terhadap Kepatuhan Wajib pajak (Studi Kasus Di Kanwil Direktorat Jendral Pajak Jawa Timur I Surabaya)" (tesis). Semarang: Magister Ilmu Hukum Program Pasca Sarjana Universitas Diponegoro.
4. Budhiarsana, I Wayan. 2015. "Pengaruh Keadilan Distributif and Penegakan Sanksi pada Kepatuhan Wajib Pajak Hotel and Restoran dengan Kepuasan wajib Pajak Sebagai Variabel Pemoderasi" (tesis). Denpasar: Universitas Udayana.
5. Chau, Gerald. Leung, Patrick. 2009. A critical review of Fischer tax compliance model: Aresearch Synthesis. Journal of Accounting and Taxation Vol.1 (2), pp, 0-34-040. Hong Kong: School of Accounting and Finance, the Hong Kong Polytechnic University, Hung Hom, Kowloon.
6. Faudi, Arabella Oentari and Yeni Mangonting. 2013. Pengaruh Kualitas Pelayanan Petugas Pajak, Sanksi Perpajakan and Biaya Kepatuhan Pajak Terhadap Kepatuhan Wajib Pajak UMKM. Tax & Accounting Review, 1(1), h: 35-42.
7. Harmawati, Nikomang Ayu. 2015. " Pengaruh Pemahaman Perpajakan, Kualitas Pelayanan, Ketegasan Sanksi Pajak and Pemeriksaan Pajak pada Kepatuhan Wajib Pajak dengan tingkat Pendidikan sebagai Pemoderasi" (tesis). Denpasar: Universitas Udayana.
8. Jatmiko, A.N. 2006. "Pengaruh Sikap Wajib Pajak Pada Pelaksanaan Sanksi Denda, Pelayanan Fiskus and Kesadaran Perpajakan Terhadap Kepatuhan Wajib Pajak" (tesis). Semarang: Universitas Diponegoro.
9. Kelly, Harold H. 1972. "Causal Schemata and the Attribution Process," in Edward E. Jones et al. (Eds.), Attribution: Perceiving the Causes of Behavior, General Learning Press, Morristown, NJ.
10. Kelly, Harold H. 1973. "The Process of Causal Attribution," American Psychologist, Vol. 28, No. 2, 107-128.
11. Layata, Sherly. 2014. Pengaruh Kewajiban Moral, Kualitas Pelayanan, Pemeriksaan Pajak and Sanksi Perpajakan pada Kepatuhan Wajib Pajak Badan. E-Jurnal Akuntansi Universitas Udayana 9.2(2014): 540-556.
12. Lubis, I. 2010. Menggali Porensi Pajak Perusahaan and Bisnis dengan Pelaksanaan Hukum. Jakarta: Gramedia.
13. Manurung, S. 2013. Kompleksitas Kepatuhan Pajak. Available from: URL:<http://www.pajak.go.id/content/article.kepatuhan,pajak> (cited 2014 Oct. 24).
14. Mardiasmo. Perpajakan, Edisi Revisi. Penerbitan Andi Offset. Yogyakarta. 2011. Yogyakarta: Andi.
15. Organisation for Economic Co-operation and Development (OECD). 2001. General Administrative Principles-GAP004 Compliance Measurement.Tac guidance series. Centre for Tax Policy and Administration.

16. Robbins, S. P. and Timothy A. J. 2008. *Perilaku Organisasi (Organizational Behavior)*. Buku I. Jakarta: Salemba Empat
17. Rosdiana, H and Tarigan, R. 2005. *Perpajakan: Teori and Aplikasi*. Jakarta: Raja Grafindo Persada.
18. Sanjaya, Adi Putra. 2014. Pengaruh Kualitas Pelayanan, Kewajiban Moral and Sanksi Perpajakan Pada Kepatuhan Wajib Pajak dalam Membayar Pajak Hotel. *E-jurnal Akuntansi Universitas Udayana* 7.1. Halaman: 207-222
19. Suartana, W. 2010. *Akuntansi Keperilakuan. Teori and Implementasi*. Yogyakarta: ANDI
20. Sukarma, Dwi Anggreni. 2015. "Locus Of Control sebagai Pemoderasi Pengaruh Kualitas Pelayanan and Sanksi Perpajakan pada Kepatuhan Wajib Pajak Bumi and Bangunan Perdesaan and Perkotaan" (tesis). Denpasar Universitas Udayana.
21. Tjahyono, H. K. 2008. "Pengaruh Keadilan Keorganisasian pada Kepuasan Individu and Komitmen Keorganisasian dengan Model Sosial sebagai Variabel Moderator" (disertasi). Yogyakarta: Universitas Gadjah Mada.
22. Tjiptono, Fandy. 2002. *Manajemen Jasa*. Yogyakarta: Andi.
23. Trisnawati, Ni Luh Mika. 2015. "Analisis Faktor-faktor yang Mempengaruhi Kepatuhan Wajib Pajak Membayar Pajak Hotel, pajak Restoran and Pajak Hiburan di Kota Denpasar" (tesis). Denpasar: Universitas Udayana.
24. Troutman, Coleen, S. 1993. "Moral commitment to Tax Compliance as Measured by The Development of Moral Reasoning and Attitudes the Fairness of Tax Laws" (Dissertation). Oklahoma State University, USA.
25. Ulupui, I.G.K. 2005. Pengaruh Partisipasi Anggaran, Persepsi Keadilan Distributif, Keadilan Prosedural and Goal Commitment terhadap Kinerja Dinas. *Jurnal Bisnis and Ekonomi*. Vol. 9. No. 2. Hal: 98-112.

DOI 10.18551/rjoas.2019-02.26

## ANALYSIS OF FACTORS INFLUENCING THE PRODUCTIVITY OF LOWLAND RICE DURING THE SECOND PLANTING SEASON IN PALEMBANG CITY, INDONESIA

**Septiana Betaria, Yazid Muhammad\*, Hakim Maryati Mustofa**

Master Program in Agribusiness, Faculty of Agriculture, University of Sriwijaya, Indonesia

\*E-mail: [yazid\\_ppmal@yahoo.com](mailto:yazid_ppmal@yahoo.com)

### ABSTRACT

Swamp rice cultivation during the second planting season (October-March), known as IP 200, which is directed in 4 sub-districts in Palembang is expected to contribute to rice production for the city of Palembang and to support national food security program. Out of 4 sub-districts, 3 sub-districts were chosen to be the locations of this survey. Respondents of this survey were members of the farmer groups who were selected randomly using proportionate random sampling. The results showed that lowland rice production in the second planting season was influenced significantly by farmers' technical ability in cultivation ( $X_1$ ), production facilities and infrastructure ( $X_2$ ) and irrigation networks ( $X_3$ ).

### KEY WORDS

Swamp rice, planting, food program, food security.

Agriculture development is an integral part of national development in Indonesia and its role has become a solid foundation for the nation's economy. Agricultural sector has contributed to the achievement of the nation's food security. The efforts of food security achievement are mostly focused on increasing food self sufficiency, especially rice (Agus and Irawan, 2006). However, currently land use conversion has become a major threat to agricultural development and food security (Long et al., 2009 in Sulaeman, 2016).

The Directorate General of Food Crops (2013) explained that one alternative to overcome the impact of conversion of agricultural land is to optimize the use of potential agricultural land. One of the strategies is to expand the planting areas by utilizing potential lands such as upland, lowlands and tidal swamp lands and the implementation of multiple cropping.

To respond to the national programs and policies and to support the Province of South Sumatra in strengthening the capacity of the region to be self-sufficient in food supply, the city of Palembang also played a role through the optimization of its agricultural sector. Based on the data from the Central Bureau of Statistics of Palembang (2016), it still has potential agricultural land of 11,526 ha, consisting of dry land and non-irrigated rice fields which are categorized as swamp areas. The potential of swamp land suitable for rice cultivation was 6,028 hectares, among which 5,734 hectares had been used by farmers for rice farming with one planting season per year (April - September). Therefore, the Government of Palembang since 2015 began to implement rice cultivation in the second planting season (October - March) with the target stated in Table 1.

Table 1 – Lowland rice cultivation in the second planting season in Palembang in 2015-2017

n/n	2015	2016	2017
Target of Planting (Hectares)	500	500	500
Realization of Planting (Hectares)	254	407	294
Harvest Area (Hectares)	208	407	294
Productivity (Tons/Hectare)	4,69	6,15	6,713
Production (Ton)	975,52	2503,05	1.974

Since 2015, rice cultivation in the second planting season (October-March) known as IP200, has been implemented in 4 districts, namely Gandus, Kertapati, Kalidoni, and

Sematang Borang in 6 sub-districts. The target area was 500 hectares, involving 355 farmers.

Table 2 – The target of lowland rice cultivation in the second planting season in Palembang

District	Sub-District	Farmers' Group	Area (Hectares)	Number of Farmers
Gandus	Pulokerto	Gapoktan Bina Usaha Mandiri	50	41
		Gapoktan Seberang Ulu	150	90
		Kelompoktani Mandiri	50	25
Kertapati	Karya Jaya	Gapoktan Karya Makmur	100	95
	Keramasan	Kelompoktani Suka Karya	50	25
Kalidoni	Sei Selincih	Gapoktan Petani Bersatu	50	20
Sematang Borang	Karya Mulia	Kelompoktani Karya M.Mulia	30	40
	Suka Mulia	Kelompoktani Cahaya	20	19
Total			500	355

In order to support rice production enhancement through the implementation of lowland rice cultivation in the second planting season (October-March), several factors are considered to influence the successful of the program, namely 1) the ability of farmers to implement lowland rice cultivation, 2) the availability of production facilities (seeds, fertilizers, pesticides) and agricultural machinery, and 3) the condition of irrigation networks that affect water conditions in the planting area. Therefore, this research was conducted to find out factors that influence the implementation of lowland rice cultivation in the second planting season (October-March) in Palembang.

## METHODS OF RESEARCH

This research was conducted in three districts where lowland rice cultivation was implemented in the second planting season, namely Kalidoni, Sematang Borang, and Kertapati from September to October in 2018. This research employed survey method. The population of this research was farmers in the 3 districts who conducted rice cultivation in the second planting season. The population was as many as 199 farmers. Sample farmers were drawn from the population using proportionate random sampling. Total numbers of sample farmers were 40 farmers.

Data collected in this research consisted of primary and secondary data. Primary data were collected through direct interviews to the respondents using a questionnaire. Secondary data were collected from papers, reports, and publications related to this research. Data collected were tabulated and descriptively analyzed. Meanwhile, to analyze the factors that influenced the production of lowland rice cultivated in the second planting season, the following equation is employed:

$$Y = \alpha + b_1X_1 + b_2X_2 + b_3X_3$$

Where: Y = Productivity of rice in the second planting season;  $\alpha$  = Constant;  $\beta$  = Regression coefficient;  $X_1$  = Farmers' technical ability to perform rice cultivation;  $X_2$  = Production facilities and infrastructure (seeds, fertilizer, pesticides, machinery);  $X_3$  = Irrigation networks.

Furthermore, to find out whether the three variables ( $X_1$ ,  $X_2$ ,  $X_3$ ) have a significant effect on the dependent variable (Y), a partial test (t test) was carried out. In addition, to test the overall effect of the independent variables on the dependent variables, a simultaneous test F test) was used.

## RESULTS AND DISCUSSION

*The Development of Rice Cultivation in the Second Planting Season.* Rice cultivation in second planting season in three districts in Palembang has been implemented since 2015. Table 1 described the target and realization of planting, harvest area, and productivity in

three districts in 3 consecutive years since 2015. There was a variation of target and realization in planting in District Kalidoni, but there was an increase in District Sematang Borang and Kertapati. However, in all district the productivity increased significantly from 2015 to 2017.

Table 3 – Lowland rice cultivation in the second planting season in 2015-2017

n/n	Kalidoni			Sematang Borang			Kertapati		
	2015	2016	2017	2015	2016	2017	2015	2016	2017
Target of Planting (Hectares)	50	250	150	50	75	90	150	50	150
Realization Planting (Hectares)	115	372	130	90	45	66	28	0	100
Harvest Area (Hectares)	115	372	128	80	30	66	3	0	100
Productivity (Tons/Hectare)	5.1	6.25	6.2	5.05	6.05	7.04	4.4	0	6.9
Production (Ton)	586.5	2,325	793.6	404	181.5	464.6	13.2	0	690

In 2015, there were 2 districts (Kalidoni and Sematang Borang) whose realization of the harvest area was above the target. Whereas District Kertapati was much below the target which only achieved 3 ha out of 150 ha targeted. In 2016, rice cultivation in the second planting season in the two districts was targeted higher than that in 2015, but District Kertapati was targeted lower due to the harvest fail in 2015. The area harvested in 2016 in District Kalidoni was achieved, but in District Sematang Borang the harvest area was lower than the target. Even, in District Kertapati there was no realization in planting in 2016. In 2017, in all three districts rice cultivation in the second planting season were re-targeted. Table 3 showed that in 2017 in all three districts, the targeted harvest area was achieved.

Overall, Table 3 revealed that the realization of rice cultivation in the second planting season (October-March) in 2015 was 254 hectares with the harvest area of 208 ha and the average productivity of 4.69 tons of dry harvest grain (GKP) per hectare. Furthermore, in 2016, the realization of both harvest area and productivity were higher than the previous year. The harvest area has increased to 407 hectares and the productivity has increased to 6.15 tons of GKP per hectare. However, in 2017, the harvest area was slightly decreased to 390 hectares, but the productivity increased significantly to 6.71 tons GKP per hectare.

*Factors Affecting Rice Productivity in the Second Planting Season.* A research sample covering 40 farmers were drawn from the population in the study area. The characteristics of respondents based on sex indicated that majority of respondents were male (92.5%). The age of respondents was between the 37 years to 67 years, but majority of respondents were in the productive aged of 41-50 years. Majority of respondents own and cultivate rice in the average area of 1 hectare.

In order to assess the influence of factors affecting the productivity of rice in the second planting season, a multiple regression analysis was performed (Table 4). The independent variables assumed to affect the productivity of rice (Y) in the second planting season as discussed above were farmers' technical ability in lowland rice cultivation ( $X_1$ ), production facilities and infrastructures ( $X_2$ ), and irrigation networks ( $X_3$ ).

Table 4 – Results of Multiple Regression Analysis

Variable	Coefficient	Standard Error	t	Sig
Constant	-.908	.203	-4.465	.000
Farmers' technical ability ( $X_1$ )	.087	.006	13.391	.000
Production facilities and infrastructure ( $X_2$ )	.081	.011	7.229	.000
Irrigation networks ( $X_3$ )	.103	.020	5.047	.000

Sig F = .000; R square = 0.97

Based on the above analysis, the regression equation of the productivity of lowland rice in the second planting season can be stated as

$$Y = -0,908 + 0.087X_1 + 0.081X_2 + 0,103X_3$$

Where:  $Y$  = Productivity of rice in the second planting season;  $\alpha$  = Constant;  $\beta$  = Regression coefficient;  $X_1$  = Farmers' technical ability to perform rice cultivation;  $X_2$  = Facilities and infrastructures (seeds, fertilizer, pesticides, machinery);  $X_3$  = Irrigation networks.

Based on the analysis, the effect of all the independent variables were significant statistically. The influence of all the independent variables on the productivity of rice in the second planting season was positive, which mean that every individual independent variable had significant positive contribution to the dependent variable. Overall effect of the independent variables on the productivity of rice was also significant based on the value of F test.

The individual effect of farmers' technical ability in rice cultivation on the productivity of rice in the second planting season is positive (as indicated by the coefficient) and significant (as indicated by the significance of t-test). This indicated that the higher the farmers' ability in rice cultivation the higher the productivity of rice in the second planting season.

The effect of facilities and infrastructures on the productivity of rice in the second planting season is also positive (as indicated by the coefficient) and significant (as indicated by the significance of t-test). This indicated that the better the facilities and infrastructures the higher the productivity of rice in the second planting season.

The influence of irrigation networks on the productivity of rice in the second planting season is also positive (as indicated by the coefficient) and significant (as indicated by the significance of t-test). This indicated that the better the irrigation networks that support rice cultivation the higher the productivity of rice in the second planting season. Water availability for rice cultivation was proved to be crucial for rice cultivation in the second planting season where water was less available.

## CONCLUSION

Rice cultivation in lowland areas of Palembang in the second planting season has been implemented in several districts since 2015. However, the realization of planting and harvest area varied among locations. Overall, rice cultivation in the second planting season in Palembang was proved to be successful in term of the increase in harvest area and the productivity.

The productivity of lowland rice cultivated in the second planting season was influenced significantly by three factors considered in the study. The effect of farmers' technical abilities in lowland rice cultivation, production facilities and infrastructures, and irrigation networks were statistically significant on the productivity of rice in the three districts in Palembang.

This study proves that rice cultivation in lowland areas in the City of Palembang can support the achievement of rice production sufficiency. Therefore, the efforts to utilize the available lowland areas surround the city should be sustained.

## REFERENCES

1. Agriculture and Food Security Agency of Palembang. 2017. The Potentials of Agriculture Sector in Palembang.
2. Agus, F., and Irawan. 2006. Agricultural land conversion as a threat to food security and environmental quality. *Agriculture Research and Development Journal* 25(3); 90-98.
3. Central Bureau of Statistic of Palembang. 2016. Palembang Municipality in Figures.
4. Directory General of Foods and Crop. 2013. Guidance for Increasing Production and Productivity of Irrigation and Swamp Rice to Support National Rice Production. Ministry of Agriculture of the Republic of Indonesia.
5. Sulaeman, D. 2005. Suitability of Land, Irrigation, and People Culture in Rice Cultivation. The Ministry of Agriculture of the Republic of Indonesia.

DOI 10.18551/rjoas.2019-02.27

## DECREASED SOCIAL CAPITAL IN MARKETING VEGETABLES IN EAST JAVA

**Riyanto Sugeng\*, Ambayoen Mas Ayu, Hardana Andrean Eka**

Faculty of Agriculture, University of Brawijaya, Malang, Indonesia

\*E-mail: [sukesbyallah@gmail.com](mailto:suksesbyallah@gmail.com)

### ABSTRACT

The research objective was to determine the decline in social capital in vegetable marketing in East Java. The method used in this study used a qualitative descriptive approach, namely in-depth interviews (in-depth interviews), participatory observation, and documentation. The results of the study concluded that there had been a decline in social capital in the distribution of vegetables in the eastern part of the region, which could be seen from the first one; there are farmers who no longer keep the agreement with the traders so that the traders have now not started to want to provide capital loans and provide seeds. Second, there are traders who deny the agreement by delaying payment, not paying the debt to the farmers.

### KEYWORD

Social capital, vegetables, marketing, farmers.

East Java is one of the barometers of Indonesia's economic development (TribunJatim.com) and has an important role in growing the Indonesian economy. East Java is an Indonesian rice barn (suaramedianasional.com) so East Java is also an Indonesian food agriculture training center. Likewise, East Java horticulture also does not want to be left behind by other regions, East Java has superior vegetable centers that are able to supply vegetables in East Java even in some areas outside East Java. East Java, which is so vast in food, requires traders to distribute agricultural products to Shahyuti (2007). For the role of traders in marketing agricultural products often experience obstacles due to the market of agricultural products in Indonesia in general in the form of imperfect competition markets.

Social capital determines the success of sales of agricultural products. Social capital is a determinant of success because the agricultural market has a unique relationship with the characteristics of mutual cooperation cash. Mutual cooperation is the social capital with the social capital of the trader can grow to be large. Social capital is able to activate togetherness, collective creativity, collective trust, and provide collective benefits (Halil, 2013). Social capital is the main capital for conducting vegetable marketing activities. Social capital as a major component in supporting vegetable marketing in East Java is also supported by Narayana san Prittchett (1997) statement.

Social capital determines the success of sales of agricultural products. Social capital is a determinant of success because the agricultural market has a unique relationship with the characteristics of mutual cooperation cash. Mutual cooperation is the social capital with the social capital of the trader can grow to be large. Social capital can activate togetherness, collective creativity, collective trust, and provide collective benefits (Halil, 2013). Social capital is the main capital for conducting vegetable marketing activities. Social capital as a major component in East Java supporting vegetable marketing is also supported by Narayana san Prittchett (1997) statement.

### METHODS OF RESEARCH

This study uses a qualitative approach, namely the process of extracting data to understand social phenomena based on holistic research, formed by words, and derived from natural situations. In implementing this qualitative approach, it is used to protect the phenomenon of the dynamics of social capital in marketing vegetables in East Java.

## RESULTS AND DISCUSSION

*Farmers Start Not Complying with Agreements with Traders.* Some farmers do not comply with agreements with traders. This form of non-compliance is that Farmers do not sell all of their harvested vegetables to traders who give them capital loans and give seeds for free, but there are some that are sold to other traders who buy at high prices. Farmers who are not too naughty, are still a little good by dividing the penny yield by half for traders who buy expensive and 1/2 for those who provide capital. Sometimes farmers are selling most of their crops to traders who buy at a higher price and only a small portion is sold to traders who provide capital. Traders who provide capital loans are only given vegetables that the seller has enough to pay the farmer's debt.

Many reasons conveyed by farmers. Why not comply with the agreement is the seeds die, growth is not good, die during seeding. This is a symptom of reductions that will have an adverse effect on the sustainability of vegetable marketing businesses carried out by traders and also vegetable cultivation by farmers. Though the habits of traders in providing seeds make it increasingly diverse types of vegetables grown by farmers and farmers getting smarter in growing vegetables. providing seed assistance, traders also provide education regarding new types of vegetable commodities. Not only did the traders' habits in providing seedlings to farmers begin to decrease, but the habits of traders in providing loan inputs also began to decrease.

Farmers also began to be dishonest where farmers had begun to mix vegetables with good and bad ones. There are also farmers who dare to sell other traders' vegetables at higher prices even though they already get a down payment / advance from other traders. The feeling of reluctance with traders has decreased. This situation cannot be tolerated because it will increasingly make a gap between farmers and traders who have long had good social relations. Because these few will gradually infect other farmers to do the same with other traders. This decline in social capital occurs if some farmers only use the capital owned by traders and also use traders when the price of vegetables decreases again. The lack of reciprocity of services provided by some farmers to traders has made relations between some farmers and traders less good.

*Traders who do not comply with agreements with farmers.* Poor behavior carried out by traders also began to arise. Examples of bad behavior are traders who are not on time in making payments to farmers. Farmers face difficulties in taking payment of their crops. This decline in confidence in the accuracy of payments made farmers move away from traders. Farmers away from traders are a big problem where traders cannot get vegetables directly from farmers. This situation makes the profitability of traders also decline. Because by getting vegetables directly from farmers or partnering with farmers, traders will be easy to get vegetable commodities, traders will get more profit difference, and the goods purchased will also be guaranteed quality. The relationship is a form of social capital that provides economic value to traders.

Some merchants are very naughty, very naughty traders usually don't pay their debts to farmers. The reason the trader is losing or stops trading. Usually traders like this cannot borrow vegetables from farmers and other traders. If these traders want to trade again they get different treatment with other traders, where if they are going to buy vegetables from farmers by means of goods there is money. So the trader must immediately pay the cash of the item he bought. Some employers who have received this treatment have difficulty running their businesses. Traders will often lose money. When rare and expensive vegetables such traders will not get vegetables from farmers and other traders and eventually forced to buy on the market. When these traders buy at the market, the price will definitely be more expensive than the farmers. Apart from the more expensive price, another problem is that the quality of goods purchased in the market is not necessarily good, so traders who commit violations will suffer huge losses. So that it can be concluded that traders who commit violations will get strict sanctions. The sanctions are not written in a binding rule, but the sanctions will be very severe if violations are made. This has caused only a few

traders to violate these rules. Because other traders see traders who violate these rules it is increasingly difficult to trade.

Violations of trade norms will be more difficult in vegetable marketing activities carried out by traders. The difficulty is that trading partners leave the merchant. So the norms and rules are very influential in their trade activities. Norms and beliefs will play a role facilitating or can also inhibit the activities of vegetable marketing businesses carried out by traders.

The decline in social capital is due to the increasing competition so that farmers do not feel dependent on one trader because of their flexibility in choosing traders where farmers will sell their crops. Besides because farmers do not feel dependent on traders, it is also because traders are also getting richer so traders also feel they are not dependent on farmers. In line with Coleman's statement (1993) the feeling of dependency among farmers will decrease due to more wealth.

*Changes in Transaction Patterns Due to Decreasing Social Capital.* As a result of some changes in the values of social capital, it caused changes in the pattern of transactions between traders and farmers. Traders will choose a system that does not have to be complicated in partnership with farmers. This is because traders have considered farmers to be inconsistent. Traders will choose another system that does not have a social capital relationship that has been very instrumental in the vegetable marketing business they are doing. The following are some of the systems that are chosen by traders in obtaining vegetables:

The slash system is a system by buying vegetables that are still in the paddy field and have not been harvested. This system has actually been around for a long time but is still only done by a few traders. For now, it is a trend of alternative choices that many traders do in getting vegetable commodities. This is the best alternative choice made by traders because it is considered as a simple system, which is unnecessary, convoluted with farmers where at first they have to lend to farmers. But here traders also have to have skills in calculating yields in one stretch.

The underlying reasons for today's traders prefer to cut rather than lend to farmers. This change shows a business system that is commercially oriented and begins to forget about the social capital they have. Going forward if this continues to change increasingly commercially and leave social capital behind, what has happened to this business cannot yet be known to continue or not. If according to the theory of the agricultural market in general it still requires the support of social capital in supporting success in marketing agricultural products.

With the decline in social capital, traders and farmers alike choose safe roads. Farmers if they meet a new trader or a rogue trader, implementing a system has money. Where traders have to pay for the cash vegetables they buy when traders bring vegetables. Whereas in the past traders could pay after the vegetables were sold in the market or term debt. The traders with other traders are big too, treating naughty traders with a system of having money, there is no debt system.

## **CONCLUSION**

Based on the results of research and data analysis that has been done, the following conclusions are obtained. There has been a decrease in social capital in vegetable trade in East Java where changes in social capital occur in traders and farmers, such changes are; 1. Farmers have begun not to deal with agreements with traders where farmers sell their crops to traders who do not provide loans for capital and seed assistance; farmers also start being dishonest by mixing the results of good penen with poor yields. Traders have started to be dishonest again, padagang colored the time of payment to farmers, there are even traders who run away and do not pay to farmers. Trust between traders also decreases where traders have started to trust in a lot of places where many traders cheat other traders. With this problem, the trading system has finally begun to change where traders buy vegetables with a slash system, then with other traders, with the system there are goods that have money, so they must be paid in full in front.

## 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). *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 Aplication*. 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 10.18551/rjoas.2019-02.28

## **FOOD CONSUMPTION DIVERSITY BASED ON LOCAL RESOURCES IN DEALING WITH FOOD SECURITY IN INDONESIA**

**Hardana Andrean Eka, Haryati Novi, Dewi Heptari Elita**  
Faculty of Agriculture, University of Brawijaya, Malang, Indonesia  
\*E-mail: [andreas@ub.ac.id](mailto:andreas@ub.ac.id)

### **ABSTRACT**

The dependence of community consumption pattern on rice has caused high demand for rice from year to year. These conditions have an impact on the decreasing of local resources diversity. This is because farmers prefer to grow rice. This study aims to explain problems in diversifying food consumption based on local resources and its policy in Indonesia. This is a literature study based on scientific articles related to the issues for 10 years. Result shows that the main problem of food diversification is the imbalance between the pattern of food consumption and the provision of food production and its availability in the community. The Indonesian government has not been sufficiently committed to use the concept of food diversity to replace the consumption patterns of its majority community in rice. Food diversification needs to be developed through the development of various value-added food industries. Large partnerships among stakeholders need to be done by involving all stakeholders, namely local government, research institutions, industry, universities, NGOs and the community.

### **KEY WORDS**

Forecasting, import, crystal sugar, demand sugar.

Food is a basic human need. In accordance with the Food Law (1996), food security is a condition of the fulfillment of food needs for households, not only in sufficient quantities, but also must be safe, quality, nutritious, and diverse; at a price affordable to people's purchasing power. The definition of food as a human right is not only quantitative or sufficient, but also includes qualitative aspects (safe, quality, and nutritious). In the country degan pagsa food expenditure large population is always encountered potential problems of food shortage. The share of food expenditure is used as one indicator of food security. The greater the share of food expenditure, meaning food security is also more vulnerable (Ashari et al, 2012).

Policies on food security in Indonesia are also too often biased towards rice. This resulted in the increasingly thick food pattern of the people to the single staple food, namely rice. This policy on rice also makes it not only a commodity but as a political commodity. The impacts caused by local food are not developed because research investment for non-rice food is also not developed (Hariyadi, 2010).

The development of food security is confronted by the underlying problem where food demand growth is faster than its production growth. Nationally, the rapid growth of food demand both in terms of quantity, quality, and diversity is due to several factors such as the growth of population, industrial growth, and purchasing power of the people, as well as changes in consumer preferences. In addition, the national food production capacity is constrained by competition in land use, extreme climate change, the phenomenon of natural and environmental degradation and the limited support of agricultural infrastructure (Saptana et al., 2013).

Diversification of food consumption became one of the main pillars in reducing food and nutrition problems. In terms of physiological, humans to be active and healthy life requires more than 40 types of nutrients contained in various types of food. Various types of food that exist, there is no single type of food complete nutrition except breast milk (Martianto, 2005). The facts show that diversification of food consumption for the population is an important aspect for the realization of Indonesia's quality human resources.

Some research studies related to food consumption patterns conducted by the researchers can be concluded that up to now the dependence of people's food consumption on food sources of carbohydrates, especially rice is still very high (more than 60%), while on the other hand the role of tubers, animal foods, vegetables and fruits and nuts are still very low. This implies the low score of diversity of food consumption pattern (PPH score) which in the year of 2005 only reached 79,1, far below the ideal score 100 which is expected to be achieved in 2015. In other words, Indonesian food consumption pattern is not yet fulfilled balanced nutrition criteria. This indicates that food diversification programs in Indonesia need to be improved through an accelerated effort (Rachman and Mewa, 2008). These efforts are made by diversifying local food consumption based on local resources.

Food security is developed based on the strength of local resources that will give birth to food self-sufficiency. the condition which in turn will not only give birth to healthy, active, and competitive individuals but also food system which will also become the solid foundation of food security at national level. Therefore, this research will examine the problems in diversification of food consumption based on local resources and its handling in Indonesia.

## METHODS OF RESEARCH

This research was conducted by using literature review study and secondary data collection from various research results that support food consumption diversity based on local resources in dealing with food security in Indonesia as well as related to the implementation of cooperative farming in agribusiness of agricultural commodities. Data collection techniques what can be done is by means of documentation by means of a literature review.

## RESULTS AND DISCUSSION

*Problems related to the handling / government policy related to food diversification during this time in Indonesia.* Efforts diversification or diversification of food consumption although it has been pioneered since the 60's, but until now still not running as expected. Local food patterns such as abandoned changed to rice patterns and noodle patterns. The average quality of food consumption of Indonesian population is also still low, less diverse, still dominated by carbohydrate source food mainly from the grains. Indonesia's staple food consumption is heavily dependent on rice with an average participation rate of almost 100 percent except for Maluku and Papua (known for sago ecology) ranging from 80 percent (Rachman and Mewa, 2008).

Especially for rice crops which furthermore become a commodity of rice as staple food of society. Keep in mind that efforts to increase production in the future seem to have difficulty yag will be faced in maintaining its availability, this is due to various factors, including: 1). Decreased wetland area, 2) Decrease in soil fertility, 3). Decline in quality and extent of irrigation system services, 4). Lack of adoption of farmers' technology, 5). Ineffective incentive policies, 6). Increasing number of smallholders, 7). The still high yield loss (Simatupang and Maulana, 2006; Agricultural Research Agency, 2005; Food Security Council, 2006).

Research studies conducted by Rachman (2001) indicate a change in the pattern of staple food consumption that tends to lead to a single pattern of rice from the original pattern of rice-tubers, and or rice-tubers. A prominent condition is the suggestion to combine rice with corn, so popular as "rice-corn". There are two meanings of the term: 1) mixture of rice with corn, and 2) replacement of rice consumption at certain times with corn. In subsequent years the government through the Ministry of Agriculture and other departments implement the program, but indeed the results are not as expected (Mewa, 2010).

The main problem of food diversification is the imbalance between the pattern of food consumption and the provision of food production / availability in the community. Production of various types of food can not be produced in all regions and can not be produced any time needed. On the other hand, food consumption is carried out by all residents and every time is

needed. such conditions of availability and distribution of different types of food in each region are important in relation to efforts to diversify food consumption in addition to access and household purchasing power (Rachman and Mewa, 2008).

Development of diversification of food consumption of the population is inseparable from the level of knowledge about food and nutrition. This is related to the problem that both shortcomings and excess food and nutrients will cause health problems. For low-income people and low access to food, food and nutrition knowledge of the population is needed to increase their understanding of the importance of efforts that lead to the fulfillment of consumption in accordance with the ideal recommendation in terms of quantity and quality (diversification) of food consumption. Meanwhile, for people with high income levels and access to food is relatively good, increased knowledge of food and nutrition of the population is needed to increase their understanding that the balance of consumption and food diversification according to the ideal recommendation in terms of quantity and quality (diversification) of food consumption to avoid More nutritional problems need to be given priority (Rachman and Mewa, 2008).

On the consumer side, studies show that potential factors of local production and community income play an important role in influencing the level of diversity of household food consumption. In low socio-economic societies the problem is not only on the quality of food consumption, but also the unmet energy needs. In high-income communities, generally the level of diversity is relatively good despite the tendency of excess nutrients. This is in line with previous studies (Martianto and Ariani, 2004; Manoewoto and Martianto, 2002) which stated that: a) the dependence of people's food consumption on food sources of carbohydrates, especially rice is still very high, and the role of animal food, vegetables and fruits and nuts -still still very low; b) Food Harvest expectation scores reflecting the diversity of food is still low and tend to fluctuate with the development of national economic situation; c) Besides the level of dependence on rice that is still very high, an increase in the contribution of imported food such as flour and its processed products; d) the consumption of fast food / eating outdoors, especially fast-food managed by multinationals, has increased; e) efforts to increase the value of local food organoleptics (yams, beans, etc.) supported by the development of simple technology for small and medium enterprises proved able to increase local consumer food preferences; and f) the allocation of research funds in agriculture and food is still highly biased on rice, and less directed to other local food (Rachman and Mewa, 2008).

*Potential development of local potential as a form of local food diversification (diversification) strategy.* The momentum of regional autonomy to build national food self-sufficiency became a form of strategy in diversification (diversification) of local food. This needs to pay attention to the potential, especially regarding the condition, the area and the condition of the environment, and then Indonesia has a great opportunity to realize the independence of food. Local governments need to re-evaluate whether rice is the right staple for the region. Local governments need to seriously explore their local potentials in terms of basic food, which is more in line with their natural environment and cultural environment (Hariyadi, 2010).

The concept of food diversification should be defined as diversification horizontally, vertically and regionally. That is, each region, in accordance with regional autonomy and independence in managing their respective areas, need to seek regional food self-sufficiency in accordance with the potential of each region. The program then needs to be affirmed with the political commitment of the local government that is politically supported also by the central government (Hariyadi, 2010).

Diversification of staple food consumption is not intended to replace the total rice but to change the pattern of food consumption of the community so that people will consume more types of food and better nutrition. Consumed food will be diverse, nutritious and balanced. In Indonesia there are guidelines to measure the diversification of food consumption including staple food known as the Food Pattern of Hope (PPH) (Ariani, 2010).

The pattern of consumption of staple food in Indonesia is shifting from diverse local resource-based patterns to rice and wheat patterns (including derivatives). Consequently,

rice consumption level is still above 100 kg / capita / year, on the contrary for local food such as maize is only 2.9 kg and tubers 12 kg / capita / year. Diversification of staple food still not in accordance with ideal food pattern as stated in PPH. Consumption of the above recommended grains, on the contrary for the tubers is still smaller than it should be (Ariani, 2010).

The pattern of consumption of Indonesian society still needs to be improved its diversity, both for food staple and for other types of food. Diversification of food also becomes one of the main pillars in realizing food security. Especially when referring to the concept of nutrition that no one type of food complete nutrients in accordance with human needs for healthy living. In terms of physiological, humans to be active and healthy life requires more than 40 types of nutrients contained in various types of food. There is no single type of food complete nutrition except breast milk (Ariani, 2010).

The staple food for society is ideally sourced from local raw materials, so that transport costs can be reduced. Today, Indonesians living in tropical areas where wheat can hardly grow, become the biggest noodle-eating eaters after the PRC. Actually so many other types of tubers other than wheat that can grow well in Indonesia and can be an alternative to food security. People are complacent to consume a lot of residual goods, which are excess products from various countries with low prices that actually turn off the domestic industry itself. But the effort to make local resources a motivation, that Food Diversification program is very possible accepted by the community that is through the 'industry' alternative food that involves the activities of production, distribution, marketing, and promotion.

*The strategy (including management of food diversification through industry to have added value).* When assessing the diversification of staple food consumption then it is necessary to return to the problem of food decentralization that is local food. Although rice consumption tends to decline but its contribution to total energy is still above 60 percent while new tubers contribute about 3 percent of energy. Various tubers have a broad enough prospect to be developed as a substitution of rice and to be processed into prestigious food. This activity requires the support of process technology development and processing as well as a good marketing strategy to transform the image of inferior food into normal and even superior food (Mewa, 2010).

Efforts to meet consumer demand, one of the most important factors in the success of food diversification program is to implement product development. This product is an effort to create a new product that has properties, among others very practical, available in all sizes, if used there is no rest and easily obtained anywhere. With all the busy life of every member of the household and insufficient time to cook the food, the ready-made and ready-to-eat food is the best choice.

The latest policy, the government set a policy to accelerate the diversification of food consumption based on local resources with two strategies, namely: 1) Internalization of food consumes diversification and Business Development and Local Food Industry. The process of internalization is carried out in two ways: 1) Advocacy, campaigning and socialization of diverse, balanced and safe food consumption at various levels to the apparatus and community, and 2) food consumption education through formal and non-formal education. Meanwhile, the development of local business and food industry is done through: 1) Facilitation to UMKM for the development of fresh food business, raw materials industry, foodstuff processed and ready-to-eat foods that are secure based on local resources and 2) Advocacy, sociation and implementation standard of quality and food safety for food business actors, especially household scale business and UMKM.

One of the important programs in the development of food self-sufficiency is to revitalize the old program of "food diversification". The old program of food diversification has never been seriously and continuously done consistently by the government. Therefore, now is the time to really implement and revitalize the food diversification program. Therefore, there is a strong and clear commitment from the government regarding this diversification program, which in turn will create conducive social environment and react positively to the diversification program (Hariyadi, 2010).

The government has established a policy to accelerate the diversification of food consumption based on local resources. Learning from the experience of diversification of food consumption so far, the implementation of the policy should be used as a mass movement, not just a government program, so that all levels of society both at the center and in the region must participate and be responsible to make it happen. In addition, there needs to be strong and consistent support from local governments and DPRD's to implement the policy.

In particular, food technology needs to play a role in the development of industrial diversification of food, certainly based on local resources. Therefore, several things are needed: (i) exploration and utilization of potential of superior local materials; (ii) improvement and application of cultivation technology, processing, packaging; and (iii) the application of the concept of food industry. The industry of food diversity needs to be done by creating added value, in such a way that the local food products produced have more value, or at least the same as the staple food products of rice (and wheat) that currently dominate the Indonesian national menu. Creation of this added value is one of the challenges that must be solved by food technology. To that end, research efforts in the field of food science and technology to explore the benefits / functional of local food, and identify and map the preferences and habits of consumers needs to be done intensively (Hariyadi, 2010).

The diversity of natural resources, biodiversity and various types of traditional food owned by the whole region can still be developed to meet the diversification of food consumption. The level of education and development of information technology and public communication strategy can provide an opportunity for the acceleration of the process of raising public awareness towards food that is diverse and nutritiously balanced. Poverty alleviation programs are expected to improve the economic capacity of the people, which in turn also increases food consumption both in terms of both quantity and quality of food consumption (Rachman and Mewa, 2008).

## **CONCLUSION**

The main problem of food diversification is the imbalance between the pattern of food consumption and the provision of food production / availability in the community. Production of various types of food can not be produced in all regions and can not be produced any time needed. Such conditions of availability and distribution of different types of food in each region are important in relation to efforts to diversify food consumption in addition to access and purchasing power of households. The staple food for society is ideally sourced from local raw materials, so that transport costs can be reduced. Potential development of cultivation berbagai other types of tubers other than wheat that can grow well in Indonesia and can be an alternative to food security. The government has established a policy to accelerate the diversification of food consumption based on local resources. Implementation of the policy should be used as a mass movement, not just a government program. In addition, the management of food diversification through industry to have added value through the use of food technology in the food diversification industry, of course based on local resources

## **REFERENCES**

1. Agriculture Research and Development Berau. (2005). Sugar Cane in Indonesia. Agriculture Berau. Jakarta.
2. Bernatonyte, D. Burksaitiene, D. & Rimiene, K. (2013). Trade Specialization Pattern of Lithuania. Economics and Management: 2013. 18 (4).
3. Bernatonyte, D. & Normantiene, A. (2009). Estimation of Trade Specialization: the Case of the Baltic States. Ekonomika-Engineering Economics (2).
4. 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.
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. Dachliani, D. (2006). Demand of sugar import on 1980-2003 in Indonesia. (Thesis). Faculty of Economic. Diponegoro University. Semarang.
8. Delroy Anthony Armstrong (2004). The Potential Impact of Trade Policy changes on Caribbean Sugar. B.S., Louisiana State University.
9. Dipl.-Ing. Dieter Bahndorf, Udo Kienle. (2004). World Market of Sugar and Sweeteners. OECD-FAO Agricultural Outlook 2016-2025, OECD Publishing, Paris.
10. Firmansyah, (2008). The Position of Competitiveness and Specialization Trading of TeaIndonesia in Facing Globalization.Brawijaya. University. Malang.
11. Gaynor, P.E., and R.C. Kirk Patrick.(1994). Tome Series Modeling and Forecasting in Business and Economics. New York, Mc Graw hill.
12. Haley, Stephen.2013. World Raw Sugar Prices The Influence of Brazilian Costs of Production and World Surplus/ Deficit Measures. United States Department of Agriculture
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., 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. Rumánková, Lenka and Smutka, Luboš. (2013). Global Sugar Market – The Analysis Of Factors Influencing Supply and Demand. Volume LXI. No. 2, pp. 463–471.
17. Sa'diyah, C. (2014). Factors that influence of economic performance for crystal sugar in Indonesia. (Thesis). Faculty of Agriculture. University of Brawijaya. Malang.
18. Sinaga, N. (2006). Model Econometric Aplication. IPB Post Graduate. Bogor.
19. 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.
20. 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 10.18551/rjoas.2019-02.29

## FACTORS THAT INFLUENCE THE PRODUCTION RISK OF WHITE PEPPER IN BANGKA BELITUNG PROVINCE, INDONESIA

**Pranoto Yudi Sapta\*, Purwasih Rati**

Department of Agribusiness, Faculty of Agriculture, Fisheries and Biology,  
Bangka Belitung University, Indonesia

\*E-mail: [udhei\\_sapta@yahoo.com](mailto:udhei_sapta@yahoo.com)

### ABSTRACT

This research was conducted to analyze the factors that influence the risk of white pepper production in the Bangka Belitung Archipelago Province. The study was conducted in South Bangka Regency, Belitung Regency, and West Bangka Regency from January 2018 to October 2018. The research method used was the survey method and the sampling method used was purposive sampling. The number of farmers used as respondents was 120 people. The factors that influence the risk of white pepper production are analyzed using a model developed by Just and Pope (1979). The results showed that the factors affecting the risk of white pepper production in the Province of Bangka Belitung Archipelago were labor and lime, both of which were risk reducing.

### KEY WORDS

White pepper, production, risk, risk reducing.

According to historical records, pepper commodities became one of the attractions of Europeans to come to Indonesia. The spices were growing rapidly since the Netherlands through the VOC opened a trading office in Palembang which also covered the Bangka Belitung region. Since three centuries ago, Bangka pepper was better known internationally as Muntok White Pepper. The name Muntok refers to the name of the port which now includes the area of West Bangka Regency which is a transit area for pepper trading from the Bangka Belitung region to the outside world. Pepper is a plant that was once a prime commodity on the islands of Bangka and Belitung. It can be seen that many people have increased their welfare due to pepper farming. In addition, plants that have been cultivated in Indonesia since the colonial era have also made the name Bangka Belitung Archipelago known to foreign countries (LPPM UBB 2015).

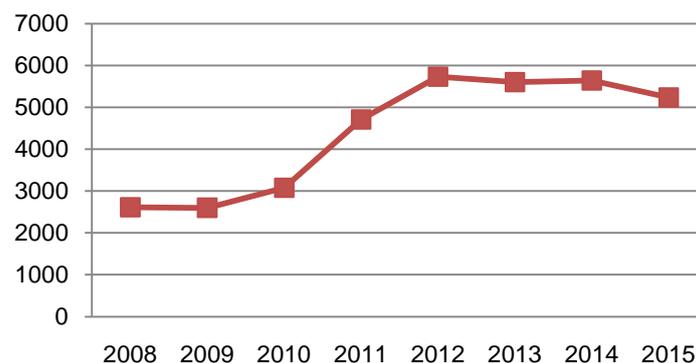


Figure 1 – Average Pepper Production in Bangka Islands Production Belitung

Based on data from the BPS Province of Bangka Belitung Islands (2016) that the average white pepper production in the Bangka Belitung Archipelago Province from 2008 to 2015 was 26,400 tons, of which South Bangka Regency contributed 45.66 percent (12,055 tons), Belitung Regency contributed 18,41 percent (4,859 tons), and West Bangka Regency accounted for 14.36 percent (3,791 tons). Thus, the district that contributes the largest

pepper production in the Bangka Belitung Archipelago Province from 2008 to 2015 is South Bangka Regency, Belitung Regency and West Bangka Regency. The following in Figure 1 presents the average pepper production in the Bangka Belitung Archipelago Province from 2008 to 2015.

Although the three regencies such as South Bangka, Belitung and West Bangka have the largest pepper production in the Bangka Belitung Archipelago Province, pepper production in the district from 2012 to 2015 has fluctuated. Fluctuating production can be caused by several factors including erratic weather and pest and plant disease attacks. Fluctuating pepper production indicates that the management of pepper farming is influenced by the risk of production.

Research on the risk of white pepper production has been carried out by Jamilah (2016), namely in Bakam Village, Bakam District, Bakam Regency. The risk of white pepper production was analyzed using the GARCH model, where the factors thought to affect the risk of white pepper production were lime, Urea fertilizer, TSP fertilizer, KCL fertilizer, NPK fertilizer, pesticides, and labor. Therefore, the purpose of this research is to analyze the factors that influence the risk of white pepper production in Bangka Belitung Archipelago Province.

## METHODS OF RESEARCH

This research was conducted in three districts in the Bangka Belitung Islands Province which included South Bangka Regency, Belitung Regency, and West Bangka Regency. This was done with the consideration that the three districts had higher pepper production than other districts and their production had fluctuated from year to year. This research was conducted from January 2018 to October 2018.

The research method used in this study is the survey method. This research uses purposive sampling withdrawal method. The criteria for farmers who will become respondents are farmers who plant white pepper at least 2 times harvesting and the minimum number of trees is 1,000 stems. The number of farmers who will be used as respondents can be seen in Table 1.

Table 1 – Number of Farmer Respondents

No	District/City	Number of Farmers (people)
1	Bangka Selatan	40
2	Belitung	40
3	Bangka Barat	40

Factors that influence the risk of white pepper production are analyzed using a model developed by Just and Pope (1979). This model accommodates the existence of production risks by incorporating variance from the production equation. The model is as follows:

$$q = f(x) + g(x)\varepsilon$$

Where: Q = Amount of production achieved; f(x) = Production function; g(x) = Production risk function; X = Production factor; E = Error term.

Production function:

$$f(x) = \ln Y_i = \beta_0 + \beta_1 \ln X_1 + \beta_2 \ln X_2 + \beta_3 \ln X_3 + \beta_4 \ln X_4 + \beta_5 D_1 + \beta_6 D_2 + \varepsilon$$

Production Variants:

$$\sigma_{Y_i} = \left( Y_i - \hat{Y}_i \right)^2$$

Production risk function:

$$g(x) = \ln \sigma_{Y_i}^2 = \alpha_0 + \alpha_1 \ln X_1 + \alpha_2 \ln X_2 + \alpha_3 \ln X_3 + \alpha_4 \ln X_4 + \alpha_5 D_1 + \alpha_6 D_2 + \varepsilon$$

Where: Y = White pepper production (kg/stem);  $\hat{Y}_i$  = Suspected white pepper production based on model (kg / stem); B = Parameters estimated in the production function; A = Parameters estimated in the production risk function; X<sub>1</sub> = Fertilizer N (kg / stem); X<sub>2</sub> = Fertilizer P (kg / stem); X<sub>3</sub> = Fertilizer K (kg / stem); X<sub>4</sub> = Labor (HOK / stem); D<sub>1</sub> = Dummy lime, 1 = give and 0 = not give; D<sub>2</sub> = Dummy pesticide administration, 1 = giving and 0 = not giving; E = Error term.

## RESULTS AND DISCUSSION

Respondents in this study were the ones who cultivated white pepper plants. The respondents' identity included age, education level, farming experience, and number of dependents in the family. Residents are said to have a productive age if they are in the range of 15-64 years and are said to have a non-productive age if they are less than 15 years and 65 years and over (BPS RI 2016). The age distribution of respondents of white pepper farming in Bangka Belitung Province can be seen in Table 2.

Table 2 – Identity of Respondents by Age in the Bangka Belitung Province in 2018

No	Age (year)	Number (people)	Percentage (%)
1	16 – 23	3	2,50
2	24 – 31	14	11,67
3	32 – 39	22	18,33
4	40 – 47	35	29,17
5	48 – 55	21	17,50
6	56 – 62	14	11,67
7	63 – 70	9	7,50
8	71 – 78	2	1,67

Source: Processed Primary Data, 2018.

Based on Table 2, it indicates that all respondents are in the productive age group. The highest percentage in the age group 40 - 47 years is 35 people or 29.17 percent, while the least is in the age group 71-78 years with 2 people or 1.67 percent. Respondents who are in the productive age group make it possible to increase the production of white pepper. This was seen from the strength and physicality of respondents who were still strong in managing white pepper farming.

Education level is an important factor for knowing the level of human resources. The level of education in this study illustrates the state of education of respondents in Bangka Belitung Province. According to Mosher (1981) education has an important role in business productivity and is a facilitating factor for agricultural development, because with education farmers recognize knowledge, skills and new ways of doing farming activities. The education level of white pepper respondents in Bangka Belitung Province can be seen in Table 3.

In general, farmers who were the respondents in this study had low levels of education. This could be seen from the percentage of respondents' education level as depicted in Table 3. Most of the white pepper respondents in Bangka Belitung Province studied only up to the elementary school level with 41 people or 34.17 percent. Meanwhile, the level of senior secondary education was 39 people or 32.50 percent and tertiary education was only 9 people or 7.5 percent of the total pepper respondents in Bangka Belitung Province.

Based on the results of interviews in the field, the low level of education of respondents was due to the limited cost of their parents to provide high education so that respondents were taught to live independently by following the footsteps of their parents becoming farmers, especially white pepper farmers. The low level of education of these respondents

massively affected the absorption of new innovations in white pepper cultivation in accordance with the recommendations. Even though they were given counseling and training on white pepper cultivation, most of the respondents found it difficult to follow and they continued to maintain the cultivation techniques carried out from generation to generation.

Table 3 – Identity of Respondents by Education Level in Bangka Belitung Province in 2018

Number	Education level	Number (people)	Percentage (%)
1	Not Graduating From School	13	10,83
2	Elementary School Graduates	41	34,17
3	Junior High School Graduates	18	15,00
4	Senior High School Graduates	39	32,50
5	University Graduates	9	7,50
Total		120	100,00

Source: Processed Primary Data, 2018.

The respondents who have higher levels of education will be very responsive to information and new innovations about white pepper cultivation in accordance with the recommendations. In addition to formal education, there are also non-formal education such as activities or learning from agricultural extension workers and the Integrated Pest Management Field School (SL-IPM) by the government.

Farming experience is one of the factors that influence success in the plantation sector, especially white pepper farming. The respondents learned from experience so that they gained knowledge to expedite their farming activities or improve the cultivation system. The experience referred to in this study is the length of time the respondents did white pepper farming. In general the respondent farmers did white pepper farming for generations, so that they had a long experience. The experience of white pepper farming of respondents in Bangka Belitung Province can be seen in Table 4.

Table 4 – Identity of Respondents Based on Farming Experience in Bangka Belitung Province

Number	Farming Time (Year)	Number (people)	Percentage (%)
1	< 10	41	34,17
2	11 – 25	54	45,00
3	26 – 41	22	18,33
4	> 42	3	2,5
Total		120	100,00

Based on Table 4, white pepper farmers in Bangka Belitung Province who were chosen as the respondents in this study were farmers who had long been doing white pepper farming. Most respondents have experienced between 11 and 25 years, which is equal to 45 percent of the respondents of white pepper as a whole. The experience of farming respondents starting from the bottom is starting from farm laborers to owning land privately, thus their knowledge of how to cultivate white pepper is quite high. But in the current conditions, the cultivation they did from the past was not so good anymore to be applied. This is due to the soil conditions that have been repeatedly processed for agricultural land which causes pests and diseases to attack white pepper plants are increasing, so the respondents must have broader knowledge to eradicate pests and diseases, and cultivate white pepper as recommended.

The number of family dependents is one measurement that describes the economic burden which must be borne by the respondents' farmers. The more the number of people in the family, the heavier the burden must be borne. The number of family dependents will be a benchmark for the family head to work harder to fulfill the family's needs. The number of dependents of respondents who are the source of research is described in Table 5.

Based on Table 5, when viewed from the number of family dependents, there are 33.3 percent or 40 respondents who have a family of 4 people. This illustrates that the white pepper respondents in Bangka Belitung Province are quite aware that with a small family size will reduce the economic burden for respondents and the number of dependents is at

least 0 and 1 at 1.6 and 3.33 percent. The number of family dependents causes a small number of workers in the family who will help work in the field, so they have to hire workers outside the family.

Table 5 – Identity of Respondents Based on Number of Family Dependents in Bangka Belitung Province in 2018

Number	Interval Number of Dependents (People)	Number (people)	Percentage (%)
1	0	2	1,67
2	1	4	3,33
3	2	11	9,17
4	3	25	20,83
5	4	40	33,33
6	5	24	20,00
7	6	8	6,67
8	7	6	5,00
Total		120	100,00

Source: Processed Primary Data, 2018.

Analysis of factors that influence production is suspected using the production function. The production function is obtained by registering the dependent variable with an independent variable. The dependent variable in this study is white pepper production in the Bangka Belitung Archipelago Province. The independent variables in this study were N fertilizer, P fertilizer, K fertilizer, labor, lime dummy, and dummy pesticide administration. The results of estimating the production function and the risk function of white pepper production can be seen in Table 6.

Table 6 – Results of Estimated Production Function and Risk Function of White Pepper Production in the Province of Bangka Belitung Archipelago

Variable	Coefficient	Std. Error	T	Sig.
(Constant)	2,967	0,546	5,435	0,000
Ln fertilizer N	0,130	0,122	1,065	0,289
Ln fertilizer P	-0,058	0,110	-0,529	0,598
Ln fertilizer K	0,232	0,106	2,193	0,031
Ln labor	0,260	0,086	3,039	0,003
Dummy limestone	-0,020	0,168	-0,119	0,906
Dummy pesticide	0,135	0,205	0,657	0,513
$R^2 = 0,249$				
(Constant)	0,376	0,182	2,062	0,042
LnX11	0,043	0,074	0,584	0,561
LnX21	0,022	0,064	0,351	0,726
LnX31	0,030	0,065	0,457	0,649
LnX41	-0,132	0,061	-2,148	0,034
Dummy limestone	-0,115	0,051	-2,256	0,026
Dummy pesticide	-0,076	0,065	-1,172	0,244
$R^2 = 0,121$				

Based on Table 6, it obtained the value of the coefficient of determination (R square) of 0.249. This value is quite representative because of the 6 variables analyzed, there are 2 variables that have a significant effect on the production of white pepper. This value indicates that 24.9 percent of the variation in white pepper production in the Province of Bangka Belitung Archipelago can be explained by N fertilizer, P fertilizer, K fertilizer, labor, lime dummy, and dummy pesticide administration, while the remaining 75.1 percent explained by other variables outside the model. Variables that significantly affect the production of white pepper are K fertilizer and labor. K fertilizer variable has a significant effect on the 5 percent level with a regression coefficient of 0.232. This value indicates that if an increase in the amount of K fertilizer (other inputs are considered constant), it can still increase the production of white pepper. In addition, labor also has a significant positive effect on white pepper production at a real level of 1 percent. The regression coefficient of labor is equal to 0.26. This value also indicates that if an increase in the number of workers (other inputs are considered constant), then it can still increase the production of white pepper. N fertilizer, P

fertilizer, lime dummy, and dummy pesticide administration did not significantly affect the level of 10 percent.

The coefficient of determination obtained from estimating the production risk function is 0.12. This value is also quite representative in explaining the variation of white pepper production because of the 6 variables analyzed, there are only 2 variables that significantly affect the risk of white pepper production in the Bangka Belitung Archipelago Province. This value of the coefficient of determination is quite low but in line with the results of Jamilah (2016). Variables that have no significant effect on the risk of production is white N fertilizer, P fertilizer, K fertilizer, and dummy pesticide. This is in line with the results of Jamilah's research (2016) that Urea, TSP, and NPK fertilizers do not affect the risk of white pepper production.

Variables that have a significant effect on the risk of white pepper production are labor and lime. In the production risk function, labor is said to be risk reducing because the regression coefficient value obtained is negative which is equal to -0.132 and its value is significant. Risk reducing shows that the use of labor can reduce the risk of white pepper production or production variations achieved. Variations in production achieved or production risks can be reduced if the workforce is able to manage white pepper farming well. Based on the characteristics of the respondents, most of the respondents had experienced between 11 and 25 years, namely as many as 45 percent of the respondents of white pepper as a whole. The experience of respondents in farming started from below, starting from being a farm worker to finally owning land privately, thus their knowledge of how to cultivate white pepper is quite high. The results of this study are in line with the results of Jamilah's research (2016) that labor is a factor of production that can reduce the risk of white pepper production.

In addition, the chalk dummy variable also has a significant effect on the risk of white pepper production and the regression coefficient value is -0.115. This value shows that lime can be said to be risk reducing which means that lime can reduce the risk of production or variations in white pepper production achieved. If the administration of lime is done well, the production variation achieved or the risk of producing white pepper can be reduced. This is in line with the results of Jamilah (2016) study that lime is a production factor that can reduce the risk of white pepper production.

## CONCLUSION

The factors that influence the risk of white pepper production in the Province of Bangka Belitung Archipelago are labor and lime, where both are risk reducing. Meanwhile, fertilizers containing N elements, fertilizers containing P elements, lime dummy, and dummy pesticides did not significantly affect the risk of white pepper production in the Bangka Belitung Islands Province.

## REFERENCES

1. Mosher A.T. 1981. Menggerakkan and Membangun Pertanian. Jakarta (ID): Yasaguna.
2. [BPS] Badan Pusat Statistik Provinsi Kepulauan Bangka Belitung. 2016. Produksi Lada Menurut Kabupaten/Kota. Provinsi Kepulauan Bangka Belitung (ID): Badan Pusat Statistik Provinsi Kepulauan Bangka Belitung.
3. [BPS RI] Badan Pusat Statistik Republik Indonesia. 2016. Profil Penduduk Indonesia Hasil Supas 2015. Jakarta (ID): Badan Pusat Statistik Republik Indonesia.
4. Jamilah. 2016. Analisis Risiko Produksi Usahatani Lada Putih di Desa Bakam. Kecamatan Bangka Kabupaten Bangka. Balunijuk (ID): Perikanan, and Biologi.
5. Just RE, Pope RD. 1979. On the Relationship of Input Decisions and Risk. In: Roumasset, J.A, J.M. Boussard and I. Shing (Eds). Risk, Uncertainty and Agricultural Development. New York (US): Agricultural Development Council.
6. LPPM Universitas Bangka Belitung. 2015. Kajian Model Pembiayaan and Komoditas Lada Di Provinsi Kepulauan Bangka Belitung. Provinsi Kepulauan Babel.

DOI 10.18551/rjoas.2019-02.30

## THE SHACKLES OF POVERTY OF THE FARMERS IN THE ISOLATED AND VULNERABLE COMMUNITY

Hatu Dewinta Rizky R.\*, Wisadhirana Darsono, Susilo Edi

Master's Program in Social Sciences, Faculty of Social and Political Sciences,  
University of Brwijaya, Indonesia

\*E-mail: [dewintaarizky@gmail.com](mailto:dewintaarizky@gmail.com)

### ABSTRACT

This study refutes Putnam's statement that people prefer to deal with people they know and can produce results in realizing their goals (Field, 2010, p. 3). Although the farmers in the Isolated and Vulnerable Community (*Komunitas Adat Terpencil/KAT*) do not only deal with people they know in the networking process, it seems that they are still unable to break the shackles of poverty. This study uses Putnam's social capital theory. The study utilizes a qualitative method with a case study approach. Data collection techniques were observation, interviews, and documentation. In-depth interviews were conducted with six informants selected through the snowball sampling technique. The results of the study show that the farmers in the Isolated and Vulnerable Community apply the bridging and linking strategies to support their farm. These strategies help the community to get capital only but do not help the community to break the shackles of poverty because of exploitation. In addition, the government seems unable to help the community because the capital they have is below the middlemen.

### KEY WORDS

Farmers, poverty, middlemen, public service.

The issue of poverty seems to be a social phenomena problem, especially in developing countries like Indonesia. Indonesia certainly manages long-term and short-term development. Long-term development has produced the rate of economic growth by an average of 7 percent per year. The development process went smoothly until the 1970s and 1980s. However, Indonesia's economic development has also experienced external shocks several times, such as the falling prices of crude oil on the international market. These conditions cause several problems, one of which is poverty (Prawoto, 2005).

Based on data from Statistics Indonesia, the number of poor people in Indonesia was recorded at 29.89 million people (12.36 percent) in September 2011. The percentage of poor people in urban areas was 9.23 percent and the poor people in rural areas was 15.72 percent in March 2011, down slightly to 15.59 percent in September 2011 (Statistics Indonesia, 2012). The number of poor people in Gorontalo Province as the research location was 198.51 thousand people (16.81%) in 2018.

The authors perceive that the current State's development strategy tend to focus on economic growth, even though the community actually need many things. State progress is not only measured by economic growth but also other aspects such as health, education, and public life insurance. The development strategy appears not to be followed by income distribution for all segments of society. Many programs are only top down, causing downward distribution does not occur, especially in the isolated and vulnerable community.

The Isolated and Vulnerable Community (*Komunitas Adat Terpencil/KAT*) is still underdeveloped in the social, political, and economic sectors. The Isolated and Vulnerable Community in Buhu Village, Gorontalo Regency is still unable to break the shackles of poverty. Based on the profile data of Buhu Village, the largest number of poor people is in Durian Hamlet of 114 families with 58 families as the Isolated and Vulnerable Community. All members of the Isolated and Vulnerable Community in Durian Hamlet make a living as farmers.

Scott in (Prawoto, 2009) states that poverty causes villagers to be willing to sacrifice anything to have safety life, to risk physical labor to produce profits for local middlemen, and to receive wages not commensurate with the costs spent. These conditions also happen in the Isolated and Vulnerable Community in Durian Hamlet. However, the relationship between the farmers and the middlemen seems to help the farmers to maintain their farming activities even though they seem to be 'exploited' by the middlemen. Edi Susilo (2018, p. 2) states that the patron-client in fishing community is a social capital, which should be used as a base to help them out of poverty. This study aims to investigate the strategies used by the Isolated and Vulnerable Community in Durian Hamlet to survive amid their poverty. This study aims to understand the bridging pattern and linking potential in the Isolated and Vulnerable Community in running their farm.

## LITERATURE REVIEW

This research uses Putnam's social capital theory. Putnam provides three typologies of social capital. Bonding social capital is a type of social capital in the context of inward-looking ideas, relations, and attention. This type of social capital generally appears in a homogeneous society. Unlike bonding, bridging social capital is inclusive and outward-looking. The bridging form of social capital is also called the modern form of a group, association or community. Bridging social capital leads to the joint answer search to solve group problems by utilizing networks owned by individuals in groups. Linking social capital is a social relationship characterized by the relationships between several levels of social strength or social status in society (Hasbullah, 2006).

## METHODS OF RESEARCH

This study uses a qualitative method with a case study approach. Data collection techniques were observation, interviews, and documentation. In-depth interviews were conducted with six informants selected through the snowball sampling technique. The researchers determined the Village Head as the key informant and the main informant. The Village Head explained the general conditions and provided names that could be used as the informants in this study. The data obtained were analyzed using a pattern-matching technique. The study was conducted in Durian Hamlet, Buhu Village, Tibawa District, Gorontalo Regency, Gorontalo Province.

## RESULTS AND DISCUSSION

*The dependency of the farmers on the middlemen.* The agricultural sector has an important role in labor absorption in rural areas as can be seen that most rural community work in the agricultural sector. It is in line with the data which shows that the main livelihoods of the villagers in Buhu Village, Tibawa District, Gorontalo Regency are mostly as farmers or corn farmers. In 2015, the highest livelihoods of the villagers in Buhu Village was in the agricultural sector which amounted to 408 people.

The farmers of the Isolated and Vulnerable Community cannot be separated from the middlemen in running their farms. The Isolated and Vulnerable Community in Durian Hamlet rely heavily on agricultural products as their source of life. Their undeveloped economic conditions certainly provide additional problems for the farmers, i.e. the cost constraints. They need capital to run the farm and buy seeds and fertilizers. Consequently, they choose to borrow money from the middlemen to be used as capital in running their farm.

The Isolated and Vulnerable Community in Durian Hamlet rely heavily on agricultural products as their source of life. Sometimes, the farmers experience distress when the harvest is unsatisfactory. It can be seen that the farmers also rely on loan capital from the middlemen. High monthly expenditure and low income make people choose to go into debt.

The researchers observed that some problems occur when people's income is very dependent on agricultural products. Unsatisfactory harvests lead to a small income.

According to Gustiyana (2003), farm income can be divided into agriculture income and household income. Revenue represents a reduction of revenues with total costs. Household income is income derived from farming activities coupled with the income derived from activities outside the farming activities. Agriculture income is different from gross income (output) and the cost of production (input) which is calculated per month, per year, and per planting season. Non-agriculture income is the income earned as a result of activities outside the farming activities such as trade, motorcycle taxi, and so on. Most people in the Isolated and Vulnerable Community work as farmers only.

Borrowing capital from the middlemen is not fully profitable for the farmers. The middlemen seem to not help the farmers. They establish a relationship with small farmers merely based on economic relationship. The middlemen only take as much profit as possible from the agricultural products of the farmers in the Isolated and Vulnerable Community in Durian Hamlet. Through the field data, the informants acknowledged that the farmers are given a 20% loan interest when borrowing the capital. The middlemen also buy the farmers' agricultural products at low prices such as paying 2300 while the normal price is 2500.

Basically, the farmers in the Isolated and Vulnerable Community are small farmers and have a high dependency on the middlemen. They feel helped because the middlemen provide the farmers' needs such as capital need. The middlemen will lend capital with interest to the farmers. Furthermore, the middlemen purchase the farmer's harvests at low prices far below the market price and sell them at market prices to make a big profit. The middlemen also become investors for the farmers. Thus, the relationship between the small farmers and the middlemen known as a patron-client relationship is formed. The middlemen certainly play a role in providing help to the farmers as their clients. However, when the farmers in the Isolated and Vulnerable Community harvest, the agricultural products must be sold to the middlemen at low prices far below the market price. The middlemen will seek maximum profits and certainly harm the farmers. As the result, the farmers in the Isolated and Vulnerable Community could not break the shackles of poverty.

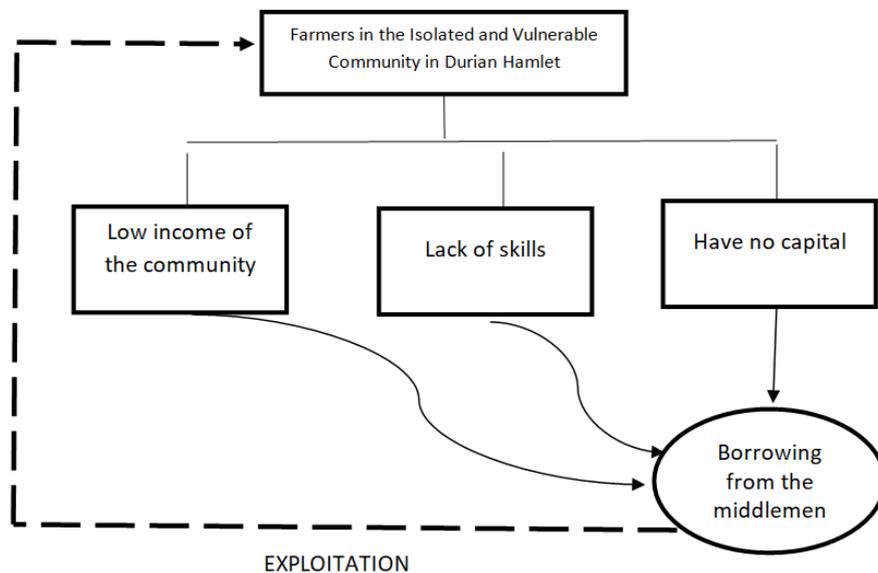


Figure 1 – The relationship between the farmers in the Isolated and Vulnerable Community and the middlemen

From the field data, the researcher draws the proposition on the dependency of the farmers on the middlemen seems to be sustainable and certainly harm the farmers. If this relationship is continuously established, unnoticed by the farmers, the middlemen conduct economic exploitation to the farmers. Because the middlemen feel that they already help the farmers, they feel entitled to use their power over farmers to gain a profit. Thus, the farmers

are indirectly exploited at the present and have no choice but to build a network with the middlemen.

*Bridging and linking strategies by the Isolated and Vulnerable Community.* A little can be done by the Isolated and Vulnerable Community to break the shackles of poverty. Low education level and lack of skills make them difficult to improve their economy. Moreover, the Isolated and Vulnerable Community seem isolated, reluctant to improve their standard of living, seem to give in, and work only to fulfill their daily needs. However, the facts in the field are different. The Isolated and Vulnerable Community is able to connect with other people by conducting the networking process with people outside their community. It is different from Putnam's statement that people prefer to deal with people they know and can produce results in realizing their goals (Field, 2010, p. 3). The facts in the field show that the Isolated and Vulnerable Community do not only deal with people they know in making cooperation.

Bridging social capital as one of the strengths and energies of social capital is the ability to bridge or connect relationships between individuals and groups with different original identity. The Isolated and Vulnerable Community opens opportunities to communicate and connect with people outside the community. This is supported by their current residence which has easier access to interact with people outside their community. Many factors require them to connect with people outside their community for their interests, one of which is for agriculture.

The Isolated and Vulnerable Community does not only interacts communicatively with people outside their community but also interact in the form of cooperation, i.e. the networking process. According to Hasbullah (2006, p. 30), outward-looking groups' attitudes make it possible to establish mutually beneficial networks with associations or groups outside their groups. Progress will be more easily achieved because idea transfer and exchange develop continuously and stimulate group and individual development.

The Isolated and Vulnerable Community exchanges with outside parties in the form of cooperation. They borrow money from the middlemen for their agricultural capital. On the other side, the middlemen take the maximum profit from the Isolated and Vulnerable Community by giving them loan interest and buying harvests at cheap prices. As long as the process is felt to be 'equally' profitable, the cooperation process will continue. The established relationship is based on the interests for mutual benefit because of potential differences and variations of each group. The farmers actually do not get a real benefit. The farmers have no choice and the quickest way to get capital is to borrow from the middlemen.

When the farmers do not develop a relationship with people outside their community, they will certainly have difficulties. They cannot just rely on their internal potential. Therefore, it is necessary and very important to build outside relationship to optimize their potential and to open potential opportunities existing outside their community. Bridging social capital is the relevant strength to be developed because they need to interact with the outside community. So, the Isolated and Vulnerable Community do the networking process by asking for help from people outside their community, i.e. the middlemen to borrow capital. Actually, the networking process through bridging social capital is very helpful for the farmers to get capital aid and market their agricultural products. However, this relationship does not help the farmers to break the shackles of poverty.

In addition to bridging social capital, the community also conducts linking social capital. Linking social capital is a social relationship characterized by the relationships between several levels of social strength or social status in society. As previously explained, a homogeneous group will hinder the creative relationship with the State and other groups as well as obstruct overall community development. The researchers obtained different results from the field. Although the Isolated and Vulnerable Community is very homogeneous and has strong bonding, it accepts changes and has a good and intense relationship with the government.

Relationship with the village government is a vertical hierarchy. Thus, the networks and relationships are important to be expanded as the community's dynamic effort to overcome their problems. According to field data, the village government is aware that the farmers in the village are being exploited by the middlemen. The Village Government has tried to

intervene through Village Enterprises (*Badan Usaha Milik Desa*, BUMDES) but the results are not maximal because the amount of capital is still below the middlemen who already have billions of capital. In this case, the village government already give special attention, but the results will be less optimal with no supporting institutions such as financial institutions and cooperatives. The access of the community should be facilitated as well when such institutions exist. Thus, the farmers in the Isolated and Vulnerable Community have no choice but to borrow from the middlemen.

## CONCLUSION

The researcher draws the proposition on the dependency of the farmers on the middlemen seems to be sustainable and certainly harm the farmers. If this relationship is continuously established, unnoticed by the farmers, the middlemen conduct economic exploitation to the farmers. Because the middlemen feel that they already help the farmers, they feel entitled to use their power over farmers to gain a profit. Thus, the farmers are indirectly exploited at the present and have no choice but to build a network with the middlemen.

The farmers in the Isolated and Vulnerable Community already conduct the bridging and linking strategies to support their farm. The Isolated and Vulnerable Community is able to connect with other people by conducting the networking process with people outside their community. It is different from Putnam's statement that people prefer to deal with people they know and can produce results in realizing their goals (Field, 2010, p. 3). The facts in the field show that the Isolated and Vulnerable Community do not only deal with people they know in making cooperation. However, this does not seem to be able to help people to break the shackles of poverty.

The bridging strategy is realized by conducting the networking process with the middlemen. The cooperation process with the middlemen seems to be their only choice. The poor condition of the farmers with no capital becomes the factor they conduct the networking process with the middlemen. Although the farmers gain no benefit from the loan interest and the cheap purchase price, it becomes very helpful because they need capital from the middlemen to run their farm. In addition, the linking strategy is also performed by having a good relationship with the village government. The village government already give special attention, but the results will be less optimal with no supporting institutions such as financial institutions and cooperatives. The access of the community should be facilitated as well when such institutions exist. Thus, the farmers in the Isolated and Vulnerable Community(IPV) have no choice but to borrow from the middlemen and unable to break the shackles of poverty.

## REFERENCES

1. Field, J. (2010). (Nurhadi, Trans.) Bantul: Kreasi Wacana.
2. Gustiyana, H. (2003). Analisis Pendapatan Usahatani Untuk Produk Pertanian. Jakarta: Selemba Empat.
3. Hasbullah, J. (2006). Social Capital (Menuju Keunggulan Budaya Manusia Indonesia). Jakarta: MR-United.
4. Hasbullah, J. (2006). Social Capital (Manuju Keunggulan Budaya Manusia Indonesia). Jakarta: MR-United.
5. Prawoto, N. (2009). Memahami Kemiskinan and Strategi Penanggulangannya Vol. 9 No.1. Jurnal Ekonomi and Studi Pembangunan, 56-68.
6. Statistik, B. P. (2012). Profil Kemiskinan Di Indonesia Spetember 2011. Jakarta: Badan Pusat Statistik.
7. Susilo, E. (2018). Fisherman's Social Capital Marginalized: (Keeping the Social Sustainability Fisheries Development). Malang: University of Brawijaya.

DOI 10.18551/rjoas.2019-02.31

## THE IMPACT OF FINANCIAL PERFORMANCE AND MACROECONOMICS ON THE STOCK RETURNS OF THE COMPANY IN CONSTRUCTION AND BUILDING SUBSECTORS

**Kharisma Yudha\*, Hartoyo Sri, Maulana Tb. Nur Ahmad**

School of Business, IPB University, Indonesia

\*E-mail: [yudhakharisma0404@gmail.com](mailto:yudhakharisma0404@gmail.com)

### ABSTRACT

The research focuses on a phenomenon of decreased stock prices for construction and building subsectors in the Indonesian Stock Exchange during the development of infrastructures by the government. It analyzes the impact of financial performances and macroeconomics towards the stock returns of construction and building subsectors in the Indonesian Stock Exchange, using the data panel regression. The variables of Debt to Equity Ratio (DER), Return On Equity (ROE), Price Book Value (PBV), inflation rates and government policies affect the stock returns of construction and building subsector significantly, while the Current Ratio (CR), Total Asset Turn Over (TAT), and Price to Earning Ratio (PER) do not have significant impacts towards the stock returns.

### KEY WORDS

Construction, building, financial performance, macroeconomics, stock returns.

The availability of infrastructures is very important to increase the process of national development and is one of the main factors for economic growth (Kodoatie, 2005). Upon realizing this, the government of Indonesia publishes the Presidential Regulation number 75 of 2014, about the availability of infrastructures, to increase the availability of prioritized infrastructures and forms the Committee to Increase the Availability of Prioritized Infrastructures (KPPIP). The government also allocates the National Budget (APBN) for infrastructures, with the largest amount of increase during the period of 2014 to 2017 compared previous period with growth 157%.

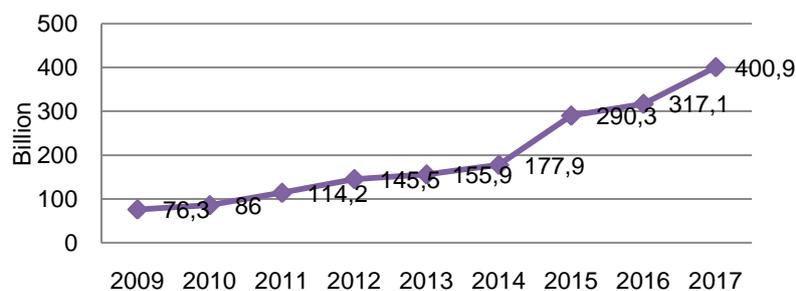


Figure 1 – The Allocation of the National Budget for Infrastructures (Source: Ministry of Finance)

The subsectors for the availability of infrastructures are constructions and buildings. The data from BPS shows that for the last three years, the construction sector has contributed consistently and became the second largest sector in Indonesia. This is the main reason to analyze financial performances of the stock returns of the company in construction and building subsectors. The analysis will be represented through the financial ratios, as it is considered accurate to portray the operations or other fundamental aspects of the company towards the extensive business competition. Hamton (1990) stated that the aspects of financial performances could be measured through various time periods, samples, and test variables, which could be beneficial for future researches, both repetition and development. The fluctuative movement of the stock returns is also influenced by fundamental factors,

based on the ratios of companies accounts. In addition, the macroeconomic factors, such as inflations and exchange rates towards US dollars, can also influence the stock returns.

The closing stock price of constructions and buildings is fluctuating and often decreasing, which is not in line with the expectation of a positive impact from the policy in increasing amount of the national budget for infrastructure. impact to the increasing amount of the National Budget for infrastructures. This requires an analysis of a company's financial performances, represented by its internal (financial performance ratios) and external sectors (inflation and exchange) of the construction and building subsectors, and the influence of the factors (internal and external) on the stock return of construction and building subsector .

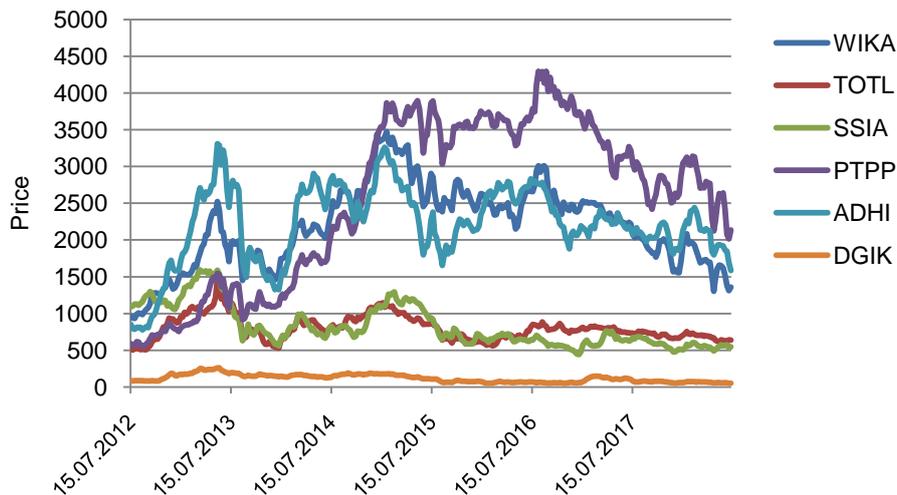


Figure 2 – Stock Price of construction and building subsectors

Based on the explanations above, the research question for this study is: “What is the influence of the financial performances and macroeconomics towards the stock returns of the construction and building subsectors in the Indonesian Stock Exchange from 2011 to 2017?” The research aims to analyse the influence of the financial performances and macroeconomics towards the stock returns of the construction and building subsectors in the Indonesian Stock Exchange from 2011 to 2017.

## LITERATURE REVIEW

In order to increase the financial performances, a company has to apply a coherent strategical approach (Weinzimmer *et al.* 2012). As a measurement for a company's financial and performance conditions, a financial analyst acquires a standard of measurement. One of which is the financial ratio, which is also one of the important steps of analysis (Van Horne 2002). Gitman and Zutter (2012) stated that the analysis involves a calculation and interpretation of financial ratio, in order to analyze and monitor the financial performance of a company. Such performance could affect the stock returns from investors. An investment, according to Husnan (1998), is simply an activity to allocate funds to one or more asset for certain periods, to gain incomes or increase its values.

Hardiningsih (2002) divided the financial performance into return on asset (ROA) and price to book value (PBV), which proved to be significant to the stock returns. Another research by Rohmah and Rina (2004) stated that the variables of economic value added (EVA), return on asset (ROA), return on equity (ROE) and return on sales (ROS) would not result a significant effect on the shareholder returns, simultaneously or partially. Furthermore, Ratnawati (2009) showed that the results for variables of debt to equity ratio (DER) and Beta had a significance towards the stock returns, while the variables of return on equity (ROE), price to book value (PBV), and earning per share (EPS) did not affect significantly.

## METHODS OF RESEARCH

The study applies a quantitative research method, which describes a statistical fact or phenomenon and shows its connections using a mathematical model. The financial performances are measured using the variables of Debt to Equity Ratio (DER), Return On Equity (ROE), Prive Book Value (PBV), Current Ratio (CR), Total Asset Turn Over (TAT), and Price to Earning Ratio (PER). Meanwhile, the variables of macroeconomics includes inflation, exchange rate, and dummy of government policies to increase the availability of infrastructures. It uses the data panel regression, which combines the cross section and time series datas. Here is one example of such model:

$$RS_{it} = \alpha_0 + \delta_1 ROE_{it} + \delta_2 PBV_{it} + \delta_3 CR_{it} + \delta_4 PER_{it} + \delta_5 DER_{it} + \delta_6 TAT_{it} + \delta_7 INF_{it} + \delta_8 Kurs_{it} + \delta_9 D_{it} + e_{it}$$

Hypothesis:  $\delta_1; \delta_2; \delta_3; \delta_4; \delta_6 > 0$   $\delta_5; \delta_7; \delta_8; \delta_9 < 0$ .

Where: RS = Stock Return; i = Company order; t = Times series; ROE = Return on Equity; PBV = Price to Book Value; CR = Cureent Ratio; PER = Price to Earning Ratio; DER = Debt to Equity Ratio; TAT = Total Asset Turn Over; INF = Infation Rate Kurs; Kurs = Exchange Rate; D = Dummy.

## RESULTS AND DISCUSSION

This research applies the pooled least square. After doing a Chow test on the probability rate above 0.05, the results of the data panel regression have underwent the criterias of normality, multicolinierity, heteroscedacity, and autocorelation tests. The estimated result shows an independent variable with a smaller probability rate than a real price of 15 percent, which are the Debt Equity Ratio (DER), Return On Equity (ROE), Price Book Value (PBV), inflation, and dummy of the Presidential Regulation No.75 of 2014. It shows the significant effect of those independent variables towards the stock returns in the construction and building subsectors.

Table 1 – The results of panel data regression

Variable	Coefficient	Prob.
C	-0.458322	0.8217
CR	-0.075445	0.2478
DER	-0.031371	0.0846
TAT	0.037326	0.7356
ROE	1.004597	0.1019
PBV	0.033322	0.0026
PER	0.000328	0.3952
INF	-0.049422	0.0003
KURS	0.090336	0.6847
DUMMY	-0.151006	0.0577
R-squared	0.235119	
Adjusted R-squared	0.187969	

*The Variable of Debt to Equity Ratio.* The variable of *Debt to Equity Ratio* (DER) had a probability rate of 0.0846, which had a significant impact on the stock returns of the construction subsector. The coefficient rate of the DER variable was about -0.0313, meaning that if other variables were stagnant and DER had a 1% increase, then the stock return would be at 0,0313%. The result was in accordance to the initial hypothesis on the negative impact of DER on the stock returns of the construction subsector. If the rate was high, there was a possibility of a low stock rate since the profit would be used to pay the debts, which decreased the stock returns from the investors. It was also in accordance to the researches by Utami (2015) and Ariyanti (2016), about the negative impact of DER towards the stock returns in the construction and building subsectors.

*The Variable of Return On Equity (ROE).* The probability rate on the variable of Return On Equity (ROE) was 0.1019, which affected significantly towards the stock returns of the

construction subsector. It showed that ROE became a reference for investors upon investing in the construction subsector. Its coefficient rate of 1.004 explained that if other variables were stagnant and ROE had a 1% increase, then the stock return would increase at 1.004%. The Return On Equity showed that a capital from the owner or investor would produce a net profit. The high return of investment from investor to the company would increase its expectation towards the stock returns of the construction subsector. The higher the ratio, the higher the profit would be. It was also in accordance to the researches by Utami (2015) and Mirela (2014), which stated that ROE was a significant indicator to rate the economy and financial performances in the construction subsector.

*The Variabel of Price Book Value (PBV).* The variable of Price Book Value (PBV), with the probability rate of 0.0026, had a significant effect towards the stock returns of the construction subsector. Its coefficient rate of 0.0333 showed that if other variables were stagnant and ROE had a 1% increase, then the stock return would increase at 0.033%. PBV is a market ratio used to measure performances of stock market prices towards the book value. The higher the ratio, the better chance of success for stockholders to create prices. The better the prices, the more interested for the investors to invest. As the result, both the stock prices and returns would increase. It was also in accordance to the research by Akbar (2015), which stated that PBV had a positive and significant impact towards the stock returns in property and real estate sectors.

*The Variable of Inflation.* The variable of inflation, with the probability rate of 0.000, had a significant effect towards the stock returns of the construction subsector. Its coefficient rate of -0.049 showed that if other variables were stagnant and ROE had a 1% increase, then the stock return would decrease at 0.049%. Inflation could affect the invested price value and decrease the profits, which was in accordance with the hypothesis, as well as the research by Utami (2015), that inflation impacted negatively towards the stock returns in the construction subsector.

*The Influence of the Presidential Regulation No.75 of 2014 towards the Stock Returns in the Construction Subsector.* The dummy variable of the Presidential Regulation No.75 of 2014 was to increase the availability of prioritized infrastructures, with probability rate of 0.0577 and coefficient rate of -0.151. The result showed that the stock return before the Presidential Regulation No.75 of 2014 was 0.151% higher than after the regulation, and was in accordance to the hypothesis about the negative impact of the regulation towards the stock return. The result also explained that one of the factors of the decreased stock prices from 2014 to 2017 was the government regulations, in particular the Presidential Regulation No.75 of 2014.

## MANAGERIAL IMPLICATIONS

Companies of the construction subsector in Indonesia are obligated to the current debt for a more liquidated company and to prevent bankruptcy. They also require to decrease the DER in order to attract investors. Using the Dupont analysis, the rate of Total Asset Turn Over (TAT) was still below 1, therefore it needs to be increased for higher profitabilities.

Investors need to realize that if the DER rate is increased, the stock returns will decrease, as well as the increased rates of ROE and PBV that will increase the stock returns. Investors also need to consider that the increased inflations will decrease the stock returns for them. In addition, investors need to consider the negative effect of government policies, in particular the Presidential Regulation No.75 of 2014, towards the stock returns.

The construction and building subsectors has a significant role in world economics, as it contributes in infrastructures. Therefore, the government needs to stimulate the construction subsector, as well as maintaining the stability of inflation rate because the variables have a significant effect on the construction and building subsector's stock return, where the increase in inflation has resulted in an decrease in stock returns.

## CONCLUSION AND SUGGESTIONS

Through simultaneous testings, the overall independent variables (financial performances and macroeconomics) affected significantly towards the dependent variable, the stock returns in the construction subsector. The financial performances referred to the variables of Debt to Equity Ratio (DER), Return On Equity (ROE), and Price Book Value (PBV), while the macroeconomic variables included inflation and the Presidential Regulation No.75 of 2014. Two variables significantly affected the stock returns in the construction subsector.

The relatively small coefficient of determination ( $R^2$ ) towards the result of the data panel regression suggested that there should be other variables included in the model. The study only applied six factors of financial performances and three factors of macroeconomics, to analyze the variables affected the stock returns in the construction subsector. This should prompt future researches to focus on other factors that affect the stock returns in the construction subsector.

## REFERENCES

1. Akbar R, Herianingrum S. Pengaruh Price Earning Ratio (PER), Price Book Value (PBV) and Debt to Equity Ratio (DER) Terhadap Return Saham (Studi terhadap Perusahaan Properti and Real Estate yang Listing di Indeks Saham Syariah Indonesia). JESTT. 2(9): 698-713.
2. Ariyanti S, Topowijono, Sulasmiyati S. 2016. Pengaruh Profitabilitas and Leverage terhadap Harga Saham (Studi pada Perusahaan Konstruksi and Bangunan yang Terdaftar di Bursa Efek Indonesia Periode 2011-2014). Jurnal Administrasi Bisnis. 35(2): 181-188.
3. Gitman LJ, Zutter CJ. 2012. Principles of Managerial Finance. 13<sup>th</sup> ed. Boston (US): Prentice Hall.
4. Hampton, J J. 1990. Financial Decision Making. 4th edition. New Jersey (USA): Prentice-Hall Inc, Englewood Cliffs.
5. Hardiningsih, Pancawati, Suryanto L, Chariri, Anis. 2002, Pengaruh Faktor Fundamental and Risiko Ekonomi Terhadap Return Saham Pada Perusahaan di Bursa Efek Jakarta (Studi Kasus Basic Industry & Chemical). Jurnal Strategi Bisnis. 8:83-96.
6. Husnan, Suad. 1998. Dasar-Dasar Teori Portofolio and Analisis Sekuritas. Ed<sup>3</sup>. Jakarta (ID): UPP AMP YKYPN.
7. Kodoatie, Robert J. 2005. Pengantar Manajemen Infrastruktur. Yogyakarta (ID): Pustaka Pelajar.
8. Mirela C. 2014. Financial return in the field of constructions: what accounting issues should an investor know?. Bulletin of the Transilvania University of Brasov. 7(56): 175-180.
9. Ratnawati R R S. 2009. Analisis pengaruh ROE, DER, PBV, EPS and Risiko Sistematis terhadap Return Saham (Studi pada Perusahaan Properti and Real Estate yang Listed Di BEI Periode (2003-2007). Jurnal Bisnis Strategi, 18(2):118-139.
10. Rohmah SN and Rina T. 2004. Pengaruh Economic Value Added and Profitabilitas Perusahaan terhadap Return Pemegang Saham Perusahaan Rokok. J. Emprika. 17(1): 64-78.
11. Utami W R, Hartoyo S, Maulana T N A. 2015. The Effect of Internal and External Factors on Stock Return: Empirical Evidence from the Indonesian Construction Subsector. Asian Journal of Business and Management. 3:370-377.
12. Van Horne, J C. 2002. Financial Management and Policy. 12nd ed. New Jersey (US): Prentice Hall.
13. Weinzimmer LG, Michel EJ, Franczak JL. (2011). Creativity and Firm-Level Performance: The Medi-ating Effects of Action Orientation. Journal of Managerial Issues. 23(1): 62-82.

DOI 10.18551/rjoas.2019-02.32

**THE ROLE OF EMOTIONAL QUOTIENT TO MODERATE EFFECT  
OF ROLE STRESS ON EXAMINER JOB PERFORMANCE IN AUDIT BOARD  
OF THE REPUBLIC OF INDONESIA**

**Adhelia Syarfina\*, Tjaraka Heru**

Department of Accounting, Faculty of Economics and Business, University of Airlangga,  
Surabaya, Indonesia

\*E-mail: [syarfinaadhelia@gmail.com](mailto:syarfinaadhelia@gmail.com)

**ABSTRACT**

Auditors are often associated with work stress. One of the stresses that are often experienced by auditors in doing work is role stress. Excessive stress faced by the auditor when working and often not immediately anticipated properly, and unfavorable working conditions can also affect auditor performance. This study uses a moderator variable, namely emotional quotient. An auditor needs to have a mechanism that is able to minimize and overcome the pressure that occurs in order to be able to maintain performance that is by the presence of emotional quotient. The self-motivation of each individual will grow if affiliated with the presence of emotional quotient. Emotional quotient is expected to be in the auditor to have high performance and get a good career in his career path. This research was conducted at the Audit Board of the Republic of Indonesia with 100 respondents, with a range of research ranges from March-April 2018. The data analysis technique used in this study is the Moderated Regression Analysis (MRA). The results of this study is emotional quotient strengthen the influence of role stress on job performance examiner.

**KEY WORDS**

Role stress, emotional quotient, job performance, auditor.

As an independent examiner in the field of state finances, the examiner Audit Board of the Republic of Indonesia is fitting to maintain the attitude and morale in carrying out the task in hand objectively. The main task of the Audit Board of the Republic of Indonesia in conducting an examination conducted by a comprehensive process and attitude of skepticism and professionalism basically is to provide assurance that the financial statements presented by government agencies have been accounted for.

Audit Board of the Republic of Indonesia is predicted to be the spearhead to promote clean state financial management, accountable for the attainment of the country. Performance of examiner time to resolve any duties is a measure that is usually used to assess whether an assignment has been carried out with the optimal or not (Kalbers & Fogarty, 1995), As a result, a conducive working conditions can affect the performance and results of the work of auditors, which in turn can affect public confidence in the auditor as an independent party in the process of auditing the auditee.

Auditors often associated with job stress (Rustiarini, 2014), One of the stress that is often experienced by the auditor to do the job that is the pressure (role stress). Pressure (role stress) a condition in which a person has difficulty in understanding what was his job, a role that he played were deemed too heavy, or in other words, he plays a wide variety of roles in which he worked (Kalbers & Fogarty, 1995). Audit Board of the Republic of Indonesia, with the checkout area spread across Indonesia, the examiners are required to give the best results in the examination process. Demands to the Audit Board of the Republic of Indonesia for carrying out checks on various national issues related to state finances leading to higher workload of the Audit Board of the Republic of Indonesia.

According to the Annual Report of the Audit Board of the Republic of Indonesia in 2016, although in these years feels short on power examiner and his supporters, the number of human resources of the Audit Board of the Republic of Indonesia would shrink over the previous year, in 2015 the amount of resources human Audit Board of the Republic of

Indonesia there are 6,438, while in 2016 dropped to 6,295 people with a percentage number of examiners as much as 52.19%. Examiner limited resources and a desire to improve the quality of the results of the examination in order to meet the public's expectations have meant that all the checks are carried out and reported in a timely manner (Schick, Gordon, & Haka, 1990),

In fact, it is not uncommon stress intentionally allowed to increase the challenge for someone to be able to improve its performance (Fogarty, Singh, Rhoads, & Moore, 2000), Nevertheless, negative stress is likely to result in a person doing dysfunctional behavior and reduce the quality of their work (Le Fevre, Matheny, & Kolt, 2003), Excessive stress faced by auditors while working and often not immediately anticipated, as well as the unfavorable working conditions can also affect the performance of the auditor (Fanani, Hanif, & Subroto, 2008), Similarly, the pressure felt by the auditor could be the reason how one behaves. When an auditor has the physical and emotional stress are excessive and go beyond their capabilities, both in the work environment of a colleague or of his superiors, they tend to act something that can injure the integrity and professionalism (Hatfield, Jackson, & Vandervelde, 2011; Nasution & Östermark, 2012),

Coenen (2008), give some examples of stressful circumstances include, bad financial condition of someone with so many bills to pay; the desire for a better lifestyle; or dissatisfaction with the living paycheck to paycheck. As a result, someone who suffered stress as a result of financial problems may be more likely to act unethically (Cianci & Bierstaker, 2009),

The pressure felt by the examiner could also be the reason how one behaves so the effect on the audit opinion, when an examiner has the pressure of the working environment is not good from colleagues and from his superiors, they tend to give their opinions or judgments which can injure the integrity and professionalism (Hatfield *et al.*, 2011; Nasution & Östermark, 2012), According to Hatfield *et al.* (2011) their perceived high pressure will cause the auditors propose auditors much less an audit adjustment than those who had low pressure. Though work stress can cause job dissatisfaction and decrease performance (Chen, Silverthorne, & Hung, 2006; Hayes & Weathington, 2007) up can result in aberrant behavior (Lawrence & Robinson, 2007),

Professional conduct examiner can be realized in the form of avoid dysfunctional audit behavior, the behavior of the auditor in the audit process that does not comply with audit procedures predefined or deviated from the applicable standard, which can reducing the quality of audits. Financial audit carried out to determine whether the financial statements (information verified) declared in accordance criteria or standards applicable accounting (Arens *et al.*, 2008).

This study uses a moderator variable that is emotional quotient. The pressure that occurs in the examiner requires a mechanism to reduce these to be able to maintain and improve the performance, one of which is the presence of emotional quotient. Behavior examiner influenced by many things. For example, in the assignment of the examiner is often faced with ethical dilemmas caused conflict audit, under such conditions of emotional quotient provides vital role how an accountant can complete the job in a work environment. Motivation will arise in a person, if it had its impetus with emotional quotient. Emotional quotient is expected to exist within the examiner in order to improve performance as well as high career. Furthermore, the necessary emotional quotient as the ability to control emotions and feelings that exist within, and how these capabilities can be used when interacting well with others.

From the results of research conducted by Cote & Miners (2006), Employees with low IQ levels can give a good performance and often participate in Organizational Citizenship Behavior (OCB) if they have a stable emotional quotient. According to Kip Holderness & Hunton (2010) high understanding of how to improve physical and psychological health will increase the benefits to individuals, organizations, and communities. Many researchers agree that the intellectual's contribution towards the path of success only takes 20%, and the rest depends on all the things that are developed in the human brain over millions of years of human evolution (Gibbs & Epperson, 1995), Similarly, in a study conducted by Ermawati,

Sinarwati, & Edy Sujana (2014); Notoprasetio (2012) Emotional intelligence is proven to affect the performance of an auditor.

Good emotional quotient can make someone for not misbehaving and can achieve satisfactory performance. Emotional quotient has a function that is quite significant, to shape the behavior and habits in one individual to the level of emotional quotient are fulfilled will be easier to deal with problems that occur, so that he could avoid the stress, able to control themselves better, interact socially well and avoid the depression and problems that would interfere with her life. Hopefully, by having emotional quotient in a person, he can have the professionalism and responsibility in their duties within the organization.

## LITERATURE REVIEW

Role reflect a pattern of behavior that a person lived, and reflects the position of a person in a position in society to interact with one another era, with all the rights and responsibilities that accompany it (Turner, 2006), According to Judge & Robbins (2008), The role is a pattern of behavior that is closely related to someone who occupies a particular position in a social unit. Simply put, according to Lubis (2010) role is part of people interacting.

Each individual has a role undertaken different behavior anyway. As an example in the world of work an employee can have more than one role, namely as a person subordinates, supervisors, union members, and also can be as a representative in work safety committee (Agustina, 2011), It also happens to auditors, as said Locke (1976) in Setiawan & Ghozali (2006), That the responsibility of an auditor is not only required to meet the wishes of the clients who use the services, but also to serve the community.

An auditor also has many roles in his life. As a wife or husband or child or other role in their daily lives, it will not simply escape from the professionalism of the performance of an auditor. When there are problems or pressure as a result of his role in the personal life of an auditor, directly or indirectly affect the performance of the auditors concerned. The performance of a specified auditor of the factors surrounding it, not only in themselves but also the factor of external factors, so that the role that enveloped also give effect to focus the auditor to achieve optimal performance.

Examining the Audit Board of the Republic of Indonesia as an external audit of state finances, and as the spearhead investigations, they besides must be independent, competent, professional, objective, fact-based, they are also expected not to take sides. The theory of the role that used in this study can be applied to analyze the relationship between individuals, individuals with a collection of groups, or between groups of individuals. In other words can be applied to analyze the relationship between social interactions that involves the examiner Audit Board of the Republic of Indonesia.

## HYPOTHESES DEVELOPMENT

Role stress condition in which a person has difficulty to understand the task and its actual role. Someone who stress the role are seen, felt that the task he had too heavy, or sometimes they undergo a variety of roles in which they work (Sopiah, 2008), The emergence of stress is often associated with conflict and role ambiguity role. Role conflict arising from a mismatch between the expectations presented in the individual in the organization with others inside and outside the organization, while the role ambiguity arise as a result of insufficient information required to complete a task or job in a way that satisfy (Fanani et al., 2008), Their role conflict and role ambiguity is a matter of considerable influence on the job for the auditor. This can lead to degraded performance of the individuals working in an organization, so the effect on the quality of work produced is not in accordance with the expectations of the organization.

An auditor also has many roles in his life. As a wife or husband or child or other role in their daily lives, it will not simply escape from the professionalism of the performance of an auditor. When there are problems or pressure as a result of his role in the personal life of an

auditor, directly or indirectly affect the performance of the auditors concerned. The performance of a specified auditor of the factors surrounding it, not only in themselves but also the factor of external factors, so that the role that enveloped also give effect to focus the auditor to achieve optimal performance. As said Locke (1976) in Setiawan & Ghozali (2006) that the auditors are not only required to meet the wishes of the clients who use the services, but also to serve the community.

Study the influence of stress on the performance of the auditor's role has been done so far, most have the result that the role of stress has a negative effect on the performance of auditors (Afifah, Sari, Anugerah, & Sanusi, 2015; Ermawati *et al.*, 2014; Martaseli & Nugroho, 2016; Yustiarti, Hasan, & Hardi, 2016), Although the research conducted by Permana, Anugerah, & Al Azhar (2016) the results obtained is the role of stress have a positive effect on the performance of the auditor, or it can be said according to the results he was getting the higher the auditor stress the higher the performance of an auditor. In contrast again to the research conducted by Rahmawati (2011), The research results influential role conflict in the auditor's performance, while role ambiguity has no effect on the performance of auditors. Reinforced by research from Ramadika, Nasir, & Wiguna (2014), which states that the role of stress does not affect the performance of an auditor.

Cordes & Dougherty (1993) in Jones III, Norman, & Wier (2010) explained the many negative consequences of the relationship between the role of stress in individuals and organizations. Their emotional quotient is expected to prevent the negative things that are created from the pressure role. Emotional quotient requires us to be introspective in appreciating the listener or the feelings of others, as well as in response to a verse that should and should not we say, so we can control the emotions that we use in everyday life. According to Goleman (2009), Emotional intelligence is the ability to recognize your feelings and the feelings of others, to motivate yourself, and managing emotions well in ourselves and in relationships with others. In fact it should be recognized that emotional quotient has a role to suppress the role of stress that is negative to increase a person's job performance in an organizational environment. On the basis of such exposure, the research hypothesis is:

H1: Emotional quotient can strengthen the influence of role stress on job performance an examiner.

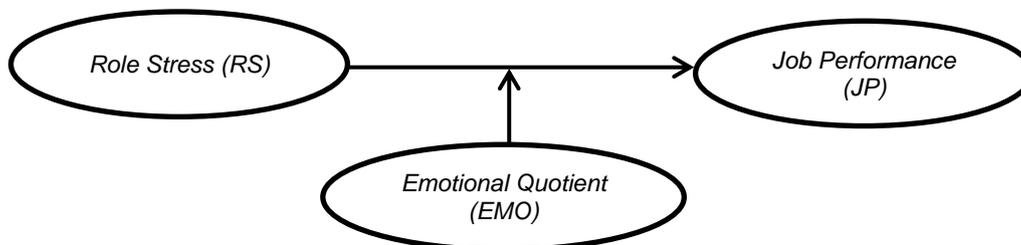


Figure 1 – Conceptual Framework

## METHODS OF RESEARCH

The type of data in this research is quantitative data. Primary data in this study were obtained through questionnaires research as an answer of each respondent. The population in this study is all inspectors on work units Main Auditorat State Finance IV and the Bureau of Public Relations and International Cooperation of the Audit Board of the Republic of Indonesia, the total population is about 150 people. Samples in this study of 100 people. Questionnaires conducted with the approximate beginning of March - the end of April 2018. The technique used in the sampling was purposive sampling technique. Respondent's chosen based on considerations specific criteria. Criteria for the determination of a sample of respondents is the first working as an auditor at least 1 (one) year work period.

Data analysis techniques used in this study is Moderated Regression Analysis (MRA). The error rate ( $\alpha$ ) in this research set at 0.05 ( $\alpha = 5\%$ ). Conclusion is that if the significance value  $> 0.05$ , then the hypothesis is accepted.

The variable in this research is divided on the dependent variable, the variable mediator and the independent variables, where the variables used are:

- Role stress or stress caused by three main factors, namely the role ambiguity, role conflict and role overload (Gratia & Septiani, 2014; Jones III et al., 2010; Sweeney, Bernardi, & Arnold, 2014), This was triggered by the internal condition which is a consequence of their action or external situation a person both physically and psychologically. This variable was measured by using an instrument developed by Rizzo, House, & Lirtzman (1970) which has been adopted by Jones III et al. (2010) with seven Likert scale and by Fanani et al. (2008) with five Likert scale. This study adjusts using a Likert scale of five ratings, namely: value 1 = strongly disagree, 2 = disagree, 3 = undecided, 4 = agree, 5 = strongly agree.
- Emotional quotient is the ability to recognize your feelings and the feelings of others, to motivate yourself, and managing emotions well in ourselves and in relationships with others (Goleman, 2009), This variable is measured using indicators adopted emotional quotient of Rahmawati (2011), Which is adapted to this research topic. This study adjusts using a Likert scale of five ratings, namely: value 1 = strongly disagree, 2 = disagree, 3 = undecided, 4 = agree, 5 = strongly agree.
- Job performance can be high or low performance diartika that one can be a good influence for themselves and for the organization. A person who has a low performance, will lead to potential errors more likely to occur and ends on the declining credibility (Fisher, 2001), This variable was measured by using an instrument developed by (Kalbers & Fogarty, 1995) which has been adopted Fanani et al. (2008) This uses five scale Likert: value 1 = strongly disagree, 2 = disagree, 3 = undecided, 4 = agree, 5 = strongly agree.

### RESULTS AND DISCUSSION

Testing the hypothesis in this study was conducted using three regression model in order to determine what kind of moderation that is owned by the variable quotient on the independent variable (role stress), including moderating variables pure (pure moderator) moderating variable pseudo (quasi moderator), variable potential, or independent variables. The regression equation in this study as follows:

$$\begin{aligned} \text{Model 1: } & JP = a_1 + b_1RS + e_1 \\ \text{Model 2: } & JP = a_2 + b_2RS + b_3EMO + e_2 \\ \text{Model 3: } & JP = a_3 + b_4RS + b_5EMO + b_6RS * EMO + e_3 \end{aligned}$$

Where: JP = Job Performance; a = constant; b = Regression Coefficients; RS = Role Stress; EMO = Emotional Quotient; HLEMO = variable role stress multiplication with emotional quotient (describe the moderating variables emotional quotient of the influence of role stress with job performance); e = error.

Table 1 – Hypothesis Testing Results

Hypothesis	Variables	B	t	Sig.
Hypothesis 1	Model 1			
	Role Stress (RS)	-0236	-2739	0007
	Model 2			
	Role Stress (RS)	-0484	-5371	0000
	Emotional Quotient (EMO)	1,081	5,217	0000
	Model 3			
	Role Stress (RS)	-3839	-2307	0023
	Emotional Quotient (EMO)	-2070	-1315	0192
	Role Stress * Emotional Quotient (RSEMO)	0906	2,019	0046

Source: Results of data processing SPSS 22.0 for Windows.

Note: The amount of data (observations) = 100; T table value:  $\alpha = 5\% = 1.66071$ ; Dependent Variables = JP.

Results of regression testing successfully support the hypothesis 1, which means that in condition emotional quotient is high, the influence of the role stress on job performance will increase with t significance of the interaction of RS and EMO is under the value of  $\alpha = 5\%$  that is 0046, and the value of t greater than t table (RSEMO = 2,019).

Variable Types emotional quotient in this equation can be determined by looking at the significance of regression coefficients in equation (2) b3EMO, b3 namely 0.000 (significant) and the equation (3) b6RSEMO, b6 namely 0.000 (significant), so this shows that the variable quotient the influence of role stress on job performance quasi act as a moderating variable. Moderating variable quasi (pseudo), is a variable that moderates the relationship between independent variables and the dependent variable where variable apparent moderation interact with the independent variables at once become independent variable.

For the sake of clarifying the nature and direction of each of the variables, we perform a mathematical calculation of derivation partial results are presented in graphical form. The goal is to be able to know whether the effect of role stress on job performance will be constant along the emotional quotient. If constant, it will clarify the influence of monotonic; otherwise if not constant then it will show a non-monotonic relationship.

The regression equation of the first hypothesis testing results is:

$$JP = (12\ 559) - 3.839RS - 2.070EMO + 0.906RSEMO$$

Its partial derivation equation is:

$$\begin{aligned} \partial JP / \partial RS &= - 3,839 + 0.906EMO \\ \text{For } EMO = 0, \text{ then } \partial JP / \partial RS &= - 3,839 \\ \text{For } \partial JP / \partial RS = 0, \text{ then} \\ 0 &= - 3,839 + 0.906EMO \\ 3,839 &= 0.906EMO \\ EMO &= 3839/0906 \\ EMO &= 4,237 \end{aligned}$$

To clarify the direction and effect *non-monotonic* of each variable can be seen in Figure 2 below:

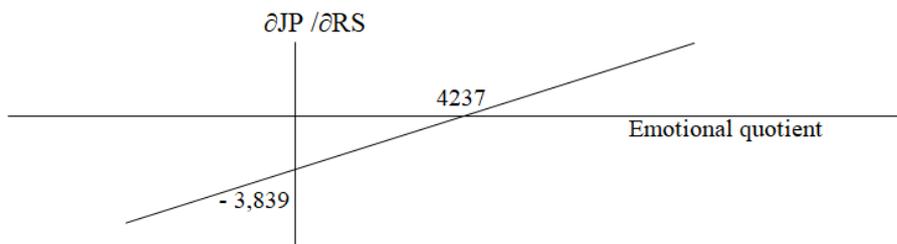


Figure 2 – Interaction between Role Stress with Emotional Quotient against Job Performance

The results of the calculation, that point which intersects the axis JP  $\partial JP / \partial RS$  is -3839, on the other hand the point that intersects the axis EMO is 4237 hereinafter referred to as the inflection point. Figure 2 shows the results of the above calculations clarify the direction and non-monotonic effect of each variable. It has been suggested that the increased emotional quotient will lead to increased job performance, and vice versa if the quotient decreases causing a decrease in job performance. With a significance value less than 0.05 (ie 0046) and t table is smaller than t ie (1.66071 > 2019), the first hypothesis which states can strengthen the emotional quotient negative influences role stressors on a checker acceptable job performance.

The results of this study support the hypothesis first successful meaningful role emotional quotient strengthen the influence of stress on an examiner's job performance. Or it

could be said that emotional quotient improvement will lead to increased job performance, and vice versa if the quotient decreases causing a decrease in job performance.

This study concurs with research conducted by Afifah et al. (2015); Ermawati et al. (2014); Yustiarti et al. (2016), Pressure due to the role or task (role stress) a condition in which a person has difficulty in understanding what the duties according to this study did not occur in the inspectors of the Audit Board of the Republic of Indonesia, though from this study proved that in the absence of pressure role felt by the examiner and management coupled with high emotional intelligence, the inspectors job performance can be increased.

Audit Board of the Republic of Indonesia implementing e-audit to improve the efficiency and effectiveness of the implementation and reporting of test results. These efforts and other efforts have helped the Audit Board of the Republic of Indonesia to resolve the gap between high workload with limited resources. According Accountability Report Audit Board of the Republic of Indonesia, in 2013 the performance scores of the Audit Board of the Republic of Indonesia had reached 88.97, the year 2014 is 89.23, 2015 amounted to 94.14, in 2016 amounted to 97, 70 with a trend that continues to rise, so it is clear that the work environment of the Audit Board of the Republic of Indonesia of human resources who have a mechanism to anticipate the pressure of everyday work life.

## **CONCLUSION**

Management of human resources of the Audit Board of the Republic of Indonesia has been done professionally with the implementation of Plan of Human Resources Management (HRM Plan) in performing their duties so as to produce high motivation and competence is adequate. Work in the Audit Board of the Republic of Indonesia system has been defined both by the organization and division of tasks and roles tailored to each individual office, so there is no overlap between the roles of an employee. Supervision is done by the senior and junior indicated in accordance with the portion of the appropriate level of respective positions, so there is no pressure felt by the examiner, paired well with the emotional intelligence that a contributing factor to affect the roles of stress on employee performance respectively, more performance goes well.

## **SUGGESTIONS**

The advice given by the author is for Audit Board staff of the Republic of Indonesia is, to continue to maintain the performance of each individual in aligning organizational goals. For the Audit Board of the Republic of Indonesia, to maintain the quality of human resources (HR) to support optimal performance both in terms of role stress and also emotional intelligence and daily operational activities or office gathering together.

## **REFERENCES**

1. Afifah, U., Sari, R. N., Anugerah, R., & Sanusi, Z. M. (2015). The Effect of Role Conflict, Self-efficacy, Professional Ethical Sensitivity on Auditor Performance with Emotional Quotient as Moderating Variable. *Procedia Economics and Finance*, 31, 206-212. ISSN: 2212-5671.
2. Agustina, L. (2011). Pengaruh Konflik Peran, Ketidakjelasan Peran, dan Kelebihan Peran terhadap Kepuasan Kerja dan Kinerja Auditor (Penelitian pada Kantor Akuntan Publik yang Bermitra Dengan Kantor Akuntan Publik Big Four di Wilayah DKI Jakarta). *Jurnal Akuntansi*, 1(1), 40-69.
3. Chen, J.-C., Silverthorne, C., & Hung, J.-Y. (2006). Organization communication, job stress, organizational commitment, and job performance of accounting professionals in Taiwan and America. *Leadership & organization Development journal*, 27(4), 242-249. ISSN: 0143-7739.

4. Cianci, A. M., & Bierstaker, J. L. (2009). The impact of positive and negative mood on the hypothesis generation and ethical judgments of auditors. *Auditing: A Journal of Practice & Theory*, 28(2), 119-144. ISSN: 0278-0380.
5. Coenen, T. L. (2008). *Essentials of corporate fraud* (Vol. 37): John Wiley & Sons.
6. Cote, S., & Miners, C. T. (2006). Emotional intelligence, cognitive intelligence, and job performance. *Administrative science quarterly*, 51(1), 1-28. ISSN: 0001-8392.
7. Ermawati, M. D., Sinarwati, N. K., & Edy Sujana, S. (2014). Pengaruh Role Stress terhadap Kinerja Auditor dengan Emotional Quotient Sebagai Variabel Moderating (Studi Empiris pada Kantor Akuntan Publik di Bali) *JIMAT (Jurnal Ilmiah Mahasiswa Akuntansi S1)*, 2(1).
8. Fanani, Z., Hanif, R. A., & Subroto, B. (2008). Pengaruh Struktur Audit, Konflik Peran, dan Ketidakjelasan Peran Terhadap Kinerja Auditor. *Jurnal Akuntansi dan Keuangan Indonesia* 5(02), 139-155. ISSN: 0853-7593.
9. Fisher, R. T. (2001). Role stress, the type A behavior pattern, and external auditor job satisfaction and performance. *Behavioral Research in Accounting*, 13(1), 143-170. ISSN: 1050-4753.
10. Fogarty, T. J., Singh, J., Rhoads, G. K., & Moore, R. K. (2000). Antecedents and consequences of burnout in accounting: Beyond the role stress model. *Behavioral Research in Accounting*, 12, 31. ISSN: 1050-4753.
11. Gibbs, N., & Epperson, S. 1995. The EQ factor. *Time*, 146, 60-67.
12. Goleman, D. (2009). Kecerdasan Emosional: Mengapa EI lebih penting daripada IQ.
13. Gratia, A. A., & Septiani, A. (2014). Pengaruh Gaya Hidup Sehat Terhadap Psychological Well-being Dan Dampaknya Pada Auditor KAP (Studi Empiris pada Auditor Kantor Akuntan Publik di Jawa Tengah Dan DIY). *Diponegoro Journal of Accounting*, 3(2), 1-12.
14. Hatfield, R. C., Jackson, S. B., & Vandervelde, S. D. (2011). The effects of prior auditor involvement and client pressure on proposed audit adjustments. *Behavioral Research in Accounting*, 23(2), 117-130. ISSN: 1050-4753.
15. Hayes, C. T., & Weathington, B. L. (2007). Optimism, stress, life satisfaction, and job burnout in restaurant managers. *The Journal of psychology*, 141(6), 565-579. ISSN: 0022-3980.
16. Jones III, A., Norman, C. S., & Wier, B. (2010). Healthy lifestyle as a coping mechanism for role stress in public accounting. *Behavioral Research in Accounting*, 22(1), 21-41. ISSN: 1050-4753.
17. Judge, T. A., & Robbins, S. P. (2008). *Perilaku organisasi*. Jakarta: Salemba Empat.
18. Kalbers, L. P., & Fogarty, T. J. (1995). Professionalism and its consequences: A study of internal auditors. *Auditing*, 14(1), 64. ISSN: 0278-0380.
19. Kip Holderness, D., & Hunton, J. E. (2010). Examining the antecedents and consequences of regular exercise in the audit profession: How CPA firms can promote auditors' psychological and physical healthiness *Advances in Accounting Behavioral Research* (pp. 143-168): Emerald Group Publishing Limited.
20. Lawrence, T. B., & Robinson, S. L. (2007). Ain't misbehavin: Workplace deviance as organizational resistance. *Journal of management*, 33(3), 378-394. ISSN: 0149-2063.
21. Le Fevre, M., Matheny, J., & Kolt, G. S. (2003). Eustress, distress, and interpretation in occupational stress. *Journal of managerial Psychology*, 18(7), 726-744. ISSN: 0268-3946.
22. Lubis, A. I. (2010). *Akuntansi Keperilakuan*. Jakarta: Salemba Empat.
23. Martaseli, E., & Nugroho, G. W. (2016). Pengaruh Tingkat Stres Terhadap Kinerja Auditor di Kantor BPKP Perwakilan DKI Jakarta. *Syariah Paper Accounting FEB Universitas Muhammadiyah Surakarta*. ISSN: 2460-0784.
24. Nasution, D., & Östermark, R. (2012). The impact of social pressures, locus of control, and professional commitment on auditors' judgment: Indonesian evidence. *Asian Review of Accounting*, 20(2), 163-178. ISSN: 1321-7348.
25. Notoprasetio, C. G. (2012). Pengaruh Kecerdasan Emosional dan Kecerdasan Spiritual Auditor terhadap Kinerja Auditor pada Kantor Akuntan Publik di Surabaya. *Jurnal Ilmiah Mahasiswa Akuntansi*, 1(4), 76-81. ISSN: 2303-1727.

26. Permana, Y., Anugerah, R., & Al Azhar, L. (2016). Analisis Pengaruh Motivasi, Stress, dan Rekan Kerja Terhadap Kinerja Auditor di Kantor Badan Pengawas Keuangan dan Pembangunan Riau dan Sumatera Utara. *Jurnal Online Mahasiswa (JOM) Bidang Ilmu Ekonomi*, 3(1), 1350-1364. ISSN: 2355-6854.
27. Rahmawati. (2011). Pengaruh Role Stress Terhadap Kinerja Auditor Dengan Emotional Quotient Sebagai Variabel Moderating. Skripsi. Universitas Islam Negeri Syarif Hidayatullah Jakarta.
28. Ramadika, A. P., Nasir, A., & Wiguna, M. (2014). Pengaruh role stress, gender, struktur audit dan profesionalisme terhadap kinerja auditor bpk-ri perwakilan provinsi riau. *Jurnal Online Mahasiswa (JOM) Bidang Ilmu Ekonomi*, 1(2), 1-15. ISSN: 2355-6854.
29. Rizzo, J. R., House, R. J., & Lirtzman, S. I. (1970). Role conflict and ambiguity in complex organizations. *Administrative science quarterly*, 150-163. ISSN: 0001-8392.
30. Rustiarini, N. W. (2014). Sifat Kepribadian Sebagai Pemoderasi Hubungan Stres Kerja Dan Perilaku Disfungsional Audit. *Jurnal Akuntansi dan Keuangan Indonesia*, 11(1), 1-19. ISSN: 2406-9701.
31. Schick, A. G., Gordon, L. A., & Haka, S. (1990). Information overload: A temporal approach. *Accounting, Organizations and Society*, 15(3), 199-220. ISSN: 0361-3682.
32. Setiawan, I. A., & Ghozali, I. (2006). Akuntansi Keperilakuan: Konsep dan Kajian Empiris Perilaku Akuntan. Semarang: Badan Penerbit Universitas Diponegoro.
33. Sopiah. (2008). Perilaku Organisasi. Yogyakarta: Andi.
34. Sweeney, C. J., Bernardi, R. A., & Arnold, D. F. (2014). Could the Level of Personal Indebtedness Influence an Auditor's Professional Decision-Making Process? Research on Professional Responsibility and Ethics in Accounting, 89-108. ISSN: 1574-0765.
35. Turner, J. H. (2006). *Handbook of sociological theory*: Springer Science & Business Media.
36. Yustiarti, F., Hasan, A., & Hardi. (2016). Pengaruh Konflik Peran, Ketidakjelasan Peran, dan Kelebihan Peran Terhadap Kinerja Auditor dengan Kecerdasan Emosional Sebagai Pemoderasi (Studi Empiris pada KAP di Pekanbaru, Padang dan Medan) *Jurnal Akuntansi (Media Riset Akuntansi & Keuangan)*, 5(1), 12-28. ISSN: 2337-4314.

DOI 10.18551/rjoas.2019-02.33

## **RISK MANAGEMENT FOR START-UP COMPANY: A CASE STUDY OF HEALTHY KITCHEN RESTAURANT AND CATERING**

**Limbong Ruth Priskila**

Esa Unggul University, Jakarta, Indonesia

**Syah Tantri Yanuar R., Anindita Rina, Moelyono**, Lecturers  
Department of Management, Esa Unggul University, Jakarta, Indonesia

\*E-mail: [priskila.ruth@yahoo.com](mailto:priskila.ruth@yahoo.com)

ORCID: 0000-0003-3595-4835

### **ABSTRACT**

Entrepreneurs in the healthy food industry must pay attention to the risks of their business; i.e. in estimating and handling risks that will bring a direct or indirect negative impact on the healthy food business. The risks include risk of loss, risk of volatility, and risk of losing opportunities. Risk management is an approach chosen to understand, identify and evaluate risks that will later emerge. The research objective is to determine the risk management of the start-up company. The research findings showed that risk management is very important to conduct at each start-up restaurant of healthy food producer to avoid losses on costs, quality, and project schedules on the business operations, marketing, human resource, and financial aspects. The action response to the possibility of risk (risk response) is carried out through the retention risk, reduction risk, transfer risk, and avoidance risk. Risk assessment includes: identifying risks, understanding needs or considering risks, analyzing the impact of risks or evaluating risks, and being responsible for certain risks.

### **KEY WORDS**

Risk, management, restaurant, project.

In carrying out production activities, internal and external sources need to be limited to achieving company goals and objectives (Sensebé et al., 2010). Therefore, companies need to analyze and carry out anticipatory activities to overcome these risks (Nasution, 2003).

Leaders, along with their working groups, also play an important role in overcoming risk management and controlling effective internal implementation (Fred, 2011). The company quantifies risk in each business unit by preparing short- and long-term goals. So, they set appropriate actions to reduce and minimize risk identification and monitor the implementation actions. The leader reviews and approves proposed actions to reduce the risks that have been identified.

Risk is generally defined as something negative; for instance, loss, danger, and other consequences. These losses are a form of uncertainty that can be studied and managed effectively by an organization as part of a strategy so that it becomes added value and support for organizational goals (Lokobal et. al., 2014).

Start-up restaurant is one of areas that have risks. Risks can have an impact on productivity, performance, quality and cost in a business. Risks can also be referred to as unexpected results. Although an activity is actually well planned, sometimes, it still has uncertainty.

Certainty is a situation that cannot be predicted beforehand. Every activity carried out by individuals or companies must have risks. Similarly, businesses also have risks. Large risks need to be taken into account with the receipt of the results of the business which will also be greater.

However, the risk of a startup restaurant of "Healthy Kitchen" cannot be avoided but can be reduced. If the risk will have an impact on project performance disruption, it can cause losses to the cost, time and quality of work. Entrepreneurs in the healthy food industry

must pay attention to the risks of their business by estimating and handling risks that will bring a direct or indirect negative impact on the healthy food business. Those risks can lead to increased costs. Since it has a big impact, then research objective is to determine the risk management of the healthy-food restaurant.

## LITERATURE REVIEW

Risks include risk of loss, risk of volatility, and risk of losing opportunities (Labombang, 2011). The management framework in an organization is directed at strategic, operational, reporting and compliance goals. Therefore, risk is a variation in things that may occur naturally or the possibility of threats to property and financial benefits caused by the existing dangers (Leonardus, 2009).

First, the strategic goal is to support the vision and mission of an organization. Second, the operational goal is the utilization of effectiveness and efficiency from the available sources. Third, the reporting goal is internal and external reports that can be trusted and relied upon. And fourth, the compliance goal is various laws and regulations of obedience.

Regarding activities in the restaurant sector, the occurred activity process has involved related parties directly or indirectly. Operational risk may cause losses directly or indirectly such as the loss of the potential opportunity in a way to achieve it. In addition, operational risk can also cause losses that are difficult to calculate materially; for instance, damage to the restaurant's reputation.

Risk factors are caused by processes, humans, systems and external factors. Process risk factor is caused by the absence of available procedures, ineffective monitoring, and inadequate coordination between units and mechanisms. Human risk factor can be caused by negligence in work, internal fraud, and inadequate competence and number of employees. System risk factor is caused by network communication errors, program errors, and viruses. In addition, external factors are caused by natural disasters, demonstrations and floods.

The risk management process has several stages which include: 1) risk identification by analyzing risk sources; 2) risk analysis by assessing the possible risks and arising risks; 3) plan of action by implementing further plans; and 4) control by measuring, controlling, supervising, and ensuring that management plans remain relevant (McNeil et. al., 2005).

## RESULTS AND DISCUSSION

Risk management is the approach chosen to understand, identify, and evaluate risks in a project (Joni & Putu, 2012). In addition, it pays attention to what must be carried out to the arising impact and the possibility of transferring risk to other parties or how to reduce the existing risks.

The objective of risk management is to recognize risks in a project and develop strategies to reduce or even avoid them. On the other hand, it also aims at how to find ways to maximize the existing opportunities.

To identify risks, it must answer questions about what is involved in risk and why? and what types of risks have an effect on the project?

Generally, the main sources of business risk are: 1) physical loss or damage due to fire, earthquake, flood, accident and landslide; 2) environment: ecological damage, pollution and waste treatment, and investigation of the condition of the society; 3) design: a new technology, new applications, tests, safety and security, details, greater risk of conformity specifications, designs arising from measurements and investigations, possible changes to agreed designs, and design interactions with construction methods; 4) logistics or material damage: loss of road equipment, special resources, and organizational separation; 5) finance: availability of funds and adequacy of insurance, provision of sufficient cash flows, losses caused by contractors, fluctuations in supplier exchange rates and inflation, taxes, interest rates, and loan costs; and 6) operation: market fluctuations for products and services, maintenance needs, reliability, safety, factory and management.

Effective risk analysis must consider the following matters: 1) analysis must focus on direct financial loss rather than service disruption or death and loss; 2) uncertainty in each estimate of expenditure must be measurable; 3) the accuracy of the analysis must be based on data accuracy; and 3) costs and efforts for analysis must be as low as those that can be absorbed by the business budget (Tjakra & Sangari, 2011).

The first is operational risk. Based on our research findings, the types of affecting risks are human resources, assets, information, technology and natural events. It includes: 1) the effect of human resources on risk caused by labors deliberately or accidentally which have a negative impact on the company; 2) the effect of assets on risk caused by damaged and improper equipment that is caused intentionally and unintentionally by the labors so that it has a negative impact on the company; 3) the effect of information technology on risks caused by damaged hardware and software that are done intentionally and unintentionally by labors that have a negative impact on the company; and 4) the effect of natural events on risks caused by natural conditions so that they have a negative impact on the company.

The second is marketing risk. Based on our research findings, the types of affecting risks are brand awareness that does not develop the risk of losing old customers, the risk of companies that do not develop a product, and an affordable market share. It includes: 1) the influence of brand awareness that does not develop caused by lack of marketing and introduction of the restaurants; 2) the risk of losing old customers because service to consumers is unsatisfactory; 3) the risk that the company does not develop that is caused by disproportionate amount of human growth based on the number of assets and brands that are not familiar to the public; and 4) an unreachable market share due to the lack of activeness in marketing the products.

The third is the human resource risk. Based on our research findings, the types of affecting risks are lack of costs, turnover, and human resources. It includes: 1) the effect of turnover due to lack of compensation given by the company; 2) lack of human resource costs due to the number of inappropriate employees; and 3) the shortage of human resource costs due to inappropriate analysis work (Hariandja, 2002).

The fourth is financial risk. Based on our research findings, the types of affecting risks are the risk of income leakage, the risk of cash calculation, liquidity management, and compliance with financial reporting. It includes 1) risk of income leakage due to limited product delivery, delays in lack of food orders, telephone numbers and so forth as a result of fraud and loss and risk of work control using transportation; 2) the risk of calculating cash due to errors in calculating cash requirements; 3) liquidity management due to late payment of debt flows; and 4) compliance with financial report due to delays in the presentation of financial statements that should be in accordance with the regulator's requirements.

Risks to human resources, assets, information technology and natural phenomena are caused by various things. Thus, employers need to master the arising risks. It includes: 1) the risk of human resources caused by workplace accidents, so, the risk control is the availability of stock of first aid drugs for work accidents, transportation to the emergency department, availability of work insurance, and building rehabilitation; 2) asset risk caused by damage to equipment, so, the risk control is to check all equipment periodically for approximately three months and plan to repair equipment damage and supply new equipment; 3) information technology risk caused by damage to hardware and software, so, the risk control is routine checking of hardware and software; and 4) the risk of natural phenomena caused by natural disasters, so, the risk control is to provide health insurance for employees. The following is the risk management in the business operations of a restaurant.

The risks include the brand awareness that does not develop the risk of losing old customers, the risk of the company that does not develop, and the unattainable target market caused by all kinds of things. Thus, employers need to master the arising risks. It includes: 1) brand awareness that does not develop caused by the lack of product marketing risks, so, the risk control is to introduce restaurants through social media; 2) the risk of losing old customers caused by unsatisfactory service to consumers, so, the risk control is listening to their complaints and evaluating the customer satisfaction on risk management; 3) the risk of the company that does not develop caused by the growth amount of the people that is not

comparable to the number of assets and the brand is unfamiliar by the society, so the risk control is by introducing new products, improving machines, increasing employees and opening new restaurant branches; and 4) market share is unreachable caused by the lack of activeness in marketing products, so, the risk control is evaluating customer satisfaction.

Table 1 – Risk of Management

Parameter	Risk	Cause	Control
Human Resource	Serious injuries, death, disability	Work accident	- First aid in accidents - Emergency room - Insurance - Rehabilitation
Asset	The stoppage of the production process	Damage to equipment	- Periodical checking to the equipment - Improvement planning to the damage equipment - New equipment
Information Technology	Stranded at the operational process	Damage to hardware and software	Routine checking
Nature Phenomena	Dysfunction, serious injuries, death, disability	Natural disasters	Insurance

Table 2 – Risk of Marketing

Parameter	Risk	Cause	Control
Brand awareness that does not develop	Unfamiliar by the public	Lack of marketing and introducing activities of the restaurant	Introducing the restaurant through social media
The risk of losing old customers	The sales target is not sufficient	Unsatisfactory services to customers	Management complaint, Evaluation to customer satisfaction
The risk of company that does not develop	Result in a loss for company	Brand company is unfamiliar by the public, the number of people did not growth in proportion to growth asset	Introducing new products, upgrading the machine, improving the employees, and opening restaurant branch
The unattainable target market	Loss charter	The marketing activity is less active in offering and promoting the products	Evaluating customer satisfaction

The risks include lack of costs, turnover, and human resources caused by all kinds of things. Thus, employers need to master the arising risks. It includes: 1) the effect of turnover caused by the lack of compensation provided by the company, so, the risk control is the provision of annual bonuses and awards to outstanding employees; 2) lack of human resource caused by inappropriate numbers of employees, so, the risk control is to evaluate workload and employee capacity; and 3) lack of human resource costs caused by inappropriate job analysis, so, the risk control is the evaluation on employees' work.

Table 3 – Risk of Human Resource

Parameter	Risk	Cause	Control
Turnover	The high level of turnover	Lack of compensation given by a company	Giving an annual bonus and rewards for outstanding employees
Human resource	Inappropriate number of employees	Calculation the number of needs to employees	Conduct an evaluation workload and capacity of employees
Human resource costs	Job analysis	Inappropriate job analysis	Evaluation on employees' work

The risks include income leakage, cash calculation, liquidity management and compliance with financial reporting caused by all kinds of things. Thus, employers need to master the arising risks. It includes: 1) income leakage caused by limited distance in product delivery, delays in ordering the lack of food, unlinked telephone numbers, and the result of fraud and loss, so risk control is working with online transportation, providing a fleet of

vehicles according to the projected number of consumers, providing online chat facilities to increase the number of telephone numbers, increase labor, guarantee operational standards and procedures, and use a sales system; 2) liquidity management for late payment of debt caused by errors in cash calculations, so risk control is to pay attention to future cash flows of income and purchases, 3) management of liquidity mainly due to late payments from debt flows, so risk control is analyzing financial statements and determine the closing time of financial statements.

Table 4 – Risk of Financial

Parameter	Risk	Cause	Control
Income leakage	Limited distance in product delivery	Lack of vehicles delivery and difficulties in maintaining the quality of far journey	Using online transportation
	delays in ordering the lack of food	The far distance of food delivery	Providing transportation in accordance with projection of the number of customers
	Unlinked customers' telephone numbers	A lack of telephone	Providing online chat facility
	Losses from fraud	Lack of employee supervision	Ensuring that employees adhering to a standard operating procedure properly
Cash calculation	Inability in meeting the needs of exact cash flow	A mistake in cash requirement calculation	Taking into account the income and expenditure of the cash flow in the future
Liquidity management	Loss or the appearance of the likely cost resulting from the failure of counter-parties payment	Delays in the payment of current debt	Ensuring sufficient cash balance for the payment of current debt
Adherence to financial report	Failure to comply with the international, national, and local law and regulations that are associated with the business process	The delay in the presentation of the financial statements	Adherence to financial report

## CONCLUSION

For each project, risk management is very essential to avoid loss of project costs, quality and schedule. Risk management is an approach chosen toward the risks by understanding, identifying and evaluating the risks of a project. It is carried out by paying attention to what must be conducted to the consequences and the possibility of transferring risk to other parties or by reducing the occurring risks. Risk assessment includes: identifying risk, understanding needs or considering risks, analyzing the impact of risks or evaluating risks, and those responsible for certain risks. Handling the possible risks may be carried out by risk retention, risk reduction, risk transfer, and risk avoidance.

## REFERENCES

1. Fred, R D. 2011. Strategic Management. Jakarta: Salemba Empat.
2. Hariandja, M. T. E. (2002). Manajemen sumber daya manusia. Jakarta: Grasindo.
3. Joni, I., & Putu, G. (2012). Resiko Manajemen Proyek. Jurnal Ilmiah Teknik Sipil Vol, 16(1).
4. Labombang. 2011. Manajemen Risiko Dalam Proyek Kontruksi. Palu: Jurnal SMARTek Vol. 9 No. 1.
5. Leonardus, S. 2009. Kewirausahaan Teori, Praktik, dan Kasus-kasus. Jakarta: Salemba Empat.
6. Lokobal, A., Sumajouw, M. D., & Sompie, B. F. (2014). Manajemen Risiko Pada Perusahaan Jasa Pelaksana Konstruksi Di Propinsi Papua (Study Kasus Di Kabupaten Sarmi). Jurnal Ilmiah Media Engineering, 4(2).

7. McNeil, A. J., Frey, R., & Embrechts, P. (2005). Quantitative risk management: Concepts, techniques and tools (Vol. 3). Princeton: Princeton university press.
8. Nasution, A. H., & Prasetyawan, Y. (2003). Perencanaan dan pengendalian produksi. Surabaya: Guna Widya.
9. Oswari, T., & Suhendra, E. S. (2013). Proyeksi Manajemen Risiko Operasional Pembukaan Kantor Cabang Perusahaan Asuransi di Indonesia. *Jurnal Asuransi dan Manajemen Risiko*, 1(2).
10. Sandyavitri, A. (2009). Manajemen Resiko di Proyek Konstruksi. *Media Komunikasi Teknik Sipil*, 17(1), 23-38.
11. Sensebé, L., Bourin, P., & Tarte, K. (2010). Good manufacturing practices production of mesenchymal stem/stromal cells. *Human gene therapy*, 22(1), 19-26.
12. Tjakra, J., & Sangari, F. (2011). Analisis Resiko Pada Proyek Konstruksi Perumahan Di Kota Manado. *Jurnal Ilmiah Media Engineering*, 1(1).

DOI 10.18551/rjoas.2019-02.34

## SEED HEALTH EVALUATION IN THE PROCESS OF FREE-VIRUS CITRUS SEED PRODUCTION ON KAMPAR REGENCY, RIAU PROVINCE OF INDONESIA

Dwiastuti M.E.\*, Wuryantini S., Sugiyatno A., Supriyanto A.  
Indonesia Citrus and Subtropical Fruit Research Institute, Indonesia  
\*E-mail: [mutiaed@gmail.com](mailto:mutiaed@gmail.com)

### ABSTRACT

Kampar is one of the largest citrus seed production centers in Indonesia which has a wide distribution range. In anticipating and preventing the spread of dangerous systemic diseases and the presence of vector pests, a survey was conducted to evaluate the health of the seeds and the application of technology to the process of citrus production in Kampar, Riau, Indonesia. The survey was conducted in November 2014 in Sungai Pinang, Tambang, Kampar Regency and at Padang Marpoyan Seed Center, Riau, Indonesia. The sample was selected by random sampling method on scattered seeds in captivity, Foundation Block (FB), Budwood Multiplication Block (BMB) plant in the protected screen house and in farmer land. The results of the survey showed that seed growers that have not used patches from the BMB mother tree are already available on the farmer's land of 1200 stems since 2014 while BMB in BBI is available since 2012. The condition of the parent FB and BMB trees managed by the Agriculture Service in Padang Marpoyan Seed Center is sufficiently good and protected in a screen house. The results of the seed health examination showed that the FB and BMB plants were free from Huanglongbing (HLB) and Citrus Tristeza Virus (CTV) diseases. Whereas, the field of BMB plants on the farmer's land with no screen house protection and Parent Tree showed that the plant's population in the field were infected with CTV by 66.7%. The seed plants spread to 100% small seed grower were infected with CTV. In the medium seed grower cluster, CTV infection occurred as much as 87.5%. In large seed grower, the indexing results showed a positive mark and contained *Liberibacter asiaticum* pathogens that cause HLB.

### KEY WORDS

Evaluation, citrus free virus, seed production, Kampar.

The horticultural seedling sector in Indonesia still not fully ready to support the highly competitive products in the free trading industry such as *China ASEAN Free Trade Area* (CAFTA) and AFTA (*ASEAN Free Trade Area*). In citrus commodities, this happens because the seeding process still does not follow the flow of disease-free seed production. Whereas, since the outbreak of Huanglongbing (HLB) disease in the 1980s which is also known as *Citrus Vein Phloem Degeneration* (CVPD) caused by *Liberibacter asiaticum* (Bove, *et al.* 2000; Jagoueix *et al.*, 1994; Jagoueix *et al.*, 1996; Jagoueix *et al.* 1997; Subandiyah *et al.*, 2000), there have been a decrease in the productivity of citrus for around 10 tons/ha. Until now, it has significantly damaged the citrus agribusiness in Indonesia. This disease is transmitted by the *Diaphorina citri* Kuw insect vector and propagation materials (seeds and patches).

Although the prospect of the citrus industry seems to be down because of the widespread effects of malignant diseases, citrus farmers still want to continue planting citrus because they assume that citrus is economically more beneficial compared to other food crops. The efforts to inhibit the spread of systemic diseases in the past have not been quite a success. The disease is still found in citrus plants over the age of 2 years. To overcome this issue, the Indonesian Citrus Rehabilitation Program has initiated a virus-free citrus seed production through *Shoot Tip Grafting* (STG) technology in *in-vitro* and indexing (Supriyanto & Whittle, 1992; Supriyanto *et al.* 1992; Devy *et al.* 2015). In 1992, this program was successfully produced. The program distributed CVPD-free citrus seeds and other viruses in several production centers especially in North Bali. The success of the program was further

strengthened by the Indonesian citrus certification program. The disease-free citrus seedling system was then become a recommendation and referred nationally by the Directorate of Horticulture Seedling with a legal support from the Decree of Minister of Agriculture number 39/Permentan/OT.140/8/2006 concerning the Production, Certification, and Distribution of Seed Regulations for disease-free citrus seeds. By that, in the production process and distribution of disease-free citrus seeds in Indonesia, the concerning parties must refer to this regulation. Thus far, the mother seed of disease-free citrus (Foundation Block (FB) has been spread in 29 provinces and has the status of Patches Block on Budwood Multiplication Block (BMB) in 34 Provinces (Supriyanto *et al.*, 2017)

In citrus plants, the superior seeds are those which are free from systemic pathogens (HLB = *Huanglungbin*, CTV = *Citrus Tristeza Virus*, CVEV = *Citrus Vein Enation Virus*; CEV = *Citrus Exocortis viroid*, CPsV = *Citrus Psorosis citrus*) that are in accordance with the parent tree with guaranteed purity of variety. This seed can only be obtained if the parent tree is produced in accordance with national seed regulation. As for citrus seed production, it must be in accordance with the disease-free citrus production flow that has been produced by Balitjestro with the classification of basic seed (FB) and main seed (BMB). During the production process from FB, FB, and scattered seeds, there must be a periodic supervision and inspection from the Seed Monitoring and Certification Agency (*Balai Pengawasan and Sertifikasi Benih* or BPSB). The examined seeds that are still healthy and free of disease will be labeled as disease-free according to their status. FB seeds will be labeled in purple, BMB seeds will be labeled in pink, and scattered seeds will be labeled in blue.

Unfortunately, this good regulation has not been implemented fully by the community as reported in several Indonesian seed centers, such as in NTT (Supriyanto *et al.* 2015a). It was found that around 80-90% of citrus seeds were produced by two seeds factories which are Purworejo-Jateng and Kampar-Riau with a capacity of 1,500,000-2,000,000 citrus seeds per year. Those seeds are not labeled and have spread to a minimum of 7 provinces in Indonesia (Supriyanto *et al.*, 2015b). The problem of unlabeled seed distribution has caused the national citrus industry to continue to decline. The latest data released by the Data and Information Center of Ministry of Agriculture in 2014 showed that in 5 years (2008-2013), there is a decline in the citrus plantation area for about 7,000 hectares (from 60,190 hectares in 2009 to 53,517 hectares in 2013). One of the main reasons in this matter is the attack of systemic diseases, especially HLB and CTV, due to the use of unlabeled wild seeds. As reported by Hartung *et al.*, 2010 and Hilf 2011, HLB or CVPD spread from seeds to seeds. For this reason, farmers are encouraged to be careful in choosing seeds. It is recommended that farmers should only select blue-labeled citrus seeds and not others. The Department of Agriculture and the local BPSB, as well as the Directorate General of Horticulture as policymakers and supervisors, must be more assertive in controlling and enforcing various project regulations as well as providing seeds for farmers. Instead of being the agents of disease dissemination, seed growers must be responsible for preventing the spread of dangerous systemic diseases such as CVPD and CTV. This must be taken seriously in every movement of citrus agribusiness development in the country.

The purpose of the observation was to evaluate the health status of the seeds in the disease-free citrus seed production process in the development center of disease-free (blue-labeled) citrus seedling area of Bangkinang, Riau Province as a provider of citrus seeds in Sumatra that is also expected to become the pilot breeder in Indonesia.

## MATERIALS AND METHODS OF RESEARCH

The observations were conducted in November 2014 in Kampar Regency, Riau Province, Indonesia. The selection of the research sites was done intentionally (selected random sampling method) in a cluster based on several considerations, such as 1) The biggest seed production center in Sumatera, 2) Big exporter of citrus seeds with label and with no label, 3) The citrus seeds in the area are feared to be contaminated with HLB and other viruses, and 4) The seed growers are based on small, medium, and large growers. The smaller selection unit of research sites is in districts that are concentrated in Bangkinang

District, the largest seed center in Kampar. The data collection was carried out by using interviews and direct observation approach on the visual symptoms of diseases in fields. The data collection and sample of infected plants (primary data) were directly taken from 3 random farmers. Meanwhile, the secondary data was collected through interviews by asking questions. The observations consisted of the seeding profiles at Kampar Riau, the symptoms of pests and diseases found, the plant growth, the sampling, as well as HLB and CTV disease analysis in laboratories. The selected samples were determined based on the criteria, scattered seeds, as well as the parent tree of BMB and FB. The sampling of scattered seeds and BMB was carried out in a composite (50–100 plants were taken randomly and considered as one sample) while the sampling of FB was performed individually.

The CTV testing protocol was done with direct DAS-ELISA and CTV antibody kit with Polynitrophenyl phosphate (PNP) substrate (Dwiastuti & Triwiratno 1994). The HLB indexing protocol to detect bacterial DNA of *L. asiaticus* 16S r DNA in 1160 bp amplified by PCR method was carried out by using a forward primer (CAC CGA AGA TAT GGA CAA CA) and reverse primer (GTG GTT GTT GTT TTT CTT CTG). The PCR cycle used was Step 1: 94°C in 3 minutes, Step 2: 94°C in 1 minute; 60°C in 1 minute; 72°C in 2 minutes (30 cycles), Step 3: 72°C in 10 minutes, and Step 4: 4°C for a cooling state. Both protocols are in accordance with the method developed by the Balitjestro Testing Laboratory accredited by ISO-IEC 17025/2005. All samples tested in the laboratory were accompanied by positive controls and negative controls as a comparison of the test results.

## RESULTS AND DISCUSSION

Kampar Regency with an area of approximately 1,128,928 Ha or 12.26% of Riau Province is an area located between 01000'40" North Latitude to 00027'00" South Latitude and 100028'30"- 101014'30" East Longitude. This region is divided into 21 districts and 245 villages. The borders of Kampar Regency are: The North is adjacent to Pekanbaru City and Siak Regency, the South is bordered by Kuantan Singingi Regency, the West is surrounded with Rokan Hulu Regency and West Sumatra Province, while the East is next to Pelalawan Regency and Siak Regency.



Figure 1 – Map of Riau Province

It is recorded that the population of Kampar Regency in 2010 was 687,797 people consisting of 354,434 male population (51.53 percent) and 333,363 female population (48.46 percent). The sex ratio (comparison of the male population with female population) is 106. It is known that the most densely populated sub-district is Kampar District which is 327 people/Km<sup>2</sup> followed by Rumbio Jaya District which has 197 people/Km<sup>2</sup>. In addition, there are other five districts which have a dense population namely Bangkinang District, North Kampar District, West Bangkinang District, Perhentian Raja District, and East Kampar

District (each of which has 195 people/km<sup>2</sup>, 190 people/Km<sup>2</sup>, 146 people/Km<sup>2</sup>, 138 people/Km<sup>2</sup> respectively). Meanwhile, the two relatively sparsely populated districts are Kampar Kiri Hulu District with 8 people/Km<sup>2</sup> and Kampar Kiri Hilir District with 13 people/Km<sup>2</sup>.

The main commodities of Kampar Regency are plantation and services sector. The commodity of the plantation sector is rubber, oil palm, cocoa, coconut, and gambier (Anonymous, 2015).

*The profile of citrus seedlings in Tambang Village, Tambang District, Kampar Regency.* Tambang District and Sungai Pinang Village are the largest seed centers in Kampar District fulfilling 110 Ha of Integrated Agricultural Technology Development Zone in Sungai Pinang Village that is funded by the Regional Budget in 2012. The citrus seed breeder in Tambang District consists of two groups: the citrus seed grower association and individual seed grower.

The number of association members is 27 growers which are divided into small growers (produce < 65,734 plants), medium growers (produce 65,734-579,830 plants), and large growers (produce > 579,831 plants). Supriyanto & Sugiyatno 2015 wrote that of those 27 growers, there are 200 members or plasma growers which have a production capacity ranging from 2 to 3 million seeds per year. The seeds are mostly produced by using patches from their own trees which a small portion of it was processed by using the patches from BMB. However, not all of which are certified--this depends on the buyer. If the buyer is from the government agency, certification will be carried out, but if the buyer is an ordinary community, there will be no certification. Almost all growers use short polybags that is not in accordance with what has been recommended by the research results. This is due to the assumptions that small polybags are more economical in planting and transport.

There are 2-3 individual citrus seed growers which have large seed turnover. Besides cultivating citrus seeds, growers also seek other fruit seeds like durian, mangosteen, rambutan, matoa, longan, agarwood, and others. The source of the patches used is taken from their own large plants which have no certificate and short polybags.



Figure 2 – Citrus seeds performance in Kampar (a) Most of the performance in Kampar is citrus seeds in short polybags and no labels; (b) The performance of blue-labeled (stickers) disease-free citrus seeds in Kampar with short polybags; (c) The performance of recommended free-disease citrus seeds in high polybags (3-liter volume) complete with a blue certification label

In both individual and association seed grower, the cultivated variety was 90% of Siam Madu seeds while the rest were lime and kaffir lime. All seed growers obtain seeds for the rootstock from Brastagi. The origin of the source of the patch is varied. Some of which come from fellow growers who have good field parent trees (PIP/PIT), some use their own parent trees in their fields, and some use the source from the BBI.

The availability of source seed for the patch:

- BMB in the screen house managed by Padang Marpoayan Seed Center is 1200 stems. The seeds which are worth to produce are 804 stems;
- There are 1200 stems of BMB with no screen house managed by 8 selected farmers and can produce 250,000 patches.

The results of the interview stated that the citrus seed production capacity in Kampar was 5,400,000 per year. It is known that 192,240 of which were labeled while the others were not labeled and distributed to 10 provinces. The small implementation of seed labeling

according to Purnomosidhi & Roshetko 2012 is due to the long process of certification. There are an additional label and inspection fees which makes the selling price to be expensive. Viewed from the history of agricultural seed certification carried out since the early 1900s (Hackleman & Scott, 1990), seed certification is an official labeling from the relevant agency which means that the labeled seed has gone through a process of health checks and purity, growth testing, and moisture content, as well as fulfilling all requirements to be duplicated or circulated (Mangold & Bonner, 2008, Nyoka, *et al.* 2011; Falivene & Creek 2017). For horticulture and plantation crops that the breeding process must go through a grafting process, there are two stages of certification process such as a) the certification of patches and b) the certification of finished seeds. The supervision procedure above is similar with other countries (Nyoka *et al.*, 2011) so as to make high costs for the growers of horticulture.

*Health evaluation of citrus seeds in Kampar.* In general, citrus seeds are produced by seed growers either using random patches or using the patches from BMB which are relatively healthy and good. Nevertheless, there are still a number of non-lethal pests and diseases and nutrient efficiency found in the field. The pests that attack the plants are *Toxoptera citricidus* pest aphids, *thrips sp.*, *Phyllocnistis citrella* peliang leaves caterpillar, infestation of scales on the leaves, and *Bemisia sp* whiteflies pest. On the other hand, the disease attacks are CVPD (*Citrus Vein Phloem Degeneration*), CTV (*Citrus Tristeza Virus*), leaves cancer (*Xanthomonas anoxopodis pv. Citri*), scabies (*Spaceloma fadiuwccetti*), greasy spots (*Mycosphaerella citri*), fungus soot (*Capnodium citri*), dead tips (*Fusarium sp. + Alternaria sp*), anthracnose branch necrosis (*Colletotrichum sp.*) (Table 1 and 2). The attack of pests and diseases is generally still controlled by atonic combined insecticides and fungicides except for CVPD and CTV (Dwiastuti *et al.* 2013, Dwiastuti 2016, David & Gottwald 2014). The most common abiotic diseases are Zn and Mg nutrients. On average, 6 kinds of pest disturbances were found to be only 1.25-7.5% while the disease was small on a scale of 0.25-8.37%.

Table 1 – The Citrus Seedling Pests in Sei Pinang Village, Tambang District, Kampar Regency, Riau Province

Number	Breeder / farmer group	Plant status	Pest Attack Incidence (%)							
			1	2	3	4	5	6	7	8
<i>Small Breeder &lt; 65,734 seeds</i>										
1	Jumadil Khoirul	Scattered	0	0	0	0	0	0	0	0
2	Raja M Nurdin	Scattered	0	0	20	5	10	0	0	0
3	Joni	Scattered	5	0	5	0	0	0	0	0
4	Muzar	Scattered	5	0	0		0	5	5	0
5	Suseno	Scattered								0
	Syafrizal	Scattered	0	0	0	5	0	0	0	0
	Syamsir	Scattered	0	0	5	5	0	0	0	0
	Average		2.5	0	7.5	3.75	2.5	1.25	1.25	0
<i>Medium breeder 65,734 – 579,830 seeds</i>										
6	Afrizal	Scattered	0	0	10	0	0	0	0	5
7	A.Nurohman	Scattered	0	0	0	0	5	0	0	0
8	Idris	Scattered	0	0	5	0	0	0	0	0
9	Nopianti	Scattered	5	0	5	5	5	0	0	0
10	Astanti	Scattered	0	0	5	5	0	0	0	0
11	Baidarus	Scattered	15	0	0	0	0	0	0	0
	Rismadiyanto	Scattered	0	0	0	0	0	0	5	0
12	Mohamad Bibit	Scattered	0	0	5	0	0	3	7,5	0
	Average		5	0	6.25	1.25	2.5	0.75	3.13	1.25
<i>Large Breeder &gt;579,831 seeds</i>										
13	Anasrun	Scattered	5	0	5	0	0	5	5	0

Note:

- |   |   |   |  |
|---|---|---|--|
| 1 | Chocolate aphid ( <i>Toxoptera citricidus</i> ), black ( <i>Toxoptera Aurantii</i> ), green ( <i>Myzus persicae</i> ) | 5 | Scales fleas ( <i>Aonidiella aurantii</i> )              |
| 2 | Orange fleas ( <i>Diaphorina citri</i> )  | 6 | Mite ( <i>Panonychus citri Phyllocoptruta oleivora</i> ) |
| 3 | Leaf Peliang ( <i>Phyllocnistis citrella</i> )  | 7 | Dompolan fleas ( <i>Planococcus citri</i> )              |
| 4 | Trips ( <i>Scirtothrips citri</i> )   | 8 | Whitefly   |

Table 2 – The Incidence of Disease in Citrus Seeds growers without Blue Label in Sei Pinang Village, Tambang District, Kampar Regency, Riau Province

No	Seed growers /farmer group	Plant Status	Disease Attack Incidence (%)									
			1	2	3	4	5	6	7	8	9	
<i>Small Breeder</i> < 65,734												
1	Jumadil Khoirul	Scattered	0	4	0	0	50	3	10	0	5	
2	Raja M Nurdin	Scattered	1	3	1	7.5	3	5	10	5	12.5	
3	Joni	Scattered	0	0	0	0	0	0	0	0	0	
4	Muzar	Scattered	0	0	0	0	0	0	0	5	5	
5	Suseno	Scattered	0	0	0	4	10	0	5	0	5	
	Rata2		0.25	1.75	0.25	0.18	15.75	2	6.25	2.5	6.87	
<i>Medium Breeder</i> 65,734 – 579,830												
6	Afrizal	Scattered	1	2.5	1	6.3	0	0	0	0	3	
7	A.Nurohman	Scattered	1	6	0	37.5	20	0	0	0	12	
8	Idris	Scattered	0	3	63	0	13	31	0	0	16	
9	Nopianti	Scattered	0	12	5.6	0	11.5	0,9	5	0	46	
10	Astanti	Scattered	0	0	0	1	0	0	0	0	1	
11	Rismadiyanto	Scattered	0	0	5	25	5	35	0	0	20	
12	Baidarus	sebar	0	6	9.3	3	5	4.6	0	0	5	
13	Mohamad Benih	sebar	2.5	4	3.3	0	0	5	0	0	5	
	Rata2		0.34	8.37	6.70	5.6	4.19	5.88	0.38	0	8.30	
<i>Large Breeder</i> >579,831												
14	Anasrun	Scattered	0	0	0	0	0	0	0	5	5	

## Note:

- |  |   |
|--|---|
| 1 HLB /Huanglungbin (CVPD) <i>Liberobacter asiaticum</i> | 6 Rotten anthracose leaves ( <i>Colletotrichum sp</i> ) |
| 2 CTV ( <i>Citrus Tristeza Virus</i> )                   | 7 Greasy spot ( <i>Mycosphaerella citri</i> )           |
| 3 Dead tips ( <i>Fusarium sp + Alternaria sp</i> )       | 8 Fungus soot ( <i>Capnodium citri</i> )                |
| 4 Scabies ( <i>Spaceloma fawcetti</i> )                  | 9. Zn deficiency  |
| 5 Citrus cancer ( <i>Xanthomonas anoxopodis</i> )        |   |



Figure 3 – The symptoms of the disease that attack citrus seeds in Sei Pinang Village, Tambak District, Kampar Regency are a). *Vien clearing* (*Citrus Tristeza virus*), b). Dead tips (*Fusarium sp. + Alternaria sp*), c). Zn nutrient deficiency, d). Scabies (*Spaceloma fawcetti*), e). Leaf cancer (*Xanthomonas anoxopodis pv. Citri*), d). Greasy spot (*Mycosphaerella citri*), and e). fungus soot (*Capnodium citri*)

The breeder groups which produce the healthiest seeds are large seed growers. The symptoms of CTV disease in the form of a light *vein clearing* which will appear more clearly on lemon and lime are observed on 8 locations of captivity. *Capnodium citri* which is usually found in citrus plants in captivity or in other citrus centers is relatively rare here. This happens probably because the condition of the humidity around the plant is quite low,  $\pm 62\%$  with a temperature of  $\pm 34^{\circ}\text{C}$ . This is not the ideal condition for the growth and development

of this fungus. The dead tips that occur in some seed growers are thought to be caused by the splashing of rainwater or water that is contaminated by the pathogen fungus inoculum.

From the pests and diseases attack, the development of dangerous diseases that need to be taken into account is CTV and HLB disease. The spread of the disease is thought to occur through the use of infected entres. Dwiastuti *et.al.*, 2013 believed that CTV disease is transmitted by aphids which can transmit the virus if it sucks the sick plant for 5 seconds with an incubation period of 5 seconds. CTV transmission can occur effectively if 27 aphids transmit the disease to healthy plants simultaneously. CVPD disease is transmitted by *diaphorina citri* insects or infected patches. *Diaphorina citri* insects can contaminate the healthy plants 160-360 hours after they eat the bacteria.

The production and distribution process of the disease-free citrus material multiplication should follow the regulations that have been recommended nationally such as the cleaning PIT of systemic pathogens especially CVPD/HLB, CTV CVEV, CEV and CPsV that its existence is found in Indonesian citrus plantation and distributed through the FB, BMB, and seed growers to be planted by farmers (Supriyanto *et al.* 1992).

*The evaluation of seed health for systemic diseases in the process of citrus seed production in Kampar based on the Elisa test (Enzyme-Linked Immunosorbent Assay) and PCR (Polymerase Chain reaction).* The search for citrus seed health against systemic diseases ranging from FB, BMB, seed growers to plants in the field with Elisa and PCR tests shows that:

The citrus mother plants in the field were used as a source of citrus seeding in Kampar Regency. The plants were infected with CTV by 66.7% but still free of CVPD. In small breeding clusters, 100% of the plants were infected with CTV while in medium breeding clusters; the CTV infection occurred as much as 87.5%. On the other hand, there was an infection of CTV by 100% and CVPD by 50% in large seed growers. The tracing continued until the orange (3.5-year-old) planted in Topas palm oil plantation owned by Anasrun which had the symptoms of blotching and Zn deficiency is found. This shows that all samples have been contaminated with HLB and CTV (Table 3). In addition, electrophoresis results are presented in Figures 3 and 4 as the final process of PCR. This can be seen that the composite samples in large seed growers and field plants are infected with HLB.

From the above evaluation, it can be noted that there are three main problems faced by citrus seed growers in Bangkinang region such as technical, regulatory, and institutional problems. Those problems are interrelated with each other. What is meant by technical problems is the ignorance or inability of seed growers to adopt the recommended technology.

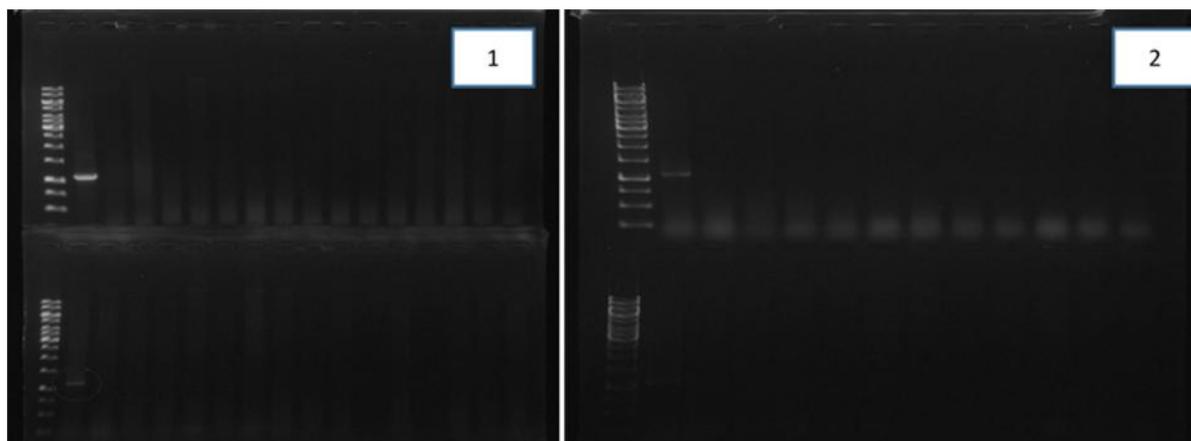


Figure 4(1) – Two electrophoresis gels resulted from DNA amplification of *Liberobacter asiaticus* causing HLB with a special primer on PCR test results. L = KB leader; PC = Positive control; NC = negative control. Top gel: sample no. 1-14 = scattered seed, bottom gel: sample number 15-28 = scattered seeds.

Figure 4(2) – Top gel: sample number 29-32 = scattered seeds, sample number 33-35 = field PIP, 36 = scattered seed, 37-42 = BMB without screen; Bottom gel: sample number 43 - 45 = BMPT without screen, 46-48 = BMB with screen. Nothing generates band (ribbon) in 1160 Kilo base, which means it contains *Liberobacter asiaticus* causing a CVPD, except on the positive control (next to KB leader).

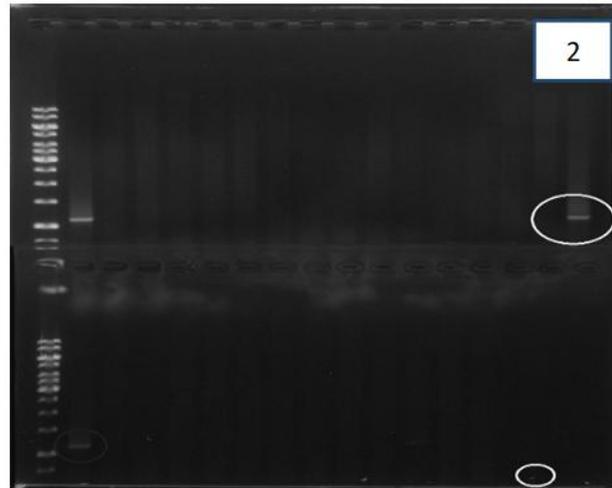


Figure 5(1) – Electrophoresis gel resulted from DNA amplification of *Liberobacter asiaticus* causing HLB with a special primer on PCR test results. L = KB leader; PC = Positive control; NC = negative control. Samples number 49-50 = BMB screen, 51-61 = FB screen.

Figure 5(2) – Two electrophoresis gels resulted from DNA amplification of *Liberobacter asiaticus* causing HLB with a special primer on PCR test results. L = KB leader; PC = Positive control; NC = negative control. Top gel: sample number 63-65 = FB , 66 = scattered seeds, 67-69 field BMB, 70.71 = scattered seeds, 72-74 = field PIP, 75 = scattered patches. Bottom gel: 76 = scatter extracts. 77-79 = BMB screen, 80-82 = field PIP, 83-85 = 3.5 productive plants. Samples number 75 and 84 produce bands (bands) at 1160 Kilo Base, which means that *Liberobacter asiaticus* is the cause of CVPD, as in the positive control (next to KB leader)

Table 3 – The observation of visual symptoms and HLB and CTV systemic disease indexing results (with ELISA and PCR techniques) in the Foundation Block parent tree, field BMB mother tree, screen house, and citrus population parent tree in Sei Pinang Village, Tambang District, Kampar Regency, Riau Province

Number	Manager	Parent Tree Status	Variety	Number of Observed Plants (tree)	Indexing Results		
					CVPD	CTV	
<b>Mother tree in screen house</b>							
1.	BBI Padang Marpoyan	Foundation Block	Siam honey	8 individuals	-	-	
2	BBI Padang Marpoyan	Foundation Block	Siam pontianak	7 individuals			
3	BBI Padang Marpoyan	BMB screen	Siam honey	Composites of 300	-	-	
4	BBI Padang Marpoyan	BMB screen house	Siam pontianak	Composites of 300	-	-	
5	BBI Padang Marpoyan	BMB screen	K Trigas	Composites of 300	-	-	
6	Moh. Benih	BMB screen	siam	4 Composites	-	-	
7	Muzak	BMB screen	siam	3 Composites	-	-	
Percentage					0 %	0 %	
<b>Field mother Tree</b>							
8	Astanti	BMB Field	siam	3 composites of 200	-	-	
9	Raja M Nurdin	BMB Field	siam	4 composites of 200	-	+	
10	Joni	BMB Field	siam	3 composites of 200	-	+	
11	Nurahman	PIP Field	siam	3 individuals	-	+	
12	Baidarus	PIP Field	siam	3 individuals	-	+	
13	Anasrun	PIP Field	siam	3 individuals	-	+	
Percentage					609 plants	0 %	66.7%
<b>Small seed growers</b>							
14	Jumadil khoirul	Scattered Seeds	siam	2 composites	-	+	

15	Joni	Scattered seeds	siam	2 composites	-	+
16	Raja	Scattered seeds	siam	2 komposit	-	+
17	Suseno	Scattered seeds	siam	1 composites	-	+
Medium seed growers						
18	Afrizal	Scattered seeds	siam	3 composites	-	+
19	A.Nurohman	Scattered seeds	Siam, kaffir	3 composites	-	-
20	Idris	Scattered seeds	Siam	2 composites	-	+
21	Nopianti	Scattered seeds	Siam, lime, kaffir	5 composites	-	+
22	Astanti	Scattered seeds	Siam	2 composites	-	+
23	Rismadiyanto	Scattered seeds	Siam, JC, kaffir	4 composites	-	-/+
24	Baidarus	Scattered seeds	Siam	2 composites	-	+
25	Mohamad Benih	Scattered seeds	siam	2 composites	-	+
Percentage					0 %	87.5 %
Large seed growers						
26	Anasrun	Scattered seeds	Siam, JC	7 composites	-/+	+
Percentage					50 %	100 %
Field plants (3,5 yo)						
27	Anasrun	Field plants	siam	composites	+	+
Percentage					100%	100%

To overcome these problems and at the same time encourage seed industrialization in Bangkinang, the strategies presented by Supriyanto & Sugiyatno 2015 are: (1) Technical, improving and enhancing the knowledge and ability of seed growers to produce good citrus seeds by conducting training, apprenticeship, and comparative studies on sites/institutions that are competent in producing disease-free citrus seeds; (2) Regulation, the regulation socialization of blue-labeled citrus seed production to citrus seed growers must be carried out frequently and followed by rigorous supervision and control from BPSB task forces during the production process; and (3) Institutional, strengthening the institutional seed growers which in this case is the association of fruit seed growers in Kampar regency. All parties must be able to increase the independence of the association to access the technology, funding, markets, and professionalism. Regular meetings still need to be done with fresh and useful material to build the association member together. Besides that, the role of local government in strengthening the breeding institutions is still very much needed.

## CONCLUSION

Citrus seedlings in Kampar Riau have not been free from CVPD and CTV systemic disease infections in which it becomes a latent danger of harmful disease outbreaks. The labeling status and certification of citrus seeds in Kampar to evaluate the health of citrus seeds still has a small percentage. There are only 3.56% blue-labeled seeds from 54,000 citrus seeds production capacity with a range of distribution to 10 provinces in Indonesia. The process of health checks in certification is assumed to be long and might increase the production costs.

## REFERENCES

1. Anonymous. 2015. Retrieved from [https://id.wikipedia.org/wiki/Kabupaten\\_Kampar](https://id.wikipedia.org/wiki/Kabupaten_Kampar) on September 9th, 2015.

2. Bove J.M., Erti Dwiastuti M., Triviratno A., Supriyanto A., Nasli E., Becu P, Garnier M., 2000b. Incidence of huanglongbing and citrus rehabilitation in North Bali, Indonesia. Proceedings of 141f. Conference 10CV, IOCV, Riverside 2000, 200-206.
3. Hall, D.G. and Gottwald, T.R. 2014. Pest Management Practices Aimed at Curtailing Citrus Huanglongbing Disease.
4. Devy, N.F., Hardiyanto, and Dwiastuti, M.E. (2015). Teknologi Shoot-top Grafting and Indeksing, aplikasinya pada perbenihan jeruk bebas penyakit. IAARD PRESS, pp. 80.
5. Dwiastuti, ME & A. Triwiratno. 1994. Indeksing CTV dengan metode DAS Elisa pada tanaman jeruk di BF and BPMT di Indonesia. Proceeding. Seminar Hasil and Pengembangan Bioteknologi II, Bogor, 1994: 1-8
6. Dwiastuti, M.E, Triwiratno, A., Endarto, O., Wuryantini S., & Yunimar. 2013. Buku Panduan Teknis. Pengenalan and Pengendalian Hama and Penyakit Tanaman Jeruk. Balai Penelitian Tanaman Jeruk and Buah Subtropika. Pusat Penelitian and Pengembangan Hortikultura. Badan Penelitian and Pengembangan Pertanian.
7. Dwiastuti, M.E. 2016. Mencegah Ancaman Penyakit Sistemik Jeruk: Bangkitkan Kejayaan Jeruk Lokal. IAARD PRESS, pp.77.
8. Haclemman J.C. and Scott W.O. 1990. A History of Seed Certification in The United State and Canada. Association of official Seed Certification Agencies. Raleigh
9. Hartung, J. S., Halbert, S.E., Pelz-Stelinski, K., Brlansky, R.H., Chen, C., & Gmitter, F.G. 2010. Lack of evidence for transmission of 'Candidatus Liberibacter asiaticus' through citrus seed taken from affected fruit. Plant Disease 94(10):1200-1205.
10. Hilf, M. E. 2011. Colonization of citrus seed coats by 'Candidatus Liberibacter asiaticus': Implications for seed transmission of the bacterium. Phytopathology 101:1242-1250.
11. Jagoueix S., Bove J.M., Garnier M., 1994. The phloem-limited bacterium of greening disease of citrus is a member of the a. subdivision of the P1'Oteobacteria. International Journal of Systematic Bacteriology 44: 397-386.
12. Jagoueix S. 1996. PCR detection of the two 'Candidatus' liberobacter species associated with greening disease of citrus. Molecular Cellular Probes 10: 43-50.
13. Jagoueix S., Bove J.M., Garnier M., 1997. Comparison of the 16S/23S Ribosomal Intergenic Regions of "Candidatus Liberobacter asiaticus" and "Candidatus Liberobacter africanum", the two species associated with Citrus Huanglongbing (Greening) Disease. Intemational Journal of Systematic Bacteriology 47: 224-227.
14. Mangold R.D. and Bonner F.T. 2008. Certification of Tree Seed and Other Woody Plant Material In: Bonner F.T. and Karrfalt R.P. (eds). The Woody Plant Seed Manual Agriculture Hand-Book 727. Chapter 6. USDA Forest Service. Washington.
15. Nyoka, B.I. 2011. Certification of Agroforestry Tree Germaplasm in Southern Africa: opportunities and challenges. Agroforest System. DOI 10.1007/s10457-011-9393-4
16. Purnomosidhi, P & Roshetko, J.M. 2012. Legalitas Produksi Bibit Tanaman Hortikultura Dari Masyarakat. (Legality Of Smallholder Horticulture Seedling Production).
17. Falivene. S & Creek, A. 2017. Citrus plant protection and management guide 2017. NSW DPI Management Guide. www.dpi.nsw.gov.au.
18. Subandiyah S. 2000. Comparison of 16S RNA and 16S23S intergenic region sequencsn an10ng citrus greening organisms in Asia. Plant Disease 84: 15-18.
19. Supriyanto, A. 1992. Citrus Rehabilitation in Indonesia. In Proc. 11th Conference of the International Organization of Citrus Virologists. Riverside, CA (pp. 409-413).
20. Supriyanto, A. (1992). The Indonesian Citrus Improvement Programme. In Proc. Asian Citrus Rehab. Conf. Puslitbang Hortikultura. (pp. 50-58).
21. Supriyanto, A. 2015a. Adopsi teknologi anjuran Produksi Bibit Jeruk Keprok SoE (Citrus reticulata Blanco) berlabel biru dalam polibag dalam Soemargono cs. In Prosiding Seminar Buah Tropika Nusantara II. (pp. 1167-1176).
22. Supriyanto A. 2015b. Potret and Upaya Industrialisasi Perbenihan Jeruk di Kawasan Bangkinang, Kabupaten Kampar, Riau Prosiding Seminar Nasional Perhorti 2015, Bogor.
23. Supriyanto, A, Ratule, MT & Syakir, M. 2017. Citrus Variety Improvement Program In Indonesia: Varieties, Production And Distribution Viruses Free Of Citrus Nursery Stocks. International Symposium on Tropical Fruits Proc. Fiji.

DOI 10.18551/rjoas.2019-02.35

## **THE EVALUATION OF CHARACTERISTICS OF JAMBI LOCAL RICE (ORYZA SATIVA L.) TOWARD THE AGROECOSYSTEM OF LOWLAND SWAMP FIELDS ON THE VEGETATIVE GROWTH STADIA**

**Aryunis\*, Nurdiansyah Fuad**

Department of Agroecotechnology, Faculty of Agriculture, University of Jambi, Indonesia

\*E-mail: [aryunis\\_oeddin@yahoo.com](mailto:aryunis_oeddin@yahoo.com)

### **ABSTRACT**

The evaluation of characteristics of Jambi local rice (*Oryza sativa* L.) toward the agroecosystem of lowland swamp fields on the vegetative growth stadia is aimed to achieve the variety of Jambi local rice that is adaptive to the extreme condition of swamp on rainfed lowlands so that the erratic rainfall due to the climate change can be overcome and as an enrichment of germplasm sources for reparation and manipulation of new superior varieties that can cope with the climate changes and improve the rice production. This study was conducted in 2018 in a lowland swamp belongs to the farmers of Lubuk Ruso Village, Subdistrict of Pemayang, Batanghari District, Province of Jambi. The test materials are varieties of local rice from Jambi, as a result of exploration in 2004, 2009, 2013, and 2018 in the province of Jambi. The screening of the adaptive lowland swamp was conducted on the nursery stage until the growth of sprouts at its maximum in accordance with the soil moisture content related to the rainfall, as many as 24 varieties of Jambi local rice. This study is selection research of Jambi local rice toward the agroecosystem of lowland swamp fields on the vegetative growth stadia. The observation is conducted on the morphology characteristics that are adaptive to the lowland swamp. The findings show the difference in morphological characteristics of adaptation abilities from the varieties of Jambi local rice evaluated on the lowland swamp. Of all 24 varieties of adaptive local rice, there are 19 varieties which have a character of short-stemmed sprout and 5 varieties which have a character of medium-stemmed sprout.

### **KEY WORDS**

Jambi local rice, landraces, adaptation, swamp, vegetative stadia.

About 30% of global rice (*Oryza sativa*) is produced in an agriculture field which is located on a low elevation which irrigation is sourced from the rainfall (Bailey-Serres et al., 2010). The rainfed rice fields reduce the soil moisture, water pollution, and soil salinization, which is often affiliated with the controlled irrigation system. However, the rainfed rice fields are prone to flood and drought due to inadequate water management. Therefore, puddles, drought, and other substantial events will lower the rice productivity, as well as sequential events (submersion followed by drought and vice versa) which are the primary obstacles in the production of rice in rainfed rice fields on lowlands.

Generally, rice is sensitive to dryness because it requires a certain amount of water, yet the variety of gogo rice and rainfed lowland rice have more tolerance for dryness. The molecular genetic analysis detects a number of locus characteristics related to the components which influence the tolerance on dryness, including the production of seeds, shoot and root morphology, and the status of leaf water (Lanceras et al, 2004;. Yue et al, 2006;. Venuprasad et al, 2009). The dryness and submersion are two primary abiotic obstacles that are very influential to the plant's growth and productivity. The global climate change that affects the occurrence of uncertain rainfall, prolonged drought, and excessive rainfall makes it necessary to find the varieties that are resistant to those two circumstances. One of the applicable attempts is to seek for local, adaptive varieties to both the obstacles of submersion and dryness because the varieties of local rice have strength wherein they have adapted to the environmental situation from generation to generation for years. However, the

strength of local rice varieties is primary on submersion and for dryness has not been much explored.

The province of Jambi has a wide and numerous rainfed fields with the varieties of local rice. The location of paddy fields in Jambi can be found alongside the flow of Batanghari river, therefore it is often flooded (submerged) and drought due to the extreme climate change. So far, it has not been explored the varieties of local rice from Jambi that are resistant to the submersion and dryness. The rice's productivity will be lowered if the climate change happens extremely during planting, yet, on the other side, there are varieties that have good productivity in such environment.

Exploration is an activity to seek, collect, and examine types of varieties in certain locations. Aryunis *et al.*, (2004) had explored and identified the quality and taste of local rice in tidal lands in Tanjung Jabung Barat District of Jambi Province. The research found 42 varieties of local tidal land rice and 6 varieties of field rice. Aryunis *et al.*, (2009) continued the exploration and identification of agronomic characteristics of local rice in three districts in the Province of Jambi, namely Tanjung Jabung Timur, Bungo, and Kerinci districts based on agroecology including paddy, rainfed, field, tides, and swamps. From the exploration, acquired 90 varieties of local rice, 25 are rice fields. The varieties of rice on average had longevity (6 months). The following research Aryunis *et al.*, (2011) had done a genetic mapping on 30 local field rice varieties. Yet, the morphological characteristic of vegetative growth of accession varieties of Jambi local rice to lowland swamps has not been explored.

## METHODS OF RESEARCH

The data used in this study are the varieties of local rice from Jambi reported through the findings of explorative research by Aryunis *et al.*, (2004 and 2009) and the result of exploration by Aryunis (2013 and 2018) on the agroecosystem of wetlands and dry lands in the Province of Jambi as many as 24 varieties, urea fertilizer, KCl, and SP36.

The instruments used in this study include Saprodi, Alsintan in accordance with the local recommendation. The planting place of plastic tubs sized 50 cm x 25 cm x 5 cm, petri dish cups, aluminum cups, and paper straws.

This study was conducted in 2018 on the lowland swamp that belongs to the farmers of Lubuk Ruso Village, Pemayung Subdistrict, Batanghari District Province of Jambi. It was conducted from May to October 2018.

The local rice from Jambi, which is the result of exploration, is evaluated to select the specific morphological characters from the accession of local Jambi rice varieties that are adaptive to the agroecosystem of rainfed lowland swamps. The evaluation was conducted on the vegetative growth stadia. The findings are presented in a form of a descriptive table.

This research will be conducted in one phase, which is Evaluation (screening). The Evaluation of the Potential Results and Characteristics of Jambi Local Rice that are adaptive to the Agroecosystem of Rainfed Lowland Swamps toward 105 accessions of Jambi local rice varieties. This study is based on the ability of high production and specific agronomic characteristics. The results of the study are expected to find the accession of the selected local rice varieties that are adaptive to the agroecosystem of rainfed lowland swamp. The cultivation technique is implemented in accordance with the standard operational procedure of in situ rice cultivation on the fields of rainfed lowland swamp.

An observation was conducted to the vegetative growth characteristic, reproductive growth, result components, results, contents of organic N, P, K, C, and EC soil, and the climate data throughout the research period.

In order to acknowledge the characteristics of adaptation ability on the lowland swamp toward the morphological characters, descriptive analysis is used and presented in a form of a descriptive table.

An observation is conducted on the plants' height, number of sprouts, angle of stems, diameter of stems, color of stems, and color of leaf neck.

## RESULTS AND DISCUSSION

The findings show that there are diverse abilities of adaptation on Jambi local rice varieties that are tested on lowland swamps regarding the morphological characters (Table 1).

Table 1 – The plants' height, number of sprouts, angle of stems, diameter of stems, color of stems, and color of leaf neck.of Jambi local rice varieties that are adaptive to the agroecosystem of rainfed lowland swamp

No.Urut	No.Accession	Varieties Names	Plant height	Number of sprouts	Stem angle	Stem color	Leaf neck color
1	89	Gadis Jambi	94.09	31.81	Medium	Green	Green
2	90	Bujang Berinai	79.00	40.00	Closed	Green	Green
3	90A	Karya Rendah	86.72	44.28	Closed	Green	Green
4	52	Payo	92.33	26.33	Closed	Green	Green
5	46A	Beras Merah Putih Kecil (white rice)	84.67	27.67	Medium	Green	Green
6	46B	Beras Merah Putih Besar) (red rice)	89.67	28.67	Open	Green	Green
7	46C	Beras Merah	97.67	31.67	Medium	Green	Green
8	91	Pandan Wangi	74.33	32.67	Closed	Green	Green
9	92	Padi Unggul Pemerintah	93.17	35.67	Closed	Green	Green
10	93	Telur Bujuk	123.00	36.00	Medium	Purple	Purple
11	95	Padi Bawang	105.33	44.67	Closed	Green	Green
12	96	Pandan Wangi	103.83	34.67	Closed	Green	Green
13	97	Raden Kuning	100.67	29.11	Closed	Green	Green
14	98	Raden Kuning bulat	111.00	24.00	Open	Green	Green
15	99	Raden Kuning Panjang	93.33	31.33	Medium	Green	Green
16	101	Rimbun Daun	71.67	40.00	Closed	Purple	Purple
17	103	Gadis Jambi	78.67	24.00	Closed	Green	Green
18	104	Sempol	95.33	28.33	Medium	Green	Green
19	105	Kuning Betung	91.17	30.50	Closed	Green	Green
20	106	Karya Rendah	46.58	29.33	Closed	Purple	Purple
21	107	Padi Cino	95.44	30.11	Medium	Green	Green
22	108	Karya Tinggi	89.56	35.17	Medium	Green	Green
23	109	Kuning Mas	89.33	25.67	Closed	Green	Green
24	110	Kuning Kelinci	92.67	39.83	Open	Green	Green

The findings show that the 24 varieties of Jambi local rice have a good and adaptive vegetative growth characteristic on the agroecosystem of rainfed lowland swamp (Table 1). According to the Evaluation of Rice Characteristics by IBPGR IRR (1980) and Chang and Berdenas (1965), Jambi local rice varieties that are adaptive to swap lowlands and have characters of short stem and multiple sprouts include the varieties of Gadis Jambi, Bujang Berinai, Karya Rendah, Payo, Beras Merah Putih Kecil (white rice), Beras Merah Putih Besar) (red rice), Beras Merah, Pandan Wangi, Padi Unggul Pemerintah, Raden Kuning Panjang, Rimbun Daun, Gadis Jambi, Sempol, Kuning Betung, Karya Rendah, Padi Cino, Karya Tinggi, Kuning Mas and Kuning Kelinci. The varieties that have characters of medium-long stem and multiple sprouts include Telur Bujuk, Padi Bawang, Pandan Wangi, Raden Kuning, and Raden Kuning (Table 1). The findings indicate that as many as 24 varieties of Jambi local rice, which were evaluated for its adaptation on lowland swamps, there is a variety of characteristics on the plant's height and there is no variety of characteristics on the number of sprouts. In other words, this study indicates that the varieties of local rice that are adaptive to lowland swamps are rice that have a characteristic of height short to medium and have a characteristic of multiple sprouts (Figure 1 and 2).



Figure 1 – The characteristics of Jambi local rice that have short stems and multiple sprouts



Figure 2 – Characteristics of Jambi local rice that have medium-long stem and multiple sprouts

### CONCLUSION

The 24 varieties of Jambi local rice, that are evaluated on the agroecosystem of rainfed lowland swamps, have a good vegetative growth adaptation with a characteristic of short stems and multiple sprouts of 19 varieties and a medium-long stem with multiple sprouts of 5 varieties.

### ACKNOWLEDGMENTS

Thank you to the Head of Research and Services Institution, to the Academia of Universitas Jambi who provided financial support DIPA PNB LP2M Universitas Jambi, and Mr. Samirun who provided land and assistance regarding the research implementation.

## REFERENCES

1. Aryunis, Esrita & F. Tafzi. 2004. Eksplorasi Padi Lokal Pasang Surut dengan Rasa Nasi Enak di Kabupaten Tanjung Jabung Barat Provinsi Jambi. Research Report. Universitas Jambi.
2. Aryunis & Tafzi, F. 2009. Eksplorasi and identifikasi padi lokal asal Jambi berdasarkan Agroekologi. Research Report. Universitas Jambi
3. Aryunis & Tafzi, F. 2011. Identifikasi karakteristik beras, mutu tanak nasi dan pemetaan genetik padi ladang lokal asal jambi untuk pelestarian plasmanutfah and perakitan varietas padi ladang berumur genjah. Research Report. Universitas Jambi
4. Bailey-Serres J, Voesenek LACJ. 2010. Life in the balance: a signaling network controlling survival of flooding. *Curr Opin Plant Biol* 13:489-494
5. Chang, T.T. & Berdenas, E.A. 1965. The morfologi and varietal characteristic of the rice plant. *IRRI Tech. Bull* (4).
6. IBPGR-IRR1. 1980. Descriptors for rice *Oryza sativa* L. IRRI, Manila, Philippines.
7. Lanceras, J.C., 2004. Quantitative trait loci associated with drought tolerance at reproductive stage in rice. *Plant Physiol.* 135: 384–399.
8. Venuprasad, R., Dalid, C.O., Del Valle, M., Zhao, D., Espiritu, M., Sta Cruz, M.T., Amante, M., Kumar, A., and Atlin, G.N. 2009. Identification and characterization of large-effect quantitative trait loci for grain yield under lowland drought stress in rice using bulk-segregant analysis. *Theor. Appl. Genet.* 120: 177–190.
9. Yue, B., Xue, W., Xiong, L., Yu, X., Luo, L., Cui, K., Jin, D., Xing, Y., and Zhang, Q. 2006. Genetic basis of drought resistance at reproductive stage in rice: Separation of drought tolerance from drought avoidance. *Genetics* 172: 1213–1228.

DOI 10.18551/rjoas.2019-02.36

## **THE MEDIATION EFFECT OF WORK STRESS ON WORKLOAD, WORK CONDITION, AND LOAN COLLECTION PERFORMANCE**

**Sulistiyono Adincha Ayuvisda\*, Narsa I Made**

Department of Accounting, Faculty of Economics and Business, University of Airlangga, Surabaya, Indonesia

\*E-mail: [adinchaayuvisda@gmail.com](mailto:adinchaayuvisda@gmail.com)

### **ABSTRACT**

This study aims to prove ability the mediation effect of work stress on workload, work condition, and loan collection performance. This is a descriptive quantitative with an explanatory approach type of study. Samples are collected from Bank Mandiri CCR Surabaya and consist of 121 people from a total of 157. Data analysis technique used was path analysis technique. Results indicate that hypothesis are accepted and can mediate. This means that high workload caused increased work stress and impacted on loan collection performance decrease. Meanwhile good work environment condition caused decreased work stress and impacted on increasing loan collection performance.

### **KEY WORDS**

Work stress, workload, work condition, loan collection, performance.

Bank is financial business institution having duty to collect and distribute funds into society by providing financial-related services and support society in improving living standard. Many societies borrow bank fund from KPR, collateral free loan and credit card. Credit allocation to consumer might involve risk including troubled credit, no obligation settlement according to agreement either in terms of amount and time. In terms of banking NPL ratio or troubled credit is credit risk measure serves as bank health level. If bank could suppress Non Performing Loan ratio below 5% then it shall provide higher profit potential as bank could reduce receivable reserve fund or write off. Lower receivable reserve impact on higher bank profit and create better banking performance. The high NPL inseparable from loan collection performance that has not been optimal, which resulted in the company must be able to improve the performance of its employees.

Employee performance is work result or output, either in terms of quantity and quality that employee attain in completing their work with full responsibility (Mangkunegara, 2014). Employee role in company are crucial matter and required to develop. High employee performance shall lead to impact from company and employee themselves. For employee having excellent performance could provide reward for them amongst them increased salary, opportunity to promotion into higher level and making such employee more expert and experienced on their field. Low performance represents that such employee actually incompetent for their field, causing such employee hard to promote into higher level, and might cause such employee to resign or called employment termination. According to Griffin, Hogan et al. (2010), employment termination is dangerous negative response for employee and organization. Performance could be affected by several factors amongst them workload and Work condition (Adityawarman, Sanim et al, 2016; Putra, 2013).

The higher consumer have receivable will increase the load of the collection division employee who will have an impact on the high goal setting, limited working completion time and less supporting environment. Almost entire employee feel stressed with such issues that it could lead into stress due to workload and inability to complete work maximally could affect performance and company achievement as well. Research carried out by Carayon and Gurses (2005) stated that high workload could increase bad communication, collaboration failure, work dissatisfaction, reduced employee performance and employee resignation from company. It is similar with Astianto (2015) research mentioning that workload influence toward employee performance. It suggests that workload have positive and negative

meaning for employee. Employee perceiving duty as challenge to complete though it is a hard assignment would remain comfortable with their work. Meanwhile for employee perceiving duty as hard assignment and burden then such employee would gradually suffer from exhaustion either physically and mentally that could lower performance.

It is also supported by research result of Shah, Jaffariet al. (2011) stating that workload positively influence toward performance in which high workload is extremely crucial assessment for supervisor to conduct, as it impacts on performance and bonus allocated for company. This research result different with research conducted by Murali, Basitet al. (2017). Such result found empirical evidence that workload do not have significant influence toward employee performance. Good work environment condition would grow employee comfort at work. Comfort feeling on work space could reduce boring situation at work. Good condition shall impact on employee performance improvement. In contrary, work space discomfort could lead into reduced employee performance. Research conducted by Kahya (2007) and Ali (2013) demonstrated that work environment influence toward performance which means the better work environment the better employee performance. This research result was in contrary with research conducted by Arianto (2013) stating that work environment do not influence toward performance.

Research result inconsistency in connection with workload and Work condition influences toward performance inspired researcher to enter a variable to bridge such inconsistency. Variable made as mediation in this research was work stress. In performing duty employee demanded to remain professional and deliver quality collection toward delinquent consumer. In addition to workload, other factor influencing work stress is work environment condition. Work condition is one factor encouraging employee to work optimally. Poor Work condition shall cause employee easily ill, difficult to think and increasing stress. This research is supported by Andrew and Kishokumar (2014) that provided empirical evidence that work environment and workload have influence on bank employee work stress.

Excessive stress would have adverse impact on employee amongst them inability to think clearly, finding it hard to make correct decision and the most concerned impact would be reduced performance. Therefore work stress control within company is crucial that stress could be maintained in correct level and increase employee performance. Workplace stress at critical level could cause physical effect that harm employee performance, their physical health, and also impact on organization as well (Giorgi, Arcangeliet al., 2017). This research was supported by Ahmed and Rezan by showing that high work stress could lower performance.

Subject in this research were PT. Bank Mandiri CCR Surabaya staff. Researcher considered PT. Bank Mandiri CCR Surabaya staff as research subject as it is the solely PT Bank Mandiri collection office in East Java, in terms of Home Loan (KPR), Collateral Free Loan (KTA), Credit Card (KK) and NPL which also called as non performing loan for 2017 financial statement that was categorized high (3.45%) compared to Bank BNI with NPL of 2.3%, BRI with 2.1% NPL and Bank BRI with 2.66% NPL.

## **LITERATURE REVIEW**

Role Stress or also called pressure at work refers to company employee role in facing situation that represents three forms, role ambiguity, role conflict and pressure size at work (role overload) (Wolfe & Snoek, 1962). It could be concluded that role stress is situation where employee experiences emotional tension that would affect thinking process that duty being performed would be perceived hard and result in less maximal result.

Work size is work measure certain organizational position/unit should shoulder and multiplication between work volume and time norm according to Minister of Domestic Affair Regulation Number 12 year 2008. It could be interpreted that workload is a number of process or activity an employee must complete in certain period of time. When such employee able to complete such work and could adapt against duty provided, than it shall not be an workload and vice versa.

Work condition or frequently referred to as work environment condition is any work physical, psychological aspect and work regulation that could affect work satisfaction and productivity attainment (Mangkunegara, 2010: 105). According to Sedarmayati (2011: 26), work environment is any condition at around workplace that would affect employee either directly or indirectly. Work environment is crucial part within company as it has direct effect toward employee in performing their work.

According to Robbins (2017: 429), stress is dynamic condition where individual faced into opportunity, obstacle, and desire, and the obtained result is crucial but could not be curtailed. Company primary objective could not be separated from each employee role as company drive. Company leader are appropriate to understand each employee condition. When employee experience issue that could obstruct company performance then leader are expected to reduce and solve such issue, especially concerning work stress that should be sustainably managed for not obstructing company performance operation.

Performance is individual employee performance in managerial activities such as planning, investigation, coordination, evaluation, supervision, staff arrangement, negotiation, and representative (Mahoney, 1963). Performance appraisal is key factor in to develop employee effectively and efficiently, due to better policy or program for human resources within company. Individual performance appraisal is crucial for company growth, as it could reveal actual condition concerning employee performance.

Workload is an individual extrinsic factor which is one source of the emergence of pressure, because excessive workload. This condition demands employee to provide more energy than usual to complete work in terms of target attainment that company desire, but it depends on each individual, which means such duties shall only be well completed or not, depend on how individual perform workload being performed. Workload discussed in this research originated from work duration and weight as well as quantity either externally or internally in terms of loan collection. Astianto (2015) highlighted that workload simultaneously have significant influence toward employee performance.

In addition to workload, company also need to focus on Work condition. Employee would generally perceive work satisfaction as they are supported by well or sufficient Work condition or work environment. In contrary worse Work condition or work environment causing reduced employee performance, such Work condition factor indirectly influence employee performance itself and output toward company. Work condition discussed in this research refers to work environment condition at office, either physical environment and inter-team member work relationship that supporting one and another. Khan et al. (2011) also demonstrated that safe, prosper and satisfying Work condition also contribute in improving employee motivation toward work.

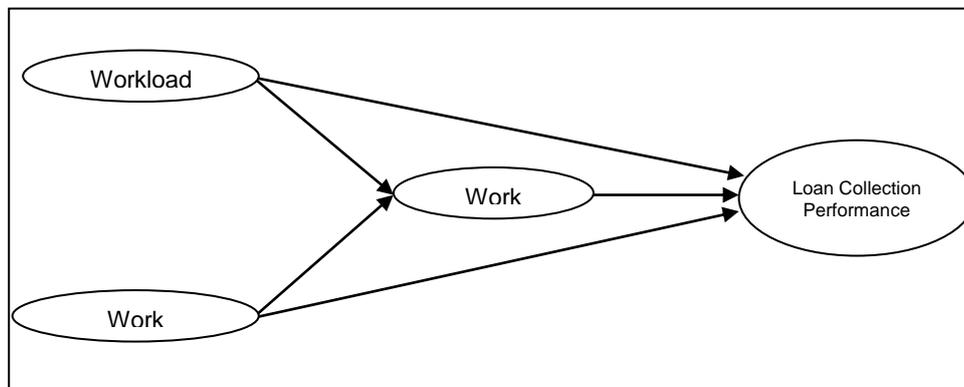


Figure 1 – Conceptual Framework

Workload and Work condition mediated by one mediating variable of work stress. Work stress could emerge when discrepancy occur between individual ability and work demands, and discrepancy between individual need with environmental fulfillment itself. Work stress must be handled properly because employee tendency would feel frustrated, emotional and

uncomfortable at work, then it could trigger failure within organization because it can interfere with each other in doing the task. According to Sasono (2004) Work stress could be perceived as condition where individual experience duty or work that they could not accomplish or beyond their capability. Work stress lead into work implementation and employee performance.

*Work stress Mediation toward Workload and Loan Collection Performance.* Workload is process or activity employee must complete in company within certain period of time. Certain work that already becomes employee load must be completed to fulfill determined target. Not entire employee could perform their work well as they differ on capability level, it could cause stress and make employee not productive and lead into loan collection performance decrease. One of stress source according to Doelhadi (1995) is hard and urgent demanding situation. Research carried out by Saefullah (2017) provided empirical evidence that workload and work stress simultaneously have significant influence toward employee productivity.

H1: Work stress mediates influence workload toward loan collection performance.

*Work stress Mediation toward Work condition and Loan collection performance.* Work environment condition is crucial matter for employee as it is directly related to their activity. Company must consider work environment in order to create excellent work environment and work condition that could provide comfort for employee to improve their performance. Work environment condition is workplace condition both physical or inter-employee relationship that could provide comfort and pleasure perception that could provide joy for employee to work. Sedarmayanti (2011: 26) defined work environment condition as any condition at around workplace that would affect employee either directly or indirectly. Supported with suitable work condition, it expected to improve employee performance with optimal result. Research conducted by Taiwo (2010) provided empirical evidence that conducive and better work environment are factors causing employee productivity improvement.

H2: Work stress mediates influence Work condition toward loan collection performance.

## METHODS OF RESEARCH

This research a descriptive quantitative with explanatory approach based on the available formulation. According to quantitative approach, this research also called as confirmatory analysis as it also focus on theoretical confirmation for the effectuation of certain research object, either for explanation as well as prediction (Sugiyono, 2017: 36).

There were three variables in this research namely independent variable, dependent variable and mediating variable. Independent variable in this research was workload and work condition. Loan collection performance served as dependent variable. Work stress served as mediating variable. Workload measure by indicators according to Hart and Stavelan (1988), among others: physical need, mental need, time need, work performance, effort, frustration level.

Work condition use indicators according to Sutanto (2015), among others: air temperature at workplace, layout at workplace, circulation at workplace, exposure level at workplace, inter-employee relationship at workplace, employee relationship with company leader at workplace.

Work stress use Indicators according to Lovibond (1995), among others: difficult to relax, raising nervous, easily angry/restless, disturbing/more reactive, impatient. Loan collection performance use indicators according to Mahoney et al. (1963), among others: planning, investigation, coordination, evaluation, supervision, staff selection, negotiation, representative.

Population in this research were entire collection staff of PT. Bank Mandiri, CCR Surabaya amounted to 157 employees per September 10<sup>th</sup>, 2018. Sample selection carried out using purposive sampling, sample determination technique through certain considerations (Sugiyono, 2017: 67). Total sample in this research were 121 respondents.

Data collected through survey using questionnaire adopted from previous research. Upon data collected through questionnaire, editing performed to examine data quality. Followed by process using coding and tabulation, or grouping of sub variable being examined through scoring and rating to support submitted hypothesis. Path analysis technique used in this research as data analysis technique.

This research used data analysis technique using 5.0 PLS (Partial Least Square) version of WarpPLS software. It is a structural equation analysis or Structural Equation Model (SEM). In the first step, outer model (measurement model) test conducted to measure reflective (manifest) and formative (causal) indicators. Reflective or manifest indicator is based on loading factor. Loading factor  $> 0.70$  is highly recommended, but  $0.50 - 0.60$  loading factor value still considered enough (Solimun, 2007: 15). Upon outer model test and measurement completed, inner model measurement carried out. Inner model measurement used to test relationship between variables in research using adjusted  $R^2$  value (Sholihin, 2013: 72). Based on adjusted  $R^2$ , a model could be classified as strong ( $\leq 0,70$ ), moderate ( $\leq 0.45$ ) and weak ( $\leq 0.25$ ).

Causal steps were used to test mediating variable analysis. It was developed by Baron & Kenny (1986). Product of Coefficient method were also used for this analysis that was developed by Sobel (1982). Sobel test carried out by testing indirect influence power of independent variable (X) into dependent variable (Y) through mediating variable (Z). indirect influence of X into Y through Z calculated by multiplying X-Z path (a) with Z-Y path (b) or ab. Therefor ab coefficient =  $(c - c')$  where c is X influence toward Y without controlling Y through Z, meanwhile c' is coefficient of X influence toward Y after controlling Z. standard error of a and b coefficient written with Sa and Sb, that represents indirect effect standard error calculated through the following formula (Ghozali, 2013).

## RESULTS AND DISCUSSION

*Outer Model Measurement Estimation.* Table 1 describes reflective value from indicator for each variable; workload variable, work condition, work stress and loan collection performance.

Table 1 – Final Iteration Outer Loading Factor Estimation Result

Variable	Indicator	Outer Loading Value	Conclusion
Workload	WL2	0,801	Significant
	WL3	0,821	Significant
	WL5	0,712	Significant
	WL6	0,742	Significant
Work Condition	WC7	0,532	Significant
	WC8	0,631	Significant
	WC10	0,813	Significant
	WC11	0,728	Significant
	WC12	0,865	Significant
	WC13	0,752	Significant
	WC14	0,807	Significant
Work Stress	WS1	0,547	Significant
	WS2	0,620	Significant
	WS3	0,647	Significant
	WS4	0,632	Significant
	WS5	0,770	Significant
	WS6	0,879	Significant
	WS7	0,837	Significant
	WS8	0,877	Significant
	WS9	0,825	Significant
	WS10	0,828	Significant
	WS11	0,838	Significant
	WS12	0,709	Significant
	WS13	0,801	Significant
	WS14	0,721	Significant
Loan Collection Performance	LCP4	0,763	Significant
	LCP5	0,577	Significant
	LCP7	0,775	Significant
	LCP8	0,797	Significant
	LCP10	0,851	Significant

Based on result from Table 1, entire proxy had outer loading factor value greater 0.5 from new iteration result. Therefore, it could be concluded that entire proxy were feasible to be made as indicator that could reflect each related variables. From Table 1 result could also be concluded that second iteration was iteration to determine indicators used as reflective indicator for each variable.

*Variables Validity and Reliability Test.* Discriminant validity measurement result, AVE value must be greater than 0.30 or having p-value lower than significance level (0.05). The following Table 2 presents discriminant value of this research.

Table 2 – Discriminant Validity Measurement Result

Variable	Original Sample (O)
Workload	0,593
Work condition	0,548
Work stress	0,576
Loan collection performance	0,575

Source: Data processing, 2018.

According to Table 2, entire variable had discriminant validity value greater than 0.50. Therefore it could be concluded that entire variables were valid.

Upon variables declared valid, reliability testing carried out using composite reliability technique. Reliability coefficient must be greater than 0.70. Composite reliability measurement result is presented on Table 3.

Table 3 – Composite Reliability Measurement Result

Variable	Original Sample (O)
Workload	0,853
Work condition	0,893
Work stress	0,949
Loan collection performance	0,870

Source: Data processing, 2018.

According to Table 3, entire variables had composite reliability value greater than 0.70. According to this result, it could be concluded that entire variables were valid and could be relied to use in further analysis test.

*Descriptive Analysis.* Descriptive analysis is used to provide information about the variables used in the study, among others: workload, work condition, work stress and loan collection performance.

Table 4 – Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Workload	121	15	30	23.26	3.140
Work condition	121	29	70	50.97	6.899
Work stress	121	19	70	44.65	10.097
Loan collection performance	121	24	50	39.16	4.710
Valid N (listwise)	121				

Source: Data processing, 2018.

According to result on table 4, the average value in the overall workload variable (6 item questions) is 3.88 with a high category, this indicates that PT Bank Mandiri CCR Surabaya has a relatively high workload. The average value in the overall work condition variable (14 item questions) is 3.64 with the high category. That is, the billing department employees owned by PT Bank Mandiri CCR Surabaya can be said that work conditions are in a high classification. This means that work facilities and infrastructure meet the standards.

The average overall work stress variable (14 item questions) is 3.19 with the disagree category. Showing that employees owned by PT Bank Mandiri CCR Surabaya can be said to

have moderate stress levels. The average variable of overall loan collection performance (10 item questions) is 3.92 with the high category; this indicates that PT Bank Mandiri CCR Surabaya has a high loan collection performance.

*Inner Model Test Result.* Work stress mediating influence level on workload influence, Work condition toward loan collection performance, measured using inner model test. Inner model measurement serves to test work stress mediation on workload influence, Work condition toward loan collection performance within research  $Q^2$  value was used. Inner model test result is presented on the following table 5.

Table 5 – R-square Adjusted Value (Adjusted  $R^2$ )

Endogenous Variable	R-square Adjusted Value (Adjusted $R^2$ )
Work stress	0,123
Loan collection performance	0,496

Source: Data processing, 2018.

According to data presented on table 5, the following predictive-relevance ( $Q^2$ ) calculation could be carried out.

$$Q^2 = 1 - (1 - R^2 \text{ of work stress})(1 - R^2 \text{ of loan collection performance}) = 0,557912$$

The above predictive-relevance ( $Q^2$ ) value calculation yielded  $Q^2$  value of 0.557912. it suggests that the constructed model could account work stress mediation on workload and Work condition influences toward loan collection performance as of 55.79%, meanwhile the remaining 44.21 accounted by other variables outside this research.

*Work stress Mediation Influence on Workload and Loan collection performance.* Work stress mechanism used as mediating variable in workload influence toward loan collection performance calculated using Sobel test.

Table 6 – Sobel Test Result of Work stress as Workload Mediation Toward Loan collection performance

Inter-Variable Influence	Path Coefficients	Standard Error	Standard Error	Standard Error of Sobel Test	Sobel Test Result (t-Sobel)	P-value	Conclusion
		(Sa)	(Sb)	(Sab)			
WL → WS	0,194	0,014	-	-	-	0,0035	Evidenced
WS → LCP	-0,146	-	0,049	-	-		
WL → WS → LCP	-0,0283	-	-	0,0097	-2,913		

Source: Data processing, 2018.

According to result on table 6, it could be concluded that work stress could mediate workload influence toward loan collection performance. It was based on p value < 0.01, which means that work stress could mediate workload influence toward loan collection performance at 1% significance level.

*Work stress Mediation Influence on Work condition and Loan collection performance.* Work stress mechanism used as mediating variable in Work condition influence toward loan collection performance calculated using Sobel test.

Table 7 - Sobel Test Result of Work stress as Work condition Mediation toward Loan collection performance

Inter-Variable Influence	Path Coefficients	Standard Error	Standard Error	Standard Error of Sobel Test	Sobel Test Result (t-Sobel)	P-value	Conclusion
		(Sa)	(Sb)	(Sab)			
WC → WS	-0,376	-0,001	-	-	-	0,0029	Evidenced
WS → LCP	-0,146	-	0,049	-	-		
WC → WS → LCP	0,0548	-	-	0,0184	2,979		

Source: Data processing, 2018.

According to result on table 7, it could be concluded that work stress could mediate Work condition influence toward loan collection performance. It was based on p value < 0.01, which means that work stress could mediate workload influence toward loan collection performance at 1% significance level.

## DISCUSSION OF RESULTS

*Work stress as Workload Mediation toward Loan collection performance.* This research result suggested that work stress could mediate workload influence toward loan collection performance. It means that high workload lead to increasing work stress and eventually impact on loan collection performance decrease. Performance decrease at banking institution especially on collection division could impact on high company NPL (Non Performing Loan. Increasing workload caused by enormous work to complete and strongly consume time to complete such work. High workload could drive employee stress work stress caused by several factors specifically employee difficulty to rest. Difficulty to rest and spend many energy to complete certain work. Increased employee work stress shall provide impact on loan collection performance decrease. This research result was in line with research carried out by Saefullah (2017) that provided evidence that workload and work stress have significant influence toward employee productivity.

*Work stress as Work condition Mediation toward Loan collection performance.* This research result stated that work stress could mediate work condition influence toward loan collection performance. It means that good work environment condition causing decreasing work stress and impact on increasing loan collection performance. Good environment condition could be achieved from work facilities and infrastructures that meet standard from air circulation, exposure level and without exception colleague relationship. Facilities and infrastructures fulfillment could provide impact on decreasing employee work stress level. Decreased work stress could simplify employee to complete work and shall provide good result, that it could increase loan collection performance. This research result was in line with research conducted by Taiwo (2010) that provided empirical evidence that conducive and better work environment are factors causing employee productivity enhancement.

## CONCLUSION

This research examined work stress mediating effect on workload, Work condition and loan collection performance. The following are conclusion of this research: (1) research result showed that stress could mediate workload influence toward loan collection performance. It suggests that high workload causing increased work stress and eventually impact on loan collection performance decrease. (2) Research also showed that work stress could mediate Work condition influence toward loan collection performance. It suggests that good Work condition causing reduced work stress and impact on increasing loan collection performance.

## REFERENCES

1. Adityawarman, Y., (2016). Pengaruh Beban Kerja terhadap Kinerja Karyawan PT. Bank Rakyat Indonesia Tbk Cabang Krekot. *Jurnal Manajemen and Organisasi* 6(1): 34-44.
2. Ahmed, A. (2013). Effects of Job Stress on Employees Job Performance A Study on Banking Sector of Pakistan. *IOSR Journal of Business and Management*. 61-68.
3. Ali (2013). Working Conditions and Employees Productivity in Manufacturing Companies in Sub-Saharan African Context. *Educational Research International* 2(2): 67-78.
4. Andrew, A. and R. Kishokumar (2014). Influence of Working Environment and Workload on Occupational Stress Among Staff in The Financial Services Industry. *International Journal on Global Business Management & Research* 3(1): 70.
5. Arianto, D. A. N. (2013). Pengaruh Kedisiplinan, Lingkungan Kerja and Budaya Kerja Terhadap Kinerja Tenaga Pengajar. *Jurnal Economia* 9(2): 191-200.

6. Astianto, A. (2015). Pengaruh Stres Kerja and Beban Kerja Terhadap Kinerja Karyawan PDAM Surabaya. *Jurnal Ilmu & Riset Manajemen* 3(7).
7. Baron, R. M. and D. A. Kenny (1986). The Moderator–Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations. *Journal Of Personality and Social Psychology* 51(6): 1173.
8. Carayon, P. and A. P. Gürses (2005). A Human Factors Engineering Conceptual Framework of Nursing Workload And Patient Safety in Intensive Care Units. *Intensive and Critical Care Nursing* 21(5): 284-301.
9. Doelhadi, A. S. S., M. (1995). Keterkaitan Pengalaman Coping dengan Dampak Negatif Stres. *Jurnal Anima* 10(38): 258-282.
10. Ghozali, I. (2013). Aplikasi Analisis Multivariat dengan Program IBM SPSS 21. Semarang, Universitas Diponegoro.
11. Giorgi, G., (2017). Work-Related Stress in the Banking Sector: A Review of Incidence, Correlated Factors, and Major Consequences. *Frontiers in psychology* 8: 2166.
12. Griffin, M. L., N. L. Hogan, et al. (2010). Job Involvement, Job Stress, Job Satisfaction, and Organizational Commitment and The Burnout of Correctional Staff." *Criminal Justice and behavior* 37(2): 239-255.
13. Hart, S. G. (1988). Development of NASA-TLX (Task Load Index): Results of empirical and theoretical research. *Advances in psychology, Elsevier.* 52: 139-183.
14. Kahya, E. (2007). The Effects of Job Characteristics and Working Conditions on Job Performance. *International Journal of Industrial Ergonomics* 37(6): 515-523.
15. Khan, N. S., A. Riaz, et al. (2011). The impact of work content, working conditions, career growth on employee motivation. *Interdisciplinary Journal of Contemporary Research in Business* 3(3): 1428-1434.
16. Lovibond, P. F. and S. H. Lovibond (1995). The Structure of Negative Emotional States: Comparison of the Depression Anxiety Stress Scales (DASS) With the Beck Depression And Anxiety Inventories. *Behaviour Research and Therapy* 33(3): 335-343.
17. Mahoney, T. A. (1963). Development of managerial performance: A research approach, South-western Publishing Company.
18. Mangkunegara, A. A. P. (2010). *Perilaku and Budaya Organisasi*. PT. Refika Aditama.
19. Mangkunegara, A. A. P. (2014). *Evaluasi Kinerja SDM*. Bandung, PT. Refika Aditama.
20. Murali, S., A. Basit, et al. (2017). Impact of Job Stress on Employee Performance. *International Journal of Accounting & Business Management* 5(2).
21. Putra, F. R. (2013). Pengaruh Lingkungan Kerja Terhadap Kinerja (Studi Pada Karyawan PT. Naraya Telematika Malang). *Jurnal Administrasi Bisnis* 6(1).
22. Robbins, S. (2017). *Perilaku Organisasi*. Jakarta, Salemba Empat.
23. Saefullah, E. and A. N. Amalia (2017). Pengaruh Beban Kerja and Stres Kerja Terhadap Produktivitas Kerja Karyawan. *Jurnal Akademika* 15(2): 117-121.
24. Sasono, E. (2004). *Mengelola Stres kerja*. Semarang, Universitas Pandanaran.
25. Sedarmayanti (2011). *Tata Kerja and Produktifitas Kerja*. Bandung, CV. Mandar Maju.
26. Shah, S. S. H., A. Jaffari, et al. (2011). Workload and Performance of Employees. *Interdisciplinary Journal of Contemporary Research in Business* 3(5): 256-267.
27. Sholihin, M., Dwi Ratmono (2013). Analisis SEM-PLS dengan WarpPLS 3.0 untuk Hubungan Nonlinier dalam Penelitian Sosial and Bisnis. Yogyakarta, CV. Andi Offset.
28. Solimun, A. A. R. F., Nurjannah (2017). *Metode Statistika Multivariat Permodelan Persamaan Struktural (SEM) Pendekatan WarpPLS*. Malang, UB Press.
29. Sugiyono. (2017). *Metode Penelitian Bisnis*. Bandung, Alfabeta.
30. Sugiyono. (2017). *Statistika Untuk Penelitian*. Bandung, Alfabeta.
31. Sutanto, E. M. (2015). Hubungan lingkungan kerja, disiplin kerja, and kinerja karyawan. *Jurnal manajemen and kewirausahaan* 17(2): 135-144.
32. Taiwo, A. S. (2010). The influence of work environment on workers' productivity: A case of selected oil and gas industry in Lagos, Nigeria. *African Journal of Business Management* 4(3): 299-307.
33. Wolfe, D. M. and J. D. Snoek (1962). A Study of Tensions and Adjustment under Role Conflict. *Journal of Social Issues* 18(3): 102-121

DOI 10.18551/rjoas.2019-02.37

## DEVELOPMENT AND SUBJECT FOR PARTNERSHIP BETWEEN STALLHOLDERS AND CRUMB RUBBER FACTORIES IN INDONESIA RUBBER MARKETING

Husin Laila\*, Yulius, Bidarti Agustina, Antoni Mirza

University of Sriwijaya, Indonesia

\*E-mail: [elahusin2007@yahoo.co.id](mailto:elahusin2007@yahoo.co.id)

### ABSTRACT

The research aims to identify constraints in developing the marketing pattern of rubber in partnership. The study was conducted on 12 processing and marketing units (PMU) of rubber material which were divided into 6 each applying partnership marketing patterns and 6 non partnerships, 9 crumb rubber factories consisting of 3 partnerships, the rest not implementing partnerships. 180 sample farmers who each applied partnerships and 90 did not implement partnerships. The method of research is in depth study by observing and interviewing to exploring the variety of reasons join or not in certain marketing pattern, advantage and disadvantage the farmers' decisions in form of marketing institution, which is partnership and non partnership. Data analyzed by using quantitative and qualitative descriptively method. The research result indicated that crumb rubber factories' reasons had not cooperated with in partnership pattern are (1) the difficulty in determining of the rubber material price, (2) the uncertained supply of farmer's rubber for factory, (3) the supply is often fulfilled by traditional marketing institution, the farmers is often not hold the agreement especially during the session of low rubber price, however the factory still give guidance and help the farmers as partnership member. This research result indicates that some farmer's reasons which had not cooperated with in partnership pattern are (1) it is the lower rubber material price by factories than by middlemen, (2) PMUs is not active any more, (3) the farmers have illegal agreement in form of credit and paid by selling their product to the middlemen, (4) the payment duration of the farmer's product in auction system is too long according to the farmers and (5) the farmers often could not fulfilled selling quote of rubber material as determined in contract. The partnership members in this cooperation should discuss any problems to get good solution. The government sould always support and facilitate the commitment of partnership between the farmers and the crumb rubber factories to increase their performance in rubber marketing and to reduce any intervention from the outer institution (such as local marketing institution).

### KEY WORDS

Partnership system, crumb rubber factories, middlemen.

The Indonesia rubber industry has the big problem. It is marked by long marketing channel and many marketing institution. These characteristics will result inefficiency marketing system (Herdiansyah *et.al*, 2015; Sujarwo, 2015; Yuprin, 2009; Panjaitan *et. al*, 1993). This marketing system is known as a traditional marketing system.

In general, the rubber marketing in Indonesia can be categorized into two marketing systems, that is organized marketing system and traditional marketing system (Dinas Perkebunan Provinsi Sumatera Selatan, 2014). The organized marketing system is the rubber marketing pattern where the farmer sell their product through their farmer's group, the village unit cooperation (KUD) or PMU and then to marketing institution or rubber processing factory. PMU is the processing and marketing unit of rubber material. The traditional marketing channel is the rubber marketing pattern where the farmer individually sells their product to marketing institution directly.

The organized marketing channel has built firstly when the government developed the Nucleous Estate Smallholder (NES) Partnership Pattern in 1977 and Smallholder Rubber Development Projcet (SRDP) in 1980. Those programs have also developed KUD as farmer marketing media to sell their products to the Nucleous Estate (corporation), marketing

institution or crumb rubber industry. Unfortunately, these patterns are not successful due to the limited areas to develop the KUD. Even though some KUDs are still exist until now at the same number. Actually the quality of Indonesia rubber is relatively low, in form of latex or crumb rubber compare to the government competitors such as Thailand and Malaysia (Asmara and Hanani, 2012), therefore since 2008, the government has developed some policies to overcome this problem and one of them is to establish the PMU. There had been developed 388 PMU until 2017, this number is still small, that is only 1.25 % of the potential PMU. It should be developed one PMU for each 100 ha area of rubber plantation.

Mostly, rubber marketing by KUD and PMU done by auction system, in form of spot or forward auction. Only a few of PMU do rubber marketing by using partnership pattern. The buyers of auction marketing are marketing institution, whereas the buyers of partnership marketing are crumb rubber factories. According to Husin *et al* (2017) partnership marketing system can give higher income to farmers compare to auction marketing especially by traditional marketing system.

The channel of partnership marketing is shorter than others, the price determined based on real Dry Rubber Content (DRC). In case of South Sumatera, as the biggest rubber producer in Indonesia, it is only 4 (total 28 units) crumb rubber factories (14.28 %) applied the partnership pattern, where 3 factories in one group. Until now, it has not studied yet the study about the reasons so they (farmers, farmer group, PMU or KUD) have not applied yet this partnership system. As we know, this partnership pattern is profitable for all. If the farmer sell the product directly to crumb rubber factory, so the price valued based on DRC so that the price is higher. Besides that, crumb rubber factory got benefit due to the guarantee of material supply, even though there is unstable demand condition, especially for excess demand so that the factory operate only 49 % process capacity. Therefore, it is important to study why the partnership pattern has not developed yet well and what the reasons are.

## METHODS OF RESEARCH

Survey was done at 12 PMU, 180 farmers and 9 crumb rubber factory in South Sumatera. The province of South Sumatera chosen due to as the biggest rubber producer in Indonesia, and then chosen 3 districts which have cooperation between factory and PMU in form of partnership, that is Musi Rawas, Musi Banyuasin and Muara Enim. From 12 PMU divided by 2 groups, partnership and non partnership system. Each district chosen 90 farmers and 2 PMU for each different marketing system, 2 crumb rubber factories for Muba and Muara Enim 3 crumb rubber factories in Palembang. The research data processed and reported by using table, and then analyzed and described quantitatively and qualitatively

## RESULTS AND DISCUSSION

*The Reasons of Participation Agents in Partnership System.* Right now, there is only a few of crumb rubber factories still participated in partnership pattern with the farmers or farmer group. Table 1 below presented some reasons about their decisions to participate or not in partnership pattern when they do the rubber marketing

Table 1 – The Reasons of Factory's Decision in Rubber Marketing System

Participation in Partnership System	Not Participation in Partnership System	Stop Participation in Partnership System
1) recommended by government through Plantation institution ( <i>Dinas Perkebunan</i> )	1) it is hard to keep the agreement of the rubber price level	1) the rubber price level tends lower continuously
2) the obligation to develop the community and traditional plantation	2) the factory still can purchase directly to another marketing institution (local traders)	-
3) control and maintainance the rubber supply for factory	-	-
4) to keep the good relationship between rubber factory and farmers	-	-

Based on data presented on Table 1 above, there are 4 (four) reasons why they participate in partnership system, and 2 (two) reasons why they are or not participation at all and only 1(one) reason why they are not participate any more (stop participating) in partnership system.

From 4 (four) rubber factory's reasons of participation in partnership pattern, there is only one reason is recommended by the local government institution (*Dinas Perkebunan*), but the others are from the factory's initiative, that is to help the farmers and the rubber community, to keep the rubber supply and good relationship with the farmers.

The big problems of sustainable partnership system are: (1) it's hard to determine the rubber price and (2) it's easy to purchase the rubber from the local trader directly. Finally, the farmer's reason of unparticipant in partnership system is the rubber price often lower and lower continuously. These factors need to be solved, especially in agreement of rubber selling price, where the PMU's selling price in partnership system tends lower than the local trader's selling price (not in partnership system).

As we know the marketing channel of partnership system is shorter (Farmers → crumb rubber factories), theoretically the marketing margin and marketing cost is smaller, so that the farmer as rubber producer (in partnership system) can take the higher price, because the marketing system is more efficient. If the partnership rubber price can be set higher, so that the rubber factory don't worry about the rubber supply, it can be fulfilled directly by PMU, KUD or farmer group in partnership system. According to the crumb rubber factory, there are some the advantages and disadvantages got in rubber marketing by participating in partnership system, presented on Table 2.

Based on the data above (Table 2), the advantages to participate in partnership system actually are more than the disadvantages, where there are 13 advantages and only 3 disadvantages by participation in this partnership system.

There are many advantages (13 points) for rubber factory as participant in partnership system. In general, this pattern can guarantee rubber supply for processing in crumb rubber factory in good quality and quantity. It means that the sustainability of rubber factory will be guaranteed, the rubber processing cost can be pressed, the rubber factory can operate efficiently, therefore they support the government program to achieve good and clean processed product (crumb rubber).

Table 2 – Advantage and Disadvantage the Factory by participating in Partnership system

Advantage	Disadvantage
1). This partnership system can support the government program	1). The partnership agreement between factory and farmers are often not committed especially for the farmers in selling the rubber to the factory
2). Farmers can produce the high quality product (in form of crumb rubber/slab)	2). The factory's limitation to get the rubber supply from non participant farmers
3). The rubber processing guidance by factory to the farmers can be implemented faster	3). These participants always claim to each other partner in implementing the partnership's regulation
4). Increase the selling price of crumb rubber such as increase the quality of product	
5). Simplify the complicated marketing channel	
6). The factory can get the good quality of crumb rubber from the farmers	
7). The factory is able to develop/invest for skilled farmers	
8). Guarantee the sustainability of rubber supply (from farmers) to factory	
9). The farmers can be easier to be educated to produce the quality crumb rubber by the factory	
10). It can help making the easier rubber processing system	
11). It can help setting the lower rubber processing cost	
12). It can guarantee the rubber quantity /supply distribute to the factory more accurately	
13). The factory can help giving the knowledge about the good rubber processing to the farmers	

From the disadvantages (3 points), only point 1 and 3 often become the factory's reasons is not participated in partnership system or not cooperated with the farmers and farmer groups. According the factories, they always commit but not the farmers for the partnership agreement, especially in selling the farmers' product (rubber) to other factory or local traders. However the farmers also complain about the lower rubber price determined by factory as participant in partnership system than other institutions, that is why they are not committed any more. The farmers choose to sell their product to non participant of partnership system, such as local traders. These marketing institutions like purchasing the farmers' rubber for higher price than partnership factory.

*The Reasons of Agents are not participated in Partnership System.* There are a lot of farmers and farmer groups don't sell their product (crumb rubber) in partnership system as government program, but they sell their product to traditional auction and traditional marketing system. As we know, the non partnership are still involved, the traditional marketing as local trader tends operate inefficient system than sell directly to the factory in the partnership system. The below table present some farmers' reasons not participate in partnership system.

Table 3 – The Farmer's and PMU's Reasons not as Participants in Partnership System

Agents/District	Number Agents not Participant Based on The Reasons (%)						
	a	b	c	d	e	f	g
Farmer							
- Musi Rawas	-	-	-	-	73	67	50
- Musi Banyuasin	-	97	30	-	-	63	100
- Muara Enim	-	100	-	-	73	17	60
Total	-	66	10	-	49	49	70
PMU							
- Musi Rawas	-	-	-	-	100	-	-
- Musi Banyuasin	-	-	100	-	100	-	-
- Muara Enim	-	100	100	50	-	-	-
Total	-	33	67	17	67	-	-

*Note:*

- a. No corporation participate in partnership system
- b. The rubber price is not good, lower than non partnership system (auction/traditional marketing system)
- c. The farmers are not sure to fulfill the selling quote to the factory as participant in partnership system
- d. Determining the rubber quality is very selective and strictly
- e. The farmers as debtor with local trader in traditional marketing system
- f. Long payment system to the farmers's rubber
- g. PMU stop operating for long time

Based on data presented on Table 3 above, the most farmers' reasons not participated in partnership system with crumb rubber factory (70%) because of PMU are not active or not operated any more for long time, next reason (66%) is The rubber price is not good, lower than non partnership system (auction/traditional marketing system), then next reason (49%) are the farmers as debtor with local trader in traditional marketing system and long payment system to the farmers's rubber, and the least reason (10%) is the farmers are not sure to fulfill the selling quote to the factory as participant in partnership system. The most PMU's reasons not active any more because it is lack of educating and controlling by government agent (*Dinas Perkebunan*). This institution prefers to achieve target quantity of PMU rather than quality of PMU. Besides that, the rubber price offered by Dinas Perkebunan is not interesting or lower than the non partnership system, such as in auction system or traditional system (local trader). In fact this marketing system has shorter channel, it means lower marketing margin and marketing cost. Therefore the rubber price in producer or PMU level should be higher not lower than the same price in different channel or longer marketing channel, that is non partnership pattern.

Besides that, the most PMUs' reasons not participated in partnership system with crumb rubber factory (67%) because of PMU are not sure to fulfill the selling quote to the factory as participant in partnership system and PMU as debtor with local trader in traditional

marketing system. The next reason (33%), the rubber price is not good, lower than non partnership system (auction/traditional marketing system), The least reason of PMU not interested participate in partnership system (17%) due to the process of determining the rubber quality is very selective and strictly.

The problem of PMU about the quote of rubber supply to the factory, it can be solved by recruiting more farmers as PMU's member. However, the problem of PMU as debtor with local trader in traditional marketing system is still scarce or seldom happened, because it means the role of PMU not active any more as business unit. The ideal partnership system in rubber marketing system should give more benefit to the farmers. However, in reality, there are only small number of PMU are still active in partnership system, eventhough, it found that there are some PMUs are not participated any more or stopping in partnership system.

Below presented on Table 4, where there are some advantages and disadvantages according to PMU when they participate in partnership system. However there are more advantages (8 points) than disadvantages (5points), where the most benefit as participant of partnership system is getting the higher price, and then being freely to choose the rubber factory to sell their product. The other benefit are relatively same frequency, such as it is easily access to get donation, it can increase farmers' experience, it makes shorter marketing channel, it is free from dependence, it has been promised to get rubber warehouse and got training from District Plantation Institution.

There are some disadvantages, such as the rubber drying process by using air fan seems take long time, the PMU's worrying can not fulfill daily rubber supply for factory, the PMU's rubber price depend on the factory's processed/crumb rubber, it has not available the solution yet for rubber price, It is scarce accessibility for donation.

Table 4 – Advantages and Disadvantages of PMU as Participant of Partnership

Advantages	Frequency	Disadvantages	Frequency.
Easily access of donation	1	the rubber processing by air fan takes long time	1
Setting Higher Price	3	Worrying not fulfilled the raw rubber supply for factory daily	1
Increasing Farmers' Experience	1	The PMU's rubber price depend on the factory's processed/crumb rubber	1
Doing shorter marketing Channel	1	not available the solution yet for rubber price	1
It is Free from Dependence	1	scarcity for donation accesibility	1
Choosing the rubber Factory who give higher price freely	2		
Being Promised to get rubber warehouse by District Plantation Agent	1		
Getting training from District Plantation Institution	1		

There are interesting facts, some contradictive reasons of participating in partnership system according to PMU and farmers (Table 3 and 4). The reason, especially for point of higher price and freely choose the factory who want to buy the rubber with higher price. However, the PMU's reasons of not participated in partnership (Table 3) is mostly because of the lower price from the factory. It seems that there are some contradictive reasons between PMU and farmers about the rubber price set by rubber factory. The information of farmer's reason on Table 3 about the lower rubber price (set by the rubber factory) may be from the farmers who participate in partnership system, not based on their experiences. Differently the PMU's reasons (Table 4), it is based on their experiences. Therefore, it is better used the last information or the information from the PMU's reasons on Table 4, because the information come from the primer source (PMU's) as respondents in this study. Meaningly, the partnership pattern in rubber marketing system gives benefits especially in increasing the rubber price for PMU and farmers.

The other uncommon advantages are the PMU can sell their product freely to many factories who can give the highest price. It is not committed with the partnership agreement.

This fact can cause the rubber factory is not interested any more to keep the agreement with the PMU. They have done some programs to help the PMU and farmers to increase their performance, such as give the training about good practice of rubber cultivation and processing.

## CONCLUSION

The reason many crumb rubber factories do not have partnerships with rubber farmers or farmer organizations is because it is difficult to make a deal on the purchase price of rubber by the factory, besides the factories can directly buy with middlemen. This problem must be facilitated by the government. Farmers often consider partner buying prices to be no better, sometimes even lower than the buying price by middlemen. Even though the partner crumb rubber factories has determined the price based on DRC, both real measured in the laboratory and estimates are more accurate than the DRC on the auction market, even traditional marketing systems. Indeed, even though the factory purchase price is based on DRC and refers to international prices, the factor of production costs and factory profits should be more open crumb rubber factories with farmers.

Many crumb rubber factories do not want to partner because besides they have a fixed supplier in the form of middlemen, also because partner farmers often demand and often break promises with an agreed contract, namely by selling to other places if prices do not benefit farmers. Even though, the company has provided guidance and assistance.

Another reason for farmers not to join in partnership is because PMU does not operate actively, is tied to debt with middlemen, the payment duration of the farmer's product in auction system is too long according to the farmers. Therefore the crumb rubber factories and the farmers who make the partnership should discuss issues that hinder the farmers' lack of commitment to the principles of partnership. The government is pushing more and more partnerships between farmers and factories to reduce the role of middlemen in smallholder rubber marketing.

## AKNOWLEDGEMENTS

This paper is part of the Grant Competitive Universitas Sriwijaya Research in 2018, which has been funded this research complies with the letter of Agreement Assignment of Competitive Grants Research Universitas Sriwijaya in 2018.

## REFERENCES

1. Asmara, R., and N. Hanani. (2012). Komparasi transmisi harga karet alam Indonesia dengan Malaysia and Thailand. Retrieved from <http://nuhfil.lecture.ub.ac.id/files/2012/12/jurnal-karet-perhepi-nuhfil-rosihan-final2.pdf>
2. Dinas Perkebunan Provinsi Sumatera Selatan. 2014. Pola Pengembangan Pemasaran Komoditi Karet Sumatera Selatan. Palembang.
3. Herdiansyah, R. et al. 2015. Sistem Pemasaran Karet Rakyat dengan Pendekatan Food Supply Chain Network (FSCN) di Kabupaten Tebo, Jambi. Prosiding Seminar Nasional. Kristalisasi Paradigma Agribisnis dalam Pembangunan Ekonomi and Pendidikan Tinggi. IPB International Convention Center, Bogor 18 April 2015. Page:545-562
4. Husin L., Yulius, Adriani D., and Antoni M. 2017. Effect of Different Rubber Market System on Farmer's Income in South Sumatra Province, Indonesia. Russian Journal of Agricultural and Socio- Economic Sciences (RJOAS), 11(71):257-262.
5. Sujarwo, R.M. 2015. Marketing System of Smallholder Rubber in the Jambi Province, Indonesia. Graduate School Bogor Agricultural University Bogor.
6. Yuprin. 2009. Analisis Pemasaran Karet di Kabupaten Kapuas. 2009. Jurnal Wacana. 12(3):519-538.
7. Panjaitan, L. et al. 1993. Efisiensi Pemasaran Karet Rakyat di Provinsi Kalimantan Selatan. Buletin Perkaretan, 11(1-3):37-51.

DOI 10.18551/rjoas.2019-02.38

## **KNOWLEDGE AND FAITH VALUES AS PART OF EMPLOYEES' PERCEIVED VALUE IN ISLAMIC BANKS AND THEIR EFFECTS ON SATISFACTION AND PERFORMANCE**

**Hamid Wahyuniati\*, Tangalayuk Agustinus**

Faculty Economy and Business, University of Halu Oleo, Kendari, Indonesia

\*E-mail: [wahyuniati@uho.ac.id](mailto:wahyuniati@uho.ac.id)

### **ABSTRACT**

The present study has two purposes. First, it intends to put forwards two new relevant dimensions of perceived value for Islamic banks, those are knowledge value and faith value. Second, it intends to explore their effects on satisfaction and performance in Islamic banks of Makassar. This study was conducted in Islamic bank employees in city Makassar, Indonesia. By using a sample of 40 respondents and SEM PLS is applied for data analysis. From the study, it is found that satisfaction has a partially mediating effect on the relationship between faith value and performance, and significantly mediating effect on that between knowledge value and performance. It is interesting that the research proposes two new variables, that is knowledge value and faith value, which can be considered as parts of perceived value, which would complement and enrich the theory of perceived value accordingly.

### **KEY WORDS**

Knowledge value, faith value, perceived value, satisfaction, commitment.

Perceived value is important concept in human resources and marketing management literature, as it has a great potential to strengthen relationship of stakeholders to organization. Despite the importance of perceived value, the literature presents variety of its definitions, conceptualization and operationalization (Woodall, 2003). It is partly due to its broadness and context dependent nature (Woodall, 2003: 3). Every sector of business possesses its own unique perceived value different from those in other sectors.

(Sheth, J. N *et al.*, 1991) for instance, introduced functional, emotional, social, epistemic, and conditional values for perceived value in consumption sector. (Petrick, J. F, 2002) pinpointed quality, emotional response, reputation obtained by acquiring the service, behavioral price, and monetary price for perceived value in recreational services. (Sánchez, J *et al*, 2006) have developed post-purchase perceived value consisting of functional value of the establishment, functional value of the contact personnel, functional value of the service quality, functional value price, emotional value and social value in tourism context. (Mathwick, C., *et al*, 2001) emphasized Visual appeal, entertainment, escapism, enjoyment, efficiency and economic value factors in internet shopping setting. Holbrook emphasized functional, social, hedonist and spiritual construct for religion-related sectors.

The present study highlights perceived value of Islamic banks within the perspective of their employees. Taking account of Islamic bank's nature, the study looks into knowledge value and faith value as some conspicuous values along with other values as they are so far absent in mainstream perceived value concept. By knowledge value here means the perception that an organization values, recognizes, enriches and manages all necessary knowledge that increase human resources and service quality. Regarding knowledge value, the bulk of Islamic banks lag behind conventional ones in terms efficiency and competitiveness due to its nascence and complex contracts. The effort to address this issue heightens perception that the organization has commitment for service quality that leads to employees' increased performance. This is especially so, as Islamic banking is regarded as a specialized area of banking since it is based on true Islamic economic principles. However, there is an increasing gap between existing and required level of expertise in Islamic banks (Ishaq Bhatti, M., *et al.*, 2011). In Pakistan case, (Ishaq Bhatti, M *et al.*, 2011) argued that it were conventional banking professional who progressed Islamic banking. However, gap still exists between for existing human resources with specialized knowledge about Islamic

banking principles and the expectation level to handle Islamic banking complex funding modes. Their study revealed gap of expertise in this Islamic banking and implies that top management of Islamic banks should have high resource commitment for training and development of their people regarding Sharia fundamentals, product knowledge, problem-solving techniques and interpersonal skills and modes of financing. It also highlights the lack of innovation and creativity of the Islamic banks (Ayedh and Echchabi, 2015).

As to faith value, an organization should take account of employees' welfare as it increases their motivation and commitment. Islam teaches the importance of happiness (Falah) and becomes one of those warranted by Islamic banks. Happiness grounded on healthy soul is one of Islamic principles that every Moslem people should accomplish. In their interview research stage with Islamic bank employees, (Khajar and Munadjat, 2017) found that the basic intention for the employees to develop careers in Islamic banks is to keep the faith. It enables them to retain happiness, as it engenders a sense of security for the feeling that they are able to perform the Islamic duties. Having religion and attempts to practice its teachings in day-to-day life, including workplace, a human characteristic (Khajar and Munadjat, 2017).

With knowledge value and faith value as parts of Islamic banks' perceived value along with other values which are beyond this study's scope analysis, the present study intends to explore their effects on satisfaction and organizational performance. The results will surely enrich human resources management literature especially pertaining to Islamic banking that accentuates more knowledge and faith values.

## THEORETICAL REVIEW AND HYPOTHESES

Perceived value is individual's perception based on evaluation of comparison between accepted benefits and sacrifice to achieve those benefits" (Sumaedi *et al.*, 2014 b). Many authors have different dimensions depending on the scope and nature of sectors under study. The following is the summary of perceived value dimensions that every author has designed.

Table 1 – Dimensions of Perceived Value

Dimensions	Author(s)
Hedonic value, utilitarian value	Holbrook and Corfinan, 1985
Acquisition value, transaction value	Monroe and Chapman, 1987
Functional, emotional, conditional, social, epistemic	Sheth <i>et al.</i> , 1991
Tangibles values, intangibles values	Nilson, 1992
Hedonic value, utilitarian value	Babin <i>et al.</i> , 1994
Expected value, received value	Kotler <i>et al.</i> , 1995
Pre-use value, post-use value	Lovelock, 1996
Benefits (quality, satisfaction and specific benefits), costs (money, time and effort)	Zeithaml and Bitner, 1996
Emotional or intrinsic value, functional or extrinsic value, logical or value for money	Woodruff, 1997
Functional, emotional	Gronroos, 1997
Quality, price, acquisition, transaction	Grewal <i>et al.</i> , 1998
Efficiency, excellence, play, aesthetics, Status, esteem, ethics, spirituality	Holbrook, 1999
Consumption value, extended value	Oliver, 1999
Acquisition value, transaction value, value "in-use", redemption value	Parasuraman and Grewal, 2000
Functional- quality, functional-price, emotional, special PERVAL	Sweeney and Soutar, 2001
Quality, monetary price, behavioral price, emotional, reputation SERV-RERVAL	Petrick, 2002
Active values (efficiency; economic value and enjoyment); Reactive values (visual attraction; entertainment value and service excellence)	Mathwick <i>et al.</i> , 2002
Functional, emotional, social GLOVAL	Sanchez <i>et al.</i> , 2006

Source: Dimutrela, 2013.

To grasp the role perceived value might play in the relationship between individuals and products or organization, means-end approach might be of a great help. Means-end chain theory holds that every individual evaluates relevant attributes and benefits of a product or organization. It was developed by (Gutman, J, 1982) with basic idea that value is a dominant factor in individuals' relationship decisions. That is, they evaluate a product or organization based on its functions or values, and whether their interaction with it leads to desired consequences. Evaluation of the consequences would determine the relationship. This evaluation drives for a closer relationship based on certain purposes (Koo, D. M, 2006), such as security, belongingness, or similarity. High perceived value would result in heightened positive affection toward the product or organization (Fornell *et al.*, 1996). In this case, values perceived by individuals over a product or organization are the main point of evaluation for further relationship (Hsin Chang, H and Wang, H, 2011).

It was developed by (Gutman, J, 1982) to emphasize that individuals make use of values or benefits of a product or organization to minimize negative consequences and maximize positive consequences. It means that individuals naturally seek product or organization with better values compared to others. In this case, it can be inferred that there is a relationship between individual's perceived value and their decision to make further intimate contacts (Hsin Chang, H and Wang, H, 2011). Some researches applied means-end theory to grasp satisfaction. They are for example, (Lopez-Mosquera, N and Sanchez, M, 2012; Gallarza *et al.*, 2009). Others also applied the same theory to explore motivation which might represent performance. Those are for example XX.

Perceived value and satisfaction is inseparable, as satisfaction engenders when expected values are fulfilled. Satisfaction might be the antecedent or the consequence of value. In the context of the present study, satisfaction holds position as the consequence of received value because employees should experience the values that make them motivated to increase performance. Several works have examined relationship between perceived value and satisfaction such as (Parahoo, S. K *et al.*, 2015; Setijono, D and Dahlgard, J. J, 2007; Mosavi and Ghaedi, 2012; Sumaedi *et al.*, 2016; Dmitrovic *et al.*, 2007; Bontis *et al.*, 2007; Chen, C. F and Tsai, D. C, 2007). While those between perceived value and performance include (Kennedy, G. J and Tuckman, B. W, 2013; Zhang and Nankai, 2014; Matanda and Ndubisi, 2009; Wan, E. W *et al.*, 2016). More specifically, the works that explored the relationship between knowledge and performance include (Lopez-Mosquera, N and Sanchez, M, 2012; Gravier *et al.*, 2008; Mills, A. M and Smith, T. A, 2011; Rahman *et al.*, 2015).

#### *Hypotheses:*

- H1: Knowledge Value is considered to have a significant effect on employees' satisfaction in Islamic banks;
- H2: Faith value is considered to have a significant effect on employees' satisfaction in Islamic banks;
- H3: Knowledge Value is considered to have a significant effect on employees' Performance in Islamic banks;
- H4: Faith value is considered to have a significant effect on staff performance in Islamic banks.

Lee, Y. K *et al.* (2006) argument that employee satisfaction leads to heightened quality customer service quality and enhance employee retention and commitment. Job satisfaction is reflected by the presence of positive emotion or enjoyment in the job (Locke, 1976) and affective feeling about the job (Spector, 1997). These emotions might lead individuals to contribute more to their works. Employee satisfaction engenders employee motivation. Several works have investigated relationship between work satisfaction and performance, such as (Gu and Siu, 2009; Sawitri *et al.*, 2016; Siengthai and Pila-Ngarm, 2016). The present study hypothesizes that.

H5: Islamic satisfaction is considered to have a significant effect on staff performance.

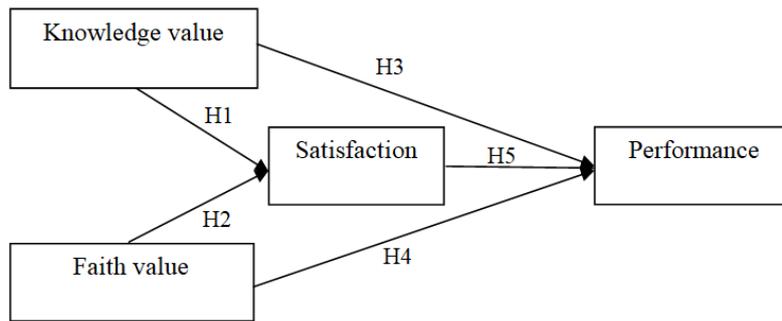


Figure 1 – Conceptual Framework

## METHODS OF RESEARCH

The present study designs two new constructs of perceived value deemed relevant for Islamic bank within the employees' perspectives. They result from previous interviews conducted before the research, and content validity and face validity are carried out subsequently to make sure their validity and reliability. Content validity involves expert judgment in which seven experts give their evaluation on the respective construct. The resulting constructs is further tested by referring the 40 respondents' opinions of their properness.

As an exploratory study, the investigation used the convenience sampling method to collect data Islamic bank employees Makassar, Indonesia. According to (Zikmund, 1996), convenience sampling refers to the sampling method of obtaining information from the people or units that are most conveniently available. Researchers generally use convenience samples to gather a large number of completed questionnaires fast and cost efficient. The respondents are chosen based on their religion and working more than 5 years. Islamic banks are spread over the region, and investigation should include them and cover all staff to accommodate their attitudes and ways of life. This study uses SEM PLS for data analysis because in this study using a model formed on the conceptual framework.

## RESULTS OF STUDY

The study conceives that knowledge value and faith value have a significant effect on satisfaction. Employees' satisfaction is also predicted to have a significant effect on employees' performance. More importantly, it conceives that satisfaction has a partially mediating effect on the relationship between faith value and performance, and has significantly mediating effect on that between knowledge value and performance. It means that faith value have matters so much to Islamic bank employees. They commonly have decided that working in Islamic bank is suitable to their social and emotional ideals and would strengthen their religion faith, including relevant values such as contribution to religion teachings that forbid interest-based loans and channeling the funds to companies operating in religion-forbidden sectors like alcohol and pork-foods. By joining this organization, they think they might keep and even strengthen their faith, and eventually might lead to emotional well-being. They commonly have less expectation of knowledge contribution and development as mainstream thinking holds that Moslem are not encouraged to stray from basic Islam guidelines. Obedience and difficulties in implementing other Sharia conventions such as Mudharabah and Musharakah. So far, Islamic banks only focus on Murabahah and the like.

## DISCUSSION OF RESULTS

From the results above, it might be conceived that Islamic satisfaction serves only partial mediation on the relationship between faith value and performance. It also hold on the relation between knowledge value and performance.

Managers should take account more on faith value and knowledge value, beside other existing values, as part of perceived value in Sharia banks. It is important as it contributes to management literature concerning perceived value, especially in Islamic banking. They also need to design condition that makes knowledge and faith values complementary. The capability to contribute, develop and make use of knowledge is emphasized in Islamic teaching and might add to faith, and thus joy of accomplishing religion duty.

Thus, Islamic bank should also a place of innovation where all changes are possible without violating Sharia rules. There should be a synergy between banks, university, Islamic intellectual bodies, and Islamic figures in finding converging points of innovations. So far divergent opinions and competing interpreting verses have impeded consensus. Attempts should be made to decrease divergences, so that any possible innovation is feasible in terms of its operationalization and sustainability.

*Future research.* Relationship between faith value and knowledge value should be further explored by future researches. It is logical as Islamic teaching also appreciates the drive to make some changes, other word for innovation, to the benefit of progress and society at large. Capability to make positive system-sized changes equates to make contribution to the progress of Islam. People with this perspective will have positive change orientation, as this also strengthen their faith. Contribution in the form of positive change is also a prayer to the God.

Comparing these values to others is also important. Social or epistemic values might play equally important parts, and their contribution parts will surely add valuable knowledge of perceive value ladder commonly made by employees in Islamic banks. Employees in different positions are also important to be accounted of, as they might have different perceived value preferences.

## CONCLUSION

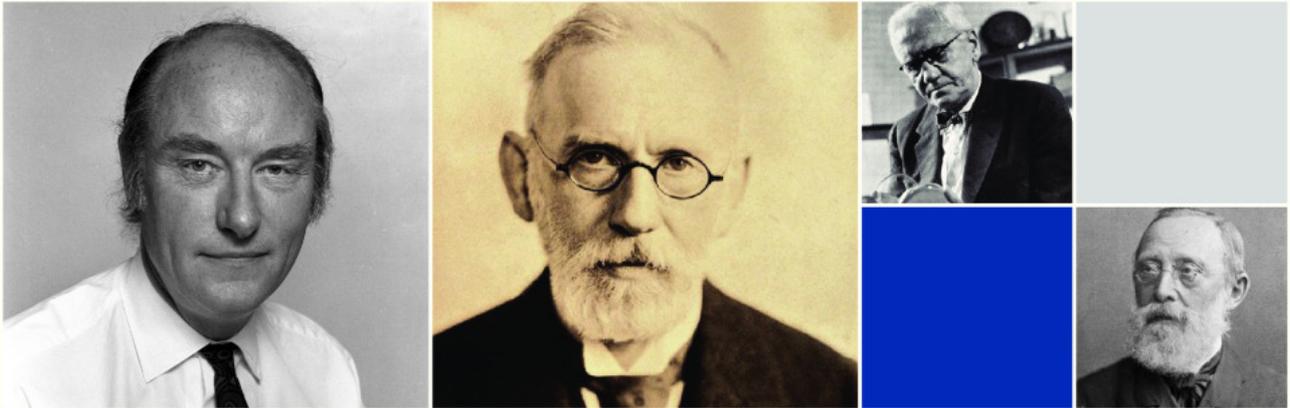
Islamic banks should take account of knowledge value. If they have shown a consistent commitment to change the organization conditions by providing continuous training, conducting rigorous knowledge management, and emphasizing the real Islamic products, the employees might start to look at knowledge value such essential that it would determine their satisfaction. There are some possibilities that make knowledge value subordinate. For one, they might already assume that there is not much to be expected from Islamic banks in terms of knowledge and creativity. It is in line with the work of (Ayedh and Echchabi, 2015) who said that Islamic bank commonly suffer from the lack of innovation and creativity of the Islamic banks' compared to conventional ones, as they are unable to provide proposals of alternative banking instruments. It would not be easy as it takes prolonged process.

## REFERENCES

1. Chen, C. F., & Tsai, D. C. (2007). How destination image and evaluative factors affect behavioral intentions? *Tourism Management*, 28(4), 1115–1122. <https://doi.org/10.1016/j.tourman.2006.07.007>
2. Dmitrović, T., Knežević Cvelbar, L., Kolar, T., Makovec Brenčič, M., Ograjenšek, I., & Žabkar, V. (2009). Conceptualizing tourist satisfaction at the destination level. *International Journal of Culture, Tourism and Hospitality Research*, 3(2), 116–126. <https://doi.org/10.1108/17506180910962122>
3. Fornell, C., Johnson, M. D., Anderson, E. W., Cha, J., & Bryant, B. E. (1996). The American Customer Satisfaction Index: Nature, Purpose, and Findings. *Journal of Marketing*, 60(4), 7. <https://doi.org/10.2307/1251898>
4. Gravier, M. J., Randall, W. S., & Strutton, D. (2008). Investigating the role of knowledge in alliance performance. *Journal of Knowledge Management*, 12(4), 117–130. <https://doi.org/10.1108/13673270810884291>
5. Gutman, J. (1982). A Means-End Chain Model Based on Consumer Categorization Processes. *Journal of Marketing*, 46(2), 60. <https://doi.org/10.2307/3203341>

6. Hsin Chang, H., & Wang, H. (2011). The moderating effect of customer perceived value on online shopping behaviour. *Online Information Review*, 35(3), 333–359. <https://doi.org/10.1108/14684521111151414>
7. Ishaq Bhatti, M., Zafarullah, M., Awan, H. M., & Bukhari, K. S. (2011). Employees' perspective of organizational service quality orientation: Evidence from Islamic banking industry. *International Journal of Islamic and Middle Eastern Finance and Management*, 4(4), 280–294. <https://doi.org/10.1108/17538391111186537>
8. Kennedy, G. J., & Tuckman, B. W. (2013). An exploration into the influence of academic and social values, procrastination, and perceived school belongingness on academic performance. *Social Psychology of Education*, 16(3), 435–470. <https://doi.org/10.1007/s11218-013-9220-z>
9. Koo, D. M. (2006). The fundamental reasons of e-consumers' loyalty to an online store. *Electronic Commerce Research and Applications*, 5(2), 117–130. <https://doi.org/10.1016/j.elerap.2005.10.003>
10. Lee, Y. K., Nam, J. H., Park, D. H., & Lee, K. A. (2006). What factors influence customer-oriented prosocial behavior of customer-contact employees? *Journal of Services Marketing*, 20(4), 251–264. <https://doi.org/10.1108/08876040610674599>
11. Lopez-Mosquera, N., & Sanchez, M. (2012). The role of satisfaction and emotional response in the choice mechanisms of suburban natural-areas users. *Environmental Management*, 49(1), 174–191. <https://doi.org/10.1007/s00267-011-9753-x>
12. Mathwick, C., Malhotra, N., & Rigdon, E. (2001). Experiential value: Conceptualization, measurement and application in the catalog and Internet shopping environment. *Journal of Retailing*, 77(1), 39–56. [https://doi.org/10.1016/S0022-4359\(00\)00045-2](https://doi.org/10.1016/S0022-4359(00)00045-2)
13. Mills, A. M., & Smith, T. A. (2011). Knowledge management and organizational performance: A decomposed view. *Journal of Knowledge Management*, 15(1), 156–171. <https://doi.org/10.1108/13673271111108756>
14. Parahoo, S. K., Al-Nakeeb, A., & Onagun, I. (2015). We are who we are: Incorporation of individual culture in customer satisfaction models. *Journal of Financial Services Marketing*, 20(3), 220–230. <https://doi.org/10.1057/fsm.2015.15>
15. Pérez-López, S., & Alegre, J. (2012). Information technology competency, knowledge processes and firm performance. *Industrial Management and Data Systems*, 112(4), 644–662. <https://doi.org/10.1108/02635571211225521>
16. Petrick, J. F. (2002). Development of a Multi-Dimensional Scale for Measuring the Perceived Value of a Service. *Journal of Leisure Research*, 34(2), 119–134. <https://doi.org/10.1080/00222216.2002.11949965>
17. Sanchez, J., Callarisa, L., Rodríguez, R. M., & Moliner, M. A. (2006). Perceived value of the purchase of a tourism product. *Tourism Management*, 27(3), 394–409. <https://doi.org/10.1016/j.tourman.2004.11.007>
18. Setijono, D., & Dahlgard, J. J. (2007). Customer value as a key performance indicator (KPI) and a key improvement indicator (KII). *Measuring Business Excellence*, 11(2), 44–61. <https://doi.org/10.1108/13683040710752733>
19. Sheth, J. N., Newman, B. I., & Gross, B. L. (1991). Why we buy what we buy: A theory of consumption values. *Journal of Business Research*, 22(2), 159–170. [https://doi.org/10.1016/0148-2963\(91\)90050-8](https://doi.org/10.1016/0148-2963(91)90050-8)
20. Wan, E. W., Chan, K. W., & Chen, R. P. (2016). Hurting or helping? The effect of service agents' workplace ostracism on customer service perceptions. *Journal of the Academy of Marketing Science*, 44(6), 746–769. <https://doi.org/10.1007/s11747-015-0466-1>

**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](http://ukpmc.ac.uk)

UK PubMed Central brought to you by:



A service of the National Library of Medicine and the National Institutes of Health

