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## **STRATEGY FORMULATION OF AN AGRICULTURAL MACHINERY DISTRIBUTOR: A CASE STUDY OF PT XYZ**

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### **ABSTRACT**

This research aims to formulate strategy of PT XYZ as an agricultural machinery distributor in Indonesia. The research was carried out by descriptive analysis method. The tools used at this study consist of EFE (External Factors Evaluation) analysis, IFE (Internal Factors Evaluation) analysis, IE (Internal External) matrix analysis, SWOT matrix analysis, and strategic architecture. The results of the analysis show PT XYZ's external strategic factors include 6 opportunities and 6 threats. The internal strategic factors include 5 strengths and 4 weaknesses. In this study PT X YZ obtained EFE 2.617 and IFE 3.047. The position of PT XYZ in the IE matrix is cell IV which means grow & build with a choice of intensive and integrative strategies. The results of the SWOT analysis provide PT XYZ with several strategies that can be implemented, namely in the form of 7 SO strategies, 3 ST strategies, 4 WO strategies, and 1 WT strategy. The choice of strategy is then compiled in a strategic architecture to become a road map for PT XYZ in the next 4 years towards the goals and objectives set by the company.

### **KEY WORDS**

SWOT, analysis, strategic architecture, machinery.

Indonesia as an agrarian country faces the challenge of how to increase agricultural productivity to meet increasing needs. Specific agricultural productivity and national competitiveness in general can be improved by the application of agricultural machinery and equipment (agricultural mechanization) appropriately (Tambunan and Sembiring 2007). However, the mechanization of agriculture carried out in Indonesia has not run optimally, which shows that the performance of farmers in adopting technology has not been effective enough, although agricultural machinery can provide economic and financial benefits (Aldillah 2016). On the other hand, the number of agricultural machines is not enough to meet the needs, so it is suggested that the type and number of agricultural machines should be increased as needed with financial support and involving the private sector (Paman et al. 2017). While the accuracy of the number and type of medicine, the concentration of the distribution of locations, the availability of agricultural machinery, the timeliness of supply, and the quality of agricultural machinery's workmanship will affect the increase in access by farmers (Purwantini and Susilowati 2017). The government must also play an attractive role in rural entrepreneurs to work in the field of agricultural mechanization and develop agricultural tools and machinery in rural areas that have great potential in agriculture (Djamhari 2009).

PT XYZ (not real name) is one of Indonesia's private companies whose main business is in the trading of agricultural equipment and machinery. PT XYZ is currently a distributor of one of the leading agricultural tractor brands. Besides this, PT XYZ also has other business lines by becoming a distributor of forklifts, generator sets, construction machinery, and trading in heavy equipment parts.

But with this diverse business line, the company is inseparable from the challenges of slow business growth as a result of external and internal changes. The shareholders see how the company's management overcomes these changes from the results of the company's performance reported annually. One of their concerns at this time is the value of sales growth and profits that have not been satisfactory in recent years.

In terms of business growth, based on the data in Table 1, it can be seen that over the past five years the value of PT XYZ's income has been relatively stagnant. Likewise in terms of profits, from 2016 to 2018 the value continues to decline.

Table 1 – PT XYZ business performance (in billion rupiah)

Description	2014	2015	2016	2017	2018
Revenue	1 003 621	1 006 767	930 753	1 010 028	1 010 050
Gross Profit	166 869	184 491	130 811	139 109	84 633

Source: PT XYZ internal data.

The existence of these conditions is important for the management of PT XYZ to evaluate and formulate business strategies in order to improve performance and support the business development of PT XYZ. In relation to strategy formulation, research is needed to identify the strategic factors of the external and internal environment that influence the current business development of PT XYZ.

Based on this background, the objectives of this study are as follows:

1. Analyzing the strategic factors of the external and internal environment that affect the growth of PT XYZ's business;
2. Formulate a strategy that can be applied to increase the business growth of PT XYZ;
3. Compile the strategic architecture of PT XYZ.

This research is limited to the formulation of the right strategy for PT XYZ by identifying external and internal factors of the company, developing a strategy that is in accordance with the main strategic factors that support business growth and develop a strategic architecture to be recommended to the company.

## METHODS OF RESEARCH

This research was conducted at the head office of PT XYZ having its address at Jakarta. The time of the study was carried out from March to April 2019. The design of this study was to use descriptive research techniques in the form of case studies. This study uses primary data obtained through in-depth interviews, focus group discussions, and surveys. In addition to using primary data, this study also uses secondary data in the form of related literature, annual reports and internal data of PT XYZ company.

Survey respondents were determined by purposive sampling, which consisted of internal and external respondents. The internal party who is the respondent is a member of the Board of Directors consisting of the President Director, Sales Director, Marketing & Product Support Director, and Business Support Director, as well as General Managers from the Sales, Marketing, Product Support, Finance and Human Resources divisions. While the external party consists of shareholder representatives, management representatives of one of the main suppliers, and customer.

To get an initial picture of strategic factors, focus group discussions were conducted with the general managers of PT XYZ. Then determine the strategic factors of the external and internal business environment. Examination of the company's external and internal environment is very important in the strategy planning process (Arslandere and Ocal 2018). The framework for analyzing the external environment is using PESTEL (Political, Economy, Social, Technology, Environment, Legal) and analysis of the industrial environment 5 Porter forces, while the framework for the analysis of the internal environment is using analysis of organizational functions such as marketing, operations, human resources, and finance (Sammut-Bonnici and Galea 2015).

After that the weighting and rating of the strategic factors is done by using a questionnaire. Weighting and rating of strategic factors produces EFE and IFE matrices which are then mapped into the Internal-External (IE) matrix. The External Factors Evaluation (EFE) and Internal Factors Evaluation (IFE) matrices are the initial input matrices that summarize the synopsis of major environmental opportunities and threats and the company's main strengths and weaknesses, and how they affect the company (Capps and

Glissmayer 2012). The combined values of EFE and IFE are mapped into the Internal-External matrix which is divided into 9 cells (David and David 2017). The use of this IE matrix is to obtain business strategies at the corporate level (Winardi 2014).

The SWOT matrix is used to develop selected grand strategies from the IE matrix into several business strategies (Budiman et al. 2018). The strategy obtained from the SWOT matrix is then compiled in a strategic architecture in the form of a road map that is recommended to be implemented by the company in the next 4 years.

Alternative strategies obtained from the SWOT matrix were then mapped into a road map using PT XYZ's strategic architecture in a certain period of time in order to improve current performance to achieve the expected goals. As Pujonggo et al. (2016) uses strategic architecture derived from the results of strategy formulation with SWOT analysis for performance improvement.

Strategic architecture is basically a high-level blueprint for the development of new functions, acquisition of new competencies or the transfer of current competencies which are important links to short-term planning and long-term planning (Hamel and Prahalad 1994). Likewise according to Ungerer and Uys (2005) that the strategic architecture of an institution or company is an approach to broad plans for opportunities as a reflection of the potential path for the future.

In strategic architecture, selected strategies that will be implemented can be mapped to make it easier for executors to read, understand, implement, and evaluate them (Yoshida 2006). Palupiningrum et al. (2015) use strategic architecture to map the strategy focus from year to year. Furthermore Rismon (2010) uses strategic architecture with an external environmental analysis approach using PEST, internal environment analysis using value chains, IE matrix, core competencies, foresight industry, and gap analysis.

The thinking framework of this research is to elaborate the strategy for a strategic architecture in the form of a road map that can be suggested to the management of PT XYZ to guide the implementation of the company's strategy in order to achieve business growth targets (Figure 1).

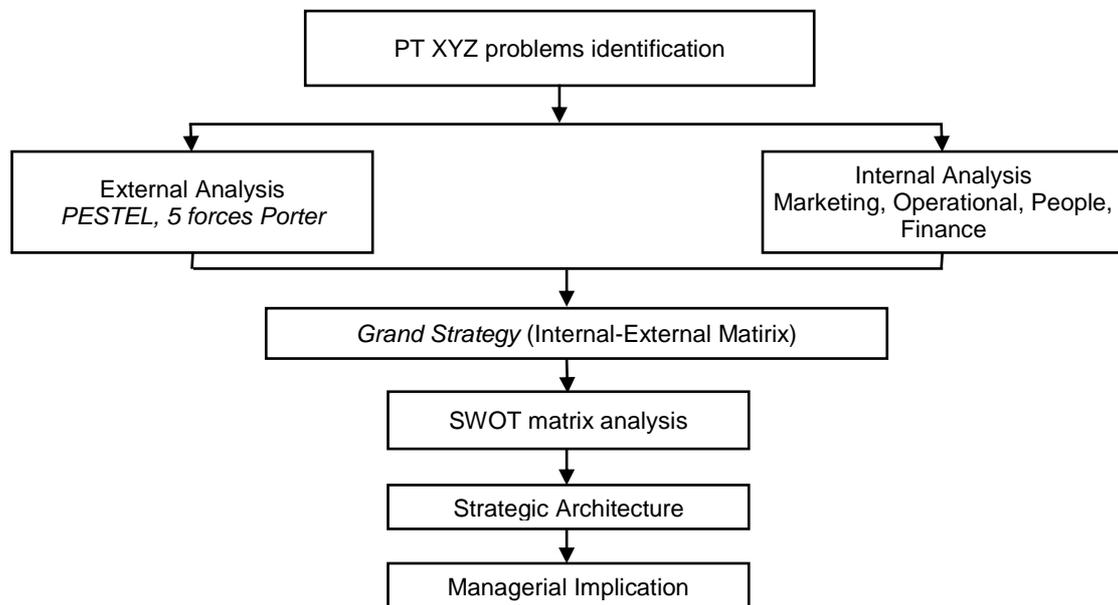


Figure 1 – Research Framework

## RESULTS OF STUDY

PT XYZ's competitive map, especially in the agricultural equipment and machinery business line in Indonesia, is quite tight. The closest competitor in this sector, especially for 4-wheeled tractor farm equipment, is PT Traktor Nusantara (TN) which is the agent of the

brand farm tractor Masey Ferguson (MF). Besides TN, there is PT Yanmar Diesel Indonesia, which is the direct representative of Yanmar Holdings Co.Ltd. Yanmar brand machinery equipment manufacturer from Japan. In addition there are various companies that sell or produce brands that are circulating in Indonesia such as PT Altrak 1978 (New Holland), PT Probesco Disatama (LS), PT Wahana Inti Selaras (John Deere), PT Corin Mulia Gemilang (Maxxi), PT RUTAN (Iseki), PT Maxi Utama Energy (Deutz-Fahr), PT Satrindo Mitra Utama (Kioti), PT Prima Agra Kencana (Class), PT Garda Nusantara (Dongfeng), PT Belarus Traktor Indonesia (Belarus), CV Karya Hidup Sentosa (Quick ), PT Barata Indonesia (Trabas), and PT Pindad (Pindad).

Foresight industry analysis is used to see a picture of changes in the future of the industry by looking at trends in technological, demographic, regulatory, lifestyle and geopolitical changes (Puryani et al. 2018). An overview of the future of the industry (the foresight industry) of the agricultural machinery and machinery business includes:

1. The machines will be more efficient and save fuel with high productivity. In its development, this machine is also believed to be able to adopt biofuel in the near future. Then there is a trend towards the use of electric powered alsintan. For a description of further developments is the development of autonomous technology.

2. Human resources in the agricultural sector are believed to continue to decline in numbers. Similarly, agricultural land will be increasingly limited. Whereas on the other hand the increasing population requires increasing food production. The combination of these matters will continue to be an impetus for more intensive mechanization of agriculture throughout the agricultural value chain from nursery to post-harvest.

3. Pressure on food needs, especially rice as a staple food also encourages different new ways of managing business in the agricultural sector. The need for efficiency from the process side will greatly increase. Therefore how to manage rice fields traditionally has the opportunity to get alternatives such as by establishing a food estate for rice production from nursery to post-harvest process.

4. In addition to increasing food needs, energy needs will also increase. But the trend is mainly towards renewable energy (renewables energy). For this reason, with the experience of PT XYZ as a generator distributor that is a power plant, there is an opportunity for PT XYZ to enter the electricity business from renewable sources such as using hydropower and biomass. This has already begun by trying to enter the mini hydroelectric power generation business for hydropower and the development of innovative biomass power generators by PT XYZ's engineer team. In relation to the current business of PT XYZ where one of the sub-sectors goes into plantations, especially oil palm, biomass produced from oil palm plantations can be an opportunity to create a biomass power plant business from palm oil waste. In the future it is believed that the electricity industry from renewable energy will grow even more rapidly, and it is expected that PT XYZ is ready to diversify its business to become the leader in the sector.

PT XYZ is a subsidiary of one of the leading business groups in the field of automotive and heavy equipment in Indonesia. The company's vision is "to be the leading and most trusted company in the industry in providing integrated solutions to customers".

While the company's mission is: 1) Promote superior partnership values with customers and suppliers, both domestically and internationally in the Agriculture, Industrial, Construction, Mining and Energy sectors, 2) Ensure that the products & services provided are the best for customers and supporting sustainability, 3) Providing the right environment for talents to always improve capability & productivity. 4) Creating sustainable shareholder value, 4) Becoming the pride of the nation and state.

PT XYZ's business activities were initially trading in agricultural tractors, but in its development PT XYZ is currently engaged in trading agricultural equipment and machinery, forklifts, generators and construction machinery. Outside the trading business, PT XYZ has also begun to expand its business into the energy sector by becoming a contractor or EPC (Engineering, Procurement and Construction) contractor for the construction of transmission and power plants. The business is run by PT XYZ through a new subsidiary established in

2018, namely PT XYZ Energi (PT XYZE). In addition, PT XYZ also entered the Independent Power Provider business of the micro hydro power plant (PLTMH).

Judging from the type of transaction which is also in line with the characteristics of various products and services traded by PT XYZ as described previously, PT XYZ is a B2B (Business to Business) company because almost all of its customers are companies or individuals who use PT XYZ products and services as goods capital (capital goods) or production equipment for their business. This is in line with B2B understanding as a type of trade transaction based on the exchange of products or services from business to business, and not from business to consumer (Saha et al. 2014).

In order to encourage faster and greater business growth, at the initiative and encouragement of shareholders, PT XYZ carried out the process of adding a business to trade heavy equipment aftermarket parts. In addition, shareholders also revamp their directors through the Extraordinary General Meeting of Shareholders (EGMS) in January 2019.

The organization of PT XYZ consists of a board of directors led by a president director with 3 directors which includes the sales director, marketing director and product support, and the director of business support. Each director oversees one or two division heads (general manager). The divisions in PT XYZ consist of five divisions, namely: sales, marketing, product support, finance, and human resources and infrastructure. In addition to the division, PT XYZ has a functional section, namely the purchasing department under the director of finance, as well as the business development section and corporate planning section under the president director.

The sales department focuses on building strong relationships with customers for each sector so that it can continue to increase sales value. The marketing department focuses on the preparation and implementation of marketing strategies for each product which is its responsibility with the target market share and profitability. In addition to the marketing team, the inventory and logistics analyst team is also under the marketing division. The product support section is responsible for after-sales service, especially in service aspects and management of warranty and claims. The engineer team is also in the product support division. All of these operational divisions are supported by the finance department and their respective human resources and infrastructure.

Table 2 – External Factors Evaluation (EFE) Matrix

No	Factors	Weight	Rating	WeightX rating
<b>Opportunities</b>				
1	The RPJMN (Government National Long Term Plan) establishes superior programs in the agriculture, industry, infrastructure & energy sectors.	0,050	3	0,150
2	Indonesia's economic growth in the agricultural sector, infrastructure, and positive energy in the last 5 years.	0,100	3	0,300
3	The market available for the PT XYZ business line is quite large.	0,117	3	0,351
4	Suppliers of PT XYZ's business lines are available quite a lot globally.	0,083	3	0,249
5	The number of agricultural sector workers continues to decline and the conversion of agricultural land.	0,092	3	0,276
6	The development of product, information and communication technology.	0,058	2	0,116
<b>Threats</b>				
7	Rupiah fluctuations against US dollar.	0,050	3	0,150
8	Interest rates are quite high.	0,100	2	0,200
9	PT XYZ's product switching costs are relatively small.	0,100	2	0,200
10	There is an import tightening policy on some PT XYZ products.	0,050	3	0,150
11	Customers and suppliers increasingly actively interact directly.	0,075	3	0,225
12	Competitors of all PT XYZ business lines are quite numerous and aggressive.	0,125	2	0,250
<b>Total</b>		<b>1,000</b>		<b>2,617</b>

The current PT XYZ employees are 612 people. Of these, including 113 salespeople, inventory analysts were 16 people, mechanics 136 people, and engineers 5 people. Currently the working period of the majority of PT XYZ's employees is 281 people, less than 5 years, so that their experience and competence must still be optimized. This is important for PT XYZ considering that many of its business fields concern matters of a technical nature and need immediate completion so that customers are satisfied.

Based on external factors both opportunities and threats that have been determined as important factors and relevant to the business of PT XYZ, then the EFE matrix table is then made by including the weight and rating for each factor obtained from the survey results (Table 2). The EFE calculation of PT XYZ produces a value of 2.617. This figure shows that PT XYZ's external factors have good potential for business.

Based on internal factors both strengths and weaknesses that have been determined as important factors and relevant to the business of PT XYZ, then IFE matrix tables are made by including the weights and ratings for each factor obtained from the survey results (Table 3). The IFE calculation of PT XYZ produces a value of 3.047. This figure shows that PT XYZ's internal factors have enough potential to be optimized to choose a more aggressive business strategy to encourage growth.

Table 3 – Internal Factors Evaluation (IFE) Matrix

No	Factors	Weight	Rating	WeightX rating
Strengths				
1	PT XYZ has a wide range of Channels & Networks Distribution.	0,188	4	0,750
2	PT XYZ has the ability to find & select suppliers and import processes.	0,063	3	0,188
3	PT XYZ products have high quality and a good brand image.	0,141	3	0,422
4	PT XYZ has the ability to provide integrated solutions to customers.	0,141	4	0,563
5	PT XYZ has a fairly complete and reliable engineering team.	0,094	4	0,375
Weaknesses				
6	The service to fulfill product support needs is not optimal.	0,110	2	0,220
7	Handling PT XYZ customer complaints is still not optimal.	0,050	2	0,100
8	XYZ's corporate brand image is relatively weak.	0,050	2	0,100
9	PT XYZ's HR development program is not yet optimal.	0,100	2	0,200
Total		1,000		3,047

PT XYZ's position in the IE matrix is in cell IV (3,047; 2,617) which illustrates that PT XYZ is fit in the grow & build with appropriate grand strategy that is intensive (market penetration, market development, product development) or integrative (forward integration, backward integration, horizontal integration).

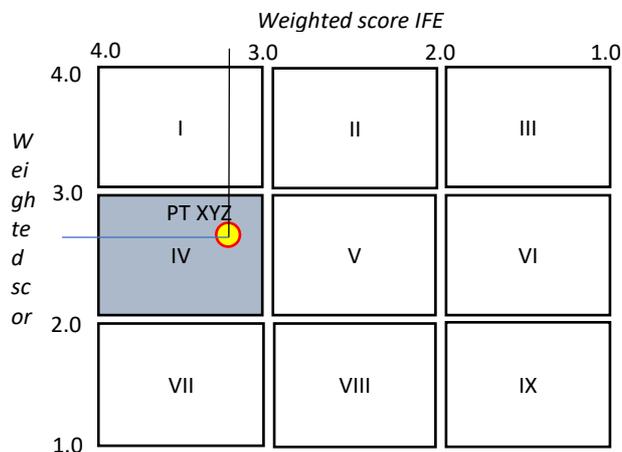


Figure 2 – PT XYZ's position on the Internal-External matrix (IE matrix)

After obtaining the grand strategy from the IE matrix, PT XYZ's strategy formulation analysis was then carried out using the SWOT matrix (Table 4). Strategy selection is mainly focused on SO (Strengths-Opportunities) strategy, which is a strategy that prioritizes the use of power owned by PT XYZ to optimally utilize business opportunities for PT XYZ. Nevertheless, PT XYZ still considers several WO (Weaknesses-Opportunities), ST (= Strengths-Threats), and WT (Weaknesses-Threats) strategies needed to increase business growth.

Table 4 – SWOT Matrix for PT XYZ business development

Internal	<b>Strengths</b> 1. Distribution Channels & Networks 2. Supplier selection and importation 3. High quality products 4. Solutions for customers. 5. Engineering team	<b>Weaknesses</b> 1. After sales service 2. Handling complaints 3. Corporate brand image 4. HR Development
External	<b>SO strategies</b> 1. Develop an End to End Agribusiness business (S1, S4, O2) 2. College partnerships (S5, O1, O6) 3. Selection of business portfolios (S2, O3, O4) 4. Integrated product development and solutions for customers (S3, S4, S5, O3, O5) 5. System integration with customer transactions (S1, O3, O6) 6. Omnichannel sales channels and global markets (S1, O5, O6) 7. Business energy (S5, O1, O2).	<b>WO strategies</b> 1. Implement a digital sales planning system (W1, W4, O3) 2. Implementation of knowledge management (W2, W4, O3, O6) 3. Promotion and corporate branding programs (W3, O3) 4. Implementation of corporate academy (W4, O3)
<b>Opportunities</b> 1. Leading RPJMN in agriculture, industry, infrastructure & energy. 2. Growth in the agricultural, industrial, infrastructure and positive energy sectors 3. Big market. 4. There are many suppliers available 5. The number of workers in the agricultural sector has declined 6. Technological developments		
<b>Threats</b> 1. Rupiah fluctuations against the dollar 2. High interest rates 3. Small switching costs 4. Tightening of imports 5. Customers and suppliers increasingly actively interact directly. 6. Number of competitors	<b>ST strategies</b> 1. Use of non-dollar currencies (S2, S4, T1) 2. Working with banks, leasing and financial institutions (S4, T2, T1) 3. Partnership program with customers (S4, S5, T3, T5)	<b>WT strategies</b> 1. Improve after-sales service (W1, W2, T3, T6)

The strategy for the growth of PT XYZ's business that has been selected in the SWOT analysis phase is then mapped into a road map in the strategic architectural design. Strategic architectural design is needed to give priority and stage strategies to achieve the goals and objectives to be achieved by PT XYZ. Strategic architecture also provides an overview of the challenges faced by PT XYZ.

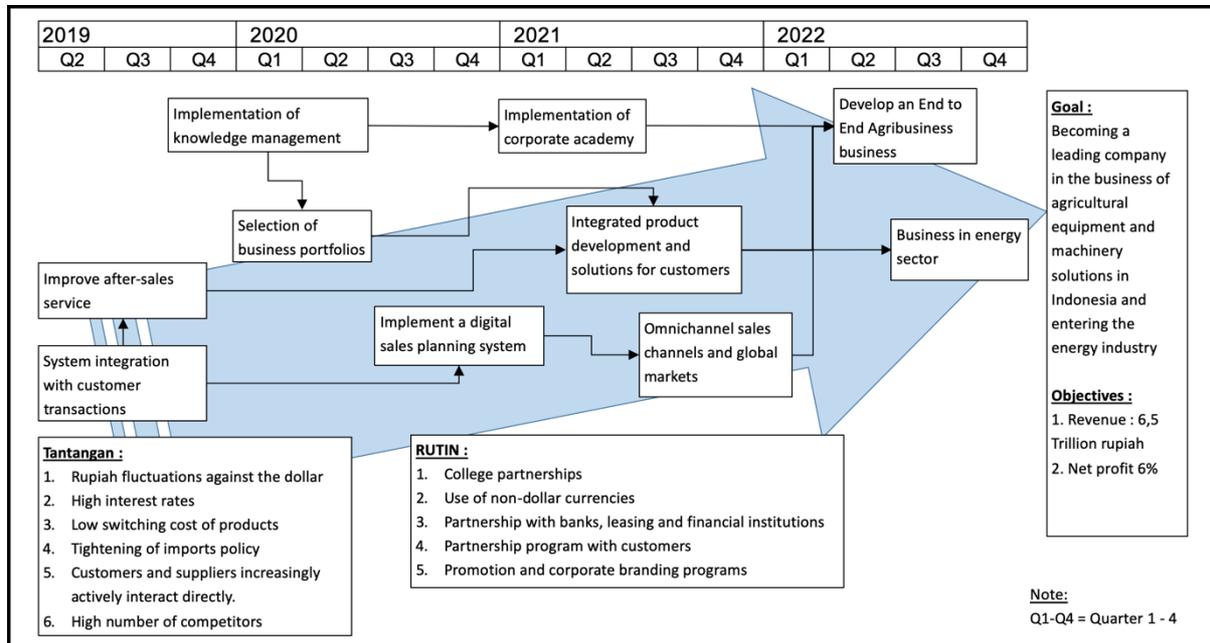


Figure 3 – Strategic Architecture of PT XYZ

The design of the strategic architecture is illustrated by the X axis and Y axis. The X axis shows the time for each stage in the year period and the Y axis describes the program to be implemented.

In PT XYZ's strategic architecture design, the selected strategies are grouped into two categories, namely routine strategies and gradual strategies. Work programs that are

routinely carried out are chosen taking into account the capabilities and needs of PT XYZ on the output of the program that is needed continuously.

The strategy stages from 2019 to 2022 PT XYZ in the form of a strategy road map can be seen in Figure 3.

### **MANAGERIAL IMPLICATIONS**

The preparation of strategic architecture for alternative strategies obtained from the SWOT analysis recommends managerial implications for the management of PT XYZ. In the SWOT analysis each selected strategy has been considered to utilize the strengths of weaknesses, overcome weaknesses, gain profit from opportunity factors, and anticipate threat factors. To achieve the objectives announced by the company within the next 4 years all selected strategies must be carried out by every part of the company according to their respective roles and responsibilities. The order of implementation is expected to follow the stages that have been systematically compiled in strategic architecture.

In the first stage, PT XYZ had the opportunity to integrate online transaction systems with key accounts, which in this case could start with the parent company which is the main dealer of PT XYZ. This needs to be done early because the transaction value is very large so this integration will secure the largest portion of revenue while increasing the opportunity for increased sales. Furthermore, this integration process can be offered in stages to other large customers, especially B2B customers.

The next strategy that must also be implemented at the beginning is a very important thing in the business world, namely improving after-sales service to customers. This is consistent with the voice of customers who want PT XYZ to increase the availability and speed of supply of spare parts as well as the adequacy of the number of mechanics. With this increase in services, it is expected that customer trust will increase, resulting in an increase in sales of units sold by PT XYZ. PT XYZ also must begin implementing knowledge management so that all employees, especially sales and operations, always get and master the latest knowledge of the development of PT XYZ products. Good and up to date product knowledge will certainly be a strong capital for PT XYZ in providing integrated solutions to customers.

In the second phase starting in 2020, PT XYZ must begin to create and conduct a business portfolio selection system to ascertain whether the existing portfolio is still the most profitable and encourage growth. In addition, this can be used to complement PT XYZ's lack of product lines. At this stage, PT XYZ must implement a better sales planning system by digitizing sales prospects. This system is expected to increase the accuracy of planning so that it can increase stock readiness, the end of which is that sales increase with the risk of excess inventory being reduced.

In the third stage in 2021, as a continuation of knowledge management, PT XYZ has been able to build a comprehensive corporate academy to improve employee quality, especially in terms of business capabilities. Next to continue portfolio selection, PT XYZ must develop products with integrated solutions to customers so that they not only offer products but can become partners of customers in achieving their business goals. PT XYZ also has to start developing sales channels with omnichannel concepts so that the marketing reach becomes much wider.

In the fourth stage in 2022 after all the previous strategies were implemented, PT XYZ was ready to develop an end to end agribusiness business by looking at market potential both upstream and downstream from the agricultural industry. At the same time, diversification into the energy sector, especially renewable power plants, both hydropower and biomass, is ready. Both of these strategies of course require PT XYZ's competency readiness to be far broader compared to current competencies. The strategy phase in strategic architecture is expected to be able to build the addition and strengthening of the competencies needed to achieve the objectives of PT XYZ as the leading agricultural business and equipment and machinery solutions company and successfully diversify its business into the energy sector.

## CONCLUSION

In this study the conclusion is the formulation of answers to the objectives of the study. The conclusions of this study are as follows:

1. PT XYZ has the potential power to be able to take advantage of opportunities in the industry where PT XYZ does business. With PT XYZ's internal strength capital as a Business to Business B2B company that is adequate in terms of the strength of the distribution network, the ability to find and select the best suppliers, high quality products with good brand image, the ability to provide integrated solutions to customers and the strength of the engineer team added value for customers, the existence of large business opportunities in the agricultural, infrastructure, energy and mining sectors can be optimized with the right strategies to support the expected business growth.

2. IE analysis positions PT XYZ in quadrant IV with a grand strategy grow & build with an intensive and integrative strategy choice. The focus of the strategy in accordance with this position is to focus more on the S-O (aggressive) strategy with 7 strategies than the W-O (conservative) strategy with 4 strategies, the S-T (competitive) strategy with 3 strategies and W-T (defensive) with 1 strategy.

3. With the internal strength and adequacy of PT XYZ's resources, all corporate-level strategies can be implemented by management by taking into account the priority of time and the ability to increase the company's competence over time according to the time period set by management. Strategic architecture in the form of PT XYZ's strategy road map for the period 2019-2022 is arranged as a company reference in implementing all the strategies that have been selected and determined.

## RECOMMENDATIONS

PT XYZ's strategy preparation was made at the corporate level, so to implement it PT XYZ still had to make a strategy at the functional level as a development of the work program that had been prepared.

PT XYZ's strategic architecture is based on current conditions by considering the foresight industry for the company's business in the future, so it is still advisable for management to periodically evaluate the suitability of the strategy with the external and internal business environment.

To enrich the literatures related to the agricultural machinery and equipment business, further research is recommended from various aspects such as strategy, marketing, operations, supply chains and finance.

## REFERENCES

1. Aldillah R. 2016. Kinerja pemanfaatan mekanisasi pertanian and implikasinya dalam upaya percepatan produksi pangan di Indonesia. Forum Penelitian Agro Ekonomi. 34(2):163-171. Available on: <http://ejurnal.litbang.pertanian.go.id/>.
2. Arslandere M, Ocal Y. 2018. SWOT analysis as a tool for strategic management and an implementation in a firm in machine industry. Conference paper.
3. Budiman I, Tarigan UPP, Mardhatillah A, Sembiring AC, Teddy W. 2018. Developing business strategies using SWOT analysis in a color crackers industry. J. Phys.: Conf. Ser. 1007 012023.doi:10.1088/1742-6596/1007/1/012023.
4. Capps III CJ, Glissmeyer MD. 2012. Extending the competitive profile matrix using internal factor evaluation and external factor evaluation matrix concepts. Journal of Applied Business Research (JABR). 28(5):1059-1062.doi: 10.19030/jabr.v28i5.7245.
5. David FR, David FR. 2017. Manajemen Strategik: Suatu Pendekatan Keunggulan Bersaing-Konsep. Puspasari N, Puspitasari LN, penerjemah. Jakarta (ID). Penerbit Salemba Empat. Terjemahan dari: Strategic Management: A Competitive Advantage Approach, Concepts and Cases, 15th ed.

6. Djamhari S. 2009. Kajian penerapan mekanisasi pertanian di lahan rawa lebak Desa Putak – Muara Enim. *Jurnal Sains and Teknologi Indonesia*. 11(3):157-161. Available on: <http://ejurnal.bppt.go.id/index.php/JSTI/article/view/840/673>.
7. Hamel G, Prahalad CK. 1994. *Competing for the future*. Cambridge (US): Harvard Business School Press.
8. Palupiningrum AW, Daryanto A, Fahmi I. 2016. Strategic architecture for School of Business, Bogor Agricultural University. *Higher Education Studies*. 6(1):40-52.doi: 10.5539/hes.v6n1p40.
9. Paman U, Khairizal, Wahyudy HA. 2017. Kebutuhan mesin pertanian and tenaga untuk mekanisasi padi skala kecil di Kabupaten Kampar, Provinsi Riau. *Jurnal Dinamika Pertanian*. 12(2):11-18.[https://doi.org/10.25299/dp.2017.vol33\(2\).813](https://doi.org/10.25299/dp.2017.vol33(2).813).
10. Pujonggo RY, Syarief R, Rifin A. 2016. Strategic Architecture of Inspectorate General Ministry of Trade Republic of Indonesia. *International Journal of Scientific and Research Publication* [internet]. [diunduh pada 2019 Februari 22]; 6(10):197-207. Tersedia pada: <http://www.ijsrp.org/research-paper-1016/ijsrp-p5833.pdf>.
11. Purwantini TB, Susilowati SH. 2017. Dampak penggunaan alat mesin panen terhadap kelembagaan usaha tani padi. *Analisis Kebijakan Pertanian*. 16(1):73-88. DOI: 10.21082/akp.v16n1.2018.73-88.
12. Puryani, Baga LM, Saptono IT. 2019. Formulasi strategi bisnis perusahaan original equipment manufacturer (OEM) studi kasus di PT XYZ. *Jurnal Aplikasi Bisnis and Manajemen*. 5(1):13-23.<http://dx.doi.org/10.17358/jabm.5.1.13>.
13. Rismon B. 2010. *Arsitektur strategik Perum Pegadaian* [tesis]. Bogor (ID): Institut Pertanian Bogor.
14. Saha SK, Aman A, Hossain MS, Islam A, Rodela RS. 2014. A comparative study on B2B Vs. B2C based on Asia Pacific region. *International Journal of Scientific & Technology Research*. 3(9):294-298. Available on: [www.ijstr.org](http://www.ijstr.org).
15. Sammut-Bonnici T, Galea D. 2015. SWOT analysis. *Wiley Encyclopedia of Management*. Edited by Professor Sir Cary L Cooper. John Wiley & Sons.
16. Tambunan AH, Sembiring EN. 2007. Kajian kebijakan alat and mesin pertanian. *Jurnal Keteknikan Pertanian*. 21(4):1-16. Available on: <http://journal.ipb.ac.id/>.
17. Ungerer M, Uys K. 2005. A theoretical model for developing core capabilities from an intellectual capital perspective (part 2). *Journal of Industrial Psychology*. 31(2):7-13. Available on <https://core.ac.uk/download/pdf/54185350.pdf>.
18. Winardi. 2014. Strategi operasional bisnis konsultan di Jakarta untuk meraih peluang yang lebih baik. *Jurnal MIX*. 4(2):135-150. Availbale on: <http://digilib.mercubuana.ac.id/>.
19. Yoshida DT. 2006. *Arsitektur Strategik: Sebuah Solusi Meraih Kemenangan dalam Dunia yang Senantiasa Berubah*. Jakarta(ID): Elex Media Kompetindo.

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## THE EFFECT OF FEMALE COMMISSIONERS AND DIRECTORS ON CORPORATE SOCIAL RESPONSIBILITY WITH PROFITABILITY AS MEDIATION ON BASIC AND CHEMICAL INDUSTRIES DURING 2014-2016

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### ABSTRACT

This study aims to examine the effect of female commissioners and directors on CSR with profitability as a mediating variable in Basic and Chemical Industry. The data used in this study was taken from company data on the basic and chemical industries listed on the Indonesia Stock Exchange in 2014-2016. The sampling method uses purposive sampling so that the number of samples in this study is 30 companies. This study uses a quantitative approach. The data analysis technique used is PLS to test hypotheses. The results show that female commissioners, female directors, and profitability have a positive influence on CSR; female commissioners have a negative influence on profitability; female directors did not have a significant influence on profitability, and profitability was not a mediating variable for the influence of female commissioners and directors on CSR.

### KEY WORDS

Female commissioners, female directors, profitability, corporate social responsibility.

One important issue that has emerged lately is gender issues. Gender issues have been the subject of debates about social change and development. Many even discuss protests related to discrimination against women (Narwoko & Suyanto, 2015).

According to Book (2009), women have leadership qualities that companies are looking for now. They not only encourage individuals who are experts in sales and marketing, but also have financial skills and talent in managing people with endless innovations. They use management and financial intelligence to change companies by developing collegial relationships with employees and clients. Women are leaders of a new paradigm where modifying feminine leadership with classical male traits so that they can increase profit and income.

Galbreath (2011) and Nathania (2014) said that female directors had a significant effect on ROA, but did not have a significant effect on ROE. So, this study uses ROA to measure profitability. An increase in profitability will increase CSR disclosure. This is supported by Mulyadi & Anwar (2012) who say that profitability affects the disclosure of CSR.

The CSR program itself can be supported by the presence of female leadership, in commissioners and directors. This is expressed in the theory of gender socialization that women can better internalize ethical and communal values through their social roles (Hyun *et al.*, 2016). So, women are more receptive to CSR than men.

Most previous research usually theorized about the impact of increasing CSR from female commissioners originating primarily from the literature on gender differences in moral and communal orientation ((Bear *et al.*, 2010; Ben-Amar *et al.*, 2017; Boulouta, 2013; Isidro & Sobral, 2015). Different results are shown in the research of Nugraheni & Permatasari (2016) which states that female commissioners have a negative effect on CSR disclosure.

Bernardi & Threadgill (2011) said that the composition of female directors has a significant positive effect on CSR disclosure. Different results are shown in the study of Sudana & Arlindania (2011) which states that female directors have a non-significant negative influence on CSR disclosure. Khan (2010) said that the composition of female directors has a not significant positive influence on disclosure of CSR disclosures.

This study uses size as a control variable. Size is basically grouping companies into several groups, including large, medium and small companies (Suwito & Herawaty, 2005). Large companies tend to employ more women at each level (Eagly, 2017). Therefore, this study uses large companies, namely companies listed on the Indonesia Stock Exchange. The company used in this study is a company in the field of basic industry and chemistry.

So the hypotheses that can be revealed through this research are:

H1: Female commissioners have a positive effect on profitability.

H2: Female directors have a positive effect on profitability.

H3: Profitability has a positive effect on corporate social responsibility.

H4: Female Commissioners have a positive effect on corporate social responsibility.

H5: Female directors have a positive influence on corporate social responsibility.

H6: Commissioners and directors of women have a positive influence on corporate social responsibility which is mediated by profitability.

## METHODS OF RESEARCH

This study uses a quantitative approach that is research that intends to confirm the theory that can explain the influence of independent variables on the dependent variable through testing hypotheses using statistical procedures. The dependent variable used is Corporate Social Responsibility as measured by the Corporate Social Responsibility Index (CSRI). The instrument that will be used in this study refers to BAPEPAM regulation No.VIII.G2 regarding annual reports in Aryanti & Sisdyani (2016) there are 78 disclosure items in accordance with conditions in Indonesia.

The independent variable used is the proportion of female commissioners and the proportion of female directors. In addition, this study uses mediating variables, namely profitability ratios. Profitability ratio is a financial ratio to measure management's ability to obtain profit. The profitability ratio used is ROA, which is formulated as net income after tax divided by total assets. The control variable used is a size that can describe the size of a company based on total assets (Sujianto, 2001).

The type of data used is in the form of quantitative data taken from financial reports and annual reports from samples of companies in the basic and chemical industries listed on the Indonesia Stock Exchange in 2014-2016. The basic and chemical industry sectors consist of 69 companies. The sampling method used in this study was purposive sampling. The number of samples in this study is 30 companies.

Data collection techniques use the documentation method by collecting information and data through literature studies, exploration of literature, financial reports and annual reports on the Indonesia Stock Exchange. Then analyzed using PLS to test the hypothesis. The method of Baron & Kenny (1986) is used to test the existence of profitability as a mediating variable.

## RESULTS AND DISCUSSION

Female commissioners have a negative effect on profitability as indicated by a path coefficient of -0.292 with a t-statistic value of 3.478 which is smaller than t-table of 1.990. This situation shows that an increase in the female commissioners has an effect on decreasing profitability.

Female directors do not significantly influence profitability as indicated by a path coefficient of -0.063 with a t-statistic value of 0.711 which is smaller than t-table of 1.990. This situation shows that the increase or decrease in the female directors did not have a significant impact on the increase and decrease in profitability.

Profitability has a positive effect on CSR indicated by a path coefficient of 0.446 with a t-statistic value of 6.484 which is greater than t-table of 1.990. This situation shows that an increase in profitability has an influence on increasing CSR.

Female commissioners have a positive effect on CSR indicated by a path coefficient of 0.374 with a t-statistic value of 6.040 which is greater than t-table of 1.990. This situation shows that the increase in the female commissioners has an influence on increasing CSR.

Female directors have a positive effect on CSR indicated by a path coefficient of 0.310 with a t-statistic value of 5.516 which is greater than t-table of 1.990. This situation shows that an increase in the female directors has an influence on increasing CSR.

Size is a control variable in the study, indicated by a path coefficient of 0.226 with a t-statistic value of 3.621 which is greater than t-table of 1.990. This condition shows that along with the increase in company size, CSR disclosure has also increased.

The results of the study using the Baron & Kenny (1986) method show that profitability is not a mediating variable for the influence of female commissioners on CSR and the influence of female directors on CSR.

## CONCLUSION AND RECOMMENDATIONS

The existence of female commissioners has a significant negative effect on the profitability of the company. That is, the more women who become commissioners, the profitability of companies tend to decrease.

The existence of female directors does not have a significant influence on the profitability of the company. This means that the existence of women in the position of directors does not have a significant effect on the profitability of the company.

Profitability has a significant positive effect on CSR disclosure. That is, the more profit the company gets, the better the disclosure of CSR.

The existence of female commissioners has a significant positive effect on the disclosure of corporate CSR. That is, the more women who become commissioners, the disclosure of CSR will increase.

The existence of female directors has a significant positive effect on CSR disclosure. That is, the more women who become directors, the disclosure of CSR will increase.

Profitability is not a mediating variable for the influence of female commissioners and directors on CSR.

### *Recommendations:*

In selecting women commissioners and directors, they should not only be due to elements of kinship, but more attention to aspects of quality and accuracy in the field of work handled. Selection with this kind of system is expected to have a better impact on the profitability of the company.

The period of time span of the study can be made longer. This study only took a period of three years, namely 2014 to 2016, so future research is expected to take a longer period of time, can be five to seven years or more.

## REFERENCES

1. Aryanti & Sisdyani. (2016). Profitabilitas Pada Earnings Response Coefficient Dengan Pengungkapan Corporate Social Responsibility Sebagai Variabel Pemoderasi. E-Jurnal Akuntansi, 171-199.
2. Baron & 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.
3. Bear, Rahman & Post. (2010). The impact of board diversity and gender composition on corporate social responsibility and firm reputation. Journal of Business Ethics, 97(2), 207-221.
4. Ben-Amar, Chang & McIlkenny. (2017). Board gender diversity and corporate response to sustainability initiatives: evidence from the Carbon Disclosure Project. Journal of Business Ethics, 142(2), 369-383.
5. Bernardi & Threadgill. (2011). Women directors and corporate social responsibility. EJBO: Electronic Journal of Business Ethics and Organizational Studies.

6. Book. (2009). *Why the best man for the job is a woman: The unique female qualities of leadership*: Harper Collins.
7. Boulouta. (2013). Hidden connections: The link between board gender diversity and corporate social performance. *Journal of Business Ethics*, 113(2), 185-197.
8. Eagly. (2017). 100 Women: Do women on boards increase company profits?, BBC NEWS. Retrieved from <http://www.bbc.com/news/41365364>
9. Galbreath. (2011). Are there gender-related influences on corporate sustainability? A study of women on boards of directors. *Journal of Management & Organization*, 17(1), 17-38.
10. Hyun, Yang, Jung & Hong. (2016). Women on Boards and Corporate Social Responsibility. *Sustainability*, 8(4), 300.
11. Isidro & Sobral. (2015). The effects of women on corporate boards on firm value, financial performance, and ethical and social compliance. *Journal of Business Ethics*, 132(1), 1-19.
12. Khan. (2010). The effect of corporate governance elements on corporate social responsibility (CSR) reporting: Empirical evidence from private commercial banks of Bangladesh. *International Journal of Law and Management*, 52(2), 82-109.
13. Mulyadi & Anwar. (2012). Influence of corporate governance and profitability to corporate CSR disclosure. *International Journal of Arts and Commerce*, 1(7), 29-35.
14. Narwoko & Suyanto. (2015). *Sosiologi Teks Pengantar and Terapan* (4 ed.). Jakarta: Prenadamedia Group.
15. Nathania. (2014). Pengaruh Komposisi Dewan Perusahaan Terhadap Profitabilitas Perusahaan. *Finesta*, 2(1), 76-81.
16. Nugraheni & Permatasari. (2016). Perusahaan syariah and pengungkapan corporate social responsibility: Analisis pengaruh faktor internal and karakteristik perusahaan. *Jurnal Akuntansi and Auditing Indonesia*, 20(2), 136-146.
17. Sudana & Arlindania. (2011). Corporate governance and pengungkapan corporate social responsibility pada perusahaan go-public di bursa efek Indonesia. *Jurnal Manajemen Teori and Terapan| Journal of Theory and Applied Management*, 4(1).
18. Sujianto. (2001). Analisis Variabel-variabel yang mempengaruhi struktur keuangan pada perusahaan Manufaktur yang Go Publik di Bursa Efek Jakarta. *Jurnal Ekonomi and Manajemen*, 2(2), 125-138.
19. Suwito & Herawaty. (2005). *Analisa Laporan Keuangan* (4 ed.). Yogyakarta: Liberty.

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## **POTENTIAL AND PERCEPTION OF COMMUNITY IN MANAGING LATUPPA AGRO-ECOTOURISM AREA IN PALOPPO**

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### **ABSTRACT**

Latuppa Area has great natural resources potential to develop. There has been environmental damage happening lately. Agro-ecotourism concept can be used to reduce the damage. Latuppa Area is located in Palopo City and it belongs to protected forest and recharge area at an elevation of 200 meters above sea level (masl). Besides that, this area is also a water resource for Palopo people. The development of Latuppa potential should be well managed by prioritizing environmental education and local community empowerment. In order to achieve a well management of area, data collection about the perception of the local community, visitors and stakeholders is needed. This study aims to describe potential and support of Latuppa Agro-ecotourism and to know the perception of the local community and the practitioners in managing Latuppa agro-ecotourism area in Palopo City.

### **KEY WORDS**

Agro-ecotourism, Latuppa potential, community's perception, Palopo City.

Palopo is a city which is located in South Sulawesi Province. Previously, Palopo was an administrative city since 1986 and a part of Luwu District which transformed into city region in 2002 based on the Act No. 11, 2002 in 10 April 2002. Geographically, Palopo is located between 2° 53' 15" - 3° 04' 08" S and 120° 03' 10" - 120° 14' 34" E. Palopo's administrative width is about 247,52 Km<sup>2</sup> or the same with 0,39% of the South Sulawesi Province's width. Palopo, with its location in the coastal area, is mostly lowlands which is about 62,85% of the total width of Palopo, showing that the region is located at an elevation of 0 - 500 masl. About 24,76% of the region is located at an elevation of 501-1000 masl and the rest which is about 12,39% is located at an elevation of 1000 masl.

The natural resource in Palopo has a very great potential to develop. It covers the forests which has many benefits for human life. Affandi and Patana (2002) stated that based on the shape, forests can be classified into two: tangible benefits and intangible benefits. The tangible benefits are the woods/logs, forest products and many others. Intangible benefits are the water regulation, recreation, education, environmental comfort and etc.

Generally, in tourism development, there is a term of sustainable tourism. Sustainable tourism is considered as a step to manage resources socially and economically and can be done by preserving the cultural integrity, basic ecology process, biological diversity, and other life support elements, by optimizing the potential of a

tourism area. One of the efforts of optimum local resources utilization is by developing tourism using the concept of ecotourism (Satria, 2009).

The potential of tourism, lately, is mostly related and used to solve the problems which have been facing by the world such as the natural resources loss and other environmental issues. One of the efforts of optimum local resources utilization is by developing tourism using the concept of ecotourism (Satria, 2009). Tourism cannot be separated with conservational efforts, local economy empowerment and support on higher respect of cultural differences. This underlies the difference between ecotourism concept and the pre-existing conventional tourism model.

Ecotourism is a nature-based tourism trip which depends very much on the nature, environment, ecosystem and its local wisdom that should be preserved (Yoeti, 2008). Indonesian Tourism and Culture Department (2009) stated that ecotourism is aimed at enjoying and learning the nature, history and culture at a region which the tourism pattern helps its local community's economy and supports the nature preservation.

The management plan of an area in terms of agro-ecotourism needs accurate and representative data. The data have to be based on the situation and recent condition. One of the basic data which is needed to collect is the community's perception. A community's perception is a perspective which directs community's respect in dealing with surrounding phenomena. The community has to be involved and considered regarding with their perception in managing the environment. That is why, perception is considered as a basic element which is needed to plan and be known before planning the activities involving the local community. This study aims to describe potential and support of Latuppa Agro-ecotourism and to know the perception of the local community and the practitioners in managing Latuppa agro-ecotourism area in Palopo City.

## **METHODS OF RESEARCH**

The design of the study used in the study of community's and practitioners' potential, support and perception in managing a sustainable agro-ecotourism in Palopo, South Sulawesi is a qualitative method. In the study, a qualitative descriptive analysis was used to know the perception of the practitioners of Latuppa agro-ecotourism in Palopo. the technique of data collection covers the observation, interview with the visitors, practitioners and tourism managers and the stakeholder.

The technique of data collection was:

- Observation, the data collection was done by doing a direct observation on the study respondents;
- The questionnaires, the data collection method was performed by giving some structured written questions to the respondents about their answers on various studied variables in the study;
- Interview, the data collection was to conduct a depth questions and answers with the respondents to obtain the more accurate and complete data regarding with further explanation of the questionnaires.

## **RESULTS AND DISCUSSION**

*The Potential of Latuppa Agro-ecotourism in Palopo.* Based on Pedoman Analisis Daerah Operasi Objek and Daya Tarik Wisata Alam (the Object Operation Area Analysis Guide and the Natural Tourist Attraction) of General Directorate in 2003, the function of the criteria and the indicators is as the base in developing the Natural Tourist Attraction. The aim of developing the criteria was to determine the priority scale of natural tourist attraction and intensifying its utilization and construction. Latuppa Region has a great natural resources potential to develop. The potential is developed with the concept of agro-ecotourism. Latuppa area which is located in Palopo City at an elevation of 200 masl is a protected forest and a recharge area. This area is also a water resource for Perusahaan Daerah Air Minum (the Local Drinking Water Company) in Palopo. Latuppa has objects or potentials which are

developed to be the tourist attraction. The development of Latuppa's potential is managed by prioritizing the environmental education tourism and also local community empowerment, so that the development uses the system of agro-ecotourism.

*The Potential Attraction of the Area.* The potentials of the area which have been the tourism attraction for both Palopo community and the tourist in Latuppa are:

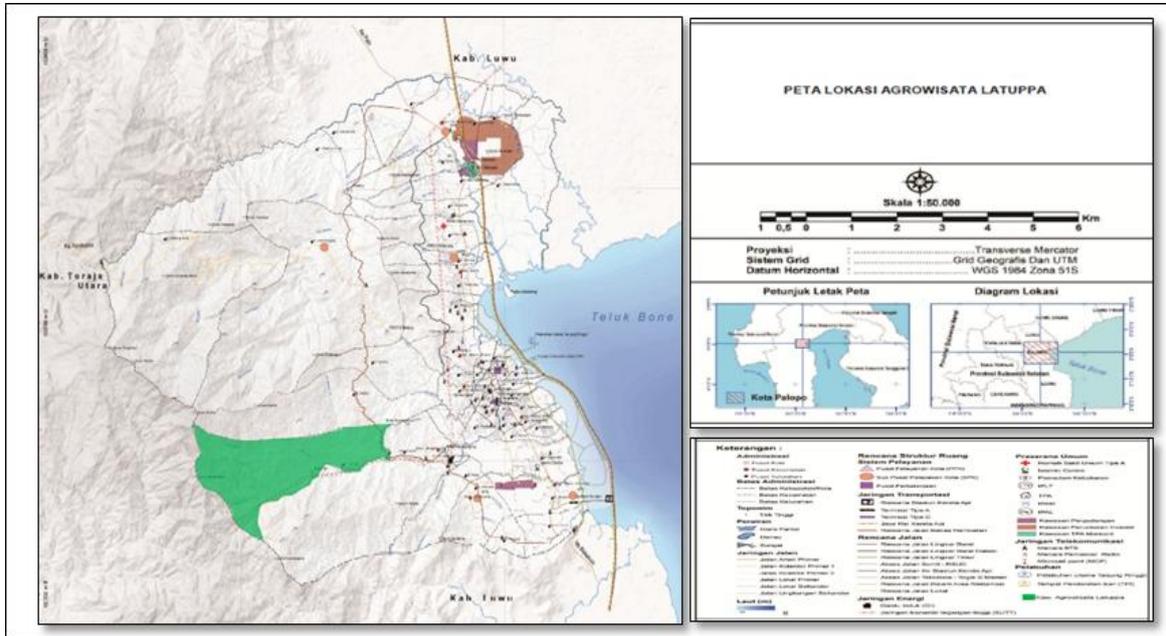


Figure 1 – The Map of the Agro-ecotourism Location of Latuppa

Latuppa produces abundant agricultural products. The agricultural results are bought as agricultural hand-gifts by the visitors or the public society. The type of this tourism object provides plantation products such are durian, Peta langsung, patikala, dangen and sagu making process. These plants are special plants in Luwu which have great potential to develop. The local community empowerment can be done to raise the economic prosperity of Palopo local community.

Peta indigenous Area also has potential in culinary, both food and drinks, to develop. The types of food are Sokko Sikapa, Peong (Lemmag), Duku fruit, Peta langsung, and Trigona honey. Trigona honey is special honey of the indigenous community which is starting to extinct and is difficult to find. In order to overcome this issue, a cooperative work between trigona honey farmers and the local government in order to support honey management or other local food to attract visitors in Latuppa is needed.

The indigenous area of Peta also provides the products for the visitors. The types of crafts are alas piring ijuk (the plate coaster made of coconut fiber) known as Lakka, Baka (basket made of bamboo), banga (plate made of maja fruit). Based on the potential of the crafts in indigenous area of Peta, workshop and empowerment for those who have skill in making the crafts can be conducted in the community. This, of course, needs support from the government.

The recreational parks in local area are Tandung Waterfall and Salo Kassi Tandung Waterfall. Until nowadays, the community has not understood the management and development of this tourism location. Thus, they tend to do the farming and agriculture. However, the area has not been managed maximally and that makes the area unpopular to the public. The potential possessed by the area is very great. Therefore, cooperation between the community and the government or related stakeholders is needed, so that the management and the development of the area can be improved.

This area also has Peta Indigenous Village which can be made into cultural and history tourism object. The indigenous people know cultural history of Peta, its law and regulation

and Peta indigenous cultural group. Traditional houses or the heritage of Peta should be preserved, so that the history and the culture do not distort and get extinct. It is also hoped that the young generation comprehend and preserve the cultural heritage.

Accessibility is defined as how easy people access or get to the objects, service, or environment. The access can be in terms of the constructions, environment, and other public facilities. Latuppa and Palopo is quite close with distance of  $\pm 10$  Km and good infrastructure. To get to Latuppa, cars or motorbikes can be used. Latuppa is not very far from Airport of Port. The access or trip from Airport Bua to Latuppa takes 30 - 40 minutes or 23 km. The distance of Tanjung Ringgit Port and Latuppa is about 13 km. This easy-to-get distance to Latuppa can be attraction to public to come and visit Latuppa agro-ecotourism.

The availability of accommodation in tourism area is an important factor for the visitors, so that they can stay in the area. MacKinnon et. al. (Ginting et. al., 2015) stated that accommodation is one of the factors that attracts the visitors to come to a place. Latuppa agro-ecotourism area also provides hotel or resorts for the visitors where they can stay in Palopo because Latuppa is not far from Palopo.

There are interesting tourism objects for tourist in Latuppa. Infrastructure and facilities are important for Latuppa Agro-ecotourism development such as providing convenient facilities for the visitors. The provided facilities are:

- The main facilities in the development of Latuppa agro-ecotourism are: tourism-aware group which is active in developing and managing Latuppa waterfall tourism object;
- The public facilities are: security post, bathrooms, changing rooms, garbage bins, parking lots, information and regulation boards and gazebos;
- The supporting facilities are hotels, warung (small shops), and kiosks.

*The Community's Perception towards the Management of Latuppa Agro-Ecotourism Area in Palopo.* Tourism in Indonesia nowadays directs mostly on natural tourism which includes natural and marine tourism. This means that the tourism object that are mostly visited are the natural objects which are many in Indonesia. Therefore, natural tourism covers environment condition. Thus, the beauty, originality, comfort, and cleanliness of the tourism objects become the important indicators for further development of a tourism object. Palopo has abundant natural and cultural resource potential to develop such as: Langkanae Traditional House, Batara Guru Museum, Sampoddo' Hill, Labombo Beach, Songka Beach and Latuppa tourism Village (Senna, 2014). One of the aspects which supports the natural resource potential is the close access to get to Latuppa from Palopo with very good infrastructure. This easy-to-get distance to Latuppa can be attraction to public to come and visit Latuppa agro-ecotourism.

The perception of the visitor is the visitors' view or judgment on something. A tourism object should improve its quality to get better to get a positive perception. Perception in tourism is opinion of the visitors to understand a tourist destination. Tourists' perception is one of important things in developing a tourist destination. Something liked, demanded, or desired by the visitors of a tourist destination is important in tourism object marketing (Warpani, 2007).

Based on the interview about perception of tourism area attraction in Palopo City, about 53,3% of the people think that the place, mostly the natural view, is attractive. In terms of the plants, 53,3% of them said attractive, 40% of them said fairly attractive. In terms of the animals, they said that it was less attractive. This because there are not many animals in the area. In category of waterfall, 73,33% of the people said it was very attractive. It is because the potential owned by the area is very good where it is still natural and beautiful. There is also an attractive footpath to walk on.

Based on the interview on the visitors' perception on the accessibility, it is revealed that they think that it is supportive. It can be seen from the footpath at Latuppa Waterfall that gives easy access for the visitors to get to the attraction spot. The condition of tourist attraction entrance with the highest score in supportive category is 53,3 %. The access from Palopo to Latuppa is quite close with distance of  $\pm 10$  Km with very good infrastructure and the availability of the road signs to Latuppa area. This is in category of fair with the percentage of 40%. However, the availability of the transportation facility to the tourist area is

in category of less supportive with the percentage of 53,3%. This is because the only transportation to get to Latuppa area is ojek (taxibike). Other public transportations have not reached Latuppa area.

Table 1 – The Perception about Tourist environment attraction

No	Tourist attraction	Very attractive (%)	Attractive (%)	Fairly attractive (%)	Less attractive (%)	Not attractive (%)	Jlh (%)
1	Natural scenery	53,33	33,3	13,33	-	-	100
2	Plants/flora	6,667	53,3	40	-	-	100
3	Animals/fauna	-	40	53,33	6,667	-	100
4	Rivers/waterfall	73,33	13,3	13,33	-	-	100
5	Water attraction (swimming pool, water park)	20	40	40	-	-	100
6	Footpath/bridges	33,33	53,3	13,33	-	-	100

Source: The Result of the study in 2018.

Table 2 – The Perception on the access to get to tourist attraction

No	Infrastructure/accessibility	the Condition of accessibility					Jlh (%)
		Very supportive	Supportive	Fair	Less supportive (%)	Not supportive	
1	The Road Entrance of Tourist location	26,67	53,3	20	-	-	100
2	The availability of the transportation	6,667	13,3	26,67	53,33	-	100
3	The road signs	13,33	33,3	40	13,33	-	100

Source: The Result of the study in 2018.

The visitors' satisfaction and comfort in enjoying the scenery in Latuppa tourism area are categorized as very satisfied with the highest percentage 46,4%. This is based on the results of the interview with the visitors who think that the available facilities in Latuppa tourism area are already good, yet it needs to be improved and managed by the managers of the place. Latuppa tourism area still has a preserved nature with flora and fauna species diversity with the percentage of comfort of 46,6% categorized as fair. There is a tracking path or footpath along the riverbanks to waterfall. The river is still clean. This makes the highest point which is in satisfied category with percentage of 60% and 66,6%. This gives comfort to the visitors.

Table 3 – The level of tourists' comfort

No	Activities	Infrastructure condition					Jlh (%)
		Very satisfied (%)	Satisfied (%)	Fairly satisfied (%)	Less satisfied (%)	Not satisfied (%)	
1	Enjoying the scenery	46,67	40	13,33	-	-	100
2	Observing the animals and plants	-	33,3	46,67	20	-	100
3	Walking down the footpath	26,67	60	13,33	-	-	100
4	Walking down and enjoying the river/other water attraction	33,33	66,7	-	-	-	100

Source: The Result of the study in 2018.

## CONCLUSION

There are various potentials obtained from the study, starting from the natural resource to good human resource. Surely, they need attention, the local government's roles to synergize with the local community in developing the agro-ecotourism in Latuppa to increase the numbers of visitors or tourists.

According to the community's perception, the management of agro-ecotourism in Latuppa area which covers the accessibility, facilities and infrastructure meets the demand. However, there are many of the society who demands the new tourist attraction to attract the tourists. The improvement of the tourists' area should consider the potential owned by the area for the sake of good management and better tourist attraction.

## REFERENCES

1. Affandi, O., and Patana, P. 2002. Perhitungan Nilai Ekonomi Pemanfaatan Hasil Hutan Non-marketable oleh Masyarakat Desa Sekitar Hutan Studi Kasus Cagar Alam Dolok Sibual-buali, Kecamatan Sipirok, Tapanuli Selatan). Laporan Penelitian. Program Ilmu Kehutanan – Universitas Sumatera Utara. Tidak diterbitkan.
2. Satria, D. 2009. "Strategi Pengembangan Ekowisata Berbasis Ekonomi Lokal dalam Rangka Program Pengentasan Kemiskinan di Wilayah Kabupaten Malang". Di Journal of Indonesian Applied Economics. Vol 3: 2087 - 2852
3. Yoeti, O. A. (2008). Perencanaan and Pengembangan Pariwisata. Jakarta: PT. Pradnya Pramita.
4. Departemen Kebudayaan and Pariwisata Indonesia. (2009). Prinsip and Kriteria Ekowisata Berbasis Masyarakat. Jakarta: Departemen Kebudayaan and Pariwisata Indonesia RI.
5. Senna, A. M. 2014. Analisis Potensi Pariwisata dalam Pelaksanaan Otonomi Daerah di Kota Palopo. Skripsi. Jurusan Ilmu Politik and Ilmu Pemerintahan Fakultas Ilmu Sosial and Ilmu Politik Universitas Hasanuddin, Makassar.

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**THE EFFECT OF COMMUNITY PARTICIPATION AND ROLE OF REGIONAL GOVERNMENT AND PRIVATE SECTOR TOWARDS THE SUCCESS OF TOURISM VILLAGE: A CASE STUDY IN AMBENGAN VILLAGE AS A TOURISM VILLAGE IN SUKASADA DISTRICT OF BULELENG REGENCY, INDONESIA**

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**ABSTRACT**

Tourism village as one of the destinations for diversifying tourism destinations increases the participation of the society in tourism activities in each region in order to realize a prosperous society. This research was conducted in Ambengan Village, Sukasada District, Buleleng Regency to analyze community participation, the role of regional government and the private sector to oppose the development of the tourism village. The results of this study indicate community participation, the role of regional government and the role of the private sector which have a positive and significant effect on the success of the tourism village. The role of regional government has a positive and significant effect on public participation and the role of the private sector. The role of regional governments is directly and positively related to the success of the tourism village through community participation. The role of regional government is directly and positively related to the success of a tourism village through the role of the private sector.

**KEY WORDS**

Community participation, regional government, private role, tourism, village.

One of the policies of the Bali Provincial Government in the tourism sector is the tourism village development program. Tourism village as an effort to diversify tourist destinations, and increase the role of the society in tourism development in their respective regions in order to create a prosperous society. The success of developing tourism village requires the support and the acceptance from local societies (Wearing, 2000 in Dewi, 2014). So, the neglect of community participation will lead to the failure of the development of the tourism village itself (Dewi, 2014). Community participation in the development of tourism village is in line with the development of community-based tourism. Through the development model of community-based tourism, it is believed that it can strengthen the ability of rural societies to manage tourism resources where societies are fully involved. According to Arnstein in Dewi (2013) participation is a strength that is owned by the society to solve problems in the present. Then, a better life can be achieved in the future.

In addition to the role of government and community participation in the development of tourism, the role of the private sector is also needed. The role of the private sector includes in the effort of integrated promotion between tourism managers, manufacturing and marketing tour packages, holding various training and running businesses that support tourism activities.

The advantage to being achieved through the establishment of the tourism village include improving village infrastructure, improving the quality of settlements, increasing income, improving the quality of human resources (HR), transferring knowledge to the society, decreasing urbanization which in turn encourages improvement in societies' welfare (*Disparda Bali*, 2013).

Buleleng as one of the regencies in Bali Province has the highest poverty rate in Bali. It participating in developing its village and has the potential to be developed as the tourism village. This is an effort to diversify tourist destinations that are expected to increase the

visitors, while at the same time having an impact on the welfare of the society which is still concentrated in the south of Bali.

Furthermore, Ambengan village is one of the tourism villages in Buleleng regency which has a superior tourism potential such as waterfalls, the panorama of rice fields, and handicrafts of banana midribs in the form of photo albums and woven bamboo crafts. Ambengan Village as one of the tourism villages in Buleleng regency was determined through the Buleleng Regent Decree no. 430/927 / HK / 2015 on December 21<sup>th</sup>, 2015.

The problems that arise in the Ambengan village include accessibility and amenities. As in Bukit Balu waterfall, the sub-district agency of Bukit Balu is still difficult to be accessed by a car. It is due to the unfavorable terrain. To reach the Bukit Balu waterfall in Bukit Balu Hamlet, the visitors have to travel about 800 meters by walking from the parking area. Even though toilet facilities have been available as a dressing room, but the location is far away from the waterfall. It cannot be utilized according to their designation. Besides, the problems also arise related to the quality of human resources. The low quality of human resources is caused by members of tourism conscious groups and managers of tourist attraction which is dominant as the farmers. Promotional efforts related to the existence of tourism village are still lacking. However, cooperation with relevant stakeholders is needed to make the Ambengan village can be better and possibly known not only by domestic tourists but also by foreign tourists (rri.co.id, 2017).

Although it has been designated as a tourism village since December 21, 2015, and it has been given guidance on tourism awareness groups, also several times physical assistance from both the central government and the provincial government, but the success of Ambengan as a tourism village has not been maximal as what it expected before.

## LITERATURE REVIEW

Tourism village is a region with a certain area and has the unique potential of a unique tourist attraction with its community that is able to create a combination of various tourist attractions and supporting facilities to attract the visitors (Director General of Tourism Destination Development, 2014)

While Nuryanti (1993) defines tourism villages as a form of integration between attractions, accommodations, and other supporting facilities presented in the structure of societies' life with the prevailing traditions.

Tourism village development is a process that urges the ways to develop or promote tourism villages (Pearce, 1995). Develop tourism villages to complement needs and improve tourist facilities to meet tourist needs. Tourism villages should fulfill four main components, namely attraction, accessibility, amenities, ancillary (supporting factors) which is included the availability of an organization and human resources supporting tourism activities (Cooper et al. 2005).

The definition of regional government as stipulated in Law number 23 of 2014 stated that regional government is the regional head and other autonomous regions as regional executive bodies. Furthermore, the regional government is a government agency that knows the potential of the region and the needs of the local people.

According to Adisasmita (2006), community participation in the social empowerment which plays a role in the activities of planning and implementing development programs or projects, it also the actualization and willingness of the community to sacrifice and contribute to the implementation of development programs.

As stated by Huraerah (2008), the form of community participations is ideas participation, labor participation, properties, skills of participation, and social participation.

Increasing the role of the private sector is one of the government's efforts in fulfilling excellent infrastructure and services to society (Manupassa, Erine Aneta, 2011). The development of tourism potential can be done by building cooperation between the regional government and the private sector based on the consideration of efficiency and effectiveness.

In the management model of tourism resources based on the community participation, the private sector as the investors, other tourism actors, including universities and non-governmental organizations (Dewi, 2013).

According to Sumodiningrat (1999), participation is an element of development in the process of human adaptation to ongoing changes. The prerequisites for the sustainable development process including all of the society at each stage of development.

In the Law of the Republic of Indonesia, Number 10 of 2009 concerning tourism stated that one of the principles in the implementation of tourism is must be able to empower the local society. So that the community is an important component which must be considered by involving them in the tourism activities and respecting their priority rights.

Tasci in Suasapha (2015) argues that the success of community-based tourism is when it is able to provide the economic benefits in the form of increasing the society income through the benefits in business and employment opportunities, alleviating poverty, restoring economic conditions and improving the infrastructure.

Community-based tourism (CBT) is the structure of the community-based tourism industry and local communities who are considered as owners (Cavaye, 2000, in the team for tourism development economic research, 2014).

Community-based tourism development requires the collaboration between parties such as government, society, tourism businesses, non-governmental organizations (NGOs), universities and research institutions (CIFOR, 2004).



Figure 1 – The Framework for tourism village development program

## METHODS OF RESEARCH

Based on the literature the following research hypothesis can be formulated as below:

- Community participation, the role of regional government and the role of the private sector has a positive and significant impact on the success of Ambengan tourism village in Sukasada district, Buleleng Regency.
- The role of the regional government has a positive and significant impact on community participation in Ambengan as the tourism villages.
- The role of regional government has a positive and significant impact on the role of the private sector in the village of Ambengan.
- There is an indirect impact on the role of regional governments in the success of Ambengan tourism villages through community participation.
- There is an indirect impact on the role of regional government in the success of Ambengan tourism villages through the role of the private sector.

The method used in this analysis was a quantitative method. The technique used test of data instruments that include validity and reliability tests. This study used Partial Least

Square (PLS) which consists of a measurement model or outer model and structural model or inner model.

In this study, the subjects of the research were the Ambengan villagers. It focused on the characteristics of the research subjects, namely the local society who played a role in the tourism village. The Ambengan villagers who played a role in the tourism village included the *Banten Sari* tourism group which consists of 24 people. In addition, the community leaders of Ambengan Village are also considered to be able to represent the characteristics of the research subjects. Emphasis on the community leaders in Ambengan village as the person who capable of representing the opinions of the people stated that they represent and can provide positive input for the progress and villagers welfare. Community leaders in Ambengan Village consist of formal and informal figures. A formal community figure is someone who is named because of his position or position in the government. An informal community figure is an informal leader in his community who is appointed by the will of his community. To strengthen the results of the research survey, the opinion of the Village Devices and Members of the Village Consultative Body (BPD) of Ambengan Village is also very necessary.

The dependent variable in this study is community participation that plays a role in tourism villages (X1), the role of the private sector (X3) and the success of tourism village (Y1) from the role of regional government (X2).

The independent variable is community participation that plays a role in tourism village (X1), the role of regional government (X2), and the role of the private sector (X3) on the success of Tourism Village (Y1).

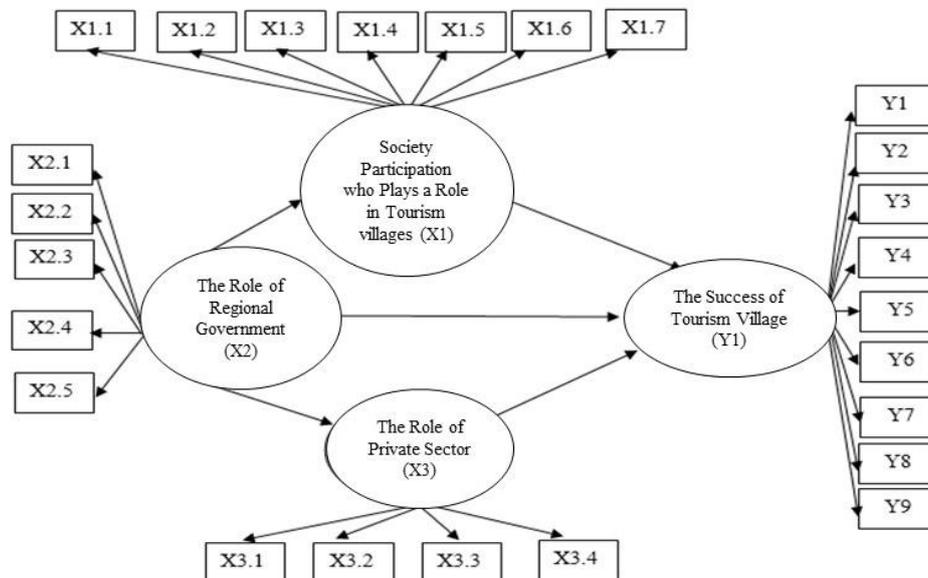


Figure 2 – The Framework of research and inter-variable relationships

## RESULTS AND DISCUSSION

The total determination coefficient of the structural equation from this research model shows that 77.6 percent of the success variables of tourism village can be explained by the research model, while the data which excluded is explained by other variables outside the research model.

The results of hypothesis testing indicate that community participation in tourism villages has a positive and significant effect on the success of tourism village in Ambengan tourism village with a regression coefficient of 0.472. The role of regional government has a positive and significant effect on the success of Ambengan tourism village in Buleleng Regency by looking at the regression coefficient of 0.219. The private sector also has a

positive and significant effect on the success of ambengan tourism village in Buleleng Regency by looking at the regression coefficient of 0.337.

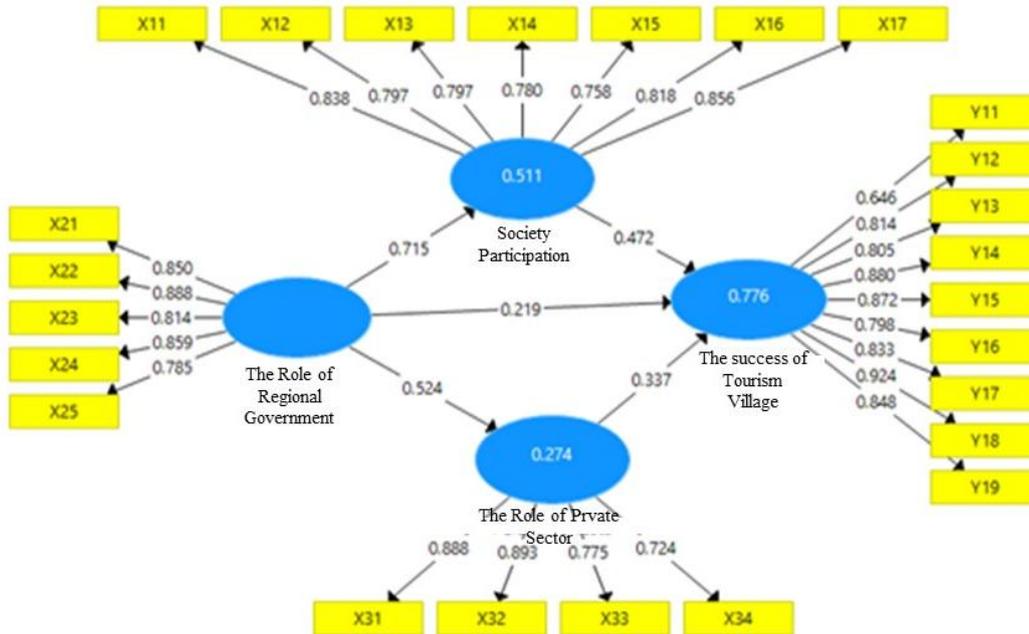


Figure 3 – Full model of estimates result society participation impact, the role of regional and private governments on the success of tourism villages

The role of regional government has a positive and significant effect on community participation that plays a role in the tourism village with a regression coefficient of 0.715. The role of regional government has a positive and significant effect on the role of the private sector in the tourism village with a regression coefficient of 0.524.

Table 1 – Direct impact inter-variable

Relation of inter-variable	Loading	Sterr	Tstatistik	p value	Ket
(X1) → (Y1)	0.472	0.105	4.498	0.000	Sig
(X2) → (X1)	0.715	0.087	8.188	0.000	Sig
(X2) → (X3)	0.524	0.116	4.507	0.000	Sig
(X2) → (Y1)	0.219	0.107	2.048	0.041	Sig
(X3) → (Y1)	0.337	0.102	3.290	0.001	Sig

The variable role of regional government (X2) which influences the success of tourism village (Y1) in Ambengan village, Buleleng Regency through the mediating role of community participation in the tourism village has a loading value of 0.337 while the role of regional government variables on tourism village success (Y1) through mediation the private role has a factor loading of 0.177.

Table 2 – Indirect impact inter-variable

Relation of inter-variable	Original Sample	Sterr	T Statistik	P Value
(X2) → (X1) → (Y1)	0.337	0.086	3.908	0.000
(X2) → (X3) → (Y1)	0.177	0.069	2.549	0.011

## DISCUSSION OF RESULTS

The results of the analysis in this study show that the influence of community participation on the success of Ambengan tourism village is positively and significantly influential. This is in line with the results of research by Rafael Modestus Ziku (2013) stated that community participation in the development of eco-tourism in *Komodo* Island was analyzed by qualitative descriptive analysis techniques that were positively valued. Positive community participation is due to the great motivation to obtain economic benefits from eco-tourism both related to increasing community income from eco-tourism businesses as well as the opening of new employment opportunities for the society. It also supported by stakeholders who play a role in motivating community participation.

In Mertha's research (2015) it was proven that the local community participation had a positive and significant impact on the quality of the destination of *Batur Geopark Kintamani*. It confirms the opinion of Tosun (2003) that the importance of community participation from the planning and development stages of tourism. So that the benefit can directly be given from tourism activities which in turn encourages the society to play an active role in the preservation of local resources. "Community participation increases tourist satisfaction", that has good support and acceptance from the society will create a positive impression for the visitors.

Community participation that plays a role in the Ambengan tourism village includes participation in ideas and labor participation. Community participation shows that community involvement in the development of tourism villages has been from the planning stage, through donations of thoughts on each socialization related to the development of tourism village plans. Likewise, with participation in the form of energy, through physical support in the construction of parking facilities in Jembong Waterfall and mutual cooperation on a regular basis in an effort to maintain the cleanliness of the village. In addition, the local people work together to make roads independently to Bukit Balu waterfall. The Ambengan tourism village program has been well socialized by the regional government to the local society. The high level of community participation in Ambengan tourism villages is due to the benefits obtained in the form of increased employment opportunities and increased income for the local society. The Head of Ambengan Village says that:

"A huge community participation in Ambengan tourism village in realizing village cleanliness is also one of the attractions for the tourists. A clean, beautiful and neatly arranged environment will create good impressions or memories for the tourists who are the embodiment of the "Sapta Pesona" (seven charms)".

The hypothesis shows that the role of the regional government has a positive and significant impact on the success of the Ambengan tourism village in Buleleng Regency. It proves that the seriousness of the regional government in realizing Article 4 of the Bali Cultural Tourism Regional Regulation No.2 of 2012 to improve the welfare of the Balinese people equally and sustainably through the development of tourism villages.

This research is in line with Bahagia's research (2008) that the regional government plays a role in the rehabilitation of mangrove forests in Baitussalam District. The planning for the rehabilitation of mangrove forests is carried out by the government supported by the assistance of donor agencies or NGOs. The government provides formal and non-formal counseling to the community to increase public understanding of mangrove conservation.

The regional government as a facilitator has provided assistance in the form of gradual physical infrastructure improvements in the Ambengan village which preceded by paving the road to the waterfall in December 2017. In terms of human resource development for the local society, the guidance has been carried out for tourism conscious groups from both the provincial and the district government.

The results showed that the role of the private sector had a positive and significant impact on the success of Ambengan tourism village in Buleleng Regency, the role of the private sector was very helpful in the success of Ambengan tourism village.

According to Dewi (2013), the community-based tourism resource management model is a synergy of stakeholders, such as the government, the society and the private sector that

is directed and responsible according to their respective roles. Private in this model are not only elements of investors and tourism business players but also the elements of NGOs and universities. Likewise, increasing the role of the private sector is one of the government's efforts to fulfill the infrastructure and excellent service to the community based on efficiency and effectiveness (Manupassa, Erine Aneta, 2011).

Furthermore, some universities have conducted training such as English language training for local people involved in tourism activities. For example, Ganesha Education University (Universitas Pendidikan Ganesha), as well as the Nusa Dua Tourism College (Sekolah Tinggi Pariwisata Nusa Dua). They also made a brochure to promote tourism in Ambengan Village as one of its service activities to society.

The results of this study indicate that the role of regional government has a positive and significant effect on community participation that participates in tourism village. It confirms the opinion of Pitana and Gayatri (2005) which said the regional government serves to provide motivation in the development of tourism for the investors and tourism entrepreneurs. Tosun (2003) emphasized that community participation helps professional tourism design better tourism plans which through involving community participation will help planners or governments to design better forms of tourism.

The role of regional government in Ambengan village through their efforts to increase community participation in tourism activities by building cooperation with universities. The cooperation is in the form of community service activities in Ambengan tourism village. It has been done by the College of Tourism (Sekolah Tinggi Pariwisata) and Education University of Ganesha (Universitas Pendidikan Ganesha) which has given the training of some foreign language to the local society.

The results of this study showed that the role of the regional government had a positive and significant impact on the private role in Ambengan tourism village. These results also indicate that the role of the regional government represented by respondents determines the strength of the private role in the Ambengan tourism village of Buleleng Regency. In Manupassa's research (2011) emphasized that increasing the role of the private sector is one of the government's efforts to fulfill infrastructure and excellent service to the society based on consideration of efficiency and effectiveness. In the development of tourism villages, the community-based tourism resource management model meant by the private sector includes investors, tourism business actors, universities and NGOs (Dewi, 2013).

Moreover, the results of this study also indicate that the role of the regional government has a positive and significant indirect impact in the success of Ambengan village in Buleleng Regency through community participation which plays a role in tourism villages.

After all the explanation above, there are some strength and the weakness of community participation that plays a role in tourism villages which be able to influence the success of Ambengan tourism village. In line with the statement of the Director General of Tourism Destination Development (2014), the existence of tourism villages which is diversification of tourism products aims to involve the community in tourism activities. Economic activities in rural areas based on tourism activities will minimize the potential for the urbanization of people from rural to urban areas.

The role of the regional government was affirmed by Munir (2010) as the coordinator who embraced the community to become the actors in the development. Morgan's statement in Mertha (2015) emphasizes the role of government in the formulation of policies can give the benefit for the minority community through empowering local communities.

The *Bali Mandara* volume 2 program in the field of tourism raised up Ambengan village as the tourism village. The development of the Ambengan tourism village which aims to increase community participation in tourism development can work together and make the relevant cooperation with the stakeholders in improving the quality of tourism development in the region. The success of Ambengan tourist villages requires the participation of local society who must be consistently motivated by the regional government.

The significant influence of the role of the regional government through community participation in the success of Ambengan tourism village is greater than the significance of

the direct influence of the role of regional governments on the success of Ambengan tourism village. Mr. Gede Suberta, the Head of Ambengan village stated that:

“The duty of the regional government in realizing the success of Ambengan tourism village is quite complex. There are many things still need to be prepared, such as the infrastructure, improving the quality of human resources and providing amenities. Through regular community participation in carrying out mutual cooperation activities every week and months of annual community service activities, the Ambengan tourism village can be well organized and maintained. The provision of parking around the tourist attractions of Jembong Waterfall and Pebantenan Waterfall by the local society is one form of efforts to provide amenities in Ambengan tourism village. Through open the road access to Bukit Balu Waterfall is also carried out independently and works together with the society. They are very enthusiastic in receiving training from universities that are conducting community service activities. Certainly, good community participation will be able to increase the success of Ambengan tourism village”.

The results of this study show that the role of the regional government has a positive and significant indirect impact in the success of the Ambengan tourism village in Buleleng Regency through the private role.

From the other perspective, Mr. Made Suneka as the coordinator of tourism group in Sub-district Jembong (Banjar Dinas Jembong) stated that:

“The private sector which is from universities helps the development of tourism in Ambengan tourism village. The intended universities include the University of Education Ganesha and the *Nusa Dua Bali* Tourism College. Through community service activities, students provide foreign language training, especially English. They make a trekking tour package brochure for Jembong Waterfall and Aling-Aling Waterfall. The activities that have been carried out by the students are quite helpful in the effort to increase the human resources and the marketing of Ambengan tourism village”.

## CONCLUSION AND RECOMMENDATIONS

Based on the foregoing discussion, the conclusion of this study is explained as follows:

- Community participation, the role of regional government, and the role of the private sector have a significant impact on the success of Ambengan tourism village. If community participation, regional government and the role of the private sector increase, it will increase the success of Ambengan tourism village in Sukasada District, Buleleng Regency too;
- The role of the regional government has a significant impact on community participation in Ambengan tourism village. If the role of the regional government increases, community participation in Ambengan tourism village also increases;
- The role of regional government has a significant impact on the role of the private sector in Ambengan tourism village. If the role of regional government increases, the role of the private sector in Ambengan tourism village also increases;
- The role of the regional government has an indirect impact on the success of Ambengan tourism village through the community participation;
- The role of the regional government has an indirect impact on the success of Ambengan tourism village through the role of the private sector.

Based on the results of this study, there are suggestions that explained as below.

To improve the accessibility which focuses on the widening rebates of Jembong Waterfall, it needs an effort to repairing and widening the narrow road to the waterfall in Sub-district of Pebantenan (Banjar Dinas Pebantenan). Then, the road to Bukit Balu Waterfall which is still difficult to reach by vehicles is also need to be repaired. Moreover, the realization to expand the parking area must be done immediately in order to provide the service of the tourist attractions.

The effort of regional governments to realize the success of Ambengan tourism village from an element of amendment to make improvements and additions to supporting tourism activities such as toilets, fitting rooms, gazebos and counter tickets.

The effort of the regional government to realize the success of Ambengan Tourism Village from the element of tourism resources should be able to provide various tourism training that is carried out continuously.

The regional government needs to make the cooperation with travel agents in order to promoting and marketing Ambengan tour packages. It can be promoted through the digital media by creating a website of Ambengan tourism village. It is an effort that can be realized besides conducting meetings, social gathering, and festivals in Ambengan Tourism Village.

In realizing the success of Ambengan tourism village, especially in the tourist attraction sector, the community participation should be enriching the local cultural tourism as the routinely art performance for tourists. The local cultural tourism mentioned namely *Rejang Dee* dance, *Truna* dance and *Mabuang* dance. Those are sacred dances which are danced during the big ceremony (piodalan agung) in *Desa temple* and *Bukit* temple. However, tourists who want to take a closer look can come to the temple with traditional customs.

In realizing the success of tourism villages from attractions and amenities sector, the community participation should be make and sell souvenirs from Ambengan village. It can be a promotional tool in the tourists' hometown. The souvenir mentioned is the village community crafts which usually make photo albums from banana midribs, vegetable baskets and hollow baskets.

In realizing the success of tourism villages, the role of private sector should be increase the attractive tourist package and integrate with other tourist attractions around Ambengan tourism village. The form of cooperation can be the package of Ambengan tourist village combined with the activity of enjoy tropical fruits in Bangkiang Sidem Village, or can be combined with visiting Sambangan tourism village. The other package can be the Ambengan tourism village combined with the city tour around Singaraja city, etc.

In order to realize the linkage of Ambengan tourism village with the other villages, the tour package can be collaborated with the tour package of Ambengan dan Sambangan tourism village. This is inseparable from the efforts of the community and the private sector to work hand in hand to realize the diversification of tourist attraction in Buleleng Regency.

The suggested role of the private sector is to carry out activities that are beneficial and can involve the community, like garbage processing activities. If every community has been able to carry out waste management independently it will have a good quality of life as part of the realization of the seven charms (*Sapta Pesona*) which consists of secure, orderly, clean, cool, beautiful, friendly, and memorable.

## REFERENCES

1. Adisasmita, Raharjo. 2006. *Membangun Desa Partisipatif*. Yogyakarta: Graha Ilmu
2. Antara, I Ketut. 2011. "Strategi Pengembangan Pariwisata di Desa Pelaga Kecamatan Petang Kabupaten Badung" (thesis). Denpasar: Universitas Udayana.
3. Antariksa, Basuki. 2012: *Peluang dan Tantangan Pengembangan Kepariwisata di Indonesia: Pusat Penelitian dan Pengembangan Kepariwisata Kementerian Kebudayaan dan Pariwisata*. [online] available from <http://www.kemenpar.go.id> [Accessed 1 Mei 2017]
4. Anwar, Saiful dan Rida Perwita Sari. 2009. *Pengaruh Partisipasi Masyarakat dan Transparansi Kebijakan Publik terhadap Hubungan antara Pengetahuan Dewan Tentang Anggaran dengan Pengawasan Keuangan Daerah*. *Jurnal Strategi Akutansi* [online] Vol.1 Nomor 2 Juli 2009. Available from [http://ejournal.upnjatim.ac.id/index.php/strategi\\_akutansi/article/viewfile/157/131](http://ejournal.upnjatim.ac.id/index.php/strategi_akutansi/article/viewfile/157/131) [accessed 1 Mei 2017]
5. Ardita, I Komang Agus. 2011. "Analisis Faktor-Faktor yang Menentukan Kualitas Kinerja Pelayanan Publik pada Kantor Pelayanan Perijinan Terpadu Kabupaten Jembrana". (thesis). Denpasar: Universitas Udayana.
6. Arnstein, Sherry R. 1969. *A Ladder of Citizen Participation* *Journal of The American Institute of Planners*. [Online] Available from <http://lithgow-schmidt.dk/sherry-arnstein/ladder-of-citizen-participation> en doc [accessed on 6 Juli 2017].

7. Bahagia.2009. "Peran Pemerintah Daerah dan Partisipasi Masyarakat Dalam Rehabilitasi Hutan Mangrove Pasca Tsunami di Kecamatan Baitussalam Tahun 2008" (thesis). Medan: Universitas Sumatera Utara.
8. Basuki, Ananto dan Sofyan. 2006. Penguatan Pemerintahan Desa berbasis Good Governance. Malang: SPOD.
9. Centre For International Forestry Research (CIFOR).2004: Pembangunan Pariwisata Berbasis Masyarakat (Tim Pengelolaan Hutan Bersama Hulu Sungai Malinau). [online] available from [www.cifor.org](http://www.cifor.org) [Accessed 1 Mei 2017].
10. Conyers, Diana. 1991. Perencanaan Sosial Di Dunia Ketiga. Yogyakarta: Gadjah Mada University Press.
11. Cooper, C. Fletcher, J. Gilbert, D.G. and Wanhill, S. 2005. Tourism: Principle and Practice, Third Edition, Harlow. Prentice Hall.
12. Dinas Pariwisata Provinsi Bali. 2017. Data Statistik Pariwisata 2016. Denpasar: CV Persada.
13. Departemen Pendidikan Nasional. .2005. Kamus Besar Bahasa Indonesia.Jakarta: Balai Pustaka.
14. Dewi, M.H.U, dkk.2013. Pengembangan Desa Wisata Berbasis Partisipasi Masyarakat Lokal Di Desa Wisata Jatiluwih Tabanan, Bali. [online] halaman 117-226. Available from <https://jurnal.ugm.ac.id/kawistara/article/download/3976/3251>.
15. Dewi, M.H.U. 2014. "Partisipasi Masyarakat Lokal Dalam Pengembangan Desa Wisata di Kabupaten Tabanan, Bali" (disertasi). Yogyakarta: Universitas Gadjah Mada.
16. Dinas Pariwisata Provinsi Bali dan Program Studi Pariwisata Universitas Udayana, 2003, Studi Pengembangan Desa Wisata Ambengan Berbasis Budaya dan Kerajinan Rakyat. Denpasar: Dinas Pariwisata Provinsi Bali.
17. Direktorat Jenderal Pengembangan Destinasi Pariwisata. 2014. Pedoman Pengembangan Desa Wisata. Jakarta: Kementerian Pariwisata dan Ekonomi Kreatif.
18. Ghozali, Imam. 2011. Structural Equation Modeling Metode Alternative dengan Partial Least Square.Semarang: Badan Penerbit Universitas Diponegoro.
19. Goodwin, H.1996. In Pursuit of Ecotourism, Biodiversityand Conversation, Netherland: Springer.
20. Hadiwijoyo, Suryo S.2012. Perencanaan Pariwisata Pedesaan Berbasis Masyarakat (Sebuah Pendekatan Konsep) 1<sup>st</sup>ed, Yogyakarta: Graha Ilmu.
21. Kali, Agustinus.2011. Analisis Partisipasi Masyarakat terhadap Perencanaan dan Pembangunan PLTMH di Paneki Desa Pombewe Kecamatan Biromaru Kabupaten Sigi. Available from <http://jurnal.untad.ac.id/jurnal>[Accessed 7 Agustus 2017].
22. Kode Etik Kepariwisata Dunia.2009. Available from: <http://www.kemenpar.go.id> [Accessed 1 Juni 2017].
23. Manupassa, Erine Arneta,2011. "Peran Sektor Swasta Dalam Pengembangan Pariwisata Bahari di Kecamatan Nusaniwe Kota Ambon" (thesis). Yogyakarta: Universitas Gadjah Mada.
24. Menteri Pariwisata RI. 2016. Peraturan Menteri Pariwisata Republik Indonesia no.14
25. Mertha, I Wayan,2015. "Partisipasi Masyarakat dan Peran Pemerintah Dalam Mewujudkan Destinasi Pariwisata Berkualitas (Studi di Batur Global Geopark Kintamani)" (disertasi). Denpasar: Universitas Udayana.
26. Muhammad Chusnul Khitam.2012. "Kerjasama Antar Pemerintah Daerah, Swasta, dan Masyarakat Dalam Pengembangan Pariwisata". Journal Universitas Lamongan,[Journal.unisla.ac.id](http://Journal.unisla.ac.id).
27. Nalayani, Ni Nyoman Ayu Hari.2016 "Evaluasi dan Strategi Pengembangan Desa Wisata di Kabupaten Badung, Bali", JUMPA 2{2}:189-198.
28. Nurhidayati, Sri Endah. 2012. "Penerapan Prinsip Community Based Tourism (CBT) Dalam Pengembangan Agrowisata di Kota Batu Jawa Timur". Jejaring Administrasi Publik, [Journal.unair.ac.id](http://Journal.unair.ac.id).
29. Parma, Gede. 2011. Faktor-Faktor Pendorong Partisipasi Masyarakat dalam Festival Pesona Pulau Serangan di Kota Denpasar. [online] available from <https://ejournal.undiksha.ac.id> [ Accessed 10 Mei 2017].

30. Pasaribu Rowland. Pembangunan Daerah. [online] available from rowland\_pasaribu.staff.gunadarma.ac.id [ Accessed 10 Mei 2017]
31. Permanasari, Ika Kusuma.2011. "Pemberdayaan Masyarakat melalui Desa Wisata dalam Usaha Peningkatan Kesejahteraan (Desa Candirejo, Magelang, Jawa Tengah)" (thesis). Jakarta. Universitas Indonesia.
32. Pitana, I Gede. 1999. Pelangi Pariwisata Bali: Kajian Aspek Sosial Budaya Kepariwisata Bali di Penghujung Abad. Denpasar: Balai Pustaka.
33. Pitana, I Gede dan Gayatri, Putu.2005. Sosiologi Pariwisata. Yogyakarta: Andi.
34. Poerwadarminta, W.J.S.2003. Kamus Umum Bahasa Indonesia.Jakarta: Balai Pustaka.
35. Prasiasa, Oka Dewa Putu dan Widari, Diyah Sri Dewa Ayu. 2017. Desa Wisata, Potensi dan Strategi Pengembangan. Denpasar: Pustaka Larasan.
36. Priasukmana, Soetarso dan Mulyadin, Mohamad. 2001. Pembangunan Desa Wisata: Pelaksanaan Undang-Undang Otonomi Daerah. Info Sosial Ekonomi. Vol.2 No.1 (2001) pp..37-44.
37. Pretty, Jules N, 1995. Participatory Learning For Sustainable Agriculture, UK: International Institute for Environment and Development.
38. Rafael Modestus Ziku. 2013. "Partisipasi Masyarakat Desa Komodo dalam Pengembangan Ekowisata di Pulau Komodo, Manggarai Barat" (thesis). Denpasar: Universitas Udayana.
39. Rahadiani, AA. Sagung Dewi, 2014 "Partisipasi Masyarakat sekitar Danau Beratan dalam Konservasi Sumber Daya Air" (thesis). Denpasar: Universitas Udayana.
40. Riska, Wulandari, 2013. "Analisis Partisipasi Masyarakat dan Kepemimpinan Terhadap Tingkat Keberhasilan Proyek PNPM Mandiri Pedesaan Di Kecamatan Gerokgak, Buleleng" (thesis). Denpasar.Universitas Udayana.
41. Sen, Amartya.1999. Development as Freedom. New York.
42. Soekanto, Soerjono. 2009. Sosiologi Suatu Pengantar.Jakarta: Rajawali Pers.
43. Soetrisno, Loekman, 1995. Menuju Masyarakat Partisipatif. Yogyakarta: Kanisius.
44. Suansri, Potjana. 2003. Community Based Tourism Handbook. Thailand: REST Project.
45. Suasapha, Anom Heri.2015. "Implementasi Konsep Pariwisata Berbasis Masyarakat dalam Pengelolaan Pantai Kedonganan sebagai Daya Tarik Wisata" (thesis). Denpasar.Universitas Udayana.
46. Sudiby, Pulung R.2006. Partisipasi Masyarakat Sub Urban dalam Pembangunan Kota Malang. Jurnal Fakultas PertanianUniversitas Muhammadiyah. [online] Available from [http://dp2m.umm.ac.id/files/file/jurnal%20Humanity%20Vol\\_1,%20No\\_2,%20Maret%2006/1\\_%20Rahmad%20Pulung%20Sudiby.pdf](http://dp2m.umm.ac.id/files/file/jurnal%20Humanity%20Vol_1,%20No_2,%20Maret%2006/1_%20Rahmad%20Pulung%20Sudiby.pdf)[accessed 5 Mei 2017].
47. Sugiyono. 2014. Metode Penelitian Bisnis (pendekatan kuantitatif, kualitatif dan R&D). Bandung: Alfabeta.
48. Tim Peneliti Ekonomi Pembangunan Pariwisata. 2014. Penelitian Pengembangan Pariwisata Berbasis Kerakyatan (CBT) Bali Utara dalam Rangka Pemerataan Pendapatan. [online] Denpasar.Universitas Udayana. Tersedia di <http://erepo.unud.ac.id>.
49. Todaro, Michael dan Smith, Stephen. 2009. Pembangunan Ekonomi. Jakarta: Erlangga.
50. Tosun, Cevat dan Timothy, Dallen J.2003.Arguments for Community Participation in the Tourism Development Process. The Journal of Tourism Studies. Vol.14 No.2.
51. <http://www.bps bali.go.id>, downloaded on 12<sup>th</sup> May 2017.
52. <http://www.kemendagri.go.id>. Perkembangan Paradigma Good Governance.2014, downloaded on 8<sup>th</sup> May 2017.
53. <http://kbbi.web.id>, downloaded on 12<sup>th</sup> May 2017.
54. <http://www.kemenpar.go.id>, downloaded on 15<sup>th</sup> October 2017.
55. <http://travel.kompas.com>, downloaded on 8<sup>th</sup> May 2017.
56. <http://www.rri.co.id>, downloaded on 10<sup>th</sup> September 2017
57. <http://www.unescap.org>. What is Good Governance, downloaded on 8<sup>th</sup> May 2017.

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## **FISHERMEN'S PERCEPTION IN SUPPORTING THE USAGE OF SUSTAINABLE FISHING EQUIPMENT IN BANDA SAKTI SUBDISTRICT OF LHOKSEUMAWE CITY**

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### **ABSTRACT**

Indonesian marine waters store abundant potential of non-biological resources. The population of Lhoksumawe consists of fishermen which have 1,827 people, all of whom are engaged in fisheries whose territory and catch are from the Malacca Strait waters. The purpose of this study was to examine the fishermen's perceptions in Banda Sakti Subdistrict, Lhokseumawe City on the utilization of sustainable fishing equipment and analyze the relationship of socio-economic characteristics with fishermen's perceptions of the utilization of sustainable fishing equipment. The method used in this study is a quantitative method that is using the class interval formula to see the level of perception and Rank Spearman correlation analysis to see the relationship that occurs. The results showed the level of perceptions of fishermen on the utilization of sustainable or environmentally friendly fishing equipment is high, with perceptual score values within the range > 224-288. Meanwhile, the socio-economic characteristics that have a relationship with the perceptions of fishermen are in the variables: income, number of dependents and socialization; namely the perception of the level of selectivity and the level of security of fishing equipment. The level of correlation in the income variable and the number of dependents on selectivity fishing equipment has a low level of correlation within the range of 0.20-0.399. Only on the socialization variable on the perception of fishing equipments' security is at a moderate level of correlation; with the correlation coefficient value of 0.571. For other variables, the level of correlation coefficient is very low with a significance value of > 0.05.

### **KEY WORDS**

Socio-economic characteristics, perception, sustainable fishing equipment, Banda Sakti.

The potential of Indonesian marine fisheries is appreciable enough to contribute significantly to fisheries development. The development of fisheries as part of national economic development has objectives: to improve the living standard and the welfare of fishermen and fish farmers. To create such conditions, it is necessary to provide various facilities in obtaining various facilities that can support the success of the fishery business, including the ease of obtaining production facilities or supplies to go to sea and guarantee of marketing. Therefore, there will be efficient process from the production to marketing.

Indonesian marine waters store abundant potential of non-biological resources. There are still many Indonesian waters that have economic potential but have not been adequately managed. In addition, the potential for renewable energy from the sea, such as deep sea water, is still become a challenge to be developed and be utilized in the future. The maritime industry, biotechnology, marine services, salt production and its derivatives, marine biopharmacology, seawater utilization other than energy, submarine pipelines and cable installations, and / or the removal of sinking objects and cargo vessels; are sub-sectors of the sea potential that have not been optimally managed.

The size of the potential and benefits of Indonesia's seas should have become a new driver of Indonesia's economy in the future. Fishing and fish farming activities have also continued to increase since the 1980s, such as the development of marine aquaculture for various types of fish, such as groupers, snapper, and *baronang*; pond cultivation such as shrimp and milkfish; and freshwater cultivation such as goldfish, carp, *pangasius* and others. (Regulation of the Minister of Maritime Affairs and Fisheries No. 25/PERMEN-KP/2015).

Many regulations and supervisions have not been effective in achieving the objectives of sustainable fisheries management. There are still many fishermen who are only concerned with the aspect of catches when they go fishing become an unsynchronous government program on sustainable capture fisheries. For that reason, there needs to be an understanding given about natural sustainability factors for fishermen to synchronize the program.

The Lhokseumawe's population consists of fishermen with a total of 1,827 people, all of whom are engaged in capture fisheries whose territory and catch are from the Malacca Strait waters. Some types of fish produced include tuna, snapper, mackerel, anchovies and several other species. The fishing equipment used by fishermen in Banda Sakti Subdistrict, is quite varied; including fishing nets, fishing rods and trawlers of various sizes. In bringing together fishermen's perceptions of the utilization of sustainable fishing equipment, it is necessary to conduct a study to measure the level of perception of fishermen on environmentally friendly fishing equipment. Therefore, it is expected that the diversity of fish's biological resources will be maintained.

The perception of fishermen in Lhokseumawe on the utilization of fishing equipment is inseparable from the social and economic factors of the community. Social capital is a resource that involves the expectation of achieving goals involving a wider network in which there are relationships that are governed by the level of trust and shared values. Social capital is inherent in the structure of relations between and among actors (Coleman, 2009). Social capital is a series of resources that make up networks; those resources are *economic capital, social capital, cultural capital, values, norms and beliefs*.

Lhokseumawe has its potential to be developed especially in coastal and marine areas with its management which refers to the condition of human resources and local wisdom in managing local ecosystems. Some important aspects to consider in regional development and management activities are human resources; inseparable from the influence of characteristics attached to them.

This study aimed to determine and analyze the level of perception of fishermen in Banda Sakti Subdistrict, Lhokseumawe City on the utilization of sustainable fishing equipment, so it is necessary to find out what can affect the perception of fishermen in Lhokseumawe; where this is one of the first steps that can be taken to unite the perception of the utilization of sustainable fishing equipment. Furthermore, it will be synchronized between socio-economic characteristics with the perception of fishermen in Banda Sakti Subdistrict, Lhokseumawe City in supporting the utilization of sustainable fishing equipment.

## METHODS OF RESEARCH

This study examines the perceptions of fishermen in Banda Sakti Subdistrict, Lhokseumawe City on the utilization of sustainable fishing equipment. The scope of this study is the socio-economic characteristics of fishermen including age, education, experience, income, number of dependents and socialization of fisheries that have been followed and the perception of fishermen on the utilization of sustainable fishing equipment.

The type of data used in this study consists of primary data and secondary data. The source of primary data is obtained through in-depth interviews with respondents assisted by questionnaires that have been provided. The questionnaire that was distributed was about the characteristics of the respondents and other questions related to perception. Secondary data is obtained from various sources regarding informations related to the topic discussed. Secondary data sources are obtained from books, research journals, articles, magazines and the internet.

The population of the study was fishermen in Banda Sakti Subdistrict, Lhokseumawe City, as many as 904 people. The sample was set at 96 people from the target population (Table 2). The number of the sample taken is in accordance with Gay's statement (1976, in Mujiburrahmad, 2013) which states that the minimum acceptable size for the correlation study is 30 subjects. Sample selection is done through *simple random sampling* with the provision of sampling 10% of the population per village.

Fishermen's perception of sustainable fishing equipment in Banda Sakti Subdistrict, Lhokseumawe City was analyzed using *quantitative descriptive* method. Afterwards, the data obtained was tabulated and analyzed by scoring techniques. The criteria for scoring are score 3 for answers that show high perceptions, score 2 for answers that indicate moderate perceptions and score 1 for answers that show low perceptions. The scale used in determining this score uses a modified *Likert* scale without neutral choices to avoid hesitant answers. Modification of the Likert scale according to Hadi (1991); can be done based on two reasons, namely the middle answer gives a double meaning, and also raises doubts of the respondent in answering then makes them choosing the middle (neutral) answer.

Based on perceptual scores on each of the following indicators (1) Respondent's perception if a fishing equipment has high selectivity; (2) Respondent's perception if a fishing equipment does not damage habitat and other organisms; (3) Respondent's perception if a fishing equipment produces good quality fish; (4) Respondent's perception if a fishing equipment does not harm the fishermen who operate; (5) Respondent's perception if a fishing equipment catches fish that is safe for consumption; (6) Respondent's perception if a fishing equipment has a small *by-catch*; (7) Respondent's perception if the operation of a fishing equipment has a low impact on biodiversity; (8) The respondent's perception if a fishing gear does not catch protected fish; and (9) Respondent's perception if an equipment is socially accepted by the community.

## RESULTS AND DISCUSSION

Socio-economic characteristics are the basic things for everyone to communicate within a community. This is the resource of each person used to carry out a community process. Fishermen's socio-economic characteristics in this study including age, education level, experience of being a fisherman, total income, number of dependents and number of participation in socialization activities.

Age is the the data about the age of respondents at the time of the study. Age categories are classified according to age categories made by the Ministry of Health of the Republic of Indonesia in 2009, then classified into three categories: adolescents, adults and elder. The average age of fishermen in the research location is elder with the experience of being a qualified fisherman. The results of the interview also found that the skills of being a fisherman were mostly hereditary knowledge from their parents and the fishing equipment used was also relatively simple.

The education level of fishermen in the study locations shows that the average fisherman in Lhokseumawe has completed 12 years of education; exceeding the government's target of 9 years of compulsory education. The level of education also influences one's mindset and adaptation to accept new things. The higher the education level of fishermen, it is expected that it will also be easier to receive innovations or programs implemented either from the government or other institutions in the fisheries sector.

The experience of being a fisherman is a process of forming or skill a fisherman in fishing. The average experience of fishermen in research locations has undergone the profession since the age of adolescence, which is between the ages of 12-25 years. This means that the fishermen in the research location have had considerable experience in terms of fishing which is becomes a permanent livelihood for him.

Earning is a representation of the economic situation of fishermen in the research location. Earning in this study are classified based on the amount of *Upah Minimal Provinsi* (Aceh Regional Regional Wages; UMP) in 2018, which is Rp.2,700,000. The results of the study showed that fishermen's income is low, that is, the average is below the UMP Aceh in 2018. This means that it is a need for community empowerment especially for fishing fishermen to increase their earning. Fishermen's earning is also inseparable from the number of family dependents owned by the fishermen. The more dependents the fishermen's family has, the greater the income that the fishermen must have to fulfill their family's needs.

Socialization is activities that must be done to carry out a program that will be implemented. The socialization of fisheries can be a reference for the government to

implement all fisheries regulations in the field of capture fisheries related to the profession of fishermen themselves. But the results of the study showed that only 4 subjects had attended socialization about fisheries, the rest said that they had never attended training or socialization or all matters related to their work as fishermen. The results of interviews with several fishermen who had participated in the socialization stated that there hasn't been any socialization since the last post-tsunami socialization carried out by the Agency of Aceh Reconstruction and Rehabilitation (BRR).

*Fishermen's Perception of the Utilization of Sustainable Fishing Equipment.* Sustainable fishing equipment is environmentally friendly fishing equipment. Data on fishermen's perception of the utilization of sustainable fishing equipment was collected by directly interviewing respondents; fishermen in Banda Sakti Subdistrict, Lhokseumawe City on 9 criteria for environmentally friendly fishing equipment according to *Conduct for Responsible Fisheries* (CCRF). Furthermore, the scores of the 9 criteria are adjusted to the level of perceptions of fishermen on the utilization of sustainable fishing equipment. The level of perception used is obtained from the class interval formula with a score of 96-160 classified as low perceptions, scores of > 160-224 classified as moderate perceptions and scores of > 224-288 classified as high perceptions. From the results of the analysis it was found that the perception of fishermen on the use of sustainable fishing equipment in Banda Sakti Subdistrict in Lhokseumawe City was at a high level of perception with a score of 230. However, when viewed from each criterion assessed, 5 criteria had moderate perceptions and 4 had high perceptions. This is in accordance with the results of Bachtiar's (2003) study which shows that the perception of fishermen in utilizing marine resources on Kodingareng Island as a whole is in two categories: moderate and good. While poor perceptions are not found in this study. But the percentages of fishermen's perceptions that are good for those who do non-destructive (sustainable / environmentally friendly) fishing are higher than those who make destructive fishing (using bombs and anesthesia). In other words, fishermen who carry out destructive capture tend to have a worse perception of coral reefs or the sustainability of other natural resources found at the study site.

*Relationship Between Socio-Economic Characteristics and Fishermen's Perception in the Utilization of Sustainable Fishing Equipments.* This relationship of fishermen's socio-economic characteristics to the perceptions of fishermen in the utilization of sustainable fishing equipment was examined between variables of age, education level, fishing experience, number of dependents, income and socialization of fisheries that had been participated; to fishermen's perceptions based on 9 criteria according to CCRF which included (1) Respondent's perception if a fishing equipment has high selectivity; (2) Respondent's perception if a fishing equipment does not damage habitat and other organisms; (3) Respondent's perception if a fishing equipment produces good quality fish; (4) Respondent's perception if a fishing equipment does not harm the fishermen who operate; (5) Respondent's perception if a fishing equipment catches fish that is safe for consumption; (6) Respondent's perception if a fishing equipment has a small *by-catch*; (7) Respondent's perception if the operation of a fishing equipment has a low impact on biodiversity; (8) The respondent's perception if a fishing gear does not catch protected fish; and (9) Respondent's perception if an equipment is socially accepted by the community.

The relationship of socio-economic characteristics to fishermen's perceptions if fishing equipment has high selectivity indicates that the socio-economic characteristic variables that are significantly related to these perceptions are only in the variable number of dependents where the significance value is less than 0.05; this is due to the fact that a family head who has more dependents must generate more income to meet the needs of their family, from field observations, generally, fishermen are more interested in using fishing equipment which they think has more continuous results and a uniform / selective size (unvarying size); therefore the results obtained tend to be more correspond with the target of the catch. Besides, the reasons of not to bound and the results of sales that can be sold on their own; are also become the main reasons for using fishing equipment. This is in accordance with the statement of Symes (2012) which states that longline fishing equipment has lower catch ability than trawler fishing equipment which produces more quantity and solid catches.

However, the longline provides a higher long-term catch than trawl which has a very high level of exploitation.

Meanwhile, other variables have a non-significant relationship. The resulting correlation that also shows the direction of a negative relationship is on the variables of age, education level, experience and the number of dependents on perceptions regarding selectivity of fishing equipment; this means that the higher the value of these variables, it may produce lower perceptions of the use of sustainable fishing equipment. The results of field observations found that this happened because in general, fishermen still took all the catches that could be sold even though the size and type were different especially when the catch was reduced. As the results of the Benardo (2017) which show that the perceptions of fishermen in the research location assess as "not good" if the fishing equipment has a high selectivity, because in research locations where prohibited fishing equipment such as tiger trawlers can damaging waters, habitats and fish resources that are not become the target of the catch.

The relationship of socio-economic characteristics to fishermen's perceptions if a fishing equipment does not damage habitat and other organisms shows a very low level of correlation and insignificant relationship, meaning that there is no relationship between fishermen's socio-economic characteristics and fishermen's perception of the utilization of fishing equipment that does not damage habitat and other organisms. This is in accordance with the results field observations which says that all fishermen agreed that sustainable fishing equipment should not a destructive fishing equipment such as tiger trawlers, fish bombs and fish poisons. However, based on the information of fishermen, there are still boats that use fishing equipment that damages the environment. So that there are still many fishermen who are disturbed by the existence of those fishing equipment, especially small fishermen who use longline nets and fishing lines which are made restless by those fishing vessels. Based on the information of several fishermen, there were not many fishermen that use such damaging environment equipment, but it was quite disturbing to other activities. For this reason, a government policy is needed to regulate these activities so that the presence of fish and the environment is maintained. As Doulman (2004) stated in his research, that in minimizing the adverse effects of overfishing and damaging the environment activities, the steps taken must lead to an approach that involves the first person, and focuses attention on the activities of resource users rather than the resources itself, because the first thing to manage is the activity is not the fish.

Fishing equipment is supposed to produce good quality fish where the catch has a fresh condition (neither damaged nor decayed) since poor conditions can reduce selling value or even it can be harmful to consumers. Based on the results of the analysis, it was found that the relationship between socio-economic characteristics of fishermen's perception if a fishing gear produces good quality fish, produces a correlation relationship with very low levels and does not have a significant relationship to fishermen's perception of fishing equipment if producing good quality fish. This is because all respondents agree with the statement that says environmentally friendly fishing equipment is good quality fishing equipment that has good quality catches. The overall field observations showed that the catches of fishermen in Lhokseumawe are in good quality and fresh catch, because fishermen generally catch fish in a day away, not taking days at sea. In addition, based on direct interviews with the Sea Commander, Fisheries Extension and *Syahbandar* in Lhokseumawe, so far there have been no reports or complaints from local people about the poor catch of the fishermen.

Fishing equipment that does not harm fishermen is also sustainable or environmentally friendly fishing equipment. The relationship between socio-economic characteristics to the perception of fishermen if a fishing equipment does not harm the fishermen who operate it, is found that the socialization variable has a higher relationship than the other variables. The results of the analysis indicate that the resulting correlation coefficient is at a moderate level of 0.571 with a significance smaller than 0.05. This shows that socialization has a significant relationship to fishermen's perception if fishing equipment used does not harm fishermen; this means that socialization can be a way to educate fishermen about safe fishing

equipment and not harm fishermen so that it is expected to reduce the utilization of fishing equipment that can harm fishermen.

As safe fishing equipment for fishermen, as well as good fishing equipment must also produce fish that are safe for consumption. Inappropriate use of fishing equipment not only damages sustainability but also disrupts consumers' health. The relationship of socio-economic characteristics to the perceptions of fishermen if a fishing equipment is safe for consumption has a very low level of correlation where age, education, experience, income, number of dependents and socialization do not have a significant relationship; so that it is considered unable to change the perception of fishermen to use fishing equipment that produces safe fish for consumption.

Fishing equipment that has little *by-products* is environmentally friendly fishing equipment and is considered to be able to maintain the fisheries ecosystem and its own resources. The fewer *by-products* produced by a fishing equipment, the fewer catches of small fish and other marine biota that do not need to be caught participating in the fishing equipment used. The results of the analysis are in accordance with the results of Firdaus's research (2010) which stated that the use of fishing equipment such as trawl has a *by-catch* and *discarded* catch. The field observations also found that *by-products* that did not reach adult size or had smaller sizes would also be taken and sold as fish feed or consumed if the main catches were produced only in small amount.

The fishing equipment used by fishermen should not catch protected fish. Moreover, the commodity is a group of fish that is almost extinct. This is to preserve natural resources in the sea in order to continue to breed so that future generations can enjoy the beauty of the sea with a variety of biological resources in it. The relationship between socio-economic characteristics to the perception of fishermen if fishing equipment does not catch protected fish is at very low level of correlation with a significance value greater than 0.05; means that all variables analyzed for socio-economic characteristics have no relationship to perception fishermen if a fishing equipment does not catch protected fish. From the results of interviews, it was found that there were still fishermen who claimed to have been caught protected fish, but generally, they let go back because according to them the fish did not have economic value, and if they were not released they were worried that their fishing equipment would be damaged. This is in accordance with the results of a research by Sumardi (2014) which stated that 57.7% of Purse Seine fishermen, 63.2% of Gill Net fishermen and 54.5% of Trammel Net fishermen stated that at the time of operation fishing equipment, the protected fish had been caught.

Delapan kriteria yang sudah dijelaskan mengenai alat tangkap diatas yaitu memiliki The eight criteria that have been explained above above fishing equipment are: have high selectivity, do not damage habitat and other organisms, produce good quality fish, do not harm fishermen who operate, catches are safe for consumption, produce little *by-catch*, low impact towards biodiversity and not catching protected fish; then a fishing gear is said to be sustainable or environmentally friendly if it meets the last requirement which is socially acceptable by the community. The results of the analysis show that the relationship of socio-economic characteristics to the perception of fishermen in the use of fishing gear is socially acceptable by the community resulting in a correlation relationship that is at very low level and does not have a significant relationship between the two. This is in accordance with Manik's (2013) statement which examines the relationship between fishermen's characteristics and fishermen's attitude towards the *Program Pengembangan Perikanan Tangkap* (Capture Fisheries Development Program) that the high socio-economic characteristics (age, education level, fishing experience, number of dependents and total income) of fishermen do not cause fishermen to behave positive or negative towards the Program.

## CONCLUSION AND RECOMMENDATIONS

The perception of fishermen in Banda Sakti Subdistrict in Lhokseumawe City that supports the use of sustainable fishing equipment is high, but when viewed from each

indicator observed, there are 5 indicators with moderate perceptions and 4 indicators with high perceptions.

There is a significant relationship between the variables of the number of dependents on the selectivity of fishing gear and on the variable socialization of fishing equipment that does not harm fishermen.

The income variables and the number of dependents have low correlation with fishermen's perceptions of the selectivity of fishing equipment, while the socialization variables are moderately correlated with fishermen's perceptions of fishing gear that do not harm fishermen. While the other variables are at a very low level of correlation and do not have a significant relationship to the 9 indicators of sustainable fishing equipment.

## REFERENCES

1. Bachtiar, S.A., Setiawan, B., Sunarto. 2003. Persepsi dan Perilaku Nelayan dalam Memanfaatkan Sumber Daya Laut di Pulau Kodingareng Sulawesi Selatan. Pusat Studi Lingkungan Hidup. Universitas Gajah Mada, Yogyakarta.
2. Badan Perencanaan Pembangunan Nasional. 2014. Kajian Strategi Pengelolaan Perikanan Berkelanjutan. Kementerian PPN/Bappenas, Jakarta.
3. Coleman, J. S., 1988. Social Capital in The Creation Of Human Capital. The University Of Chicago Press, American, Vol 94: pp.S95-S120.
4. Doulman, D. 2004. Fisheries Management, Poverty Alleviation and The Implementation of The Code of Conduct For Responsible Fisheries. Springer Science and Business Media Dordrecht .West Africa.
5. Firdaus, M. 2010. Hasil Tangkapan dan Laju Tangkap Unit Perikanan Pukat Tarik, Tugu, dan Kelong. Jurnal Makara. Universitas Indonesia, Depok.
6. Hadi, Sutrisno. 1991. Analisa Butir untuk Instrument. Edisi pertama. Andi Offset. Yogyakarta.
7. Kotler, P. 2000. Prinsip–Prinsip Pemasaran Manajemen. Prenhalindo. Jakarta.
8. Menteri Kelautan dan Perikanan. 2015. Peraturan Menteri Kelautan dan Perikanan Nomor 25/PERMEN-KP/2015 Tentang Rencana Strategis KKP Tahun 2015-2019. Kementerian Kelautan dan Perikanan. Jakarta.
9. Mujiburrahmad, F. 2013. Hubungan Faktor Individu Dan Lingkungan Sosial Dengan Partisipasi Masyarakat Dalam Pengelolaan Sampah Rumah Tangga (Kasus Kampung Sengked, RT03/RW 03 Desa Babakan, Kecamatan Dramaga, Kabupaten Bogor). Tesis. PascaSarjana Institute Pertanian Bogor, Bogor.
10. Mussadun AF, Kusumastanto T, dan Kamal MM. 2011. Analisis Persepsi Nelayan dalam Pengelolaan Sumberdaya Perikanan Berkelanjutan di Taman Nasional Karimunjawa. Jurnal Tata Loka UNDIP. Semarang.
11. Nababan, B. 2017. Persepsi dan Kepatuhan Nelayan TanjungBalai Asahan Sumatera Utara dalam Mendukung Perikanan Tangkap Berkelanjutan. Tesis. Institut Pertanian Bogor, Bogor.
12. Nikijuluw, V.P.H. 2002. Rezim Pengelolaan Sumberdaya Perikanan. PT. Pustaka Cidesindo. Jakarta.
13. Subehi, S., Hery, B.S., Dian, A.N. 2017. Analisis Alat Penangkap Ikan Ramah Lingkungan Berbasis Code of Conduct Responsible Fisheries (CCRF) di TPI Kedung Malang Jepara. Indonesian Journal of Capture Fisheries (IJoCF). Universitas Diponegoro, Semarang.
14. Sugiyono. 2010. Metode Penelitian Pendidikan Pendekatan Kuantitatif, kualitatif, dan R&D. Alfabeta. Bandung.
15. Suharman. 2005. Psikologi Kognitif. Srikandi. Surabaya.
16. Sumardi, Zainal, M. Ali Sarong, Muhammad Nasir. 2014. Alat Penangkapan Ikan yang Ramah Lingkungan Berbasis Code of Conduct for Responsible Fisheries di Kota Banda Aceh. Agrisep. Universitas Syiah Kuala, Banda Aceh.
17. Sunaryo. 2004. Psikologi untuk Keperawatan. EGC. Jakarta.

18. Symes, D. 2012. *Regionalising The Common Fisheries Policy: Context, content and controversy*. Maritime Studies a Springer. University of Hull, UK.
19. Tichenor, J. P., George A., and Clarice N.Olien. 1970. *Knowledge Gap Hypothesis Dikutip dalam Teori Komunikasi: Sejarah, Metode, & Terapan di Dalam Media Massa*. Kencana. Jakarta.
20. Tumpak Manik. 2013. *Penilaian Nelayan Terhadap Program Pengembangan Perikanan Tangkap Khususnya Pemberian Bantuan Alat Tangkap Ikan (Kasus: Kecamatan Teluk Mengkudu Kabupaten Serdang Bedagai)*. Universitas Sumatera Utara, Medan.
21. Walgito, Bimo. 2004. *Pengantar psikologi Umum*. Andi. Jakarta.
22. Wiyono ES. 2009. *Persepsi Nelayan terhadap Sumberdaya Perikanan*. *Jurnal Sosial-Ekonomi Pertanian dan Agribisnis*. Institut Pertanian Bogor, Bogor.

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## **THE EFFECT OF FISHERMEN EMPOWERMENT TOWARDS THEIR WORKING ABILITY IN EAST LOMBOK**

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### **ABSTRACT**

This research is motivated by the phenomenon of empowerment that does not show results in an effort to increase the working ability of fishermen. Various trainings have been carried out to improve working ability, including assistance from the government and the private sector, but still have not shown an increase in the empowerment of East Lombok fishermen. Therefore, the empowerment of East Lombok fishermen was examined in this study. This study aims to determine the effect of fishermen empowerment towards their working ability in east Lombok. Data was obtained through questionnaires to 171 fishermen respondents in East Lombok, interviews with community leaders related institutions, and field observations. The analysis was carried out descriptively and quantitatively. Descriptive analysis explains the indicators that have a score above and below the average total score for each variable. Quantitative analysis uses SEM with PLS applications to determine the level of significance between variables as mentioned in the research objectives. The results showed that empowerment had a positive and significant effect on fishermen working ability. This means that the empowerment of the East Lombok fishing community must continue to be improved to improve the empowerment of fishermen. Variables that have a significant effect must be increased to improve the welfare of fishermen in East Lombok.

### **KEY WORDS**

Empowerment, working ability, fishing, East Lombok, community.

The issue of poverty is a major topic in the lives of fishermen. Increasing the empowerment of fishermen is needed to be able to get out of the present situation. Various empowerment programs have been carried out to increase the empowerment of fishermen, but still not able to remove fishermen from the deterioration experienced today. Poverty causes the powerlessness of fishermen to access resources. In an effort to improve the welfare of the community in coastal areas empowerment is needed to increase the working ability of fishermen. Community empowerment is a concept that arises because of the assumptions about failure of development which tend to be centralized. The aim of community empowerment is to enable and empower the community, especially from poverty and underdevelopment / disparity / powerlessness.

Therefore the purpose of this study is to analyze the effect of empowerment on working ability.

### **LITERATURE REVIEW**

Working ability is a condition or outcome of a process or activity of empowerment. Power is a basic word of empowerment which means strength that comes from within, but can also be strengthened through elements from outside (Theresia et al., 2014). Empowerment is a condition where individuals have the power or ability (power / power) to maximize their potential to achieve prosperity. According to Kartasmita (1996), empowerment is an element that enables individuals, organizations or communities to survive and be dynamic, and can develop themselves to achieve their goals or welfare.

Empowerment is a series of activities to strengthen the strength or empowerment of vulnerable and weak groups in society, including individuals who experience poverty problems, so that they have empowerment in fulfilling their life needs both physically,

economically, and socially such as: self-confidence, and expressing aspirations, have livelihood, participate in social activities and establish in carrying out their life tasks (Suharto, 2005). The way in which is carried out in the process of empowerment is by providing motivation or support in the form of resources, opportunities, knowledge, and skills for the community to increase their capacity, increase awareness about the potential they have, then try to develop the potential they have.

## METHODS OF RESEARCH

This study seeks to find relationships between variables so that it is a relational study. This study seeks to find a relationship between empowerment variables and the working ability variables of fishermen. The analysis unit is located in the unit of the fishermen's head of family. This research was conducted in East Lombok. The object of research is sustainability in research with empowerment. Therefore, the subjects of the study were the heads of households selected as samples in East Lombok.

The population in this study was fisherman households in East Lombok with a total of 4571. Samples were taken purposively which were fisherman households in the target area of the study. Of the population of 4,571 sample households tolerated by 10 percent.

$$n = \frac{4571}{1+4571 (0,075)^2} = 171 \quad (1)$$

So the number of samples taken was 171 fishermen.

In this study, structural equation analysis (SEM) was used by alternative Partial Square Least PLS (component based SEM). Testing the hypothesis of direct influence using the bootstrap resampling method using statistical tests t. If the t-statistic value (t count) > t-table then the hypothesis is accepted, and vice versa. In addition, a comparison between the p-value and alpha ( $\alpha$ ) can be made. If p-value  $\leq$  0.05 (alpha 5 percent) is obtained, it is concluded that it is significant, and vice versa.

## RESULTS OF STUDY

The questionnaire distributed to respondents was 171 copies. The collected data includes the identity of the respondent, household characteristics, business characteristics and ordinal data information that extracts information from fishermen using a Likert scale. In addition, the opinions of fishermen on the existence of the government are also explored: do fishermen feel helped or not by the fishermen's empowerment program and what the reasons are. From the questionnaires distributed and filled in completely by the respondents, there are several things that are of concern, especially the empowerment process which has not been able to increase the empowerment of fishermen.

Based on the results of data analysis, all constructs are positively and significantly related to each other with the probability of acceptance of the hypothetical zero less than 1 percent as shown in Table 1.

Table 1 – Empowerment, Empowerment of East Lombok fishermen, 2018

Relationship between Variables	Loading	Std. Error	t -statistic	p value	Information
Empowerment → Working ability (Y1)	0.226	0.086	2.267	0.009	Significant

Based on Table 1 above, it can be concluded that empowerment has a positive effect on fishermen working ability. The effect of empowerment on fishermen working ability shows a value of 0.226 (positive) with a t-statistic value of 2.267. These two figures indicate that the empowerment variable influences the working ability of fishermen. This is in accordance with the research from Sumodiningrat (1998) which states that the empowerment of the poor needs to be directed at changing the coping strategies of the poor to be better based on the needs and expectations of the poor. at the local level. Planning and implementation of

empowerment should contain efforts to strengthen their productive economic efforts based on their "views and needs", so that the poor have access to independent socio-economic and political resources. To improve the ability of the poor, at least there must be improved socio-economic and cultural accessibility of four things, namely: (1) access to natural resources, (2) more efficient access to technology, (3) access to markets and (4) access to financing sources.

Furthermore Wahyono, al. (2001), states that empowerment of poor coastal communities in Pantai village is a series of efforts with a range of activities that touch the fulfillment of various kinds of access and basic needs for food, education, housing and health, including meeting the need to participate in poverty reduction them, so that all members of the poor in coastal villages can be independent, confident, not dependent and able to be free from the shackles of socio-cultural and economic structures that make them poor.

## CONCLUSION

Based on the results of data analysis it can be concluded, Empowerment has a positive and significant effect on empowerment. The better the empowerment efforts aimed at households, the more empowerment and improvement in quality of life will become stronger.

The contribution in this study is:

To improve fishermen's working ability, they are focused on external empowerment. Internal factors will be able to support external factors as a government effort in alleviating poverty. Lack of working capital inhibits empowerment and well-being, this has consequences for all parties to eliminate negative culture, by socializing that consumptive expenditures such as expenses for kinship ceremonies, should be adjusted to capacity so that income can be used for productive matters.

The findings of this study can be used as a reference or reference by the government, especially the East Lombok Regency government in overcoming the problems of fishermen's working ability faced by their communities. The increase in community empowerment that has been carried out by the government is more of a routine program without touching on the substantial problems faced by fishermen families, resulting in the view that the government behaves as benefactors which results in fishermen always waiting for government obligations to help with their living needs. This situation creates a culture of sustainable poverty without regard to its empowerment.

## REFERENCES

1. Aprillia, Theresia. Dkk. 2014. *Pembangunan Berbasis Masyarakat*. Bandung, Alfabeta.
2. Ary Wahyono, dkk (ed.). 2001. "Kata Pengantar" dalam *Pemberdayaan Masyarakat Nelayan*, Yogyakarta: Media Pressindo.
3. Kartasasmita, Ginandjar. 1996. *Pembangunan Untuk Rakyat. Memadukan Pertumbuhan and Pemerataan*, Penerbit PT. pustaka CIDESINDO, Jakarta.
4. Suharto, Edi. 2005. *Membangun Masyarakat Memberdayakan Rakyat Kajian Strategis Pembangunan Kesejahteraan Sosial and Pekerjaan Sosial*. Cetakan kedua. Bandung: Aditama.
5. Sumodiningrat, Gunawan. 1998. *Membangun Perekonomian Rakyat*, Yogyakarta: Pustaka Pelajar.

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## NANOPARTICLES FROM ONION (*ALLIUM CEPA*.L) EXTRACT SUPPRESS BCL-2 EXPRESSION IN MCF-7 CELLS IN VITRO

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### ABSTRACT

This research aimed to make nanoparticles from *Allium cepa*. L extract that can inhibit Bcl-2 protein expression in MCF-7 cells in vitro. The particles were broken down to nano with the addition of NaTPP dissolved in distilled water and chitosan dissolved in 1% acetic acid. The particle size based on the SEM and PSA tests had an average size of 336 nm. Nanoparticles from *Allium cepa*. L extract based on the KLT test contained flavonoids, saponins, and tannins. MCF-7 cells were treated with doses of 40 µg/ml, 80 µg/ml, 160 µg/ml, and 320 µg/ml. The results showed that nanoparticles from *Allium cepa*. L extract had cytotoxicity in MCF-7 cells with the IC<sub>50</sub> value of 235 µg/ml and proved to inhibit Bcl-2 protein expression.

### KEY WORDS

*Allium cepa* L, nanoparticles extract, Bcl-2, MCF-7.

Breast cancer refers to cancers originating from the mammary gland, glandular tissue, and breast supportive tissue. Besides, breast cancer has been reported to attack some animals, particularly productive adult female dogs [1, 2]. The high incidence of breast cancer results in various treatment. In this research, a breakdown method for drug particles in cancer therapy was developed to enhance the ability of drug release.

Nanoparticles have higher drug release ability than drugs with general particle size. Nanoparticles from *Allium cepa*. L have active compounds such as flavonoids, saponins, tannins and other compounds such as vitamins (B1, B2, and C), sodium, potassium, phosphorus, and others [3].

Flavonoids in *Allium cepa*. L act as antioxidants that can prevent oxidation, stabilize free radicals formed by carcinogenic compounds, and inhibit the production of heat shock proteins causing drug resistance in cancer therapy. Thus, drugs for cancer therapy derived from plant extracts have been used as an alternative therapy to prevent the negative reaction and inhibit anti-apoptotic protein with safe doses [4]. Flavonoids can induce apoptotic cells [5].

In addition to flavonoids, saponins have immunomodulatory activities and ability to inhibit the proliferation of cancer cells. Tannins also have the potential as antioxidants [6,7] Saponins and tannins are coined as effective phytochemical agents. Saponins are composed of one or more hydrophilic glycoside moieties along with a lipophilic and derived aglycone and finally one or more sugar chains. Saponins interfere with the replication of cellular DNA and prevent the proliferation of cancer cells. Tannins are of polyphenolic nature. The features distinguishing tannins from plant-based polyphenols of other types are basically the properties of the binding of the former to proteins, basic compounds, pigments, large-molecular compounds, and metallic ions and also the display of anti-oxidant activities [8]. Saponins have immunomodulatory potential via cytokine interplay [9].

Bcl-2 is anti-apoptotic proteins. Bcl-2 overexpression inhibits TRAIL-induced apoptosis in neuroblastoma, glioblastoma, and breast carcinoma cells [10].

### METHODS OF RESEARCH

*Allium cepa*. L were collected and cut into small pieces. *Allium cepa*. L slices were dried in the room for 7 days, dried again in the oven at 50°C, and then powdered using a mechanical blender. 148 grams of this powder was extracted using the maceration method

with 70% ethanol for 24 h. The obtained extracts were put to vacuum evaporator for evaporation of the excess solvent.

*Allium cepa*. L's nanoparticles were prepared by ionic gelation method. 1 gram of *Allium cepa*. L's extract was taken and put into the Duran tube. It was added with 35 ml of ethanol and 15 ml of distilled water. Then, a 1% chitosan solution diluted in 100 ml of 1% acetic acid was added. A 0,001% NaTPP solution diluted in 350 ml of distilled water was added slowly while being rotated with the magnetic stirrer for 2 h. Nanoparticles preparation was conducted in the Clinical Pathology Laboratory, Faculty of Veterinary, Airlangga University.

Nanoparticles were put in vacuum evaporator for evaporation of the excess solvent for 24 h. The obtained extracts were put to vacuum evaporator for evaporation of the excess solvent and finally, these nanoparticles were freeze-dried to maintain the stability.

Flavonoids, saponins, and tannins are phytochemical compounds. The qualitative phytochemical screening of 500 mg of nanoparticles from *Allium cepa*. L extract diluted in 1 ml of 70% ethanol was performed using TLC. The mobile phase used n-hexane ethyl acetate at 8:2 ratio of 2 ml.

Spray reagents used were ammonia for flavonoids detection, anisaldehyde for saponins detection, and FeCl<sub>3</sub> for tannins detection. The results were observed visually under UV light at 366 nm.

Particle size analysis of *Allium cepa*. L's nanoparticles was conducted by Particle Size Analyzer (PSA) using Malvern Zetasizer Nano series Nano ZS (Malvern Instruments Ltd.)

Scanning electron microscopy of *Allium cepa*. L nanoparticles was conducted using Carl Zeiss (Evo MA 10) English.

Breast cancer cell line used in this research was the Michigan Cancer Foundation-7 (MCF-7) cell line. Cells were cultured in Dulbecco's Modified Eagle's Medium (DMEM) medium supplemented with 10% FBS, 2% penicillin and streptomycin, and 0,5% fungizone at 37°C in the incubator containing 5% CO<sub>2</sub>.

First, the sample used as a therapy for MCF-7 cells was prepared. One mg of *Allium cepa*. L's nanoparticles was taken and diluted in 1 ml of dimethyl sulfoxide (DMSO), then diluted again in DMEM medium until the concentrations were 40 µg/ml, 80 µg/ml, 160 µg/ml, and 320 µg/ml. A positive control was made by diluting 1 mg of cisplatin into 1 ml DMSO in DMEM medium until the concentration was 4 µg/ml. In this research, 100 µl DMSO was used as a negative control.

Cells were seeded at the concentration of 5000 cells/100 µl DMSO in a 96-well plate. After 24 h of incubation, the medium was removed and the doses of the treatment were entered into the well with *Allium cepa*. L's nanoparticles doses (50 µg/ml, 100 µg/ml, 150 µg/ml, and 200 µg/ml), cisplatin doses, and negative control doses. Each treatment was repeated three times and incubated at 37°C for 24 h. After 24 h of incubation, liquid in the 96-well was removed and MTT was added into all of the wells, then incubated at 37°C for 2h. Finally, 1% SDS was added to lyse the life cells so formazan could be read. Optical Density (OD) can be read by ELISA reader at 366 nm.

The growth inhibition was determined using Table 1.

$$\% \text{ growth inhibition} = \frac{\text{OD}_{\text{control}} - \text{OD}_{\text{sample}}}{\text{OD}_{\text{control}}} \times 100\%$$

Immunohistochemical analysis was performed to evaluate Bcl-2 gene expression in MCF-7 cells which were treated with nanoparticles of *Allium cepa*. L extract (Marleen et al., 2011).

Immunohistochemical painting for Bcl-2 protein expression in MCF-7 cells was carried out in 4 treatment groups (cell control for Bcl-2, IC50, 2IC50, and 4IC50). This method used 6-well microplates with coverslips. MCF-7 cells and DMEM complete media of 500 µl with 5x10<sup>4</sup> cells/well were incubated in 5% CO<sub>2</sub> at 37°C for 24 hours. Then, the DMEM medium was removed, nanoparticles extract and *Allium cepa*. L extracts were added according to

dosage, and incubated in an incubator in 5% CO<sub>2</sub> at 37°C for 24 hours. After incubation, the media was removed again, fixed with 500 µL methanol left at 37°C for 10 minutes, washed with tap water three times, and finally washed with PBS and left for 5 minutes.

The remaining PBS was removed, added with 30% blocking solution (H<sub>2</sub>O<sub>2</sub>) with 10 ml of methanol (1: 9), incubated for 10 minutes, washed with tap water, and the preparations were rinsed with PBS. Then, the preparations were added with 20 µl of serum blocking and incubated for 10 minutes in a wet tray. 50 µl of Bcl-2 antibodies were added and incubated for 1 hour in a wet tray. The preparations were washed with 2x PBS and added with 30 µl of biotin (secondary Ab), and incubated in a wet tray for 20 minutes. Next, 30 µl of streptavidin was added and incubated in a wet tray for 10 minutes. The preparations were washed again with 2x PBS and added with 30 µl of substrate (1000 µl of buffer substrate and 10 µl of diaminobenzidine), washed with tap water to clean the substrate and H&E color, and left for 3 minutes. The preparations were washed with running water, drained, and pressed with mounting media. The preparations were covered with a coverslip and Bcl-2 protein expressions in the cell cytoplasm were observed using the inverted microscope at 1000x magnification.

### RESULTS OF STUDY

The analysis results of TLC proved that *Allium cepa*. L nanoparticles had active ingredients which can act as antioxidants and inhibit heat shock protein (HSP) in many malignant cancer cells, including breast cancer cells [11].

Table 1 – Phytochemical result of *Allium cepa*. L nanoparticles

No	Media	Mode	After Spray	Observation
1	Flavonoids	+		With UV 366 nm The color was light blue after being sprayed with ammonia
2	Tannins	+		Visual The color was black after being sprayed with FeCl <sub>3</sub>
3	Saponins	+		Visual The color was violet after being sprayed with anisaldehyde

The results of the particle size analysis showed that the size distribution of *Allium cepa*. L nanoparticles were 84.7% with Z-Average (d.nm) of 336,8 nm.

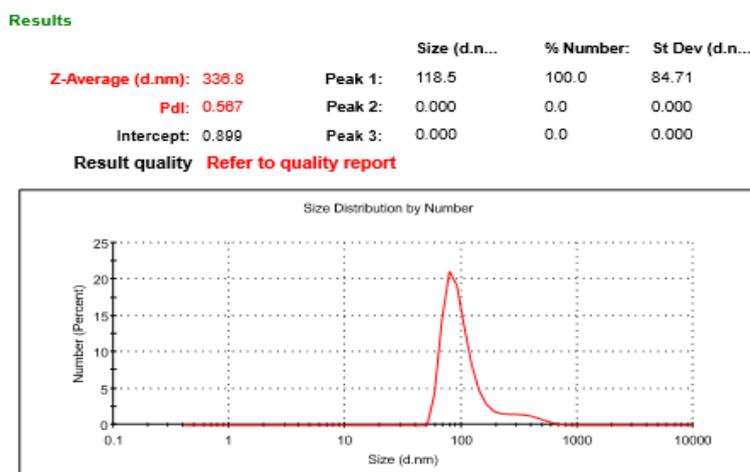


Figure 1 – Size distribution results of *Allium cepa*. L nanoparticles

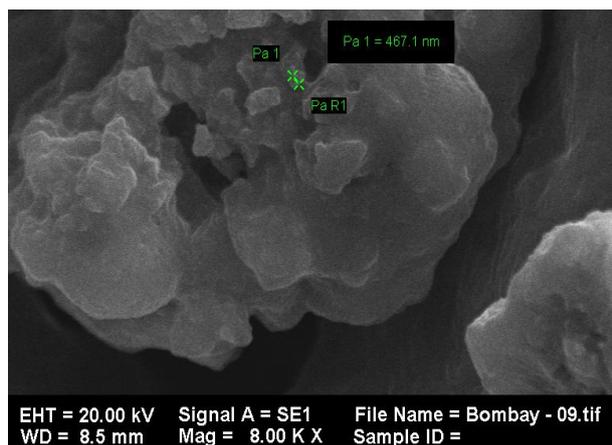


Figure 2 – Scanning electron microscopy (8.000x magnification)

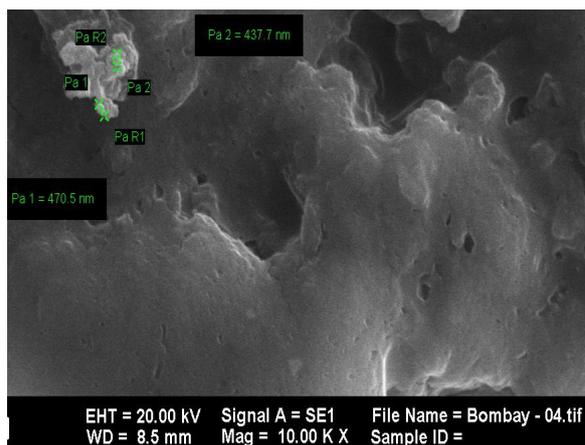


Figure 3 – Scanning electron microscopy (10.000x magnification)

The effective concentration of nanoparticles from *Allium cepa*. L extract required for 50% inhibition of the cell viability was expressed as IC<sub>50</sub>. In this research, nanoparticles from *Allium cepa*. L extract could inhibit MCF cell growth with the IC<sub>50</sub> value of 235 µg/ml.

Table 2 – Cytotoxic activity of *Allium cepa*. L nanoparticles

No	Type of treatment	Therapy concentration (µg/ml)	Cell death %	Linear Regression	IC <sub>50</sub>
1	<i>Allium cepa</i> . L nanoparticles	40 µg/ml	44.52%	y = 45.30 + 0.020x	235 µg/ml
2		80 µg/ml	47.63%		
3		160 µg/ml	50.45%		
4		320 µg/ml	51.08%		
5	Positive control (cisplatin)	4 µg/ml	15.61%		
6	Negative control (DMSO)	100 µl	3.01%		

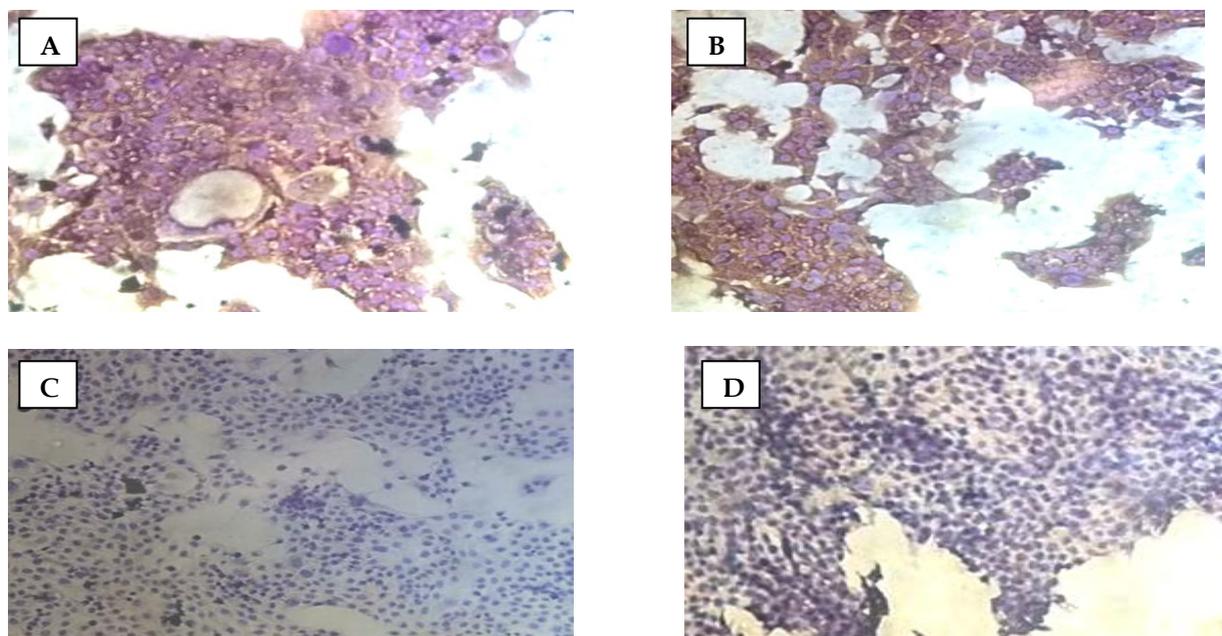


Figure 4 – Bcl-2 expression from MCF-7 cells from the immunohistochemical analysis given therapy with a series of concentrations of *Allium cepa*. L nanoparticles with 24-hour incubation time. A) Control of MCF-7 cells, B) therapeutic dose (IC<sub>50</sub>) of 235 µg/mL, C), therapeutic dose (2IC<sub>50</sub>) of 470 µg/mL, D), therapeutic dose (4IC<sub>50</sub>) of 940 µg/mL

The results of the scanning electron microscopy showed the surface visualization and the size of *Allium cepa*. L nanoparticles. SEM in this research used four magnifications of 8.000x and 10.000x.

Observation on the Bcl-2 expression level was characterized by the brown color of the cell cytoplasm. When there was no Bcl-2 activity, the cytoplasm was purplish-blue in color according to the coloring used. This research used H&E staining [12].

## DISCUSSION OF RESULTS

The research results showed that cells treated by *Allium cepa*. L nanoparticles after 24 h incubation time could suppress Bcl-2 expression and inhibit the proliferation of MCF-7 cells at concentrations of 40 µg/ml, 80 µg/ml, 160 µg/ml and 320 µg/ml. The higher concentration caused a smaller number of living cells. Based on data about cell death percentages and after being calculated by linear regression statistics, the concentration of 235 µg/ml could inhibit 50% MCF-7 cell proliferation.

Cytotoxicity of *Allium cepa*. L was influenced by the particle size because nanoparticles could release the drug 74 times faster [13] and the active ingredients contained in *Allium cepa*. L. Table 1, especially flavonoids. When flavonoids contained in *Allium cepa*. L was broken down, many quercetin compounds were found [3].

Quercetin is the aglycone form of a number of glycosides that can react as an anticancer to cell regulation and inhibit DNA topoisomerase enzymes cell cancer [14]. Quercetin is also capable of suppressing mutant p53 expression in breast cancer cells [15].

The results of the particle size analysis in this research showed that the size of the obtained nanoparticles had a Z-average of 336,8 nm. These results are in line with a theory stating that the good size range of a nanoparticle is 336 nm [16].

## ACKNOWLEDGMENTS

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## REFERENCES

1. Veta, M., Van, D.P.J., Willems., S.M, Wang, H., Madabhushi, A., Cruz-Roa, A., Gonzales, F., Larsen, A.B.L, Vestergaard, J.S, Dahl, A.B et al. 2014. Assesment of algorithms for mitosis detection in breast cancer histopathology images. Med Ima anal.doi:10.1016/j.media.2014.11.010.
2. Priosoeryanto, B.P. 2014. Penyakit Tumor Pada Hewan: Biologi dan Upaya Penanganannya, Institut Pertanian Bogor. Bogor.
3. Murtihapsari, 2012. Analisis Senyawa Bawang Bombay (*Allium cepa*. L) Melalui Uji Multifragmen Separatif dan Spektrofotometer. Fakultas MIPA. Universitas NegeriPapua. Manokwari. Papua Barat.
4. Oesterreich, S., Weng, C.N., Qui, M., et al. 1993. The small heat shock protein hsp27 is correlated with growth and drug resistance in human breast cancer cell lines. Cancer Res;53:4443-4448.
5. Mukherjee, A., Anisur, R.K.B. 2014. Quercetin Down-regulates IL-6/STAT-3 Signal to Induce Mitochondrial-mediated Apoptosis in a Non Small Cell Lung Cancer Cell Line, A549. Cytogenetic and Molecular Biology Laboratory. University of Kalyani. India.
6. Sun, H.X., Xie, Y. And Ye, Y.P. 2009. Advances The Adjuvants Bassed in Saponins. Vaccine 27:1787-1796
7. Bawadi, H.A., Bansode, R.R, Trappey, A., Truax, R.E and Losso, J.N. 2005. Tannininhibition activity to CaCo<sub>2</sub>, MCF-7 and Hs578T and DU 145 from black peanutett, 218:153-162.

8. Kutlu, T. dan Isil, Y. 2015. Agen Antikanker: Saponin dan Tannin. *Jurnal Kimia Biologi Internasional*. Volume 9.332-340.
9. Sun, HX., Y. Xie dan YP Ye. 2009. Kemajuan dalam ajuvan berbasis saponin. *Vaksin* 27:1787-1796.
10. Fulda, S., Meyer, E. and Debatin. K.M. 2000. Inhibition of TRAIL induced apoptosis by Bcl-2 Overexpression. *Oncogene.*, 21, 2283-2294.
11. Hansen, R.K, Oesterrich, S., Lemieux, P. 1997. Quercetin inhibits heat shock protein induction but not heat shock factor DNA-binding in human breast carcinoma cells. *Biochem Biophys Res Commun*; 239:851-856.
12. Minn, A.J., Velez, P., Schendel, S.L., Liang, H., Muchmore, S.W., Fesik, S.W., Fill M. and Thompson, C.B. 1997. Bcl-x (L) form an ion channel in synthetic lipid membranes. *Nature.*, 385(6614):353-357.
13. Dewandari, K.T., Yuliani, S. dan Yasni, S. 2013. Ekstraksi dan Karakterisasi Nanopartikel Ekstrak Sirih Merah. *Pasca Panen*. Volume 10.
14. Hegnauer, R.Nd. 2012. Chemical Characters in Plant Taxonomy: some Possibilities and Limitations. June.2.2012
15. Lamson, D.W., Brignall, M.S. 2000. Antioxidant and Cancer, part3:Quercetin, *Alternative Medicine Review* Volume 3 Number 3.
16. Winarno, F.G. and Fernandez, I.E. 2010. *Nanoteknologi Bagi Industri Pangan dan Kemasan*. Bogor:Mbrio Press.

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## **ASSESSMENT OF SAND LOBSTER (*PANULIRUS HOMARUS*) RESOURCES IN PALABUHANRATU WATERS OF SUKABUMI, WEST JAVA, INDONESIA**

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### **ABSTRACT**

Lobster fisheries resources are popular food commodities with high economic value. Consequently, lobsters are captured globally and have very high selling prices. Palabuhanratu Bay is one of the lobster fisheries centers in West Java, Indonesia. Sand lobster (*Panulirus homarus*), one of the lobster species in Palabuhanratu Bay, has experienced a decrease in the catch. This research aims to (1) examine the sand lobster population based on biological aspect and population dynamics aspect; (2) identify the utilization status and management of sand lobster resources. Population parameter was analyzed using the FISAT II program and Maximum Sustainable Yield (MSY) potential assessment. The results showed that sand lobster carapace length ranged between 30-101 mm with 97.6% carapace length below 8 cm. The growth pattern of sand lobsters was negative allometric. The  $L_c < L_r$  value indicated that female sand lobsters have been caught before reaching the mean size at onset of spawning. Asymptotic length ( $L_\infty$ ) of male sand lobsters was smaller than female sand lobsters, while growth coefficient (K) of male sand lobsters was faster than female sand lobsters. The rate of exploitation (E) values for male and female sand lobsters showed above optimum values of 0.59 and 0.61. The sustainable potential and lobster resource utilization level in WPP 573 Waters was 662.93 tons/year and 910 thousand trips with nets as standard fishing gears. Catch fluctuated with a decreasing trend and the rate of exploitation above the optimum value. It indicated that overfishing has occurred.

### **KEY WORDS**

FISAT II, sand lobsters, MSY, *Panulirus homarus*, Palabuhanratu Bay.

The high economic value of lobsters is one of the factors causing continuous lobster fishing with no attention to the resource and environmental conditions. Lack of awareness of fishery practitioners (communities, businesspersons, and fishermen) on the importance of environmentally-friendly fishing practices that can guarantee the sustainability of sea lobster stocks will damage lobster ecosystem and habitat, causing a reduction in the commodity stocks (Wardiatno and Mashar, 2013).

Palabuhanratu Waters is a potential waters with abundant fisheries resources and used as fishing areas for fishermen, one of which is lobster fishing. The high economic value of sand lobsters (*Panulirus homarus*) is one of the factors that encourage Palabuhanratu fishermen to conduct continuous fishing activities without regard to the resources and environmental sustainability. Fishermen are lack of awareness to control fishing as well, for example by regulating the number of catches and lobster fishing effort.

### **LITERATURE REVIEW**

Palabuhanratu community identifies sand lobsters with the name of crayfish. Classification of sand lobsters according to Chan (1998) is:

Phylum: Arthropoda;  
Subphylum: Crustacea;  
Class: Malacostraca;  
Order: Decapoda;

Suborder: Macrura;  
 Family: Palinuridae;  
 Genus: *Panulirus*;  
 Species: *Panulirus Homarus*.

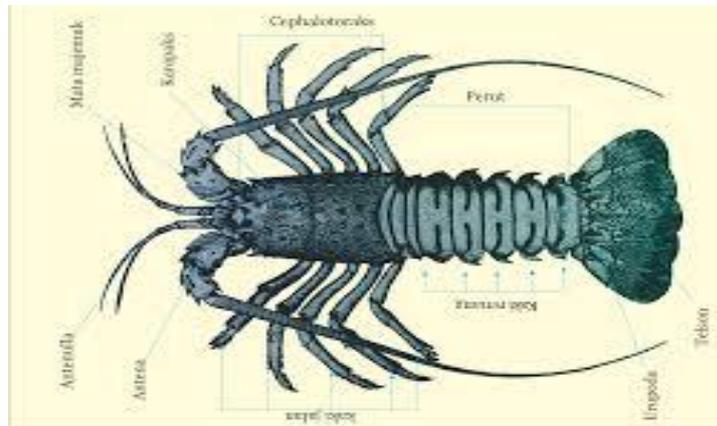


Figure 1 – Dorsal view of lobsters of the genus *Panulirus* (Source: WWF Indonesia, 2015)

In general, the growth rate of lobsters in the family Palinuridae ranges between 0.27-0.54/year. The asymptotic carapace length is quite diverse but generally ranges between 118-164 mm. The values of the growth rate and the asymptotic carapace length are used to determine the maximum lifespan of a lobster population. From some research results, the maximum lifespan of lobsters in the family Palinuridae ranges between 10-14 years (Kadafi et al., 2006). Cobb and Phillips (1980) state that lobsters are found mostly in coastal waters, especially on rocky bottoms or coral reefs, and sometimes on sandy bottoms mixed with aquatic plants. Adult lobsters generally molt and breed during the summer, so that a ban on lobster fishing during this period provides an opportunity for population development (Moosa MK and Aswandy I, 1984).

Population dynamics refers to how populations change in size over time. Population dynamic of lobster resources in waters is characterized by changes in population size both through additions and subtractions (Wijaya, 2007). In the balance of population dynamics, additions to the population can be caused by births, deaths, and migrations of lobster resources. According to Badrudin (2012), the catch per unit effort (CPUE) is a measure of relative abundance as one indicator of lobster resource status, while production levels can act as economic performance indicators. The CPUE trend of fisheries is an important indicator of fishery health.

Table 1 – Advantages and Disadvantages of Lobster Fishing Gears

Name of Fishing Gear	Advantages	Disadvantages
Trap	Able to catch more lobsters than <i>krendet</i> because trap has a bigger chamber than <i>krendet</i>	Need a bigger place when on a boat The cost of making is more expensive than <i>krendet</i> .
Hook with Diving	More selective in terms of the catch.	Able to threaten the health of the catcher when diving
<i>Krendet</i> (hoop net)	The cost of making is cheaper Easy to carry	Fewer caught lobsters than trap Able to damage habitat if left behind or stuck
Trammel Net or Bottom-set Gillnet	Able to catch a fairly large amount of lobsters because the net is long and stretched	Less selective in catching because the net not only catches lobsters but also another biota, such as reef fish, etc.

Source: WWF Indonesia (2015).

## METHODS OF RESEARCH

The research location was the waters around Palabuhanratu, Sukabumi Regency, West Java Province (WPP 573). Palabuhanratu waters is located in the Indian Ocean region at the geographical position of 06° 50'-07° 30' S and 106° 10'-106° 30' E. The preparation stage until the field survey was conducted from March to May 2018.

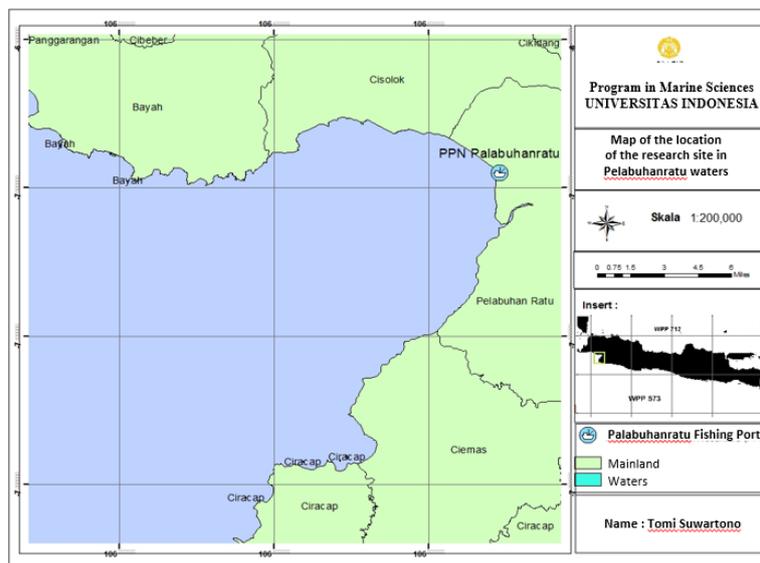


Figure 2 – Research Location in Palabuhanratu Bay Waters

Samples were observed for 3 months with data collection intervals once every two weeks using the census and simple random sampling method. The census method was utilized when the lobster catches were few that enabled thorough observation. Data measured included carapace length (mm), weight (mg), lobster sex, and the number of egg-bearing lobsters. Lobster measurements were carried out on the species of *P. homarus* caught by previously selected fishermen. Carapace length of the lobsters used as the samples was measured using a caliper with a precision of 0.1 mm and weight was determined using a digital balance with a precision of 0.01 g. Functional maturity of the female lobsters was observed by direct observation of the presence/absence of eggs under the abdomen (berried female). Primary data collection for economic aspects in this research was conducted using a structured interview method with a questionnaire list. In-depth interviews covered all aspects of production activities, including lobster selling prices and fishing operational costs, such as ships, machinery, fishing gear, fuel, and ship crew supplies.

Data on sand lobster carapace length were categorized into several length groups, so the  $i^{\text{th}}$  length group had a frequency. Estimation of the size group was conducted by analyzing the lobster carapace length frequency using the ELEFAN I (Electro Length Frequency Analysis) method with the FISAT II (FAO-ICLARM Stock Assessment Tool) program to determine lobster frequency distribution based on length and weight and lobster identification based on sex and gonad maturity. In addition, the growth and mortality rate of sand lobsters could also be examined through the curves produced by the FISAT II (FAO-ICLARM Stock Assessment Tool) program. Production and fishing armadas data were grouped and tabulated using Microsoft Excel to obtain the productivity value of fishing gear, Catch per Unit Effort (CPUE), fishing season, and Fishing Power Index (FPI). Thus, the utilization of sand lobsters in Palabuhanratu can be analyzed.

The length-weight relationship was calculated based on the following formula proposed by Effendie (1997); Fafioye and Oluajo (2005); and Kalayci et al. (2007):

$$W = aL^b$$

Where: W = body weight; L = fork length; a and b = constants.

The length at first capture value or the length at which 50% of a fish at first capture was calculated by the following formula (Sparre & Venema, 1999 in Nuruludin and Sadhotomo, 2013).

$$SL = \frac{1}{1 + \exp^{S_1 - S_2 * L}}$$

Where SL = logistic curve; L = length interval midpoint; S1 and S2 = Constants.  
Equation can be rewritten as:

$$\ln\left(\frac{1}{SL} - 1\right) = S_1 - S_2 * L$$

$$L_{50\%} = \frac{S_1}{S_2}$$

The mean size at first gonad maturity (Lm) was calculated using the Spearman-Kärber formula developed by Udupa (1986) as follows:

$$m = x_k + \frac{d}{2} - \left(d \cdot \sum P_i\right)$$

Where: m = log size of length groups at first maturity; d = log size increment; k = number of length groups; xk = last log size at which 100% of shrimp are fully mature (Pi = 1). Thus, the length at first maturity was given by antilog equation.

Estimation of growth coefficient (K) and asymptotic length (L $\infty$ ) was obtained based on the Ford-Walford method (Sparre and Venema, 1999) by regressing lobster length at age t (Lt) with lobster length at age t+1 (Lt+1) which resulted in growth parameter equation K = -Ln b and L $\infty$  = a/(1-b). The t0 value or theoretical age of fish was calculated using Pauly's (1983) empirical formula of:

$$\text{Log}(-t_0) = -0.3922 - 0.2752 \log L^\infty - 1.038 \text{Log} K$$

Estimation of growth parameters (L $\infty$  and K) used the FISAT (FAO-ICLARM Stock Assessment Tools) II version 1.2.2 program with the ELEFAN I (Electronic Length Frequency Analysis) method.

Von Bertalanffy growth model is as follows:

$$L_t = L^\infty (1 - e^{-K(t-t_0)})$$

Where: Lt = lobster length at age t; L $\infty$  = asymptotic length; K = growth coefficient; t = time.

The total mortality rate (Z) was estimated using the Jones & Van Zalinge method, while the natural mortality rate (M) was estimated using Pauly's (1984) empirical formula.

$$\ln M = -0.0152 - 0.279 \ln L^\infty + 0.6543 \ln K + 0.463 \ln T$$

Where: M = natural mortality; L $\infty$  = asymptotic length in the Von Bertalanffy growth equation; K = growth coefficient in the Von Bertalanffy growth equation; T = average water surface temperature (0C).

## RESULTS AND DISCUSSION

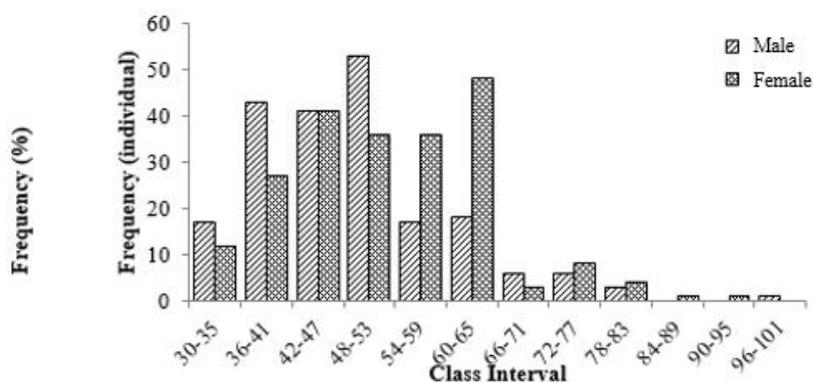
Previous lobster research in Palabuhanratu Bay obtained a range of carapace length (CL) which was not significantly different from Zairion et al.'s (2017) research. Carapace length of lobsters caught using nets ranged between 28-100 mm.

Table 2 – Lobster production in WPP 573 Waters and Indonesian Waters

Years	Production (tons)		Proportion (%)
	WPP 573	Indonesia	
2005	954	4,538	21.02
2006	759	4,121	18.42
2007	661	4,151	15.92
2008	670	4,631	14.47
2009	630	4,193	15.03
2010	414	4,091	10.12
2011	532	6,731	7.90
2012	673	4,946	13.61
2013	525	4,928	10.65
2014	435	4,244	10.25

Table 3 – Sex ratio of sand lobster (*Panulirus homarus*) every month of observation

Sampling Time	n	Total		Sex Ratio (M:F)
		Male	Female	
October 2017	60	32	28	1:0.88
November 2017	40	13	27	1:2.08
December 2017	60	27	33	1:1.22
January 2018	40	19	21	1:1.11
February 2018	40	15	25	1:1.67
March 2018	37	15	22	1:1.47
April 2018	36	13	23	1:1.77
May 2018	31	18	13	1:0.72
June 2018	51	30	21	1:0.70
July 2018	8	7	1	1:0.14
August 2018	5	4	1	1:0.25
September 2018	14	12	2	1:0.17
Total	422	205	217	1:1.06

Figure 4 – Distribution of carapace length frequency of sand lobsters (*Panulirus homarus*) in Palabuhanratu Bay Waters

The carapace length-weight relationship of male and female lobsters obtained the coefficient of determination ( $R^2$ ) of 0.73 and 0.76. It means the lobster carapace length influenced 73% of weight for male lobsters and 76% for female lobsters. The analysis results also obtained the growth pattern with the length-weight relationship of  $W = 0.0353CL^{2.0612}$  for male lobsters and  $W = 0.0348CL^{2.0651}$  for female lobsters. It means male sand lobsters had a faster growth of carapace length than weight compared to female sand lobsters.

The ELEFAN I method in the FISAT II program was used for age group analysis. The analysis results of the age groups of male sand lobsters and female sand lobsters indicated growth with an increase in the cohort line.

The mean length at first capture ( $L_c$ ) is the length at which 50% of the animals sampled are caught on the selectivity of fishing gear. The mean carapace length at first capture for male and female sand lobsters were 43.56 mm and 52.71 mm respectively. These research

results were not significantly different from Zairion et al.'s (2017) research in which the mean carapace length at first capture (Lc) of male lobsters was 50.45 mm and female lobsters was 59.87 mm. The size of the lobster catches results indicated high activity intensity condition in fishing activities and the high rate of exploitation.

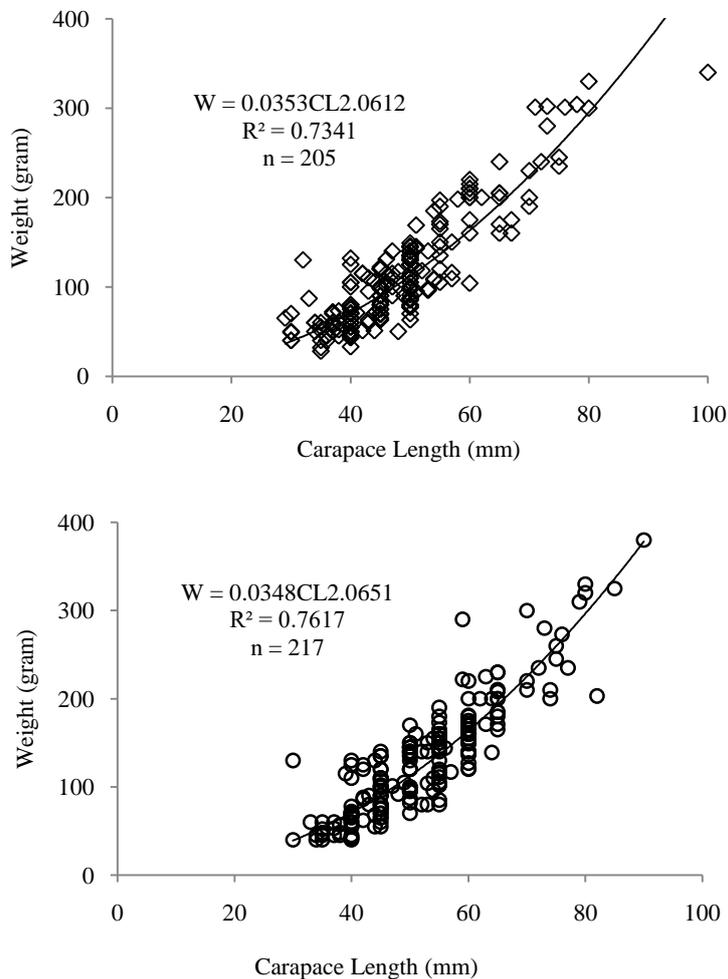


Figure 4 – The carapace length-weight relationship of sand lobsters in Palabuhanratu Bay: (1) males and (2) females

This research found that the mean carapace length of female lobsters at onset of spawning was 72.75 mm. The mean size at onset of spawning (Lr) in Palabuhanratu Bay in 2016 was 81 mm with a range between 80-82 mm (Zairion et al., 2017). In addition, Junaidi et al. (2010) stated that the value (Lr) on carapace length was 77.44 mm.

The Von Bartalanffy growth equation of male and female sand lobsters resulted in  $L_t = 104,40(1 - e^{-0,33(t+0,3565)})$  and  $L_t = 108,90(1 - e^{-0,31(t+0,3760)})$ . Male sand lobsters are estimated to live up to 8.73 years and female lobsters up to 9.30 years. The rate of exploitation (E) values for male and female sand lobsters showed above optimum values of 0.59 and 0.61. Based on these values, it is estimated that overfishing has occurred on the sand lobster population in Palabuhanratu Bay.

Figure 7 generates a CPUE linear equation =  $1.4565 - 0.0008E$  with the constant (a) of 1.4565. It means that when there is no effort, the available potential in nature is 1.4565 tons/effort.

The calculation results of the Schaefer model equation showed that  $C = 1325.87E - 0.7282E^2$ . Potential estimation can be continued because the slope value was negative in which the value was a condition for determining MSY and FMSY. Based on the MSY value, the total allowable catch (TAC) for lobsters in WPP 573 was 530.34 tons/year.

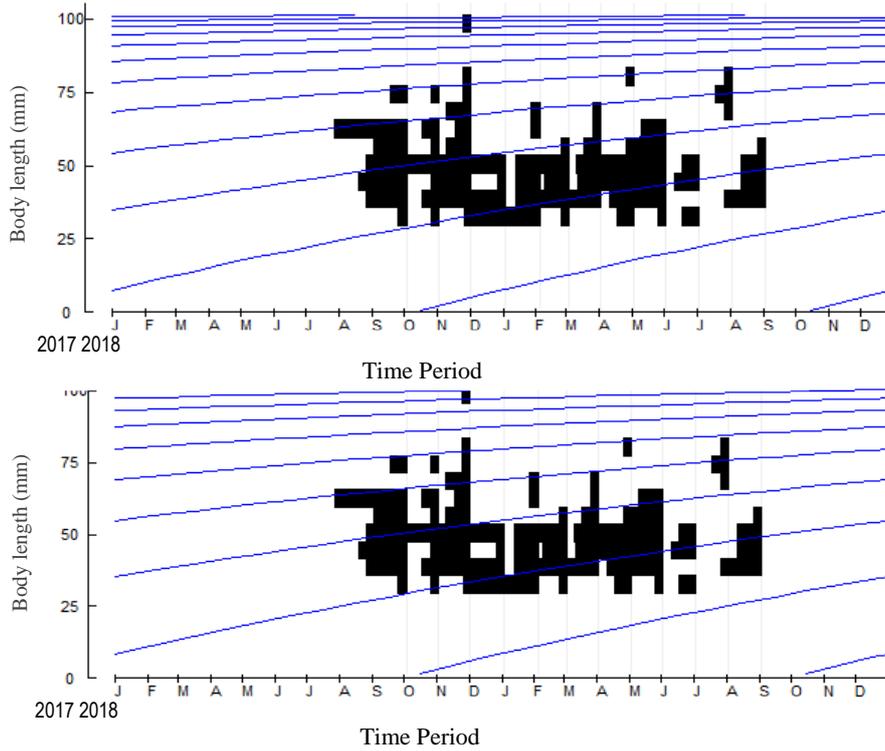


Figure 5 – Distribution of carapace length frequency with the curve plot of von Bertalanffy's growth of sand lobsters (*Panulirus homarus*) in Palabuhanratu Bay Waters; (1) males and (2) females

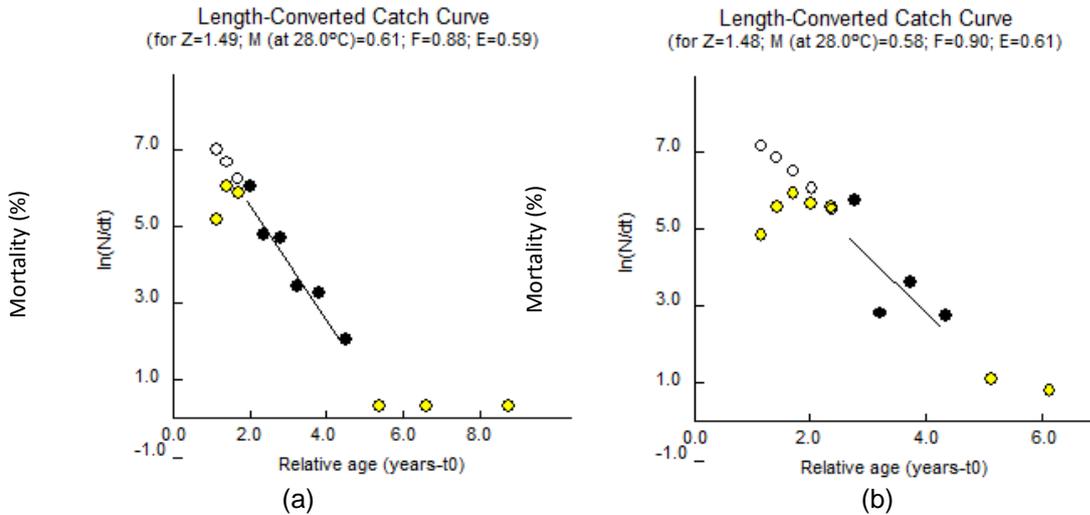


Figure 6 – Graph of total mortality (Z), natural mortality (M), capture mortality (F), and rate of exploitation (E) of sand lobsters (*Panulirus homarus*) in Palabuhanratu Bay Waters based on the length-converted catch curve method: (a) males and (b) females

Table 4 – Production and Effort from Nets and Traps

Year	Effort		Production (Ton)	
	Nets	Traps	Nets	Traps
2005	670	320	763	191
2006	714	345	592	167
2007	740	369	502	159
2008	801	283	536	134
2009	778	260	504	126
2010	698	218	331	83
2011	581	206	399	133
2012	496	232	538	135
2013	538	255	424	101
2014	671	230	333	102

Table 5 – FPI Calculation for Traps and Nets as Standard Fishing Gears

Year	CPUE (C/E)		CPUE Standardization		FPI
	Nets	Traps	Nets	Traps	
2005	1.1391	0.5963	1	0.5234	1.5234
2006	0.8292	0.4840	1	0.5837	1.5837
2007	0.6789	0.4299	1	0.6333	1.6333
2008	0.6692	0.4735	1	0.7076	1.7076
2009	0.6478	0.4846	1	0.7481	1.7481
2010	0.4744	0.3800	1	0.8010	1.8010
2011	0.6867	0.6456	1	0.9401	1.9401
2012	1.0855	0.5802	1	0.5345	1.5345
2013	0.7890	0.3943	1	0.4997	1.4997
2014	0.4966	0.4426	1	0.8912	1.8912

Table 6 – Catch and fishing effort of sand lobsters (*Panulirus homarus*) in WPP 573

Year	C (Production)	Standard Effort	Standard CPUE
2005	954	838	1.1391
2006	759	915	0.8295
2007	661	974	0.6786
2008	670	1001	0.6692
2009	630	972	0.6481
2010	414	873	0.4742
2011	532	775	0.6865
2012	673	620	1.0855
2013	525	665	0.7895
2014	435	876	0.4966

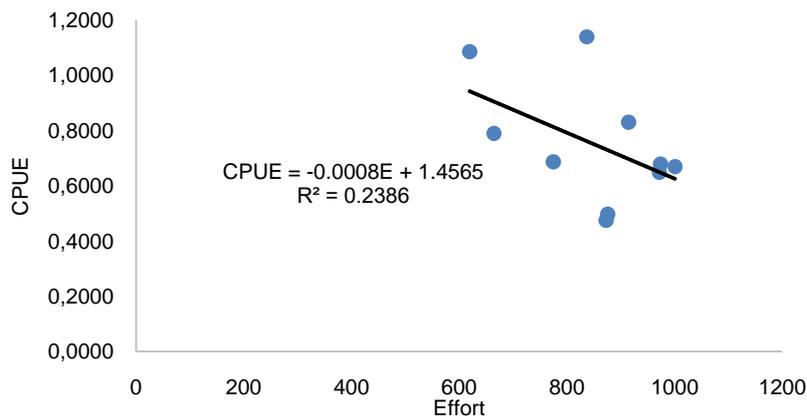


Figure 7 – Graph of the Standard Effort and Standard CPUE Relationship

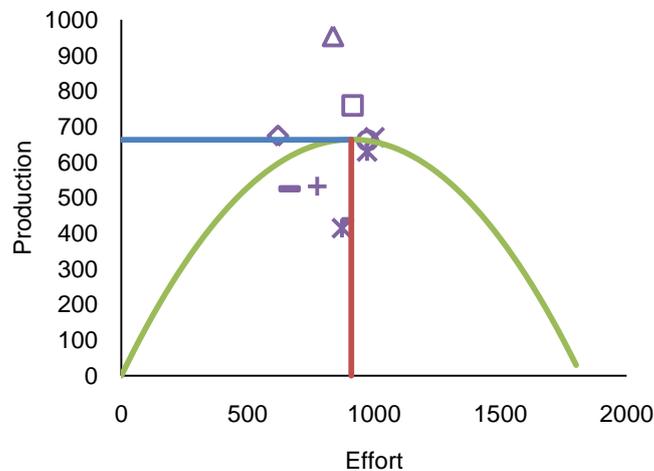


Figure 8 – MSY curve of sand lobsters (*Panulirus homarus*) in WPP 573 Waters

## CONCLUSION

Distribution of carapace length frequency of sand lobster (*Panulirus homarus*) in Palabuhanratu Waters ranged between 30-101 mm with 97.6% carapace length below 8 cm. The growth pattern of male and female sand lobsters was negative allometric. Many female sand lobsters have been caught before reaching the mean size at onset of spawning. The rate of exploitation of sand lobsters was above the optimum value of lobster fishing. The status of lobster resources utilization in Palabuhanratu waters showed a decreasing utilization trend which indicated overfishing.

## REFERENCES

1. Chan, T.Y. 1998. Lobster. In: Carpenter KE, Niem VH (eds.) FAO Species identification guide for fishery purposes. The living marine resources of the Western Central Pacific. Volume 2. Cephalopods, Crustaceans, Holothurians and Sharks. Rome: FAO. pp. 687-1396.
2. Cobb, J. S., and Phillips, B. F. (1983). Behavior and distribution of larval and early juvenile *Homarus americanus*. Can. J. Fish. Aquat. Sci. 40: 2184-2188.
3. Effendie, M. I. 2002. Biologi Perikanan. Yogyakarta: Yayasan Pustaka Nusatama.
4. Kadafi, M., Widaningroem, R., & Soeparno. 2006. Aspek biologi and potensi lestari lobster (*Panulirus* spp.) di perairan pantai Kecamatan Ayah, Kabupaten Kebumen. Jurnal Perikanan. 8(1): 108-117.
5. Moosa, M. K., & Aswandy, I. 1984. Udang karang (*Panulirus* spp.) dari perikanan Indonesia. LONLIPI. Jakarta.
6. Pauly, D. 1984. Fish Population dynamics in tropical waters: a manual for use with programmable calculators. Manila: ICLARM.
7. Sparre, P., & Venema, S. C. 1999. Introduksi Pengkajian Stok Ikan Tropis Buku e-manual (Translated Edition). In cooperation between FAO UN and Center of Fisheries Research and Development, Badan Penelitian and Pengembangan Pertanian, Jakarta, Indonesia.
8. Zairion, Islamiati, N., Wardiatno, Y., Mashar, A., Wahyudin, R. A., & Hakim, A. A. 2017. Dinamika Populasi Lobster Pasir (*Panulirus homarus* ), di Perairan Palabuhanratu, Jawa Barat. Jurnal Penelitian Perikanan Indonesia. 23(3): 215-226.

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**LASIK CLINIC NEW BUSINESS MODEL TO MEET THE SURGICAL COST CHALLENGES: A CONTRIBUTION TO DECREASE INDONESIA'S REFRACTIVE DISORDERS RATE AND TO MEET INDONESIA'S HEALTHY VISION OF 2020**

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**ABSTRACT**

Refractive surgery has been the second most common surgical procedure after cataract surgery in the eye health field in Indonesia. The projection of refractive disorder patients in Indonesia is about 4,6% of the population, according to the Indonesia's Ministry of Health data in 2011. Uncorrected refractive disorders can lead to blind. LASIK stands for Laser-Assisted in situ Keratomileusis. It is a type of laser surgery to treat myopia, astigmatism and hyperopia. Myopia is a very common refractive error that people in general usually have. The prevalence rates of myopia are the highest in Asian countries, Indonesia is not excluded. Lasik procedure helps to correct the shape of the cornea, enabling light to be focused on the retina. The main reasons for people with eye refractive disorder do not seek Lasik surgery treatment are the expensive cost, fear of surgery and other unnecessary feelings. In addition to that, external factors such as the limitation of medical personnel and eye clinic facilities that can perform Lasik surgery also contribute to the still-low number of the patients undergo the procedure. By considering the analysis of business plan components to build Lasik eye health services that offers an effective treatment with a flexible payment scheme, this business model provides a promising return of investment (RoI). Significant gap between the number of people with refractive disorders and available eye care services with Lasik surgery equipped with experienced human resources and the latest technology opens the market for health care industry in Indonesia. The biggest challenge lies on medical cost. This new business model in eye clinic provides profitable gain both for investor and for obtaining Indonesia's Vision 2020. This article describes experience to develop and implement new business model in Lasik clinic in Jakarta to answer the medical cost challenges facing by the patients. The main goal is to encourage the nationwide replication to meet Indonesia's Vision 2020.

**KEY WORDS**

Lasik, refractive disorder, myopia, astigmatism, Lasik surgery, surgical cost.

Health, according to World Health Organization, can be interpreted as a well overall condition including physical, mental and social conditions, and not just the absence of a disease or disability. Healthy sight has been of one of global concerns and in 2003 World Health Assembly (56th WHA) has launched its resolution of "Elimination of Avoidable Blindness" by 2020 which has been signed by more than 40 countries which Indonesia Government is one of the signatories. Through this then comes up a program of Vision 2020: Right to Sight.

According to the Survey of the Sight and Hearing on 1993-1996 the number of national blindness in Indonesia reaches 1,5%, the highest in Asia. Bangladesh 1%, India 0,7%, and Thailand counts for 0,3%. If there is 12 of global population experiencing blindness every one hour it means four (4) of them contributed from countries in Southeast Asia which one (1) of them comes from Indonesia! Data from Indonesia's Ministry of Health shows that the causes of blindness are cataract (0,78%), glaucoma (0,12%), refractive disorders (0,14%), and other causes-related to aging (0,38%).

The refractive disorders are myopia, astigmatism and hyperopia. These refraction disorders can be overcome using eye glasses, contact lenses or Lasik surgery. Myopia is a very common refractive error that people in general usually have. The prevalence rates of

myopia are the highest in Asian countries and the lowest in predominantly white populations such as the US and Europe.

Gazzard et al, reviewed that a study done in Sumatra, Indonesia, supported a hypothesis that suggested myopia was an increasing health problem in youngsters throughout Asia, including rural areas of Indonesia. (APBN). Some data show that 10% of Indonesia school-age children experience refractive disorders. Furthermore, myopia has a great impact on public health and socioeconomic well-being. Sight disturbance brings impact for productivity and mobility of the patients, family, society and state.

Though myopia is a common condition, the exact underlying causative mechanism remains unclear. It seems that both nature and nurture play important roles in the development of this common ocular disorder. Genetic factors have been emphasized in various studies. Because of rapidly increasing prevalence of myopia among school-age children, there is debate regarding whether the cause of myopia is due to genetic or environmental factors, such as frequent exposure to computer screens or handheld electronic devices and educational-load stress. These disorders can be corrected by using eye glasses, contact lenses, or undergoing LASIK surgery.

LASIK is Laser in-situ keratomileusis, a type of laser surgery used to treat myopia, hyperopia and astigmatism. This procedure helps to correct the shape of the cornea, enabling light to be focused onto the retina. This allows clearer vision while reducing or eliminating the need for glasses or contact lenses.

The availability of eye clinic with LASIK services across Indonesia faces some challenges which one of them, patients' affordability to pay the medical cost, will be discussed in this article. A new business model with payment scheme which helps patients to access the LASIK services described below has been implemented in Jakarta.

In the process of planning this new business model of eye clinic, several essential business planning components are incorporated as listed:

1. Description of the business;
2. Analyze the local market;
3. Competitive analysis;
4. Design development;
5. Marketing plan;
6. Operational plan;
7. Evaluate return on investment and expected revenue;
8. Management summary.

Understand that many people with refractive disorder cannot undergo Lasik surgery due to the expensive medical cost we develop a business plan to build Lasik eye health services which different from the existing eye clinics by changing the paradigm of Lasik eye health services: LASIK services is not always expensive and exclusive.

Based Indonesia's Ministry of Health data in 2011, the projection of refractive disorder patients is about 4,6% of the total population. The number of people with refractive disorders in West Jakarta, especially in high schools, is approximately 1778 children. On the other hand, in 2016, according to suppliers' information, there were only 3 well-known eye care services particularly in Lasik surgery service in Jakarta. There were 120 patients undergoing Lasik surgery a month and 1440 patients undergoing the same procedure in a year.

It shows there is a significant gap between the number of people with refractive disorders and the availability of eye care services with Lasik surgery. There are many people with refractive abnormalities, but there are limited eye care services of Lasik surgery in the community. It can be interpreted that providing services of Lasik surgery has great potentials and the business can continue to grow in line with technological advancements. So, business of Lasik surgery service has the opportunity to develop.

It is important to identify the target customers, assess the market size and the potential growth, and find ways minimizing weakness and maximizing the strengths as well as knowing the existing opportunities to deal with threats that may affect the existence of this business. The type of analysis used is Porter's five forces analysis and SWOT for analyzing the local market in Jakarta.

*SWOT analysis:*

**STRENGTHS**

1. Offering a lower price with flexible payment options;
2. Accredited LASIK clinic;
3. Experienced and qualified human resources;
4. A good relationship with the suppliers;
5. Using the latest LASIK technology and equipment.

**WEAKNESSES**

1. Unlike the competitors, the clinic has not yet been recognized by the community;
2. No tangible assets;
3. No referral procedures yet;
4. LASIK surgery is not yet covered by the Indonesia's Government health insurance scheme (BPJS) and the private insurance.

**OPPORTUNITIES**

1. The number of LASIK services is insufficient compared to the number of patients with refractive disorders;
2. The number of qualified human resources who can perform LASIK surgery cannot fulfill the demand of LASIK services;
3. The awareness of eye care and appearance are improving;
4. Some careers such as in military, police department, modeling, sports, or being a pilot requires a good vision without spectacles;
5. Some patients do not feel comfortable wearing soft lens or spectacles.

**THREATS**

1. The improvement of LASIK technology and equipment grow rapidly;
2. Unstable surgical tools prior due the money exchange report;
3. The number of uneducated people with refractive disorders and the social culture are still significant factors that can burden LASIK surgery services;
4. Using spectacles and contact lenses are attractive options to replace the treatment of undergoing LASIK surgery;
5. The "medical tourism" trend.

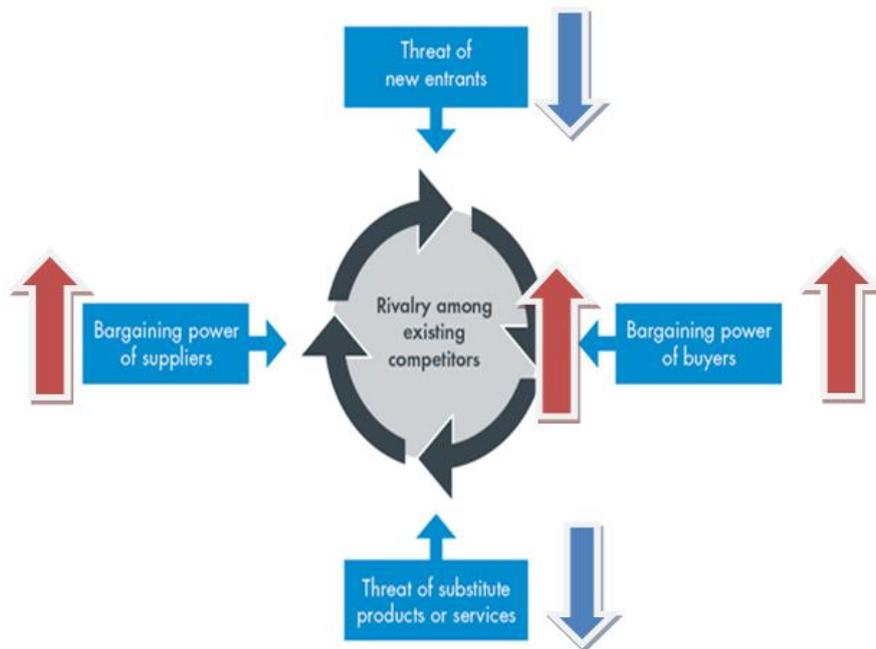


Figure 1 – Porter's Five Forces Analysis

The largest pressure sequence of the five force porter to the Lasik Center is threat of substitute products or services. Many people with refraction disorder do not undergo Lasik

surgery due to expensive medical cost and feeling scare of the procedure. Choosing to wear eye glasses or contact lenses are still best options for the patients.

Another pressure sequence is bargaining power of health care services buyers. The customers have the bargaining power to choose which LASIK clinic they want to visit.

There is an intense rivalry among existing competitors since people in the community are already familiar with the existing LASIK clinics.

However, the pressure from bargaining power of suppliers is low because supplier will participate as the investor in this LASIK center.

Threats of new players are also still low because it takes a lot of investment to develop a LASIK center and, the most significant one, there are not many experienced human resources in LASIK business yet.

The substitute products to replace Lasik procedure such as eyeglasses or contact lenses are still the main choice for people with disorders refraction. The cheap price of eyeglasses is a deciding factor for most people to choose this product.

Ying-Feng Zheng et al showed that higher socioeconomic status (e.g, higher education and income level) was not associated with higher expenditure on myopia, suggesting a lack of association between income elasticity and demand for myopia correction. The younger age of onset of wearing glasses was the only significant factor that was associated with increased cost. This is expected, as adults with younger age of onset of wearing glasses have a longer duration of disease, and, thus, longer duration of treatment, such as changing the spectacle prescription on a regular basis. Refractive surgery is now the second most common surgical procedure after cataract surgery. (26) The direct medical cost of laser refractive surgery is SGD\$ 4891 per patient, seven times higher than the costs of refractive correction. Based on the assumption that patient who had undergone laser refractive surgery did not have to pay for refractive correction, Javitt and Chiang (28) found out that laser photorefractive keratectomy (US\$ 2000 for each eye) was financially equivalent to wearing daily-wear soft contact lenses for 10 years in the United States. In our cohort study, nevertheless 28,6% (2/7) of Lasik patients still had annual expenditure on spectacles for their distant vision.

Table 1 – Price comparison of LASIK product substitutes (2016)

No.	Lasik replacement products	Price
1.	Eyeglasses with National Health Insurance (every 2 year)	Grade 3: US\$ 12 Grade 2: US\$ 16 Grade 1: US\$ 23
2.	Eyeglasses without Insurance (better than with insurance)	Start from US\$ 154
3.	Contact lenses	Start from US\$ 35 every 6 month

The procedure of LASIK surgery is more costly compared to eyeglasses or contact lenses. Nevertheless, LASIK procedure is permanent, and the procedure doesn't need to be repeated; whereas the patients who choose to wear eyeglasses or contact lenses have to change them periodically.

Table 2 – Price Comparison of LASIK Procedure for 2 Eyes (2016)

No.	Competitors	Price
1.	Competitor A	US\$ 2000
2.	Competitor B	US\$ 2154
3.	Competitor C	US\$ 2154

The buyers (patients) have strong bargaining power because many people can choose any LASIK centers they desire. In Jakarta, there are 3 eye health services providing LASIK services. They should be taken into account. The main difference comparing to other LASIK eye health services is the price of LASIK procedure.

The price of Lasik surgery offered will be below the competitor's price, with the installment program, about 1615 US\$.

The rivalry among existing competitors is quite intense because the brands have been well known by the people. Besides, the tendency of loyalty to visit the same doctors who conduct practices in those Clinics drives patients to undergo the LASIK surgery there.

The bargaining power of suppliers is still low. The supplier will participate as investor with agreement that all LASIK machines and consumables goods used for LASIK surgery will be provided with special prices.

The threat of new players is also insignificant since it requires a large amount of investment to establish one LASIK center. Furthermore, there is still limited amount of human resources who have skills and experience in LASIK surgery.

Some of the components of competitive analysis are: identifying the strengths, weaknesses, opportunities, threats, determining the financials etc. Aaker (1984) has proposed a model to rank the business against its competitors using the key success factors (KSF). Once the various conditions under KSF is decided they need to be graded, the weights allotted should come up to 1. Once the weight has been allocated, the strength rating is allotted to each KSF ranging from 1 (weak) to 5 (strong). The calculation of the firm strength; the strength rating of the corresponding KSF is multiplied with weights parallel to it. The final rating denotes the overall strength. The higher the rating, the higher the overall strength is. With the reference to Table1, it is seen that entrepreneurs business have a middle rating and hence it is better than competitor C.

Table 3 – Competitive Analysis

Key Success Factors	Weights	Own business		Competitor A		Competitor B		Competitor C		Eyeglasses or Contact lens	
		Rating	Weights	Rating	Weights	Rating	Weights	Rating	Weights	Rating	Weights
Brand awareness	0.20	3	0.6	4	0.8	4	0.8	3	0.6	4	0.8
Service	0.20	3	0.6	4	0.8	3	0.6	3	0.6	4	0.8
Sales turnover	0.06	2	0.12	4	0.24	3	0.18	2	0.12	4	0.24
Market share	0.09	4	0.36	3	0.27	3	0.27	2	0.18	4	0.36
Business experience	0.06	2	0.12	4	0.24	3	0.18	2	0.12	2	0.12
Financial strength	0.09	3	0.27	3	0.27	3	0.27	3	0.27	2	0.18
Location	0.20	3	0.6	3	0.6	3	0.6	1	0.2	3	0.6
Provision of facilities	0.10	4	0.4	4	0.4	3	0.3	3	0.3	2	0.2
<b>TOTAL</b>	<b>1.00</b>		<b>3.07</b>		<b>3.62</b>		<b>3.2</b>		<b>2.39</b>		<b>3.3</b>

Design and development plans are needed to show the stages of product planning, graphs of development in the context of production and sales.

The LASIK business that will be built has a strong competitive position and high market growth, because it is in the competitive quadrant. The competitive strategy includes market development, market penetration, product development, backward integration, forward integration, horizontal integration and related diversifications.

The market penetration is implemented by conducting continuous promotion and offering the affordable price of Lasik surgery, and flexible payment terms.

In this segment, the strategies are formed to decide how to reach the customers, how to capture the attention of the potential customers, what kind the messages needed to get a response motivating the potential customer to come and get LASIK services that s/he wants. Since the marketing plan is associated with costs, it is essential to select the methods that

give a higher impact. The methods can include paid advertisement using social media, sales promotion, personal sales, magazine and radio to promote this LASIK eye health service that offers an effective and flexible payment scheme with well-experienced human resources in LASIK surgery and the use of state-of-the-art LASIK equipment.

The operational plan will focus on the logistics needed by the clinic such as various tasks and responsibilities of the management team, how the inter-departmental assignment procedures established in the clinic, as well as budget and expenditure requirements related to the clinic's operations.

Operational Plan:

1. Business establishment preparation planning;
2. Location and clinic lay-out planning;
3. Medical devices planning;
4. Consumable items planning;
5. Patient flow planning.

The financial plan is the main section of the business plan as it integrates all parts of the business, namely: the marketing plan, operational plan, and other details including the expected financial outcomes.

Table 4 – Capital Need and Usage

Funding	Estimation	Actual
Investor funds		
Investor	US\$ 784.615	-
Supplier	US\$ 192.308	-
Owner of the office	US\$ 38.462	-
Total Investment	US\$ 1.015.385	-
Loan	-	
Other Funding	-	
Total Funding	US\$ 1.015.385	-
Cost	Estimation	Actual
Pre-investment	US\$ 2.846	-
Office rent	US\$ 15.385	-
Initial investment: Lasik machine and support devices, office tools, application of IT and office renovation	US\$ 619.231	-
Working capital: consumable items, employee salary, overhead cost, marketing cost	US\$ 373.077	-
Total Cost	US\$ 1.010.539	-
Surplus/(deficit)	US\$ 4.846	-

The estimated revenue is calculated from the expected sale volume and the target price. In calculating the projected revenue and sales, the sensitivity analysis is used to understand more about how far the financial analysis is able to confront the changing factors that influence it.

The sensitivity analysis is carried out by creating 3 revenue recognitions: 1. Pessimist = 6%; 2. Normal = 8%; 3. Optimist = 10%.

Table 5 – The Calculation of the Number of Patients Based on the Target Market

Assumption	Annual Surgery Performed	Annual Consultation Performed
Pessimist	541	1805
Normal	576	1920
Optimist	634	2112

Table 6 – After-tax Income Yearly Budget

Services	Pessimist	Normal	Optimist
Consultation	US\$ 124.962	US\$ 132.923	US\$ 146.215
Surgery	US\$ 794.475	US\$ 845.874	US\$ 931.048
TOTAL	US\$ 919.437	US\$ 978.797	US\$ 1.077.263

The payment of dividends will be distributed at the end of the third year as much as 80% of the net profit of the third year after the tax, and the rest will become the retained earnings that will be used to fund the expansion plan in the next 4 to 5 years. In addition, the payment of the dividends is also to give the investors the flexibility making use of the profit of this business.

Table 7 – Projected Retained Earnings and Dividends Each Year (normal condition)

n/n	1	2	3	4	5
Retained earnings (US\$)	-	283.799	668.018	789.689	971.994
Net Profit (US\$)	283.799	384.218	608.355	911.528	1.454.159
Dividends (US\$)	-	-	(486.68)	(729,22)	(1.163.32)
Final Retained Earnings (US\$)	283.799	668.017	789.689	882.172	1.262.826

Return on Investment Ratio is ratio that calculates the profits of company in producing the income statement of the stakeholders.



Figure 2 – Trend of Return on Investment Ratio

Source of funds comes from 3 investors, one of which is the distributor of LASIK machine. In order to be more efficient, this new business model of LASIK eye clinic works with the existing eye clinics that do not provide LASIK services.

Another factor that influences finding is the people who are associated with the business. It should include details as follow:

1. The prior experience of the team members;
2. Their achievements;
3. Reputation within the business surroundings;
4. Their knowledge, skills and abilities;
5. Commitment towards the set-up;
6. The strengths of the team as a whole;
7. The team's viewpoint.

The strength of this LASIK business model lies on its human resources who are experienced and qualified and with good reputation in the business.

## CONCLUSION

With all the considerations of the analysis component business plan to build LASIK eye health service that offers an effective and a flexible cost, with experienced human resources in LASIK procedures, use LASIK machine with state-of the art technology, this business will have the opportunity to develop quickly in order to meet the needs of patients with refractive disorders.

The potential market for this New Business Model is wide-open. The next challenge of how to use BPJS-scheme for Lasik procedure should be analyzed further in order to achieve Indonesia's goal on Vision 2020.

## REFERENCES

1. Aaker, D., (1984), "how to select a Business Strategy". California Management Review, Vol.XXVI, No.3.
2. Abimanju, Ariadi. 2015. Marketing Book For Those Who Don't Like To Read, Jakarta.
3. Ahmad Rodoni, 2014. Manajemen Keuangan Modern. Penerbit Mitra Wacana Media, Jakarta.
4. Ashwin J. Baliga, Dr. Lewlyn L. R. Rodrigues, (2015), "Business Plan – The Secret to Success", The International Journal of Bisnis and Management, Vol. 3 Iss pp.210-214.
5. Cyr, L. (2007). Creating a Business Plan. Boston, Massachusetts: Harvard Business School Press.
6. David, Fred., (2007). Strategic Management: Concept and Cases International Version. Pearson Higher Education.
7. Definisi sehat menurut WHO. <http://kekeanisa20091995.wordpress.com>.
8. Dinas Kesehatan Provinsi DKI Jakarta. 2016. Kesehatan Mata Di Provinsi DKI Jakarta. Program PTM Dinkesprov DKI Jakarta.
9. Friend,G., Zehle,S. 2004. Guide to Bussines Planning. The Economist. Italy.
10. Gus Gazzard, Seang-Mei Saw, David Koh, et al. Refractive Error in Sumatra, Indonesia- A population- Based Prevalence Study. APBN 2002; Vol 6 No.2:49-52.
11. Harvard Bussines Study, Case Interview Guide, eBook.
12. John Maleyeff. (2007), Improving service Delivery in Government with Lean Six Sigma. IBM Center for Business of Government.
13. Kementerian Kesehatan Republik Indonesia, 2014. Profil Kesehatan Indonesia Tahun 2013, Jakarta.
14. Kotler,P., Keller, K.L., 2007, Manajemen Pemasaran. Edisi 12 Bahasa Indonesia, PT. Indeks, Jakarta.
15. Pei-Chang Wu, Hsiu-Mei Huang, Hun-Ju Yu, et al. Epidemiology of Myopia. Asia Pac J Ophthalmol 2016;5:386-393.
16. Roger Beuerman. Molecular Biology of Myopia. APBN 2002;Vol.6 No 2:43-48.
17. Tjiptono, Fandy. 2015. Strategi Pemasaran. Edisi Keempat, Andi Offset, Yogyakarta.
18. Wirawan, Dr., MSL., Sp.A.,M.M.,M.Si., Kepemimpinan Teori, Psikologi,Hukum Ketenagakerjaan, Aplikasi dan Penelitian, Aplikasi dalam Organisasi Bisnis, Pemerintahan dan Pendidikan. Divisi Buku Perguruan Tinggi. PT Raja Grafindo Persada. Jakarta: Rajawali Pers, Maret 2015.
19. Ying-Feng Zheng, Chen-Wei Pan, Junxing Chay, et al. The Economic Cost of Myopia in Adults aged Over 40 Years in Singapore. Invest Ophthalmol Vis Sci 2013; 54:7532-7537.

## CITY BRANDING POLICY AND REGIONAL MARKETING IN INDONESIA

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### ABSTRACT

City branding is a form of communication that is built through a public policy that is used to market a city to form a perception of a city carried out by the relevant government. The implementation of city branding has been carried out by various countries including various regions in Indonesia. Especially with the existence of regional autonomy since 2000, each city competed to show its superiority. Various studies have been conducted to see the success of City Branding which can be measured through several related theories, such as Hexagon theory of Anholt's City branding. The purpose of this paper is to see the process of implementing city branding in Indonesia. The method used uses a qualitative approach with data sources derived from literature studies. It can be concluded that city branding policies have an impact on increasing income through the tourism sector which benefits the economy and prosperity of its people. While the problems that are often faced include the lack of participation resulting from a lack of government and community knowledge regarding the meaning, purpose, and benefits of city branding.

### KEY WORDS

City branding, public policy, regional marketing, regional development.

City branding is a strategic concept for marketing a city, region, and country. Anholt in Luthfi (2013) revealed that city branding is an idea of how to apply an identity that is usually used for a product, into a place branding that stakeholders want to be of more value than the viewpoint of a consumer. The success of the city branding strategy is closely related to the influence of Place marketing concepts that shape the identity of a place and also with the support of the community and stakeholders/government. As a public policy, Intiah and Kriswibowo (2018) argue that the determinant of the success of the public policy is in the implementation steps in the field, or in other words, good implementation will produce good policy performance, as well as in the context of city branding policy in Indonesia. From the point of view of public sector marketing, Wibawanto (2015) argues that the place marketing approach greatly influences the concept of marketing in a place. Place branding is also needed to identify suitable brands according to the target conditions of the place and community group.

Although the purpose of city branding has been formulated, as in Cai's opinion in Qu, Kim, & Im (2011), that is to build a positive image of a place and to distinguish the place from its competitors, there are many other thoughts in the formulation of city branding policies in Indonesia. The hope, through a branding approach in a city, can popularize a brand from a product owned by the city. The product here is everything that becomes the identity of a city. Please note that the implementation of city branding has been carried out by various countries including various regions in Indonesia. Moreover, with the existence of regional autonomy since 2000, each Regency/city competes to show its superiority. Every region of the City / Regency in Indonesia has now used the city branding strategy to improve the existence of the region, they are also trying to attract the attention of local/foreign tourists and investors. In order to further review the success of the city branding strategy in a City / Regency area or in a country, further analysis is needed using the literature review method. This paper will look at how the concept of city branding has evolved in various regions and to assess the achievements of the implementation of city branding in Indonesia in recent years.

As a form of policy in the public sector, of course, this study of city branding is interesting to be explored further.

## **METHODS OF RESEARCH**

This study uses a qualitative approach using data in the form of literature in the form of books, proceedings, and scientific journals. Through the literature study approach, views, concepts, and comparisons of the implementation of public city branding policies will be obtained in Indonesia.

## **RESULTS AND DISCUSSION**

According to Mathieson (2005: 22) in Intyaswono, Yulianto, & Mawardi, (2016), brands are interpreted as something that can run the whole process of mixed communication of attributes, in the form of a logo or symbol that reflects a promise or emotional process between consumers and companies and create valuable influence for stakeholders and consumers. While another opinion states that Branding in the sense of city branding is to give a brand to the city so that it can be easily recognized and can form a city image to market the area both locally and internationally (Bawanti, 2016). So from the opinion of the experts, it can be concluded that branding is an effort to give and market a brand that can be a logo or symbol and other communication processes that can form a positive image/image to influence and attract consumers.

Wahyurini (2009) sees from the other side that city logo is closely related to the city branding communication framework which can increase international recognition of a city. City logo as a brand of city identity symbolizes city identity, a positive image of the city and a city branding strategy. Like in New York which has the I ♥ NY logo that can arouse tourist attraction and increase the love of the local community in their pride of living in the city. So that many of the companies and communities make the City Logo the design of their products which are then hunted by tourists as souvenirs. Melbourne has also spent more than AU\$ 250,000 only for design costs, city logo describes Melbourne as a sophisticated world city with a variety of components and features, which easily communicates with stakeholders, society, residents and even political culture.

On the other hand, there are some optimizations in the implementation of City Branding, such as the findings of Bawanti (2016) who conducted research in Jayapura Regency regarding city branding where the business carried out by the government was not optimal. This is because City branding has not yet formed an immigration and city logo city related to its natural beauty, especially in the beauty of Sentani lake which is often a tourist destination, as well as lack of accessibility and transportation that cannot support tourists to enjoy their visit. Then it is necessary to establish a city branding that must be able to show an attractive brand for visiting tourists. Such as the formation of a brand and a symbol to launch a good city branding can reflect the beauty of Sentani Lake and the cultural diversity of other local communities.

According to Sevin (2014) in Hambalah (2017), city branding is a collection of associations that are in someone's mind about a city or that are perceived by the city, which are the results of communication, values, and actions made by stakeholders the city. Whereas according to Kavartzis (2004) in Jannah, Arifin, & Kusumawati (2014) states that seeing city branding in the context of communication from the image of a city through three stages of communication namely primary, secondary, and tertiary. So it can be concluded that city branding is a communication context that is used to market a city to form a perception of a city carried out by the government concerned.

City branding can also appear automatically without a planned strategy from the local government because city branding can be interpreted as a society's perception of social or historical environmental conditions that exist in a city or country. This is in line with that expressed by Koob & Samuel, (2010) regarding Place Branding and Destination Marketing in Paris which shows the results that city branding is obtained from its image that is

internationally known as it is called "city of love", "city of light" and "City of fashion". Branding is formed by people and tourists themselves who consider the conditions of the social environment and the charm of the place/city buildings in Paris, and the government only strives to promote tourism through the development of website-based communication and information technology to lead public opinion which is then formed.

According to Anholt (2007: 108) in Intyaswono et al. (2016), there are six aspects to measuring city branding effectiveness, namely: 1. Presence: based on the international status of the city and knowledge of the city globally. This is also used as a benchmark for the contribution of cities in science, culture, and governance globally. 2. Potential: measuring how economic and educational opportunities in a city. For example, opportunities to find employment, or opportunities to get a higher education. 3. Place: measuring people's perceptions of the physical aspects of each city in terms of climate, environmental cleanliness and how the city spatial layout. 4. Pulse: measures the perception that there are interesting things in a city, whether it's an activity or an event that is able to fill leisure time or can attract visitors. 5. People: measure how friendly local people are, what communities are in the community and how the area is able to provide a sense of security for visitors. 6. Prerequisite: determine how people see the quality in a city, whether the city is satisfactory, have standards for public facilities such as schools, hospitals, transportation, and sports facilities.

In order to know the effectiveness and efficiency in the success of the city branding strategy, a measurement effort is needed. There are several measurement models that can be done to measure the success of city branding. Moreover, in various regions in Indonesia emphasize city branding in the marketing of a city/district in an effort to improve the tourism sector. As a study conducted by Hilman & Megantari, (2018) related to city branding as a strengthening of local tourism in East Java Province which obtained results that the city branding strategy is very effective in increasing tourist visits. This is because city branding has been able to provide excellent references for tourists in an effort to increase tourist visits in various areas of East Java, and considering tourism is one sector that provides a lot of income for East Java Province, it can be concluded that city branding can increase PAD / Regional Revenue through the tourism sector.

The other research conducted by Wahid (2018) shows the success of the application of city branding in Lumajang in 2016 which has a considerable impact on the increasing number of tourist visits. With the city branding, "I Like Lumajang" can make tourism and culture services become the highest 3 major contributions in increasing the PAD/Regional Revenue of Lumajang in 2014-2017. The marketing strategy carried out by the Government of Lumajang Regency was seen from three elements of city branding: brand personality, brand positioning, and brand identity. Brand personality is the character chosen as the best way to communicate the brand to the target user, while the brand positioning shows how a brand can be known and placed in the minds of consumers, and brand identity can be interpreted as a set of words, impressions, and a set of customers perception of the brand.

In Brand Personality, Lumajang Regency uses the tagline "i like Lumajang" does not have a strong attachment but is able to foster a sense of love for Lumajang Regency with its various potentials, and in Brand Positioning, Lumajang Regency only focuses on communicating its city branding to the local community. foreign tourists, so that tourist visitors there are emotionally involved visiting as a form of pride in their hometown or having relatives living in Lumajang. Whereas in Brand Identity focused on aspects of visualization with logos/symbols and other marketing media it has been considered able to attract the attention of tourists.

According to Yuli (2011) in Indonesia, there is no legal protection for city branding brands. As well as not focusing on brand positioning and brand identity, this certainly affects the regions that have a particular product brand. As a company, Indonesia is a corporate brand that houses 33 provinces as a product brand. Without a clear national positioning, it greatly influences marketing activities, especially in terms of communication. Not surprisingly, then some regions took their own initiative to do branding even though some of them often did not show the uniqueness of the area.

Besides that effective city branding measurements can also be carried out using The Hexagon Brand Theory theory put forward by Anholt in the previous section, revealing that there are six dimensions in city branding strategies which include the presence, potential, place, pulse, people, and prerequisite. This is reinforced by the research conducted by Lutfi and Widyaningrat (2013) which can be concluded that the city branding concept with reference to The City Hexagon Brand created by Simon Anholt is the right strategy so that the city has an identity and is better known by the wider community. However, the application of the city branding concept must be considered because it is related to several important parties in forming the identity of a city. City branding is not only the duty of the government, but also business people, local residents, community leaders, and migrants are interrelated to create a positive image of the city. This will attract domestic and foreign tourists to visit so that it will not form a negative pattern of visiting behavior, and attract investors to come and develop the city's potential.

Chaerani (2011) also conducted an analysis of the implementation of city branding in Surakarta City using Anholt's theory, and the results of the study showed that Surakarta City had a potential aspect as indicated by its strategic location in the middle of Java island and aspects of people can be assessed from hospitality of people to the most prominent tourists, but the City of Solo is weak in the place dimension. Another advantage is the pulse aspect because Solo has many interesting artistic and cultural activities. Then it can be concluded that the Anholt theory can reach all aspects in the area so as to obtain the accuracy and effectiveness of measurement of city branding strategies. On the other hand, Christin & Fauzan (2015) conducted research conceived by focusing on Prerequisites influence on city branding. Bandung as a world tourist city established by UNESCO on the 25th September 2013 in Beijing, must have adequate facilities to support easy access for tourists, such as the aspect of a city tour with Bus Bandros. This research shows that Prerequisite is very influential in facilitating access to tourism development which is a city branding destination.

There are also several other studies that use the city branding strategy measurement model from Merrilees (2012) in Purwianti & Lukito (2014) where there are six dimensions consisting of nature, business opportunities, transportation, social bonding, cultural activities. Like research conducted by Kawi & Maulana (2017) in looking at the City Influence of Balikpapan City branding on Brand Attitude. This research is motivated by the city of Balikpapan which has great potential for oil and gas but wants to change its image to become a tourism city. Balikpapan city held a voting or city branding name selection through the official website of the Balikpapan government, [www.Balikpapan.go.id](http://www.Balikpapan.go.id) by making 11 new name categories proposed by several stakeholders. The results showed that the effect of city branding on the brand attitude based on the simultaneous determination test showed only 31.9% of city branding influence on brand attitude. Whereas, 68.1% is influenced by variables not examined. Business opportunity variable becomes the variable that most influences the brand attitude. Because the majority of the people of Balikpapan City are immigrants, the website of the Balikpapan City government was reported. Besides research Purwianti & Lukito, (2014) using the same method and showing the results that the factors that influence the brand city of Batam City as a place of residence for residents of the city of Batam are factors of business opportunity, social bonding, and networking.

In addition, several studies have tried to reveal whether there is a connection between city branding, city image and the decision of tourists to visit. As conducted by Indriano & Kuswoyo (2017) in his research which resulted in an analysis of the relationship between city branding and city images and the visiting decision of tourists. The results obtained are that city branding has a significant effect on city image and the decision to visit tourists so that all three of them influence each other. So if Purwakarta wants to increase the PAD / Regional Revenue through the tourism sector then it must be able to increase interest in visiting tourism decisions by also increasing the city image so that tourists know well the attractive tourist conditions in Purwakarta. In line with the research conducted by Wandari, Kumadji, & Kusumawati, (2014) the results show that these three aspects influence the city branding "Shining Batu". With city branding results having a significant effect on city image, city branding also has a significant effect on visiting decisions and city image has an influential

but not significant effect on tourist visiting decisions. The research conducted by Intyaswono et al. (2016) also shows the success of the city branding "Shining Batu" which can describe the three leading sectors (agriculture, tourism, and education) that attract foreign tourists so they can increase the Regional Revenue.

Another study conducted by Jannah et al. (2014) also analyzed the influence of city branding and city image on the decision to visit tourists to Banyuwangi. This study shows that 1) the city branding variable "The Sunrise of Java" has an influence on the Banyuwangi city image, especially in terms of tourism potential, and local residents who are able to create a comfortable atmosphere for tourists. 2) the city branding variable has a significant effect on visiting decisions but only shows a small percentage, this is due to the maximization of Banyuwangi branding. The Banyuwangi Regency Government is currently still an effort to improve the branding promotion of "The Sunrise of Java" by making it a cover in *Gatra* magazine, and making Discover Banyuwangi videos and disseminated via YouTube and DVDs aimed at non-local tourism Banyuwangi while the respondents in this study are local residents of Banyuwangi. 3) that city image has an effect but not significant to visiting decisions, This is because most of the respondents came from Banyuwangi so that for them the Banyuwangi city image was not used as a consideration to visit Banyuwangi tourism.

Many of the various countries and regions of the city are carrying out city branding in order to get the attention of local and foreign tourists in an effort to increase their income from as dirty as tourism and hope to be able to attract investors. Various methods were used to emphasize tourism, some using socio-cultural aspects of society and history. As the research conducted by Pecot (2015) discusses city brand management that focuses on the role of Heritage Brands in City branding communication, showing the results that local residents are very concerned about various elements of city branding formation through the City Brand Heritage (CBH) which favoring the social and historical cultural heritage that develops in the community, but other results are shown by tourists who pay less attention to the value of the cultural heritage and focus more on clearer elements such as the dimensions of places known as tourist destinations. Therefore, if the government will carry out CBH, it needs to pay full attention to the chosen promotion/marketing methods to provide easy access that can attract tourists.

Learn from Dinnie's (2009) research in South Korea which is trying to do city branding through the promotion of various cultures and foods and the development of sophisticated technology through the distribution of volunteers who work in information technology companies, the education sector and the environment around the world. This study looks at the challenges of the entry of the business sector that can influence the formation of city images, such as the response of some people when asked about South Korea called Samsung brands and K-Pop idols. The same challenge must be experienced by Singapore. It was proven by research conducted by Yee, (2009) about national branding in Singapore which turned out to continue to update its brand tagline starting from the last, Uniquely Singapore (2004), New Asia (1996), Surprising Singapore (1985), Instant Asia (1970), The Garden city (1967) and The Lion city as the first branding since the establishment of this country. This is done by Singapore to build a brand that can withstand the challenges of business and economic development in this country. Young, (2012) looked at city branding and urban tourism in Seoul and Taipei and obtained results that both chose to form a positive image of city branding through the creativity of art and local culture, with its Seoul megaproject (Design Seoul planning) and Taipei (Taipei Beautiful planning).

Murfianti, (2010) conducted research in Indonesia precisely in the city of Solo that uses city branding in the formation of the city's identity. The city of Solo chose to elevate the social and cultural life of the people through the archipelago batik tradition. Then Larasati & Nazaruddin, (2018) conducted research on Tourism Potential in the Formation of City Branding in Pekanbaru City. The results showed that the city branding carried out had not been able to show the potential of cultural arts, culinary, natural tourism and historical tourism. So from these results it is necessary to review the vision and strategy in city branding as the gateway to Malay culture, there need to be synergies between stakeholders (such as local residents, employers, and government), improving tourism infrastructure,

forming public spaces (such as parks), and the need for communication through a tagline that is in accordance with the branding of the city of Pekanbaru in various districts of the region.

The city branding to improve the tourism sector can also be done through political and economic stability, a quality education system, and the development of high-tech systems and also their natural beauty. Like research revealed by Paschou & Metaxas, (2013) about city branding in Stockholm, with the title "Capital of Scandinavia" which means rulers on the Scandinavian peninsula (northern Europe). This is pinned because Stockholm succeeded in making the city a safe, comfortable and friendly city for immigrants and investors by strengthening political and economic stability in the country. In addition, the improvement of the tourism sector in city branding communication can also take advantage of the potential of its natural resources, such as the research conducted by Hambalah (2017) which in the formation of the city of Surabaya as a maritime city based on its marine potential. Shown by the port of Tanjung Perak, it also functions as a human transportation port, also has North-Quay as a port for overseas cruise ships who want to transit to Surabaya, Sentra Pasar Ikan Bulak (Center of Fish Market) which stands majestically on the edge of Kenjeran Beach, there is a Suramadu bridge as a liaison between cities, The existence of the Pangkalan TNI-AL V (Navy Fleet Base) in the city of Surabaya which is also the largest Naval Fleet Base in Indonesia provides many opportunities for the city of Surabaya to host the TNI-AL (Navy) events. Coupled with the tourist attraction, the unique Jalesveva Jayamahe Statue Monument and the only one found in Indonesia.

City branding can also be used as a development of the tourism sector that targets the business market. Febrianur (2016) saw the impact of Enjoy Jakarta and YourSingapore city branding on the development of Meeting, Incentive, Convention and Exhibition (MICE), where MICE itself is a segment in tourism that targets the business market for business people where they can hold meetings (meetings), traveling (as part of incentives or gifts to business people), conducting conferences and exhibitions. Bringing YourSingapore can make someone no longer feel alienated in Singapore even though it is the first time they come to Singapore, this brand that builds closeness with tourists shows a target interest in the MICE market which certainly prioritizes quality over quantity, and causes Singapore to be chosen as the number one city meeting International Congress and Convention Association (ICCA) in the Asia Pacific region. It is inversely proportional to the results of research in Jakarta with the Enjoy Jakarta brand, where although this branding still exists today, there is no synergy between stakeholders and the public and business actors.

*Challenges and Problems in the implementation of City Branding in Indonesia.* The implementation of City Branding has been carried out in various regions, but many of them are still not optimal because they have not been able to show their various potentials. We need to know that the main thing that is a challenge in implementing city branding and needs to be considered is the process of building city branding itself, as stated by Lestari, (2016) that the process of building City Branding begins with exploring city identity that comes from regional potential and uniqueness which are owned.

Besides that, the challenge that must be faced by Indonesia in carrying out city branding to increase income from the tourism sector is having to be able to provide transportation, accommodation and public facilities that are good at supporting tourism potential. Like the research conducted by Christin & Fauzan (2015) in Bandung, which was motivated by the characteristics related to the establishment of world tourism cities, one of the must-have values is having adequate facilities to support easy access for tourists, such as the city tour aspect. Then in line with the research carried out by Bawanti, (2016) in Jayapura, the biggest challenge from the results of the research was that transportation and tourism access received low ratings compared to several other elements of the quality of tourism products.

While the problems that are often faced include the lack of participation resulting from a lack of government and community knowledge regarding the meaning, purpose and benefits of city branding. This is in line with the findings of Romandhona, (2016) in Surabaya which shows the results that the level of knowledge and understanding of the community regarding

the existence of "Sparkling Surabaya" city branding can be said to be lacking. Government officials also do not really understand the meaning of the implementation of "Sparkling Surabaya", the concern of the private sector is still limited to profit alone, and there are still many apathetic attitudes from the young generation towards the direction of tourism development in the city. Then the communication of city branding also needs to be considered by the regional government to be right on target with the expected goals. City Branding Communication must pay attention to global competition and the development of information technology in promoting branding.

### CONCLUSION

Most of the research conducted shows the results that city branding strongly supports the formation of the image/identity of a country or a city, and is considered quite effective in marketing various products it has. The purpose of this city branding is to increase revenue through the tourism sector. The benefits are increasing the economy and prosperity for the people. The communication of city branding in the development of the tourism sector can be done through various ways, such as the creation of taglines, symbols or social empowerment of society and culture, through the exploitation of natural, culinary, and economic-political stability and global competition in the business market. Then measuring the success of city branding can be done using several theories, including The Hexagon Brand Theory theory put forward by Anholt and the theory expressed by Merrilees which consists of nature, business opportunities, transportation, social bonding, cultural activities. In addition, several studies also try to reveal whether there is a connection between city branding, city image and the decision of tourists to visit.

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### REFERENCES

1. Bawanti, A. (2016). Analisis City Branding Dalam Pembangunan Destinasi Pariwisata Kabupaten Jayapura. *Jurnal Media Wisata*, 14(1), 365–381.
2. Chaerani, R. Y. (2011). Pengaruh City Branding Terhadap City Image (Studi Pencitraan Kota Solo: "The Spirit of Java). *JRK*, 2(4).
3. Christin, M., & Fauzan, S. F. (2015). City Branding Kota Bandung melalui Bus Bandros. *Jurnal Komunikator*, 7(2).
4. Dinnie, K. (2009). Repositioning the Korea Brand to a Global Audience: Challenges, Pitfalls, and Current Strategy, 4(9).
5. Febrianur, Z. (2016). Dampak City Branding Eejoy Jakarta & YourSingapore Terhadap Perkembangan MICE. *Journal Ilmu Hubungan Internasional*, 4(4).
6. Hambalah, F. (2017). Surabaya Sebagai Kota Maritim: Strategi Pemasaran. *Jurnal Aplikasi Administrasi*, 20(1), 61–69.
7. Hilman, Y. A., & Megantari, K. (2018). Model City Branding Sebagai Strategi Penguatan Pariwisata Lokal Provinsi Jawa Timur. *Jurnal Komunikasi Dan Kajian Media*, 2(2), 22–35.
8. Indriano, J., & Kuswoyo, C. (2017). Pengaruh City Branding Pada City Image dan Keputusan Berkunjung Wisatawan ke Kabupaten Purwakarta. *Jurnal Manajemen Maranatha*, 17(1), 41–52.
9. Intiah, I., & Kriswibowo, A. (2018). Kinerja Implementasi Penuntasan Buta Aksara Di Kecamatan Karangjambu Kabupaten Purbalingga. *Jurnal Dinamika Governance*, 8(2).
10. Intyaswono, S., Yulianto, E., & Mawardi, M. K. (2016). Peran Strategi City Branding Kota Batu Dalam Trend Peningkatan Kunjungan Wisata Macanegara ( Studi Pada Dinas Pariwisata dan Kebudayaan Kota Batu ). *Jurnal Administrasi Bisnis*, 30(1), 65–73.
11. Jannah, B., Arifin, Z., & Kusumawati, A. (2014). Pengaruh City Branding dan City Image

- Terhadap Keputusan Berkunjung Wisatawan ke Banyuwangi. *Jurnal Administrasi Bisnis*, 17(1), 1–7.
12. Koob, J., & Samuel, O. (2010). Place Branding and Destination Marketing Case: Marketing of Paris. *Tourism Destination Development*, Dalarna University.
  13. Larasati, D., & Nazaruddin, M. (2018). Potensi Wisata dalam Pembentukan City Branding Kota Pekanbaru. *Jurnal Komunikasi*, 10(2), 2016. <https://doi.org/10.20885/komunikasi.vol10.iss2.art1>
  14. Lestari, R. B. (2016). Membangun Citra Sebuah Kota Dalam Persaingan Global Melalui City Branding. *Jurnal Forum Bisnis Dan Kewirausahaan*, 5(2).
  15. Murfianti, F. (2010). Membangun City Branding Melalui Solo Batik Carnival. *Jurnal Penelitian Seni Budaya*, 2(1).
  16. Paschou, E., & Metaxas, T. (2013). City Branding Of Stockholm. In MPRA Paper. Munich Germany: University Library of Munich. Retrieved from [https://mpra.ub.uni-muenchen.de/48118/1/MPRA\\_paper\\_48118.pdf](https://mpra.ub.uni-muenchen.de/48118/1/MPRA_paper_48118.pdf)
  17. Purwianti, L., & Lukito, Y. R. D. (2014). Analisis Pengaruh City Branding Kota Batam Terhadap BrandAttitude. *Jurnal Manajemen*, 14(1), 61–80.
  18. Qu, H., Kim, L. H., & Im, H. H. (2011). A model of destination branding : Integrating the concepts of the branding and destination image. *Tourism Management*, 32, 465–476. <https://doi.org/10.1016/j.tourman.2010.03.014>
  19. Wahid, W. N. (2018). Strategi Pemasaran Pariwisata Melalui City Branding Dalam Meningkatkan Pendapatan Asli Daerah ( PAD ) Kabupaten Lumajang. *Jurnal Kebijakan Dan Manajemen Publik*, 6(2), 1–7.
  20. Wandari, L. A., Kumadji, S., & Kusumawati, A. (2014). Pengaruh City Branding “Shining Batu” Terhadap City Image dan Keputusan Berkunjung Wisatawan ke Kota Batu Tahun 2014. *Jurnal Administrasi Bisnis*, 16(1).
  21. Wibawanto, S. (2015). Pendekatan Konseptual PlaceMarketing dan Place Branding dalam Destination Branding. *Jurnal Fokus Bisnis*, 14(2).
  22. Yee, F. W. (2009). Nation branding : A case study of Singapore. UNLV Theses, Dissertations, Professional Papers, and Capstones.
  23. Young, Y. E. (2012). City Branding and Urban Tourism : A Case Study of Seoul and Taipei. In In 6th Conference of the International Forum on Urbanism (IFoU): TOURBANISM, Barcelona (pp. 1–10).
  24. Yuli, A. (2011). City Branding Sebagai Strategi Pengembangan Pariwisata Ditinjau Dari Aspek Hukum Merek (Studi Kasus City Branding Daerah Istimewa Yogyakarta Sebagai Daerah Tujuan Wisata Unggulan di Indonesia). *Jurnal Ilmiah Ilmu Hukum QISTI*, 5(1).
  25. Romandhona, D. (2016). Pengelolaan Partisipasi , Potensi , dan City Branding Sebagai Upaya Pengembangan Industri Pariwisata Di Kota Surabaya. Universitas Airlangga.
  26. Kawi, T. G., & Maulana, S. (2017). Pengaruh City Branding Kota Balikpapan Terhadap Brand Attitude. *E-Proceeding of Management*, 4(2), 1978–1985.
  27. Luthfi, A., & Widyaningrat, A. I. (2013). Konsep City Branding Sebuah Pendekatan “The City Brand Hexagon” Pada Pembentukan Identitas Kota. *Seminar Nasional Manajemen Dan Bisnis Ke-3*, 315–323
  28. Pecot, F., & Barnier, V. (2015). City Brand Management : the role of Brand Heritage in City Branding. In 14th IMTC (International Marketing Trends Conference), Paris.
  29. Wahyurini, O. D. W. (2009). The Significance of City Logo in City Branding Strategy City. In *Recent Researches in Engineering Mechanics, Urban & Naval Transportation and Tourism* (pp. 79–84). Cambridge: WSEAS Conferences.

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## THE EFFECT OF HALAL AWARENESS, HALAL CERTIFICATION AND HALAL MARKETING TOWARD HALAL PURCHASE INTENTION OF FAST FOOD AMONG MUSLIM MILLENNIALS GENERATION

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### ABSTRACT

The purpose of this research is to analyze the effect of halal awareness, halal certification and halal marketing on purchase intention. Muslim millennial characteristics in this research are gender, age, occupation, income, status and domicile. The quantitative approach is carried out by online survey methods to respondents. The data were collected from October to April 2019 and respondents were selected by *accidental sampling*, data processing technique used in this research were SEM (Structural Equation Modelling) with Lisrel 8.3 software and descriptive analysis with SPSS 22. The results of this research indicate that halal awareness, halal certification and halal marketing have a significant influence on purchase halal purchase intention. It is characterized by positive score obtained in all the variables.

### KEY WORDS

Halal awareness, halal certification, halal marketing, halal purchase intention.

Agriculture and Agri-Food Canada (2016) stated that Indonesia is one of the largest food industry markets in Asean. One of the industries that drive the development of the food industry in Indonesia is the fast food industry. Fast food is food which was served quickly, easily obtained, it feels good and using fresh ingredients nutritious, which usually have been through the first stage cooking process so that the presentation is much easier and faster (Sharkey JR et al, 2011; Rania 2017). Fast food types as stated by Alam (2013) is food from western fast food (burgers, sandwiches, fried chicken, pizza, donuts) and fast food from Japan (bento, sushi). Amelia (2018) added the fast food of Indonesia such as *nasi Padang*, soup, chicken porridge, *nasi warteg* (rice food stall).

A survey conducted by JakPat in 2016 showed that the age range of 20-39 years known to the highest number of fast food purchases. The age range of 19-38 (year of birth from 1981 to 2000) is Millennials generation or Generation Y (Ali and Purwandi 2016). One of the millennial behavior is "I want it fast, I want it now" even to the selection of food, the millennial prefer fast food. (Barton et al 2012).

When eating fast food, some consumers have their own perspective on what they consume. For examples Muslim consumers want to be sure of what foods they eat is halal, it also applies to Muslim consumer's millennial. Food that allowed in Islam is the good food or usually called *halalan thayyiba* means substances, does not contain carrion, blood, pork or alcohol and both of how to get it. Cloud research results et al (2015) presents religiosity set the standards of behavior of someone who directly impact on the food preferences.

In choosing halal food, Muslim millennial more likely to choose a product or service that has been certified halal. Tri (2019) states that the certification of halal for Muslims millennial merely to ensure that the product or service offered has passed the test of the Indonesian Council of Ulama (MUI), so there is no intention to know more about the product. In fact, there are some manufacturers who do not have adequate knowledge about halal food and claim their products are halal. Therefore, they display the halal logo without halal certification from MUI, where an action can be categorized as public deception (Rashid, 2010). This resulted in Muslim consumers are likely to have awareness of the food they consume. Unfortunately, the millennial Muslims tend not to find out about what they consume halal because of their lifestyle.

Temporal (2011) reveals that the Muslims constitute a quarter of the population in the world, but it turns out the Muslim market is not homogeneous, many variables that influence consumer purchase decisions. Beyond of halal and halal certification awareness of a Muslim doing purchase intention is based marketing strategy offered out by fast food restaurants. Today's consumers are increasingly sensitive to price and quality so they tend to choose good quality products. This is the appeal of a fast food restaurant how they care for their customers especially if their customers are Muslim majority.

## LITERATURE REVIEW

Purchasing intention is the behavior that appears in response to an object that shows the interest of consumers to make purchases or also a repeat purchase interest (Assael, 2004). Farouk and Fathima (2017) found consumer purchase intention in products such as food are influenced by habit what they do. If they are Muslims, they will have an interest in buying the products accordance with sharia and Islamic rules. Islam has set what is lawful and unlawful food to be consumed by Muslims.

Awareness in the context of halal food is a condition in which the consumer has a special interest based on experience and the information they know about allowed food in Islam, as a religion that believed someone would affect to the purchase intention. (Ambali, 2014; and Mathras, 2016).

Shafie (2006) claimed that halal certification is used by manufacturers to inform and reassure consumers that their products are halal and sharia-compliant. To represent the credibility of consumer products are safe for consumption by Muslims usually labelled the halal logo on their products (Wibowo & Ahmad, 2016).

The definition of halal marketing is conceptually the same with marketing in general, the differences is in halal marketing where it should be fixed to the rules and guidelines set by the Shari'a (Salehudin and Mukhlis 2012). Nurhasanah (2018) highlights four tools of the important marketing mix to be considered in satisfying the customer and company goals as a way to evaluate how they respond to their customers in accordance with the manufacturer's marketing strategy. Islamic marketing mix consists of product, price, promotion and logistics (Alserhan 2011). But, only three variables of marketing mix that being used in this study namely: product, price and promotion.

Ali and Purwandi (2016) states millennial consumers who born in the range of 1981 - 2000, estimated to be aged in the range 19-38 years now. One characteristic of Muslim generations millennial is they believe religion and modernity can go hand in hand, but did not see any cons in both of them (Janmohamed 2017). For example, the development of the food, Islamic people are required to always consume halal foods. Some Muslims millennial judge halal food if the food is labelled by halal logo. But most other millennial Muslims want a guarantee that not only the inclusion of the halal logo, but also more thoroughly covers certification and official halal information (Janmohamed, 2017).

## METHODS OF RESEARCH

This study took place in all regions of Indonesia. The study began October 2018 to April 2019. The approach used in this study was a quantitative approach with online survey. Respondents in this study were all millennials Muslim consumers (19-38 years) who have purchase intention of the products at the food outlets and fast food restaurant in Indonesia. The technique of the sample collection is accidental sampling technique. The total numbers of samples were 385 respondents. Data processing technique used in this research was SEM (Structural Equation Modeling) with Lisrel 8.3 software and descriptive analysis with SPSS 22.

Based on the empirical studies conducted, it was assumed that halal awareness, halal certification and halal marketing have an effect to halal purchase intention. The conceptual framework was presented in Figure 1 as follows:

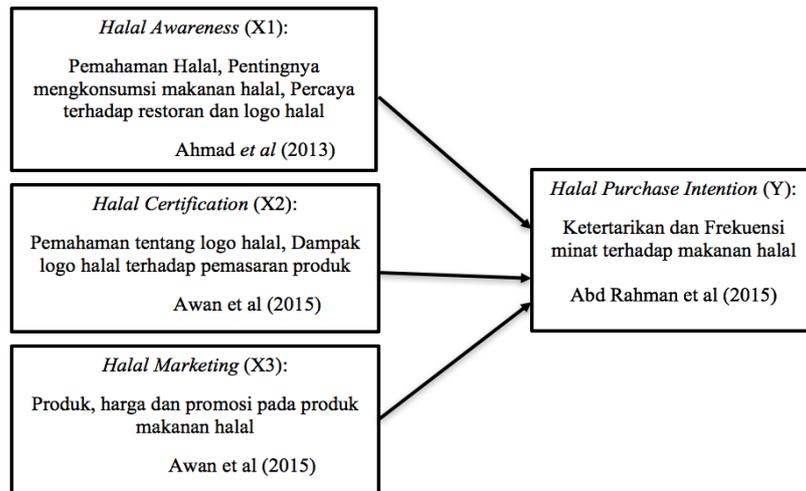


Figure 1 – Conceptual Framework

Based on the conceptual framework above, the proposed research hypotheses are:

H1: Halal awareness has a positive and significant effect on lawful purchase intention;

H2: Halal certification has a positive and significant effect on lawful purchase intention;

H3: Halal marketing has a positive and significant effect on lawful purchase intention.

## RESULTS AND DISCUSSION

Characteristics of gender identify purchase intention of fast food tends to be done by women than men. Women's high interests to fast food are driven by practical food so that women do not need to buy groceries as well as a waste of time to cook. Millennial Muslims who aged 19-23 years is more dominant in doing purchase intention of fast food. Millennials now like to gather and spend their time at a fast food place, so that the interest aged 19-23 years against fast food is higher. Respondents who have good job are more likely to have interest in buying fast food. Respondents whose income less than Rp.1. 500,000 is a respondent who has interest in buying fast food. Consumer purchasing ability with an income of Rp.1. 500.000 prefers food based on the sale price and taste. Fast food is a solution of food at a bargain price and good taste. Purchase intention fast food tends to be done by people who are not married yet. People who are unmarried have flexible time and tend to have flexible preferences in making purchasing decisions on food. Married consumers pay more intention in selecting food consumption for either individuals or families. Most Muslim respondents millennial lived in the Java island, and the millennial Muslims in Java more dominant consume fast food than in other regions. The information can be seen in the following table 1.

The table shows the relationship among the variables halal awareness, halal certification, marketing halal and halal purchase intention by demographics for instance gender, age, occupation, income, status and region. It should be noted by fast food marketers that the relationship between demographic variables to be one way to look at the target market segment and millennial Muslims. Men have a higher halal awareness in comparison to women, but not for halal certification, and halal marketing purchase intention. This is because women are more curious about the halal certification than men and interest toward halal purchase intention is also high as the halal marketing.

The age range of 29-33 years have higher halal awareness, but for halal certification age range of 24-28 years and 34-38 years had a curious high level of halal certification, aged 24-28 years have higher halal marketing than that others in reverse for the halal purchase intention aged 29-33 years have a high desire for buying interest against halal food. This happens either because they are influenced by employment and income. There is a

significant difference in halal awareness, halal certification, halal marketing and halal purchase intention on employment and income.

Table 1 – Average - Average score a variable based on the respondent's profile

Profile of Respondents	Research variable			
	<i>halal Awareness</i>	<i>halal Certification</i>	<i>halal Marketing</i>	<i>Halal Purchase Intention</i>
Gender				
• Man	3.92	4:20	3.91	3.98
• Woman	3.91	4:26	4:08	3.98
Age				
• 19-23 years	3.88	4:18	3.97	3.97
• 24-28 years	3.91	4:30	4:04	3.90
• 29-33 years	3.99	4:25	4:00	4:06
• 34-38 years	3.88	4:30	4:03	3.99
Work				
• College student	3.87	4:20	4:05	3.98
• Honorary	3.96	4:31	4:10	3.98
• Private employees	3.80	4:22	4:08	4:00
• Government employees	3.96	4:25	4:02	4:18
• Does not work	3.98	4:30	4:00	3.98
• entrepreneur	3.90	4:14	3.83	3.86
• more	3.96	4:28	4:02	3.92
Income				
• <Rp.1.500.000				
• Rp.1.500.000- Rp.2.999.000	3.91	4:19	3.96	3.97
• Rp.3.000.000- Rp.4.999.000	3.89	4:29	3.85	3.85
• Rp. 4,500,000- Rp.5.999.000	3.96	4:31	4:00	3.98
• Rp. 4,500,000- Rp.5.999.000	3.95	4:28	4:23	4:07
• > Rp.6.000.000	3.89	4:20	4:03	4:03
Status				
• Single	3.92	4:23	3.95	3.91
• Married	3.92	4:26	4:14	4:16
Domicile				
• Bali, NTB & NTT	4:00	4:20	4:20	4:07
• Java	3.97	4:30	4:05	4:02
• Kalimantan, Sulawesi	3.89	4:22	4:11	4:06
• Maluku and Papua	3.86	4:17	4:00	4:33
• Sumatra	3.86	4:18	3.82	3.92
Average - Average Total	3:29	4:24	4:02	4:00

Both unmarried and married respondents have same halal awareness, but not halal certification, and halal marketing purchase intention. There is a difference between respondents who are unmarried and married. This is because the millennial married Muslim consumers pay more attention on deciding of individual consumption needs as well as for long term purchasing intention.

Unmarried millennial Muslim consumers are more flexible in buying fast food they are influenced by the marketing carried out by fast food restaurants. Region also play important distinction for halal awareness, halal certification, halal marketing and halal purchase intention. Relations domicile and halal certification. While other variables did not show relationship. Omar et al (2008) reveals that halal certification is not a problem issue in Kelantan since most of the population is Muslim consumers so that consumers tend to ignore the halal certification in the consumption of food products.

But it is different if a place where Muslim is minority so they are aware of halal products and halal certification at a fast food restaurant which they will choose is the solution to attract

purchase intention of Muslim consumers. This condition can be utilized as a marketer to focus on the halal certification and halal marketing on their fast food products.

Compatibility test model can be seen from RMSEA, GFI, AGFI, IFI, NFI, CFI as can be presented in the following Table 2. The overall aspects score of the compliance criteria was in *Good Fit* category for overall it is claimed eligible.

Table 2 – Results of the overall compatibility test models (overall model fit)

Goodness-of-Fit	Cut-off-Value	result	Conclusion
RMSEA	≤ 0:08	0071	Good fit
GFI	> 0.90	0.97	Good fit
AGFI	> 0.90	0.96	Good fit
IFI	> 0.90	0.98	Good fit
NFI	> 0.90	0.96	Good fit
CFI	> 0.90	0.98	Good fit

Scoring result for testing the *goodness of fit* showed RMSEA which score was 0071 0:08, it means the model is already good fit. The use of criteria other goodness of fit is GFI, AGFI, IFI, NFI and CFI the score was > 0.90, which means the models in category as *goodness of fit*. Since some indicators showed *goodness of fit* category the hypothesis testing can be conducted. RMSEA score was of 0.07 <0.08 it means the model was accepted and categorized as good fit in RMSEA criterion. GFI score was 0.97 which indicates that the model is a good fit. AGFI score of 0.96 which indicates that the model is a good fit. Scoring result showed that IFI score of 0.98, NFI score of 0.96, and the CFI score of 0.98 showed that the model was in good fit.

Compatibility test for measurement model is conducted by applying validity and Reality test. Compatibility test for measurement model and variance extracted score (VE) and construct reliability (CR) can be seen in Table 3 as follows:

Table 3 – Compatibility measurement model test and variance extracted and construct reliability

Construct	Indicator	Loading factor	T- count	Validity test		test Reliability	
				VE > 0.5	Information	CR > 0.70	Information
Halal Awareness	HA1	0.74	29.67	0:54	Valid	0.88	reliable
	HA3	0.71	23:10				
	HA4	0.77	29.50				
	HA5	0.91	43.76				
	HA6	0.64	17.95				
	HA7	0.61	28.00				
Halal Certification	HC1	0.67	16:37	0:51	Valid	0.83	reliable
	HC2	0.72	23:56				
	HC3	0.72	14.77				
	HC4	0.86	22.72				
	HC5	0:54	14.93				
Halal Marketing	HM1	0.81	19.67	0:51	Valid	0.80	reliable
	HM2	0.62	15.97				
	HM3	0:54	15.99				
	HM4	0.84	15.84				
Halal Purchase Intention	PI1	0.65	33.35	0.66	Valid	0.90	reliable
	PI2	0.82	15:03				
	PI3	0.88	15:13				
	PI4	0.88	15:44				
	PI5	0.80	15:02				

Based on the result as in *standardized loading factor* and factor *t-value* diagram it can be categorized that all the variables were valid as shown by score standardized loading factor which was more than 0.5 and the value of the t-value of 1.96 significant category. Based on the validity and reliability tests revealed that the models were valid and reliable is indicated by the score of VE > 0.5 it means that the model was valid, and CR > 0.7 means that any latent constructs are valid and reliable. Therefore, it can be concluded that the variables

used in this study had good reliability or able to measure the construction. The results of the measurement model evaluation showed that the overall model fit to the data, this research was valid and reliable.

The next stage should be conducted after the model was analyzed for compliance is to test the compatibility structural model (structural model fit). There are three indicators which do not affect the halal awareness, and two indicators that do not affect halal marketing. This happens because this study using significance test which significance level is 0.05 (95% confidence level). Then at a rate of 0.05 t value of each structural equation coefficients must be different than 1.96. The score of t-values smaller than 1.96 indicates that no significant relationship or cannot explain the latent variables are designated by arrows. From the above results need the elimination.

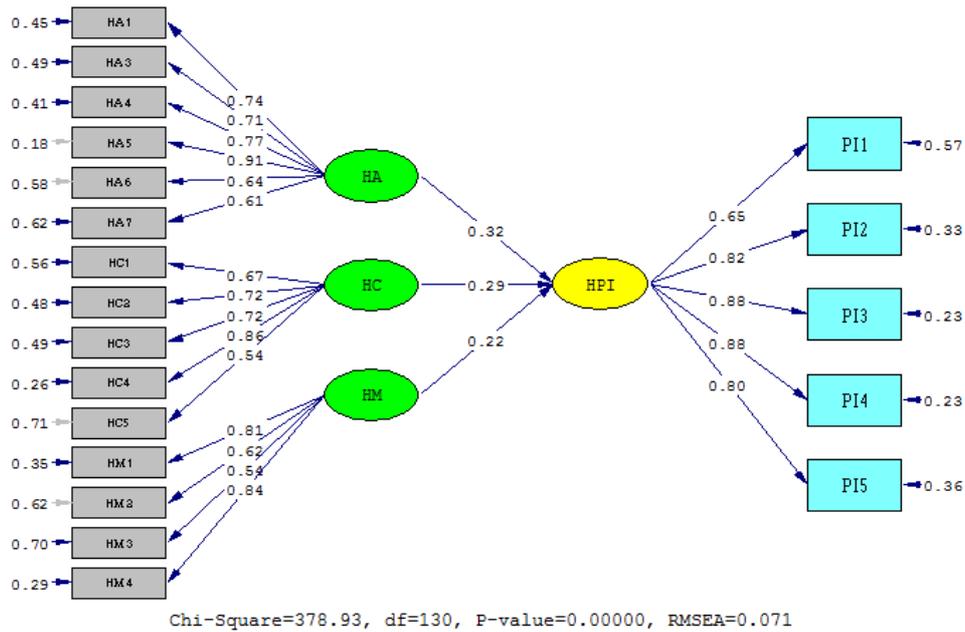


Figure 2 – Image loading factor after elimination

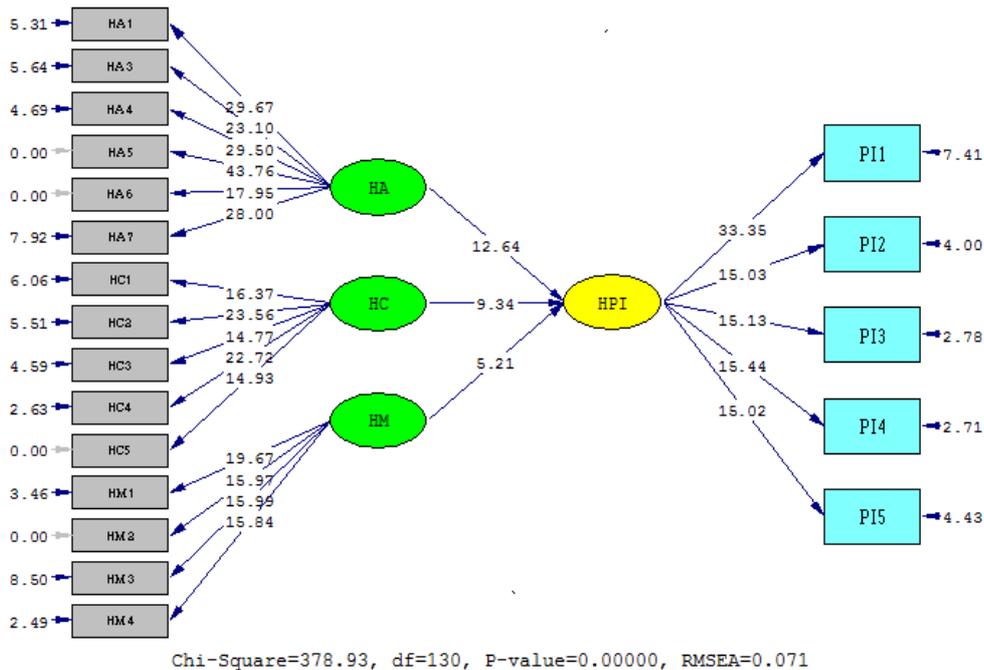


Figure 3 – Picture T-count after elimination

Table 3 – Estimated result of SEM Model

Variables	Standardized loading factor	t-count	Conclusion
HA - HPI	0:32	12.64 *	Significant
HC - HPI	0:29	9:34 *	Significant
HM - HPI	0:22	5:21 *	Significant

Note: \*) value t count > t-table 1.96 means significant influence.

Table 3 explains that all variables have a significant influence on halal purchase intention. It is characterized by positive score obtained in all the variables. This condition is relevant with some other research results which stated that halal awareness, halal certification and halal marketing have a positive influence on purchase intention (Nurhasanah 2018; Awan et al 2015; Shaari 2009). Halal awareness has a positive influence on the halal purchase intention with a positive score (0.32) and t-count = 12.64. Halal certification has a positive influence on the halal purchase intention with a positive score (0.29) and t count = 9.34. Halal marketing has a positive influence on the halal purchase intention with a positive score (0.22) and t count = 5.21.

Based on this research results, there are three factors that affect the halal purchase intention to fast food that is halal awareness, halal certification and halal marketing. From the above results can be summarized that the most dominant factor is halal awareness, this indicates there are still many millennial Muslim consumers are wary of halal food will be consumed. Millennial Muslim worriess lessens if there is a halal certificate on the product, so that it becomes a second factor that affects halal purchase intention. Hence manufacturers pay more attention to the fast food halal certification, as well as safety for consumers also can be used as a marketing strategy. For halal marketing, millennial Muslim consumers tend to prefer halal products even if the price is high, this is because the millennial Muslims still consider their religion in consuming halal food. Besides, Muslims millennial consumer loyalty is also influenced by familiar brand name but on the results of this research indicate that it is not too dominant. This perhaps caused by millennial Muslims less loyal to a brand. However, a small portion of the millennial Muslim consumers still have to consider the price of halal fast food tend to be expensive. This is because the lack of purchasing power. The producers should determine prices according to the purchasing power of the millennial Muslims in order to compete with other competitors. Manufacturers of fast food needs to pay attention to the relationship between the variables (halal awareness, halal certification, halal marketing, and halal purchase intention) with the demography as a way to select segment and Muslim millennial as marketing market.

## CONCLUSION

The research showed the effect of halal awareness, halal certification and halal marketing toward halal purchase intention. These results revealed that halal awareness, halal certification, halal marketing have a positive influence on halal purchase intention.

Based on the research results, this study only analyzed aspects of halal awareness, halal certification and halal marketing. For the next research it highly is recommended to add variables such as *Islamic advertising and brand* which also yield an effect on halal purchase intention. The object for further research is expected to be more specific and add the data collection methods such as direct interviews with respondents.

## REFERENCES

1. Agriculture and Agri-Food Canada. 2016. The Foodservice Profile - Indonesia. GOC [Internet]. [Downloaded 2018 Nov 10]. Available at:<http://www.agr.gc.ca/eng/industry-markets-and-trade/international-agri-food-market-intelligence/asia/market-intelligence/foodservice-profile-indonesia/?id=146895041158>

2. Ahmad NAB, Abaidah BTNP, Yahya MHBA. 2013. A study on Muslim halal food awareness among customers in the Klang Valley. In The 4th International Conference on Business and Economic Research (4th October 2013) Proceedings (pp. 1073-1087).
3. Alam Y. 2013. Business Ala Fast Food Indonesia. Elex Media Komputindo.
4. Ali H, Purwandi L. 2016. Indonesia 2020: The urban middle-class Millennials. Alvares Research Center.
5. Alserhan, Baker A. 2011. The Principles of Islamic Marketing. Surrey (EN): Gower Publishing Limited.
6. Amelia L. 2018. Several fast food menus from Indonesia. [Internet]. Available at:<http://www.abuelaskitchen.com/beberapa-menu-makanan-cepat-saji-dari-indonesia/>
7. Ambali AR, AN Bakar. 2014. People's awareness on halal foods and products: potential issues for policy-makers. *Procedia-Social and Behavioral Sciences*. 121: 3-25.
8. Assael, H. 2004. *Consumer Behavior: A Strategic Approach*, 6th ed. Boston, MA: Houghton Mifflin Company
9. Cloud HM, 2015. Factors affecting purchase intention halal-evidence from Pakistan's halal food sector. *Management Research Review*. 38 (6): 640-660.
10. Barton C, Fromm J, Egan C. 2012. The millennial consumer: Debunking stereotypes. The Boston Consulting Group, 16.
11. Farouk O, R. 2017. Fathima Muslim and non-Muslim consumer perceptions of halal at supermarkets in a non-Muslim country: a thesis submitted to Massey University in fulfillment of the requirements for the degree of Masters in Business Studies in Marketing (Doctoral dissertation, Massey University).
12. Jakpat. 2016 Battle of the fast food restaurant-survey report. [Downloaded 2018 Nov 9]. [Internet]. Available at:<https://blog.jakpat.net/battle-of-the-fast-food-restaurant-survey-report/>,
13. Janmohamed, S. 2017. *Generation M: The young generation Muslims and how they shape the world* / Shelina Janmohamed; Yusa translator Tripeni; Ika Yuliana Kurniasih editor. Yogyakarta: Landscape,
14. Mathras D, 2016. The effects of religion on consumer behavior: A conceptual framework and research agenda. *Journal of Consumer Psychology*, 26 (2), 298-311.
15. Nurhasanah S. (2018). Factors that influence the buying interest in halal processed food products (Case Study in the City / County Bogor). Bogor (ID): Institut Pertanian Bogor.
16. Rania D. 2017. Often practically the same, it is lo 9 difference fast food and junk food. Do unmistakably yes! [Downloaded 2019 Jan 15]. [Internet]. Available at:<https://www.hipwee.com/feature/sering-dibidang-sama-ternyata-ini-lo-9-perbedaan-fast-food-dan-junk-food-jangan-salah-lagi-ya/>
17. Rashid TH. 2010. Raising the awareness of halal products among Indonesian consumers: Issues and strategies. *Indonesian Journal of Agricultural Economics*. 1 (01).
18. JA N Shaari Mohd Arifin NS. 2009. Dimension of lawful purchase intention: A preliminary study.
19. Salehudin I, Mukhlis BM. 2012. Halal Marketing: Concepts, Implications and findings in the field. *FEUI corpus young economists* (pp. 293-305). Jakarta (ID): Issuing Faculty of Economics UI.
20. Schiffman L, LL Kanuk. 2010. *Consumer Behavior*. Jakarta: INDEX.
21. Shafie S, Othman MN. 2006 Halal certification: an international marketing issues and challenges. In *Proceedings at the International IFSAM VIIIth World Congress* pp: 28-30.
22. Sharkey JR, 2011. Association between proximity to and coverage of traditional fast-food Restaurants and non-traditional fast-food outlets and fast-food consumption among rural adults. *International journal of health geographics*. 10 (1): 37.
23. Temporal P. 2011. *Islamic branding and marketing: Creating a global Islamic business*. John Wiley & Sons.
24. Tri WN. 2019. Communication among millennial halal lifestyle: enlightening and entertaining.[downloaded 2019 May 10].
25. Wibowo MW, Ahmad FS. 2016. Non-Muslim consumers' acceptance of halal food product models. *Procedia Economics and Finance*. 37: 276-283.

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## **ANALYSIS OF THE RELATIONSHIP BETWEEN CHARACTERISTICS OF USERS OF ELECTRONIC MONEY APPLICATIONS TO INTENTIONS AND USAGE BEHAVIOR**

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### **ABSTRACT**

Data from the Indonesian Financial Technology Association (IFA) and OJK in 2016 showed that the largest percentage in financial technology was payment sector. However, the Central Jakarta survey data in 2017 shows that the cash payment method is still the consumer's main choice of 77% in making payments. The answers to the research are arranged using a Likert scale to be processed with Crosstab Analysis. The results showed that transportation services had the largest percentage in online transactions of 37.33%.. The results of the study also showed that 56.84% of users used electronic money applications for less than ten times in one month. The reason for using the most electronic money is practically 47.02%.

### **KEY WORDS**

Behavioral intention, electronic money, use behavior, public service.

Information technology has been rapidly growing during the last decade both in Indonesia and throughout the world. The rapid growth of technology has affected the financial technology sector in Indonesia. According to data from DailySocialid, the number of companies using financial technology increased to 196 companies in 2017 from 140 companies in 2016. The increase is due to the perceived ease, security, and practicality in using financial technology.

The 2016 data from Indonesia's Financial Technology Association (IFA) and Financial Services Authority of Indonesia (OJK) showed that the sectors of payment (42.2%), lending (17.78%) and aggregator (12.59%) occupied the top three positions on the distribution of financial technology in Indonesia. The increased use of financial technology in the payment sector cannot be separated from the benefits received by consumers. Electronic money is one of the growing and most widely used financial technology products.

The 2016 data from Indonesia's Financial Technology Association (IFA) and Financial Services Authority of Indonesia (OJK) showed that the largest percentage in financial technology was the payment sector. However, the data obtained from the JakPat survey in 2017 showed that cash-based payment method was still the main choice of 77% consumers. The cash-based payment method is chosen because it is considered to be more measurable and accepted everywhere. Based on the description above, the questions raised are as follows:

- What are the characteristics of electronic money users in Jabodetabek?
- How do the relationship between characteristics users and behavioral intention to the use of electronic money?
- How do the relationship between characteristics users and behavioral intention to the use of electronic money?

Based on the problem statement, this study aims to:

1. Analyze the characteristics of electronic money users in Jabodetabek;
2. Analyze the relationship between characteristics users and behavioral intention to the use of electronic money;
3. Analyze the relationship between characteristics users and use behavior to the use of electronic money.

## LITERATURE REVIEW

Financial technology is a business sector with the second largest amount of investment in Indonesia by 2016 after E-Commerce (Tech in Asia Indonesia). Financial technology is intended to reduce the use of cash by the public and put forward the efficiency, practicality, and security. Due to its rapid growth, Bank Indonesia took steps to boost the growth of the financial technology industry and issued consumer protection regulation as well. One of the growing financial technology products is electronic money.

Behavioral intention is defined as the desire of consumers to behave according to certain ways in order to have, dispose of and use products or services (Mowen and Minor 2002). This understanding is in line with Venkatesh et al. 2003 which defines the intention to behave (behavioral intention) as a matter that refers to the intention of effective use by consumers of products or services in the future.

Behavior of Use (use behavior) is the level of use of technology observed and generated from intention to behave (Venkatesh et al. 2003). Furthermore, Davis (1989) explains that usage behavior is a tendency for behavior to continue using a technology. Correspondingly, Venkatesh et al. (2012) explains that use behavior is the behavior of use in using a technology.

According to Lovelock and Wirtz (2011), there are three stages in behavior of use, especially services. These stages include prepurchase, service encounter and postencounter. This stage helps to understand how consumers recognize their needs, look for alternative solutions, choose and experience being part of a service, and evaluate the results of experience, especially services. The description of the three stages is as follows:

The stage of pre-purchase is a situation where prospective consumers are aware of the need and continue to look for alternative information and evaluations to decide whether they are willing or not to buy certain services.

Service encounter stage is a situation where there is a real direct interaction between the customer and the service provider. During service delivery, many customers begin to evaluate the quality of services received and decide whether to meet their expectations.

Post-encounter stage At this stage, consumers will consider whether they will subsequently repurchase and become loyal customers or not. In this stage, customers will evaluate service performance and compare it with customer expectations.

Haywood's research (2017) states that use behavior is significantly affected by habit. Correspondingly, Sedana and Wijaya (2010) research shows that behavioral intention has a positive and significant correlation with use behavior.

## METHODS OF RESEARCH

This study was conducted in Jakarta, Bogor, Depok, Tangerang, and Bekasi (Jabodetabek). Data collection took five months from April to August 2018. This study used a quantitative approach with survey method. The population in this study consisted of millennials aged 18-36 years (Howe and Strauss 2000) in Jabodetabek. The respondent sample criterion was the online transaction user and the sample size was 300 people. The sampling technique used was purposive sampling.

The data used were primary data obtained through the questionnaires. Additional data from previous studies in books and scientific writings on the internet were used as supports in completing the information. Data collection from respondents was using a structured questionnaire. It was conducted by distributing questionnaires online through google form to the target respondents extensively.

Descriptive analysis is a method used to describe the status of a group, people, an object, a concept, a condition, or an event in the present (Nazir 1998). According to Sumarwan (2011), this analysis is designed to collect information in an actual manner, describe a situation that occurs, and analyze the causes of a phenomenon, unable to control an event and asses what has already occurred.

Validity and reliability tests were applied to 285 respondents and using SPSS 23. This study used a significance level of 10% with r table value at 0.113. Thus all correlation coefficients generated by data processing exceeded r table value of 0.113 or declared to be valid. A variable is reliable if it has Cronbach's alpha value > 0.6 (Ghozali 2012). The reliability test results in this study were 0.96 that exceeded 0.6.

## RESULTS AND DISCUSSION

The results showed that 67.72% of information regarding the use of electronic money was obtained through the internet. The most frequently used electronic money product was Go-Pay (63.16%) with the use intensity of fewer than ten times in one month (56.84%). The most often purchased top-up balance was < 250,000 IDR (45.61%) and the most commonly top-up method used was SMS/Internet Banking (64.21%). The use of electronic money in Jabodetabek was dominated by transportation services at 37.33%. The main reason for using electronic money was its practicality (47.02%).

Cross tabulation analysis explained according to Santoso (2010) is a guideline in decision making in the chi square test in order to know the real differences of each variable tested in the study. In making decisions for this chi square test, it can be guided by two things, namely comparing the value of Asymp. Sig. with a critical limit of 0.1 or 10 percent. The output of processing different tests as in Table 1.

Table 1 – Results of Cross Tabulation of Demographic Characteristics, Behavioral Intention and Use Behavior (Crosstab)

Demographic Characteristics	Behavioral Intention			Use Behavior				
	BI1	BI2	BI3	UB1	UB2	UB3	UB4	UB5
Gender	0.41	0.97	0.46	0.22	0.04*	0.44	0.35	0.45
Age	0.33	0.38	0.37	0.26	0.76	0.64	0.60	0.56
Education	0.09	0.04*	0.47	0.45	0.12	0.56	0.21*	0.46
Occupation	0.19	0.12	0.25	0.44	0.85	0.24	0.08*	0.88
Spending	0.42	0.65	0.32	0.53	0.74	0.23	0.39	0.29
Domicile	0.93	0.95	0.45	0.89	0.81	0.51	0.89	0.60
Transaction	0.41	0.49	0.70	0.94	0.97	0.94	0.75	0.95

Note: \* Significant < 0.1 and \*\* Significant <0.05.

Based on the output results in Table 1 only 4 out of 56 parts were tested using cross tabulation. In parts that have a value above > 0.1 or 10 percent are considered not to have a real difference or it can be interpreted that each part in the indicator is considered the same. In this case the management or electronic money application service provider company does not need to do different marketing activities in order to increase the intention and activity of using electronic money applications.

Table 2 – Cross Tabulation Percentage Comparison

Uraian	Persentase (%)	Information
Gender x UB2	44.08	Female
Education x BI1	60.81	Bachelor
Education x BI2	58.36	Bachelor
Occupation x UB4	37.55	Private Employees / Government Employees

In Table 1, it is known that the relationship that has a real difference after cross tabulation analysis is gender with indicators using electronic money applications to share types of transactions (UB2), education with indicators has the intention to use the future electronic money application (BI1), education with electronic money application indicators will be used in everyday life (BI2) and work with indicators deciding to become loyal users of electronic money applications (UB4). These findings need to be supported by additional information as in Table 2 to get more accurate results.

Based on Table 2, it is known that management or electronic money application service provider companies need to focus on segmentation to increase intentions by looking at education and employment of consumers. In this case the electronic money application service provider companies need to target consumers who have undergraduate education. In addition, companies also need to target consumers of gender and occupational backgrounds. The results of the comparison of cross tabulation percentage in this study indicate that consumers with female gender are considered to have better prospects for using electronic money applications, besides Private Employees / Government Employees also have great potential as a target of loyal consumers to use electronic money applications.

The main objective of this study was to analyze the characteristics of electronic money users in Jabodetabek, analyze the relationship between demographic characteristics of users of electronic money applications to use intentions and behavior towards the use of electronic money applications. The importance of this research is that we can find out that the use of electronic money in Indonesia, especially Jabodetabek, is very large than cash. The most frequently used electronic money product was Go-Pay (63.16%) with the use intensity of fewer than ten times in one week (56.84%). The most often purchased top-up balance was < 250,000 IDR (45.61%) and the most commonly top-up method used was SMS/Internet Banking (64.21%). The use of electronic money in Jabodetabek was dominated by transportation services at 37.33%. The main reason for using electronic money was its practicality (47.02%).

Companies need to better identify and set user targets so that the company's marketing activities are right on the specified targets. This is so that the company can maximize profits with the growth of new customers and retain existing users. The company can focus its target on the female community because of its intensity in making larger transactions. In addition, the community with an education level of undergraduate and community members who work as private employees / BUMNs is also the next target. This is because the majority of private employees / BUMN are graduates who are always looking for easy and practical things in increasing productivity.

Companies need to maintain the ease of process when using electronic money applications, one of which is by making features that are user friendly so that consumers feel comfortable in their use. In addition, the company needs to maintain several features that are advantages of electronic money applications such as the speed of application of electronic money in transactions, convenience in using electronic money applications for new users and the suitability of nominal transactions that must be paid by consumers after the products or services ordered. also need to review promotional policies through various forms such as cashback, discounts and rewards for loyal users so as not to move to competitors. On the other hand, companies need to pay attention to the protection of user information and minimize loopholes in the electronic money application application system so as not to harm the user.

## **CONCLUSION**

The results showed that 67.72% of information about the use of electronic money was obtained through the internet. The most frequently used electronic money product was Go-Pay (63.16%) with the use intensity of fewer than ten times in one month (56.84%). The most often purchased top-up balance was < 250,000 IDR (45.61%) and the most commonly top-up method used was SMS/Internet Banking (64.21%). The use of electronic money in Jabodetabek was dominated by transportation services at 37.33%. The main reason for using electronic money was its practicality (47.02%).

This research has limitations in the form of focusing on the financial and Y technology payment sector in Jabodetabek. In addition, this research also emphasizes from the consumer's perspective so that it does not look at it from the point of view of the business actor. It is suggested to conduct a further study with other sectoral approaches but payment on financial technology. Moreover, it studies a broader object and not only focus on one

generation. The study objects are not only electronic money users but those who have not used electronic money as well.

For consumers who will use the electronic money application, they need to pay attention to the rules made by the company, especially for activities related to sales promos. Consumers who have used the electronic money application when making transactions need to pay attention to the last balance in the electronic money application application to minimize the mismatch that will occur. Consumers who have become loyal users can invite the surrounding environment especially to use electronic money applications because of the various advantages and conveniences offered.

## REFERENCES

1. Dailysocialid. 2017. Fintech Report. . [internet] [Diacu 05 Februari 2018]. Tersedia dari: <http://www.dailysocialid.id>.
2. Davis FD. 1989. Perceived usefulness, perceived ease of use and user acceptance of information technology. *Journal MIS Quarterly*. 2(3): 34-42.
3. Ghozali I. 2012. Aplikasi Analisis Multivariate dengan Program IBM SPSS. Yogyakarta (ID): Universitas Diponegoro
4. Haywood D. 2017. The Relationship between Nonprofit Organizations and Cloud Adoption Concerns. Walden University
5. Howe N, Strauss W. 2000. Millennials rising: The next great generation. Vintage
6. [IFA] Indonesia's Fintech Association and [OJK] Otoritas Jasa Keuangan. 2016. Financial Technology di Indonesia.
7. Jakpat. 2017. Are you cashless society?. [internet] [Diacu 11 Februari 2018]. Tersedia dari: <http://Jakpat.net>.
8. Jakpat. 2017. Online ride booking apps. [internet] [Diacu 11 Februari 2018]. Tersedia dari: <http://Jakpat.net>.
9. Lovelock C, Wirtz J, 2011. Pemasaran Jasa Perspektif edisi 7. Jakarta (ID): Erlangga
10. Mowen C, Minor JM. 2002. Perilaku Konsumen. Jakarta (ID): Erlangga
11. Nazir M. 1998. Metode Penelitian. Jakarta (ID): Ghalia Indonesia.
12. Santoso S. 2010. Statistik parametrik. Jakarta (ID): Elex Media Komputindo.
13. Sedana IGN and Wijaya SW. 2010. UTAUT model for understanding learning management system. Universitas Sanata Dharma. *Internet Working Indonesia Journal*. 2(2):22-34
14. Sumarwan U. 2011. Perilaku konsumen: Teori and penerapannya dalam pemasaran. Bogor (ID): Ghalia Indonesia
15. Techinasia. 2016. Kilas balik perkembangan layanan transportasi online di tahun 2016. [internet]. [diakses pada: 2018 Februari 05]. Tersedia pada: [www.techinasia.com](http://www.techinasia.com).
16. Venkatesh V, Morris G, Davis G, Davis, F. 2003. User acceptance of information technology: Toward a unified view. *Mis Quarterly*. 27(3): 425-478.
17. Venkatesh V, Thong JYL, Xu X. 2012. Consumer acceptance and use of information technology: Extending the unified theory of acceptance and use of technology. *Mis Quarterly*. 36 (1): 157-178.
18. Waluyo M. 2011. Panduan and Aplikasi Structural Equation Modelling (Untuk Aplikasi Model dalam Penelitian Teknik Industri, Psikologi, Sosial and Manajemen). Jakarta (ID): PT. Indeks

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## **INDONESIA CANTEEN SANITATION POLICY IMPLEMENTATION IN COLLEGE CAMPUS AS A STEP TO OPTIMIZING THE PUBLIC HEALTH SECTOR**

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### **ABSTRACT**

Environmental sanitation is very important for a canteen as the a part of world of education, especially at the university level, to maintain the public health in an effort to prevent the occurrence of health problems due to environmental factors that can potentially harm health. This is done with the aim that the implementation of health development is to increase awareness, willingness and ability to live healthy for everyone in order to realize the optimal degree of public health. Given that health problems are one of the most important needs for efforts to achieve optimization of the public health sector. The sanitation development process aims to increase awareness, willingness and ability to live healthy for everyone in order to realize the highest degree of public health, as an investment for the development of socially and economically productive human resources. This paper was compiled with a literature review method with the aim of knowing the urgency of canteen sanitation policies within the campus in a theoretical manner and the process of policy formulation. Therefore, the importance of implementing canteen sanitation policies in an effort to optimize the public health sector must be carried out properly so that the impact of lack of attention to canteen sanitation within the university or campus is no longer happening.

### **KEY WORDS**

Implementation studies, canteen sanitation, food service management, public health, catering sanitation.

The problem of processing and serving food is something that must get special attention in the application of overall health. This is because food is one of the basic human needs that directly plays a role in improving human health and well-being. For this reason, food must meet health standards, which are safe, healthy, nutritious and do not cause interference with the disease (Chusna, 2012). In the world of education, especially in universities, there are certain food providers in it, we often know the term canteen. As a food provider dealing directly with canteen service users, of course, there are many problems that they face, one of which is in terms of food hygiene and landfills that are not helped, this is the most important factor in the discussion of canteen sanitation in the educational environment. Because the cleanliness of a food can affect the health of the buyer or user of the canteen, if it is wrong in the process of handling sanitation it can cause a slum and unhygienic impression, this is what makes many health problems faced by canteen service users.

Environmental health development is an integral and most important part of national development. The purpose of holding health development is to increase awareness, willingness and ability to live healthy for everyone to realize optimal public health degrees. Article 48 of the Health Law No. 36 of 2009 states that efforts to administer health are carried out through family health activities, nutrition improvement, food and beverage supervision, environmental health, occupational health, mental health, eradication of diseases, health

recovery, counseling public health, supervision of pharmaceuticals and medical devices, additive supervision, school health, sports health, traditional medicine and eye health. One important component in carrying out a health-care business is through healthy canteen services. Canteen/cafeteria is a business (place) that is carried out by schools to provide services to students or other school elements that need healthy food and drinks so that teaching and learning activities in schools can achieve their goals to the maximum (Ulfatin & Triwiyanto, 2015).

In 2008 the Indonesia Food and Drug Supervisory Agency (BPOM, 2008) reported 197 cases of food poisoning throughout Indonesia with 9022 sufferers, which included 8943 sick / treated people and 79 who died. Judging from the incidence of outbreaks of food poisoning it was concluded that 85 (43.15%) cases had not been identified, 54 (27.41%) cases were due to microbiology, 37 (18.78%) cases were due to chemicals and 21 (10.66%) cases of no samples. The profile of the proportion of morbidity in the case of food poisoning outbreaks in 2008 can be concluded that the highest number of cases was reported in West Java as many as 3166 (35.40%), Central Java 1240 (13.87%) and Central Kalimantan as much as 860 (9.62% ). This incident shows that more than 25% of poisoning cases are caused by microbiological activity which is very likely due to poor sanitation.

## LITERATURE REVIEW

The environment is one variable that gets special attention in assessing public health conditions. One environment that must be considered is the educational environment, where there are young people and young people who will become the next generation of the nation. Therefore, the level of health needs to be fostered and improved. One of these health efforts is maintaining canteen cleanliness in the educational environment (Sari, 2013). Environmental sanitation is one indicator of an environmental health status that includes housing, sewage, clean water supply and so on. Environmental sanitation can also be interpreted as an activity aimed at improving and maintaining basic environmental conditions that affect human health. These conditions include: 1) supply clean and safe water; 2) disposal of waste from efficient animals, humans, and industries; 3) food protection from biological and chemical contamination; 4) clean and safe air; 5) a clean and safe house (Oihuwal, 2012).

On the other side, the Higher Education Campus is one of the educational institutions that have the facility for selling foods in the form of a canteen specifically reserved for students, lecturers, and administrative staff. The canteen is a facility provided to meet the food needs of campus residents. The cleanliness of the canteen as a food processing place at the university level aims to facilitate the fulfillment of food and beverage needs for students, lecturers and administrative staff so that the fulfillment of food and beverage needs is expected to be protected and guaranteed to create a productive work spirit. Aside from being a place for processing food, cooking and making food, which is then served to consumers, the canteen can also be a place for the spread of disease through its food and drink. Thus food and beverages sold in canteens have the potential to cause disease-related illnesses if not managed and handled properly (Mukono, 2000).

Given that health problems are a very complex problem, which is interrelated with other problems outside of health itself. Supriadi & Chandra (2018) argue that sanitation is very important to maintain the environmental health of an environment to prevent the occurrence of health problems due to environmental factors that can potentially harm health. Environmental sanitation is an effort to achieve a healthy environment through controlling physical environmental factors, especially those that have a detrimental impact on the physical development of health and human survival (Utami, Thoha, & Nugraheni, 2018). Likewise, solving public health problems is not only seen in terms of its health but must be seen from all aspects that influence these health problems.

A poor sanitation environment will harm health. Various types of diseases can arise because a poor sanitizing environment is a source of various types of diseases. So that we avoid various diseases, the environment must always be maintained sanitation, especially

the canteen as a food processing place at each university. Canteen sanitation is a health effort carried out by maintaining and protecting the cleanliness of the canteen environment from various risk factors that can pollute the canteen environment. For example, providing clean water for handwashing purposes, providing trash bins to accommodate garbage so that it is not disposed of carelessly, the condition of the building and the canteen yard must be clean and neat so that the user's comfort and safety are maintained and free of vectors.

The requirements for canteen sanitation are explained in the Regulation of the Minister of Health of the Republic of Indonesia Number (Kepmenkes) 1096 / Menkes / PER / VI / 2011, concerning sanitation hygiene in the catering service. Sanitation is the most important part of the food processing process that must be carried out properly. Sanitation can be defined as an effort to prevent disease by eliminating or regulating environmental factors related to the chain of disease transfer. (Rahmawati, Farahdiba, Alfian, & Adhly, 2018).

Contamination can occur in food if not processed properly. The problem that often arises in society is the quality and quantity of food production. Therefore, food as a very important factor for human life in addition to fulfilling in terms of nutrition and attractive appearance, food must also be safe for consumption, which is free from all forms of contaminants that can harm consumers. The potential for food to be contaminated with hazardous substances and become a source of disease transmission increases if the handling process is consumed by the public not paying attention to hygiene and sanitation. The canteen at the university has an important role to fulfill the needs of its people for food while on campus. In general, foods sold in canteens have very diverse variations, with prices relatively cheap and easy to reach. (Nugroho & Yudhastuti, 2014). According to Nadiawati (2013) "Hygiene is a science that studies health. Hygiene is closely related to individuals, food, and drinks because it is a condition for achieving health status. Moderate sanitation according to WHO is an effort to supervise several physical environmental factors that affect humans, especially on things that have detrimental effects on physical development, health, and survival.

## **RESULTS AND DISCUSSION**

Public space has potential as a place for disease transmission, environmental pollution, or other health problems. Monitoring or inspection of public places is carried out to create clean public places to protect public health from the possibility of transmission of diseases and other health problems. Public places or facilities that are obliged to carry out environmental sanitation, among others, public places or public facilities that are managed commercially. (Wati, 2013). Health awareness is one of the most important needs for efforts to achieve healthy living skills for everyone. For achieving this aim, it is necessary to make the best efforts by the government to include improvements; prevention; healing; and recovery efforts that are comprehensive, integrated and sustainable. This is reasonable because the program policies in the health sector are quite extensive and require serious attention, therefore, this task is not only the responsibility of the government but also all levels of society. (Gasim, 2015). The Long Term Development Plan / RPJP (2005-2024) focuses on health development towards the promotion and preventive health efforts. One of the programs of the Indonesian Ministry of Health (Kemenkes) in the development plan is the Gerakan Hidup Sehat (Germas) / Healthy Life Movement. In this period, The Germas is focused on: Doing physical activities, Eating vegetables and fruits, Regularly checking the health and providing healthy food not only for accelerating nutrition improvement but also for achieving healthy people. The Germas program is expected to improve everyone's knowledge, awareness, willingness and ability to live healthily. (Kartika, 2017)

Based on Law No. 36 of 2009 concerning health, health development aims to increase awareness, willingness and ability to live healthy for everyone to realize the highest degree of public health, as an investment for the development of socially and economically productive human resources. Health development is directed at increasing awareness, willingness and the ability to live healthily for everyone so that the highest level of public health can be realized. In accordance with the vision and mission of health development

towards Healthy Indonesia 2015-2019 which aims to create a healthy society that is independent and equitable, then the implementation must touch all levels of society and all age groups including elementary school students to students in the world of higher education (Kepmenkes, 2015 in Jaya Saputra, 2016). One important component in carrying out educational health efforts is through healthy canteen services. Canteen/cafeteria is a business place that is carried out by education services to provide services to students or other school elements that need healthy food and drinks so that teaching and learning activities in places education can achieve their goals to the maximum (Kusmintardjo, 1993).

Decree of the Republic of Indonesia Health Minister (Kep.Menkes) no. 1429 of 2006, concerning Guidelines for Implementing School Environmental Health, mentioning environmental health requirements covering several aspects including aspects of school canteen building and school sanitation facilities. The school canteen must have a good sanitation system because the canteen is the place where food is consumed by students. If the canteen sanitation system is not good, then the school canteen can be an intermediary in the emergence of health problems caused by food. Meanwhile, school sanitation facilities include the provision of clean water, toilets, wastewater disposal facilities, and waste disposal facilities. This school sanitation facility must meet the prescribed health requirements to support the implementation of environmental health in schools and prevent the transmission of disease in the school environment. As an educational institution, environmental health standards on higher education campuses can also adopt the same public policies.

According to Nugroho & Yudhastuti (2014), the problems that often arise in the community are the quality and quantity of food production. Therefore, food as a very important factor for human life in addition to fulfilling in terms of nutrition and attractive appearance, food must also be safe for consumption, which is free from all forms of contaminants that can harm consumers. The potential for food to be contaminated with hazardous substances and become a source of disease transmission increases if the handling process is consumed by the public not paying attention to hygiene and sanitation. Restructuring efforts on canteen hygiene and sanitation have also been regulated in the regulation of the Indonesian health minister (Kepmenkes) No. 1098 / MENKES / PER / VII / 2003 concerning hygiene requirements for restaurant and restaurant sanitation. Where the canteen is one type of catering business that provides food, especially in an institution both educational institutions, government, and companies. Whereas sanitation can be defined as an effort to prevent disease by eliminating or regulating environmental factors related to the disease transfer chain. Sanitation science is the application of principles that will help improve, maintain, or restore good health to humans. Concerning food processing, sanitation is the creation or maintenance of conditions that can prevent food contamination or the occurrence of diseases caused by food. Or in other words, sanitation is an effort to reduce the number of seeds of disease contained in food ingredients in such a way that the degree of human health can be perfectly maintained (Nadiawati, 2013).

According to Oihuwal (2012), there are 4 (four) important things which are the principles of food hygiene and sanitation including the healthy and clean behavior of people who manage food, food sanitation, equipment sanitation, and food processing sanitation. All of that can be contaminated with microbes because of several things, including using a dirty cloth to clean the table, clean furniture, and others, and food stored without being closed so that insects and mice can reach it as well as sick food processors or disease carriers. Meanwhile according to Blum in N. Sari, Irnawati, & Indra, (2013) that health degrees are influenced by 4 (four) factors, namely: environment, behavior, health services and offspring. Based on these four factors, in developing countries, environmental factors and behavioral factors have a very large role in addition to other factors to improving the degree of public health. Both of these opinions can complement each other to perfect the factors that can influence the level of environmental health.

Good hygiene of food and beverage sanitation needs to be supported by environmental conditions and good sanitation facilities. These facilities include: (1) the availability of sufficiently clean water, both in terms of quantity and quality, (2) the disposal of well-ordered

wastewater so that it does not become a source of pollutants, (3) landfills made of waterproof material easy to clean, and has a lid. Poor hygiene conditions can affect the quality of food served to consumers. This obviously will also affect the level of health of consumers who consume these foods. If food sanitation hygiene is bad, it can lead to health problems such as foodborne disease and food poisoning cases. One disease caused by food and drink that does not meet health requirements is diarrheal disease (Yulia, 2016). Diseases that are closely related to the provision of unhygienic food and often occur are diseases with symptoms of diarrhea, gastrointestinal and food poisoning. One of the causes of food-borne diseases is the presence of *Escherichia coli* bacteria in water or food sources which is a sure indication of contamination of human feces. (Setyorini, 2013)

At least some canteen sanitation requirements can be identified by government regulations covering building, construction, and sanitation factors with the following details:

Building:

- Canteen building must sturdy, strong and permanent;
- The room must be arranged according to its function, making it easier for guests to flow, the flow of employees, the flow of food and ready-made food and other items that can pollute the food.

Construction:

- The floor must be waterproof, flat, not slippery, dry and clean;
- Wall; the surface of the wall must be flat, waterproof and cleaned;
- Ventilation; Natural ventilation must ensure adequate air circulation, can eliminate steam, gas, smoke, odor, and dust in the room. Artificial ventilation is needed if natural ventilation cannot meet the requirements;
- Lighting; the lighting intensity of each room must be sufficient to carry out effective food processing work and room cleaning activities;
- The roof does not leak, is quite gentle and does not become a nest of mice and other insects;
- Ceiling, flat surface, clean, no holes.

Sanitation Facilities:

- Clean water; the quality of clean water must meet physical requirements (odorless, tasteless, colorless, clear), and the amount is sufficient for all activities;
- Wastewater flows smoothly, the sewerage system must be good, the channels are made of water-proof material, the sewage disposal channel is closed;
- Toilet; Toilet available, clean. Inside the toilets must be available latrines, basins, and water tanks. Soap/detergent is available for hand washing. Inside the toilet, a tub and clean water must be available in sufficient condition;
- The trash can is made of waterproof material, not easily corroded, has a lid. Available at every place/space that produces waste. Waste is disposed of every 24 hours;
- Hand washing facilities, hand washing facilities are placed so that they are easily reached by guests and employees. Handwashing facilities are equipped with running water, soap/detergent, reservoirs whose surface is smooth, easy to clean and the waste are drained into a closed sewer;
- Washing equipment is made of materials that are strong, safe, not rusty and easy to clean. Washing tubs consist of at least 3 washbasins/washbasins which are to flush, soap and rinse. 7. A place to wash food ingredients made of materials that are strong, safe, not rusty and easy to clean. 8. The storage of clean water (water reservoirs) must be closed so that it can withstand the entry of mice and insects.

Kitchen room, dining room, and presentation: the kitchen must be clean, the kitchen must be free of insects, mice, and other animals.

The results of the research by Agustina, Pambayun, & Febry (2011) on food processing equipment can be concluded that only 34.8% of respondents had good sanitation equipment, while the remaining 65.2% of respondents had poor sanitation in terms of equipment. Based on observations during the study, none of the respondents who washed the equipment correctly found any research. Some respondents washed the equipment

without using soap, the equipment was only dipped in a bucket of dirty washing water. The level of knowledge of food traders about good food safety is still relatively low, only 17.65%. The level of knowledge about excessive doses of food coloring is 64% while 52% of traders know the dangers of formalin and borax. The low level of knowledge and sanitation practices is a challenge for Indonesian people, including in the canteen on higher education campus. Agreeing with this, Aminah & Hidayah, (2006) emphasizes that knowledge about sanitation hygiene is not always balanced with the conditions of selling places that meet the requirements.

Canteens with closed rooms area or canteens with open spaces must have sufficient clean water supply, both for processing needs and for washing and cleaning needs. For water that will be used for cooking and stored in buckets, do not slurry the water by dipping your hands. Use a long stem to remove water from a bucket/container of water. The water bucket/container must always be closed. The water requirements for canteens are that water must be free of microbes and chemicals that can endanger a person's health, are colorless and smell. The water used must meet the quality requirements for clean water and no drinking water. As well as water that will be used for cooking or washing food, it must meet the requirements for raw water (Nuraida, 2011).

Both closed canteens and canteens in open spaces have the same requirements for the disposal of waste (liquid, solid and gas), with details as follows:

- Trash or solid waste in the canteen must be available and the amount is sufficient and always closed;
- Inside and outside the canteen must be free from the garbage. Distance to the canteen with a temporary trash shelter with a minimum of 20 meters;
- There are sewers or sewers, including wastewater and function properly and are easy to clean if there is a blockage;
- There is a vent that serves to drain fresh air and remove waste gas from cooking food (Nuraida, 2011).

Plurals occur in various canteens where the conditions for washing the equipment, there are still many who have not fulfilled the provisions as in Kepmenkes No. 1098 / MENKES / SK / VII / 2003 concerning Hygiene Requirements for Sanitation of Restaurants and Restaurants, which states that the requirements for washing facilities are consisting of 3 washing tubs that are useful for flushing, soaping, and rinsing. Thus, the washing place for the equipment must have a sufficient amount of water and washing soap available. Draining sites are needed to dry equipment without using a cloth/napkin to avoid cross-contamination or re-contamination of cleaned equipment. According to Kepmenkes No. 1098 / MENKES / SK / VII / 2003 concerning Hygiene Requirements for Sanitation of Restaurants and Restaurants, there are several conditions in serving food, among others: must be protected from pollution; equipment for presentation must be kept clean; must be contained and touched with clean equipment; and presentation is done with healthy behavior and clean clothes. (Syafirah & Andrias, 2012). The other challenges, such as improper disposal of wastewater, are a trigger for health problems, so it needs to be addressed as early as possible. Wastewater from bathrooms, kitchens, and toilets contains various substances that endanger humans and living creatures around them. Efforts to improve environmental sanitation through the use of sewerage channels that meet health requirements can reduce the incidence of diarrhea. Food safety is a necessity of the community because safe foods will protect and prevent diseases or other health problems. Food safety is basically an effort to sanitize food, nutrition, and safety.

There is also a canteen where the trash does not use plastic bags for easy food scraps so that in the trash can it looks dirty and smelly because of the leftover rotting food. The rest of the wet food can stick to the surface of the trash that does not use a plastic bag and if this continues to occur it can occur a buildup of garbage on the surface of the trash. Poor waste management can be used as a place for developing disease vectors such as flies (Pawenang, 2017). According to data from BPOM in 2004, the university was the highest place for food poisoning cases in Indonesia, which amounted to 22.57%. 12 The Malaysian

Ministry of Health also stated that in 2007 17% of food poisoning cases occurred in the university area (Inayah, 2015).

## CONCLUSION

Looking at the current phenomenon, attention to canteen sanitation is very important in an effort to realize a public health sector, because it requires the willingness of universities to formulate a variant policy so that it can implement good canteen sanitation, considering that no sanitation policy good will have a dangerous impact. The policy can be in the form of a rector's regulations or head of a college, the establishment of a canteen supervisory and fostering institution, provision of training and guidance for food providers or catering tenants. Without the awareness of the campus as canteen sanitation will not be implemented and even gives a greater risk to the decline in student health figures. In addition, as explained earlier, the requirements for canteen sanitation in accordance with the Ministry of Health include building factors, construction, and sanitation facilities, this must be truly applied in the effort to implement public health. In addition to canteen sanitation, there are several other things which of course must be considered, including hygiene or hygiene. Poor hygiene conditions can affect the quality of food served to consumers. If food sanitation hygiene is bad, it can lead to health problems such as foodborne disease and food poisoning cases. Therefore, the importance of implementing canteen sanitation policies in an effort to optimize the public health sector must be carried out properly so that the impact of the lack of attention to canteen sanitation within the university or campus is no longer happening.

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## REFERENCES

1. Agustina, F., Pambayun, R. and Febry, F. (2011) Tradisional Di Lingkungan Sekolah Dasar Di Kelurahan Demang Lebar Daun Palembang Tahun 2009, Jurnal Publikasi Ilmiah Fakultas Kesehatan Masyarakat Universitas Sriwijaya.
2. Aminah, S. and Hidayah, N. (2006) 'Pengetahuan Keamanan Pangan Penjual Makanan Jajanan Di Lingkungan Sekolah Kelurahan Wonodri Kecamatan Semarang Selatan Kota Semarang', Jurnal Litbang Muhammadiyah Universitas Semarang, 4(3), pp. 18–25.
3. BPOM (2008) Peraturan Badan pengawas Obat dan Makanan Republik Indonesia, Badan Pengawas Obat dan Makanan. Jakarta.
4. Chusna, F. I. (2012) Faktor Yang Mempengaruhi Kualitas Sarana Sanitasi Kantin Di Universitas Negeri Semarang Tahun 2012. Universitas Negeri Semarang. doi: 10.15294/UJPH.V2I1.3036.
5. Gasim, H. (2015) 'Optimalisasi pelayanan kesehatan terhadap masyarakat miskin di provinsi gorontalo', Publik (Jurnal Ilmu Administrasi), 4(1).
6. Inayah (2015) 'Hubungan Pengetahuan Higiene Dan Sanitasi Makanan Terhadap Sikap Dan Perilaku Penjamah Makanan Di Kantin Universitas Tanjungpura', Jurnal Mahasiswa Fakultas Kedokteran Untan, 13(3), pp. 1576–1580.
7. Kartika, N. T. (2017) 'Evaluasi Promosi Dan Pelatihan Higiene Dan Sanitasi Penjamah Makanan Di Kantin Sekolah', Ikesma, 13(2), pp. 128–134.
8. Kemenkes (2006) Keputusan Menteri Kesehatan Republik Indonesia No 1429.
9. Mukono (2000) Prinsip-Prinsip Dasar Kesehatan Lingkungan. Airlangga University Pess.
10. Nadiawati (2013) Gambaran Higiene dan Sanitasi Kantin Kampus 2 Universitas Islam Negeri Alauddin Makassar. Universitas Islam Negeri Alauddin Makassar.
11. Nugroho, M. D. A. and Yudhastuti, R. (2014) 'Kondisi Higiene Penjamah Makanan dan

- Sanitasi Kantin di SMAN 15 Surabaya', *Jurnal Kesehatan Lingkungan*, 7(2), pp. 166–170.
12. Nuraida, L. (2011) *Menuju Kantin Sehat di Sekolah*. Bogor: Seafast Center.
  13. Oihuwal, T. S. (2012) *Gambaran Higiene dan Sanitasi Kantin Kampus di Lingkungan Universitas Islam Dalam Negeri Alauddin Makassar*. Universitas Islam Negeri Alauddin Makassar.
  14. Pawenang, E. (2017) 'Kondisi Sanitasi Dan Kepadatan Lalat Kantin Sekolah Dasar Wilayah Kerja Puskesmas Kedungmundu', *Journal of Health Education*, 2(1), pp. 66–72.
  15. Rahmawati, S. et al. (2018) 'Sanitasi Makanan dan Minuman dengan Menggunakan *Salmonella* sp. sebagai Indikator di Kantin Universitas Islam Indonesia', *Jurnal Sains dan Teknologi Lingkungan*, 10(2).
  16. Saputra, J. (2016) *Studi Deskriptif Sanitasi Kantin dan Fasilitas Sanitasi Dasar Di Lingkungan Sekolah Dasar Pada Wilayah Kerja Puskesmas Ungaran Kecamatan Ungaran Barat, Kabupaten Semarang Tahun 2016*. Universitas Negeri Semarang.
  17. Sari, E. R. (2013) *Gambaran Higiene dan Sanitasi Kantin Sekolah (Studi Banding SMPN Perkotaan dan SMPN Pedesaan Tahun 2013)*. Universitas Islam Negeri Alauddin Makassar.
  18. Sari, N., Irnawati, M. and Indra, C. (2013) 'Higiene Sanitasi Pengelolaan Makanan Dan Perilaku Penjamah Makanan Di Kantin Sekolah Menengah Atas (Sma) Negeri Dan Swasta Di Kecamatan Rantau Utara Kabupaten Labuhan Batu Tahun 2012', *Lingkungan dan Keselamatan Kerja*, 2(1), pp. 43–50.
  19. Setyorini, E. (2013) *Hubungan Praktek Higiene Pedagang Dengan Keberadaan Escherichia Coli Pada Rujak*. Universitas Negeri Semarang.
  20. Supriadi, S. and Chandra, E. (2018) 'Penerapan Hygiene dan Sanitasi di Pondok Pesantren As'ad Seberang Kota Jambi Tahun 2016', *Jurnal Ilmiah Universitas Batanghari Jambi*, 18(1), pp. 132–142.
  21. Syafirah, S. and Andrias, D. R. (2012) 'Higiene Penjamah Makanan dan Sanitasi Kantin Sekolah Dasar Negeri di Kecamatan Mulyorejo, Surabaya', *Jurnal Media Gizi Indonesia*, 10(02), pp. 111–116.
  22. Ulfatin, E. M. R. N. and Triwiyanto, T. (2015) 'Manajemen Layanan Kantin Sehat Di Sekolah Adiwiyata (Studi Kasus Di Smpn 10 Malang)', *Jurnal Administrasi Pendidikan*, 2(1), pp. 1–15.
  23. Undang Undang Nomor 36 Tahun 2009 Tentang Kesehatan (2009) Republik Indonesia.
  24. Utami, R. A., Thoha, S. jaya and Nugraheni, I. L. (2018) 'Dampak Sanitasi Lingkungan terhadap Kesehatan Masyarakat di Wilayah Pesisir Kecamatan Kota Agung', *Jurnal Penelitian Geografi*, 6(7).
  25. Wati, C. A. I. (2013) 'Faktor Yang Berhubungan Dengan Praktik Sanitasi Pada Pedagang Makanan Di Sekitar Pantai Logending Kecamatan Ayah Kabupaten Kebumen', *Unnes Journal of Public Health*, 2(4), pp. 1–10. doi: 10.1177/1403494814549494.
  26. Yulia, Y. (2016) 'Higiene Sanitasi Makanan, Minuman dan Sarana Sanitasi terhadap Angka Kuman Peralatan Makan dan Minum pada Kantin', *Jurnal Vokasi Kesehatan*, 2(1), pp. 55–61.

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## **TERRITORIAL MARKETING AND COLLECTIVE BRANDING TO SUPPORT REGIONAL DEVELOPMENT: A STUDY OF SMEs BATIK INDUSTRY**

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### **ABSTRACT**

Global competition places more challenges not only for nations but also regions to attract potential resources. Marketing approaches have been pursued by the government and the local authority to communicate their places. The aim of this study is to analyze the implementation of territorial marketing and collective branding to support regional development. Region or territory has its own identity and uniqueness that can be used as a tool to differentiate from the competitors (other regions). More specifically, this study explores the process of building collective branding in Batik clusters located in Banyuripan, Bayat, Klaten Central Java Indonesia. Case study analysis and focus group discussions were conducted to gather and analyze the data. Four batik clusters were chosen as case study. The main objectives for this case study analysis are: 1) Finding the standard quality batik production. 2) Producing standard operation procedures to support collective branding. 3) Socialization of territorial marketing and implementation of collective branding. 4) Collective branding registration for Batik Banyuripan.

### **KEY WORDS**

Territorial marketing, collective branding, regional branding, batik industry.

With the increase on global competition, branding a place has become increasingly a common strategy for the government and the local authority. Linking marketing strategy and place management is no longer a new phenomenon. The use of branding is to communicate the identity and uniqueness of the place. Some success examples of city and nation brands are “I Amsterdam”, “Be Berlin”, “I Seoul U” for city brands, as well as “your Singapore” and “100% pure New Zealand” for country brands. Branding the place expresses the marketing and entrepreneurial efforts of the government, where place is now managed more like business manner (Harvey 1989; Kavartzis 2005). Despite nation and city branding, place branding strategies are also applied in smaller economic sectors for the same reasons. Place branding can be employed on different scales of geographical areas (nations, state, territory, regions, cities and communities). Branding for smaller areas such as regional or territorial branding has also been seen as effective in marketing local products and strengthen the local identity. The introduction of geographical indications (GIs) highlights the proliferation of combining the image/reputation of the region or territory with the local products.

Geographical indications or GIs is naturally the kind of brand strategy. Unlike the common brand, it does not explicitly indicate the firm/single owner of the brand. Developed by EU countries, GIs branding combine the name of the location to the product as a brand name. One particular product often is very well known from specific area and it cannot be easily produced in other areas. GIs branding has been developed to guarantee the quality and originality of the product along with the geographical location as part of the brand. GIs branding strategy was initially applied for agricultural and food products, but nowadays, it has expanded to more varieties of local products. The main objective of GIs idea is to protect the producers and consumers from fraudulent use of the product name. Products that have been successfully protected by GIs are wine, spirits and foods (chocolate, cheese, coffee and tea).

Although nations have been commonly used as the usual unit of analysis when examining economic growth, economic performance between regions within the same country is different (Borg 2013). Some regions are more prosperous and grew much faster than other regions (Lorenzinni 2011). Some regions may also more popular than the country

it self. The popularity may because of the unique landscape, culture, history, tourism infrastructure and the local products. The GIs idea relates more on the local knowledge, innovation and resources that has evolved in a long period. This phenomenon makes it important to investigate the relation between the image strength of the location and the local products produced. Due to the majority of the local producers are local farmers or local small medium enterprises, thus they need to be protected by the government. Creating GIs system is to ensure that the local original producers are protected and may compete well with their distinct brand name in the global market.

Rural regions are competing with their neighboring regions and other regions. Places are competing for "scarce resources". Scarce resources include tourists, companies and talented people, investors, event, etc. The success of place branding requires local competences, availability of distinctive assets and resources. In rural areas, agricultural and food products often form a distinctive assets. This local distinctive assests can also built from the local talents and local culture to make arts and crafts. To communicate and protect the local products, the local authorities are now taking marketing approach to improve the performance of the local industry. The aim of this applied research is to explore how the practice of territorial marketing and collective branding may support regional development. Specifically, this study will analyse the case of collective branding practice effort in Batik clusters in Banyuripan, Klaten Central Java Indonesia.

## LITERATURE REVIEW

Territorial marketing according to Gollain (2013) in Amajid, et al., (2016) is public management area which considers the efforts to build the territory to become more competitive than the other territories, including promoting territory's offering to target market. Success from territorial marketing is expected to attract more talented people to stay and visitors to come thus increasing the territory's income and quality of life. Territorial marketing is defined as a tool to manage a territory by developing its resources through promoting its services, goods and activities of people and business operating there (Amajid, et al., (2016). In the field of place management, there are resources, called as 'scarce resources' which are competed by all places. Scarce resources include tourists, skilled or talented people, students, investors, events, firms, etc, which have the potential to generate the wealth of the territory. All efforts are often focused to call these scarce resources to come to the area since these scarce resources when managed well can be a potential booster for economic development. Hatem (2007) in Amajid, et al., (2013) divided the target of territory marketing into three categories. 1) investors, to attract funds to establish commercial relations nationally and internationally, 2) tourists for offering income and new experiences, 3) citizens in order to strengthen identity, quality of life and sense of belonging. The challenge of territory marketing is to create positive image that the place is attractive to live and to invest. Overall, the main objective of territorial marketing is the wellness and prosperity of the people in the territory.

The concept of country-of-origin (COO) has long been in the discussions in the marketing literature. Here the product is connected with the country's reputation. Globalization of the market makes particularly developed countries win the effect of COO. COO which recently also known as Place-of-origin (POO) is an effective marketing strategy in combining the strength of country reputation to any products made by the related country. Some countries are very successful with the COO concept for example Japan with its car and electronic industry, The US with its car, computer and film industries, Italy with its car, shoes, bags, and Korea with its mobile phone, car and cosmetics. The correlation between place and its product has become the strength in marketing and place development strategy.

Until now, studies on nation branding / marketing, place branding / marketing, city branding / marketing have largely treated in the literature within multidiscipline backgrounds such as marketing, urban planning, public diplomacy and economic development (Anholt 2002; Anholt 2006; Dinnie 2008; Kavaratzis & Ashworth 2005, Braun, & Zenker, 2010). All these studies emphasize that places are competing for resources in order to prosper people

who live in the area. Place can use the marketing approach compete and win the market. All nations are developing brand and conducting marketing strategy to communicate their identity and promote their offerings. Regional authorities are also building their local brands to win the scarce resources. With the advanced of information technology, the effect of place branding and marketing are more effective since technology helps the places to reach their targeted market faster.

However, place branding study for regions has been rather neglected (Florek, 2013). Only a few studies have investigated the regional product or regional branding in relation to place branding or place image (Elliot & Papadopoulos, 2016) and regional branding to local cooperation and sustainable development (Florek, 2013). Few studies on regional branding are studies by Garcia, et al. (2013) and Pasquinelli (2010), which observed the capacity of regional branding to support local development. the major conclusion of that studies are the importance of well coordination and cooperation of different local stakeholder groups on regional branding efforts.

Food has been so far the most advanced product introduced with the regional/territorial branding. For example, the European Union has developed a common legal framework for official signs to agricultural and food product quality related to their origin. This legal framework known as Geographical Indications (GI) which consists of three types namely protected designation of origin (PDO), protected geographical indication (PGI) and traditional specialty guaranteed (TSG). The World Trade Organisation (WTO) so far has acknowledged GIs as intellectual property rights and having the same basis as those of other commercial brands (Trade-Related Aspects of Intellectual Property Rights, TRIPs Agreements 1994). Some agricultural products from USA and EU that have gain popularity in implementing GIs system are Florida oranges, Idaho potatoes, Washington apple, Scotch Whisky (UK), Asiago cheese (Italy) and Bordeaux wine (France).

When branding regional food, commonly the branding efforts are connected with the local culture and heritage. How the food is locally produced, how the food is locally consumed as part of the tradition, and how the food is supporting the local's economy are all effect the formation of regional branding. Regional food branding is a complex process since it has some multidimensional aspects that provide identity for the food. Lorenzini et al., (2011) stated that territorial brands consider emotional and iconic brands, and should be able to convey an authenticity, quality and typicality of the product, represents the contexts of the rural traditions and having strong commitment from the locals to materially and immaterially treating the brand. This means that despite the distinct features of the local product, the locals are also actively engaged with the products.

Porter (2003) argues that even though economic development is usually measured per country basis, however, it is common that some regions in the country may have better reputation than the country it self while also the economic performance of the regions are different. A region could be very prosperous due to the geographical locations and the talented locals. Regions with rich cultural heritage and local talents may leads due to the active participation of the locals. Regional branding can be given for non food products such as arts and crafts (painting, dance, pottery, batik, etc). The abilities of rural people combined with the local natural resources may create distinctive local products. Branding local product can be in the forms of individual or group. However, individual branding tends to be organized by a more established firms, while SMEs usually do not consider branding their products. While the benefit of branding and giving legal entities is very important for future global competition, collective branding is one alternative to support the local SMEs to improve their competitiveness.

Brand is a name, term, design, or symbol of a company or organization or producers to differentiate or give identity to their products or offering from others (Fishman, et al., 2018). Brand has many benefits to either the producers and the consumers. The benefits for producers cover giving the identity and protections. For customers, brand communicate the quality, distinctiveness, reduce risks and social status. For the producers, when competing in the wider market place, brand provide legal protection from activities such as irresponsible illegal use or property right (Suryo, 2010). Collective branding is sharing a brand by a group

of producers. Collective branding is a name for certain products / services which is traded by group or individual. This collective branding has been practiced by some countries who has applied Geographical Indications (GIs) system such as for wines (Bordeaux, champagne), cheese (Camembert, Parmesan, Feta) and coffee (Colombian, Ethiopian). These brand names have been protected with geographical indication (PGI) status meanings that others are restricted the use of the geographical identification unless the product are made from the area. In order to create distinctiveness of the local business, using the concept of GIs, the protection of local skills can be embedded with the geographical name. The GIs concept allow rural resources with geographical name to be developed by the region using marketing strategies emphasized on distinctive identity (Horlings & Marsden, 2014).

Regional products commonly have a long history and may have a strong emotional value related to the original location where it produced. The need for producers to distinguish their local products through non-price factors such as place of origin, product quality and image has becoming more critical due to intense competition and the business opportunity for the market who appreciate the value of authenticity. For local producers (SMEs) their limitation to build individual brand can be overcome by collective branding. The sharing name by groups of producers may assist 1) providing legal protection, 2) providing clear identity, 3) sharing knowledge and talent, and 4) maintaining quality standards. When the geographical name is used for collective branding, this strategy will strengthen the identity and becoming more difficult to copy by competitors.

## **METHODS OF RESEARCH**

The case study was chosen as a research strategy. The case study focused on collective branding effort by Batik cluster located in Banyuripan, Klaten, Central Java Indonesia. These batik clusters have specialty in their hand made batik production with natural color. In order to achieve the objective of the study, field studies were conducted to four batik clusters in the targeted areas. Some interviews to local authorities were also completed to understand how local authorities managed their marketing strategy. Java is the island where batik has well developed until recently. Around Banyuripan area, there are four active batik clusters where each cluster is supported by 25-45 women entrepreneurs as members. Four batik clusters were visited twice in order to: 1) see in detail how batik is made, starting from how raw materials are bought, designing, waxing, soaking, airing, administrative, quality control, ordering, marketing, financing and training. 2) Socialization and training to introduce and ensure for the standard quality in production. 3) Arrange standard operating procedure for quality control. 4) preparation and management of the clusters for collective branding registration and implementation.

The member of batik clusters in Banyuripan are all family small businesses. Some of the women entrepreneurs are quite advanced in managing the business where they already have their own show room in their house. However, they don't individually name their production since they are belonging to the clusters. They are allowed to sell their batik production individually and directly to the market, but somehow the order is higher from the group clusters. The clusters regularly have a meeting once a month to discuss some issues or managing routine orders. The name of the group of batik cluster "Batik Banyuripan" has been accepted by all members in the cluster. However, they do not aware of the importance of legalizing the brand name. Due to the situation where the name "Banyuripan" is shared or used as collective brand, thus the alternative strategy is registering the brand "Banyuripan" to the government via the ministry of law and human rights. It is important that all members of the cluster understand whether the name "Banyuripan" is going to be registered. Once registered as a collective brand, all members must have the commitment to maintain the level of quality as agreed by all of the members.

In complement with field survey, focus group discussions (FGD) were also taken to gather more information from the member of the batik clusters and from the local authority invited to the meeting. The topic for the first FGD was a discussion on challenges and problems in batik natural color productions. Other than sharing information from FGD,

researcher and the team are also gathered information relating to required quality standard for batik natural color production. This information is further prepared for arranging the standard operating procedures (SOP) to be distributed among the cluster members as guidance for quality control.

The second focus group discussions was conducted with the emphasized on the following topics:

- Good governance. Even though the clusters combined is considered as small medium enterprise, however, quite often that the group received huge amount of orders, where all members received responsibility to handle the project together. This means that there should improvement on the organization management, particularly the definition of job responsibility. The group must arrange clear job division so job responsibility is clear and the work load is distributed evenly;
- Financial report. A well managed financial report is important for the investors to value the prospect of a business. Similarly, if this cluster wants to expand and needing investment, financial report must be clearly provided. Financial report is also important as the form of organisational responsibility to its members;
- Intellectual property and collective branding. The members of Banyuripan batik cluster are majority house hold women with education as high as high school graduate. Only few of them with university degree. In the rural areas, collective living is very strong and many way of lifes are shared together. Intellectual property right is a kind of knowledge they do not have many information on it since they have not found the urgency for their business at this current state. In the future, everyone must appreciate their talents, their works and their productions, as part of the competition to stay in the business. Knowledge of intellectual property right will protect someone's creations and teach people to respect on someone's creations;
- Collective branding. The knowledge on collective branding is very urgent since the clusters' logo is yet being registered to the authority. The similar name and logo could be used and registered by others and thus no more chance to use the same name and logo for this group of cluster. The current name of the clusters is "Banyuripan" batik. This name is originally come from the geographical name "Banyuripan" region, where this group of cluster is geographically located. Branding product by attaching the geographical name has been acknowledged in the GIs system and can be a good identity for branding collective producers. Batik producers can use the GIs approach in naming the brand since it provides identity while also Batik entrepreneurs will take a lot of benefits from joining the collective branding. As a small family business, there is a small potential that the batik women entrepreneurs will set up individual brand. Collective branding is one of solution to protect their products.

## RESULTS AND DISCUSSION

Batik as a Javanese word 'amba' means 'to write'. Indonesian's batik has a long history and Indonesia is the biggest country that maintain the design and technique to make Batik. Batik is particularly very popular in Java and there are three kinds of batik techniques, which are 1) hand-written batik, 2) hand-stamped batik, and 3) combination of hand written and stamped batik. Indonesian batik has been part of Indonesian culture since the 4<sup>th</sup> or 5<sup>th</sup> century. Batik as local cultures have been practiced long before the foreign influence entering Indonesia. For the Javanese, the design of batik has many symbols representing the human life cycle from the birth stage, marriage life and the death. The motifs and designs have been majority influenced by the nature such as the animals, leaves, flowers, clouds, etc. Until recently, Indonesian's batik is produced by different size of businesses, whether Individual SMEs, firms and/or group of clusters.

Culture can be a strategic factor that supports the economic development, social capital and the quality of life (Simeon & Martone, 2014). As a cultural product, the work on Batik is sought for its authenticity which is made through combinations of social distinctiveness and cultural characteristics (Park, et al., 2016). Batik consumers appreciate

the authenticity and would be willing to pay premium for valuing the authenticity. Authenticity can be valued in terms of the motifs and designs, the detail complexity, the production methods and the place of origin (Beverland & Farrelly, 2010). Spreading in vast geographical locations, Indonesian batik has varieties of designs and dye techniques. Despite the varieties of batik production across Indonesia, the center of batik production remain strongly from Java particularly centering around Central java (Surakarta, Yogyakarta, Pekalongan), West Java (Cirebon), and east Java (Tuban, Lasem and Madura). There are currently 3,400 batik designs have been developed in Surakarta Central Java and until 2008 there has been 900 batik designs patented from Batik Surakarta (Kemendag, 2012). The growth of batik industry as well as the pride with batik arts have been increasing sharply after the announcement from the UNESCO, in the 2<sup>nd</sup> of October 2009, where Indonesian Batik was designated as a Masterpiece of Oral and Intangible Heritage of Humanity. Since then, the 2<sup>nd</sup> of October is celebrated by Indonesian as national Batik day.

After listed as cultural heritage by UNESCO in 2009, the market attractiveness and popularity of Indonesian batik is increasing sharply. As a cultural product, the market appreciate authenticity and consumers are willing to pay premium price (Moulard, et al. 2015). However, there is a consequence due to the popularity of batik in the market where "*Batik printing*" since then flooding Indonesia's textile market. Batik printing is a kind of textile with batik motifs printed on it. Indonesian does not consider batik printing as Indonesian's batik, it is only a common textile product. Majority of batik printing comes from China and Malaysia (Sardjono, et. al., 2015). Even though Indonesia's batik export increased, import batik also increased from USD 28 million in 2014 to USD 34 million in 2015 (Budiman, 2016). Due to the ease in production using the machinery technology, the price of batik printing is far cheaper than the local manual handmade batik. The number of batik printing competing in Indonesian batik market certainly worries local batik producers since Indonesians' consumers are not quite aware of batik printing and batik handmade while also consumers enjoy cheap batik. Only those who have concern in the value of traditional batik will appreciate the hand made batik. After all, this imported Batik is certainly destructive to the competitive capability of the local Batik. Government need to take action to protect the local Batik.

While the designs can be easily copied, the hand drawn and stamp Batik are still valued due to its uniqueness and authenticity of the making. To protect the traditional batik, one of the solutions is by giving them legal protection. Batik design and the motifs are rich with intellectual properties. Branding the local batik should be managed to protect from the imported Batik. The benefits of branding or giving trademark for local batik covers: (1) Providing identity to distinguish between local batik and imported Batik. 2) providing distinguished mark which represent the quality of the product. 3) Helping the promotion of local Batik. 4) providing legal protection. In order to receive collective branding or trademark, the producers should register their brand to the Directorate General of Intellectual Property Rights of Indonesia (DGIPR Indonesia). In the case of SMEs where branding is uncommon and too expensive to cover the cost, the solution is by organizing collective brand. The collective brand can be used by the members of the group when doing their trading activities. In becoming the member of collective brand, all members must agree the terms and conditions for committing the quality standard.

The Modern batik has taken place since the influence of Islam and western countries. The modern designs have less traditional guidelines and have more freedom in expressing motifs and colors. More chemical coloring instead of traditional (natural) coloring is currently used and environment consequences become the further issue. As the coloring technology improving, batik is drawn in more varieties of medium, such as in wood, glasses, metal, etc. Batik designs and motifs are also creatively expanding to be produced for mobile phone wallet, laptop covers, helmet, wooden statues, house hold clothes, t-shirts, stationary items, accessories, etc. The authenticity of modern batik products similarly needed to be protected. Once the design or the idea is launched to the market, it will soon face industry competition particularly copying issues. In the creative industry which rich with intellectual property

issues, producers and artisans should understand how to protect their talents and their products to sustain competitive.

In the context of rural SMEs such as women batik entrepreneurs in Banyuripan, Bayat, Klaten, many are unaware from the importance of protecting their products and creativities. If the government were not taken care, they will hardly survive. The introduction and registration for collective brand is considered urgent since the business has increasing orders from national and international clients. If they were not protected, their local name (Banyuripan as geographical name) could be registered by others and the group will miss the chance of using their local geographical name as their local identity. Registering the brand name is not the domain of individual SMEs since it is considerably expensive and time consuming. It is therefore more cost effective when collective branding is agreed and managed by the group.

Our research team in the second FGD has gathered the information about the acceptance of participating to the collective branding. There has been some positive response by the cluster members since they have some experience on having their designs spread quickly by others before they have the chance to introduce their own motif design to the market. The brand provides identity and creates positive image in the eyes of consumers (Fathanudien, 2016). Collective branding not only protect their brand name “Banyuripan” but further may be extended into registering all motif designs that need to be protected. When joining with the collective brand, there are certainly some rules that all member should comply with the term and conditions agreed. The terms and conditions for collective brand commonly cover: product characteristic; general features; monitoring procedures; quality standard; sanction or penalty.

Once the terms and conditions have been arranged and agreed by all the members, the group or organization may apply to the ministry of law and human right. With the case of “Banyuripan” name as a collective brand name, in doing registration, some members as representative could sign the document. Once approved, the organization is no longer run by a person but by all member listed in the collective brand document. Some benefits from registering collective brand cover: 1) the costs (price) is shared together (not by individual), 2) the difficulties in running the business are shared, 3) the skills and knowledge are shared, 4) the market and projects are shared and distributed together, 5) the production processes can be shared, 6) the marketing effort can be shared, and 7) instead of competing, the members support each other.

The success of collective brand depends on the commitment of the member. The mutual cooperation or in Javanese term called ‘*gotong royong*’ should be encouraged among members. The strong cultural characteristic combined with geographical reputation will give identity and uniqueness in distinguishing ‘*Banyuripan natural color Batik*’ from competitors. All members in collective brand may use the brand name and logo for their business operation. After in depth discussions with representative members of batik Banyuripan clusters, a logo was designed and the meaning was given to the logo. Together with the brand name “Banyuripan”, the logo also registered to the ministry of law and human right. The batik Banyuripan logo is described in figure 1, where the green color represents the symbol for commitment of using natural color. The picture “canting” which is a specific spoon to place the wax when drawing batik represents the nature of hand made traditional batik techniques used. Bayuripan collective brand has been registered to the office of local ministry of law and human right in March 2019. Once registered, “Banyuripan” as a collective brand name and the logo are now legally protected by the Indonesian government and will be valid for 10 years. The name and logo should be re-registered after 10 years have passed.



Figure 1 – Banyuripan Brand Logo

Traditional Batik can be made in three techniques: Hand written Batik, hand stamped and combination of the two. Wax is used to draw batik using special tool called "Canting". Invented by the Javanese, canting is a small copper container as drawn in Banyuripan logo. The tip of canting has different sizes of spouts. Different size is used to create varied design effects. The wax is heated on the small stove, and the liquid wax is placed in canting then is used to draw batik motifs. After waxing the motifs, there are several steps to be followed which are waxing and dewaxing (removing the wax). This waxing step can be done several times depending on the expected color and detail motifs to the fabric. The traditional motifs are still produced and easily found in the market with softer colors. The modern batik commonly used chemical with brighter colors and more varieties of motifs and designs.

The making of hand drawn Batik can take several days, weeks and even months particularly for a fine quality hand-drawn batik. No wonder hand drawn Batik is very expensive due to the difficulties and time-consuming efforts in making it. With the growing demand of Batik, the stamped Batik was introduced. The stamped Batik is particularly to make Batik more affordable for lower income people as well as more speed in the making. Since batik demand is quite high, another technique was introduced called hand stamped batik. This technique is similarly using melted wax, but instead of written into the fabrics, the wax is applied into the cooper stamp. The stamped batik was introduced in the 19<sup>th</sup> century. The stamped technique allows the production of high-quality Batik with shorter time. The stamped technique takes 2 to 3 days to complete. This stamped technique is done by both women and men, and it is easier than the hand written batik which usually done by women. Stamped batik is cheaper than hand written batik. However, the combination oh hand written and hand stamped batik is also common techniques and many combination products are found in the market. The price of course is more expensive than the pure stamped batik.

Globalisation makes all countries, government and individu reachable and competition is at all levels. The early marketing literature has identified on the role of Country-of-origin / COO in increasing the competitiveness of products from related country of origin. However, there are different growth and performance among regions in the country. Some regions may be better developed than other and may be more popular than the country where it resides. Such as Bali for Indonesia, many overseas tourists know Bali as famous destination better than Indonesia. This condition make sense when the reputation of a region/territory can be a powerful marketing tool to increase the market of the regional product. As previously discussed, territorial marketing is the action to manage territory's resources through marketing local goods and services operating in the territory. In order to be able to be marketed and receive positive market response, local products should be branded. Product brand will be useful to support the region marketing strategy. If a territory have rich of local industries, these industries can be a big asset to promote territory. When local industries has regisetered brand, the regional marketing team will be easier in communicating the identity as well as the distinctiveness of the local products.

When planning and conducting territorial marketing, policy makers should do prior analysis about the history of the place, the daily life of the people, the characteristics of the citizens, the natural resources (raw material) as well as the local culture that determine the uniqueness of the area. Among" territorial marketing, collective branding, culture and local daily life", they should be well managed in order to create strong identity to the local. With the better economic condition, people around the world have better income and this impact on more people travelling. When travelling, people usually enjoy the place which offer uniqueness they cannot find in their home countries. Even that travellers would be happy to pay high for something that unique and having good quality. Originality and authentciity become important value seek by more people regardles the higher costs that traveller should pay. Creating uniqueness and originality are now important strategies to marketing territory. The internet helps people to do in depth search for products or destinations they wish to visit. To market territory and support collective barnding, online and offline approach should be endorsed and the market dynamic should be anticipated regularly. Overall, the success of local branding and territorial marketing is closely related. Government or travel agents should

build marketing strategy for the territory, where the local products and local brand are clearly promoted and communicated.

## CONCLUSION AND RECOMMENDATIONS

Global competition placed more challenges to any organization whether profit or non profit to sustain. Not only business entities that needs to apply marketing approach, but also governmental bodies at national or regional level face competition to make their place prosperous and attractive to the stakeholders. Regional development can be achieved when the region has significant resources to support the growth of the area. These resources known as scarce resources are competed among regions. These resources cover investment, investors, events, tourists, skilled and talented people, students, etc. In managing and attracting scarce resources to come, regional government needs to market and promote its place. One of the challenges in managing resources is protecting the resource with brand and engaging in specific marketing strategy. Region or territory has its own identity and uniqueness that can be used as a tool to differentiate from the competitors (other regions). The challenges in creating this differentiation effect are by understanding the strength of the local products. When branding local products, the combination of the uniqueness of the products and the geographical name can be an effective regional marketing strategy. The aim of this research is analyzing how the practice of territorial marketing and collective branding may support regional development. Due to the limitation of local producers to set up individual brand, the alternative strategy is by assisting them to build collective branding. This study explore and analyse the process of building collective branding in Batik clusters in Banyuripan, Bayat, Klaten Central Java Indonesia.

Batik Banyuripan is a Batik cluster focusing the production with hand written batik using natural color. The member of this cluster is women Batik entrepreneurs. The uniqueness of Banyuripan batik is the specific garden design and the natural coloring which has minimum pollution impact to the environment. In order to success in the regional branding and territorial marketing, the local products should be supported. Using the Geographical Indication approach, this batik clusters registered their Banyuripan name and logo as collective branding. This batik cluster brand and the local products could be one of the assets for the regional branding in Klaten region. In order to support the sustainability of production and the quality standard, the members of Bayuripan collective brand have to agree with the terms and conditions. Training and monitoring are given to ensure that the output will always within the quality standard required.

## REFERENCES

1. Amajid, G., Souaf, M. & Wazani, Y.E. (2016). Territorial marketing and its effects on Development, approach from the literature. *Revue Marocaine de recherche en management et marketing*, 13, January-March, 111-129.
2. Anholt, S. (2002). Nation branding: a continuing theme. *Journal of Brand Management*, 10 (1), 59-60.
3. Anholt, S. (2006). Public diplomacy and place branding: Where's the link? *Place Branding and Public Diplomacy*, 2 (4), 271-275.
4. Beverland, M.B. & Farrelly, F.J. (2010).The quest for authenticity in consumption: consumers' purposive choice of authentic cues to shape experienced outcomes. *Journal of Consumer Research*, 36(5), 838-856.
5. Braun, E. & Zenker, S. (2010). Towards an integrated approach for place brand management. 50th European Regional Science Association Congress, Jonkoping, Sweden, 19-22 August 2010.
6. Borg, E. (2013). Collective Brand Strategy, Entrepreneurship and Regional Growth: The Role of a Protected Designation of Origin (PDO). *Journal of World Economic Research*, 2(3), 26-38.

7. Budiman, D. (2016). Karena Murah, Masyarakat RI Lebih Suka Batik Palsu Buatan China. Available at <https://economy.okezone.com/read/2016/02/25/320/1321075/karena-murah-masyarakat-ri-lebih-suka-batik-palsu-buatan-china>
8. Dinnie, K. (2008). *Nation branding: Concepts, issues, practice* (London: Routledge).
9. Elliot, S. & Papadopoulos, N. (2016). Of products and tourism destinations: An integrative, cross-national study of place image. *Journal of Business Research*, 69, 1157-1165.
10. Fathanudien, A. (2016). Alternatif perlindungan hukum atas hak merek kolektif genteng Jatiwangi guna mengurangi persaingan usaha di Kabupaten Majalengka. *Jurnal Unifikasi*. 3 (2).
11. Fishman, A., Finkelstein, I., Simhon, A. & Yacouel, N. (2018). Collective brands, *International Journal of Industrial Organization*, 59, 316-339.
12. Florek, M. (2013). Building the image of a place brand with the support of local commercial brands. Poznan Brand Consortium case study. *Journal of International Studies*, 6(1), 9-21.
13. Garcia, M.D.D., Horlings, L., Swagemakers, P. & Fernandez, X/S. (2013). Place branding and endogenous rural development. Departure points for developing an inner brand of the River Minho estuary. *Place Branding and Public Diplomacy*, 9 (2), 124-140.
14. Harvey, D. (1989). From managerialism to entrepreneurialism: the transformation in urban governance in late capitalism. *Geografiska Annaler. Series B. Human Geography* 71B (1), 3-17
15. Horlings, L.G. & Marsden, T.K. (2014). Exploring the 'New Rural Paradigm' in Europe: Eco-economic strategies as a counterforce to the global competitiveness agenda. *European Urban and Regional Studies*, 21 (1), 4-20.
16. Kavartzis, M. & Ashworth, G.J. (2005). City branding: an effective assertion of identity or a transitory marketing trick? *Tijdschrift voor economische en sociale geografie*, 96 (5), 506-514.
17. Kemendag. 2012. Batik cultural beauty. <http://www.kemendag.go.id/files/pdf/2012/12/08/batik-id0-1354950532.pdf>
18. Lorenzini, E., Calzati, V. & Giudici, P. (2011). Territorial brands for tourism development a statistical analysis on the marche region. *Annals of Tourism Research*, 38, 540-560.
19. Moulard, J., Babin, B. J. & Griffin, M. (2015). How aspects of a wine's place affect consumers' authenticity perceptions and purchase intentions: The role of country of origin and technical terroir. *International Journal of Wine Business Research*, 27, 61-78.
20. Park, J., Javalgi, R. & Wachter, M. (2016). Product ethnicity and perceived consumer authenticity: the moderating role of product type. *Journal of Consumer Marketing*, 33/6, 58-468.
21. Pasquinelli, C. (2010). The limits of place branding for local development: The case of Tuscany and the Arnovalley brand. *Local Economy*, 25 (7), 558-572.
22. Porter, M. (2003). The economic performance of regions. *Regional Studies*, 37(6-7), 545-546.
23. Simeon, M.I. & Martone, A. (2014). Relationships between Heritage, intangible capital and cultural and creative industries in Italy: a framework analysis for urban regeneration and territorial development. *Advanced Engineering Forum*. 11, 149-156.
24. Suryo, U.T. (2010). Hak Kekayaan Intelektual (HKI) di Era Global Sebuah Kajian Kontemporer. Graha Ilmu. Yogyakarta.
25. Sardjono, A., Prastyo, B.A. & Larasati, D.G. (2015). Development of collective trademark for batik industry in kampung batik Laweyan (Laweyan batik's village), Solo. *Indonesia Law Review*, 1, 33-50.

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**THE LEADER-MEMBER EXCHANGE ROLE IN THE MEDIATION RELATIONSHIP  
OF THE ROLE OF STRESS TOWARDS TURNOVER INTENTION WITHIN  
COOPERATIVES IN THE REGENCY OF TABANAN**

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**ABSTRACT**

Cooperatives represents one of the main driving forces of economic development on the basis of a local economy. The forward and backward movements of a 'Cooperative' can be affected from the level 'Role of Stress' for employees and 'Leader - Member Exchange' within an organisation. Employees are categorised as important assets within the 'Cooperatives' in which needs to be managed well to ensure reductions of costs that emerge due to factors of finding new employees. From this it is needed to understand the factors involved that can effect the occurrence of 'Turnover Intention'. This research is undertaken to determine the role of 'Leader-Member Exchange', in regards to the mediation of the 'Role of Stress' towards the 'Turnover Intention' of employees. This research is undertaken through using 75 (seventy five) Cooperatives in the Regency of Tabanan. The data gathering is undertaken through the spreading of questionnaires that uses a 5 points Likert scale to measure 12 (tweleve) questions. The analysis technique that is applied is the 'Path Analysis' with the method of analysis using the Partial Least Square (PLS). The result of this research will help indicate (1) Role of Stress having a positive effect and significance towards the Turnover Intention, (2) Role of Stress having a negative effect and significance towards Leader-member Exchange, (3) Leader-Member Exchange having a negative effect and significance towards Turnover Intentions, (4) Leader-Member Exchange mediating partially the effect on Role of Stress that can effect Turnover Intention.

**KEY WORDS**

Cooperatives, role stress, leader-member exchange, turnover intention.

The economic development on the island of Bali specifically the finance sector, t this time has made significant progress. In regards to the finance sector, therefore one of the main supporters to this is 'Cooperatives'. Cooperatives are considered a main supporter of the economy due to playing a vital role in the development of local economies in regards to support of the development for small and medium enterprises (SME's). Human resources currently represents the main success factor to services provided by cooperatives. This is due to the fact that cooperatives are considered a service company that puts forward the quality of its human resources to attain long term company goals.

The development of cooperatives at this moment is supported by the development of SME's in Bali that have increased. The data provided by the Central Bureau of Statistics (Data Badan Pusat Statistik (BPS)) in the year of 2014 has shown that, 98 percent propotion of the indonesian society are in the scale of small and medium enterprises. That matter has indicated a very large portion, in which in the same year has shown that 97 percent of the total labour absorbed in the SME's sector that contributes to the total number of labour availability and contributions towards the Gross Domestic Product (GDP) achieving 54-57 percent. The magnitude of the proportion of labour absorption does not mean it does not encounter problems or challenges. Several aspects that are considered challenges are for examples access to funding, access to technology and information, access to markets, the level of professionalism amongst human resources, and appropriate organisational competence in undertaking managerial duties.

The advancement and health of a cooperative is determined by the level of performance of its employees, interpersonal relationships between employees, and the

managers roles in motivating employees effectively that can directly effect the welfare of cooperative members. As for the number of new cooperatives that are considered active and not active including the total number of members in the regency of Tabanan from the years 2011-2015 can be shown on Table 1 as follows:

Table 1 – The Development of Cooperatives in the Regency of Tabanan

Year	Active	Not Active	Total	Members (People)	Asset (Rupiah)	SHU (Rupiah)
2012	468	47	515	74.217	658.369.000.000	9.558.000.000
2013	478	53	531	78.044	708.044.000.000	12.460.000.000
2014	493	50	538	79.935	901.188.739.227	16.791.428.480
2015	506	43	549	83.766	1.233.724.994.985	21.976.033.111
2016	524	35	559	89.077	1.196.753.652.490	28.559.621.480

Source: Dinas Koperasi dan UMKM Kabupaten Tabanan, 2017.

As shown in Table 1 it can be viewed that there is a significant increase in the number of cooperatives in the Regency of Tabanan in regards the total number of cooperatives and assets of cooperatives that also include SHU( Sisa Hasil Usaha) or the remainder of the annual proceeds. Other than that, the Regency of Tabanan has also recieved an appreciation of the Paramadhana Madya of Cooperatives in the year of 2011 as a regency that is considered a driver of cooperatives. In the year 2014, the Regency of Tabanan also recieved the same appreciation from the Ministry of Cooperatives and Small, Medium Enterprises of the Republik of Indonesia.

In the year of 2016, in accordance with the regulations of the Ministry of Cooperatives and Small, Medium Enterprises of the Republic of Indonesia No.20/Per/M.KUKM/XI/2015 it is recorded that 75 cooperatives that are assessed from the District of Tabanan in which come from all sub-districts. The number of cooperatives assessed per sub-district for the year 2016 are as shown on Table 2 as follows:

Table 2 – The Number of Cooperatives Assessed Per Sub-District of the Year 2016

No	Sub-District	Number
1	Kediri	12
2	Tabanan	20
3	Penebel	12
4	Marga	10
5	Baturiti	4

No	Sub-District	Number
6	Kerambitan	5
7	Selemadeg	3
8	Selemadeg Barat	4
9	Selemadeg Timur	3
10	Pupuan	2

Source: Dinas Koperasi UMKM Kabupaten Tabanan, 2017.

As shown in Table 2 it is indicated that out of the 75 cooperatives assessed only 16 cooperatives are categorised as healthy, 57 cooperatives are categorised as reasonably healthy and 2 cooperatives categorised as unhealthy. According to the predicate and assessments that have been determined by the Dinas Koperasi (Cooperative Services) of the city of Tabanan district of the year 2016, stated that the achivement of all the cooperatives assessed is considered healthy but can not be separated from the realisation achieved in the annual budget of employees income for 2016 or the target in which has previously been determined.

The initial pre-research and through short duration interviews through observation and asking direct questions of 12 people who are employees of cooperatives during a rest period. From the 12 employees that were interviewed, there were 8 people who are cooperative employees that have stated an intention to change jobs or find other types of employment on the basis that there was an uneven workload given in comparison to work that was described in the job description, furthermore 6 people out of the 12 who are cooperative employees also stated that were encountering stress in which make it possible for employees to consider thinking or having the intention of changing employment. Other than that, there is still indication of overlapping between managers and employees in which the head of each

department does not receive any input or advice from lower level employees, due to fear of voicing their opinions or even ideas. The rest, in which include 4 employees still stated that support from every organisation they work for is still lacking, this lack of support from the organisation has caused the feeling of having an intention to change organisations or to other companies.

Symptoms causing employees to have thoughts of an intention to change companies in theory is categorized as the theory of *Turnover Intention*. This situation has become a very important issue in the working world specifically for employees, this is caused mainly by inequality and the relationship towards the organisation. Ahsan, et al, (2013) stated that turnover intention is a desire from an employee to change jobs from one company to another. Furthermore, Hopkins *et al*, (2010) stated that in order to reduce turnover intention for employees within an company can be undertaken through fostering good relationships between employees, supervisors and managers. The failure by companies in managing individuals can cause a tendency to create high turnover intention within a company.

Support and good relations with company management or manager or supervisors can help reduce the risk of turnover by employees (Kim dan Michàlle, 2014). Other researchers like Gouldner, (1960), in theory of social exchange stated that when a person initiates kindness to other people, the person giving the kindness is expecting the same treatment in the future. Based on that thought it is presumed that attitude and behavior of employees is dependent upon how they perceive equality in social interactions that occur within every organisation they work for.

Hopkins *et al*, (2010) stated that the goal that has been set may not be achieved due to problems and pressures that are received, in the end may cause employees to have an intention to change jobs to another company. This matter is caused by the workload and level of responsibility that the employees are given in which can cause increased work stress for employees. Shahzad *et al*, (2011) also stated a similar opinion put forward which indicates that stress has a positive correlation towards high turnover intentions in employees. Firth *et al*, (2004) research stated that the role of stress not only does it have a direct effect towards dissatisfaction of work, but also a significant variable to a large degree contribution towards turnover intention that occurs within organisations.

Yefei *et al*, (2015) research indicated that the Role of Stress that is categorized as severe can cause employees to suffer from feeling lethargic at work and in turn can cause the desire for employees to change or find a better job. Zulhartini (2010) mentioned that the role of stress can cause employees to have an intention to exit the company because of the not suitable work conditions given by new management and this can create stress that may not benefit the individual employee.

*Leader-member exchange* (LMX) is considered in the theory of social exchange (Kim dan Michàlle, 2014). Yimo Shen *et al*, (2014) argue that *leader-member exchange* is an improvement in quality of relationships between supervisors and employees, however in reality the relationship between the employees and supervisors is not always good in which can cause employees not to last within the company. Previous research indicates that *leader-member exchange* has a positive relationship to the employee behavior (Cherynyak-Hai dan Tziner, 2014). Gerstner and Day (1997) research validations indicated that high quality LMX can contribute to achieving results at work that are easier to attain, increased productivity, and a reduction in the intention of employees wanting to stop or quit their jobs.

Through observation and pre-research at the condition of Cooperatives in the District of Tabanan itself, it is indicated the need to undertake research on the role *Leader-member exchange* (LMX) as the mediator to influence the *Role of Stress* towards *Turnover Intention*. This research is undertaken within cooperatives, remembering that cooperatives play a vital role that is considered strategic in the economic development of communities.

Research undertaken by Desiana dan Soetjipto (2006), has found that the stressors role which consists of *role overload*, *role conflict*, dan *role ambiguity* are related to dissatisfaction and turnover intention for employees. In other words, the level of stress that is high can cause a high level of turnover intention. Other than that, the influence between the role of stress and turnover intention has not been fully explored especially the role of stress

as a mediator between the influence of *Leader-Member Exchange* towards *turnover intention*.

When a person does kindness for other people, in accordance to the theory of social exchange people that give kindness expect it in return in the future from the person that kindness is given (Gouldner, 1960). Attitude and behavior of employees depends upon how much they feel balance in the social exchange process within the work environment (Blau, 1964). Previous research has indicated that imperically the results of LMX is crucial (Kim dan Michàlle, 2014) when an individual employee feels the relationship is equal between their managers or supervisors, in turn employees will have job satisfaction for their work and can reduce the turnover intentions. However, continuous support depends on the relationship between the emotional connection, whilst *leader-member exchange* depends upon the quality of the interactive relationship (Shen *et al*, 2014).

Previous researches like Kim dan Michàlle (2014) put forward that when employees encounter stress within the work environment, employees will try to resolve or deal with stress by undertaking *turnover*. Hopkins *et al*, (2010) research stated that the work environment represents a main factor that contributes to initiating stress between employees. A different opinion that is put forward by Firth *et al*, (2004) has stated that the role of stress is not only effected by low job satisfaction towards work, but also a significant variable in which is that largest contributor towards turnover intention within organisations:

H1: Role of Stress significantly influences positively towards Turnover Intention;

H2: Role of Stress significantly influences negatively towards Leader-Member Exchange;

H3: Leader-Member Exchange significantly influences negatively towards Turnover Intention.

Kim dan Michàlle (2014) concluded that when an employee feels the relationship is equal in between them and their superiors or supervisors, employees will have more job satisfaction and reduce the consideration to undertake Turnover Intention. In line with other researchers like Gerstner dan Day (1997) validated that a higher quality from LMX will improve the results attainment easier, improved job satisfaction and reducing the consideration to stop or quit work.

The research that is put forward by Hopkins *et al*, (2010) in which stated that the work environment and the role of stress represent the main factors towards the creation of stress between employees and ultimately resulting in turnover intentions. The same opinion was also stated by Firth *et al*, (2004) in which stated the role of stress does not only contribute to reducing job satisfaction towards work, but also a large contributor variable towards turnover intention within organisations. Other opinions that have been stated Desiana dan Soetjipto (2006), found that the role of stress that consists of *role ambiguity*, *role conflict*, and *role overload* significantly effect the influence of turnover intention for employees. Therefore, the hypothesis that are submitted are as follows:

H4: Leader-Member Exchange (LMX) as a mediator for the Role of Stress influencing Turnover intention.

## METHODS OF RESEARCH

This research will utilize Quantitative Design (Positivism) that is a research approach that works with numbers where the data is created from data in form of tangible numbers. Quantitative approach uses statistics to answer and or test the hypothesis of this research that is specific in nature and can help predict that several variables. The quantitative approach uses statistics to answer questions or to test the hypothesis of this research that its nature is specific and to predict the relationship several variables effecting other variables. Testing the hypothesis is related to the relationship of the *role of stress* ( $X_1$ ) towards *Turnover Intention* (Y) with the mediation from *Leader-Member Exchange* (M). This research utilizes quantitative method and associative forms.

This research is undertaken at cooperatives throughout the district of Tabanan. The consideration to select this location is because of the large number of employees that have a

high intention to change companies on the merit of work loads that are given not in accordance with the given job description, and another aspect is that the level of growth for cooperatives in the district of Tabanan from in terms of productivity and assets are relatively high, thus its predicate has achieved by the district of Tabanan as the main activist of cooperatives in the year 2014.

The dependent variable in this research is *Turnover Intention*. The term *Turnover Intention* can be defined as the desire of employees to exit from a company, with the reason to find another employment that is better than the previous employment. Other than the dependent variable, this research also utilizes the dependent variable of the *Role of Stress* in which is defined as the sources of stress that are related towards hope above behaviour of employees that are positioned within the company. The other variables that are utilized in this research is the mediation variable that is *Leader-Member Exchange* in which is defined as the process of exchange that occurs between superiors and subordinates within an organisational setting.

The data that has been gathered for this research is categorised as quantitative data and qualitative data in the form of research questionnaire, that is from the total number of cooperatives in the district of Tabanan. For the sources of data, the primary data that is utilized is from interviews, identity and answers from the respondents towards every single statement within the questionnaire. The secondary data source for this research is from literature reviews, leading journals and internet websites to search for more information that is related to the problems that are discussed within this research.

The population within this research is cooperatives in the district of Tabanan that in total 75 units. The method of obtaining samples for this research uses *Probability Sampling* technique whilst incorporating the method of *Simple Random Sampling*. Samples within this research are employees of cooperatives that are assessed and given the status for cooperatives as healthy, quite healthy and unwell for the year 2016 from the Cooperative Services and UKMK district of Tabanan.

The method of gathering data that will be utilized are interviews and questionnaires. Interviews are utilized as a technique to gather data, in order to analyze the problem that is to be researched, and also for the researchers to fully understand the root problems related to the actual conditions of the population. The technique to gather data for applying within the questionnaires is the technique that uses questions or written questions to the respondents to answer based of the perception of the respondents themselves. The scale of the measurement that is applied within this research is the Likert Scale from a range of 1 (one) to 5 (five), where every answer is connected through a statement or supported by attitudes that are conveyed through words. Score 1 (one) on the likert scale indicates 'Strongly Disagree' (STS) and a score of 5 (five) for 'Strongly Agree' (SS)

The analysis models that are applied to complete the problems found in this research are *The Descriptive Analysis* and *The Path Analysis*. The problems that have to be answered are the direct influence *The Role of Stress* dan *Leader-Member Exchange* towards *Turnover Intention*, and the roles of mediation from *Leader-Member Exchange* on the relationships of the *Role of Stress* towards *Turnover Intention*. This research utilizes *Structural Equation Modeling* (SEM) with the approach of the *variance based* or *component based* with *Partial Least Square* (PLS).

An instrument is said to be valid if the correlation coefficient between questions is  $> 0.30$ , and is considered reliable when the value of the Cronbach's Alpha is  $\geq 0,60$ . Overall, the validity of the tests have indicated that all variables have a correlated coefficient value with a total score larger than that of 0,30. This situation indicates that the statements in this research instrument is considered valid. Other than that, the reliability test conditions for this research have been fulfilled, through the value of the Cronbach's Alpha  $\geq 0,60$ .

At the initial analysis stage, that is at the descriptive analysis, has indicated that the analysis can be divided into two (2) groups, which are indicators that are above the average variables and indicators that below the average variables. For the variable of the Role of Stress the average variable is as big as 2,57, there is one indicator variable that is below the average of the Role of Stress and that is 'Role Overload' as big as 2,43 it is presumed that

cooperatives that have resources (capital, goods and information) that is considered high in comparison to the the work responsibilities that are given to employees within the cooperatives.

To continue, there are two variable indicators that are above average which are the indicator for "Role Conflict" ( $X_2$ ) as big as 2,66 and the indicator of "Role Ambiguity" ( $X_3$ ) as big as 2,63. This matter can be perceived that employees within cooperatives in the district of Tabanan feel a high degree of responsibility that is given to them in comparison to their abilities, therefore quite often employees at cooperatives in the district of Tabanan receive assignments outside the level of their responsibility that is given.

The variable *Leader-Member Exchange* overall has an average of 3,48 in which indicates that *Leader-Member Exchange* that is felt by employees at cooperatives in the district of Tabanan are included in the criteria of good. The indicator that has become a trigger for the total average becoming good is at the indicator of "Contribution" ( $M_4$ ) where this indicator has an average value as big as 3,83 in which indicates that contribution in achieving goals is considered good. However, there are three (3) indicator variables that have a below than average overall in which needs attention by the cooperatives which are the indicator of "Professional Respect" ( $M_3$ ) as big as 3,25; the next indicator is "Affection" ( $M_2$ ) as big as 3,36 ; and the indicator of "Loyalty" ( $M_1$ ) as big as 3,46.

The indicator for "*Professional Respect*" is measured from how close the relationship between the superior and the subordinate from a professional viewpoint, in which has an average value which considered the lowest in comparison to the other questions as big as 3,25. This means that the interactive relationship between lower level employees and superiors in the context of professional work is still not enough for the employees working within cooperatives in the district of Tabanan. Two (2) other indicators that are also below the average variable is "Affection" ( $M_2$ ) dan "Loyalty" ( $M_1$ ), can be perceived that concern given by superiors towards work being undertaken by employees at cooperatives is considered good enough, thus the defense that is given by superiors towards work that is given to employees working within cooperatives is also good enough.

The descriptive answer results by respondents for the variable of *Turnover Intention* of employees at cooperatives in the district of Tabanan are considered relatively high as big as 2,90. The result achievement is relatively high which is contributed by one indicator that is above average variable which is employees that want to leave the company if given a chance ( $Y_5$ ) as big as 3,87. This situation can be perceived that employees within cooperatives in the district of Tabanan will leave the company they are currently working at if the opportunity presents itself to find better employment elsewhere.

*Turnover Intention* for employees that is relatively high within the cooperatives in the district of Tabanan is formed by four (4) indicators that are below the average variables, which are trend of 'employees thinking of leaving the organisation' ( $Y_1$ ) as big as 2,48 in which can be perceived that there is a low number of employees in cooperatives within the district of Tabanan that are thinking of leaving the company, the next variable is the 'possibility of employees to find new work at other organisations' ( $Y_2$ ) is as big as 2,59, which means there is a low number of employees seeking new work at other organisations in the cooperatives at the district of Tabanan; the third variable is 'employees that would like to leave their job in the near future' ( $Y_4$ ) as big as 2,75, this indicates a relatively high possibility of employees in within cooperatives in the district of Tabanan that would like to leave their company in the near future; the last variable is 'the possibility of employees to leave the company' ( $Y_3$ ) as big as 2,80, in which can be perceived that employees at cooperatives in the district of Tabanan will leave the company if there are offers from another company that may provide a higher wage.

At the second analysis stage which utilizes *Structural Equation Modeling* (SEM) with the approach of *variance based* or *component based* and with *Partial Least Square* (PLS) has obtained results in general that indicate the data of this research has met all valid standards in the outer model. The results are as follows:

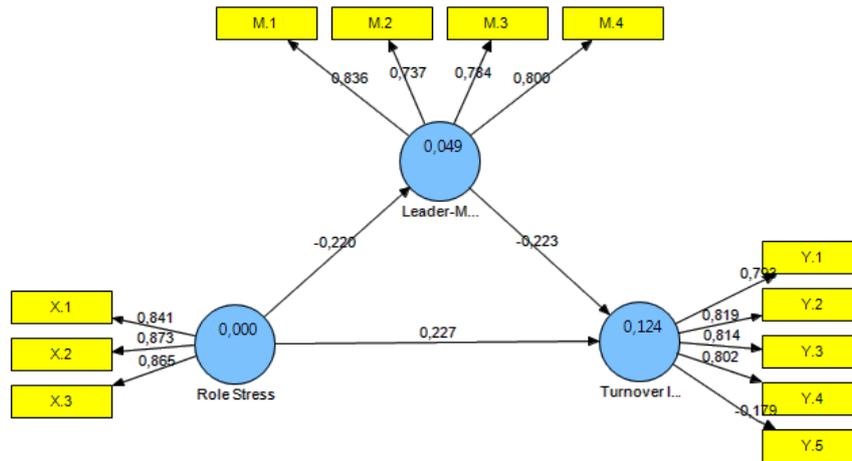


Figure 1 – Outer Model (Source: Processed Data, 2017)

The reliability composite value for the three (3) variables that make up the model of research has also indicated a result above 0,70. However, one variable which is ‘Turnover Intention’ has a value of 0,797223. This result indicates that each variable has fulfilled the composite reliability, thus can be concluded that all variables have a level of internal consistency that is high.

Table 3 – Test Result Composite Reliability

Variable	Composite Reliability
Role Stress (X)	0,868832
Leader-Member Exchange (M)	0,894804
Turnover Intention (Y)	0,797223

Source: processed data (2017).

The result from the *convergent validity* also indicate that the average in each indicator variable of this research has a value loading factor of more than 0,5. However, there is still one (1) indicator that has a value loading factor less than < 0,5 which is indicator Y<sub>5</sub> in which only has a value of -0,179. Therefore, it is assumed that the majority of the measurement indicators have fulfilled all the requirements of the convergence validity except indicator Y<sub>5</sub>.

Table 4 – Test Results of Convergen Validity

Variable	Original sample estimate	Mean of subsamples	Standard deviation	T-Statistic
<i>Role Stress (X)</i>				
X <sub>1</sub>	0,841	0,839	0,048	17,469
X <sub>2</sub>	0,873	0,869	0,037	23,485
X <sub>3</sub>	0,865	0,860	0,048	17,920
<i>Leader-Member Exchange (M)</i>				
M <sub>1</sub>	0,836	0,819	0,141	5,944
M <sub>2</sub>	0,737	0,727	0,104	7,113
M <sub>3</sub>	0,784	0,766	0,109	7,169
M <sub>4</sub>	0,800	0,778	0,140	5,710
<i>Turnover Intention (Y)</i>				
Y <sub>1</sub>	0,793	0,777	0,076	10,390
Y <sub>2</sub>	0,819	0,798	0,073	11,142
Y <sub>3</sub>	0,814	0,799	0,084	9,744
Y <sub>3</sub>	0,802	0,786	0,078	10,290
Y <sub>3</sub>	-0,179	-0,165	0,208	0,861

Source: Processed Data (2017).

Other than that, the calculation results of the AVE have also shown that all values of AVE for the variables within this research are above 0,5. It can be concluded that this measurement has met all requirements of discriminant validity and can be stated that every variable has achieved *discriminant validity*. As for the results of the *convergent validity* and discriminant validity can be seen in Tables 4 and 5.

Table 5 – Test Results of Discriminant Validity

Variable	Average Variance Extracted (AVE)
Role Stress (X)	0.623966
Leader-Member Exchange (M)	0.739317
Turnover Intention (Y)	0.527254

Source: Attachment (Processed Data, 2017).

Testing of the Goodness of Fit (GoF) model for the structure for the inner model utilizes the value of  $Q^2$  *predictive-relevance* ( $Q^2$ ). The value of  $Q^2$  *predictive-relevance* can be obtained through a formula as follows:

$$Q^2 = 1 - (1 - R_1^2)(1 - R_2^2) = 0,166523$$

The calculation results have shown that the value of *predictive-relevance* is as big as 0,166523 (> 0). This means that if at 16,65 percent from *turnover intention* (*dependent variabel*) variation can be described by the other variables that are applied within this model for this research, while the remainder of 83,35 % can be described by other variables outside this model of research.

## RESULTS AND DISCUSSION

The results of the empirical model of research utilizes a tool of analysis which is Partial Least Square (PLS) this produces results that can influence between variables as follows:

Table 6 – Test Results of the Research Hypothesis

n/n	Original sample estimate	Standard deviation	t - Statistic	Information
Role Stress → Turnover Intention	0.227	0.112	2,030	significant
Role Stress → Leader-Member Exchange	- 0,220	- 0,243	2,235	significant
Leader-Member Exchange → Turnover Intention	- 0,223	- 0,238	2,003	significant

Source: Processed Data (2017).

Testing the hypothesis variable for Role of Stress towards *turnover intention*, permitted the result indicate that *role of stress* has a significant positif affect towards *turnover intention*. The results from testing the hypothesis with the PLS approach has produced a direct influence path coefficient *role stress* towards *turnover intention* with a value of  $\beta$  as big as 0,227 and the t-statistics as big as 2,030. The value of the t-statistik as big as 2,030 is larger than that of 1,96 (t-critical value), has indicated that the influence *role of stress* towards *turnover intention* is significant. Therefore, the hypothesis has stated that the *Role Stress* has a positive significance towards *Turnover Intention* can be accepted. This matter indicates that the *Role Stress* has real influence in effecting *Turnover Intention* to employees at cooperatives in the district of Tabanan.

This result can be perceived that the higher the level of *Role of Stress* for employees in cooperatives in the district of Tabanan, it will result in the rise of the level of *Turnover Intention* that will occur, and vice versa. This is caused by the relatively high ambiguity of roles that is felt by employees of cooperatives in the district of Tabanan related towards the amount of workload given to employees at cooperatives that is outside their level of responsibilities. Besides that, there is also a conflict of roles that occurs within cooperatives

in the district of Tabanan related to the unequal balance between ability and responsibilities that the employees have at the cooperative within the district of Tabanan.

The test results of the hypothesis have been proven positive and significant this is due to the majority of respondents are aged between 26-30 years old, so that has to be clarified in detail related towards responsibilities given to work that is designated. This matter will have an effect towards how employees think in order to deal with Role of Stress in the work environment, other than that with the level of clarity of roles which is designated by superiors of course this will effect the desire of people wanting to move to another company.

This research will develop further from the research undertaken by Hopkins *et al.* (2010) in this research stated that working environments and role of stress is the main factors that significantly influences stress between employees and leading to *turnover intention*. The same opinion was also put forward by Firth *et al.* (2004) the research found that role of stress does not only affect job satisfaction, but represents a large contributing variable towards *turnover intention* within organisations. Another opinion from the research conducted by Desiana dan Soetjipto (2006), found that the stressor role is made up of *role ambiguity*, *role conflict*, and *role overload* in which significantly has influence on *turnover intention* for employees.

Testing the hypothesis variable of *Role Stress* towards the variable of *Leader-Member Exchange*, has obtained results that the *Role Stress* has a negative significance towards *Leader-Member Exchange*. The results from testing the hypothesis by using the PLS approach has produced the influence path coefficients influencing directly the *Role of Stress* towards *Leader-Member Exchange* with a value  $\beta$  as big as -0,220 and t-statistics as big as 2,235. The t-statistics value of 2,235 is larger than that of 1,96 (t-critical value), thus the statement of the hypothesis has stated that the *Role Stress* has a negative effect and significance towards *Leader-Member Exchange* in which can be accepted. This situation signifies that a significant increase in the *Role Stress* can lead to reducing *Leader-Member Exchange* of employees at cooperatives in the district of Tabanan, and vice versa.

This situation indicates that if the *Role Stress* of employees in cooperatives increases, it can cause a decrease in the *Leader-Member Exchange* at cooperatives in the district of Tabanan, and vice versa. The results from the description variable of this research also supports the hypothesis that states *Role of Stress* has a negative significance towards *Leader-Member Exchange*. The description variable of this research indicates that when there is a reduction from the indicator of affection and professional respect, there is a high probability it is caused by ambiguity roles and conflict roles that are encountered by employees in cooperatives in the district of Tabanan. This situation can lead to the reduction of the level of *Leader-Member Exchange*, in which *Leader-Member Exchange* represents a process of exchange that occurs between superiors and subordinates within an organisation. Other cause that significantly effects this situation is caused by the majority of employees within cooperatives in the district of Tabanan have a high school education level, in which effects the level of knowledge for employees in regards to dealing with levels of Role Stress that is encountered when undertaking the work loads been given.

The results of this research is to expand the research put forward by Ariani (2011) in which the research stated that high Role Stress has a tendency to reduce the relationship interaction between superiors and subordinates within a company. Other research also indicated similar outcomes, in which according to Cherynyak dan Tziner (2014) stated that *Role Stress* has a significant influence towards *Leader-Member Exchange*. Opinions that have been stated by Graen dan Uhl-Bien (1995) stated that *Leader-Member Exchange* is based on the reciprocal relationship between workers and the organisation, in which there is a tendency for reciprocating kindness to the organisation, this includes the effort put forward to reduce the level of Turnover Intention.

The testing of the hypothesis on the influence of *Leader-Member Exchange* towards *Turnover Intention*, has produced results indicating that *Leader-Member Exchange* has a negative significance towards *Turnover Intention*. The test results of the hypothesis utilizing the PLS approach has produced direct influence path coefficients that *Leader-Member Exchange* has towards *Turnover Intention* with a value  $\beta$  as big as -0,223 and t-statistics

2,003. The value of t-statistics is 2,003 in which is larger than that of 1,96 (t-critical value), therefore the influence of *Leader-Member Exchange* towards *Turnover Intention* is considered significant. From this, the hypothesis has showed that *Leader-Member Exchange* has a negative significance towards *Turnover Intention* is accepted. This situation is caused by the increase in *Leader-Member Exchange* that can reduce the *Turnover Intention* of employees in cooperatives in the district of Tabanan, and vice versa.

The results has shown the relationship significance as negative in which is caused by the Contribution indicator that has shown average an average value that is highest. This has contributed to the situation where superiors with employees trying in achieving the same goals, are able to reduce the *Turnover Intention* of employees for cooperatives in the district of Tabanan. Other than that there is another contribution is from the Loyalty indicator can be interpreted in regards to the defense superiors have to subordinates in regards to assignments and work which are given. The significant and negative influence is due to the majority of respondents have a working period cycle of 3-7 years with the average ages between 26-30 years old and with a highschool education level, there is also a need to provide guidance and cooperation with supervisors, in order to create synergy between subordinates and supervisors to reduce the level of *Turnover Intention*.

This research tries to expand the previous research undertaken by Kim dan Michàlle (2014) where the results concluded that when an employee has an equal relationship between employees and leaders or supervisors, employees will enjoy their work and in turn reduce the level of *Turnover Intention*. In line with other researches like Gerstner dan Day (1997) validated that the higher the quality from the *Leader-Member Exchange* will make achieving results that are required by the job much more easier, improved work productivity, and reducing the level of employees having an intention to stop work. Bauer et al, (2006) also stated that the relationship between *Turnover Intention* and *Leader-Member Exchange* within the research undertaken, found that members that have quality exchanges that are considered low will have a low relationship with their leaders, inturn they will have an intention to exit higher than that of higher quality *Leader-Member Exchange*.

From testing the hypothesis it has been proven that the *Role of Stress* has a negative influence and significance towards *Turnover Intention* through partial mediation of *Leader-Member Exchange*. *Role of Stress* is still able to influence *Turnover Intention* of employees at cooperatives in the district of Tabanan with or without the variable of *Leader-Member Exchange*. The results of the calculations for the mediating role using the method put forward by Hair *et al*, (2010) through four steps, which are:

- Influence of *Role of Stress* → *Turnover Intention* on using the *full model*: indicated positive as big as 0,227 and is significant;
- Influence of *Role of Stress* → *Turnover Intention* on using the *partial mode*): indicated positive as big as 0,317 and is significant;
- Influence of *Role of Stress* → *Leader-Member Exchange* on using the *full model*: indicated as negative as big as 0,220 and is significant;
- Influence of *Leader-Member Exchange* → *Turnover Intention* on using the *full model*: indicated as negative as big as 0,223 and is significant.

From this, it can be explained that by using the *full model*, the influence of *Role Stress* towards *Turnover Intention* (1) is positive and significant; the influence of *Role Stress* towards *Leader-Member Exchange* (3) and *Leader-Member Exchange* towards *Turnover Intention* (4) is negative and significant. Whilst, by using the *partial model* it can be seen the influence the *Role of Stress* has towards *Turnover Intention* (2) is positive and significant.

Direct influence that is given by the *Role of Stress* towards *Turnover Intention* using the *partial model* is positive and significant as big as 0,317. The value magnitude is relatively larger if compared to the direct influence that is given by the *Role of Stress* towards the *Turnover Intention* using the *full model*, which is as big as 0,227. From this, it can be concluded that *Leader-Member Exchange* act as a partial mediator in mediating the *Role of Stress* towards *Turnover Intention*. This means that the *Role of Stress* significantly can influence *Turnover Intention* directly or through mediation from *Leader-Member Exchange*.

The variable of *Leader-Member Exchange* does not need to be too forced in its existence if the managers of cooperatives in the district of Tabanan itself is unable to reduce the level of the *Role of Stress* that is being encountered by employees in cooperatives in the district of Tabanan and provide influence that is positive towards reducing the level of *Turnover Intention* of employees. The role of *Leader-Member Exchange* is needed in order to motivate managers at cooperatives in order to create reciprocal relationships between employees and the organisation, thus when employees feel the reciprocal relationship from the organisation, employees will have a tendency to reciprocate in kindness to the organisation itself. The continuity of *Leader-Member Exchange* that is good within cooperatives can cause continuous improvements in the foreseeable future. The results of this research is supported by several other results previously and consistently from research undertaken by Kim *et al*, (2014), Hopkins *et al*, (2010), Kim dan Stoner (2008), Bauer *et al*, (2006) in which indicated that *Leader-Member Exchange* mediates the influence of *Role of Stress* towards *Turnover Intention*.

## CONCLUSION

The results of this research has provided implications to leaders or supervisors of cooperatives throughout the district of Tabanan to put more attention in regards to the relationships between superiors and subordinates in order to reduce *Turnover Intention*. The cooperatives in the district of Tabanan are expected to reduce conflict of roles and ambiguity of roles that are encountered within cooperatives, in order to provide clarity in regards to work assignments and responsibilities that is given to every employee. This situation can be done through developing an accurate description of tasks in clarity and in writing regarding individual positions that are within the organisation

The respondents data has shown that the relationship that is considered professional between superiors and subordinates has the lowest score. This situation is caused by the large number of employees at cooperatives have a kinship relationship that is relatively strong within the leaders or supervisors of the cooperatives within the district of Tabanan. Therefore, the cooperatives is hoped to improve the levels of *professional respect*, affection and loyalty in order to reduce *Turnover Intention* in cooperatives within the district of Tabanan by undertaking a process of selection that is more selective rather than that of personal connections with the potential employees at cooperatives.

For future researchers it is expected to consider other factors that have a relationship with the *Role of stress*, the *Leader-Member Exchange*, and the *Turnover Intention* like for example job satisfaction or even loyalty, and conduct research in the type of industry that is different and also different sized of companies. Other than that, future researchers should do variations in the analysis technique of the data, moderation analysis technique or other analysis techniques, in order to enrich the references for future research.

## REFERENCES

1. Ahsan, M, Maidin, A, Sudirman, I, 2013. Pengaruh Kepuasan Kerja, Stress kerja, Variabel Organisasi dan Kepemimpinan Terhadap turnover Intention Karyawan Pada Rumah Sakit Pertamina Balikpapan. Tesis Jurusan Magister Manajemen Fakultas Ekonomi Universitas Hasanuddin.
2. Ariani, Wahyu D. 2011. Persepsi Terhadap Dukungan Organisasi dan Penyalah, Kepuasan, Nilai, dan Komitmen Pada Industri Perbankan di Indonesia. Jurnal Keuangan dan Perbankan, 15, pp: 416-427.
3. Bauer, T.N, Erdogan, B, Liden, R.C, Wayne, S.J, 2006. A longitudinal study of the moderating role of extraversion: leader-member exchange, performance, and turnover during new executive development. Journal of Applied Psychology 91, 298–310.
4. Berrin, Erdogan and Talya N Bauer. 2015. Leader–Member Exchange Theory. Portland State University, Portland, OR, USA.
5. Blau, P.M. 1964. Exchange & power in social life. New York, NY: John Wiley & Sons.

6. Boushey, H, & Glynn, S. J. 2012. There are significant business costs to replacing employees. diambil dari situs <https://www.americanprogress.org/wp-content/uploads/2012/11/CostofTurnover.pdf> diakses pada Tanggal 5, Bulan Februari, Tahun 2017
7. Cherynyak-hai, L, & Tziner, A. 2014. Relationship between counterproductive work behavior, Perceived justice and climate, occupational status, and leader-member exchange. *Journal of work and organizational psychology (JWOP)*, 30, pp: 1-12.
8. Desiana, P.M. dan Soetjipto, B.W. 2006. Pengaruh Role Stressor, Persepsi Dukungan Organisasi terhadap Kepuasan Kerja dan Komitmen, *Usahawan*, No. 05 Th. XXXV: pp: 22-32.
9. Detienne, K. B, Agle, B. R, Phillips, J. C, & Ingerson, M. C. 2012. The impact of moral stress compared to other stressors on employee fatigue, job satisfaction, and turnover: An empirical investigation. *Journal of Business Ethics*, 110, pp: 377-391.
10. Firth, L, Mellor, M, Moore, K, Loquet, C. 2004. How can managers reduce employee intention to quit? *Journal of Managerial Psychology* 19(2). pp: 170-187.
11. Foa, E. B, & Foa, U. G. 1974. *Societal structures of the mind*. Springfield, Ill: Charles C. Thomas.
12. Gerstner, C. R, & Day, D. V. (1997). Meta-analytic review of leader member exchange theory: correlates and construct issues. *Journal of Applied Psychology*. 82(6), pp: 827-844.
13. Goolsby, J.R, 1992. A theory of role stress in boundary spanning positions of marketing organizations. *J.Acad.Mark.Sci.* 20, pp: 155–164.
14. Gouldner, A. W. 1960. The norm of reciprocity: A preliminary statement. *American Sociological Review*, 25, pp: 161–178.
15. Graen, B George & Mary Uhl-Bien. 1995. Relationship-Based Approach To Leadership: Development Of Leader-Member Exchange Theory Of Leadership Over 25 Years. *Journal Leadership Quarterly* 6 (2), pp: 209-247.
16. Graen, G. B, & Cashman, J. F. 1975. A role-making model of leadership in formal organizations: A developmental approach. In J. G. Hunt & L. L. Larson (Eds.). *Leadership frontiers*. Kent, OH: Kent State University Press.
17. Graen, B George & Mary Uhl-Bien. 1995. Relationship-Based Approach To Leadership: Development Of Leader-Member Exchange Theory Of Leadership Over 25 Years. *Journal Leadership Quarterly* 6 (2), pp: 209-247.
18. Hair, J. F, W. C. Black, B. J. Bopin, and R. E. Anderson. 2010. *Multivariate Data Analysis A Global Perspective (Seventh Edition)*. New Jersey: Pearson Education Inc.
19. Handoko, T, & Hani. 2000. *Manajemen sumber daya manusia (2<sup>nd</sup> ed.)*. Yogyakarta: Badan Penerbit Fakultas Ekonomi.
20. Harnoto. 2002. *Manajemen Sumber Daya Manusia, Edisi kedua*, PT. Prehallindo, Jakarta.
21. Hasibuan, Malayu S.P. 2014. *Manajemen Sumber Daya Manusia*. Jakarta: Penerbit Bumi Aksara.
22. Hopkins, K.M, Cohen-Callow, A, Kim, H.J, & Hwang, J. (2010). Beyond intention to leave: Using multiple outcome measures for assessing turnover in child welfare. *Children and Youth Services Review*, 32, pp: 1380–1387.
23. Juniantara, Wayan. 2015. Pengaruh Motivasi dan Kepuasan Kerja Terhadap Kinerja Karyawan Koperasi di Denpasar. Tesis. Program Pascasarjana Universitas Udayana Denpasar.
24. Kahn, R.L, & Quinn, R.P. 1970. Role stress: A framework for analysis. In A. McLean (Ed.), *Mental health and work organizations* (pp: 50–115). Chicago, IL: Rand McNally.
25. Kim, Ahraemi & Michàlle E., Mor Barak. 2014. The mediating roles of leader–member exchange and perceived organizational support in the role stress–turnover intention relationship among child welfare workers: A longitudinal analysis. *Children and Youth Services Review*.
26. Kim, H, & Stoner, M. 2008. Burnout and turnover Intention among social workers: Effect of role stress, job autonomy, and soivial support. *Administration in social work*, 32, pp: 5-25.

27. Liden, R. C, & Graen, G. 1980. Generalizability of the vertical dyad linkage model of leadership. *Academy of Management*, 23, pp: 451–465.
28. Liden, R. C, & Maslyn, J. M. 1998. Multidimensionality of leader-member exchange: an empirical assessment through scale development. *Journal of Management*, 24, pp: 43-72.
29. Lucas, S. (2012). How much does it cost companies to lose employees. *MoneyWatch*. Diambil dari: <http://www.cbsnews.com/news/how-muchdoes-it-cost-companies-to-lose-employees/> diambil tanggal 21, bulan Juni, tahun 2015.
30. Lum, L, Kervin, J, Clark, K, Reid, F, and Sirola, W. 1998. Explaining nursing turnover intention: Job satisfaction, pay satisfaction, or organizational comirment. *Journal Of Organization Behaviour*, 19 (3), pp: 305-320
31. Peraturan Menteri Koperasi Dan Usaha Kecil dan Menengah Republik Indonesia Nomor 15/Per/M.KUKM/IX/2015 tentang Usaha Simpan Pinjam Oleh Koperasi
32. Preacher, K. J, dan A. F. Hayes. 2004. SPSS and SAS Procedurer for Estimating Indirect Effects in Simple Mediation Models. *Behavior Research Methods, Instruments & Computers*, Vol 36, No 4.
33. Robbins, Stephen P. dan Timothy A. Judge. 2008. *Perilaku Organisasi (Organizational Behavior)*. Jilid 1, edisi 12. Jakarta: Penerbit Salemba Empat.
34. Shahzad, Khurram, Hayat, Khansa, Abbas, Muhammad, Bashir, Sajid, ur-Rehman, Kashif. 2011. Interdisciplinary. *Journal of Contemporary Research In Business*, pp: 108-120.
35. Shen, Yimo, Jackson, Todd, Ding, C, Yuan, D, Zhao, L, Dou, Y, Zhang, Q. 2014. Linking perceived organizational support with employee work outcomes in a Chinese context: Organizational identification as a mediator. *European Management Journal*. pp: 406–412.
36. Sugiyono, 2014. *Metodologi Penelitian Bisnis*. Bandung: Alfabeta.
37. Widodo, R. 2010. Analisis Pengaruh Keamanan Kerja dan Komitmen Organisasional terhadap Turnover intention serta dampaknya pada kinerja karyawan outsourcing (Studi pada PT PLN APJ persero Jogjakarta). Tesis program studi magister manajemen UNDIP.
38. Witasari, L. 2009. Analisis pengaruh kepuasan kerja dan komitmen organisasional terhadap intention to quit. Unpublished Master Tesis, Universitas Diponegoro, Semarang.
39. Yefei, Yang, Peter K.C.Lee, and Cheng, T.C.E.. 2015. Operational improvement competence and service recovery performance: The moderating effects of role stress and job resources. *Journal Production Economics*, 164, pp: 134–145.
40. Yukl, Gary. 2004. *Leadership in Organizations (6th ed.)*. New Jersey: Prentice Hall.
41. Zulhartini, Sri. 2010. Pengaruh Pemutusan Hubungan Kerja Terhadap Karyawan Perusahaan. *Jurnal Pendidikan Sosiologi dan Humaniora*, 1(1), pp: 77-89.

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## **REVEALING THE ACCOUNTABILITY TRANSFORMATION OF COMMUNAL BASED MICROFINANCE INSTITUTIONS IN INDONESIA**

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### **ABSTRACT**

This research is aimed at revealing accountability practices at the oldest Communal Based Microfinance Institution in Indonesia, Lumbung Pitih Nagari. Lumbung Pitih Nagari is a traditional microfinance institution owned by the nagari community (traditional village) and transformed into a formal financial institution (rural credit banks and cooperatives). This research was carried out during 2017-2018 on several research sites spread across three districts / cities in Indonesia's West Sumatra province. Data collection is done by in-depth interviews, observation and documentation. Research informants were determined in advance for several key informants and the rest followed the snowball sampling pattern. Data analysis was carried out following 12 stages of sequential development methods introduced by Spradley in Realist ethnographic research. This study found a change in direction and form of accountability from the social base to rule base on the Lumbung pitih nagari which turned into rural credit bank. While the Lumbung pitih nagari turned into cooperatives, there was also a change in direction and form of accountability, although it was not significant, as happened in the Lumbung Pitih Nagari which turned into a rural credit bank. In the final section, this study found changes in the Lumbung Pitih Nagari to become a rural credit bank or cooperatives make the Lumbung Pitih Nagari uprooted from its roots as a communal nagari-based microfinance institution that should contribute to the development of economic, social, religious and cultural aspects of the Nagari community

### **KEY WORDS**

Accountability, microfinance institutions, communal, ethnography, Lumbung Pitih Nagari.

The Province of West Sumatra Indonesia has a communal-based microfinance institution (MFi) that has been established long time ago. This microfinance institution is known as Lumbung Pitih Nagari (LPN). Base on Seibel (2001) and Chavez and Vega (1996) Lumbung Pitih Nagari was first established in the 1930s with the name Lumbung Padi Nagari (Communal rice store)(Fitri, 2006). This informal financial institution then developed into a semi formal financial institution owned by the nagari (traditional village) community after Indonesian independence in 1945 and reached its heyday in the 1980-1990 period. In its heyday, LPN was able to activate all aspects of the life of the Nagari society not only in economic aspects but also in social, cultural and religious aspects. LPN contributes in many ways besides providing credit for the Nagari community, but its also involved in the construction of the Nagari road, traditional Nagari events, mosque construction and others. (Holloh, 2001: Sila, 2010: Seibel & Parhusip, 1998). Research conducted by Chavez and Vega (1996) even found Lumbung Pitih Nagari was one of eight models of rural microfinance institutions that were successful in Indonesia in the 1990s.

The success story of the LPN did not last long, starting from the issuance of government policies through the decision of the finance minister No. 1064 / KMK.00 / 1988 in October 1988 known as Pakto 88, then accompanied by the issuance of Law No. 7 of 1992 and Law No. 10 in 1998 which stated that the existing LPN had to change its legal entity to

become a rural credit bank/Bank Perkreditan Rakyat (BPR) or cooperative. If this is not done, the existing LPN is no longer allowed to raise funds from the community. The Pakto 88 policy and this law were initially welcomed enthusiastically by the existing LPN managers, as evidenced by their willingness to change their LPN legal entity into a BPR. A year after the policy came out at least 27 LPNs that had changed legal entities to become BPRs (Sila, 2010: Oman,1995).

At the beginning of the change to BPR there was no significant change in the governance of the LPN, especially in accountability forms. In the early days of the change, the LPN managers who had turned into BPRs still agreed to provide revenue sharing of 20 percent of the profits to the nagari as well as before they changed to BPR as a form of accountability to the nagari. Many social, religious and community activities that have led to public costs are still supported wholeheartedly by BPR managers. Time goes along with the entry of new investors as a consequence of the need for additional capital required by the Financial Service Authority (OJK), the costs of which are public costs begin to be reduced. The manager's direction of accountability has also slowly changed from the previous one fully to the Nagari community through the provision of profit sharing of 20 percent of LPN profits and support for various activities and development of the Nagari, slowly shifting towards shareholders and policy makers. This form of accountability also slowly changed to adjust to the rules issued by OJK at that time.

Based on various definitions of accountability, in essence accountability is often indicated by the direction and form of accountability provided (Gray et al, 1996: Ihsan, 2003: Ebrahim, 2003). According to Dixon et al (2006) the typology of accountability in microfinance institutions can be divided into four types which are divided into vertical accountability and horizontal accountability with reference to the relationship pattern developed.

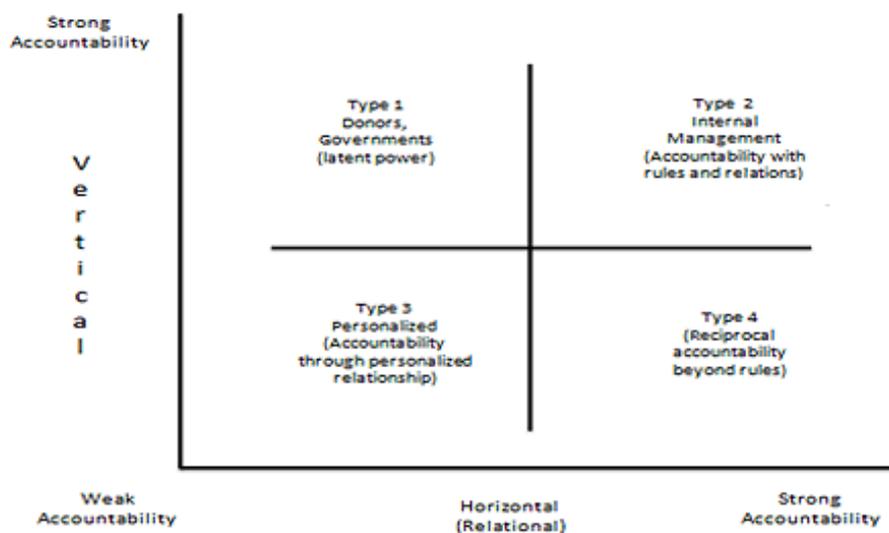


Figure 1 – Dixon's Accountability Framework

Type 1 accountability is upward-oriented vertical accountability, namely to donors and government. The relationship pattern developed by this type of microfinance institution is strong vertical relations to capital providers and the government. The main orientation is to meet the demands of donors and the government vertically such as preparing reports and meeting the rules requested by donors or government. This type considers MFIs to be more accountable when they are able to meet demands from above "Externally driven". This type has a pattern of weak relationships horizontally for example with the community or clients. Type 2 accountability is accountability that tries to combine a strong pattern of relationships vertically by preparing accountability reports as desired by the boss, the government and funders / financiers on the one hand while on the other hand they try to build stronger

communication with clients in the community horizontally. Type 2 accountability is also called internal management accountability.

Accountability type 3 and type 4 should be the accountability needed by MFIs because, as revealed by Karim (1996), MFIs are basically designed to prioritize "relational accountability" rather than "rule base accountability". Accountability type 3 is accountability that is more concerned with relationships that strong with the community that was built personally by the loan officer (in the CETZAM case) discussed by Dixon et al. This type of accountability does not emphasize relations with donors or the government. While type 4 accountability is accountability that is in line with type 3 where vertical relations to donors and the government are not considered important but horizontal relations with clients are considered very important. Type 4 accountability requires a strong reciprocal relationship with the client beyond compliance with the rules.

Departing from the above problems, this research is intended to understand and to interpret the direction and form of accountability of the LPN that has changed its legal entity to BPR or cooperative at this time. This study tries to uncover the practice of accountability in the two types of microfinance institutions that were once communal-based microfinance institutions owned by the Nagari society.

## **METHODS OF RESEARCH**

This study uses the interpretive paradigm because it aims to understand and interpret the practice of accountability in communal MFIs that have changed to BPR or cooperatives. The research method used is the method of realist ethnography (Creswell, 2013). Data collection was carried out through in-depth interviews, documentation and observations at four research sites spread across three districts / cities in West Sumatra, namely BPR LPN Pagaruyung, BPR Balerong Bunta, BPR Padang Magek and Pulau Mainan Cooperative. The informants interviewed were key informants who underwent a process of changing LPN accountability from social base to rule base. The selected informants came from the four research sites using the snowball sampling method. Data analysis was carried out using domain analysis, taxonomic analysis, componential analysis and others contained in twelve steps of the Spradley developmental research sequence methods (Spradley, 2006).

## **RESULTS AND DISCUSSION**

*Reality of Accountability in LPNs that Change to BPR.* Referring to the initial purpose of establishing the Lumbung Pitih Nagari as stipulated in the regional regulation (Perda) No. 1 of 1982 it was stated that the LPN was established with the following objectives: a) encourage economic development of rural / urban / nagari people through directed savings and effective capital distribution b) Establish and collect capital for development in the village / nagari c) Realize a business of a social functioning savings and loan agency using Pancasila-based economic principles d) Create equity in business opportunities for residents and workers in rural or urban villages.

To make this purpose happen, LPN distributes capital loans for the Nagari community for economic empowerment and poverty alleviation and encourages various development activities oriented to the progress of the village. This means that in this condition the direction and form of accountability carried out by the LPN is correct in accordance with the initial purpose of establishing the LPN. The nagari community can feel the accountability given by the LPN to the nagari in the form of various development programs and activities such as the construction of village roads, the construction of mosques and worship facilities, the construction of ballrooms (traditional meeting places) and others. The community considers the accountability of the LPN to have been realized well through contributions to the Nagari development fund of twenty percent (20%) of the portion of profits earned by LPN each year. With this condition the LPN manager feels that the full accountability that must be realized by the LPN manager is only for the nagari community, so that the identification of the main stakeholder needs only related to the needs of the nagari community.

Today the conditions are different, refers to current practices of LPN that have changed to BPR, the direction and form of accountability that has been done has changed considerably. At present BPR are preoccupied with OJK provisions and regulations that they must fulfill as a consequence of being BPR. The orientation of the LPN manager is no longer the identification of the social base needs, but rather the fulfillment of the top down regulations issued by the Financial Services Authority (rule based). This can be captured from the excerpt interviews of BPR Pagaruyung Manager (Mr Dedet) and BPR Balerong Bunta Manager (Mr. Ekky) below:

"Especially now, OJK rules now, if capital (BPR) does not reach 3 billion in 2019 or 6 billion in 2024, then this BPR will be closed, or merged or turned into a cooperative" (excerpt interview with Mr Ekky).

"No more coaching is available, OJK is strict with its rules, for example like a mobile phone worth 1 million, of which 1 million is problematic, 1 million also loses BPR, if it used to be able to adjust. Now the rules for BPR are the same as commercial banks while the motion of commercial banks is limited. In a public bank there may be a lot of funds. Local governments can also enter there" (Excerpt interview with Mr Eki).

"If the OJK (a form of accountability) other than financial statements, of course the payment per quarter they request, is usually requested 0.03% of the assets per quarter. If it's calculated a year ago, we paid about 15 million (Excerpt interview with Mr Dedet).

"In the past when we didn't pay anything, we got coaching, now that we pay, the coaching is gone, all that is checking, investigating, closing. Paying us even the rules get worse ... hahaha" (excerpt of interview with Mr. Dedet).

From several excerpts from the interview above, it can be captured the current feeling of the BPR manager that reflects the changes in direction and form of accountability they are carrying out. Managers are preoccupied with fulfilling the latest regulations issued by the Financial Services Authority (OJK) such as changes in guarantee appraisal methods, the necessity of controlling shareholders, preparation of financial reports in accordance with Indonesian Financial Reporting Standard (SAK and SAK ETAP), and mandatory certification for commissioners and employees. The latest thing that has become a scourge for managers is the fulfillment of regulations related to capital adequacy of 3 billion in 2019 and 6 billion in 2024.

For BPR managers, the fulfillment of capital adequacy impacts on many things, especially in dividend distribution. This is because the rules for fulfilling the 3 billion capital are followed by other provisions that stipulate that before the adequacy of the 3 billion capital is met, dividends may not be shared. This raises a separate problem for the managers of BPR as revealed by the results of an interview with the director and chief commissioner of BPR Pagaruyung following:

"As a result of this dividend it cannot be distributed, many investors are retreating, in West Sumatra people want to buy shares to get dividends, later if they get dividends payment, they can buy something. In our MFi because we are not being able to distribute dividends, my controlling shareholder (BPR) resigned. Every time I submit a capital increase to the shareholders of their weapons, we are reluctant to add capital, because dividends cannot be shared" (Excerpt interview with Mr. Dedet).

"...the issue of this dividend, If it may be distributed, of course the public trust will be even greater, the more willing they are to become investors in this BPR. In the past, while still allowed (shared), people were fighting over who wanted to invest, but after OJK rules like this, they became weak (slow) to fulfill this capital adequacy" (Excerpt interview with H Panji Commissioner BPR Pagaruyung).

This condition certainly creates a dilemma for managers and LPN owners who have changed to BPR. On the one hand, the manager is required to meet the capital adequacy of 3 billion rupiah in 2019 so that it can still operate as a BPR. To fulfill this obligation the most likely step taken by the managers is to increase capital from the shareholders, both the old shareholders and prospective new shareholders from outside. So far, to attract old shareholders to increase their share ownership or to attract prospective new shareholders to become shareholders in BPR is to promise attractive dividend distribution every year. For

BPR Pagaruyung for example, so far the average shareholders receive dividends of not less than 25 percent of the capital they invest each year, so that in 4 years the shareholders have returned their full capital.

At present the dividend distribution is prohibited by the OJK before the 3 billion capital adequacy is fulfilled in 2019 so that many LPN managers have difficulties in fulfilling the capital adequacy of 3 billion in 2019. From the informal conversation with the managers of PT BPR, it was revealed that perhaps not more than 30 percent of the current BPR in West Sumatra province would be able to meet the 3 billion capital adequacy if the policy (related to dividends) was not changed.

The above is only one example of the problems faced by LPN managers who have changed to BPR. Of course, it can be imagined as an entity that has rule-oriented accountability, so the management days will only be busy with fulfilling the provisions and regulations so that the BPR operational license is not revoked. In psychological conditions like this, it is certain that there will be no longer found a form of community-based accountability (social base) which is actually the most appropriate form of accountability in community-based microfinance institutions such as LPN. At present there is no longer a contribution of 20 percent for nagari development funds or 5 percent for social funds as applied when the LPN has not changed to BPR. Even if there is a provision of social funds, the nature is only incidental depending on the proposal that goes to PT BPR LPN.

"...for us now, if there are proposals activities from Nagari, we certainly distinguish (with other proposals) because Nagari is part of the owner. Only for the village development fund (which is 20%), we certainly cannot realize it, because there are no more rules, it is not allowed because we are already public. For example, if we do something like that in one village, other villages will also demand because now the shareholders are not (limited) only our nagari society again"(Excerpt interview with H Suhaili Director of BPR Padang Magek).

From the discussion above, it can be seen that the LPN that has changed to BPR has undergone a change in direction and form of accountability. If previously the accountability was aimed at the interests of the nagari community according to the focus of activities that will be carried out by the nagari, after becoming BPR, the LPN accountability direction of the LPN manager changed in the interests of shareholders and compliance with regulations stipulated by financial authorities in Indonesia (OJK).

The accountability of who (from who) also changes, if before becoming BPR responsibility as a form of accountability is carried out by the LPN management agreed upon by the members and decided by the Kerapatan Adat Nagari (KAN) then after becoming BPR responsibility is carried out by the BPR Commissioners and Directors appointed by shareholders through a general meeting of shareholders (GMS) held annually.

The form of accountability (information form) and the type of information (information needed) provided also changes along with the change in LPN to BPR. When it is in the form of LPN, the form of accountability is in the form of financial reports that are often not standardized with the type of information needed is information about development programs and economic empowerment and poverty alleviation programs that have been implemented for the Nagari community. After being a BPR information needed for accountability refer to circular of financial services authority (SEOJK) number 39 / SEOJK.032017 consisting of annual reports and publication reports.

Annual report contains a) general information covering management structure, ownership, BPR business development, management strategies and policies and management reports b) Annual financial statements for 1 (one) financial year consisting of balance sheets, income statement of the relevant financial year, report on changes in equity, cash flow statements and notes to financial statements c) Opinions from public accountants if the Annual Financial Report is audited by public accountants d) Disclosure of other information such as summaries of accounting policies, explanations of financial statement items, commitments and contingencies, developments the last is the financial accounting standard that applies to BPR, reclassification, the nature and impact of events and events after the balance sheet date and e) Management letter of the financial statement audit. While publication reports are BPR financial statements at the end of March, June, September and

End of December which are a combination of the financial statements of the BPR head office and all of its branches.

*Reality of Accountability on LPNs that Change to Cooperatives.* Somewhat different from the LPN who changed its legal entity to BPR, the LPN that turned into a cooperative did not experience a change in direction and a form of significant accountability. From interviews that researchers have done with Mr. Ratno Sukoco the founder and manager of the cooperative LPN Pulau Mainan in Dhamasraya Regency, West Sumatra, it was revealed that before turning into a cooperative in Dhamasraya Regency itself there were 8 (eight) LPNs that survived as communal-based MFIs. Of the 8, 3 have been changed to LPN Cooperatives, namely Pulau Mainan Cooperatives, Padang Bintungan Cooperative and Multi Usaha Sungai Rumbai Cooperative.

During the observations and interviews it was also revealed that in fact the image of the community towards the cooperative was not as good as the LPN, especially in Dhamasraya Regency because from several previous cases it was found that cooperatives were closed due to problems. Even if they can choose, the managers of the Pulau Mainan cooperative feel more comfortable in the form of LPN as before, as expressed by Mr. Ratno below:

"It is true, sir, if they could choose, they (the LPN cooperative managers) stated that they are still comfortable on the LPN, but because it is mandatory and at that time there is less guidance or protection. In 2014, we ourselves felt like that, sir, whose name holds a lot of money but the legality is not clear, sir" (Excerpt interview with Mr. Ratno).

From the interviews, it was also revealed that changes in the form and direction of accountability carried out by the managers of the LPN cooperative actually did not drastically change the direction and form of accountability carried out by the LPN managers who changed to PT BPR LPN.

"Actually, we didn't feel too much change (in accountability) just because we felt (needed) a legal umbrella yesterday that was fundamental" (Excerpt interview with Mr. Ratno).

This is caused by several things. 1) The LPN that turned into this cooperative without realizing it was actually in the form of cooperatives where capital originated from members through principal savings, mandatory savings and voluntary savings. 2) LPNs that turned into cooperatives on average were established LPN after the 2000s long after the heyday of LPN passed and was not strongly tied to the regional regulations on LPN that had been applied before (Perda No. 1 of 1982) so that the governance and forms of accountability carried out also did not refer to these regulations.

For example, in terms of contributions to the nagari, if referring to the regulations mentioned above, of course the LPN must give contribution twenty percent of development funds and five percent of social funds from the profits of LPN every year. While the LPN-LPN established after 2000 this obligation is no longer carried out strictly as revealed from the following interview with Mr. Ratno.

"That is the nature of social fund, stated in the Statutes and bylaws of 5%. Distribution is only based on the needs, on request. If we don't, we will make a allowance fund, sir, because all this time the village itself doesn't really care, so he also doesn't demand too much".

This condition is understandable because if in the 1970-1980 the establishment of the LPN was assisted by the provincial government in the form of capital grants / loans, while for LPN-LPN which was established after the 2000s the capital was purely from the founders who were also members of the LPN. Like the LPN Pulau Mainan at the time of establishment all of the capital Rp. 44,021,000 came from the founders of 35 people. There is no capital originating from government grants or equity participation from the Nagari.

It's mean that the direction (to whom) of the LPN before and after turning into a LPN cooperatives actually does not change drastically, only to the members of the cooperative, while the community is only in the form of social responsibility as stipulated in the Statutes and bylaws of each cooperative. In line with this, the party burdened with the responsibility to provide accountability (from who) also does not change drastically, it is still carried out by the

LPN management or the LPN cooperative chosen and determined at the Annual Member Meeting.

Things that change are only forms of accountability (type of accountability) and types of information provided in providing responsibility. If before becoming a cooperative form of accountability is manifested in the form of self-designed financial statements based on the needs of LPN without certain rules governing, after becoming an LPN cooperative the form of accountability and type of information refers to the Minister of Cooperatives and Small and Medium Enterprises Regulation Number 13 /Per/M.KUKM/IX/2015 concerning guidelines for Accounting for Savings and Loans by Cooperatives. In this regulation, the form of accountability of savings and loan cooperatives is regulated through financial statements of savings and loans cooperatives which consist of 1) Balance Sheet, 2) Report on calculation of business results, 3) Reports on changes in equity, 4) Cash flow reports and 5) Notes to financial statements.

Here it can be concluded that there was no significant change from the direction and form of LPN accountability before or after changing into LPN cooperatives not because of the conformity between LPN and LPN cooperatives, but because the LPN-LPN established after the 2000s had indeed shifted from the initial form of LPN as stipulated in Perda No. 1 of 1982.

This mismatch has begun from the different objectives of establishing the LPN. If referring to Perda No. 1 of 1982 expressly stated the purpose of establishing the LPN is to encourage economic development of the village/nagari and create a business of a savings and loan agency that has social functions and is not limited to economic functions. While the LPN which was established after the 2000s and later turned into a cooperative focused more on economic goals, namely to improve the welfare of members who met in LPN cooperatives without explicitly including other social functions carried out as revealed by Mr. Ratno below:

"The purpose of establishing LPN for those of us who were 35 people initially was only to improve the economy of members, from the beginning the form of this LPN was cooperative form, there were basic savings, mandatory etc. We will set aside some of the results for the Nagari".

*Reflection of Result.* If using the accountability framework suggested by Dixon above, Type 1 accountability is accountability that is currently applied by the LPN that changes to BPR LPN and leaves its initial form as a community-based MFI. This is illustrated by the manager's current orientation, namely vertically trying to fulfill the rules issued by the government through the OJK and efforts to get the maximum profit to maximize the welfare of the shareholders.

Discussions among BPR managers during field observations were only related to the fulfillment of OJK obligations such as capital adequacy of 3 billion rupiah in 2019 and 6 billion rupiah in 2024, fulfillment of collateral aspects, efforts to meet financial disclosure and reporting standards and others. No discussion at all was oriented towards fulfilling horizontal accountability to the community such as the construction of nagari, support for traditional activities in the nagari and activities that encourage the progress of the nagari. Even if there are funds or donations given to the community, they are more voluntary and incidental when there are proposals for community activities.

This is certainly very different from the LPN before it experienced changes in objectives and mission. In the past LPN had the main goal of encouraging the development of the nagari, helping social activities, religion and culture of the community so that the nagari community felt they had an LPN. Now the conditions are different, whether or not BPR in one nagari makes any difference to them. This is further emphasized by the loss of LPN profit sharing contributions of twenty percent of profits for the nagari which were previously always given.

In addition, there is also a change in the managerial paradigm where after changing to BPR, helping social activities, religion and cultural customs in the nagari where LPN is located is no longer considered an obligation of the LPN. LPN managers maintain vertical relations with shareholders and the government in this case more than maintaining horizontal relations with the Nagari community where the LPN operates.

For LPNs that turn into cooperatives, accountability type 4 may be closer to their current conditions where mutual relations between cooperative managers and clients in this case cooperative members are strongly interwoven. Cooperative managers feel horizontally responsible for meeting members' needs through providing loans with low interest rates and the process is not difficult. In LPN cooperatives loans can also be "customized" according to the needs of members, although for these conditions it is often discussed first in the annual member meeting.

A strong horizontal relation between the cooperative managers and members of the LPN cooperative is the key to the success of the LPN cooperative's accountability. For LPN cooperative managers the relationship vertically to fulfill the wishes of capital owners is not too important because the owners of capital are themselves, while vertical relations to the government are not too urgent because so far the cooperative service is more coaching and does not provide pressure like the OJK culminating in sanctions if not followed.

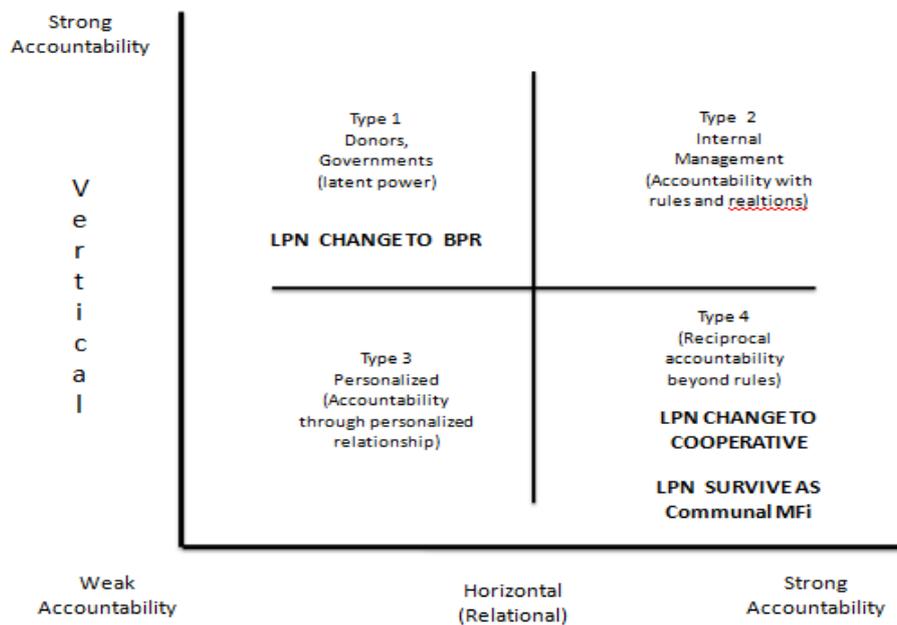


Figure 2 – Accountability of LPN in the Dixon Framework

Similar to the LPN which turned into a cooperative, on LPNs that still survive as communal-based MFIs, Type 4 of accountability more appropriate to describe their current conditions. Now LPNs that still survive as communal-based MFIs such as LPN Limau Manis do not feel they have a vertical accountability relationship to both the fund owners and the government in this case the OJK as the authority holder. The OJK staff themselves when asked by researchers about the status of LPN still survive as communal based MFi in West Sumatra stated that the LPN was beyond their supervision. This is reinforced by the existence of Law No. 1 of 2013 concerning microfinance institutions which states that LPN, LPD and other similar institutions that have existed before this Act was issued have the right to self-management without having to be bound by government regulations. LPN managers also feel that they are not required to provide annual reports and other reports that are needed just like other microfinance institutions.

While horizontally to the community they feel they must have strong relational relationships. Their main responsibility is to the community through the programs they roll out for the interests of the nagari. Somewhat different from Dixon et al's proposed accountability framework for the case of the MFIs they studied (CETZAM) where accountability was built through "personalized relationships" with clients, then on communal-based LPN the pattern of relations with the community must be built through reciprocal programs explained and directed according to the needs of the nagari, so that the pattern of horizontal relations shifts

to the right (strong), From this it can be concluded that the more appropriate form of accountability to describe the LPN that still survives in communal form is in type 4.

## CONCLUSION

Based on the discussion above, it can be concluded that there is evidence that shows a significant change in accountability on the LPN that turns into BPR from social base to rule based. If before changing to a BPR, the accountability of the LPN is directed horizontally to the Nagari community through nagari programs and the contribution of 20 percent of the profit for the development of the nagari but after changing to BPR the direction of accountability changes which are vertically addressed to shareholders and government official OJK.

The form of accountability also changes, if before becoming a BPR, LPN forms accountability in the form of nonstandard LPN financial statements (containing financial information with emphasis on programs for nagari), then after becoming a BPR forms accountability refers to SEOJK number 39 / SEOJK.032017 which consists of annual reports and publication reports. In addition, those who gave accountability also changed from the LPN management to the board of directors of the LPN through the general meeting of shareholders.

On LPN that changed into cooperative the direction of accountability did not undergo drastic changes. Before has a legal entities, the direction of LPN accountability was also directed at the members of the cooperative, not entirely to the Nagari community. This is because most LPNs that turn into LPN cooperatives are LPNs that were born after 2000 and have not felt tied to the regulation No. 1 of 1982 governing LPN. After becoming an cooperative and the entry of new members from outside (nagari) the direction of cooperative accountability was increasingly member oriented, which led to the loss of contributions to nagari.

Although there was no significant change in the direction of LPN cooperative accountability, the form of accountability experienced a significant change, if before becoming a cooperative LPN the form of accountability was almost the same as the other LPN, namely in the form of nonstandard financial reports prepared according to cooperative needs but after becoming LPN cooperatives the form of accountability refers to the Minister of Cooperatives and Small and Medium Enterprises Regulation of the Republic of Indonesia Number 13 / Per / M.KUKM / IX / 2015 concerning the Guidelines for Accounting for Savings and Loans by Cooperatives.

As a conclusion, in line with Sila (2010) study, the change in LPN to become a BPR or a cooperative made LPN be rooted from its roots as a communal-based microfinance institution whose direction and form of accountability should be aimed entirely at developing social, cultural and religious aspects of the community (social base) not intended for shareholders or policy makers (rule base)

## REFERENCES

1. Chavez Rodrigo A & Vega Claudio G. 1996: The Design of Succesfull rural Financial Intermediaries: Evidence from Indonesia: World Development, Vol 24, issue 1, [https://doi.org/10.1016/0305-750X\(95\)00114-R](https://doi.org/10.1016/0305-750X(95)00114-R).
2. Creswell, John W., 2013. Qualitative Inquiry & Research Design, Choosing Among Five Approach ,(California: Sage Publications, 2013).
3. Dixon, R., Ritchie, J. & Siwale, J., 2006. Microfinance: accountability from the grassroots. Available at: <http://dx.doi.org/10.1108/09513570610670352>.
4. Ebrahim, A., 2003. Accountability In Practice: Mechanisms for NGOs. World Development, Vol 31(5), pp.813–829.
5. Fitri, R., 2006. Informal Finance and Poverty Alleviation: A Grassroots Study of Small farmers' Credit In West Sumatera, Indonesia, Unpublished Disertation Massey University, New Zealand.

6. Gray, R., Owen, D., & Adams, C. (1996). *Accounting and accountability, changes and challenges in corporate social and environmental reporting*. Prentice Hall Europe.
7. Holloh, D., 2001. *ProFI Microfinance Institutions Study*. Denpasar.MoF BI GTZ-ProFi.
8. Ihsan Hidayatul, 2013. *Understanding Accountability in A Waqf Institution : The Case of Dompot Dhuafa*. International Islamic University Malaysia.
9. Karim, M. (1996), "NGOs in Bangladesh: issues of legitimacy and accountability", in Edwards, M. and Hulme, D. (Eds), *Beyond the Magic Bullet: NGO Performance and Accountability in the Post Cold War World*, Earthscan, London.
10. Oman, Endang. 1995, *Analisis Keragaan dan Faktor Berpengaruh Terhadap Pengembalian Kredit; Kasus Lumbung Pitih Nagari Sumatera Barat*, Skripsi Fakultas Pertanian Institut Pertanian Bogor.
11. Peraturan Daerah Gubernur Sumatera Barat No 1 tahun 1982 Tentang Lumbung Pitih Nagari.
12. Seibel, H.D., 2001. *Rural finance: Mainstreaming informal financial institutions*. *Journal Development. Entrepreneurship*. 6, 83.
13. Seibel, H.D., Parhusip, U., 1998. *Microfinance in Indonesia An Assessment of Microfinance Institutions Banking with the Poor*. *Economic. Sociologi. Occas. Paper*. 2365.
14. Sila, M.A., 2010. *Lembaga Keuangan Mikro dan Pengentasan Kemiskinan : Kasus*. *jurnal sosiologi Masyarakat*, 15(1), pp.1–19.
15. Spradley, James P. 2006. *Metode Etnografi*. Edisi kedua, Yogyakarta: Tiara Wacana Yogya.
16. Undang-Undang No 7 Tahun 1992 Tentang Perbankan, Dewan Perwakilan Rakyat Republik Indonesia.
17. Undang-Undang No 10 tahun 1998 Tentang Perubahan atas UU No 7 Tahun 1992 Tentang Perbankan, Dewan Perwakilan Rakyat Republik Indonesia.
18. Undang Undang No 1 Tahun 2013 Tentang Lembaga Keuangan Mikro. Dewan Perwakilan Rakyat Republik Indonesia.

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## **ANALYSIS OF SMALL-SCALE FISH HANDLING DEVELOPMENT IN REMBANG WATERS**

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### **ABSTRACT**

Fishing vessels in Rembang Regency, Indonesia, are mostly small-scale ones with a size of less than 10 GT. Small size fishing vessels use ice blocks as a chilling medium during fish handling in the sea. Handling the catch using ice blocks appears to be nonoptimal, so improvement in technology is needed. The aim of the study was to determine alternative fish handling suitable for small-scale fishing management in Rembang Regency. The research employed a descriptive method using the AHP (Analytical Hierarchy Process) analysis related to technological feasibility. The research results of AHP analysis reveal that the weight value of handling fish without using ice is 0.1098, using ice blocks is 0.2711, and using RSW (Refrigerated Sea Water) is 0.6192. Small-scale fish management in Rembang Regency prefers using RSW for handling the catch.

### **KEY WORDS**

Fishing, small-scale fish handling, Rembang waters, Indonesia.

Most of the fishermen's fishing vessels in Rembang Regency, Indonesia, are small-scale ones with a size of less than 10 GT. Small size fishing vessels usually use ice blocks as a chilling medium for handling fish in the sea. Improper use of ice blocks will cause spoilage to the catch. Spoiled fish can reduce fish selling since they will be undesirable to customers. Riyadi (2016) asserted that the research result of conventional fish catch handling by using ice blocks was not optimal; thus, there must be efforts made to improve fish handling through renewable technology.

RSW (Refrigerated Sea Water) chiller is a renewable technology to handle fish catch using refrigerated seawater as a chilling medium through a refrigeration machine. The RSW system has several advantages: (a) It can prolong fish freshness/it has longer storage time; (b) it prevents physical damage because fish are not piled up and pressed by other fish or ice blocks; (c) the temperature will drop rapidly because all fish are in contact with the coolant (rapid cooling process); (d) Fish handling procedures are easier and faster, both in loading/unloading so it saves time and labor; and (e) the quality of the catch is physically better (Riyadi, 2016). This study aims to determine alternative fish handling suitable for small-scale fishing management in Rembang Regency.

### **METHODS OF RESEARCH**

This research was conducted in Plawangan Village, Kragan District, Rembang Regency, regency in *Jawa Tengah* (Central Java) Province of Indonesia. The location is located at 111°00' - 111°30' East Longitude and 06°30' - 07°00' South Latitude (figure 1). The study employed an interview/questionnaire and observation methods. The questionnaires were distributed to 10 respondents, who were the staff of Fisheries and Marine Service of Central Java Province, lecturers, practitioners, and fishermen.

Development policy analysis is conducted to determine the appropriate policy alternatives for fish handling suitable for small-scale fishing management in Rembang Regency. It utilizes the Analytical Hierarchy Process (AHP) (Saaty, 2008). The first step is compiling the hierarchies, placing priority factors through pairwise comparisons (table 1), and conducting normalization. In the analysis, the calculation of priority vectors and their number are intended to determine the importance of these priority factors in small-scale fish handling.



Figure 1 – The Research Location Map

The pairwise comparison matrix values are filled with numbers that describe a factor's level of importance compared to the others within a range of 1-9 (table 2).

Table 1 – The Pairwise Comparison

	$C_1$	$C_2$	$C_n$
$C_1$	1	$a_{12}$	$a_{1n}$
$C_2$	$1/a_{12}$	1	
Total	$\Sigma a_{11}-a_{n1}$		$\Sigma a_{1n}-a_{ij}$

Note:  $C_1 \dots C_n$  is a criterion at a certain level of the criteria to be compared that reflects the importance value of  $C_1$  to  $C_j$ ;  $a_{12} \dots a_{ij}$  is a comparison value based on the pairwise comparison scale table.

Table 2 – The Factor's Importance Value

Level	Definition
1	The two factors are equally important
3	One factor is slightly more important than the others
5	One factor is more important than the others
7	One factor is obviously more important than the others
9	One factor is absolutely more important than the others
2,4,6,8	Uncertainty between two adjacent values
1/1 s/d 1/9	Reverse value

Source: Saaty, 2008.

## RESULTS AND DISCUSSION

The fish handling for small-scale fishing vessels is expected to maintain the quality of the catch, which will increase fish selling prices and the income of small-scale fishermen; ultimately, it can improve the welfare of small-scale fishermen. Supartono, et al. (2011) in Kusumayanti, (2018), stated that economists generally measure welfare level by looking at economic variations, particularly the income levels. Winardi, (1996) in Kusumayanti, (2018), pointed out that the income or profit obtained is expected to meet the life needs of a worker. Todaro, (2004) in Kusumayanti, (2018), asserted that the level of income reflects economic growth that must be achieved in a good economy, which can provide welfare for all residents in the country or region.

Based on the consultations with practitioners and academics, several important factors were identified in small-scale fish handling. They are the space requirement, operational ease, the fish quality and selling price resulting from the fish handling. Supporting this, Masyahoro (2006) presented that the determinants of success in fisheries business are technology, facilities, infrastructure, market potential, product quality and price. The space requirement (facilities and infrastructure) in fish handling is one of the factors that must be considered because inappropriate space for fish handling will interfere with fishing activities. Operational ease in handling after fishing is also essential as easy-to-operate technology will save time and skills. Additionally, the other important factors are the fish quality and selling

price. Masyahoro (2006) argued that the fish quality and price are directly related to the supply and sale value of the catch, which affects the total income and profits.

There are three alternatives to small-scale fish handling: fish handling without using chillers (ice blocks), using ice block for chilling, and using RSW for chilling. Based on AHP analysis, the order of priority in small-scale fish handling is obtained from the highest to the lowest weight.

Based on the survey results obtained from all relevant stakeholders, there are several factors that must be considered in fish handling. Table 3 presents the pairwise comparison of each factor and weight value.

The fish selling price of fish handling with a weight value of 0.37 is the most important factor in small-scale fish handling since it is the main factor in supporting fishermen's income.

Table 3 – Pairwise Comparison Factors and Weight

	SR	OE	FQ	FSP	Weight
NFP	1.00	0.84	0.38	0.21	0.12
OE	1.19	1.00	0.61	0.80	0.20
FQ	2.60	1.64	1.00	0.86	0.31
FSP	4.82	1.25	1.16	1.00	0.37

Note: SR - space requirement; OE - operational ease; FQ - fish quality; FSP - fish selling price.

The fish quality from fish handling with a weight value of 0.31 is placed as the second factor of small-scale fish handling. The good fish quality will have an effect on the price level. Masyahoro (2006) asserted that the fish quality and price are directly related to the supply and selling value of the catch, which will certainly affect the value of the company's income and profits.

The operational ease of handling fish occupies the third factor with a weight of 0.20, after fish price and quality. By utilizing a new handling medium, fishermen will require the skill to operate it. If it is easy to operate, it will be very helpful for the fishermen.

The space requirement of fish handling is placed next with a weight value of 0.12. Chilling medium requires space for handling fish on board, especially one that uses renewable technology such as RSW.

There are three alternatives to small-scale fish handling: fish handling without using chillers (ice blocks), using ice block for chilling, and using RSW for chilling.

Table 4 – The Weight of Handling Alternatives Based on Handling Factors

Factor	Weight	Without ice blocks	RSW	With ice blocks
SR	0.12	0.10	0.66	0.24
OE	0.20	0.26	0.44	0.31
FQ	0.31	0.07	0.65	0.28
FSP	0.37	0.07	0.68	0.25
Total		0.11	0.62	0.27

Note: SR - space requirement; OE - operational ease; FQ - fish quality; FSP - fish selling price.

The effects of small-scale fish handling alternatives on the space requirement priority are (table 4):

- The handling alternative of using RSW chiller affects the space requirement priority as much as 0.66; this indicates that the RSW chiller highly needs a space compared to using ice blocks or without using any chiller. Since RSW chiller has a large system and space requirement, any improper installation will interfere with fishermen's activities;
- The handling alternative of using ice blocks affects the space requirement priority as much as 0.24; this means that using ice blocks as chiller will require more space than without using them, as they need adequate space for storage;

- The handling alternative of utilizing no chiller affects the space requirement priority as much as 0.10; in other words, it is the lowest value of space requirement. Naturally, it does not need a space for storage as it does not use ice blocks.

Furthermore, the effects of small-scale fish handling alternatives on the operational ease priority are (table 4):

- The handling alternative using RSW chiller affects the priority of operational ease as much as 0.44. This chilling medium does not require a large amount of energy for its operations, because it only requires sea water; the use of ice blocks, on the other hand, requires energy for the process of moving ice blocks from the land to the vessel. According to Riyadi (2016), the fish handling procedure of loading and unloading is easier and faster; thus, it saves time and effort;
- The handling alternative of using ice block chiller affects the priority of operational ease as much as 0.31;
- The handling alternative without using any chiller affects the priority of operational ease as much as 0.26.

The effects of small-scale fish handling alternatives on the fish quality priority resulting from chilling are (table 4):

- The handling alternative of using RSW chiller affects the fish quality priority as much as 0.65. According to Riyadi (2016) and Budiarto (2013), the fish stay fresh longer, they are not physically damaged and has better quality;
- The handling alternative of using ice blocks affects the fish quality priority as much as 0.28;
- The handling alternative of utilizing no chiller affects the fish quality priority as much as 0.07. Riyadi (2016) and Budiarto (2013) asserted that the fish quality will decrease by 50% after they are caught.

The effects of small-scale fish handling alternatives on the fish selling price priority resulting from chilling are (table 4):

- The handling alternative of using RSW chiller affects the fish selling price priority as much as 0.68. Fish selling prices are affected by the fish quality; fish with good quality will increase the selling price, while fish with poor quality will decrease the selling prices. The RSW chilling can maintain the fish quality, so this makes the fish selling price better than others;
- The handling alternative of using ice blocks affects the fish selling price priority as much as 0.25;
- The handling alternative without using any chiller affects the fish selling price priority as much as 0.07.

In sequence, the total number of weights of the three alternatives are: (1) without using ice blocks is 0.11; (2) using ice blocks is 0.27; (3) using RSW is 0.62. This reveals that fish handling using RSW medium is preferred for small-scale fish handling. Taking the weight value into account, the major factor is the fish selling price as it has a direct effect on fishermen's income. The second factor is the space requirement since using the RSW technology requires an appropriate space that does not interfere with the fishing operation. The third factor is fish quality, and the last one is operational ease.

## **CONCLUSION**

The alternative fish handling selected for small-scale fishing management in Rembang Regency is to utilize RSW renewable technology. In sequence, this alternative takes the fish selling price, the space requirement, the fish quality, and operational ease into account.

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## REFERENCES

1. BBPI. 2014. Laporan Kegiatan Uji Coba Small Capacity Portable Refrigerated Sea Water System untuk Kapal Penangkap Ikan Skala Kecil. Research Report. Semarang: Balai Besar Penangkapan Ikan, Direktorat Perikanan Tangkap – KKP.
2. BBPI. 2015. Laporan Kegiatan Uji Operasional Small Capacity Portable Refrigerated Sea Water System untuk Kapal Penangkap Ikan Skala Kecil. Research Report. Semarang: Balai Besar Penangkapan Ikan, Direktorat Perikanan Tangkap – KKP.
3. Budiarto, U., Kiryanto & H. Firmansyah. 2013. Rancang Bangun Sistem Refrigerated Sea Water (RSW) untuk Kapal Nelayan Tradisional. *Jurnal Kapal*. 10(1):48-57.
4. DKP Kabupaten Rembang. 2016. Laporan Tahunan Bidang Kelautan and Perikanan Kabupaten Rembang Tahun 2015. Research Report. Rembang: Dinas Kelautan and Perikanan Kabupaten Rembang, Pemerintah Kabupaten Rembang, Jawa Tengah.
5. Ibrahim R., & Dewi, E. N. 2008. Pendinginan Ikan Bandeng (*Chanos chanos* Forsk) dengan Es Air Laut Serpihan (Sea Water Flake Ice) and Analisa Mutunya. *Jurnal Saintek Perikanan*, 3(2):27-32
6. Ilyas, S., 1988. Teknologi Refrigerasi Hasil Perikanan, Teknik Pendinginan Ikan, 1<sup>st</sup> Edition. Jakarta: Badan Penelitian and Pengembangan Pertanian, Pusat Penelitian and Pengembangan Perikanan.
7. Ilyas, S., 1993. Teknologi Refrigerasi Hasil Perikanan, Teknologi Refrigerasi Hasil Perikanan, 2<sup>nd</sup> Edition. Jakarta: Badan Penelitian and Pengembangan Pertanian, Pusat Penelitian and Pengembangan Perikanan.
8. Junianto. 2003. Teknik Penanganan Ikan. Jakarta: Penebar Swadaya.
9. Kurniawan, M. A. & Baheramshyah. 2014. Desain Sistem Spray (RSW) Refrigerated Sea Water untuk Ruang Palka Kapal Purse Seine 40 GT. *Jurnal Teknik Pomits*. 3(1):124-128.
10. Kusumayanti, N. M. D., 2018. Analisis Faktor-faktor yang Mempengaruhi Kesejahteraan Nelayan di Kab. Jembrana. *E-Jurnal Ekonomi and Bisnis Universitas Udayana*. 7(11):2437-2466.
11. Masyahoro, A., 2006. Analisis Kebijakan Pengembangan Perikanan Purse Seine dengan Metode AHP di Perairan Kab. Parigi Moutong. *J. Agroland*. 13(3):275-281.
12. Nugraheni, H., 2013. Analisa Pengelolaan Pelabuhan Perikanan Pantai Tasikagung Kabupaten Rembang untuk Peningkatan Produksi Perikanan Tangkap. *Journal of Fisheries Resources Utilization Management and Technology*. 2(1):85-94.
13. Nugroho, T. A., Kiryanto, & Berlian, A. A. 2016. Kajian Eksperimen Penggunaan Media Pendingin Ikan berupa Es Basah and ice Pack sebagai Upaya peningkatan Performance Tempat Penyimpanan Ikan Hasil Tangkapan Nelayan. *Jurnal Teknik Perkapalan*. 4(4):889-898.
14. Pangabean, M. A. 2016. Studi Peran Subsektor Perikanan dalam Pengembangan Wilayah di Kota Sibolga. *J. Il. Tan. Lingk*. 18(1):49-55.
15. Poernomo, H., 2015. Analisis Karakteristik Unjuk Kerja Sistem Pendingin yang Menggunakan Freon R22 Berdasar pada Variasi Putaran Kipas Pendingin Kondensor. *Kapal*. 12(1):1-8.
16. Rahardjo, O. B. 2015. Uji Coba SCP-RSW Kapasitas Kecil untuk Kapal Penangkap Ikan Skala Kecil. *Arioma*. 32 :56-68
17. Riyadi, M. 2016. Analisa Teknis and Ekonomis Penggunaan Sistem Pendingin Refrigerated Sea Water (RSW) pada Kapal Ikan Tradisional. *Jurnal Teknik Perkapalan*. 4(1):101-112.
18. Saaty, T., 2008. Decision Making With the Analytic Hierarchy Process. *Int. J. Services Sciences*. 1(1):83-98.
19. Setyoko, B., S., Darmanto, & Rahmat. 2007. Analisa Mesin Pendingin pada Kapal Ikan (Refrigerated Sea Water). *Teknik*. 28(3):245-250.

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## **TO THE QUESTION OF CONSTITUTIONAL AND LEGAL REGULATION OF THE RIGHTS AND FREEDOMS OF THE CHILD IN THE RUSSIAN FEDERATION**

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### **ABSTRACT**

Child is a small citizen of his country, a tiny, but very significant part of society. Protection of his rights, freedoms and legitimate interests is the main task of the state. His physical and spiritual development, social and legal security, his worldview, attitude of his parents, their substitutes and the state depends on what his life will be before the age of majority. The formation of the child's personality is the basis for the formation of the personality of an adult person. The issues of constitutional and international legal regulation, protection and ensuring the rights and freedoms of children in the modern world, the process of creating a single mechanism for their implementation, the need to create a special legal status of the child as an essential element of society and the state are considered in this article.

### **KEY WORDS**

Rights and freedoms of the child, ensuring the survival, protection and development of children, juvenile justice, the legal status of the child.

In legal state, the child plays an integral role. Despite the fact that child is given of certain rights and freedoms at birth and the fact of his birth secures these rights for him, any child has very vulnerable legal needs. The child's mental, physical, moral, political, and intellectual development cannot fully allow him to ensure the proper realization of his rights and freedoms. In this regard, the state is a single legal mechanism, thus, it should take care of ensuring the rights of the child. In turn, such competence of the state will allow creating a really functioning regulatory framework, enforcing the existing letter of the law in order to form the full legal status of the child as a member of society.

In accordance with the current legislation of the Russian Federation, the legal status consists of the position of its subject endowed with a set of rights and obligations by the norms of law. Such definition justifies the legal status of the person and citizen, but not a child. The above concept cannot fully formulate his legal status due to the particular specificity of the object under consideration.

According to L.N. Degtyaeva, the status of the child provides for a special aspect that belongs to certain categories of citizens, which include pensioners and handicapped people. The general legal status of a person is the basis of status as a whole. In this regard, the legal status of this category may have its own specifics, due to the presence of additional rights and obligations, benefits or restrictions [1].

We agree with the opinions of the authors N.I. Matuzov and A.A. Vorotnikov who believe that one of the tasks of legal science is the improvement of statuses [2].

Currently, many politicians, journalists, scientists, including public are seriously puzzled by the legal status of children not only in Russia but also abroad.

It should be noted that Chapter 2 of the basic law of the state is the guarantor of the rights and freedoms of citizens, including the protection of the family, maternity and childhood by the state (art. 38) [3]. In our opinion, at the present stage of development of the Russian Federation, the legal status of the child is directly dependent on social family support and forces and means of the state for ensuring the realization of protection of his rights and interests.

It seems that the above provisions guaranteeing the rights and freedoms of a person and citizen do not have proper regulation of the problem. Thus, in the regulatory and legal framework of the Russian legislation, up to the present, there is still no single legal act

providing the constitutional and legal realization of the rights and freedoms of the child.

According to Vorobyov E.D., a child, as a physically and mentally immature creature, should remain under scrutiny and control of the state and be provided with help, getting at the same time in the area of public concern [4].

In March 2009, being the President of the Russian Federation, D.A. Medvedev said that in Russia there is no system for the protection of childhood that corresponds to the norms of today. At the same time, he noted that Russia cannot do without it. After 10 years, such a system has not yet been created. In today's world, children are at even greater risk than before, cases of abuse of the rights and freedoms of the child have become more frequent, children's homelessness is increasing every year, drug addiction and alcoholism have swept over modern society, material distress encourages parents to violate the rights, freedoms and legitimate interests of children or simply abandon them. Under these conditions, the existing legal norms cannot compensate for the need to create a single effective legal mechanism for regulating the constitutional rights and freedoms of children.

The tasks of protecting the rights and freedoms of children, both for the Russian Federation and for other countries of the world, are of top priority today. Degtyareva L.N. rightly speaks about this issue. In her opinion, society will need to create an effective mechanism for the legal regulation of constitutional rights and legal interests of minors [1, p.4].

Note that it is impossible to implement the observance of human rights without observance of the child rights. This statement of contemporaries is true and the international legal system has learned it well. Despite the fact that Russia ratifies international legal acts in this field, the dominant number of them remains formal, with no due effect throughout its territory.

According to O.A. Bondarenko, the existing kind of mechanism for the implementation of the constitutional rights and freedoms of the child is intended to implement the system of interrelated elements that have structural differences and can affect, as well as a set of forms, techniques, methods and socio-legal factors that can stimulate the transition of the constitutional rights and freedoms of the child from formalization to the actual use of them [5].

For the first time, the need to protect the rights of the child was mentioned in the Geneva Declaration on the Rights of the Child at November 26, 1924. Subsequently, its prescriptions formed the basis for the creation of the 1959 Declaration of the Rights of the Child. In this regard, its principles proclaimed that the child, as a creature physically and mentally immature, needs special care, legal security and protection, and this should not depend on whether he was born or is still in the womb. The next step towards the development and reform of international legislation in the field of the protection of the children rights and freedoms was the adoption of the 1989 Convention on the Rights of the Child. Russia became the country that ratified this Convention on September 15, 1990, thereby undertaking to prioritize ensuring the rights and freedoms of the child. However, the Constitution of the Russian Federation, adopted in 1993, proclaimed only guarantees of human and civil rights and freedoms, without securing the rights of children, which are still governed by international law.

The provisions of Part 4, Article 15 of the Constitution of the Russian Federation provide that the generally recognized principles and norms of international law and international treaties of the Russian Federation are an integral part of its legal system. If an international treaty of the Russian Federation establishes other rules than those provided by law, then the rules of the international treaty shall apply. Over the 29-year period, since Russia ratified the Convention on the Rights of the Child, the vast majority of its normative acts have been brought into line with international standards. This made it possible to further initiate the settlement of family law.

The ratification of the Convention served as a platform for the creation of the Family Code of the Russian Federation in 1995, the provisions of which in a certain sense are aimed at protecting the rights and freedoms of the child (p.11). Thus, the legislator has introduced to some extent the legal status of ensuring the protection of the rights and freedoms of children within the framework of criminal, civil and other codes.

The Family Code of the Russian Federation was the beginning of the creation of legislative acts, provisions of which are designed to protect the constitutional rights and freedoms of the child and which in force in Russia at present. Among them are the following federal laws ensuring the rights of the child: "On the Basic Guarantees of the Rights of the Child in the Russian Federation" 1998, "On the protection of children from information harmful to their health and development" 2010, Decree of the President of the Russian Federation "On additional measures to ensure the rights and protection of the interests of minors of the Russian Federation" 2011, "On the basis of the system for the prevention of neglect and juvenile delinquency" 1999, "On additional guarantees for social support for orphans and children left without parental care" 1996, "On guardianship and trusteeship" 2008 and others. We believe that, in essence, these are formally valid legal acts that do not have a wide legal application.

From September 2009 in Russia, in accordance with the Decree of the President of the Russian Federation No. 986, the constitutional rights and freedoms of the child should be protected and ensured by a new official, namely the Commissioner under the President of the Russian Federation on the rights of the child. Within 2 years since the adoption of the law, the children's ombudsman appeared in every region of Russia. The competencies of the indicated official are not legally enshrined in the Constitution or in any other legal act. His functions are minimized — send requests and receive answers to them. There is no talk about any effective regulation and ensuring the constitutional rights and freedoms of children. The children's ombudsman does not even have the ability to protect the constitutional rights and freedoms of children, which again indicates a formal attitude to the existing problem. Since 2015, it has become possible to assign the duties of a regional children's ombudsman to an ombudsman for human rights in the constituent entity of the Russian Federation. The formalism of the decisions made in the field of the rights and freedoms of the child does not leave indifferent.

Contrary to the provisions of the Convention, which establish the inalienability of the child's right to life and ensure their maximum survival and healthy development by all countries that ratify it (art. 6) and the right to benefit from social security (art. 26), in 2016, the children's ombudsman of Perm Krai supported a regional law that does not entitle mothers to receive regional childbirth allowance due to the fact that they raise children without fathers. In her opinion, a woman should not give birth to children from irresponsible fathers, and the state should not support them in this. The financial aspect is one of the main at the birth and upbringing of the child, the decision of Ombudsman for Children's Rights to refuse material assistance once again emphasizes the predominance of the external form over its content. The financial insecurity caused the dominant number of cases when mother abandons the child. Without the necessary state support, including being on parental leave, it is impossible to ensure the healthy development of the child ( Article 6 of the Convention), provide him with the necessary standard of living for his spiritual, physical, mental and social development (Article 27 of the Convention) including providing the child with the opportunity for cultural and creative activities, leisure and recreation (Article 31 of the Convention). The state, guarding and protecting the rights of each child to a decent life and the inalienable right to live with their parents, must first of all solve this problem.

The constitutional rights and freedoms of the child in Russia are not regulated and not protected; the absence of a single legal document regulating the constitutional rights and freedoms of the child leads to the fact that they are properly provided only by the provisions of the Convention, but not by constitutional norms.

Today, the Convention on the Rights of the Child is the main effective tool in achieving the rights of children, even though there are a lot of legal acts in various states that contain provisions to ensure the rights and freedoms of the child. The Convention on the Rights of the Child positions it as an individual who has not only physiological rights (for example, the right to life), but also, as far as possible, right to know his parents (art. 7), freely express his opinions (art. 11), to think freely, act according to conscience and choose the religious direction for yourself (art. 14), have access to information that would contribute to his social, spiritual and moral well-being, as well as support the healthy physical and mental

development of the child (art. 17), in case of his mental or physical inferiority, the child should not be deprived of anything, his life should be full and dignified, he should not lose self-confidence or lose his dignity and living conditions should facilitate his dynamic participation in the life of society (art. 23) [6].

According to the provisions of the Convention on the Rights of the Child, regardless of origin, color, race, sex, language, religion, none of the children can be subjected to discrimination either by parents or their substitutes or by other family members.

But the annual statistics of infringements on the rights and freedoms of the child claims the opposite. Every year the number of crimes and offenses committed against children, the predominant part of which is committed by his relatives, increases. Infringement on the rights and freedoms of the child is the main problem of civil society that takes the scale of the disaster.

Every day, many children around the world are exposed to hazards that impede their growth and development. They are subject to incalculable suffering, being the victims of war and violence or victims of negligence, cruelty and exploitation [7].

In the first nine months of 2018, 917 children were killed by criminals in our country.

The Investigative Committee of the Russian Federation made public the horrendous statistics that during these months nearly 15.5 thousand criminal cases were opened regarding crimes against minors. According to statistics from the investigative department, most crimes are committed against minors aged 15-17 years old - the number of victims was 5225. Among children aged 11 to 14 years there are 3640 victims, 6-10 years old - 1647, under age 5 - 789, under one year - 374 [8].

As previously emphasized, Russia is a country party that ratified the Convention on the Rights of the Child, but according to the statistics above, it has not been able to translate into reality all prescriptions of Convention. The imperfection of the Russian legislation in the sphere of protection of the rights and freedoms of the child leads to constant encroachment on their rights and freedoms. It is impossible to protect children without having legal resources to protect them. It is absolutely obvious that Russia is not yet able to protect a child from engaging in illicit trafficking in narcotic drugs and psychotropic substances (p. 33), from sexual violence (art. 34), from restricting or depriving children of their liberty by abduction or sale (art. 35), from any form of exploitation that can harm the welfare of the child (art. 36).

Despite the considered provisions of the international legal document, children are endangered every day, and Russia, on the basis of the statistics provided, is not able to ensure the protection of their constitutional rights and freedoms at the proper level.

The negative impact on the child by an adult affects his consciousness, leads to disregard of established and generally accepted norms and rules, devalues the rights and freedoms of other people in his consciousness, as a result of which the child himself becomes the subject of offenses and crimes.

According to the data of the Ministry of Internal Affairs of the Russian Federation, a total of 1490.9 thousand crimes were recorded during the period from January to September 2018, 57.8% of which were committed by repeat offenders, 32.5% by persons who were intoxicated and 3.7% by juveniles [9].

The above information once again shows how children and their constitutional rights and freedoms, without proper security and protection of the state, can easily become both an object and a subject of criminal acts and offenses, and the main task of the state is to ensure the safety and security of their constitutional rights and freedoms.

Child is innocent, vulnerable and fragile human being. The legal relationship between the child and the state entails the latter's obligation to protect the constitutional rights and freedoms of the child while ensuring their regulation. The child should not ask for the protection of his constitutional rights and freedoms, which have not yet been recognized as natural and inalienable, and should be protected.

Summing up, it should be noted that the child is the same link in society and the state as an adult citizen, and the recognition of his constitutional rights and freedoms, their consolidation at the legislative level in full measure and the endowment of his special legal

status - long overdue and inevitable necessity, as well as the creation of an effective legal mechanism for regulating the constitutional rights and freedoms of the child. The lack of a special legal status of the child, the formal adoption of laws and the introduction of conditional posts that are not able to protect the child speaks about the need to reform the legislation in this area.

Thus, it seems appropriate to reorganize certain provisions and legal norms that currently have reference prerequisites. The purpose of making certain changes will be the settlement of the processes of constitutional rights and freedoms of a child. In turn, we propose to give an opportunity to subsequently consolidate the informative proposals in the separate legislative act.

## REFERENCES

1. Dyagtereva L.N. Theoretical and legal foundations of the constitutional rights and freedoms of minors in Russia: monograph. Ministry of Education and Science of the Russian Federation, Tambov: Consulting Company Ucom LLC, 2017.
2. Theory of State and Law: Course of lectures / ed. N.I. Matuzov, A.A. Vorotnikova. 3rd ed., revised and enlarged, M., 2017.
3. The Constitution of the Russian Federation (adopted by popular vote on 12.12.1993) (with amendments introduced by the Laws of the Russian Federation on amendments to the Constitution of the Russian Federation of 30.12.2008 N 6-FCL, of 30.12.2008 N 7-FCL, of 05.02.2014 N 2 -FCL, of 07.21.2014 N 11-FCL) // Rossiyskaya gazeta. 2014, Federal edition issue 6435 (163).
4. Basics of juvenile law: textbook / in 3 volumes, under the scientific. ed. V.F. Vorobyova, E.D. Volokhov, A.V. Zaryaev. Voronezh, 2001. V. 1. P. 12
5. Bondarenko O.A. The concept of the mechanism for the implementation of the constitutional rights and freedoms of the child in the Russian Federation // Yurist - Pravoved. 2008. Issue 5 (30).
6. UN Convention "On the Rights of the Child" 1989 // VVS USSR. 1990. Issue 45.
7. "World Declaration on the Survival, Protection and Development of Children" 1990. URL: // [https://www.un.org/ru/documents/decl\\_conv/declarations/decl\\_child90.shtml](https://www.un.org/ru/documents/decl_conv/declarations/decl_child90.shtml) (access date: 10.04.2019).
8. Rossiyskaya Gazeta - Federal Issue No. 261 (7724) of 11/20/2018. URL: <https://rg.ru/2018/11/20/skr-rasskazal-o-statistike-prestuplenij-protiv-maloletnih.html> (access date: 10/04/2019).
9. The state of crime in Russia in January - September 2018: Collection // Federal Governmental Institution "Main Information and Analytical Center of the MIA of Russia". URL: <https://mvd.rf/reports/item/14696015/> (access date: 10/04/2019).

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## **THE HAPPINESS ANALYSIS OF PEOPLE LIVING WITH HIV AIDS (PLWHA) IN DENPASAR CITY**

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### **ABSTRACT**

HIV AIDS is a disease caused by a virus that has not been cured until now. HIV AIDS was expected to reduce the life expectancy of PLWHA so that the expected contribution of PLWHA in the economic sector and social development becomes smaller. Another result of HIV AIDS in the environment is the imposition of social penalties for PLWHA, such as acts of avoidance, exile, rejection, and discrimination. In addition, PLWHA can't do their jobs optimally or even have to lose their jobs because of poor physical condition, so they can lose income. Social, economic, psychological and environmental problems for PLWHA are feared to reduce the quality of life for PLWHA which will have an impact on the happiness of PLWHA themselves. This study aims to find the condition of PLWHA happiness, the difference between happiness of PLWHA with male and female, the influence of socio-economic factors, psychological factors, and environmental factors on religiosity, as well as the influence of socio-economic factors, psychological factors, environmental factors, and religiosity on PLWHA happiness in Denpasar City. The data used in this study were primary data obtained by observation, structured interviews, and in-depth interviews. The sample used was 148 PLWHA respondents in Denpasar City using the Consecutive Sampling methods. The data obtained then analyzed using the Structural Equation Modeling (SEM) method through the Partial Least Square (PLS) application program. The results of this study are PLWHA in Denpasar City who are predominantly still feeling happy can be interpreted that HIV AIDS does not necessarily eliminate the hope of PLWHA to live happily, while gender does not have a relationship with the happiness level of PLWHA in Denpasar City. Socio-economic factors and environmental factors have a positive and significant effect on the religiosity of PLWHA in Denpasar City, while psychological factors don't affect the religiosity of PLWHA in Denpasar City. Socio-economic factors, psychological factors, and environmental factors do not affect the happiness of PLWHA in Denpasar City directly, but religiosity has a positive and significant effect on the happiness of PLWHA in Denpasar City. It can be said that religiosity mediates in full the relationship between socio-economic factors and environmental factors with the happiness of PLWHA in Denpasar City, while on the other hand religiosity does not mediate the relationship between psychological factors and the happiness of PLWHA in Denpasar City. The happiness of PLWHA in Denpasar City is influenced by its religiosity. PLWHA, who have faith in God, have knowledge about the religion they embrace, and practice the teachings of religion well and can truly feel happiness in their lives. Government policy through socialization and lectures by presenting religious leaders is expected to provide motivation and instil religious values to PLWHA.

### **KEY WORDS**

PLWHA, social economy, psychological, environment, religiosity, happiness.

Development is a continuous process of change to lead to better conditions based on certain norms. The important meaning of development is progress or improvement, growth, and diversification. Research doing by Jaafar, et.al. (2008) prove that the level of income is not the most important in development, but rather the distribution of income evenly, so that can meet the basic needs of everyone, open access to employment, public services, and better quality infrastructure. Happiness is an indicator of the community's response to how development has been carried out so far and then its impacts on human life, therefore, a low

level of happiness is actually a warning for policymakers to improve development policies to be more oriented on equity and security of quality of life immediately.

One of the development policies implemented by the government to increase community happiness is health development policies. Health is a fundamental development goal. It is the core of fundamental well-being to shape broader human abilities (Todaro and Smith, 2006). Health policies held are related to the health system. According to the WHO definition, the health system is all activities whose main purpose is to improve, maintain and cope with public health complaints. Policies in tackling health complaints of residents in the Province of Bali relate to the improvement of the health system which includes the components of the public health department, hospitals and clinics, as well as doctors and paramedic practice rooms.

Policies are carried to reduce the health complaints of the population and to achieve one of the health development goals, such increase awareness, willingness, and the ability to live healthy for everyone to realize the optimal degree of public health. But it is not easy to achieve this goal, because along the times the various kinds of diseases have emerged that can hinder health development (Mubarak, 2008). The advancement of technology in the health sector is not necessarily able to solve this problem, because there are still some incurable diseases because the medicine has not been found, like HIV AIDS.

AIDS or Acquired Immune Deficiency Syndrome is symptoms and infections or syndromes caused by human immune system damaged by HIV (Human Immunodeficiency Virus). HIV is a virus that can weaken immunity in humans. The Real data of the number of people living with HIV AIDS (PLWHA) that are not recorded in various health service facilities that the real number far more than the official data recorded. The number of findings of HIV AIDS cases in Bali Province until 2017 is quite high; it will certainly tarnish the good name of Bali as the Island of the Gods, which is one of the excellent tourist destinations in Indonesia. The following Figure 1 describes the graph of the cumulative number of HIV AIDS cases based on districts in the Province of Bali in 1987-2017.

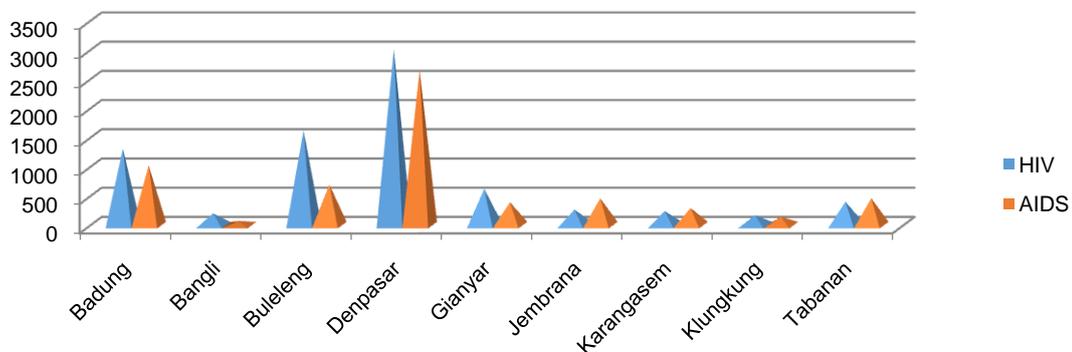


Figure 1 – Number of Cumulative HIV AIDS Cases by Regency / City in Bali Province 1987-2017  
(Source: Bali Provincial AIDS Commission, 2018)

Figure 1 shows that the cumulative HIV AIDS cases in Denpasar City in 1987-2017 were the highest compared to other districts in Bali Province. The high number of HIV AIDS cases in Denpasar City has the potential to increase the percentage of PLWHA who do not get health services or cannot be reached by health workers. This can occur because of constraints of factors such as PLWHA who do not dare to carry out HIV AIDS and PLWHA are introvert, causing more PLWHA to be displaced then not being registered with health services in Denpasar City. This situation is feared to have an impact on the condition of happiness of PLWHA because it can affect the decrease in positive emotions that are felt such as feelings of joy, optimism, love, and pride. The high number of people living with HIV can be expected to reduce life expectancy later because more people are expected to live in a shorter period of time, the contribution expected from PLWHA to the national economy and

social development becomes smaller and less reliable. The consequences of HIV AIDS in the environment also include impacts on households. PLWHA cannot do their jobs optimally, or even have to lose their jobs because their physical condition is not good, so they have the potential to lose income. One of the most visible impacts is the imposition of social penalties for PLWHA including human rights violations. The following is a picture of 2 types of human rights violations against PLWHA in Denpasar City.

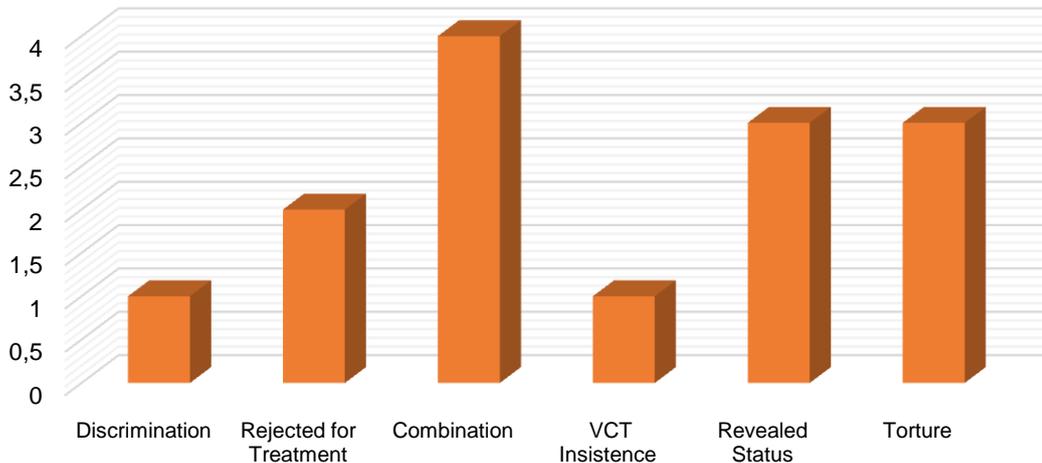


Figure 2 – Types of Human Rights Violations against PLWHA in Denpasar City in 2017  
(Source: Legal Aid Institute of Bali Province, 2018)

The social and economic impacts caused by the high spread of HIV AIDS are not only a problem for the government but also PLWHA in general, moreover, PLWHA will feel the psychological problems caused by HIV AIDS. Social, economic, and psychological problems for PLWHA are feared to reduce the quality of life for PLWHA which will have an impact on the happiness of PLWHA. Seligman (2005) explains that happiness is a concept that refers to positive emotions felt by individuals. The definition of happiness is a subjective concept because each individual has different benchmarks. Each individual also has different factors so that can bring happiness to them. These factors include social economic factors, psychological factors, environmental factors, and religiosity

## METHODS OF RESEARCH

This research was conducted in Denpasar City because the cumulative number of PLHIV recorded in health services in Denpasar City was the highest compared to other districts in Bali Province, besides this research was conducted because there was not enough information about the happiness of PLWHA. This study uses qualitative data and quantitative data, both types of data are obtained through field research so that both include primary data. Research on the analysis of happiness of people living with HIV AIDS (PLWHA) in Denpasar resulted in these two types of data, to obtain it used methods of data collection through observation, structured interviews (interviews), and in-depth interviews (in-depth interviews).

Data from Bali Provincial Health Office states that the population of people with HIV AIDS (PLWHA) recorded in Denpasar City health services in 2017 reached 880 people. This amount is quite large and it is not possible to learn everything in the population because of limited funds, energy, and time so that the sample studied in the population can be used (Husein, 2003). The sample is part of the number and characteristics possessed by the population (Sugiyono, 2007). The number of samples that must be sought in this study are 148 people with HIV AIDS (PLWHA) in the city of Denpasar using the method of determining the sample, Consecutive Sampling. Consecutive Sampling is a method of selecting samples

by specifying subjects that meet the research criteria included in the study until a certain period of time so that the number of respondents can be fulfilled.

Structural Equation Modeling (SEM) is used to produce a model that feasible. This analysis is a multivariate analysis technique that can analyze complex variable relationships. With this technique, it is expected that the relationship between variables can be thoroughly explained. The calculation process is assisted by the Partial Least Square (PLS) application program, which is Smart PLS software version 3.2.8. According to Wold in Ghozali (2008), Partial Least Square is a powerful analytical method because it is not based on many assumptions. Data does not have to be multivariate normally distributed (indicators with category, ordinal scale, intervals until ratios can be used on the same model), samples do not have to be large and can be used simultaneously for reflective and formative models.

### RESULTS OF STUDY

Respondents in this study were people with HIV AIDS in Denpasar City. The data obtained are then divided based on the characteristics of the research respondents. The following is Figure 3 which shows the characteristics of respondents by gender.

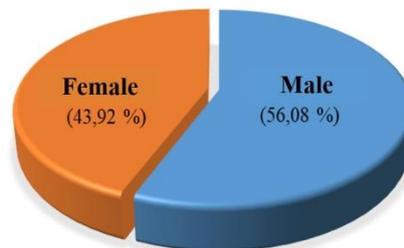


Figure 3 – Respondent Characteristics by Gender (Source: Data Processed, 2019)

Based on Figure 3 the characteristics of respondents by gender were dominated by men with 83 PLWHA who had a percentage of happiness level 8.44 percent less happy, 62.65 percent happy, and 28.91 percent were very happy, while women numbers are 65 PLWHA with a percentage happiness level 6.16 percent is unhappy, 60 percent are happy, and 33.84 percent are very happy. Statistical tests state that gender does not have a relationship with the happiness level of PLWHA with a significance value of 0.819 and the value of Chi Square counts 0.400 less than the Chi-Square table value of 5.991.

The happiness level of PLWHA in Denpasar City varies, based on Figure 4 shows that dominant PLWHA still feel happy even though they have HIV AIDS. This condition can mean that HIV AIDS does not necessarily reduce the happiness level of PLWHA in general because there are other factors that can affect the happiness of PLWHA, including socio-economic, psychological, environmental, and religiosity factors. The following is a picture of 4 characteristics of respondents based on their level of happiness.

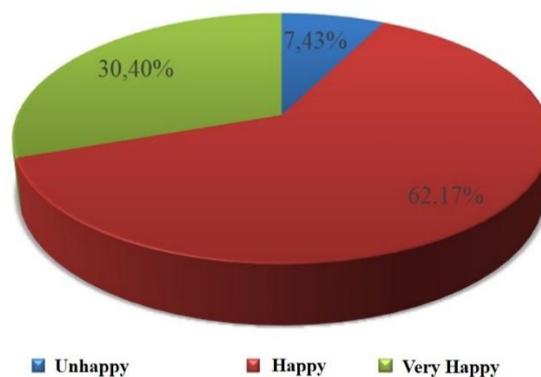


Figure 4 – Respondent Characteristics by Level of Happiness (Source: Data Processed, 2019)

The process of data analysis uses the Partial Least Square (PLS) application program, which is Smart PLS software version 3.2.8. Figure 5 shows the R-square value of variable  $Y_1$  of 0.211 which means that 21.1 percent of the variation in the variable religiosity on PLWHA is influenced by socio-economic factors, psychological factors, and environmental factors while the remaining 78.9 percent are influenced by other factors outside the model. The variable  $Y_2$  R-square value is 0.194 which means that 19.4 percent of the variation in happiness variables on PLWHA is influenced by socio-economic factors, psychological factors, environmental factors, and religiosity while the remaining 80.6 percent are influenced by other factors outside the model. The following is a picture of the results of an analysis of the happiness of people with HIV AIDS (PLWHA) in Denpasar City.

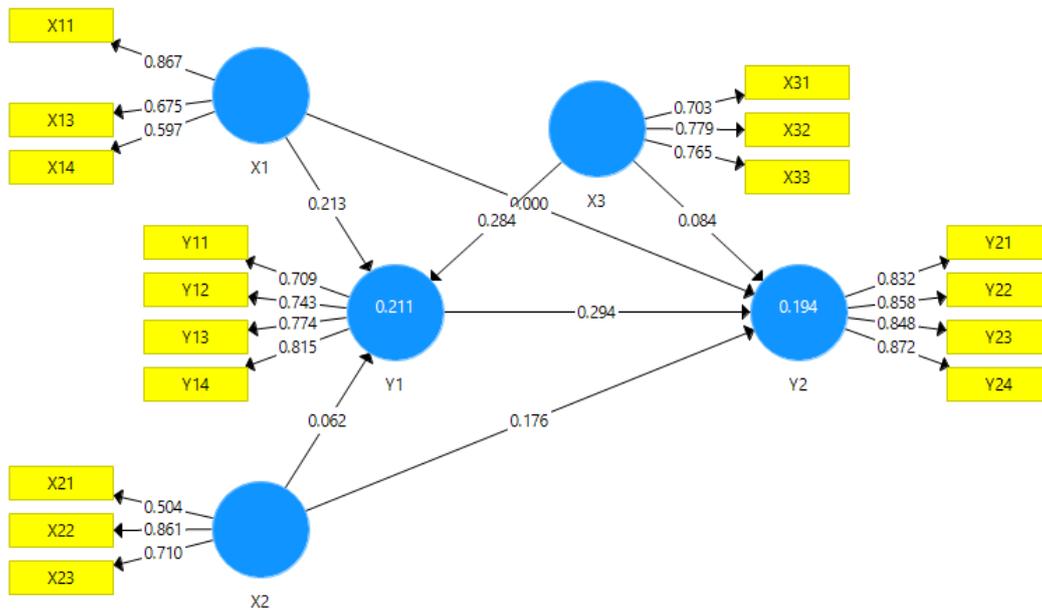


Figure 5 – Research Results Analysis of Happiness for People Living with HIV AIDS (PLWHA) in Denpasar City (Source: Research Results, 2019)

The total indirect effect of socio-economic factors ( $X_1$ ) on happiness ( $Y_2$ ) PLWHA through religiosity ( $Y_1$ ) is 0.0627 while the direct influence of socio-economic factors ( $X_1$ ) on happiness ( $Y_2$ ) PLWHA is 0.0004. This means that the indirect effect of socio-economic factors ( $X_1$ ) on happiness ( $Y_2$ ) PLWHA through religiosity ( $Y_1$ ) is greater than the direct influence between socio-economic factors ( $X_1$ ) and happiness ( $Y_2$ ) PLWHA. The total indirect effect of psychological factors ( $X_2$ ) on happiness ( $Y_2$ ) PLWHA through religiosity ( $Y_1$ ) is 0.0182 while the direct effect of psychological factors ( $X_2$ ) on happiness ( $Y_2$ ) for PLWHA is 0.1765. This shows directly the influence of psychological factors ( $X_2$ ) on happiness ( $Y_2$ ) PLWHA is greater than the indirect influence of psychological factors ( $X_2$ ) on happiness ( $Y_2$ ) PLWHA through religiosity ( $Y_1$ ).

The total indirect effect of environmental factors ( $X_3$ ) on happiness ( $Y_2$ ) PLWHA through religiosity ( $Y_1$ ) is 0.0837 while the direct effect of environmental factors ( $X_3$ ) on happiness ( $Y_2$ ) for PLWHA is 0.0840. It shows the influence of environmental factors ( $X_3$ ) on happiness ( $Y_2$ ) PLWHA is greater than the indirect influence of environmental factors ( $X_3$ ) on happiness ( $Y_2$ ) PLWHA through religiosity ( $Y_1$ ). Meanwhile, the significance value of the relationship between variables can be seen from the numbers of p values, Table 1 the significance value of the happiness analysis of people living with HIV AIDS (PLWHA) in Denpasar City.

Based on Table 1 it can be explained that socio-economic factors ( $X_1$ ), psychological factors ( $X_2$ ), and environmental factors ( $X_3$ ) directly did not significantly influence happiness ( $Y_2$ ) with p values more than 0.05. While directly religiosity ( $Y_1$ ) has a significant effect on

happiness ( $Y_2$ ) with  $p$  values 0.009 less than 0.05. Indirectly socio-economic factors ( $X_1$ ) and environmental factors ( $X_3$ ) have a significant effect on happiness ( $Y_2$ ) through religiosity ( $Y_1$ ), so that it can be interpreted that religiosity ( $Y_1$ ) mediates in full the relationship between socioeconomic factors ( $X_1$ ) and environmental factors ( $X_3$ ) with happiness ( $Y_2$ ). Meanwhile, indirectly psychological factors ( $X_2$ ) have no significant effect on happiness ( $Y_2$ ) through religiosity ( $Y_1$ ) so that religiosity ( $Y_1$ ) does not mediate the relationship between psychological factors ( $X_2$ ) and happiness ( $Y_2$ ).

Table 1 – The Significance Value of Happiness Analysis of People Living with HIV AIDS (PLWHA) in Denpasar City

Variables	<i>P Values</i>	Information
X1 → Y1	0,041	Significant
X1 → Y2	0,997	Not Significant
X2 → Y1	0,502	Not Significant
X2 → Y2	0,134	Not Significant
X3 → Y1	0,001	Significant
X3 → Y2	0,394	Not Significant
Y1 → Y2	0,009	Significant

Source: Data Processed, 2019.

## DISCUSSION OF RESULTS

A person's happiness generally does not depend on one particular thing, as well as for people with HIV AIDS (PLWHA). There are many factors that can bring about happiness even though PLWHA are constrained by health problems. Based on this study, of 148 PLWHA respondents in Denpasar City there was a variation in the level of happiness felt, with the details of 62.17 percent of PLHIV feeling happy, 30.40 percent very happy, and 7.43 percent less happy. Research Arriza, et al. (2011) states that the factors that influence PLHIV in reconstructing happiness include internal, external, and religiosity factors. Regarding religiosity, PLWHA who have knowledge of religion (intellectual), apply religious teachings are more grateful and obey prayer or worship tend to be happier than others.

The happiness of PLWHA in Denpasar City is directly influenced by religiosity, it shows that a religious approach is needed to build the spirit and self-confidence of PLWHA in their environment. Meanwhile, this study found that out of 83 PLWHA who had male percentage of happiness level 8.44 percent were unhappy, 62.65 percent were happy, and 28.91 percent were very happy, while women were 65 PLWHA with a percentage level of happiness 6.16 percent are unhappy, 60 percent are happy, and 33.84 percent are very happy. The data can mean the happiness level of PLWHA by gender does not have a significant difference. According to Eddington and Shuman (2005), women have a higher level of negative affect and higher levels of depression compared to men. This might happen because women show this feeling more often than men who often hide their feelings.

Socio-economic factors have a positive and significant effect on the religiosity of PLWHA in Denpasar City, this is consistent with Thouless's (2000) statement that education or teaching and various social pressures (social factors) include all social influences in the development of religious attitudes, including education from parents social traditions, pressure from the social environment to adjust with various opinions and attitudes agreed upon by the environment have an effect on one's religiosity. Quality PLWHA social life, both in maintaining relationships in the community and family environment or receiving without discrimination causes a sense of gratitude for PLWHA in their lives which is expressed in a way that they always get closer to God. Meanwhile, sufficient economic conditions have a positive impact on the religiosity of PLWHA. According to Popova (2019), good finances can stimulate activities to carry out activities related to the field of religion.

Psychological factors have no effect on the religiosity of PLWHA in Denpasar because the fact that HIV AIDS cannot be cured causes it is always on the minds of PLWHA so that however the psychological state of PLWHA will not affect their religiosity. The results of this study are inversely proportional to the statement of Daradjat (2003), that a person's religiosity

can be formed because the desire to live better and not give up with a disappointing situation and there is inner conflict or inner conflict and feeling tension, like a condition where a person feels unable to deal with various problems in life. Physical and psychological shocks that are faced cause PLWHA need a lot of time for the process of healing and self-acceptance of their lives.

Environmental factors have a positive and significant effect on the religiosity of PLWHA in Denpasar City. The family environment is the smallest system of social life and is the place where someone first learns about various things, like about religiosity. Status as a PLWHA does not prevent the respondent from becoming a more religious person, this happens because religiosity can be formed from self-will which encourages a person to submit to God (Rachmat, 2004). Social and environmental support such as solicitation and suggestions, such as moral and material assistance made by leaders and religious leaders to someone who experiences anxiety and misery in life can also make the religiosity of PLWHA increase (Daradjat, 2003).

Socio-economic factors do not affect the happiness of PLWHA in Denpasar City. The results of this study are inversely proportional to Carr's (2004) statement, that individuals who have a higher level of happiness generally have a satisfying social life and spend a lot of time socializing. Support from family or people around can have a positive impact on the happiness of PLWHA. Living in a city causes PLWHA to have limited association with the people around them so that it closes the possibility for them to get support or motivation. Moreover, most PLWHA has not opened their status in public because of fears of discrimination, humiliation and rejection from their environment. Status as a PLWHA does not prevent them from working daily to fulfil their daily needs, even though it requires a lot of money in the treatment process, PLWHA can allocate their income for other needs because most of them already have health insurance.

Psychological factors do not affect the happiness of PLWHA in Denpasar City. The condition of PLWHA in accepting the reality of living with HIV AIDS causes their physical and mental conditions to decline. It can also depend on PLWHA in perceiving their health condition after being positive for HIV AIDS. Seligman (2005) states that health that can affect happiness is health that perceived by individuals (subjective health), not actual health (objective health). Fulfilment of access to medicines, adequate health services, and health insurance has not guaranteed the happiness of PLWHA. Drugs that are PLWHA consumption can reduce the development of HIV AIDS, but not a few of them have to withstand the pain of the side effects of the drug. Most PLWHA needs more rest time to maintain their body condition so that they will take a lot of time to recover their health.

Environmental factors directly do not affect the happiness of PLWHA in Denpasar City. PLWHA need adaptation to the disease, the process needs to be supported by a conducive environment. According to Szaflarski (2017), one way to reduce stigma in the environment is to educate the public and involve religious leaders in the development of interventions. The negative stigma elimination intervention is recommended to be the main focus in helping healing PLWHA. Infected with HIV AIDS causes most PLWHA to struggle harder in living their lives. Worsening health conditions can reduce the confidence of PLWHA, so not a few of them sometimes care less about other things in their lives. Good environmental conditions, such as the condition of a decent home, the absence of a threat of natural disasters, and adequate security are not the main priorities in the process of healing and the formation of enthusiasm in PLWHA.

Socio-economic, psychological, and environmental factors are very important for PLWHA, but there is a perception in the minds of PLWHA that HIV AIDS cannot be cured causing no significant influence on the happiness of PLWHA in Denpasar City, therefore not only human relations are needed but also the relationship between PLWHA and God seen from its religiosity. Religiosity has a positive and significant effect on the happiness of PLWHA in Denpasar City, according to Eddington and Shuman's statement (2005) that there is a significant correlation between happiness and one's belief in religion, the strength of one's relationship with God, worship, and participation in religious activities. Religious experience or beliefs that someone has makes a person have a meaningful feeling in his life.

Religion or religion is also able to fulfil one's social needs through religious activities carried out jointly or because they share the same values and beliefs.

Religiosity has fully mediated the relationship between socio-economic factors and environmental factors on the happiness of PLWHA in Denpasar City, while on the other hand religiosity does not mediate the relationship between psychological factors and the happiness of PLWHA in Denpasar City. The difference is due to socio-economic factors and environmental factors have a significant effect on religiosity, while psychological factors have no significant effect on religiosity. Szaflarski (2017) states that religiosity is important for people living with HIV AIDS (PLWHA). The religiosity of PLWHA has been defined as a multidimensional phenomenon that improves quality of life directly and through mediating factors. Religiosity helps PLWHA to cope with stress, especially stigma or discrimination. Religiosity interventions utilizing the power of prayer and meditation can increase the confidence of PLWHA in the community.

### **CONCLUSION AND SUGGESTIONS**

The study of happiness analysis for People Living With HIV-AIDS (PLWHA) people in Denpasar resulted in several conclusions, including happiness in PLWHA in Denpasar based on 148 respondents with details of 62.17 percent of people living with HIV feeling happy, 30.40 percent very happy, and 7.43 percent less happy. Meanwhile, out of 83 PLWHA who had a male percentage of happiness level, 8.44 percent were unhappy, 62.65 percent were happy, and 28.91 percent were very happy, while women were 65 PLWHA with a percentage of happiness level of 6.16 percent were unhappy, 60 percent were happy, and 33.84 percent were very happy. Socio-economic factors and environmental factors have a positive and significant effect on the religiosity of PLWHA in Denpasar City. Meanwhile, psychological factors have no effect on the religiosity of PLWHA in Denpasar City. Socio-economic factors, psychological factors, and environmental factors do not affect the happiness of PLWHA in Denpasar City. Religiosity has a positive and significant effect on the happiness of PLWHA in Denpasar City. Religiosity was fully mediated the relationship between socio-economic factors and environmental factors with the happiness of PLWHA in Denpasar City, while on the other hand religiosity does not mediate the relationship between psychological factors and the happiness of PLWHA in Denpasar City.

HIV AIDS is a disease spread through viruses, the pattern of its spread is like an iceberg so it is very difficult to determine the actual number of people living with HIV AIDS in Denpasar, so awareness from various levels of society is needed to reduce the widespread of this disease. Suggestions from researchers include awareness of PLWHA to seek treatment to prolong their age and always behave positively, in terms of guarding themselves and not intending to spread this disease to others. The community must respect and respect PLWHA by not isolating or discriminating because in essence PLWHA are still God's creatures who have the right to live and be happy. The government, private sector, and religious leaders must play an active role in enlightening PLWHA to "repent for treatment" and arouse the spirit of life to reduce the negative effects of this disease. Besides that, all levels of society must also provide information on the importance of knowledge about HIV AIDS continually and how to mitigate it with the aim of suppressing the spread of HIV AIDS.

### **REFERENCES**

1. Arriza, et.al. 2011. Memahami Rekonstruksi Kebahagiaan pada Orang dengan HIV AIDS (ODHA). *Jurnal Psikologi Universitas Diponegoro* Vol. 10, No 2.
2. Carr, Alan. 2004. *Positive Psychology: The Science of Happiness and Human Strengths*. New York: Brunner-Routledge.
3. Daradjat, Zakiah. 2003. *Ilmu Jiwa Agama*. Jakarta: Bulan Bintang.
4. Eddington, N. dan Shuman, R. 2005. *Subjective Well Being (Happiness)*. *Continuing Psychology Education: 6 Continuing Education Hours*.

5. Ghozali, Imam. 2008. Structural Equation Modeling. Edisi II. Universitas Diponegoro. Semarang.
6. Husein. 2003. Metode Penelitian Untuk Skripsi dan Tesis Bisnis. Cetakan Kedua. Jakarta: PT Raja Grafindo Persada.
7. Jaafar, et.al. 2008. The Index of Happiness of The Malaysian and Indonesian Peoples.
8. Komisi Penanggulangan AIDS Provinsi Bali. 2018. Laporan Situasi Temuan Kasus Kumulatif HIV AIDS di Provinsi Bali Tahun 1987-2017.
9. Lembaga Bantuan Hukum Provinsi Bali. 2018. Laporan Akhir Tahun.
10. Mubarak. 2008. Ilmu Kesehatan Masyarakat: Teori dan Apikasi. Gresik: Salema Medika.
11. Popova, Olga. 2019. Does Religiosity Explain Economic Outcomes ?. Institute for East and Southeast European Studies. ISSN: 2054-9571.
12. Rakhmat, Jalaluddin. 2004. Psikologi Agama: Sebuah Pengantar. Bandung: Mizan.
13. Seligman, M. E. P. 2005. Authentic Happiness: Using The New Positive Psychology to Realize Your Potential for Lasting Fulfi Ilment (Eva Yulia Nukman, Penerjemah). Bandung: PT. Mizan Pustaka.
14. Sugiyono. 2007. Metode Penelitian Bisnis. Bandung: Alfabeta.
15. Szaflarski, Magdalena. 2017. Spirituality and Religion Among HIV-Infected Inviduals. PMC. Curr HIV/AIDS Rep. 2013 Dec. 10(4): 324–332.
16. Thouless, H. 2000. Pengantar Psikologi Agama. Jakarta: Rajawali Press.
17. Todaro, M. P. dan Smith, S. C. 2006. Pembangunan Ekonomi. Edisi Kesembilan: Jilid Kesatu. Jakarta: Erlangga.

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## **CAR LOAN BEHAVIOR AND CUSTOMER RETENTION**

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### **ABSTRACT**

The purpose of this study is to identify customer characteristics, customer behavior, and customer retention in car loan companies. In this study used cross-sectional design as a method. Data obtained through an online survey are processed using a quantitative approach with descriptive analysis. The sampling technique in this study used purposive sampling, with 310 respondents obtained according to Slovin's calculation. The criteria for respondents are the customer who has a good history and already used car loan products or services at least once and for five years since the end of their credit period they never used credit again. Most of car loan companies' respondents are men with 31-40 years old and have married status. The education level of respondents is a bachelor degree with a job as an office employee who has expenditure Rp.4.100.000-5.000.000/month. Most of the respondents have one unit of the car with Toyota brand. For purchasing a car again, credit payment mechanism is still preferred than cash. Top of mind car loan companies is Company X, BCA Finance, and Mandiri Tunas Finance. Media information that is considered most useful for car loan companies is used sales dealer. Most of the respondents currently using BCA Finance because of this company have the interest and low installment. In line with this, the car loan program that considered attractive by respondents is special interest and installments. Regarding the customer retention, most of respondents are interested in reusing, recommending to others, and the company is a priority.

### **KEY WORDS**

Customer behavior, customer retention, car, loan company.

This time most companies focus on strategy for getting new customer compared to retain (Kurniawan 2018). If the companies focus on the strategy of retaining customer, many benefits will be obtained, one of them are the companies will have a loyal customer. Also, the adoption of a strategy that acquires a new customer is more expensive than the strategy of retaining customer (Griffin 1995).

One of the indicators for successful business in a competition is currently assessed by customer retention. This is a challenge by the companies how to keep their customer, so they do not move to competitors. Besides that the companies also need to think of new strategy so that customer will continue to use products or services and will be recommended to others. One marketing strategy that is usually used to build a long relationship between companies and customer is generally known as customer relationship management (Dawes 2009).

For a company that contributes to business line services, of course, it is a challenge in facing current competition. The company must be able to make their customer feel the benefit that is intangible when using their services. Also, the company needs to pay attention to the services provided for the customer because of excellent services indirectly show the positive image to the customer. When the customer feels happy to use the services of the company, they feel satisfied and will be making a repurchase. Kotler (2009) states that satisfaction is a happy feeling of someone because they compare the perceived performance

with customer expectation.

The car loan company in this study is one of the companies in financial services with the main product of financing four-wheel vehicle. In the previous year, the business process strategy carried out by company X focused on a strategy to get a new customer (customer acquisition). This can be seen from the portfolio of customer who has used credit in company X, almost 80% are a new customer, and 20% are existing customer. If the company only focus on how to get a new customer, it is possible that existing customer who has used products or services will switch to competitors.

Currently, there are two groups of an existing customer in company X that are divided based on the parameter of late credit payment (overdue), priority customer (customer with good payment history) and non-priority customer (customer with lousy payment history). The priority is a group which, over the past five years tends to decline. Based on the description, this study is to identify customer characteristics, customer behavior, and customer retention in car loan companies.

## **LITERATURE REVIEW**

Customer behavior is the study of individual, group or organization related to a process in selecting, securing, using, placing products or services, experience or idea to do what is desired and it is an effect (Hawkins et al. 2007). The scope of customer behavior includes many things because customer behavior is a study of the process when individual or group of people choose to use or not products or services to satisfy their needs or desire (Solomon 2007). Based on the definition, it can be concluded that customer behavior is the study of an individual or group in determining to choose, buy, use, and replace a products or services to achieve what is desired.

Lewis (2009) said that customer retention is a customer behavior to maintain something from the company because of the low price or the popularity of a particular brand and other reasons. According to Seth et al. (2005), customer retention is an effort to maintain a business relationship that occurs between service provider and customer. On the other hand, Gustafsson et al. (2005) state that the main factor of customer retention is customer satisfaction. Therefore the company must improve the quality of the products or services offered to the customer so that the customer feels satisfied. Based on these definitions, it can be concluded that customer retention is all activity directed by the company to maintain good and sustainable interaction with the customer. Hume (2006) mentions there are three indicators of customer retention variable are used, that are interested in reusing, and recommending to others and the company is a priority.

## **METHODS OF RESEARCH**

The method used in this study is a cross-sectional design. Data obtained through an online survey are processed using a quantitative approach with descriptive analysis. The sampling technique in this study used purposive sampling, with 310 respondents obtained according to Slovin's calculation. The criteria for respondents are the customer who has a good history and already used car loan products or services at least once and for five years since the end of their credit period they never used credit again. Data collected through this study are primary data that include the characteristics of the customer, customer behavior, and customer retention in a car loan company. Customer retention is an effort to maintain a business relationship that occurs between a service provider and customer with three indicators that are interested in reusing, giving a recommendation to others, and the company being a priority. Data collection used a questionnaire with Likert scale and disseminated in the Google documents.

## **RESULTS AND DISCUSSION**

*Characteristics of Car Loan Customer.* This study was conducted on 310 respondents

who are a customer of company X. Gender is a critical component in marketing, but not all product and service can be differentiated according to this segment. Respondents from this study were dominated by men (82.3%) with age 31-40 years (51.0%). According to the term and condition of the car loan that a person can make a car loan if he meets the criteria for adult age. Based on government regulation, a person is considered an adult age if he is twenty-one years old. If it is not yet twenty-one years old but already married, they included in the adult category. According to Schiffman and Kanuk (2008), the marital status of the respondents is one indicator in determining product to be sold. In this study respondent who had married had a higher percentage (71.6%).

The level of education will significantly affect respondents in choosing the products or services. Also, a person's level of education will influence the values, way of thinking, perspective, and even his perception of a problem. The level of education in this study is divided into four groups, Senior high school, Diploma, Bachelor, and Master. In this study was dominated by Bachelor (65.5%). In the second and third positions, the level of education was a Diploma (20.6%) and Master (12.9%).

A job can describe a person's social status. Besides, a job also affects a person's behavior in buying or using products or services. The job in this study is divided into six groups, student, government employee, office employee, entrepreneur, labor, and profession. The highest percentage of job respondents is in the office employee (43.2%). The second position is occupied by respondents who work as an entrepreneur (25.8%), and the lowest position is occupied by respondents with the labor (1.0%).

Information about expenditure or allowance per month is needed to determine the economic background of the respondents. Based on this information, it can be seen which expenditure segmentation or allowance per month take the most car loan at company X. The monthly expenditure in this study is divided into five range, Rp.1.000.001-2.000.000, Rp.2.000.001-3.000.000, Rp.3.000.001-4.000.000, Rp.4.000.001-5.000.000, and > Rp.5.000.000. Expenditure per month issued by respondents in this study are dominated by Rp.4.000.001-5.000.000 (54.8%), the second position is Rp.3.000.001-4.000.000 (21.0%), while the third position is > Rp.5.000.000 (15.5%). The profile of the respondents in this study is presented in Table 1.

Table 1 – Profile of respondents based on demographic aspects

Characteristics	Category	Amount (n)	Percent (%)
Gender	Man	255	82.3
	Woman	55	17.7
Age	< 20 Years	14	4.5
	20 - 30 Years	47	15.2
	31 - 40 Years	158	51.0
	> 40 Years	91	29.4
Marital Status	Married	222	71.6
	Single	88	28.4
Education	Senior High School	3	1.0
	Diploma	64	20.6
	Bachelor	203	65.5
	Master	40	12.9
Job	Office Employee	134	43.2
	Entrepreneur	80	25.8
	Government Employee	60	19.4
	Profession	19	6.1
	Student	14	4.5
	Labor	3	1.0
Expenditure	Rp.1.100.000-2.000.000	14	4.5
	Rp.2.000.001-3.000.000	13	4.2
	Rp.3.000.001-4.000.000	65	21.0
	Rp.4.000.001-5.000.000	170	54.8
	> Rp.5.000.000	48	15.5

*Customer Car Loan Behavior.* In this study, a vehicle is considered as one of the critical investment in life. Information about the respondent's vehicle ownership both from the

number of vehicles owned and the brand is needed to find out how much the vehicle asset. Based on this information can be used as a reference for company X to make new product according to the segmentation and vehicle brand preferred by respondents. This study result related to the number of vehicles owned is attached in Table 2.

Table 2 – Number of vehicles owned by respondents

Number of Vehicles	Amount (n)	Percent (%)
1	248	80.0
2	54	17.4
>2	8	2.6
Total	310	100.0

In this study, the number of vehicles owned is divided into three groups, 1, 2, and > 2 unit. Most respondents of company X have one vehicle (80.0%). The second position is occupied by a group of respondents who have two vehicles (17.4%), and in the third position, only a small proportion of respondents have more than two vehicles (2.6%). Besides that, in Table 3 will show the brand of vehicle owned by the respondents.

Table 3 – Brand of vehicle owned by respondents

Brand	Amount (n)	Percent (%)
Toyota	197	63.5
Daihatsu	80	25.8
Honda	17	5.5
Mazda	7	2.3
Nissan	3	1.0
Isuzu	2	0.6
Mitsubishi	2	0.6
Suzuki	2	0.6
Total	310	100.0

Vehicle brand in this study is grouped into Toyota, Daihatsu, Honda, Mazda, Nissan, Isuzu, Mitsubishi, and Suzuki. Based on the brand groups, most respondents had a vehicle with Toyota (63.5%). The next position is that the respondents owned a vehicle with Daihatsu (25.8%), and the third position is Honda (5.5%). The result of this study shows that currently, most of the respondents still use the credit payment mechanism if they want to make a car purchase, which is attached in Table 4.

Table 4 – The number of vehicle purchased through credit

Number of Vehicle	Percent (%)			Percent Total (%)
	1	2	>2	
1	100.0	0.0	0.0	100.0
2	16.7	83.3	0.0	100.0
>2	0.0	62.5	37.5	100.0

All respondents had one car that purchased on credit (100.0%). Respondents who had two cars mostly bought both cars on credit (83.3%), and only a few respondents bought one car through credit (16.7%). Respondents who have > 2 unit of cars, most of them buy two units of the cars on credit (62.5%), and some respondents buy > 2 unit of cars using credit (37.5%).

Several reasons cause the behavior of respondents preferred to use a credit mechanism than cash such as cashback, additional car accessories, and vehicle insurance protection during the credit period. Also, top of mind car loan companies, according to respondents are companies X, BCA Finance, and Mandiri Tunas Finance, which are attached in Table 5.

Respondents knew more about company X through sales dealer (72.0%). Respondents knew more about BCA Finance from media print (37.2%). Media information about Mandiri Tunas Finance mostly comes from friends (32.3%). As it turns out at this time, most of the

respondents were doing credit at BCA Finance (36.1%). In the second position, the respondents stated that they were doing credit at BFI Finance (31.6%) and in the third position, the respondent's credit at Mandiri Tunas Finance (21.0%). The information is attached in Table 6.

Table 5 – Top of mind car loan company

Car Loan Company	Media Information (%)					Percent Total (%)
	Event	Family	Media Print	Sales dealer	Friends	
Perusahaan x	12.4	6.8	1.9	72.0	6.8	100.0
BCA Finance	27.7	21.3	37.2	13.8	0.0	100.0
Mandiri Tunas Finance	27.4	11.3	29.0	0.0	32.3	100.0

Table 6 – Credit loan company currently use by respondents

Credit Loan Company	Amount (n)	Percent (%)
BCA Finance	112	36.1
BFI Finance	98	31.6
Mandiri Tunas Finance	65	21.0
Mandiri Utama Finance	35	11.3
Total	310	100.0

The reason for respondents using BCA Finance because of low interest and installment. They had used it before, and the credit process was easy. BCA Finance has a lower interest rate compared to other credit companies with one to two percent interest rate gap. Besides, the most important program for respondents is attached in Table 7.

Table 7 – Special program interesting by respondents

Special Program	Amount (n)	Percent (%)
Special Interest Rate	133	62.4
Loyalty Program	63	29.6
Credit Plafond	17	8.0
Total	213	100.0

A special program that is considered the most interesting by respondents is special interest rate (62.4%) than a loyalty program (29.6%) and credit plafond (8.0%). If the respondents get a special interest rate, it will affect the installment per month that will be paid.

*Customer Retention.* There are three indicators of customer retention in this study which is attached in Table 8.

Table 8 – Customer retention indicator distribution

Symbol	Indicator	Percent (%)	
		Disagree	Agree
CR1	1. Interested in reusing	18.3	81.7
CR2	2. Giving recommendation to others	19.7	80.3
CR3	3. The company is a priority	16.6	83.4

The percentage of respondents answer according to the score level classification, and selection from each statement about customer retention show that in the first indicator most respondents (81.7%) stated that they were using company x if there would apply for a car loan (CR1). In addition to the second indicator, most respondents (80.3%) stated that they were willing to recommend company x to others (CR2). The last indicator of most respondents (83.4%) is willing to make company x as a priority when they are going to apply for car loan again (CR3).

## CONCLUSION

Most respondents of car loan company are men with age 31-40 years old and have married status. The education level of the majority of respondents is a bachelor degree with

a job as an office employee who has expenditure Rp.4.100.000-5.000.000/month. Most of the respondents have one unit of the car with Toyota brand. For purchasing a car again, credit payment mechanism is still preferred than cash. Top of mind car loan companies is Company X, BCA Finance, and Mandiri Tunas Finance. Media information that is considered most useful for car loan companies is used sales dealer. Most of the respondents currently using BCA Finance because of this company have an interest and low installment. In line with this, the car loan program that considered attractive by respondents is special interest and installment. Regarding the customer retention, most of respondents are interested in reusing, recommending to others, and the company is a priority. Suggestions for further research should be able to conduct research on other financing product and use the segmentation of other respondents.

## REFERENCES

1. Dawes J. 2009. The Effects of Service Price Increases on Customer Retention: The Moderating Role of Customer Tenure and Relationship Bread. *Journal of Services Research*. 11: 232.
2. Griffin J. 1995. *Customer Loyalty, How to Earn It and How to Keep It*. San Fransisco: Internet. [15 December 2018]. Available on: <https://www.scirp.org/>
3. Gustafsson A, Johnson MD, Roos I. 2005. The Effects of Customer Satisfaction, Relationship Commitment Dimensions and Triggers on Customer Retention. *Journal of Marketing*. 69: 210.
4. Hawkins D, Roger J, Coney. 2007. *Consumer Behavior*. New York: The McGraw-Hill Companies Inc.
5. Hume, Margee. 2006. Exploring Repurchase Intention in a Performing Arts Context: Who Comes? And Why Do They Come Back. *International Journal of Nonprofit and Voluntary in Marketing Sector*.
6. Kotler P. 2009. *Marketing Management*. Jakarta (ID): Gramedia.
7. Kurniawan D. 2018. Customer acquisition vs customer retention: [15 December 2018]. Available on: <https://www.majalahfranchise.com/article/260/customer-acquisition-vs-retention>.
8. Lewis M. 2009. The Effect of Shipping Fees on Customer Acquisition, Customer Retention, and Purchase Quantities. *Journal of Retailing*. 82: 13-23.
9. Schiffman LG, Kanuk LL. 2008. *Consumer Behavior*. 7th Edition. Jakarta (ID): Indeks.
10. Seth N, Deshmukh SG, Vrat P. 2005. Service Quality Models: A Review. *International Journal of Quality & Reliability Management*. 22(9): 913-949.
11. Solomon. 2007. *Consumer Behavior: Buying, Having, and Being*. NJ: Prentice Hall.

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## **THE EFFECT OF EMOTIONAL SELF-EFFICACY ON CAREER SATISFACTION WITH SELF-PERCEIVED EMPLOYABILITY AS A MEDIATOR VARIABLE IN Y GENERATION**

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### **ABSTRACT**

This study aims to examine whether there is an effect of emotional self-efficacy on career satisfaction and self-perceived employability as mediator variables in Y Generation. The definition of career satisfaction in this study is based on the explanation of Judge et al. (1995, Seibert et al., 2013) Emotional self-efficacy uses the theory of Kirk, et al. (2011, Pool & Qualter, 2012). While self-perceived employability uses a theory developed by Rothwell & Arnold (2007). This research was conducted on permanent employees in various companies with a total of 51 subjects. Data were obtained using survey methods used a scale of career satisfaction (Seibert et al., 2013) which consisted of 12 items, the full version of the scale of emotional self-efficacy (Kirk et al., 2008) consisting of 32 self-perceived items and questionnaires employability (Rothwell & Arnold, 2007) which consists of 11 items. Data analysis was performed using simple and multiple linear regression methods based on the mediation test analysis techniques of Baron and Kenny (1986). The results of the analysis show that self-perceived employability mediates the effect of emotional self-efficacy on career satisfaction on Y Generation.

### **KEY WORDS**

Career satisfaction, emotional self-efficacy, self-perceived employability, generation Y.

At present, changes in the demographic of the workforce are one of the realities experienced. The demographic change in question is a change in the dominance of generations in the world of work. The world of work is currently dominated by Generation X, this is because the Generation of Baby Boomers will retire (Smola & Sutton, 2002). On the other hand, Generation Y has also worked and most others are preparing to join the world of work (Lancaster & Stillman, 2002 in McDonald & Hite, 2008). Demographically, the Baby Boomers population will decline, the number of Generation X workers will be rivaled by the increasing number of Generation Y. Over time, Generation Y will be the youngest generation that will dominate the workforce in the world. According to Dhawan (2015) he predicts that by 2025, Generation Y will dominate 75% of the total number of workers in the world. Meanwhile, predictions according to BPS (Central Statistics Agency) in 2020, the population of Indonesia with an age range of 20 to 40 years is around 83 million people, equivalent to 34% of the total population of Indonesia (Ali & Purwandi, 2016).

The reality of changing the demographic conditions of the workforce is in fact not easy to manage. It is not easy for Generation X and Baby Boomers to employ Generation Y who have different views, hopes and definitions from them about careers (Lynch, 2008). According to Lynch (2008) Generation Y in general, is more active in leadership than just following orders and controls from superiors. Generation Y is able to be more flexible in building relationships with others and liking work with collaboration methods (Lynch, 2008). Another character that is so attached to Generation Y is that they have different meanings for career success (Qamariyah, 2016). McDonal and Hite (2008) state that subjectively, Generation Y feels their career success if they can enjoy and feel happy with their position or position at work. The Generation Y's main focus in a career is not just financial but an increase in its personal abilities (Lynch, 2008). So based on this, Generation Y defines that career success for them is reflected in their satisfaction in career satisfaction (Harrington et

al., 2015). Individual career satisfaction is the main indicator that can measure intrinsic and extrinsic aspects of positive feelings felt by each individual (Greenhaus, et al., 1990).

Nevertheless, there are several opinions that state that Generation Y does not feel satisfied in a career. According to Lockhart (2012), Indonesian and Singapore employees are considered the most dissatisfied workers in the world. Due to the dissatisfaction, Generation Y employees are considered to have low career engagement with the organization because they feel that their expectations of the organization are not fulfilled and cause them not to feel happy with the work they are doing (Karobka, 2015; Ratanjee & Edmond, 2013). The low workload of Generation Y also has an impact on the turnover rate experienced by the company. The high level of turnover intention can be caused by employee dissatisfaction with his expectations of the organization (Prahadi, 201; Izzati, 2015).

Individual satisfaction in a career is important to study because this aspect is an evaluation of individual subjective career success (Judge et al., 1995). When individuals can achieve success in their career subjectively, it will affect various other psychological constructs. Some studies reveal that subjective career success can reduce turnover intentions (Tschopp & Grote, 2014; Dyke & Duxbury, 2010), increase work commitment (Simo, et al., 2010; Dyke & Duxbury, 2010), and improve subjective well-being (Ewis, 2015; Keller, et al., 2014; Wiese, et al., 2002) on individuals. Based on that, it is necessary for companies or organizations to pay attention to career satisfaction because when individuals have high career satisfaction will tend to be diligent in undergoing a career path and vice versa if low career satisfaction tends to arise to make plans and strategies and new career behavior (King, 2004, in Seibert et al., 2013). In order for high career satisfaction to be achieved, emotional intelligence is needed to be able to control it. Emotional intelligence is a term to describe emotional adaptive functions, while career satisfaction needed is more subjective so that more is needed is the individual's confidence in his ability to regulate his emotions or commonly called emotional self-efficacy (Pool & Qualter, 2013). In addition, the tendency of high and low career satisfaction and emotional self-efficacy will lead to a tendency of the ability of individuals to maintain their jobs or even get the desired job or better known as self-perceived employability (Rothwell & Arnold, 2007).

Based on the explanation above, the authors in this study used self-perceived employability as a mediator variable in connecting emotional self-efficacy and career satisfaction. This research was conducted to prove the relationship of the three variables. Based on the above explanation a question arises, whether the effect of emotional self-efficacy on career satisfaction on Y Generation is mediated by the role of self-perceived employability.

## **LITERATURE REVIEW**

Career Satisfaction is interpreted as a form of individual subjective evaluation of the psychological and material conditions obtained from the accumulation of work experience that he lived (Judge et al., 1995 in Seibert et al., 2013). Career satisfaction is part of the career self-regulatory process where individuals can formulate their career goals, develop career plans and implement them, and make efforts for the advancement of their careers. Individuals who have high career satisfaction tend to be diligent in undergoing their career path, while individuals with low levels of career satisfaction tend to make new plans, strategies, and career behaviors (King, 2004, in Seibert et al., 2013).

Emotional Self-Efficacy is a combined term of two concepts, namely Emotional Intelligence and Self-Efficacy. Emotional intelligence is a term used to describe emotional adaptive functions, while self-efficacy is an individual belief in its ability to regulate and take actions needed to produce certain achievements (Bandura, 1997, in Kirk et al., 2008). Emotional self-efficacy is part of emotional intelligence because the character and individual perceptions of emotional functions that are owned are also included in aspects of emotional intelligence (Petrides & Furnham, 2003, in Kirk, et al., 2008). Kirk, et al. (2011, in Pool & Qualter, 2012) defines Emotional Self-Efficacy as a belief in one's emotional abilities. Although emotional self-efficacy is included in emotional intelligence, both are not really the

same (Kirk et al., 2008). Kirk, et al. (2008) also argue that there are aspects of self-perception and character that are not included in emotional self-efficacy. The focus of emotional self-efficacy is the individual's belief in his ability to regulate emotions which is operationalized with 4 abilities in emotional intelligence, namely realizing, using, understanding and managing emotions (Pool & Qualter, 2013). Someone who has emotional self-efficacy will have the ability to control their emotions (Bandura, et al., 2003., in Pool & Qualter, 2013).

Self-Perceived Employability at the conceptual level, Rothwell & Arnold (2007) defines employability as the ability of individuals to maintain the work they have or get the desired job. At the analytical level, this definition is the beginning of measuring employability based on self-rated employability (SRE) (Berntson et al., 2006). SRE discusses individual beliefs about how easy it is to get a new job (Rothwell & Arnold, 2007), or individual perceptions about the possibility of getting a new job (Berntson et al., 2006).

In general, employability is defined as the ability of individuals to obtain and retain their jobs, or obtain desired jobs (Fugate et al. 2004; Rothwell & Arnold, 2007). This ability comes from individual knowledge about skills, knowledge of the labor market, and adaptability (Van Dam, 2004). Individuals are said to be employable if they can utilize the factors within themselves effectively to negotiate environmental demands (Fugate, et al., 2004).

### METHODS OF RESEARCH

The subjects in this study were Generation Y aged 21 to 36 years and included permanent employees in a company. Sampling in this study using non-probability techniques with accidental sampling method. The use of this sampling technique allows samples to be taken randomly, so that bias can occur. The choice of subject in his research is sometimes chosen because it is known by the author. To reduce the likelihood, the subject in this study was a subject unknown to the author. Researchers also try to get samples of different types of work environments and diverse ages but still within the range of predetermined criteria.

The number of samples in this study amounted to 51 subjects with a percentage of men 43.13% namely as many as 22 people and women 56.87%, as many as 29 people. The average subject is 25 years old from various companies, namely, government agencies, state-owned companies, private sector, and independent businesses. The subjects in this study were also dominated by employees of private companies with a total subject of 30 people or 62.5% of the total subject. The 37.5% of subjects in this study had a working period of 1 to 2 years.

### CONCEPTUAL FRAMEWORK

Based on empirical studies conducted, it is assumed that the effect of emotional self-efficacy on career satisfaction and self-perceived employability in Y Generation. The conceptual framework is presented in Figure 1.

Based on the conceptual framework above, the proposed research hypothesis is:

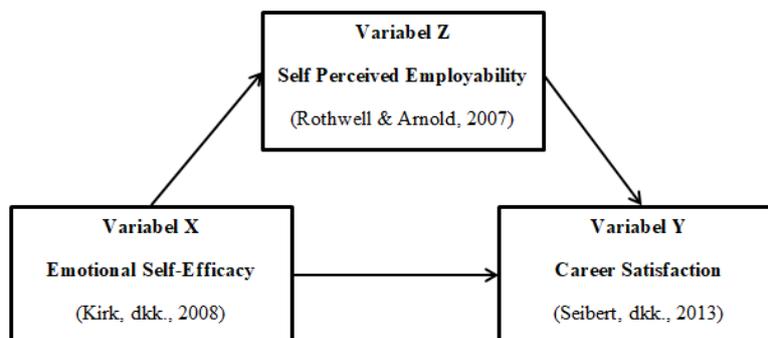


Figure 1 – Conceptual Framework

Ha: There is an effect of Emotional self-efficacy on Career Satisfaction with Self Perceived Employability as a mediator variable in Generation Y.

Ho: There is no effect of Emotional self-efficacy on Career Satisfaction with Self Perceived Employability as a mediator variable in Generation Y.

## RESULT OF STUDY

Data analysis in this study used the mediation technique of Baron and Kenny (1986) which stated that the procedure for analyzing mediator variables in a simple way can be done through regression tests. However, before conducting a regression analysis, researchers tested the correlation with the research variables. After the correlation test, the researcher conducted a simple linear regression test and continued by conducting multiple linear regression tests.

Table 1 – Correlation Statistics Results

n/n		1	2	3
1	Emotional Self-Efficacy	1	0,301	0,341
2	Self Perceived Employability	0,301	1	0,533
3	Career Satisfaction	0,341	0,533	1

Based on the results of the correlation test above, the strength of the relationship between the variables of emotional self efficacy and self-perceived employability is classified as weak, which is equal to 0.301. The strength of the relationship between the variable emotional self efficacy and career satisfaction is low, which is equal to 0.341. In contrast, the strength of the relationship between self-perceived employability variables and career satisfaction is classified as moderate with a value of 0.533. The three correlation results in this study are classified as significant with a significance value of three less than 0.05 at a significance level of 5%. It is seen that the direction of the relationship of all variables is positive. Thus, when the career satisfaction variable increases, the self-perceived employability and career satisfaction variables will also increase. Similar to emotional self efficacy, when the self-perceived employability variable increases, the emotional self-efficacy and career satisfaction variables will also increase.

Table 2 – Results of Regression Analysis

No	Regression Model	R Square	Value B	Beta	Sig.	Information
1	Regression X to Y	0,116	0,172	0,341	0,014	Significant
2	Regression X to Z	0,091	0,138	0,301	0,016	Significant
3	Regression X and Z to Y	0,320	0,100 (X) 0,519 (Z)	0,199 0,473	0,118 0,000	Not Significant Significant

According to Baron and Kenny (1986), the influence of independent variables on the dependent variable with the role of mediator variables will be fulfilled if there are three conditions, namely (1) estimating the estimated predictor value of the dependent variable regression (Y) with an independent variable (X) as a predictor. At this stage, it is expected that the resulting value is significant, (2) estimating the estimated value of the predictor from the mediator variable regression (Z) with an independent variable (X) as a predictor. At this stage, it is expected that the resulting value is also significant, (3) regression of the dependent variable (Y) with the independent variable (X) and the mediator variable (Z) as a predictor. At this stage, the prediction of Z against Y is expected to be a significant value, while the prediction of X against Y is expected to be insignificant. If the three conditions above are met, the magnitude of the effect of the independent variable (X) on the dependent variable (Y) in the third equation must be smaller than the magnitude of the influence of the two in the first equation to get complete mediation.

Based on the table above, it is known that the results of regression analysis are fulfilled in the first and second conditions with estimated predictors of 0.172 and 0.138 and the

results obtained are significant. Whereas in the third condition, the mediator variable is proven to affect the dependent variable with control of the independent variable. This is indicated by the results that are not significant in the multiple regression model  $x$  with  $y$  with a significance level that is equal to 0.118 with an estimated predictor value of 0.100 and  $Z$  to  $Y$  multiple regression with a significance level of 0.000 with an estimated predictor value of 0.533. The estimated value of the predictor  $x$  against  $y$  in the third equation of 0.099 has proved to be greater than the first equation. Therefore, the research hypothesis which states that there is an influence of emotional self-efficacy on career satisfaction and self-perceived employability as mediator variables in the  $Y$  generation is accepted and included in the type of perfect mediation.

## **DISCUSSION OF RESULTS**

The research conducted this time aims to determine the effect of emotional self-efficacy on career satisfaction through the role of mediators from self-perceived employability in Generation  $Y$ . Based on the results of regression analysis obtained in this study, it is known that self-perceived employability can edit the influence of emotional self efficacy towards career satisfaction. This is evidenced by the four requirements in the mediation test Baron and Kenny (1986) fulfilled.

The results of the analysis in the first equation state that ESE has an effect on career satisfaction. But it turns out that ESE's influence on career satisfaction tends to be low. So that it is proven that ESE's relationship with career satisfaction requires other variables to strengthen the relationship between the two. This indicates that even though  $Y$  Generation has confidence in its emotional abilities, it will not necessarily be satisfied with its career.

The results obtained in the second equation prove that ESE has an effect on SPE. This is in line with the results of Pool and Qualter (2013) where Generation  $Y$  employees who have higher ESE levels see themselves as individuals who are able to be employed. This indicates that the individual's confidence in his emotional abilities influences the self-perceived self-employability of the individual. Individuals who are more confident with their ability to accept, use, understand and manage their emotions will see themselves better to be employed. Individuals who are more confident with their emotional abilities view themselves as effective communicators in interacting with coworkers so that they are able to manage personal networks and be more valued by others (Pool & Qualter, 2013).

In the third equation, it proves that ESE's influence on career satisfaction will be stronger if it is mediated by SPE. In line with the first and second feelings, even though Generation  $Y$  has confidence in their emotional abilities, they will not necessarily be satisfied with their careers. The results of the study prove that when an individual feels confident in his ability to use and manage emotions, he will be easier to interact with his work environment, which guides the individual to feel that he has a better ability to be employed. When the individual's self-perception of the ability to work is good, then he will feel more satisfied in his career.

## **CONCLUSION AND RECOMMENDATIONS**

Based on a series of analyzes conducted by researchers, it can be concluded that self-perceived employability (SPE) can mediate the effect of emotional self-efficacy (ESE) on career satisfaction. Individuals who believe in their ability to use and manage emotions will have a better perception of their ability to work so that it will increase their satisfaction in a career. Thus, the alternative hypothesis ( $H_a$ ) in this study was accepted. In line with this, the results of research on Generation  $Y$  show a positive correlation between emotional self-efficacy and self-perceived employability and career satisfaction.

In line with the results of the research, the authors propose several suggestions, (1) further research is expected to find out other variables that can be mediators for the relationship of emotional self-efficacy and career satisfaction in Generation  $Y$  such as protean career behavior and proactive career behaviors. (2) career satisfaction will be better

if measured by a multidimensional perspective, namely, dimensions of satisfaction with income, power and status, skill and development and employability, (3) the weakness of this study is to use self-report as a measure of emotional self-efficacy and self-perceived employability, this can actually lead to bias, so further research is expected to be able to conduct an observational method to observe what is done by individuals who have high emotional self-efficacy in their work environment.

## REFERENCES

1. Ali, H., & Purwandi, L. (2016). Indonesia 2020: Urban middle class millennial. Alva Research Center, 5-7.
2. Berntson, E., Sverke, M., & Marklund, S. (2006). Predicting perceived employability: human capital or labour market opportunities?. *Economic and Industrial Democracy*, 27(2), 223-244.
3. Dacre Pool, L. (2013). Emotional self-efficacy, graduate employability, and career satisfaction: Testing the associations. *Australian Journal of Psychology*, 65(4), 214-223.
4. Dacre Pool, L., & Qualter, P. (2012). The dimensional structure of the emotional self efficacy scale (ESES). *Australian Journal of Psychology*, 64(3), 147-154.
5. Dhawan, E. (2012). Busting Gen Y and Gender Myths. Harvard Center Public Leadership, 2-3.
6. Fugate, M., Kinicki, A. J., & Ashforth, B. E. (2004). Employability: A psycho-social construct, its dimensions, and applications. *Journal of Vocational behavior*, 65(1), 14-38.
7. Greenhaus, J. H., Parasuraman, S., & Wormley, W. M. (1990). Effects of race on organizational experiences, job performance evaluations, and career outcomes. *Academy of management Journal*, 33(1), 64-86.
8. Harrington, B., Van Deusen, F., Fraone, J. S., & Morelock, J. (2015). How Millennials Navigate Their Careers. Boston College Center for Work & Family.
9. Izzati, N. N., (2015). Makna komitmen organisasi pada generasi y (Skripsi). Surabaya: Universitas Airlangga, Fakultas Psikologi.
10. Kirk, B. A. (2008). Development and preliminary validation of an emotional self-efficacy scale. *Personality and Individual Differences*, 45(5), 432-436.
11. Korobka, T. (2015). Why 70 percent of millennials are unhappy with their jobs. Sheknows [on-line]. Diakses pada 5 Agustus 2016 <http://www.sheknows.com/>
12. Lockhart, J. (Maret, 2012). Indonesian millennials are the unhappy with their jobs. Business insider [on-line]. Diakses pada 5 Agustus 2016 dari <http://www.businessinsider.com.au/>
13. Lynch, A. J. (2008). ROI on generation Y employees. *Bottom Line Conversations*, 2-8.
14. McDonald, K. S., & Hite, L. M. (2008). The next generation of career success: Implications for HRD. *Advances in Developing Human Resources*, 10(1), 86-103.
15. Pool, L.D. (2013). Emotional self-efficacy, graduate employability, and career satisfaction: testing the associations. *Australian journal of psychology*, 65, 214-223.
16. Prahadi, Y. Y., (2015). Survei: gen y hanya tahan setahun di satu perusahaan. SWA [on-line]. Diakses pada 5 Agustus 2016 dari <http://swa.co.id/swa/trends/management/survei-gen-y-hanya-tahan-setahun-di-satu-perusahaan>.
17. Rothwell, A., & Arnold, J. (2007). Self-perceived employability: development and validation of a scale. *Personnel Review*, 36(1), 23-41.
18. Seibert, S. E., Kraimer, M. L., Holtom, B. C., & Pierotti, A. J. (2013). Even the best laid plans sometimes go askew: Career self-management processes, career shocks, and the decision to pursue graduate education. *Journal of Applied Psychology*, 98(1), 169.
19. Smola, W. K., & Sutton, C. D. (2002). Generational differences: Revisiting generational work values for the new millennium. *Journal of organizational behavior*, 23(4), 363-382.
20. Van Dam, K. (2004). Antecedents and consequences of employability orientation. *European Journal of Work and Organizational Psychology*, 13(1), 29-51.

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## **A CRITICAL REVIEW ON SHORT TERM IMPACT OF DEMONETISATION ON INCLUSIVE GROWTH OF INDIA**

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### **ABSTRACT**

In this paper, we focused on the impact of demonetisation on unorganized sector by which the inclusive growth of our country falls down. All the research and study shows that the inclusive growth of India has been affected in short run after decision implemented by the Govt. of India. GDP growth has been pegged at 7% in quarter ending December 2016, while the growth for 2016-17 has been estimated at 7.1%. This is in various estimates, including the International Monetary fund's report reveals that the growth of manufacturing sector will be decline in next quarter; CSO reports also depict the picture of GDP's downturn trend of manufacturing sector. The researchers also analyse the data and find that demonetisation affected the inclusive growth due to which the people engaged in unorganised sector loosed their jobs. The Government of India announced that the Rs 500 and Rs. 1000 denominated currency notes will cease to be legal tender. The move was targeted towards tackling inclusive growth, unorganized sectors and black money. After initial euphoria, questions began to emerge that the government of our country still does not have the proper report of unorganized sector's data as the government has answerable machinery. But the demonetisation may be good for the organized sector of the India economy.

### **KEY WORDS**

Demonetisation, digitalization, unorganized sector, inclusive growth, GDP.

Indian economy, unorganized sector and Demonetisation: Most people in India earn a livelihood by working for an income. They work for one employer or many, or as self-employed or own account workers or as contract workers, home-based workers etc. in every sector in the economy. The Unorganized sector constitutes largest portion of the economy in terms of value addition, savings, investments etc. The share of organized sector is around 12-14 percent in our national income. In the case of United States, the share of organized sector is nearly 70 percent and the population of U.S. is approx. 42 crore, which is less than as compared to 125 crore population of India. So that is the main reason behind the dependence of Indian Economy on unorganized sector. The unorganized sector's organisations are major players in such activities as manufacturing, agriculture, construction, transport, trade, hotels and restaurants, and business and personal services.

The unorganized sector plays a significant role in the economy in terms of employment opportunities and poverty alleviation. This sector generates income-earning opportunities for a large number of people. In India, a large section of the total workforce is still in the unorganized sector, which contributes a sizeable portion of the country's net domestic product.

The economy of India is the sixth-largest economy in the world measured by nominal GDP<sup>1</sup> and the third-largest by purchasing power parity (PPP). And the outlook for short-term growth is also good as according to the IMF, the Indian economy is the "bright spot" in the global landscape. It adversely affects the unorganized sector due to demonetisation.

Demonetisation<sup>2</sup> is the act of stripping a currency unit of its status as legal tender. It occurs whenever there is a change of national currency: The current form or forms of money is pulled from circulation and retired, often to be replaced with new notes or coins. Sometimes, a country completely replaces the old currency with new currency. The opposite of demonetisation is remonetisation, in which a form of payment is restored as legal tender.

Although the history of demonetisation in India from the time when various rulers ruled over this country:

- On 12<sup>th</sup> January 1946, Rs.500, Rs.1000 and Rs.10, 000 notes were declared as invalid as legal tender;
- The new notes of Rs.1000, Rs.5000 and Rs.10, 000 came into economy in 1954;
- On 16<sup>th</sup> January 1978, at that time the finance minister was H.M. Patel. The Morarji Desai led-Janta party demonetized bank notes of Rs.1000, Rs.5000 and Rs.10, 000;
- To control the flow of inflation RBI introduce a new bank note of Rs.500 into the economy in 1987;
- The current impact of demonetisation on our country on 8<sup>th</sup> November 2016, the old bank notes of Rs.500 and Rs.1000 were banned from being legal tender and new notes of Rs.2000 were launched in 10th November.

The legal basis for the order demonetizing currency can be found in section-26 of the Reserve Bank of India Act 1934. Under sub section (2) of this section, the union government is given the power to declare that any notes issue by the Reserve bank will no longer be legal tender.

Many countries have experimented with the process of demonetisation in the past. Some countries benefited tremendously from the move while some terribly failed at it. Here it is a list of some countries that have implemented the policy of demonetisation:

- U.S. (1969);
- Britain (1971);
- France;
- Myanmar (1987);
- Congo (1990);
- Australia (1996);
- Zimbabwe;
- North Korea (2010);
- Pakistan (2015).

*Short term impact of Demonetisation on Inclusive Growth (IG)*<sup>3</sup>. The purpose of this paper is to define the impact of demonetisation on Inclusive Growth. Rapid poverty reduction requires inclusive growth that allows people to contribute to and benefit from economic growth. The statement is in line with the OECD<sup>4</sup> development assistance committee policy statement on pro-poor growth. The inclusive growth approach takes a longer term prospective on productive employment rather on direct income redistribution, as a means of increasing incomes for excluded groups. In the short term, government could use income distribution schemes to reduce the negative impact of policies on the poors for their growth and development, but the government scheme can't be an answerable in the long term and can be problematic also in the short term. In poor countries such scheme can impose significant burden on unorganized sectors also, and it is theoretically impossible to reduce poverty through redistribution in countries where average income falls below US\$ 700 per

<sup>1</sup> <http://statisticstimes.com/economy/countries-by-projected-gdp.php>

<sup>2</sup> <http://debt diagnosis.com/2016/12/06/demonetisation-is-the-act-of-stripping-a-currency-unit-of-its-status-as-legal-tender/>

<sup>3</sup> <http://siteresources.worldbank.org>

<sup>4</sup> <http://www.oecd.org/inclusive-growth/about/inclusive-cities-campaign/all-on-board-for-inclusive-growth-in-cities-remarks-at-habitat-iii.htm>

day. According to a recent OECD study, even in developed countries, redistribution schemes can't be the only response to rising poverty rates in certain segment of the population. Mainly the demonetisation in the country deals with the distribution of income among the unorganized sectors. Policies for inclusive growth are an important component of most government strategies for sustainable growth.

*Unorganized sectors*<sup>5</sup>. India's workforce comprises nearly 86 per cent in the unorganised segment, while only one-fifth of the non-farm workers are found in the organized segment.

The unorganised sector covers most of the rural labour and a substantial part of urban labour. It includes activities carried out by small and family enterprises, partly or wholly with family labour. In this sector wage-paid labour is largely non-unionised due to casual and seasonal nature of employment and scattered location of enterprises, the contributions made by the unorganised sector to the national income, is very substantial as compared to that of the organised sector. It adds more than 60% to the national income while the contribution of the organised sector is almost half of that depending on the industry. Due to the, Demonetisation the inclusive growth of the unorganized sector falls down rapidly.

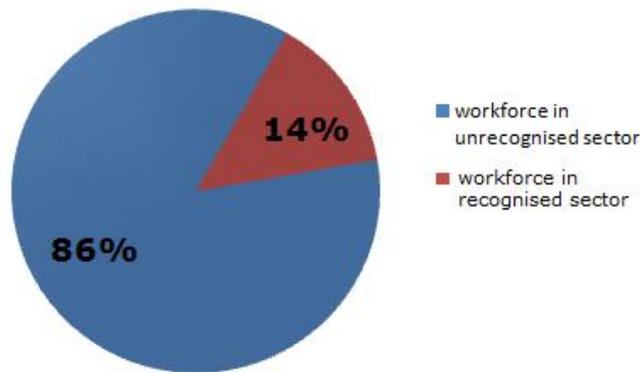


Figure 1 – Share of organised and unorganised workers in total workforce of 456,5 millions

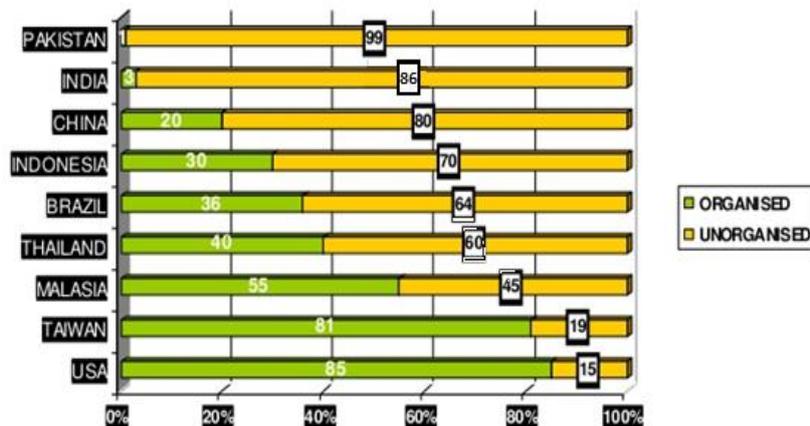


Figure 2 – Workforce by countries

On the above figure, our country which bifurcate the sectors of Indian economy as unorganized and organized sectors. We took the above data of different countries and we found that there is 99% unorganized sector in Pakistan. On the other hand, India has the second largest unorganized sector in the world.

*Impact of demonetisation on inclusive growth.* The unorganized sector in India will be the worst hit by the November demonetisation of high value currency. Under the organized

<sup>5</sup> <http://economictimes.indiatimes.com/jobs/why-93-of-indias-workforce-is-trapped-in-unorganized-sector/articleshow/16915839.cms>

sectors, most of the industries were gone through the shortage of cash which is required to run the business. “The unorganized sector is expected to bear higher brunt of demonetisation”. Centrum Wealth Research<sup>6</sup> said in a report. In this matter, Centrum said results for the 3rd quarter ending December have become irrelevant post-demonetisation. “In the post-demonetized India, investors would be more focused on the subsequent quarterly (March 2017) season. Quarter four 2016-17 earnings season would be a real barometer of underlying economic recovery, as it would have the full quarter impact of demonetisation, “it said. On November 8, the government announced that Rs.1, 000 and Rs.500 notes were no longer legal tender, saying the move was aimed against black money counterfeit currency and terror financing.

*Data collection and analysis*<sup>7</sup>. In this research paper we collect the qualitative primary data and secondary data through the reliable sources of ground reality and authentic reports of government institutions. We took the secondary data from the western U.P. and took a survey of demographic analysis, we asked many questions from almost 1000 people and they said that, they were not satisfied from the decision of demonetisation because of many reasons such as the workers and labourers found difficulties because they lose their jobs. The primary data collect from Meerut, Ghaziabad and Muzaffarnagar had also focused on the data analysis regarding the adverse impact of demonetisation.

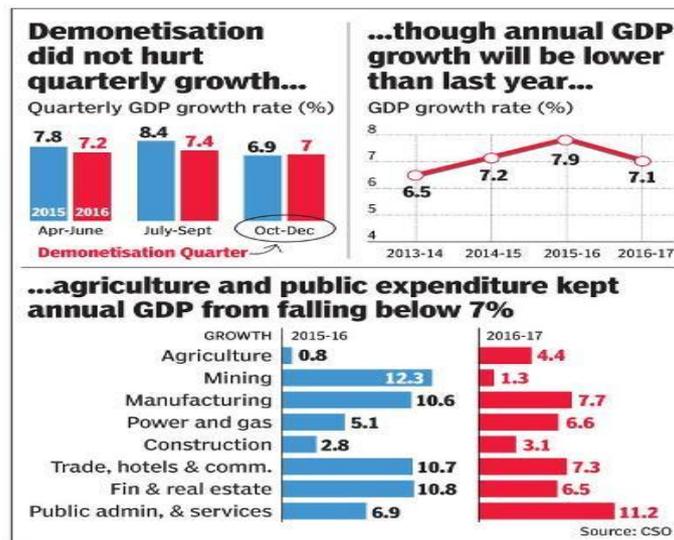


Figure 3 – Demonetisation impact

During the changes that come due to demonetisation, there was a rapid fall in the inclusive growth of the unorganized sector. Mainly the agricultural sector has a positive impact on the GDP due to which the inclusive growth also have been increased, it increase up to 4.4 during 2016-17 as compared to the last year GDP that was 0.8 during 2015-16, this change was came because of suitable weather conditions and rainfall. If we talk about the mining sector, the growth rates have been decreased as compared to the last year. The manufacturing sector has been decline from the previous year due to the demonetisation; almost 2.9% of the GDP have been fallen<sup>8</sup>. The construction sectors also have been increased in its growth rate. So we finally conclude that demonetisation is good as in all these above sectors.

Under the unorganized sector we found that almost 86% of the unorganized sector of our country suffers from the problem of inclusive growth which has adverse impact on the unorganized sector due to the demonetisation. Ever since the announcement of

<sup>6</sup> <http://www.moneycontrol.com/news-topic/centrum-wealth-research/>

<sup>7</sup> From the source of library and surveys of demographic analysis

<sup>8</sup> [http://www.moneycontrol.com/news/economy/impact-analysisdemonetisationindia\\_8044821.html](http://www.moneycontrol.com/news/economy/impact-analysisdemonetisationindia_8044821.html)

demonetisation, the income of unorganised sector workers has come down drastically - by up to 60 per cent and their work is decreasing day by day.

On the other hand, when we made the analysis, it is to be found that a corrupt system affects poor the most. For instance, take the case of a street vendor. He pays bribes to the police, municipal staff, local mafia, and large shopkeepers - all in cash. Demonetisation has not stopped such bribery. He gets goods from wholesalers on credit or pays in cash.

Within the unorganized sector, there are a proportion of labour-intensive sectors wherein cash was the only way to conduct business. Due to sudden demonetisation announced by the Govt., experts are warning that close to 4, 00,000 jobs may be lost within such sectors.

Thankfully, these job cuts would be temporary – as more currency notes are getting introduced, such labour-intensive sectors would recover gradually and jobs would be back.

But the hard reality is staring us right into the eyes: Out of 32 million people employed by textile and garment industry, one-fifth are daily wagers, who used to get cash as compensation for their work at the end of the day. As there is no currency due to demonetisation, the daily wages for such employees may be reducing. Similarly, 20-15% of 2.5 lakh workers in leather industry are also impacted.

As per a market study, prices of houses is all set to go down by 30% across top 42 Indian cities, due to demonetisation.

Due to this market-correction because of demonetisation (which resulted due to loss of black money), approximately Rs 8 lakh crore would be wiped off from the market; majority of which is black money in a bubble)

As per the research, real estate valuation in top 42 Indian cities will drop from Rs 39.55 lakh crore to Rs 31.52 lakh crore in the next 6-12 months. Mumbai will bear the brunt for maximum loss in real estate value (2 lakh crore), followed by Bangalore (Rs 99k crore), and Gurgaon (Rs 79k crore).

During the overall research, the GDP estimates for third quarter of Financial Year 2016-17 have surprised many people. Despite headwinds to growth from demonetisation, GDP growth has been pegged at 7% in quarter ending December 2016, while overall growth for Financial Year 2016-17 has been estimated at 7.1%. This is in contrast to various estimates, including the International Monetary Fund's which had expected economic growth to fall to 6% in the second half of the current fiscal year.

The Indian economy is expected to expand at 7.1% this financial year after factoring in the impact of demonetisation, the Central Statistics Office (CSO)<sup>9</sup> said on Tuesday. Although this is slower than the 7.9% growth registered in 2015-16, it gives the Narendra Modi government the firepower to defend its decision to scrap old Rs 500 and Rs 1,000 notes, which, according to critics, has been disastrous for the economy.

During October-December 2016, CSO's second advance estimates showed that GDP grew by 7%, compared to 7.4% in the previous quarter. It maintained the full year growth estimate at the same level (7.1%) as the first advance estimate released in early January, which had not factored in the impact of demonetisation.

*Black money*<sup>10</sup>. During the course of the last month, the objectives of the demonetisation drive have been changing continuously. The initial focus was on curbing black money. However, it soon became apparent that this was a large amount of black money since amounts of money in the form of new currency notes has been recovered during only about 6% of such money is kept in cash. Consequently, it is not at all surprising that suspicious tax raids.

The above criticism of demonetisation is reinforced by a recent statement of the Revenue Secretary in the Ministry of Finance who has stated that the government expects all scrapped Rs.500 and Rs.1,000 notes to come back to the banking system, which then raises questions about the very purpose of the hugely disruptive demonetisation exercise (Indo-Asian News Service (IANS), 2016). It may be remembered that the government expected

<sup>9</sup> <http://www.csir.res.in>

<sup>10</sup> <http://economictimes.indiatimes.com/news/politics-and-nation/what-black-money-government-may-be-in-for-shock/articleshow/55719794.cms>

that, of the Rs. 15.4 trillion of scrapped money, 30% or Rs. 4.5 trillion was black (that is, this money would not find its way back to the banks). It is now being accepted that at most 10% of the Rs. 15.4 trillion may be black money.

Some impacts of demonetisation on unorganized sectors:

- Transportation halts. After the demonetisation was announced, about 800,000 truck drivers were affected with scarcity of cash, with around 400,000 trucks stranded at major highways across India were reported. While major highway toll junctions on the Gujarat and Delhi-Mumbai highways also saw long queues as toll plaza operators refused the old banknotes. Nitin Gadkari, the Minister of Transport, subsequently announced a suspension of toll collections on all national highways across India until midnight of 11 November, later extended until 14 November and again until midnight of 18 November, and yet again till 2 December.
- Agriculture, Transactions in the Indian agriculture sector are heavily dependent on cash and were adversely affected by the demonetisation of ₹500 and ₹1,000 banknotes. Due to scarcity of the new banknotes, many farmers have insufficient cash to purchase seeds, fertilisers and pesticides needed for the plantation of Rabi crops usually at the mid-November. Farmers and their unions conducted protest rallies in Gujarat, Amritsar and Muzaffarnagar against the demonetisation as well as against restrictions imposed by the Reserve Bank of India on district cooperative central banks which were ordered not to accept or exchange the demonetized banknotes.
- Dumping of agricultural produce. The demonetisation lead to unavailability of cash to pay for food products. The reduction in demand that turn to crash in the prices of crops. Farmers were unable to recover even the costs of transportation from their fields to the market from the low prices offered. The prices dropped as low as 50 paise per kilo for tomatoes and onions. Some farmers resorted to buying unsold vegetables. Agricultural produce such as vegetables, food grains, sugarcane, milk and eggs were dumped on roads. Some farmers dumped their produce in protest against the government.
- Drop in industrial output. There was a reduction in industrial output as industries were hit by the cash crisis. The Purchasing Managers' Index (PMI) fell to 46.7 in November from 54.5 in October, recording its sharpest reduction in three years. This indicates a slowdown in both, manufacturing and services industries. The PMI report also showed that the reduction in inflation in November was due to shortage in money supply. The growth in eight core sectors such as cement, steel and refinery products, which constitute 38% of the Index of Industrial Production (IIP), was only to 4.9 percent in November as compared with 6.6 percent in October.

We collect the data through survey, from workers and labourers who were engaged in unorganized sector that includes Small Scale Industry, Cottage Industry and Agriculture Sector allied activities, the survey responded by the researchers who took the survey of almost 1000 peoples who were engaged in unorganized sector.

## CONCLUSION

On the above research we get to know that there is a huge impact of demonetisation over the unorganized sector which reduced the economic growth. From the above analysis of data regarding demonetisation, unorganized sector, Gross domestic Product and the inclusive growth it is hardly to say that the decision of demonetisation may be beneficial for the unorganized sector because the current research shows that there is 86% of the people who were engaged in the unorganized sector, facing the negative effects due to the decision of demonetisation due to which the Inclusive Growth of unorganized sector also have been declined. Even the government of our country still does not have the proper report of unorganized sector's data as the government has answerable machinery. But the demonetisation may be good for the organized sector of the India economy.

## REFERENCES

1. Dixit, P. and Lal, R. C. (2016) "Role of Gandhi's Khadi Textile Industry towards Inclusive Growth and Corporate Social Responsibility", *Int. J. of Trade and Commerce-IIARTC*, Vol. 5, No. 1, pp. 115-120, DOI 10.13140/RG.2.2.36573.26086.
2. Dixit, P., Lal, R. C. (2019), "Inclusive Growth and Social Responsibility - A Critical Analysis of Indian Textile Industry", *MERC Global's International Journal of Management*, Vol. 7, Issue 2, pp. 202-210.
3. Dixit, P., Tyagi, A. (2018) "A Study of Downturn Trends of Crude Oil Price – An Economic Advantage for Indian Government and Consumers" 10.13140/RG.2.2.27345.79207.
4. Electronic source: <http://debtdiagnosis.com/2016/12/06/demonetisation-is-the-act-of-stripping-a-currency-unit-of-its-status-as-legal-tender/>.
5. Electronic source: <http://economictimes.indiatimes.com/jobs/why-93-of-indias-workforce-is-trapped-in-unorganized-sector/articleshow/16915839.cms>.
6. Electronic source: <http://economictimes.indiatimes.com/news/politics-and-nation/what-black-money-government-may-be-in-for-shock/articleshow/55719794.cms>.
7. Electronic source: <http://siteresources.worldbank.org>.
8. Electronic source: <http://statisticstimes.com/economy/countries-by-projected-gdp.php>.
9. Electronic source: <http://www.csir.res.in>.
10. Electronic source: [http://www.moneycontrol.com/news/economy/impact-analysisdemonetisationindia\\_8044821.html](http://www.moneycontrol.com/news/economy/impact-analysisdemonetisationindia_8044821.html).
11. Electronic source: <http://www.moneycontrol.com/news-topic/centrum-wealth-research/>
12. Electronic source: <http://www.nistads.res.in/indiasnt2008/t6rural/t6rur5.htm>.
13. Electronic source: <http://www.oecd.org/inclusive-growth/about/inclusive-cities-campaign/all-on-board-for-inclusive-growth-in-cities-remarks-at-habitat-iii.htm>.
14. Pankaj Dixit, Ramyar Rzgar Ahmed, Arvind Kumar Yadav and R. C. Lal (2019). Diversification of economy - an insight into inclusive growth & food security with special reference to Pakistan's agriculture economy. *Asian Journal of Agriculture and Rural Development*, 9 (1), 82-98.
15. Pankaj, D., Lal, R. (2019). A Critical Analysis of Indian Textile Industry: An Insight into Inclusive Growth and Social Responsibility. *Russian Journal of Agricultural and Socio-Economic Sciences*, 88 (4), 53-61. doi:10.18551/rjoas.2019-04.08.
16. Pankaj, D., Ramyar, R. (2019). Diversification of Economy – An Insight into Economic Development with Special Reference to Kurdistan's Oil Economy and Agriculture Economy. *Russian Journal of Agricultural and Socio-Economic Sciences*, 85 (1), 395-404.
17. Pankaj, D., Ramyar, R. (2019). Economic Diversification: An Insight Into Sustainable And Inclusive Agriculture With Special Reference To Pakistan. *Russian Journal of Agricultural and Socio-Economic Sciences*, 85 (1), 32-44.
18. Mousa qadrAhmed, D., & Al, F. A. K. A. K. (2019). Application of Accrual Basis in the Public Sector and its Role in Providing Useful Information Exploratory Study of a Sample of Academic Specialists in the Kurdistan Region of Iraq. *Qalaai Zanist Journal*, 4 (1).
19. Al, F. A. K. A. K., & Mousa Qadr Ahmed, D. (2019) The Role Of The Sarbanes-Oxley Act (Sox) In Reducing Agency Costs Exploratory Study Of A Sample Of Auditors In The Kurdistan Region Of Iraq. *Qalaai Zanist Journal*, 4 (2).
20. Al, F. A. K. A. K. (2019) problems of Internal Auditing in the Educational Sector (A Field study at the private university in Erbil – Iraq). *Journal of Arts, Literature, Humanities and Social Sciences*, 35 (1).

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## **AWOT ANALYSIS IN SMALL-SCALE FISHING MANAGEMENT IN MARINE WATERS OF INDRAMAYU REGENCY**

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### **ABSTRACT**

AWOT Analysis is a SWOT analysis (Strengths, Weaknesses, Opportunities and Threats) that are integrated into the AHP (Analytical Hierarchy Process). The management of small-scale capture fisheries in the waters of Indramayu Regency is influenced by several integrated approach factors, namely: ecological, social, economic, environmentally-friendly technology, and institutional factors that have not been well structured, so that resource management sometimes overlaps among several development sectors. Based on the matrix of Internal Strategy Factors (IFAS) and External Strategy Factors (EFAS) on the Management of Small Scale Fishing in Indramayu Regency, it was found that the total internal strategy factor (IFAS) was 3.269 with a strength factor value of 2.169 and a weakness factor value amounting to 1,100 so that the difference is 1,069. While for the value of the total external strategy factor (EFAS) of 2.626, the opportunity factor value is 1.623 and the threat factor value is 1.003 so that the difference is 0.62. If this value is analyzed in the internal-external matrix (IE) the Management of Small-Scale Fishing in Marine Waters of Indramayu Regency is in quadrant IV (Integrative Strategy) which means that the Management of Small Scale Fishing in the Waters of Indramayu Regency gains strength and opportunity to continue built and grown (integrated).

### **KEY WORDS**

SWOT analysis, management, small scale fishing, marine waters, Indramayu regency.

Some important issues in capture fisheries management are issues on resources, social and economic, and also institutional issues. Issues on resources are on habitat damage, conflict in the use of fishing gear, and issues on the efforts to increase fishing [5]. In the operational context, the issue of resources is also related to technological aspects [7]. While social and economic issues are issues of conflict between fishermen, which is between local fishermen and migrants, the struggle for resources between fishermen using gears with different levels of technology, and other factors. While among economic issues are the low prices of fishery products at the fishermen level. In the assessment of fisheries management systems, ecological, social and economic consequences are equally considered, as well as technological and ethical consequences [6]. While institutional issues include the limited formal role of fishermen groups or *Usaha Bersama* (Joint Business Groups) in determining fisheries management policies. According to [3], fisheries management with an ecosystem approach (Ecosystem Approach to Fisheries Management) includes: (1) fisheries must be managed at a boundary that has an impact tolerated by ecosystems; (2) ecological interactions between fish resources and their ecosystem must be maintained; (3) Management tools should be compatible for all fish resource distributions; (4) the prudence principles in fisheries management decision making processes; (5) fisheries governance encompasses ecological and human system interests.

Management of fish resources is very closely related to the management of operations

and the target of fishing. In an effort to utilize capture fisheries resources, fishing activities are the main characteristic in fisheries business. However, aspects of uncertainty in such businesses are high. This uncertainty is caused by fishing businesses that are very dependent on the availability of stocks and the potential fisheries resources which is in high temporal variation especially if the utilization rate has exceeded its potential so that in the end the fish resources will be overexploited. The use of resources should consider its sustainability aspects through the dimensions of planning that must be carried out and then how to do that [2].

Determination of small-scale capture fisheries management strategies in marine waters in Indramayu Regency uses AWOT approach. AWOT is a SWOT analysis (Strengths, Weaknesses, Opportunities and Threats) integrated into the AHP (Analytical Hierarchy Process). The purpose of this research is to get results of the analysis related to the information base of the strategic planning processes carried out in order to develop a small-scale capture fisheries management strategy in marine waters in Indramayu Regency.

The study was conducted for five months from April to August 2018. The research was carried out in four coastal regions namely Kandanghaur, Cantigi, Indramayu and Juntinyuat Subdistricts, Indramayu Regency, West Java Province. The map of the research sites can be seen in Appendix 5.

## **MATERIALS AND METHODS OF RESEARCH**

The variable of this research is the management of small-scale capture fisheries and fishing communities in the coastal area. The method used in this research is the survey method which was quantitatively and descriptively analyzed based on the factors influencing the research. [4] stated that the survey method is an investigation conducted to obtain facts from existing symptoms and find factual information. Furthermore, these factors were analyzed by pairwise comparison method using application Expert Choice 11.

Internal Strategy Factors in the Management of Small-Scale Fishing in Marine Waters of Indramayu Regency which refers to IFAS (Internal Strategic Factors Analysis Summary) include:

(1). Strengths:

- a. Use of environmentally friendly fishing gear;
- b. The role of formal organizations;
- c. Supervision of capture fisheries management;
- d. There is government support in managing fisheries resources;
- e. Conservation of mangroves and coral reefs;
- f. Long coastline.

(2) Weaknesses:

- a. The lack of counseling and socialization related to fisheries management;
- b. Lack of supervision and facilities for monitoring fishing activities;
- c. The low level of education of fishermen;
- d. Most fishermen do not carry out the fish auction process at TPI (Fish Auction body);
- e. Low participation of fishermen in capture fisheries management;
- f. There is a conflict of fishermen, especially users of mini bottom trawlers.

External Strategy Factors in the Management of Small-Scale Fishing in the Marine Waters of Indramayu Regency which refers to EFAS (external Strategic Factors Analysis Summary) include:

(1) Opportunities

- a. Sufficient fish resource potential
- b. Fisherman compliance
- c. Development of mangrove forests as a marine tourism area
- d. There is a replacement gear program (replacement)
- e. TPI and PPI facilities and infrastructure are quite adequate
- f. Regional autonomy

(2) Threats

- a. Over Fishing;
- b. The use of fishing gear that is not environmentally friendly;
- c. The existence of extreme weather changes;
- d. Decrease in environmental support;
- e. The role of formal organizations is not optimal;
- f. Competition between fishermen from other regions operating in the marine waters of Indramayu.

The analysis aiming at determining the strategy of small-scale capture fisheries management in Marine Waters of Indramayu Regency was carried out using AWOT analysis which is basically a SWOT analysis (Strengths, Weaknesses, Opportunities, and Threats) integrated into the AHP (Analytical Hierarchy Process) in a purpose of increasing the quantitative information base of strategic planning processes. These factors are then further analyzed using the pairwise comparison method with the ExpertChoice 11 application.

## RESULTS AND DISCUSSION

According to [8] IFAS is a tool for formulating strategies to summarize and evaluate major strengths and weaknesses in functional areas and also becomes the basis for identifying and evaluating relationships in these areas. Based on the results of the calculation of the analysis of internal factors, an IFAS matrix that contains strengths and weaknesses along with the weight and rating can be compiled. The determination of the weight is taken from the AHP results, while the rating is determined by the researcher based on the results of the discussion with the respondents. Discussions with respondents were conducted before and after the respondent filled out the questionnaire. The weight and rating of internal and external factors are then multiplied to obtain a score. The results of the comparison analysis of strengths and weaknesses were obtained using the ExpertChoice 11 application, and the IFAS matrix can be seen in Appendix 1.

Based on the calculation of IFAS matrix in Appendix 1, it was found that the main strength factor affecting internal decision making was the use of environmentally friendly fishing gear with a value of (0.564). The role of formal organizations is the second power with a value of (0.351). The role of the formal organization also influences the small scale capture fisheries management factors that are significant in various matters relating to the lives of fishing communities. One program that has been implemented is the socialization of the use of environmentally friendly fishing gear, the introduction of fish shelter as a step to improve fish habitat and increase the income of fishermen through the use of more than one type of fishing gear in one boat owner known as combine fishing and supervision of marine and fisheries resources through community-based supervision groups. However, considering capture fisheries are open and owned by the public (open access common property) so that the application in the field is very difficult to do, especially in overcoming the pressure of fishing activities from other regions or hitching fishermen. Besides that, the existence of government support in the management of fisheries resources especially capture fisheries has a value of (0.363). The next factor is the supervision of capture fisheries management with a value of (0.260); mangrove and coral reef conservation with a value of (0.303) also influences the decision making process which is a force in order to improve damaged fish ecosystems, inhibit the development of non-environmentally friendly fishing gear (destructive fishing) and increase fishermen's income with marine tourism, fishing and capture fisheries productivity. While the lowest strength factor is to have a long coastline with a value (0.177). This illustrates that the coastline length in Indramayu Regency is an element of strength in the management of small-scale capture fisheries in the waters of the Indramayu Regency. Indramayu Regency has a coastline of 147 Km, which is the longest coastline in West Java Province. The potential conditions with the length of the coastline make most people in Indramayu Regency live in coastal areas where their profession in general is as fishermen with capture fisheries. As for the main weakness factor lies in the lack of counseling and socialization related to fisheries management with a value of (0.312). The second weakness

factor is the lack of supervision and monitoring facilities for capture fisheries activities with a value of (0.244). The third weakness factor is the low level of education of fishermen with a value of (0.189). This shows the low quality of human resources in fishing communities. Based on existing data, the average education of fishermen's husbands and crew members is generally elementary school graduates, while the average wife's education does not graduate from elementary school or under husband's education. This reinforces the notion that community development in the capture fisheries sub-sector faces obstacles in the low quality of human resources and poverty. Furthermore, the fourth weakness factor is the participation of fishermen in the management of capture fisheries which is low with a value (0.159). It is proven that the fishing community in Indramayu Regency has a perception of catch fisheries management is quite high but the implementation in the field and its participation have not been significant or are still relatively low. The fifth weakness factor is the conflict of fishermen, especially arad net users, with a value of (0.114). Based on the results of a research interview, conflicts between fishermen still occur frequently, among fishermen who use mini bottom trawl fishing gear with fishermen who use Gill Net.

This still exists due to the low level of awareness of mini bottom trawl fishermen on fishing operations that are permitted for mini bottom trawling and the lack of supervision and media for surveillance of capture fisheries and law enforcement and regulations that are not yet firm. The weakest weakness was that most fishermen did not carry out fish auction processes at the fish auction site (TPI) with which the value amounting to 0.082. It is evident that in general small fishermen are still caught in debt given by the broker/middleman which also means that the fishermen cannot have a bargaining position and they finally sell their commodity to the broker. As for the total value of the IFAS matrix is 3.269 (classified as the average position), which means that the internal organization is in a strong position. The IFAS matrix value of the strength factor has a score of 2,169, while the weakness factor has a low score of 1,100. The difference between the two internal factors is 1.069. This value means that internal factors in the form of strength have more influential or more dominating values than the current weaknesses.

After obtaining internal factor score (IFAS), it is necessary to make an external factor analysis (EFAS) which includes opportunities and threats in small-scale capture fisheries management strategies in the waters of the Indramayu Regency. Determination of weight is taken from the AHP results while the rating is determined by the researcher based on the results of the discussion with the respondents. Discussions with respondents were conducted before and after the respondent filled out the questionnaire. The weight and rating of external factors are then multiplied to get a score. The results of the comparison of opportunity and threat factors were obtained by the Expert Choice 11 application and the EFAS matrix can be seen in appendix 2. Based on the calculation of EFAS matrix analysis in table 37, it was found that the main opportunity factors identified were fisherman compliance with a value of 0.532. Based on the results of the research interview, it was found that small-scale fishermen in Indramayu District generally adhered to capture fisheries management regulations, but due to the large number of fishermen in Indramayu Regency added by fishermen from other regions such as Subang, Karawang, Cirebon and Brebes who captured in the marine waters in Indramayu using a small fishing fleet (less than 5 GT) in which it results limited range of cruising areas or over fishing on lane 1 (0-4 nautical miles).

The second opportunity factor is the existence of regional autonomy with a value of (0.448), as mandated in Law No. 32 of 2004 concerning Regional Government. this certainly opens up many business opportunities in the fisheries sub-sector, both capture fisheries, aquaculture, fishery product processing, and salt farmers, through the Office of Fisheries and Marine of Indramayu Regency. Activities carried out by the regional government in this case the Office of Fisheries and Marine Affairs of Indramayu Regency, especially in capture fisheries activities through the office of the Small Fishermen empowerment section (PNK) and Business Development. The activities that have been launched are programs to increase the income of fishing communities, such as: the provision of environmentally friendly fishing equipment, 24 HP (Horse Power) diesel engines and 5.5 HP gasoline engines, with a converter to change fuel gasoline to gas fuel for fishing boats, installation of fish shelters in

several coordinate points spread in the waters of Indramayu, procurement of cool boxes, Hand Global Position Systems, training and capacity building for fishermen related to equipment environmentally friendly fishing, ship engine maintenance and diversification of fish processing, fish auction site (TPI) rehabilitation, procurement of 'fish trais', construction of break water and dredging of river mouths in each TPI/PPI (Fsih Landing Port) to facilitate the entry and exit of fishing boats, and installation flares on the right and left of each river estuary that have TPI as a sign of fishing boats entering and leaving. The third opportunity factor is adequate fish resource potential (SDI) with a value of 0.369. Next is the replacement of fishing gear (replacement) with a value of 0.339. The facilities and infrastructure of TPI and PPI are sufficient to have a value of 0.168 and the development of mangrove forest as a marine tourism area has a value of 0.142. As for the main threat factor in the small-scale capture fisheries management strategy in marine waters in Indramayu Regency with a value of 0.237 is the role of formal organizations that have not been optimal. The biggest threat factor illustrates that formal organizations such as the HNSI (Indonesian Fishermen Association) branch of Indramayu, KUB (Joint Business Group), NGOs (Non-Governmental Organizations), POKMASWAS (Supervisory Community Groups) and Fisheries Cooperatives, are still not optimally conducting activities, maintaining, and managing environmental sustainability, especially capture fisheries. The second threat factor is a decrease in environmental carrying capacity with a value of 0.232. It is evident that the environmental support in marine waters of Indramayu began to decrease due to pollution of both domestic and industrial waste. Indramayu's marine waters have a huge supply of industrial waste in the eastern region with the Balongan Oil Processing Industry in Balongan District and in the western region with steam power plants 1 and 2 (PLTU) in the East Sumuradem Village of Patrol District. In addition, the rise of domestic waste originating from 15 rivers which empties into the sea, namely 1). sewo river, 2) sukahaji river, 3) kalimenir river, 4) eretan river, 5) Sumber mas river, 6) bulak river, 7) cilet river, 8) pangkalan river, 9) bangkir river, 10) karangsong river, 11) Singaraja River, 12) Balongan River, 13) Limbangan River, 14) Dadap River and 15) Tegal Agung River. The estuary of the 14 rivers are all to the sea. The third threat factor is the use of non-environmentally friendly fishing gear with a value of 0,198. Based on the interview results, it was found that there were still many small-scale fishermen using destructive fishing gear such as *arad*, *garok* and *dogol* in fishing efforts, so that the condition of fish habitat was damaged due to the use of these fishing gear. The fourth threat factor is the existence of extreme weather changes with a value of 0.174. Changes in extreme weather greatly affect the activities of fishermen in fishing in the sea. Fishermen in Indramayu who have joined a group, cooperative members, and who register to get Fishing Region Information (IDPI) once a week will get SMS from IDPI operators related to weather prediction, wind speed, wave height, and potential fishing to cellphone number registered at the Indramayu Fisheries and Marine Service. This can help fishermen in fishing activities at sea. The fifth threat factor is competition between fishermen from other regions who also fish in the marine waters of Indramayu with a value of 0.112. This activity is also a threat, especially those who do not use environmentally friendly fishing gear. With the coastline length of 147 Km, there are many fishermen from other areas operating in the Indramayu marine area such as fishermen from Cirebon, Brebes, Subang and Karawang Regencies.

The lowest threat factor is over fishing with a value of 0.050. This illustrates that the waters of Indramayu are potential waters, but because of the large number of fishermen in the north coast of West Java with small fishing fleets (<5 GT) which result in limited roaming areas, triggering overcrowding situations (over fishing) on line 1 (0-4 nautical miles). The total value of the EFAS matrix is 2,626 (classified as average), meaning that the external organization is in a strong state. EFAS matrix value of opportunity factors has a score of 1,623, while the threat factor has a score of 1,003, where the difference between the two external factors is 0,620. This value means that external factors in the aspect of opportunity have a more influential value than the threat factor for now. The cumulative value of EFAS matrix is lower than the IFAS matrix, this can explain that internal factors are more control in determining the strategy than the choice of external factors. After finding out the critical

factors of the IFAS matrix analysis process that explain strengths and weaknesses and EFAS matrix analysis that provides an overview of the opportunities and threats faced, then the next step to do is to combine IFAS and EFAS values using the strategy matrix. The purpose of using the strategy matrix is to obtain a strategy that can determine the direction of further development. The matrix position on the aspect of strategy is obtained by combining the results of the total IFAS matrix score and the total EFAS matrix score. Through the merger, the current position of small-scale capture fisheries management strategies in the waters of Indramayu Regency is known and what strategies must be applied in the future. The IE strategy matrix, can be seen in appendix 3. Based on the calculation results obtained IFAS value of 3.269 with a strength factor value of 2.169 and a weakness factor value of 1,100 so that the difference is 1.069. While for the EFAS value of 2.626 with an opportunity factor value of 1.623 and a threat factor value of 1.003 so that the difference is 0.62. Therefore, the strategy that can be applied is an integrative strategy (quadrant IV) for now. According to [1] quadrant IV is a growing and constructive condition, institutions that are involved in implementing small-scale capture fisheries management strategies in the marine waters of Indramayu get the strength and opportunity to continue to be built and grown (integrated). Based on the SWOT matrix analysis there are four types of strategies that can be explained as follows:

(1). Strategy *Strength-Opportunities* (SO). The SO strategy is a strategy to use the power that is owned to take advantage of the opportunities that exist. Based on the strengths and opportunities obtained, the first strategy that should be carried out is conducting routine fisheries research, especially research related to fisheries management. This is based on the improvement of the latest data every year regarding the estimation of production data, fishing fleet data, the number of fishing gear, the number of fisheries households (RTP) and so on, which can be used as consideration and sustainable fisheries policies, hence an increase is needed the amount of fundamental and strategic research. The second strategy that can be done is to increase the productivity of fishing with environmentally friendly fishing gear. The strategy is based on the existence of government support which is reflected in the replacement fishing gear program. The third strategy that can be done is the development of mangrove conservation areas and coral reefs. This strategy is caused by the length of the existing coastline so that mangrove conservation is needed for prevention of coastal abrasion. Cendikian Island, Biawak Island and Rakit Island in the marine waters of Indramayu is a Regional Marine Conservation Area (KKLD). The fourth strategy that can be done is to increase TPI / PPI facilities and services. There are 14 TPI / PPI in Indramayu Regency which are spread and are still active, therefore facilities and services need to be improved so that small fishermen are willingly join and auction off their catches at TPI. The fifth strategy that can be done is to strengthen the role of the organization or institutional group of fishermen. The role of the organization greatly influences the success of small-scale capture fisheries management, so it needs to be strengthened and developed. The sixth strategy that can be carried out is integrated management and supervision.

(2). ST Strategy (*strength-threats*). The ST strategy is a strategy to use strength to avoid threats that come from outside. The most important ST strategy is to limit the number of fishing fleets in critical fishing areas. This strategy is carried out as an effort to preserve existing fish resources. The second strategy is to carry out mangrove rehabilitation, coral reef planting and coral transplantation. This strategy is carried out as an effort to preserve mangroves and coral reefs which until now are still ignored. The third strategy is to process waste from business activities around the coastal area. The strategy was carried out as an effort to reduce the pollution of the Indramayu marine environment. The fourth strategy is the empowerment of fishermen through the provision of stimulant assistance to replace environmentally friendly fishing equipment. The strategy is carried out as an effort to keep the sustainability of the existing fish resources in keep them sustainable. The fifth strategy is strengthening the role and function of formal organizations. The sixth strategy is to improve coordination and establish cooperation with fellow fishermen from other regions and local governments.

(3). Strategy WO (*weakness-opportunities*). The WO strategy is a strategy that

minimizes weaknesses by utilizing opportunities. The main WO strategy that can be done is capacity building through counseling and socialization related to fisheries management. This strategy is based on the lack of counseling and socialization related to fisheries management in Indramayu Regency. The second strategy is to increase the human resource capacity and skills of fishermen through training and education. The avoidable weaknesses of this strategy are the low level of education and participation of fishermen in capture fisheries management. This strategy takes advantage of opportunities in the form of fisherman compliance. While the third strategy is to increase facilities for guidance and supervision activities. This strategy is based on the lack of supervision and means of monitoring fisheries activities. The fourth strategy is to increase community participation related to capture fisheries management. This strategy is based on the low participation of fishermen in capture fisheries management. The opportunity used in this strategy is the development of mangrove forests as a marine tourism area. The fifth strategy is the provision of special loans for low interest and unsecured fishermen. The strategy is based on the majority of fishermen who do not carry out the fish auction process at TPI. Opportunities used in this strategy are adequate TPI / PPI facilities and infrastructure. The sixth strategy is continuous assistance to fishermen regarding fishing operations. The strategy is based on the conflict between fishermen, especially users of the 'arad' net. Opportunities used in this strategy are fisherman compliance, the existence of fishing gear replacement programs and the existence of regional autonomy.

(4). WT Strategy (*weakness-threats*). The WT strategy is a strategy to reduce weakness and avoid threats. The first strategy that can be carried out is wise and wise management of fish resources. The second strategy is capacity building through counseling related to legal sanctions for using fishing equipment that is not environmentally friendly. The third strategy is to increase the empowerment of fishermen through the diversification of other fisheries. The fourth strategy is to increase the active role of the community in fisheries management in the coastal and marine areas. The fifth strategy is to conduct the auction process in each sales transaction through TPI / PPI. The sixth strategy is to manage and maintain conservation areas by monitoring and providing understanding to fishing communities.

## CONCLUSION

Based on the results and discussion, it can be concluded that ecological factors are the most important factor in managing small-scale capture fisheries, the existence of fish resources in the waters of the Indramayu Regency experiences over fishing. The tendency of over fishing is indicated by the value of MSY (Maximum Supplyable Yield) and the amount of production captured by fishermen from year to year decreases. This is reinforced by the condition of over fishing that occurs due to the actual amount of effort that has exceeded the EMSY value so that a small scale capture fisheries management strategy is needed in marine waters of the Indramayu that gains the strength and opportunity to continue to be built and grown (integrated).

## ACKNOWLEDGEMENTS

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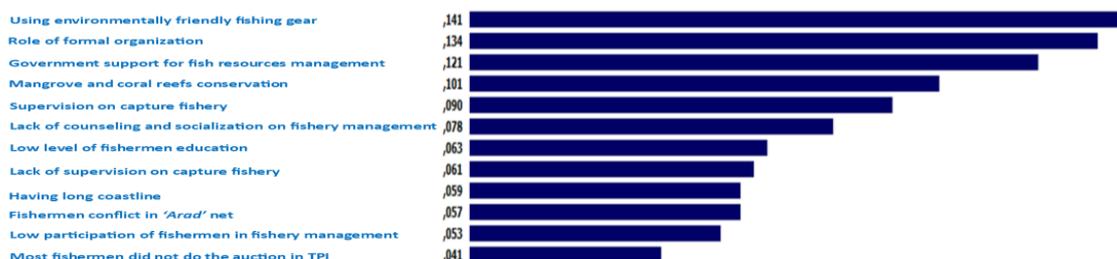
## REFERENCES

1. Candra, A. 2013. "Strategi Kebijakan Perikanan Tangkap Indonesia dalam Kerjasama

- Perikanan Regional pada West and Central Pasific Fisheries Commission (WCPFC)". (Policy Strategy for Indonesian Capture Fisheries in Regional Fisheries Cooperation at West and Central Pasific Fisheries Commission (WCPFC) Disertasi. Program Pasca Sarjana. IPB. Bogor.
2. Carles. 2014. "Strategi Pengelolaan Perikanan Tangkap Skala Kecil di Perairan Laut Kabupaten Simeulue". (Strategy for the Management of Small Scale Fishing in the Marine Waters of Simeulue Regency). Tesis. Program Pasca Sarjana. IPB. Bogor.
  3. FAO (2003). Ecosystems Approach to Fisheries. FAO Technical Paper.
  4. Kusnandar, M. S. 2015. "Strategi Pengelolaan Sumberdaya Perikanan Berbasis Ekosistem". (Ecosystem-Based Fisheries Resource Management Strategy) J. Oseatek, Vol. 9 (01), 1858 - 4519 hal.
  5. Kusnadi, 2002. "Konflik Sosial Nelayan. Kemiskinan dan Perebutan Sumberdaya Perikanan". (Fishermen's Social Conflict. Poverty and the Struggle for Fisheries Resources). LKiS, Yogyakarta. 190 p.
  6. Mc Goodwin, J. 1990. Crisis in the World Fisheries: People Problems and Policies. Stanford University Press, Stanford.
  7. Monintja, D.R., Sultan, M., dan Sarminto. 2002. "Metode Seleksi Teknologi Penangkapan Ikan yang Ramah Lingkungan dan Berkelanjutan di Kawasan Terumbu Karang". Makalah Konferensi Nasional III Pengelolaan Sumberdaya Pesisir dan Lautan Indonesia. (The Selection Methods Environmental and Sustainable Fishing Technology in the Coral Reef Area. Paper on the Third National Conference on Management of Indonesian Coastal and Ocean Resources) FPIK IPB, Bogor, 15 hlm.
  8. Supriadi, D. 2012. "Analisis Ekonomi Rumah Tangga Nelayan Skala Kecil dan Pemanfaatan Sumberdaya Perikanan Dasar di Kota Cirebon, Jawa Barat". (Economic Analysis of Small-Scale Fishermen's Households and Basic Fisheries Resource Utilization in Cirebon City, West Java). Disertasi. Program Pasca Sarjana. Universitas Brawijaya. Malang.

APPENDIX 1 – Internal Strategy Factor Matrix (IFAS-Internal Strategic Factors Analysis Summary)  
Management of Small-Scale Fishing in Marine Waters of Indramayu Regency

Priorities with respect to:  
Goal: IFAS



Inconsistency: 0,05  
With 0 missing judgments

Internal Factor	weight	Rating	Score
<b>Strength</b>			
a. Use of environmentally friendly fishing gear	0,141	4	0,564
b. The role of formal organizations	0,134	3	0,402
c. Supervision of capture fisheries management	0,090	4	0,360
d. government support in managing fisheries resources	0,121	3	0,363
e. Conservation of mangroves and coral reefs	0,101	3	0,303
f. Having a long coastline	0,059	3	0,177
<b>Weakness</b>			
g. The lack of counseling and socialization related to fisheries management	0,078	4	0,312
h. Lack of supervision and facilities for monitoring fishing activities	0,061	4	0,244
i. The low level of education of fishermen	0,063	3	0,189
j. Most fishermen do not carry out the fish auction process at TPI	0,041	2	0,082
k. Participation of fishermen in low capture fisheries management	0,053	3	0,159
f. fishermen conflict especially 'arad' net users	0,057	2	0,114
<b>Total</b>	<b>1</b>		<b>3,269</b>

APPENDIX 2 – Matrix of External Strategy Factors (EFAS-External Strategic Factors Analysis Summary) Management of Small-Scale Fishing in Marine Waters of Indramayu Regency

Priorities with respect to:  
Goal: IFAS



Inconsistency: 0,07  
With 0 missing judgments

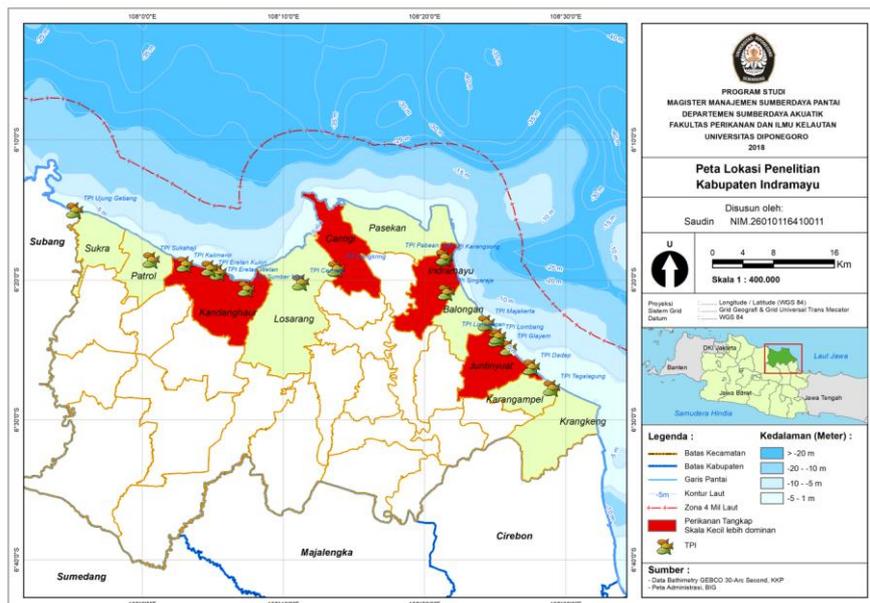
External Factor	weight	Rting	Skor
Opportunity			
a. sufficient fish resources	0,129	3	0,369
b. Kefishermen's compliance	0,101	4	0,532
c. Development of mangrove forest marine tourim area	0,062	2	0,142
d. Replacement program for fishing gear	0,118	3	0,339
e. Sufficient facilities and equipment of TPI and PPI	0,055	2	0,168
f. Regional autonomy	0,077	4	0,448
Threats			
g. Over Fishing	0,050	1	0,050
h. The use of fishing gear that is not environmentally friendly	0,099	2	0,198
i. Extreme weather change	0,058	3	0,174
j. decreasing environment support	0,116	2	0,232
k. the roles of formal organization are not optimal	0,079	3	0,237
l. rivalry of local fishermen with those who are from other region	0,057	2	0,112
Total	1		2,626

APPENDIX 3 – Internal Strategy Matrix - External (IE)

Total IFAS Weighted

Total EFAS Weighted	Score	Strong (3,0 – 4,0)	Average (2,0 – 2,99)	Weak (1,0 – 1,99)
	High (3,0 – 4,0)	I	II	III
	Medium (2,0 – 2,99)		V	VI
	Low (1,0 – 1,99)	VII	VIII	IX

APPENDIX 4 – Research Location Map



## APPENDIX 5 – SWOT Matrix for Formulating Small Scale Capture Management Strategies

External	Internal	<p><b>STRENGTH (S)</b></p> <p>S1 Use of environmentally friendly fishing gear</p> <p>S2 Roles of formal organisation</p> <p>S3 Supervision of capture fishing management</p> <p>S4 Government support in managing fisheries resources</p> <p>S5 Conservation of mangroves and coral reefs</p> <p>S6 Long coastline</p>	<p><b>WEAKNESS (W)</b></p> <p>W1 The lack of counseling and socialization related to fisheries management</p> <p>W2 Lack of supervision and media of monitoring fisheries activities</p> <p>W3 The low level of education of fishermen</p> <p>W4 Most fishermen do not carry out the fish auction process at TPI</p> <p>W5 The participation of fishermen in the management of low capture fisheries</p> <p>W6 There is a conflict among fishermen, especially users of the 'arad' net</p>
	<p><b>OPPORTUNITY (O)</b></p> <p>O1 Sufficient SDI potential</p> <p>O2 Fisherman compliance</p> <p>O3 Pengembangan hutan mangrove sebagai kawasan wisata bahari</p> <p>O4 Replacement program for fishing gear</p> <p>O5 Sufficient facilities and equipment of TPI and PPI</p> <p>O6 Regional autonomy</p>	<p><b>STRATEGY SO</b></p> <p>SO1 Regular research on fishery (S1, S2, S3, S4, S5, S6, O1, O2, O4, O5, O6)</p> <p>SO2 Productivity improvement of fishing using environmentally friendly fishing gear (S1, S3, S4, O1, O2, O3, O4)</p> <p>SO3 Development of mangrove conservation areas and coral reefs (S5, S6, O1, O3)</p> <p>SO4 Improvement of PPI / TPI facilities and services (S1, S2, S3, S4, S5, O1, O2, O3, O4, O6)</p> <p>SO5 Strengthening the role of organizations or institutional groups of fishermen (S5, O5, O6)</p> <p>SO6 Integrated management and supervision (S2, S6, O4, O5, O6)</p>	<p><b>STRATEGY WO</b></p> <p>WO1 Capacity building through counseling and socialization related to fisheries management (W1, W3, W5, O1, O2, O4)</p> <p>WO2 Increased capacity of Human Resources and skills of fishermen through training and education (W3, W5, O2)</p> <p>WO3 Improvement of facilities for training and supervision activities of fishermen (W2, W4, O2, O3, O5, O6)</p> <p>WO4 Increase community participation related to capture fisheries management (W5, O3)</p> <p>WO5 providing special credit for low interest and unsecured fishermen (W4, O5)</p> <p>WO6 Continuous assistance to fishermen regarding fishing operations (W6, O2, O4, O6)</p>
	<p><b>THREAT (T)</b></p> <p>T1 Over Fishing</p> <p>T2 The use of fishing gear that is not environmentally friendly</p> <p>T3 The existence of extreme weather changes</p> <p>T4 Decrease in environmental carrying capacity</p> <p>T5 The role of formal organizations is not optimal</p> <p>T6 Competition between fishermen from other regions operating in the marine waters of Indramayu</p>	<p><b>STRATEGY ST</b></p> <p>ST 1 Restricting the number of fishing fleets in critical fishing areas (S1, S3, T1, T2, T3)</p> <p>ST 2 Carry out mangrove rehabilitation and coral reef planting and coral transplantation (S4, S5, S6, T1, T2, T4)</p> <p>ST 3 Waste treatment is carried out from business activities around coastal areas (S3, S4, T4)</p> <p>ST 4 Empowerment of fishermen through the provision of stimulant assistance for environmentally friendly replacement fishing gear (S1, S4, T1, T2, T3)</p> <p>ST 5 Strengthening formal organizational roles and functions (S2, S3, T5, T6)</p> <p>ST 6 Improve coordination and establish cooperation with fellow fishermen from other regions and local governments (S2, S3, S4, S5, S6, T1, T2, T4, T5, T6)</p>	<p><b>STRATEGY WT</b></p> <p>WT 1 Fair and wise management of fish resources (W1, W2, T1, T2)</p> <p>WT 2 Capacity building through counseling related to legal sanctions for the use of non-environmentally friendly fishing gear (W1, W2, W3, W6, T1, T2)</p> <p>WT 3 Increasing the empowerment of fishermen through diversification of other fisheries (W3, W4, T1, T2, T3, T4, T6)</p> <p>WT 4 Increasing the active role of the community in managing fisheries in the coastal and marine areas (W1, W2, W3, W5, W6, T1, T2, T4, T5, T6)</p> <p>WT 5 Conduct auction process in every fish sale transaction through TPI / PPI (W2, W4, T1, T4, T6)</p> <p>WT 6 Managing and maintaining conservation areas by conducting supervision and providing understanding to fishing communities (W1, W2, W5, W6, T1, T4)</p>

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**A STUDY OF CARRYING CAPACITY OF WATER RESOURCES  
FOR THE DEVELOPMENT OF ECO-FRIENDLY SHRIMP FARMING IN MALAKA  
REGENCY, WEST TIMOR OF INDONESIA**

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**ABSTRACT**

This research explores the opportunities for developing eco-friendly shrimp farming. It aims to examine the environmental carrying capacity of nearshore water for shrimp farming. Quantitative estimation method was employed to assess the carrying capacity of an environment based on the total volume of seawater and the capacity of available oxygen dissolved in the water. The research result shows that the development potential of shrimp farming in Malaka Regency is fairly great, based on the total volume of available seawater in coastal Wewiku, reaching up to 213,473,289.8 m<sup>3</sup>/day, while the availability of dissolved oxygen to dilute organic waste reaches 327,140.89 kg O<sub>2</sub>/day. Then the daily capacity of organic waste reaches 1,635,704.43 kg. Based on the carrying capacity of the Wewiku waters to contain organic waste, intensive developments of shrimp farming are possible for an area of 177 ha, with 3,240.03 tons/MT of production. If the land is developed up to 685.12 ha, shrimp production can be increased up to 4,028.52 tons/MT. For semi-intensive and traditional plus shrimp farming options, the area developed can be expanded up to 1,415.84 ha and 3,352.54 ha with shrimp production capacity of 4,516.54 tons/MT and 2,581.46 tons/MT respectively for each area.

**KEY WORDS**

Carrying capacity, shrimp culture, opportunity, environmentally friendly production.

In addition to milk fish, shrimp is one of the fishery potentials in Wewiku District, Malaka Regency. Various studies and information from Liufeto [1], BPP [2], ATSEF [3], Motaain Fish Quarantine Border Post, BKIPM Kupang 2010-2014, advise that there has been a decrease in the supply of shrimp caught from Malaka, including black tiger shrimp (*Penaeus monodon*) and white shrimp (*Penaeus marginatus*), resulting in the declining caught shrimp volumes traded to Java, Bali and Timor Leste, that even traders have failed to meet market demand in certain seasons.

Data by Belu and Malaka Central Bureau of Statistics (BPS) of 2008-2013 [5] suggests that the total production of white shrimp and black tiger shrimp did actually decline, from 84.3 tons in 2008 to 34.9 tons in 2010. Even the volume of white shrimp and tiger shrimp in the waters was considerably stagnant throughout 2011 to 2013, with an average production rate of 45.8 tons and 5.2 tons/year. This condition indicates the great potential of shrimp farming, in addition to strategic implementation of the concept of sustainable caught shrimp

management. Belton and Thilsted [6] state that there has been a fundamental transition in the fishery sector, as players have shifted from fishing-based to farming-based supply.

FAO [7] shows that in 2018, half of fish consumption was obtained from cultivation. In the global era, aquaculture activities have become a reliable source of meeting world seafood needs [8-12].

According to Leung et al., [13] and Anderson [14], the key economic aspects in selecting commodities for aquaculture development include having strong potential market demand and high selling prices in both domestic and export markets, having strong potential to be produced at a reasonable cost, and having strong potential for value added products. However, Widigdo [15] notifies that maximizing short-term economic benefits without considering ecological support will only lead to environmental degradation and ecological crisis.

The development of shrimp farming is generally executed on an intensive farming scale, while organic waste, including fish food waste, feces and other dissolved materials, on an intensive scale is proven to have an impact and to pose risks of damage to the environment [16, 17, 18]. Therefore, the development of eco-friendly shrimp farming ponds must consider these two important aspects, including the quantification of farming waste and the ability of nearshore waters to contain farming waste [19].

One of the methods to estimate the carrying capacity of water resources developed to measure the ability of the waters to contain farming waste is to evaluate the available capacity of dissolved oxygen in the waters to decompose organic waste from aquaculture activities. This is conducted by predicting the volume of waste that can be accommodated by nearshore waters based on the availability of dissolved oxygen in the water column when tidal changes in the waters [20, 21].

This study of the carrying capacity of water resources is important for the purpose of developing aquaculture activities for shrimp commodity in Malaka. Wewiku District is decided as the site of research by considering the LQ value indicator of  $>1$ , indicating the region is considered more productive in fulfilling farming production demand of the surrounding area and export demand. Thus, the study aims to examine the carrying capacity of the water resources of the Wewiku District with regard to potential application of eco-friendly shrimp farming in Malaka Regency.

## MATERIALS AND METHODS OF RESEARCH

This research was conducted in 3 coastal villages located in the Wewiku District of Malaka Regency, focusing on 4 research stations known to be the centers of aquaculture activities in Wewiku District, including Baderai (B) station in Baderai village, Tuatolu station (T) and Uluklubuk (U) stations in Weoe village, and Weseben (W) station in Weseben village. The distribution of farming ponds in Wewiku District is presented in Figure 1.



Figure 1 – Observation Station and Research Sampling

Estimation of environmental carrying capacity of the coastal area of Wewiku District was conducted at 4 research stations considered representative to the ecological conditions and aquaculture activities in Wewiku District. Estimation of carrying capacity of water resources for eco-friendly land development and production of shrimp farming was conducted based on the evaluation of dissolved oxygen availability of the total volume of seawater entering nearshore waters at high tide. Calculation of total seawater volume was done by calculating the total volume of sea water entering nearshore waters at high tide, the volume of remaining water at low tide, and the volume of water available in one tidal cycle.

Tidal range value data (h) was obtained from measuring the low tide of Baderai beach for 15 days (15x24 hours), which was representative to the other 3 stations as the Baderai farming pond has been more productive than other regions, in addition to easier access to its coastal area. The measurement of the height of low tides was carried out using scaled bamboo.

The length of coastline (y) was obtained from the data of distance coordinates based on the measurement result using Global Positioning Systems (GPS), indicating the position from Weseben beach to Baderai beach. To calculate the bedslope, the highest and lowest contour data, and water coordinates data verified by manual water depth measurements were collected, in addition to distance data of each contour coordinate, representing each research station. Data of distance from coastline to the sea at low tide at each station was obtained by using Global Positioning Systems (GPS).

According Boyd [22] explains that the tidal turnover would provide or supply oxygen in nearshore waters to decompose farming waste, thus the measurement of dissolved oxygen availability was carried out at high tide. Dissolved oxygen supply from the waters entering the 4 stations of the existing farming area was measured in the main channel of sea water, and observation was carried out for 15 days to get an estimation of the volume of dissolved oxygen at the time of high and low tides.

To find out the land area and shrimp production volume based on the carrying capacity of water resources, it is important to know the volume of waste from shrimp farming activities in ponds, and the capacity of waters to contain organic waste based on the calculation of the availability of dissolved oxygen entering the waters to dilute shrimp farming organic waste.

Because the activities of shrimp farming in the research site have never been done before, then the data on the volume of organic shrimp waste used in this study was secondary from the result of the study. Allaudin [23] reported that the volume of organic waste in the form of TSS produced in shrimp farming intensively with shrimp population density of 126 fish/m<sup>2</sup> was approximately 9,228.52 kg/ha/farming season, while for a population density of shrimp of 50 fish/m<sup>2</sup>, the organic waste was approximately 2,387.46 kg/ha/farming season. For semi-intensive systems with a population density of 25 fish/m<sup>2</sup> and traditional plus with a population density of 8 fish/m<sup>2</sup>, the volume of organic waste produced was 1,155.29 kg/ha/farming season and 487.90 kg/ha/farming season.

The data used to calculate the capacity of the waters to contain organic waste was the primary one from the calculation of the total volume of sea water entering the waters and the availability of dissolved oxygen

The volume of seawater entering the nearshore waters at high tide (V<sub>o</sub>) was calculated using the following formula by Widigdo and Pariwono [24]:

$$V_o \text{ (m}^3\text{)} = 0.5 \cdot h \cdot y (2x - h/\text{tg}\Theta) \quad (1)$$

Where: V<sub>o</sub> = volume of seawater entering the waters when tide is high (m<sup>3</sup>); h = tidal range of the area; y = coastline (m); x = distance from coastline (high tide) to the farming pond;  $\Theta$  = slope of seabed.

While the volume of water remaining at low tide (V<sub>s</sub>) was determined by the formula:

$$V_s \text{ (m}^3\text{)} = 0.5 \cdot h \cdot y [ 2x - (2h-1)/\text{tg}\Theta ] \quad (2)$$

Thus, the volume of remaining water in nearshore waters ( $V_{os}$ ) in one tidal cycle ( $f$ ) to dilute farming waste (joining equations 1 and 2) became:

$$V_{os} \text{ (m}^3\text{)} = 0.5 \cdot h \cdot y [ 4x - (3h-1)/tg\theta ] \quad (3)$$

If the tidal frequency is  $f$  times a day, then the total volume of water remaining in nearshore waters to dilute the waste is:

$$V_{tot} \text{ (m}^3\text{)} = f \cdot V_{os} \quad (4)$$

Retention time calculation of water entering the waters was done using the following formula:

$$WT = (V_o + V_s) / V_s \quad (5)$$

To calculate the carrying capacity of farming waste, it is necessary to know the flushing time of the waste to the waters. It was calculated using the following formula:

$$FT = 1 / D \quad (6)$$

$$D = [ V_{Pt} - V_{Ps} ] / F \cdot V_{Pt} \quad (7)$$

Where: FT = Flushing Time (day); D = Dillution Rate;  $V_{Pt}$  = Volume of nearshore waters at highest tide ( $m^3$ );  $V_{Ps}$  = Volume of nearshore waters at lowest tide ( $m^3$ ); F = Tidal frequency in a day.

The results of research by Widigdo [15], Poernomo [25], Boyd [22], and Wedemeyer [26] conclude that the minimum level of dissolved oxygen for cultivated organisms is 3 mg/l. If the dissolved oxygen availability in the water column ( $O_{ka}$ ) is X mg/l, then the availability of dissolved oxygen ( $O_{ak}$ ) which can support assimilation of waste in waters is:

$$O_{ak} \text{ (mg/l)} = X \text{ mg} - 3 \text{ mg/l} \quad (8)$$

If the total volume of water remaining in nearshore waters ( $V_{tot}$ ) and flushing time (day) are known, the available capacity of dissolved oxygen ( $K_{ot}$ ) in the water column per day is equal to:

$$K_{ot} = [V_{tot} / FT] : O_{ak} \quad (9)$$

According to the analysis by Willioghby referred in Meade [20], dissolved oxygen needed to decompose the load of organic waste entering and staying in nearshore waters is 0.2 kg  $O_2$ /kg of organic waste. Thus the environmental carrying capacity (DDL) to contain a volume of organic waste is:

$$DDL \text{ (kg/day)} = K_{ot} : 0.2 \text{ kg} \quad (10)$$

If the volume of organic waste per kg of organism = E, then the production capacity of shrimp farming is in accordance with the environmental carrying capacity:

$$F = D / E \quad (11)$$

Where: D = the volume of organic waste contained in nearshore waters (kg/day); F = shrimp production volume fitting to the environmental carrying capacity (kg).

## RESULTS OF STUDY

Recapitulation of data of sea tides measured, distance from coastline at high tide to the location of seawater collection, coastline length and slope of seabed, tidal height in Wewiku waters within 15 days of measurements reached an average of 1.23 m with tidal frequency 2 times a day. The detail results are presented in Table 1, with a tidal display shown in Figure 2.

Table 1 – The physical condition of the near-shore waters of Wewiku District

No	Parameter	Observation Result
1	Coastline length of Wewiku District	
	a. Baderai Village	1,200 m
	b. Weoe Village	1,400 m
	c. Weseben Village	3,320 m
	Total	5,920 m
2	Mean value of Wewiku nearshore bedslope (°)	0.1771
3	Distance from coastline (high tide) to the farming pond:	
	a. Pond Baderai	1,800 m
	b. Pond Tuatolu	1,720 m
	c. Pond Uluklubuk	2,818 m
	d. Pond Weseben	995 m
4	Mean value of tidal range (h)	1.23
5	Tidal pattern	2 times of high tide 2 times of low tide

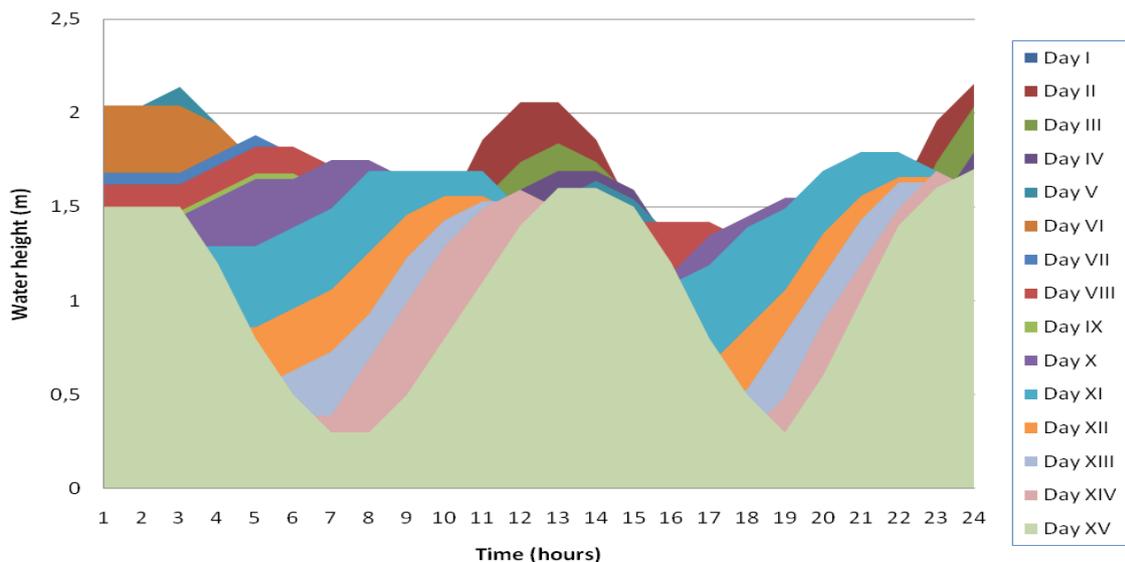


Figure 2 – Tidal changes in the waters of Wewiku District

Observation of tidal water conducted for 15 days is in accordance with Pariwono's [27] claim about a prediction tidal conditions of a waters requires measurement of data for at least 15 days. The tidal type is determined by the frequency of high and low tides every day. If the waters experience two high tides and two low tides in a day as observed and measured by the tide height, the tidal type in Wewiku waters is classified as a semi-diurnal tide type.

The tidal pattern in the coastal areas of Wewiku District can actually result in differences in the volume of the nearshore waters which will give a change to the area of water level. The volume of water in the nearshore of Wewiku District will experience an increase during high tides, hopefully at full moon. Vice versa, the volume of water will decrease on no-moon nights. According to Bishop [28], tidal actions can result in differences in the volume of water and in water level. Pariwono [27] explains that the difference in tide height is also influenced by the location of the waters, in addition to the influence of full moon and half moon (sickle) nights.

The average tidal range of 1.23 mW in Wewiku waters is actually a guide in determining the bottom of the pond yard which should not be higher than the Mean Sea Level (MSL), to facilitate filling and drying of pond water especially if the cultivation system is still traditional/traditional plus, which relies on gravity for filling the pond. According to Mustafa and Taranamulia [29], the ideal tidal range for shrimp farming is between 1.5-2.5 m while Asbar [30] argues that ideal tidal range for traditional pond cultivation is 1.30 m.

Nontji [31] states that in the nearshores, especially in narrow bays or straits, the movement of the waters will cause tidal currents. It is usually alternating, if the water level moves up, the water will flow in. If the water level moves down, then the current flows out. In certain places, this tidal current can be quite strong. Nontji even notes that the tidal potential of seawater currents on the islands of Nusa Tenggara can reach up to 2.5m/sec, especially at full moon, whereas it is usually less than 1.5m/sec in other areas, and less than 0.5m/sec in the open sea. The measurement of the velocity of tidal currents at the Wewiku coast indicates that the highest velocity at high tide reaches 1,786 m/sec while the velocity at low tide reaches 1.042 m/sec. This proves Nontji's [31] statement that the velocity of tidal current in NTT as an archipelago is relatively high compared to other regions with a tidal velocity less than 1.5 m/sec.

Poernomo [25] explains further that the location of ponds for shrimp farming should not be too far from the water sources as shrimp farming activities, especially with traditional and traditional plus cultivation systems, still rely heavily on tides for filling the water into the ponds, which is in contrast to the semi-intensive and intensive technology which use the pump.

Based on the data in Table 1, the distance from the coastline to Weseben station is 0.995 km, to Tuatolu station is 1.720 km, and to Baderai station is 1.8 km. While the furthest location is the Ulukklubuk station, reaching up to 2.818 km from the coastline. The data indicates that the location of the ponds in each station is still quite far from the required distance according to the traditional plus, semi-intensive and intensive cultivation methods (130-900 m) [23, 32, 25, 22, 33]. Water sources that are too far away can impact water quality and quantity negatively, and may compromise productions [25].



Figure 3 – Coordinates for determining the nearshore bedslope at 4 research stations: W (1,2) Weseben Coordinates, U (1,2) Ulukklubuk Coordinates, T (1,2) Tuatolu Coordinates, B (1,2) Baderai Coordinates

Additionally, the data in Table 1 shows the coastline length of 3 coastal villages in Wewiku District reaching 5,920 m, starting from Weseben beach at 9°44.668'S 124° 50,543'T to the coast of Baderai at 9°42.422'S 124° 52,866'T. The length of the coastline determines the distribution of the volume of water entering the coast, especially the pond area when the tides change. The nearshore bedslope of Wewiku is sloping from 3% to 6%, causing a large

tidal effect to the coastal area, greater than typically steep bedslopes. This situation is in accordance with the real condition at almost all research stations for even though the distance of the pond area from the shoreline is quite far, the tidal effect of the sea is still significant at a distance of 3 km from the coastline, passing through existing natural channels. This is in accordance with the statement of Kapetsky et al.'s [32] and Poernomo's [25] that the slope of land for shrimp farming should not be greater than 10% since it is considered not suitable.

The nearshore bedslope affects the tidal currents entering the coastal area. The average bedslope of the nearshore, as presented in Table 2, shows that the bedslope of Wewiku waters is 0.17710, obtained from the calculation of the highest and lowest waters contours at each coordinate as shown in Figure 3, accompanied with the data in Table 2. According Bowden [34], currents caused by tides are influenced by the seabed, where the strongest currents will be found near the surface and will decrease in velocity as it approaches the seabed.

Table 2 – The analysis result of the nearshore bedslope of Wewiku District

Station	Measurement Position		Distance (m)	Slope (m)	Elevation (m)	Degree of Slope (Tg $\Theta$ )
	X	Y				
Baderai	706150	8926098	1939.14	0.002	1	0.1182
	707624	8924838			-3	
Tuatolu	705392	8925415	1698.585	0.0047	0	0.2669
	706607	8924228			-8	
Uluklubuk	704443	8924530	1626.11	0.00369	0	0.2114
	705677	8923471			-6	
Weseben	703539	8923707	1446.643	0.002074	1	0.11188
	704666	8922800			-2	
Mean						0.177095

Source: Analysis Result.

Note: Distance Estimation Formula =  $\sqrt{(X_2-X_1)^2 + (Y_2-Y_1)^2}$ ; Slope = (Elevation I - Elevation II): Distance; Degree of slope =  $\text{tg}^{-1}$  x value of slope.

According to Officer [35], the movement of water masses in coastal areas, apart from being caused by the movement of water masses on the high seas, is affected by tides, while circulation in nearshore waters such as straits, bays and estuaries is strongly affected by tides. In the period between low tide and high tide (ranging from 6-12 hours), the mass of sea water flows from the high seas to the coast, or enters bays/estuaries.

From the discussion above, the physical condition of the tides, the length of the coastline and the bedslope are used to calculate the volume of available water ( $V_o$ ) in the waters of Wewiku District in one tidal cycle, using the formula by Widigdo and Pariwono [24]. Calculation of the Total Volume of Nearshore of Wewiku District is presented in Table 3.

Table 3 – Calculation of the Total Volume of Nearshore of Wewiku District

Description	Station				Total
	Baderai	Tuatolu	Uluklubuk	Weseben	
Length of coastline (Y m)	1,200	700	700	3,320	5,920
Distance from coastline to farming ponds (x) m	1,800	1,720	2,818	995	7,333
Nearshore bedslope (tg $\Theta$ )	0.1771	0.1771	0.1771	0.1771	0.1771
Tidal range (h) m	1.23	1.23	1.23	1.23	1.23

Note:

- $V_o$  (Water volume at high tide,  $m^3$ ) =  $0.5 \cdot h \cdot y (2x - h / \text{tg} \Theta) = 53,370,687 m^3$ ;
- $V_s$  (Water volume at low tide,  $m^3$ ) =  $0.5 \cdot h \cdot y \{2x - (2h - 1) / \text{tg} \Theta\} = 53,365,958 m^3$ ;
- $V_{O_s}$  (Water volume available in one tidal cycle,  $m^3$ ) =  $0.5 \cdot h \cdot y \{4x - (3h - 1) / \text{tg} \Theta\} = 106,736,645 m^3$ ;
- $V_{tot}$  (Total water volume in a day,  $m^3$ ) =  $f \cdot V_{O_s} = 213,473,290 m^3$ ;
- WT (retention time) =  $(V_o + V_s) / V_s = 2$  hour.

The calculation of the volume of water available in Wewiku waters in one tidal cycle based on data of high tide volume, low tide volume, tidal range, coastline length, distance

from the coastline to farming pond and the slope of seabed is equal to 106,736,644.9 m<sup>3</sup>. Tidal frequency of the nearshore of Wewiku District is 2 times/day, the total volume of water available in nearshore ( $V_{tot}$ ) of Wewiku District is  $2 \times 106,736,644.9$  m<sup>3</sup> or 213,473,289.8 m<sup>3</sup>.

Calculation of retention time is based on multiplication between the results of the division of the volume of water entering the coast at the time of installation and the volume of remaining water at low tide with the volume of residual water at low tide. The calculation result shows the retention time of the volume of water mass in nearshore per tidal cycle is at 2.0 hours. Because the tidal frequency in the Wewiku District coastal area is 2 times/day, the remaining volume of water mass in the Wewiku nearshore waters is at  $2 \times 2.0$  hours or equal to 4.0 hours.

Table 4 – Mean Value of Dissolved Oxygen Content within 15 Research Days

Duration (Hour)	Dissolved Oxygen Content (mg/l)			
	Baderai Station	Uluklubuk Station	Tuatolu Station	Weseben Station
6.00	6.13	6.7	5.59	6.32
7.00	6.72	6.54	6.03	6.54
8.00	6.43	6.23	6.22	6.25
9.00	6.64	6.84	6.1	6.48
10.00	6.77	6.78	6.16	6.23
11.00	7.5	6.78	6.61	6.73
12.00	7.6	6.7	4.16	6.28
13.00	7.8	6.37	6.9	7.02
14.00	9.37	6.72	5.28	6.47
15.00	7.8	6.83	6.01	6.13
16.00	5.7	6.47	6.07	6.48
17.00	5.6	6.36	6.23	5.48
18.00	8.9	6.55	6.35	6.4
19.00	7.23	6.5	6.05	6.4
20.00	7.46	6.43	6.54	6.4
Mean	7.18	6.59	6.02	6.374
Max	9.37	6.84	6.9	7.02
Min	5.58	6.23	4.16	5.48
Std. Dev	1.07	0.19	0.64	0.33

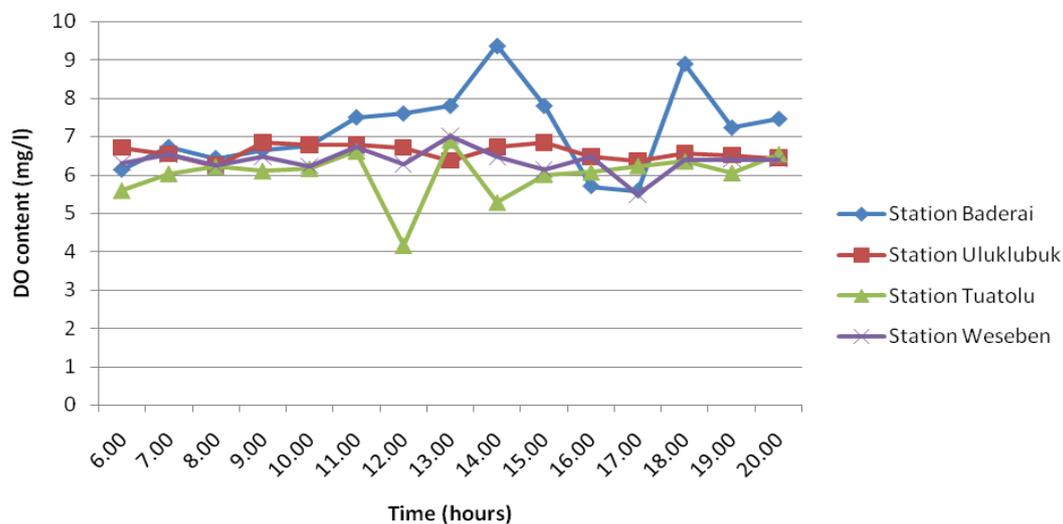


Figure 4 – Dissolved Oxygen (DO) Content at 4 Measured Stations

Estimation of environmental carrying capacity in the nearshore of Wewiku District for developing shrimp farming is done using the approach of environmental carrying capacity based on the available capacity of dissolved oxygen in the water column to decompose the organic waste. The available capacity of dissolved oxygen in the water column is calculated by referring to the modification of the formula proposed by Willoughby referred in Meade [20] and Boyd [21], including the difference between available dissolved oxygen concentration in the water column of nearshore ( $O_{ka}$ ) and minimum concentration of dissolved oxygen ( $O_2$ )

required by cultivated organisms (Obud). The dissolved oxygen content available in the water column due to tides is used to meet the minimum requirements for dissolved oxygen for the cultivation system.

The measurement results for the average dissolved oxygen content of each research station (Baderai, Tuatolu, Uluklubuk, Weseben) for 12 hours in 15 consecutive research days were 7.2 mg/l, 6.02 mg/l, 6.59 mg/l, 6.37 mg/l, with a mean value of dissolved oxygen content of 6.54 mg/l (O water column) as presented in Table 4 and Figure 4.

Lee et al [36] state that the dissolved oxygen content in a waters can be used as an indicator of water quality, and if the dissolved oxygen content of a water is >6 mg/l, then the waters is classified as uncontaminated or just very lightly polluted. Dahuri et al [37] mention that the concentration and distribution of oxygen in the sea is determined by the solubility of oxygen in water and the biological processes that control the level of consumption and release of oxygen. Physical processes also greatly affect the velocity of oxygen entering and being distributed to the waters. Dissolved oxygen is very important for the life of cultivated organisms for breathing and oxidizing organic matter in farming ponds, and pollution of organic waste can cause a decrease in dissolved oxygen content in waters [38].

Research results by Widigdo [15], Poernomo [25], Boyd [21], Boyd [22], Wedemeyer [26]; Rachmansyah et al. [39] conclude that the minimum level of dissolved oxygen for shrimp farming is 3 mg/l (Oaq), thus the difference between available dissolved oxygen in the nearshore water column (Oka) and the minimum dissolved oxygen needed by cultivated organisms (Oaq) is 3.54 mg/l. The total volume of water available in nearshore waters (Vtot) of Wewiku District is 213,473,290 m<sup>3</sup>.

The volume of water at the highest tide (VPt) is 45,796,100.46 m<sup>3</sup>, the volume of water at the lowest tide (VPs) is 6,159,313,122 m<sup>3</sup>, and the daily tidal frequency is 2 times. They all made up the dilution rate (D) of 0.4324. The flushing time is 2.31 days. The flushing time is calculated using the following formula:

If:

$$h \text{ (highest tide)} = 2.16$$

$$y \text{ (coastline length)} = 5920 \text{ m}$$

$$x \text{ (distance from coastline to farming ponds)} = 3587.5 \text{ m}$$

$$h \text{ (lowest tide)} = 0.29$$

$$\text{tg}\theta = 0.1771$$

$$\text{VPt (Water vol. at highest tide)} = 0.5 \times h \times y (2x-h/\text{tg}\theta) = 45796100.46$$

$$\text{VPs (Water vol. at lowest tide)} = 0.5 \times h \times y (2x-2h-1/\text{tg}\theta) = 6159313.112$$

$$\text{Dilution Rate (D)} = [\text{Vhighest tide}-\text{Vlowest tide}]: f * \text{Vpt} = 0.432752865$$

$$\text{Flushing time (day)} = 1/\text{D} = 2.31 \text{ day}$$

The total volume of Wewiku nearshore waters is 213,473,289.8 m<sup>3</sup>, so the total capacity of available dissolved oxygen (O<sub>2</sub>) in nearshore waters can be calculated by multiplying the total volume of seawater in Wewiku nearshore waters with flushing time. The minimum dissolved oxygen level needed by cultivated organisms, or in this case the total capacity of available dissolved oxygen (O<sub>2</sub>) in nearshore waters is equal to (213.473.290 m<sup>3</sup>/2.31) x 3.54 mg/l = 327,140.89 kg O<sub>2</sub>/day.

According to Willoughby as referred in Meade [20], the volume of dissolved oxygen needed to decompose organic waste that enters and resides in nearshore waters is 0.2 kg O<sub>2</sub>/kg of organic waste. Thus, if the available capacity of oxygen in Wewiku waters is 327,140.89 kg O<sub>2</sub>/day, the volume of organic waste that can be contained by Wewiku waters without exceeding the environmental carrying capacity is 327,140.89 kg/O<sub>2</sub>: 0.2 kg/O<sub>2</sub> per kg of waste = 1,635,704.43 kg organic waste/day. In other words, the volume of organic waste that can be contained by nearshore waters of Wewiku District without exceeding the environmental carrying capacity is 1,635,704.43 kg/day. Racocy and Alison in Widigdo and Pariwono [24] stated that in order to free the waters from pollution, the quantity of seawater taking the waste must at least be 100 times the quantity of waste disposed.

After observing that the quantity of seawater entering Wewiku nearshore waters is 213,473,290 m<sup>3</sup> and the volume of organic waste that can be contained by nearshore waters is 1,635,704.43 kg/day, it can be concluded that the Wewiku waters are able to contain,

dilute, and assimilate all incoming waste and does not cause harmful effects. Waste entering nearshore and marine waters will interact with sea water and produce typical waste characteristics that can evaporate, dissolve and be dispersed [40].

Quantification of waste loads resulted from shrimp farming is usually only carried out on intensive, semi-intensive and traditional plus technologies as in these, the shrimp maintenance relies on artificial food (pellets), while the traditional one relies on natural food. Artificial food has been named the culprit for the decline in the quality of the aquatic environment for the shrimps do not always eat all of it, and then the remaining pieces will turn into organic waste and becomes the cause for decreased environmental quality [41, 42].

Referring the results of Allaudin's study [23] on the application of intensive shrimp farming technology with a population density of 126 shrimps/m<sup>2</sup> and 50 shrimps/m<sup>2</sup>, respectively, which produce organic waste in the form of Total Suspended Solid (TSS) of 9,288.52 kg/ha/farming season and 2,387.46 kg/ha/farming season, while semi-intensive and traditional plus farming technologies produce 1,155.29 kg/ha/farming season and 487.90 kg/ha/farming season, respectively.

The volume of organic waste from shrimp farming in the form of TSS will be disposed to the nearshore waters and will potentially pollute it. Daily TSS concentration in nearshore waters depend heavily on the total volume of water containing the waste ( $V_{tot}$ ), the volume of discarded shrimp pond waste, tidal patterns and flushing time [43].

Still referring to Allaudin's [23] study on the volume of organic waste produced at various shrimp farming systems, and taking into account the calculation of the volume of organic waste that can be contained by Wewiku District's nearshore waters without exceeding the environmental carrying capacity, the result of calculation of land area and pond production according to the environmental carrying capacity is presented in Table 5.

Table 5 – Capacity to contain waste, pond area and production carrying capacity

Shrimp Farming Technology	Volume of organic waste disposal (kg/ha/MT) <sup>(a)</sup>	Capacity to contain organic waste (kg/day) <sup>(b)</sup>	Pond area in accordance with carrying capacity (ha) <sup>(c)</sup>	Production carrying capacity (tons/ MT) <sup>(d)</sup>
Intensive (126 fish/m <sup>2</sup> )	9,228.52	1,635,704.43	177.24	3,240.03
Intensive (50 fish/m <sup>2</sup> )	2,387.46	1,635,704.43	685.12	4,028.52
Semi intensive (25 fish/m <sup>2</sup> )	1,155.29	1,635,704.43	1,415.84	4,516.54
Traditional plus (8 fish/m <sup>2</sup> )	487.90	1,635,704.43	3,352.54	2,581.46

*Note: a = The volume of organic waste discharges according to the research by Allaudin (2010); b = The result of the calculation of the capacity to contain organic waste in the Wewiku nearshore waters; c = b : a; d = c x each production scale (intensive with a population density of 126 shrimps/m<sup>2</sup>, producing 18.28 tons/ha/MT; intensive with a population density of 50 shrimps/m<sup>2</sup>, producing 5.88 tons/ha/MT; semi-intensive with a population density of 25 shrimps/m<sup>2</sup>, producing 3,20 tons/ha/MT; traditional plus with a population density of 8 shrimps/m<sup>2</sup>, producing 0,777 tons /ha/ MT; MT = Farming Season.*

Table 5 shows that based on capacity to contain organic waste and oxygen available capacity in the waters, the area that can be developed intensively for farming ponds without exceeding the environmental carrying capacity is 177.24 ha (population density of 126 shrimps/m<sup>2</sup>), producing 3,240.03 tons/MT and 685.12 ha (population density of 50 shrimps/m<sup>2</sup>) with production capacity reaching 4,028.52 tons/MT. While the land area that is in accordance with the environmental carrying capacity for semi-intensive and traditional plus farming are 1,415.84 ha and 3,352.54 ha, respectively, with production capacity of 4,516.54 tons/MT and 2,581.46 tons/MT, respectively.

## DISCUSSION OF RESULTS

The results of the calculation of pond production based on the carrying capacity of the Wewiku waters above are only based on the calculation of shrimp production based on the area of cultivation. Potentials for shrimp production in the area of cultivated land will certainly depend on the choice of the type of shrimp and the farming system that will be developed.

According to Farkan et al [44], with intensive cultivation systems, tiger shrimp production can reach up to 12 tons/year while vanamme shrimp can reach up to 24 tons/ha/year. Thus, based on environmental carrying capacity, average shrimp production according to Farkan et al [44] may reach an average of 18 tons/ha/year. The result of the Allaudin's [23] study also shows that with a population density of 126 shrimps/m<sup>2</sup>, the average production of shrimp could reach 18.28 tons/ha/year, and the production would only reach 5.88 tons/ha/year for a population density of 50 shrimps/m<sup>2</sup>. In a semi-intensive farming system, Farkan et al [44] mentions that tiger shrimp production could reach 5.1 tons/ha/year, while vanname shrimp may reach 12 tons/ha/year, although Allaudin [23] also suggests shrimp productions of 3.20 tons/ha/year and 0.77 tons/ha/farming season in a traditional plus farming system.

The real condition on field and various references above suggest that efforts to develop aquaculture activities in Wewiku District, Malaka Regency with a choice of shrimp farming can be done by considering the land area and choice of cultivation systems for productions that do not exceed the environmental carrying capacity of Wewiku waters. Farkan et al [44] states that the traditional and extensive technology has a more sustainable effect than the intensive technology, but the demand for shrimp food is a burden for increasing production, and one of the efforts to increase carrying capacity is to increase the availability of seawater and the number of bacteria that eat organic waste. Meanwhile, according to Edward [45], efforts to increase the carrying capacity of the water resources can be done by combining modern and traditional cultivation technologies, best management practices, appropriate location selection, focusing land and aquatic environmental carrying capacity, and efficiency of land and water utilization.

Ting et al [46] explains other factors that affect aquaculture productivity, including environmental, social, institutional and economic factors. According to Sa et al [47], land management and management of shrimp farming really affect farming productivity. Ahmad [48], McDowell and Hess [49], Schmitt and Brugere [50], Suwarsih et al., [51], argue that increasing the carrying capacity of the aquatic environment can be done by considering land management policies, farming technology and ecological and social support. Thus, the eco-friendly shrimp farming can be developed in the Wewiku District of Malaka Regency by considering shrimp production in land area that is in accordance with the carrying capacity of the nearshore waters to dilute organic waste produced from shrimp farming.

## CONCLUSION

Based on the carrying capacity of the aquatic environment on the nearshore of Wewiku District, the area of land that can be developed for shrimp farming ponds with intensive farming pattern is 177.24 ha (126 shrimps/m<sup>2</sup>) with a production capacity of 3,240.03 tons/MT. For a land area of 685.12 ha (population density of 50 shrimps/m<sup>2</sup>), shrimp production capacity reaches 4,028.52 tons/MT. In semi-intensive and traditional plus cultivation systems, land area suitable for environmental carrying capacity is 1,415.84 ha and 3,352.54 ha with production capacity of 4,516.54 tons/MT and 2,581.46 tons/MT, respectively.

## REFERENCES

1. Liufeto, F., Nuddin Harahab., Arning Wilujeng., Soemarno, 2018. Market Demand Analysis of Prawn and Milkfish for Cultivation Business Development in malaka Regency, West Timor Indonesia. *International Journal of Business Mareting and Management (IJBMM)*. Volume 3. P.P 34-45
2. BPP (Badan Pengelola Perbatasan) NTT, 2011. Laporan Kajian Potensi and Tata Ruang Kawasan Perbatasan di Kabupaten Belu. Laporan Penelitian Kerjasama Lembaga Pemberdayaan and Pengembangan Wilayah Kupang
3. ATSEF (Arafura and Timor Sea Expert Forum), 2006. Potret Sumberdaya Kawasan Laut Arafura and Laut Timor. Kerjasama ATSEF dengan BRKP, Jakarta.

4. BKIPM (Balai Karantina Ikan Pengendali Mutu and Keamanan Hasil Perikanan) , 2010-2014. Data arus lintas hasil perikanan di perbatasan Motaain. Tidak dipublikasi.
5. BPS (Badan Pusat Statistik) Kabupaten Belu, 2008-2014. Produksi Perikanan: Kabupaten Belu Dalam Angka. Pemerintah Kabupaten Belu
6. Belton, B and Thilsted, S.H., 2014. Fisheries in transition: food and nutrition security implications for the global South. *Global Food Security*, 3(1),59-66
7. FAO, 2012. The state of world fisheries and aquaculture 2012. Rome: Fisheries and Aquaculture Development, Food and Agriculture Organization of the United Nation.
8. FAO, 2006a. FishStat. Fisheries Departement, Food and Agriculture Organization of the United Nation. Rome Italy
9. FAO, 2006b. Production: Environment, species, quantities and values. Chapter 2 in Expert Workshop on Global Review on Status and Trends in Aquaculture and Prospective analysis of Future Aquaculture Development. Guangzhou City, Guangdong, China.12-15 March 2006. Food and Agriculture Organization of the United Nations, Rome Italy
10. FAO, 2004. The State of world Fisheries and Aquaculture 2004. Fisheries Departement, Food and Agriculture Organization of the United Nations. Rome Italy
11. Barbier, E.B and Cox,M. 2002. Economic and demography factors affecting mangrove lloss in the coastal provinces of Thailand, 1979-1996. *Ambio*, 31, 351-357.
12. Tacon, AGJ. 2001. Increasing the Contribution od Aquaculture for Food Security and Poverty Alleviation . In A Tacon (ed) *Aquaculture in third millennium*. Bangkok, Thailand, 20-25 Februari 2000. NACA, FAO, Rome pp 66-71
13. Leung., P.S., C.S. Lee and P.J. O'Bryen., 2007. Species and system selection for sustainable aquaculture.Blackwell publishing, IOWA-USA.
14. Anderson 2007. Sustainable aquaculture: what does it mean and How do we get there ? In Leung et al.,, 2007. Species and system selection for sustainable aquaculture, Blacwell Publishing IOWA USA Anderson
15. Widigdo, B., 2002. Perkembangan and peranan perikanan budidaya dalam pembagunan. Makalah disampaikan dalam seminar penetapan standar kualitas air buangan tambak. Ditjen Perikanan Budidaya, Puncak 7-9 Agustus 2002.
16. Lewis, R.R., Philip M.J., Macintosh, D.J., 2003. Thematic review on coastal wetland habitats and shrimp aquaculture. Report prepared under the world bank, NACA, WWF and FAO Consorsium Program on Shrimp Farming and Environment. Work in Progress for Public Discussion. Published by the consorsium.
17. Nash, C., 1995. *Aquaculture Sector Planning and management*. The University Press, Cambridge.
18. Johsen RI, Grahl-Nielson O, Lunestad BT. 1993. Environmental distribution on Organic waste from marine fish farm. *Aquaculture*, 118:229-224
19. Soewardi K. 2002. Pengelolaan kualitas air tambak. Makalah dalam seminart penetapan standar kualitas air buangan tambak. Ditjen Perikanan Budidaya, 7-9 Agustus 2002
20. Meade, J. W. 1989. *Aquaculture Management*. AnAvi Book, Van Nostrand Reinhold. New York. 175p.
21. Boyd CE., 1990. Water quality in ponds for aquaculture. Alabama Agricultural Experiment Station. Auburn University, Alabama, 482p
22. Boyd, C.E., 1999. Management of Shrimp pond to reduce the eutrophication potensial of effluents. *The Advicae*, December 1999:12-14
23. Alauddin, M.H.R., 2010. Optimasi Pemanfaatan Wilayah Pesisir Berbasis Daya Dukung Bagi Pengembangan Budidaya Tambak Udang di Kecamatan Mangara Bombang,Kabupaten Takalar Provinsi Sulawesi Selatan. Disertasi. Sekolah Pasca Sarjana IPB.
24. Widigdo B, and Pariwono. 2003. Daya dukung pantai utara Jawa Barat untuk Budidaya udang (studi kasus di kabupaten Subang, Teluk Jakarta and Serang). *Jurnal Ilmu Ilmu Perairan and Perikanan Indonesia* 1, 10-17
25. Poernomo, A., 1992. Pemilihan Lokasi Tambak Udang berwawasan Lingkungan. Pusat penelitian and pengembangan perikanan – Badan Penelitian and Pengembangan Pertanian-Departemen Pertanian, Jakarta.

26. Wedemeyer GA.1996. Physiology of fish in intensive cultures system. Chapman and Hall.New York. 232 p
27. Pariwono, J.I. 1985. Tides and Tidal Phenomenon in Asean Region. Australian Cooperative Programmes in Marine Sciences. Prelim.Rep.FIAM, South Australia
28. Bishop JM. 1984. Applied Oceanography. John Wiley and Sons, Inc. Newyork: 252 p
29. Mustafa A, Taranamulia. 2008. Model analisis spasial kesesuaian lahan tambak skala semi detail berdasarkan peubah kunci tambak sistem ekstensif and semi intensif. Balai Riset Perikanan Budidaya Air Payau Maros. 14 hal.
30. Asbar 2005. Optimalisasi pemanfaatan kawasan pesisir untuk pengembangan budidaya tambak berkelanjutan di kabupaten Sinjai Sulawesi Selatan. Disertasi program Doktor Sekolah Pasca Sarjana IPB (tidak dipublikasikan)
31. Nontji, A. 1987. Laut Nusantara. Penerbit Djambatan, Jakarta
32. Kapestky, J.M., L. Mc Gregor, and H. Nanne. 1987. A Geographical kinformation System and Satellite Remote Sensing to Plan for Aquaculture Development: A FAO – UNEP/GRID Cooperative Study in Costa Rica. FAO Fish. Tech. Pap. (287): 51.
33. Prasita, 2007. Analisis daya dukung lingkungan and optimalisasi pemanfaatan wilayah pesisir untuk pertambakan di kabupaten Gresik. Disertasi. Program Studi Pengelolaan Sumberdaya Pesisir and Lautan. Sekolah Pasca Sarjana Institut Pertanian Bogor. 145 hal.
34. Bowden,K,F., 1983. Physical Oceanography of Coastal Waters. Ellis Horwood Limv.
35. Officer, C.B 1976. Physical Oceanography pf Estuaries (and Associated Coastal Waters). John Wiley & Sons
36. Lee., C. D, S.B Wang and Kuo. 1978. Bentic macro invertebrate and fish as biology indicators of water quality, with reference to community diversity index. International Conference of water Pollutan Control In Developing Countries. Bangkok Thailand
37. Dahuri, R., J. Rais, Sapta P. Ginting., Sitepu., 2001. Pengelolaan Sumber Daya Pesisir and Lautan Secara Terpadu. Pradya Paramita, Jakarta 326 pp.
38. Efendi H. 2003, Telaah kualitas air bagi pengelolaan sumberdaya and lingkungan perairan. MSP-IPB Bogor
39. Rachmansyah, Makmur, Undu MC. 2008. Peningkatan kualitas lingkungan tambak dengan penerapan probion pada budidaya udang. Laporan Kegiatan Balai Besar Pengembangan Budidaya Air Payau Jepara. Tahun 2008. Hal: 193-208
40. Mukhtasor, 2007. Pencemaran Pesisir and Laut. Cetakan Pertama. PT Pradnya Paramita, Jakarta, 322 hal.
41. Mc Donald, Tikkanen ME, Axler CA, Larsen RP, CP and Host G, 1996. Fish simulation culture model (FIS-C): a bioenergetics based model for aquaculture wasteload application. Aquaculture engineering, 15 (4): 243-259
42. Horowitz A, Horowitz S. 2000. Microorganism and feed management in aquaculture. Global Aquaculture Alliance, The Advocate, Vol 3, Issue 2 April 2000, p:33-34
43. Barg, U. C. 1992. Guideliness of The Promotion of Environmental Management of Coastal Aquaculture Development. Fisheries Technical Paper 328, FAO, Rome. 122p.
44. Farkan, M., D. Djokosetiyanto, R.S Widjaja, Kholil, Widiatmaka., 2016. Carrying capacity analysis of area of sustainable Shrimp Cultivation Based on Land Suitability and water availability in coasta; Bay of Banten Indonesia. International Journal for research in Biology and Pharmacy. Volume 2 p:29-40
45. Edward, P., 2015. Aquaculture Environment Interactions: Past, Present and Likely Future Trends. Aquaculture (2015) doi: 10.116/j.aquaculture.2015.02.001.1-11
46. Ting KH, Lin HT, Jhan HT, Huang TJ, Wang CM, Liu WH, 2015. Applicaion ps Sustainable Fisheries Development Indicator System For Taiwan Aquaculture Industry. Elsevier Aquaculture 437 (2015). Doi: 10.1016.398-407
47. Sa TD, de Sousa RR, Rocha IRCB, de Lima GC, Costa FHF, 2013. Brackish Shrimp Farming In Northeastern Brazil: The Environment and Socio – Economic Impacts and Sustainability. Natural Resources Journals, 2013, 4,538-550.

48. Ahmad T., 2006. Perikanan budidaya sebagai langkah maju pemanfaatan terkendali sumberdaya perikanan. Jakarta: Badan Riset Kelautan and Perikanan, Departemen Kelautan and Perikanan.
49. McDowell, JZ and J.J Hess 2012. Multiple Stress on livelihoods in teh Bolivian Highlands Under Changing Climate. Journal Global Environment Change Journal home page: [www.Elsevier.com/locate/gloenvcha](http://www.Elsevier.com/locate/gloenvcha) USA 22, p.342-352
50. Schmitt LHM, Brugere C. 2013. Capturing ecosystem services, stakeholders preferences and trade – Offs in Coastal Aquaculture Decisions: A Bayesian Belief Network Application. PloS One 8 (10): 275956. DOI: 10.1371, 1-16 p
51. Suwarsih, Marsoedi, Nuddin Harahab and Mohammad Mahmudi, 2016. The Utilization Analysis Coastal District Of Jenu Tuban As Land Vannamei Shrimp With Geographic Information System (Gis), Asian Journal of Microbiology, Biotechnology and Environmental Sciences. Vol. 18, No. (2): 2016: 379-389; <http://www.envirobiotechjournals.com/>

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## **SOCIO-ECONOMIC FACTORS AFFECTING POVERTY IN BALI PROVINCE, INDONESIA**

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### **ABSTRACT**

The issue of poverty is still a strategic development issue carried out by the Bali Provincial Government. The poverty reduction efforts have been carried out by the regencies/cities of Bali Province with various development programs, but the number of poor people still shows that there is a level of poverty inequality between regencies/cities in Bali Province. This study aims to examine and analyze the influence of social and economic factors on poverty levels in the Bali Province, Indonesia. The social factors in question are population density, unemployment rate, education, and life expectancy. While several economic factors studied included investment, income distribution, and contribution of the agricultural sector. The data in this study are panel data covering socio-economic data and poverty levels in nine regencies/cities in Bali Province during the period 2007-2017. Data analysis was carried out with a quantitative approach using panel data multiple regression methods and equipped with descriptive analysis. The results of the study showed that education, investment, and the contribution of the agricultural sector has a negative effect on poverty levels. Population density, unemployment rate, life expectancy, and income distribution has a positive effect on poverty levels. Suggestions to policy makers, first, the regencies with low investment levels (Bangli, Karangasem, and Jembrana Regencies) to make innovative breakthrough efforts to attract investors to invest according to the potential of each region to support the sustainable development of Bali; and second, the consistency of pro-poor principles of social assistance spending policies.

### **KEY WORDS**

Poverty level, population density, unemployment rate, education, life expectancy, investment, income distribution, contribution of agricultural sector.

Poverty alleviation has become a priority agenda in the policy framework in many countries as well as international organizations which is a commitment in the Millennium Development Goals (MDGs) which ended in 2015, and continues to the Sustainable Development Goals (SDGs) program. SDGs as a continuation agreement of the MDGs commitment consists of five elements, namely human, planet, welfare, peace and partnership, and to achieve the three noble goals of the nation's life in 2030, among them is to end poverty.

Sustainable development of a nation can be directed at three main things, namely increasing the availability and expansion of the distribution of basic necessities for the community, improving the welfare of the community (material well being), and increasing the ability of communities to access (expand choices) as well as economic activities and social activities in their lives (Todaro, 2011).

The issue of poverty is a strategic issue of development carried out by the Bali Provincial Government. The strategy implemented is in accordance with the mission of Realizing a Prosperous and Inner Birth of Bali is how the decline of the poor can continue to be improved and how the new poor will not occur again. The poverty alleviation efforts have been carried out by the Provincial Government of Bali with various development programs, but there is still an increase or decrease in the number of poor people in several districts, and the fact is that there are still poverty levels between regencies/cities in Bali. There is a causal relationship between economic and social aspects with community welfare (poverty) as a

result of development. But from the reality, development in order to improve economic and social living standards also depends on the role of government (expenditure allocation policy).

Based on this background, the purpose of this study is to find out and analyze the influence of social and economic factors on poverty levels in the Province of Bali, Indonesia. The social factors in question are population density, unemployment rate, education, and life expectancy. While several economic factors studied included investment, income distribution, and contribution of the agricultural sector.

## **THEORETICAL REVIEW**

Development is interpreted as a multidimensional process that includes a variety of fundamental changes to the social structure, attitudes of society, and national institutions while continuing to pursue accelerated economic growth, handling income inequality, and alleviating poverty (Todaro, 2011). Todaro (2011) emphasized that there are at least three basic components/core values to understand the real meaning of development, namely sustenance, self-esteem, and freedom.

Economic development according to Jhingan (2016) is not enough with economic conditions, but is closely related to "human wealth, social attitudes, political conditions, and historical settings". Jhingan (2016) further elaborated on several economic development requirements which include: (1) the process of growth of economic development must be based on the ability of the domestic economy; (2) economic development related to efforts to eliminate market imperfections that cause barriers to sectoral expansion and development; (3) structural change, namely transition from traditional farming communities to modern industrial economies that lead to the opening of employment opportunities and increasing labor productivity, capital stock, utilization of new resources, and technological improvements; (4) capital formation which is the main key to economic development; (5) appropriate investment criteria, not only determines the level of investment but also the composition of investment; (6) the socio-cultural insights of the community must change if they expect economic development to work; and (7) an administrative presence that is accountable, has integrity and is not corrupt is a situation and condition i am inevitable (*sine qua non*) in economic development.

Poverty is no longer understood to be limited to economic inability, but also the failure to fulfill basic rights and differences in treatment for a person or group of people, men and women, in living a dignified life (Dadang, 2007). Sen (1999) in the edition of *Development as Freedom*, poverty is expressed as lack of capability (capability deprivation) rather than just emphasizing low income. Capability to function is the most important thing to determine a person's poor status.

Chambers (1987), states that the core problem of poverty actually lies in what is called a deprivation trap. According to Chambers (1987), poverty is an integrated concept that has five dimensions, namely: (1) proper; (2) powerless; (3) state of emergency; (4) dependency; (5) isolation.

The Central Bureau of Statistics (BPS) measures poverty using the concept of the ability to fulfill basic needs (basic needs approach). With this approach, poverty is seen as an economic inability to meet basic food and non-food needs as measured by expenditure. With this approach, head-count index can be calculated, which is the percentage of poor people to the total population. The method used is calculating the Poverty Line, where the population whose value is fulfilling food and non-food expenditure under the poverty line is categorized as poor.

The measure of poverty according to Nurkse (1953) in Arsyad (2010) in a simple and commonly used manner can be divided into three terms, namely: (1) absolute poverty; (2) relative poverty; (3) cultural poverty. Khomsan et al. (2015), there are several ways to calculate poverty lines such as head count index, poverty gap index, poverty severity index, and so on. Determination of the exact size of poverty according to economists in Todaro

(2011), must meet the principles: (1) anonymity; (2) independence of the population; (3) boredom; (4) distributional sensitivity.

The causes of poverty include economic and non-economic (social) factors which result in the inability to earn income in improving the quality of life in the community thereby reducing the level of welfare of a community.

At present population issues are the main issue of development, especially concerning population growth and the social-economic implications of development. According to Todaro (2011), very rapid population growth often leads to impoverishment. This opinion is reaffirmed by Todaro (2011), that the real problem is in the distribution of the population. Not the number of people causing problems, but the distribution of population or population density in a region cannot compensate for the availability of land and other resources. Empirical evidence at the household level has a very significant correlation and ensures that the negative consequences of rapid population growth have befallen almost all poor people.

According to Fields et al. (2007), there is a close relationship between poverty and minimum wages. Unemployment called open unemployment or the open unemployment rate is one indicator of the employment situation in a region or country. According to Kuncoro (2015), the condition of the working age population included in the unemployment group is measured by the open unemployment rate indicator, as a percentage of the number of unemployed workers. The TPT indicator is used as an ingredient in evaluating the success of reducing the number of poverty and economic development programs in Indonesia.

The level of education of a person increases the opportunity to get a better job and additional income. According to Simmons in Todaro (2011), education is a way to save themselves from poverty. Where with the higher education that is owned by the community, the greater the ability and opportunity to earn income and good work, so that it will be the furthest from existing poverty. Research conducted by Ezebuilo and Emmanuel (2014) found that higher education has the capacity to reduce poverty. There is a negative relationship between education and poverty, where the higher the education that is owned by the community, the smaller the poverty in the community will be. Those who have higher education can increase their income, so that economic conditions are above those with lower education.

The better the health of a community, the healthier and longer the productive age of a person, it is possible to have the capacity and opportunity to improve their welfare and avoid the threat of poverty. Studies revealed according to Todaro (2011) show that healthier people will get high wages and most of the health effects of increasing income are due to differences in productivity.

As explained earlier, that there are economic and non-economic (social) factors which are alleged to cause poverty. Wahyuni (2004) concluding that the two best policies for empowering the poor, especially in developing countries, i.e.: (1) increasing investment and credit markets for the poor who are seen as successful in increasing economic growth, and (2) financial stabilization, international market openness and size moderate government. This policy will provide benefits if supported by the existence of effective institutions, social and political structures, which enable the poor to be more involved in development and reduce inequality between the poor and the rich. The assertion that capital formation is an important factor in development to alleviate poverty is stated Jhingan (2016), and further stated that with capital formation, the market will be created broadly and help market imperfections that will cut the vicious circle of poverty.

Research by Suryadarma et al. (2005) entitled "A Reassessment of Quality and Its Role in Poverty Reduction in Indonesia", showing that in this study period there was a mixed pattern of inequality trends, decreasing during 1984 and 1990, increasing between 1990-1996, decreasing sharply in the year 1999 and increased again in 2002. The findings of this study are that the lowest inequality occurred in 1999 with a higher poverty rate than 1993. Furthermore, this study also proves the importance of reducing inequality as a way to increase the influence of economic growth on poverty reduction, because inequality affects poverty growth elasticity. At a high level of inequality, growth will have little influence in reducing poverty.

Todaro (2011) states that more than two-thirds of people with extreme world poverty are involved in agricultural activities. And more than two-thirds of the poorest people in the world live in rural areas that mostly live from subsistence agriculture, where the most important thing for them is to survive. Increasing agricultural productivity will increase income in the agricultural sector and certainly will affect the welfare of farmers. This is in line with the results of Dewbre et al. (2011) that the growth of the agricultural sector will reduce the level of poverty in a region.

## FRAMEWORK AND HYPOTHESES

Raising the issue of poverty does not only cover the fulfillment of basic needs from economic aspects, but also includes non-economic aspects such as social, cultural, environmental, political, and even institutional aspects. This study analyzes economic aspects which include investment, income distribution, and contribution of the agricultural sector, as well as social aspects which include population density, unemployment, education, and life expectancy. The concept of this study is the logical relationship between foundations and empirical studies that have been described in the literature review as show as Figure 1.

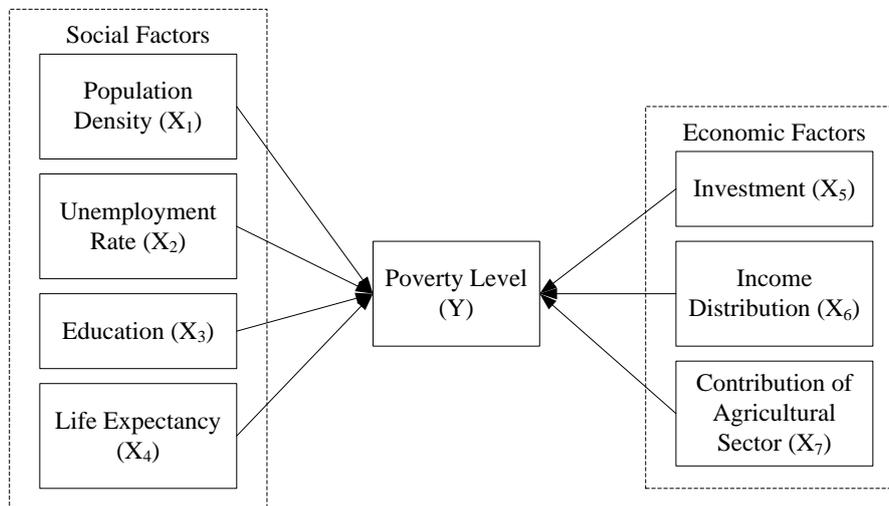


Figure 1 – Conceptual Framework

Based on the conceptual framework, two research hypotheses can be prepared:

- The population density and unemployment rate have a positive effect on poverty levels in Bali Province;
- Investment, income distribution, contribution of the agricultural sector, education, and life expectancy have a negative effect on poverty levels in Bali Province.

## METHODS OF RESEARCH

This research will be carried out in the regencies/cities of Bali Province which have been implementing various poverty alleviation programs. Poverty alleviation programs have been implemented by each regencies/cities and province of Bali, but there are still phenomena of poverty inequality in 9 (nine) regencies/cities of Bali Province which are geographically located in one island unity, so that more analysis is needed further related to the poverty of regencies/cities in Bali Province. The data in this study are panel data, which is a combination of cross section and time series data, which consists of data on several socio-economic factors and poverty in nine regencies/cities in Bali Province during the period 2007-2017.

The data analysis technique in this study uses a quantitative approach with panel data regression. Panel data regression analysis will provide better results statistically because the

incorporation of cross-site data and sequential time data will produce a greater degree of freedom, will provide more data, and can overcome the problem of variable omission (Sriyana, 2014).

In this study, the poverty model is assumed to be based on the theory and empirical causes of poverty contained in this study, and then a panel data regression model is formulated as follows:

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \beta_5 X_{5it} + \beta_6 X_{6it} + \beta_7 X_{7it} + e_{it} \quad (1)$$

Where:

- $Y_{it}$  = Poverty of nine regencies/cities in Bali Province in 2007-2017;
- $X_{1it}$  = Population density of nine regencies/cities in Bali Province in 2007-2017;
- $X_{2it}$  = Unemployment rate;
- $X_{3it}$  = Education;
- $X_{4it}$  = Life expectancy;
- $X_{5it}$  = Investment;
- $X_{6it}$  = Income distribution;
- $X_{7it}$  = Contribution of agricultural sector;
- $\beta_0$  = Constanta;
- $\beta_{1-7}$  = Regression Coefficient;
- $e_{it}$  = Error Term (the estimation error rate).

General panel data regression equation (Equation 1.) Above, will adapt the method of election results approach best estimates.

## RESULTS AND DISCUSSION

The analysis of panel data regression results is done after getting the best model through testing the right model selection to use. The model selection test consists of two testing stages, namely: (1) the Chow Test to choose the common effect or fixed effect model; and (2) the Hausman Test to choose the random effect or fixed effect model. Before analysis of panel regression results on the selected model (Common Effect Model/CEM, Fixed Effect Model/FEM or Random Effect Model/REM), the selected model (CEM or FEM model) must meet the classical assumptions because the estimation of the two models is classic linear regression model with estimation method of ordinary least square (OLS) (Gujarati, 2007).

The initial stage of testing is to get a model approach with the best estimation between the common effect model or the fixed effect done by the Chow test. The model tested is a panel data regression model without entering moderating variables according to the model equation 1.

Selection of common effect or fixed effect model which is right to use by comparing the calculation results of  $F_{\text{statistic}}$  and  $F_{\text{table}}$ . Based on the Chow test on equation 1, which is  $F_{\text{statistic}}$  getting 10,0894 while  $F_{\text{table}}$  significant at 5% from dari numerator 8 and denominator 83 obtained a value 2,02, it can be concluded that the  $F_{\text{statistic}}$  more than  $F_{\text{table}}$  ( $10.0894 > 2.02$ ), so the exact model used between common effect and fixed effect is Fixed Effect Model (FEM). The same results are obtained by testing using the Eviews version 10 application to determine which CEM or FEM model can be used, such as Table 1 below.

Table 1 – Test Result between Common Effect and Fixed Effect Model for Panel Regression Equation Model

<i>Effects Test</i>	<i>Statistic</i>	<i>d.f.</i>	<i>Prob.</i>
<i>Cross-section F</i>	9.812639	(8,83)	0.0000
<i>Cross-section Chi-square</i>	65.901470	8	0.0000

Based on the output of Table 1, the Prob value is obtained. Cross-Section Chi-Square (0,000) is significant with Sig. 0.000, the right model is used between the common effect

model and the fixed effect is a Fixed Effect Model (FEM). The results with this test are the same as the results using the previous Chow Test.

The next step after the Chow test with the selected fixed effect model is that the test determines the model that is more accurately used between the fixed effect (FEM) or random effect (REM) model. Testing the selection of the best estimation model between the two models is done by the Hausman Test. Determination of the selected model is seen based on the prob value obtained from the results of the test of the hausman test. The test results obtained with the help of the Eviews application version 10 are shown in Table 2 below.

Table 2 – Testing Results between Random Effect and Fixed Effect Models for Panel Regression Equation Models

<i>Test Summary</i>	<i>Chi-Sq. Statistic</i>	<i>Chi-Sq. d.f.</i>	<i>Prob.</i>
<i>Cross-section random</i>	63.895437	7	0.0000

Based on the results of the Hausman Test in Table 2 above, the Prob value is obtained. (0,000) less than 0.05, then the hypothesis H0 is rejected. Thus the right model used between fixed effect and random effect is a Fixed Effect Model (FEM).

The chosen FEM method is also called the Least-Squares Dummy Variable (LSDV) regression model where intercepts vary between regencies/cities (nine regencies/cities) and each intercept does not vary over time (time invariant). It can be said that the chosen FEM model is assumed that the slope coefficient of the regressor does not vary among regencies/cities and between times. Because FEM is based on a classic linear regression model that uses OLS methods, the model must fulfill the classic assumption in order to produce an unbiased linear estimator and have a minimum variant (Best Linear Unbiased Estimator/BBLUE) according to the Gauss-Markov theorem (Ghozali and Ratmono, 2017).

This study analyzes panel data with the Pooled Least Square (PLS) technique so that only Multicollinearity and Heteroscedasticity tests are needed. The model regression results have been freed from multicierity testing, with the correlation value between independent variables below 0.9. In multicollinearity testing, the provisions of the model containing multicollinearity according to Hair et al. (2014), if the correlation value between all the independent variables tested is more than 0.9 to perfect multicollinearity with a value of 1.0. Furthermore, using the help of the Eviews program version 10, the resulting regression results are results that are free of heteroscedasticity.

Panel data regression test results on the equation model (1) shown in Table 3 with the poverty panel regression model in Bali Province obtained:

$$Y_{it} = \beta_0 + \beta_1.X_{1it} + \beta_2.X_{2it} + \beta_3.X_{3it} + \beta_4.X_{4it} + \beta_5.X_{5it} + \beta_6.X_{6it} + \beta_7.X_{7it} + e_{it} \quad (2)$$

$$Y_{it} = 6,3199 + 0,0008X_1 + 0,1025X_2 - 0,7944X_3 + 0,0635X_4 - 0,0639X_5 + 0,0768X_6 - 0,0252X_7 \quad (3)$$

Where:  $Y_{it}$  = Poverty level;  $X_1$  = Population Density;  $X_2$  = Unemployment Rate;  $X_3$  = Education;  $X_4$  = Life Expectancy;  $X_5$  = Investment;  $X_6$  = Income Distribution;  $X_7$  = Contribution of Agricultural Sector.

Pointing to Table 3 above, the output of the eViews application shows seven independent variables used, namely the investment variable (PMTDB), income distribution (INCD), agricultural sector contribution (AGRIC), population density (PDD), unemployment rate (TPT), education (RLS), and life expectancy (AHH). The results of calculation of the F test or simultaneous test which is also a model validity test, there are simultaneous effects of investment variables, income distribution, agricultural sector contribution, population density, unemployment rate, education, and life expectancy on poverty level variables. The value of F shows a number of 43.42, which is much greater than the value of Ftable at a free degree of 7: 91 with a significant level of 5 percent of 2.11. The significance of the effect simultaneously of the independent variables on the dependent variable is also indicated by the value of the Prob. (F-statistic) of 0,000 which is smaller than the real level of 5 percent.

Based on the output of the processing, the R2 determinant coefficient of 0.8869 shows the ability of independent variables (free) to explain the dependent variable (bound) of 88.69 percent. This means that 88.69 percent of the poverty level variables that occur can be explained by using investment variables, income distribution, agricultural sector contribution, population density, unemployment rate, education, and life expectancy, while the remaining 11.31 percent can be explained by other variables in outside the model.

Table 3 – Results of Test of Poverty Panel Panel Data Regulations in Bali Province 2007-2017

Variable	Coefficient	t-Statistic	Prob.
C	6.3199	0.8409	0.4028
PDD (X <sub>1</sub> )	0.0008	3.6076	0.0005
TPT (X <sub>2</sub> )	0.1025	1.0376	0.3025
RLS (X <sub>3</sub> )	-0.7944	-2.5994	0.0111
AHH (X <sub>4</sub> )	0.0635	0.5891	0.5574
PMTDB (X <sub>5</sub> )	-0.0639	-3.1220	0.0025
INCD (X <sub>6</sub> )	0.0768	1.9747	0.0516
AGRIC (X <sub>7</sub> )	-0.0252	-0.8014	0.4252
Fixed Effects (Cross)			
_JBR--C	1.6407		
_TBN--C	0.7732		
_BDG--C	-1.2482		
_GNY--C	0.4285		
_KLK--C	1.7756		
_BGL--C	0.5618		
_KRG--C	-0.3125		
_BUL--C	0.8087		
_DPS--C	-4.4278		
R-squared	0.8869	S.E. of regression	0.7003
Adjusted R-squared	0.8665	F-statistic	43.4243
Sum squared resid	40.7101	Prob(F-statistic)	0.0000

Equation model 3 and output Table 3 for partial test analysis (two-way t test) shows that with the value of 91 independent degrees at the critical point -1,986 and 1,986, the variables that significantly influence the poverty level are the variable density population (X1), education (X3), and investment (X5). The results of the probability value (Prob.) Based on processed data with eViews also show the same results, where the three poverty determinant variables are significant with the Prob value. smaller than 5%.

The partial test results concluded: 1) education, investment, and the contribution of the agricultural sector negatively affected the poverty level. The negative effect of education is significant with a coefficient of 0.7944; significant investment with a coefficient of 0.0639; and the contribution of the agricultural sector is not significant with a coefficient of 0.0252; and 2) population density, unemployment rate, life expectancy, and income distribution have a positive effect on poverty levels. Positive influence of significant population density with a coefficient of 0,0008, the unemployment rate is not significant with a coefficient of 0.0125, life expectancy is not significant with a coefficient of 0.0635, and income distribution is not significant with a coefficient of 0.0768. Thus, based on the direction of the relationship, the poverty determinant variables are statistically proven, except for income distribution and life expectancy which have no negative effect on poverty levels, but are not significant.

Based on the constant fixed effect (cross) coefficient of the regression model mentioned above, the largest fixed effect (cross) value is owned by Klungkung Regency at 8.0954 and the smallest one is owned by Denpasar City with a coefficient of 1.8921. The difference in the value of fixed effect (cross) shows how much the difference between one region and another region. Each region has its own characteristics reflected in other variables outside the independent variables in the model.

## DISCUSSION OF RESULTS

As the results of the panel data linear regression analysis described earlier, the results of the analysis revealed and proved that together (simultaneously) the variable population density, unemployment, education, life expectancy, investment, income distribution, and contribution of the agricultural sector had a significant effect the level of poverty in the Province of Bali. This shows that all independent variables in the study together play a role in influencing the level of poverty in the province of Bali. According to the results of the analysis, the role of the variable population density, unemployment, education, life expectancy, investment, income distribution, and contribution of the agricultural sector can explain the dependent variable poverty rate of 88.7 percent, while the remaining 11.3 percent is explained by other variables outside the unexamined model or other variables not included in the research model.

The value of the intercept produced by assuming the heterogeneity of the poverty levels of regencies/cities in Bali Province shows that the poverty rate of Denpasar City is the lowest compared to other districts to rate all the same independent variables. During the 2007-2017 study period the poverty rates in Denpasar City ranged from the lowest 1.52 percent and the highest 2.39 percent, with an average poverty rate of 2.1 percent. The regency which shows the highest poverty level for the value level of all the same independent variables is Klungkung Regency. In the intervals of the study period, the poverty rate in Karangasem Regency ranged from 5.23 percent to the highest reaching 9.14 percent, with an average poverty rate of 6.73 percent. Furthermore, the partial analysis of the influence of the independent variables on the level of poverty obtained the following results.

Population density variables have a positive effect on poverty levels or there is a positive relationship between population density and poverty level. This means that population density has an effect on increasing poverty levels in Bali Province. The highest population density in 2017 is in Denpasar City followed by Badung Regency and Gianyar Regency, and the lowest density is in Jembrana Regency. Areas with high population densities such as Denpasar City and Badung Regency have low poverty rates of 2.06 percent and 2.27 percent far below the other districts which range from 4.92 percent to 6.55 percent. Population density in both regions is undeniable as a result of the success of development and tourism development, which attract population migration, both because of better infrastructure infrastructure facilities, the potential for employment opportunities that promise jobs, more complete health facilities, and many choices access to education.

According to Guzman (2005), population density in an area caused by population migration to urban areas will have a positive impact on stimulating economic growth and encouraging poverty reduction in developing countries, insofar as the income of some emigrants is used to increase education and new investment. The issue of overcrowding that exceeds the existing environmental capacity and does not contribute to quality economic growth will lead to socio-economic problems that widen income inequality among community groups and decrease the quality of life of the community.

Variable unemployment rate has a positive effect on poverty levels or there is a positive relationship between unemployment and poverty levels. These results are similar to those of Osinubi (2005) who also found a unidirectional relationship between unemployment rates and poverty rates in Nigeria. In his research, concluded that the unemployment rate did not significantly influence the poverty level. This happens to see the fact that unemployed people in Nigeria are involved in various types of irregular work and make many workers richer and improve their quality of life. In many cases, some unemployed workers in Nigeria depend on their relatives who are not poor to survive, and get them out of the poverty trap.

Educational variables have a negative effect on poverty levels or there is a negative relationship between education and poverty levels. This means that the increase in education has a significant effect on reducing poverty in Bali Province.

The findings of this study in accordance with the results of previous studies which suggested the influence of education on poverty such as research conducted by Niazi and Khan (2008) found the importance of education to reduce multidimensional poverty.

Similarly, the results of Aref's (2011) study found that there was a contribution of education to poverty reduction. Education helps alleviate poverty with its impact on labor productivity (Flor *et al.*, 2006 in Aref, 2011). Furthermore it was stated that the important role of education in reducing poverty could not stand alone, the solution to rural poverty through multi-disciplinary fields that included economic, social, political and institutional factors. Research on the effect of the high and low levels of education on poverty was also revealed by Ezebuilo and Emmanuel (2014) who found that higher education has the capacity to reduce poverty.

Life expectancy variables do not negatively affect poverty levels or in other words, there is a positive relationship between life expectancy and poverty levels. The results of this study found a positive correlation between life expectancy and poverty levels in the Province of Bali, but the effect was not significant. This unidirectional but not significant relationship is different from the results of a study conducted by Geronimus *et al.* (2001) which found that there is a very strong relationship between life expectancy and the level of poverty in an area. His research found an inverse relationship between life expectancy and poverty levels. The higher life expectancy affects the decline in poverty. This happens because the degree of good health and old age that is still productive is still available in the study area.

Investment variables have a negative effect on poverty levels or there is a negative relationship between investment and poverty levels. This means that the increase in investment significantly decreases the percentage of poor people.

Overall in the period of the study year, the contribution of investment of regencies/cities tended to increase slowly and the percentage of poor people also declined. Thus, the contribution of physical investment (formation of capital accumulation) has a negative influence on the level of poverty. Increasing investment will reduce the percentage of poor people. This is in line with the results of research that supports the hypothesis that investment has a positive effect on poverty levels in Bali Province. This finding is in line with the research conducted by Fan *et al.* (2004) entitled *The Importance of Public Investment for Reducing Rural Poverty In Middle-Income Countries: The Case Of Thailand*, which found investment in agriculture, irrigation, rural areas, and infrastructure (including roads and electricity) had an impact on reducing rural poverty.

More specifically the results of a study conducted by Granados (2015) titled *Does Transportation Infrastructure Reduce Poverty? Evidence from the Free Federal Trunk Highway System in Mexico* states that investments aimed at road infrastructure lead to poverty reduction and have a greater impact during periods of economic contraction. Further found on average for each additional kilometer of the highway (km/100 km<sup>2</sup>), poverty was reduced by 0.4 percentage points. Then Eseyin *et al.* (2016) with his research entitled *Investment in Agricultural Sector: Implication for Poverty Reduction in Nigeria (1985-2012)* which identified various investment options in the agricultural sector and their implications for poverty reduction in Nigeria found productivity in the agricultural sector with the accumulation of physical capital in the form of facilities significant infrastructure in reducing poverty in the current year.

The income distribution variable does not negatively affect the poverty level or there is a positive relationship between the distribution of income and the level of poverty. This means that the increase in the percentage of income distribution for the 40% of the lower groups does not affect the decline in poverty rates in Bali Province, but it is not significant.

The per capita income of the lower community groups also has an impact on increasing their income mastery which will narrow the gap between lower class groups, moderate community groups, and high community groups, so that the distribution of income is evenly proportional should reduce the poverty level of the lower population.

According to Fosu (2010), the model for estimating the relationship of growth-poverty-inequality, reveals that the lower the level of income, the more likely it will fall below the basic needs and make the individual fall into poverty. Conversely increasing income, the greater the possibility of the ability to meet basic needs and lift individuals from the trap of poverty.

Increased income that leads to lower inequality or inequality will reduce the poverty level of the community. This turned out to be less in line with the findings of this study, where the results of this study revealed a positive relationship between the distribution of income

and the level of poverty. That is, an increase in the income distribution of the group of 40 percent below influences the increase in poverty levels.

The variable contribution of the agricultural sector has a negative effect on the level of poverty or there is a negative relationship between the contributions of the agricultural sector to the level of poverty. This means that the increase in the contribution of the agricultural sector influences the decline in the level of poverty in the Province of Bali, but the effect is not significant.

The results of the descriptive analysis as outlined in Chapter V, show that throughout the period 2007-2017, there was a decline in the contribution of the agricultural sector in the formation of GDP at both the provincial and regencies/cities levels, with increasing GRDP growth. The findings of this dissertation study are different from those of Ligon (2008), Cervantes and Dewbre (2010), and Priyarsono (2011). Ligon found that agricultural growth for the poorest 10 percent of the group was substantially more important than the growth of the non-agricultural sector. Cervantes and Dewbre found that in reducing poverty, the role of agriculture is consistently greater than the contribution of the agricultural sector itself to GDP. And Priyarsono's research results also reveal the important role of the agricultural sector in overcoming poverty.

## CONCLUSION

This study aims to examine and analyze the influence of socio-economic factors on poverty levels in Bali Province. Based on the results of the descriptive analysis and discussion that has been described, it can be concluded that education, investment, and the contribution of the agricultural sector have a negative effect on the level of poverty in Bali Province. Education, investment, and the contribution of the agricultural sector show an inverse relationship, so that the increase in investment education and the contribution of the agricultural sector will reduce the level of poverty in the Province of Bali.

While population density, unemployment rate, life expectancy, and income distribution have a positive effect on poverty levels in Bali Province. This means that population density, unemployment rate, life expectancy, and income distribution show a unidirectional relationship, so that increasing population density, unemployment rate, life expectancy, and income distribution will increase the poverty rate in Bali Province.

Based on the analysis, discussion, and conclusions described earlier, to improve the welfare of the people in Bali, especially to reduce poverty levels, it can be suggested to the Bali Provincial Government to encourage low-investment districts (Bangli, Karangasem, and Jembrana Regencies) to make breakthrough efforts innovative attract investors to invest their capital in accordance with the potential of each region to support the sustainable development of Bali. Development programs implemented to focus on inclusive economic growth based on equity (inclusive economic growth based on equity). Physical infrastructure investment opens access to remote rural areas reaching the lowest income groups of the community economy.

## REFERENCES

1. Aref, Abrisham. (2011), "Perceived Impact of Education on Poverty Reduction in Rural Areas of Iran", *Life Science Journal*, Iran.
2. Arsyad, L. (2010), *Ekonomi Pembangunan*, Yogyakarta: UPP STIM YKPM.
3. Cervantes-Godoy, D. and Joe Dewbre. (2010), "Economic Importance of Agriculture for Sustainable Development and Poverty Reduction: finding from a case of Indonesia", *Global Forum on Agriculture*, 15-17 November 2010.
4. Chambers, R. (1987), "Sustainable Rural Livelihoods: A Strategy for People, Environment and Development", overview paper for only One Earth Conference on Sustainable Development organized by the International Institute for Environment and Development, April 1987.
5. Dadang, Solihin. (2007), *Economic Development: Overview Indonesia Masa Krisis 1998*.

Jakarta: Artifa Duta Prakarsa.

6. Dewbre, J., D. Cervantes-Godoy and S. Sorescu. (2011), "Agricultural Progress and Poverty Reduction: Synthesis Report", OECD Food, Agriculture and Fisheries Working Papers, No. 49, OECD Publishing.
7. Eseyin, Oluwasegun. Toluyemi, Taiwo S. and Oni, Opeyemi Olusegun. (2016), Investment in Agricultural Sector: Implication for Poverty Reduction in Nigeria, American Journal of Business and Society, Vol. 1 No. 3 pp. 118-128.
8. Ezebuilo R, Ukwueze and Emmanuel O, Nwosu. (2014), "Does Higher Education Reduce Poverty Among Youths In Nigeria?", Journal Asian Economic and Financial Review, 2014, 4(1):1-19.
9. Fan, Shenggen. Jitsuchon, Somchai. and Methakunnavut. (2004), "The Importance Of Public Investment For Reducing Rural Poverty In Middle-Income Countries: The Case Of Thailand", DSGD Discussion Paper No. 7., International Food Policy Research Institute, Washington, USA.
10. Fields, Gary S., Baran Han and Ravi Kanbur. (2007), "Poverty Effects of the Minimum Wage: The Role of Household Employment Composition", Paper on Annual Convention of the Society of Labor Economics, Chicago, May 2007. NY: Cornell University Ithaca.
11. Fosu, Augustin Kwasi. (2010), "The Effect of Income Distribution on The Ability of Growth to Reduce Poverty: Evidence from Rural and Urban African Economies", American Journal of Economics and Sociologi, Inc., Vol. 69. No. 3. pp. 1034-1053.
12. Geronimus, Arline T. John Bound. Timothy A. Waidmann. Cynthia G. and Colenand Dianne Steffick. (2001), "Inequality in Life Expectancy, Functional Status, and Active Life Expectancy across Selected Black and White Populations in the United States", Demography, Vol. 38, No. 2 pp. 227-251.
13. Granados, Nayeli Noyolitzin Salgado. (2015), "Does Transportation Infrastructure Reduce Poverty? Evidence from the Free Federal Trunk Highway System in Mexico", Master in Economic Development and Growth, School of Economic and Management, Lund University.
14. Gujarati, Damodar N. (2007), Basic of Econometry, Third Edition, Jakarta: Penerbit Erlangga.
15. Guzman, Pilar Martin. (2005), Population and Poverty, Universita degli Studi di Roma La Sapienza - JSTOR.
16. Jhingan, M.L. (2016), Economic Development and Planning, Jakarta: Rajawali Pers.
17. Kuncoro, Mudrajat. (2015), Mudah Memahami dan Menganalisis: Indikator Ekonomi, Yogyakarta: UPP STIM YKPN.
18. Ligon, E. and E. Sadoulet. (2008), "Estimating the Effects of Aggregate Agricultural Growth on the Distribution of Expenditures", Background Paper for the World Development Report 2008, World Bank.
19. Niazi, Muh. Imran, Khan, Atta Ullah. (2008), "The Impact of Education on Multidimensional Poverty across The Regions in Punjab", Journal of Elementary Education, Vol. 21 No. 1 pp. 77-89.
20. Osinubi, Tokunbo Simbowale. (2005), "Macroeconometric Analysis of Growth, Unemployment and Poverty in Nigeria", Pakistan Economic and Social Review, Vol. 43, No. 2 pp. 249-269, University of the Punjab.
21. Priyarsono, D. S. (2011. ), From Agriculture to Industry-Development Analysis from Regional Economic Perspective, Bogor: IPB Press.
22. Sen, Amartya. (1999), Development As Freedom, New York: Anchor Book.
23. Suryadarma, D., Rima Prama Artha, Asep Suryahadi, Sudarno Sumarto. (2005), A Reassessment of Inequality and its Role in Poverty Reduction in Indonesia. SMERU Research Institute.
24. Todaro Michael P. dan Stephen C. Smith. 2011. Pembangunan Ekonomi. Edisi Kesebelas. Jakarta: Penerbit Erlangga.
25. Wahyuni, H. (2004), "Is There A Link between Increased Growth and Reduced Income Inequality? Analysis of Cross-Country Studies", Jurnal Ekonomi dan Pendidikan, Vol. 1, No.1.

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## STRATEGIC PLANNING OF INDONESIAN SKINCARE CLINICS

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### ABSTRACT

Business activity is one of the important activities within the company. The tendency of an effort to be superior to the competitors is the main target of all business units. We need strategic planning that can support the achievement of company goals. Good management of this business creates a high-profit business; therefore the business strategy development is needed. To determine and develop the strategy, SWOT analysis is needed. The unit of analysis of this research is Rafa Health and Beauty Lifestyle Aesthetic Clinic in Bandung. The method used is qualitative descriptive by analyzing the business environment from internal and external aspects. The internal analysis uses McKinsey's 7S and external analysis using Porter's five forces. After that, the analysis technique uses the SWOT matrix with the EFAS and IFAS approaches. The results show that the Rafa Aesthetic Clinic is in Quadrant II, which is the right strategy implemented is a turn-around strategy (Retrenchment) that is designed to strengthen the basic competencies of a unique organization.

### KEY WORDS

7S McKinsey framework, five forces Porter's; SWOT analysis, skincare clinics.

Small and medium enterprises are always faced with uncertain market conditions, always growing rapidly to make the competition very competitive. One form of small and medium enterprises that are growing rapidly now is the beauty clinic business. Some beauty clinics that are now often found in big cities are beauty clinics that combine facial and body beauty services, and skin health consultations. Bandung is a city with a large beauty product market, based on data from the data (Bandung City Central Bureau of Statistics, 2017) also seen from the population of women aged 15-64 years, as many as 887,456 people or 49% of the population of Bandung in 2018, which is the target market of the beauty industry. This situation becomes a great potential that is utilized by the beauty industry services in the city of Bandung. The tendency of women to beautify themselves is closely related to the needs of women to come to beauty clinics.

The beauty clinic offers services by combining facial and body beauty services, and skin health consultations. Seen in figure 1 several beauty clinic practitioners in Bandung:

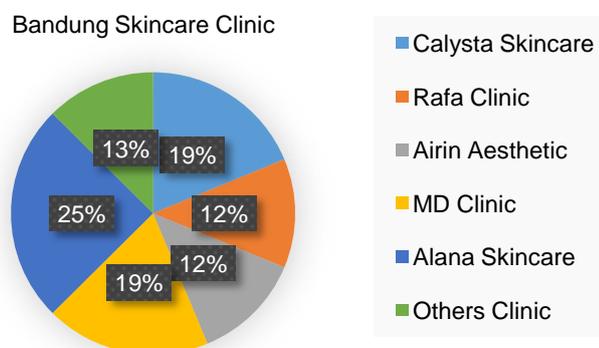


Figure 1 – Beauty clinic company in the city of Bandung

Based on figure 1 above, it appears that several skin care industry players in the city of Bandung have two to four branches. Alana Skincare is a market leader in beauty clinics in the city of Bandung with the most branches, which has four branches. Viewed from the number of branches, length of stay, results of care, and market share. Competition between beauty clinics is getting tighter because it raises an innovation in the world of beauty in the city of Bandung. The innovations include several beauty clinics that have used sophisticated and modern tools to be used in dealing with facial problems and beautifying their consumers. Among the skincare clinics above, Rafa Clinic is one of the techniques that have more than one branch, namely two branches in the city of Bandung. At present one of the cities that has become a trend in the beauty industry is the city of Bandung. Competition between beauty clinics in the city of Bandung is very strict accompanied by fashion trends among women is increasing.

Rafa beauty clinic is located in the city of Bandung, there since 2005. Currently, Rafa clinic has 3 branches spread in Bandung and Garut. Rafa Clinic is engaged in the field of aesthetic medicine, anti-aging medicine, and herbal aesthetic. The clinic is currently supported by high-tech equipment that is always the foremost, innovative and complete in overcoming all health and beauty problems. The Rafa Clinic has a complete range of treatments ranging from toe to head. Available Medical and Non-Medical Treatments, as well as safe and clinically tested care products that are tailored to the type and problem of the skin. Accompanied by Doctors, Pharmacists, Pharmacy and Beauty Therapists who are trained, professional, experienced and certified. With the motto "Beauty Aesthetics with Smart Way", Rafa is very following the times in terms of skincare, slimming and more.

Consumers will be more selective in choosing a beauty clinic that will be a place to subscribe, by looking at the services provided. Because, good service is also an important thing in the success of the beauty business. Rafa Clinic always strives to provide the best service for its consumers, but more and more competitors also provide different services for their customers. Also, consumers will choose beauty clinics that can provide cheaper prices with services that are not reduced at all. There is a problem with the Rafa Clinic compared to other skin care clinics, that is, every consumer is charged a fee when consulting a beauty doctor, but at several other beauty clinics, the consultation process is free. Consumers also become more selective in choosing cheaper prices with the same quality products and services, because consumers prefer services and products at the lowest possible prices.

Every company will try to compete with other companies that produce replacement products. With its ability to satisfy needs that are not much different from consumers, but with different characteristics, the price of a substitute product can be the highest limit of the price set by a company. Thus, a replacement product performs the same or similar function or service. This is certainly a pretty heavy problem faced by the Rafa Clinic. Some examples of beauty products that can replace Rafa Clinic products are Ashanty Beauty Skincare, Ertos facial treatment, Helwa Beauty, EMK Beverly Hills, and Dissy Cosmetics.

If you look at the problems faced, there is a need for a strategic planning analysis that will certainly strengthen the existence of the Rafa Clinic to keep attracting public attention. The identification is in line with what was revealed (Porter, 1980, 1996,1997) (Rulmet, 1984) there are five competitive forces in an industry, namely the threat of the entry of new entrants, the threat of substitute products, the bargaining power of buyers, the strength of supplier bargaining power, competition among competitors. These five competitive forces determine the intensity of competition and profitability in the industry and will be very important in the formulation of the company's strategy. The state of competition in an industry depends on the five competitive forces.

This research was conducted by analyzing the strategic planning that will be carried out by the Beauty Clinic by using the analysis of Five Forces Porter and 7S McKinsey, then analyzed through external factor analysis strategy (EFAS) and internal factor analysis strategy (IFAS) with approaches to strengths, weakness, opportunities and threats (SWOT) analysis. With this analysis, it is hoped that it will produce further identification of the formulation of competitive strategies that can be done by the Rafa Clinic to continue to exist in a society that has cared a lot about appearance, especially skin and body beauty.

## LITERATURE REVIEW

Business strategy is a comprehensive planning formula on how the company will achieve its objectives, taking into account its internal and external environment to maximize competitive advantage and minimize competing limitations (Rumelt, Schendel, & Teece, 1991; Teece, 2010). Strategic planning is part of strategic management. Strategic planning focuses on how top management determines the company's strategy to achieve company goals in the long run (Thune & House, 1970; Wheelen & Hunger, 2010). Strategic planning is a systematic effort something formal from the company, to describe the main form of the company, objectives, policies, and strategies, to achieve the target and the main form of the company concerned in managing the company today to do future projections (Kerzner, 2001; 2004).

Strategic planning is an effort made by a company to develop the company's vision and mission, culture, and business strategies needed to be implemented to achieve the company's targets (Haines, 2010). Strategic planning as a way to determine fundamental decisions to form and guide an organization with the aim of what must be done (Bryson, 1988). In preparing strategic planning, it is necessary to formulate the goals and objectives to be achieved by the company. The essence of strategic planning is knowing the opportunities and threats in the future, with the choice of steps needed and more appropriate to achieve the desired situation explicitly related to management of change and includes a series of innovations and changing companies (I. Ansoff, 1965; 1968; 2005; Simons, 1994; Rulmet, 1984; Ginsberg & Venkatraman, 2011; Nickols, 2016; Dey, Clegg, & Bennett, 2010).

The 7S framework was developed in the early 1980s by Tom Peters and Robert Waterman. There are 7 factors which are interdependent, each grouped into Soft & Hard elements. Soft Elements is more difficult to describe, less tangible and influenced by culture, namely: Shared Values, Skills, Style, and Staff. Hard Elements is easier to define and determine and management can directly influence it, namely: Strategy, Structure, Systems. 7S from McKinsey or better known as McKinsey 7S Framework is a management model to see how effective the organization is in achieving its desired goals (Savkin, 2015; Kaplan, 2005).

According to (Porter, 2008a; 2008b) there are five competitive forces in an industry, namely the threat of the entry of new entrants, the threat of substitute products, the bargaining power of buyers, the strength of supplier bargaining power, competition among competitors. These five competitive forces determine the intensity of competition and profitability in the industry and will be very important in the formulation of the company's strategy. According (David & David, 2017) the steps taken in the formulation of the strategy for the main stage are the formulation of a strategy consisting of IFAS (internal factor analysis strategy) is a strategy formulation tool used to summarize and evaluate the main strengths and weaknesses in the scope of business functions, and also becomes the basis for identifying and evaluating the relationships between these areas, then EFAS (external factor analysis strategy) that enables strategy makers to summarize and evaluate political, economic, socio-cultural, and technological information. A thorough understanding of the factors included in it is more important than the numbers available.

In general, companies must monitor the strength of the macro environment (demography, economy, technology, politics, law, and social culture) and micro-environmental actors (consumers, competitors, distribution channels, suppliers) that affect the ability to earn profits. Companies must have marketing intelligence capabilities to follow trends or developments, management needs to identify opportunities and threats posed (Rangkuti, 2013).

According to (Rangkuti, 2015) explained that SWOT analysis is the identification of various factors systematically to formulate a company's strategy, based on a logic that can maximize strengths and opportunities, but simultaneously minimize weaknesses and threats SWOT analysis has important roles and functions in the planning process and strategic decision making. A SWOT analysis is an integrated analysis framework between internal companies and the external environment, by building a SWOT approach. A SWOT analysis

is also a tool to identify whether the strategic decisions that have been taken or determined are correct or not (Assauri, 2011). From the analysis, an overall picture of the general condition of the company will be obtained. The results of the analysis are expected to help companies improve their competency and capability (Wheelen & Hunger, 2010).

## RESEARCH FRAMEWORK

The Strategic Planning Analysis Process of Beauty Aesthetic Clinic Rafa Health and Beauty was conducted through a series of analyzes, which began with identifying the vision and mission of the Rafa Skincare Beauty Clinic. Then proceed by analyzing external environmental factors and internal environment. External environment analysis in the form of opportunities and threats using Five Forces Porter. While the analysis of the internal environment in the form of strengths and weaknesses of the company (7s Mckinsey). After identifying the vision and mission and analyzing the environmental situation, the two steps are needed to formulate a strategy, at this stage, there are two steps in determining the strategy.

First, determine the alternative strategy using the SWOT matrix. After the strategy is obtained, the next stage is the formulation of long-term goals and objectives. From the results of the strategy formulation, there will be strengths and weaknesses, and what opportunities and threats will be faced by the Rafa Health and Beauty Aesthetic Beauty Clinic in Bandung City. This will be a reference material that will strengthen and clarify the direction of the goals and objectives to be achieved in the next five years.

Based on the strategies generated from the above steps and by taking into account the vision and mission, environmental factors, and goals and objectives, strategies, programs, and action plans can be established to support the competitive strategy of Rafa Health and Beauty's Aesthetic Beauty Clinic in Bandung. This research framework is listed in Figure 2.

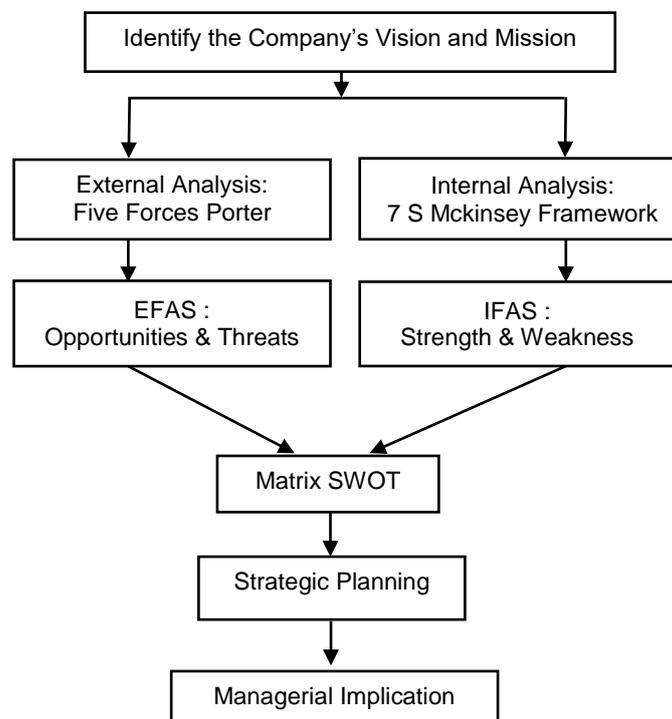


Figure 2 – Research Framework

## METHODS OF RESEARCH

The research method that will be used is qualitative with in-depth exploration (Gunawan, 2013) about the object of research, namely SWOT analysis at the Rafa Health

and Beauty Lifestyle Beauty Clinic. The basis of the theoretical foundation of qualitative research rests on phenomenology and excavation of meaning in research. In a qualitative approach, the position of the theory is an end product that must be produced. The research design is built on a set of assumptions and concepts developed from relevant theories that exist.

The informant's sources in this study were from the Rafa Beauty Clinic to get information about the company's Vision and mission, to know the circumstances of internal environmental factors and external factors, then to find out the level to meet the interests of the SWOT attribute. Then the party from the Bandung Small and Medium Enterprises Cooperative Office, to get data on the number of units and the value of contributions and how the growth rate of the Bandung City beauty clinic.

The researcher used the technique of checking data validity (trustworthiness) put forward by (Sugiyono, 2010; 2016) including the test of credibility, transferability (external validity), dependability (reliability), and confirmability (objectivity). After the data is valid, then the data presented by the researcher is obtained from the results of observations and interviews consisting of an analysis of five forces porters which will be an external environmental factor, and 7S McKinsey which is an internal environmental factor. Furthermore, these factors will be further analyzed based on the SWOT matrix assessment. Matix SWOT is processed based on EFAS (External factor analysis strategy) and IFAS (Internal factor analysis strategy). Strategy analysis through the SWOT matrix is a technique that can objectively establish priority strategies that are prioritized, as a technique that aims to determine business strategies in Beauty Clinics, analysis to determine business strategy requires good intuitive judgment. So this study uses a qualitative approach with the technique of in-depth interviews with informants.

## **RESULTS AND DISCUSSION**

According to (Pearce & Robinson, 2011), a strategy is a large-scale plan that is long-term oriented to interact with a competitive environment to achieve company goals. Strategic analysis is carried out to gather information from informants who will form the basis of strategy formulation. According to (Tunggal AW., 2009) explained that business strategy is a strategy that must be made as to the main thinking base in making information technology strategies because in the strategy mentioned the company's vision and mission along with the performance targets of each function and organizational structure. According to (Ward & Peppard, 2002), business strategy is a solution that aims to achieve long-term goals. Business strategies are formulated to determine how an organization becomes more competitive than its previous position (Rumelt, 2012; Rumelt et al., 1991; Corrocher & Guerzoni, 2009; Ginsberg & Venkatraman, 2011; Slater & Narver, 1994; Thune & House, 1970; Chang & Horng, 2010).

According to (David, 2011; David & Carolina, 2011) the process of formulating a company's strategy includes three stages, namely; input stage, matching stage and decision stage. The input stage contains basic input information needed to formulate a strategy. The matching stage focuses on creating alternative strategies that make sense by taking into account the main internal and external factors. The decision stage serves to objectively evaluate alternative strategies identified at the matching stage and provide an objective foundation for the selection of alternative strategies. Strategy analysis is an evaluation of internal factors (IFAS) and external factors (EFAS) of the Beauty Clinic. Internal environmental factors in the form of strengths and weaknesses were analyzed through 7S McKinsey (Waterman, Peters, & Phillips, 1980; Kaplan, 2005; Savkin, 2015; Fleisher & Bensoussan, 2007; Ravanfar, 2015; 2017). External environmental factors in the form of opportunities and threats obtained based on the analysis of five forces porters (M E Porter, 1979; 2008) at the Rafa Clinic Beauty Clinic. After that, then the results of IFAS and EFAS analysis become a reference for the formulation of the SWOT Matrix (Rangkuti, 2015) too produce a business position Quadrant that can create alternative strategies for the Rafa Clinic Beauty Clinic.

For internal analysis, this study utilizes McKinsey's 7s framework of Strategy, Structure, Systems, Skills, Style, HR, and Value. By using this framework, analysis of internal conditions can be done in full.

Table 1 – Internal Environment Conditions

No	7S McKinsey	Fact	Rafa Clinic Owner Opinion	Strengths / Weaknesses
1	Shared value	Very strategic business location	Making the city of Bandung a big market	Strengths
2	Structure	Having a business branch	Broader business reach	Strengths
3	Strategy	Cost Leadership	Cost leadership can be used to maintain the company's position	Strengths
4	System	Marketing limitations	Competitors have e-commerce websites that can function as sales channels to market their products	Weaknesses
		Limitations of raw materials	The limitations of raw materials make the company hampered in producing its products	Weaknesses
		Facilities and infrastructure	Competitors have better facilities and infrastructure than the Rafa Clinic	Weaknesses
5	Style	Having a work culture with a family system	Togetherness and kinship will foster a sense of belonging so employees will work without feeling forced	Strengths
6	Staff	Labor that is not optimal the	the excess workload must be evaluated whether due to a growing business or unclear division of tasks	Weaknesses
		Have special and quality human resources	HR is unique, and the company's uniqueness will create a competitive advantage	Strengths
7	Skill	There are no substitute specialists for beauty specialists	Companies that are unable to regenerate their knowledge will become a threat	Weaknesses

Table 1 presents a list of internal environmental conditions of the Rafa Beauty Clinic which are grouped according to McKinsey's 7s framework. The column "Competitors / Standards / Literature / Expert Opinion / Impact" provides a brief explanation of the things that form the basis of determining whether the internal conditions possessed are a strength or weakness. The results of determining the condition are included in the "Strength / Weakness" column. Then the next analysis is an analysis of external environmental conditions using the Porter five forces approach, namely Suppliers, Customers, Competitors, New Arrivals, and Substitute Products. With this analysis, the study succeeded in identifying opportunities and threats originating from the external environment of the Rafa Health and Beauty Lifestyle Beauty Clinic.

Table 2 – External Environmental Conditions

No	Porter's five forces	Fact	Impact on business	Opportunities/ Threats
1	Supplier	Raw material supply	Rafa clinic only has one source of raw materials, a threat to high product costs	Threats
		Good relationships with stakeholders	A good relationship between the Rafa Beauty Clinic and stakeholders is very necessary for the continuity of business activities.	Opportunities
2	Buyers	Customer loyalty	Customer loyalty is a great opportunity to compete with competitors through loyal customers.	Opportunities
3	Competitor	Intense competition	Threats to Rafa can develop	Threats
		Business location environment	The business location environment influences consumer access to repeated orders, a great opportunity for sustainability	Opportunities
		Country economy	The threat of Rafa clinic's customers dropping	Threats
4	New Entrants	Good market growth	The rapid growth of the beauty industry market has become an opportunity for business people in the field of beauty clinics.	Opportunities
		Product licensing policy	The absence of product licensing raises doubts for consumers	Threats
5	Substitute Products	Contents of harmful substances	Contents of harmful substances reduce customer interest	Threats
		Technological sophistication	Great opportunity to be able to compete with larger competitors than Rafa	Opportunities

Table 2 presents a list of the external environmental conditions of Micro Rafa Beauty Clinics grouped by the framework of Porter's five forces. The "Impact on Business / Industry" column provides a brief explanation of the influence of external conditions on the company, whether it becomes an opportunity or threat. The results of determining the condition are included in the "Opportunities / Threats" column.

Based on the results of the presentation data described above, several factors are gathered which become the external environment and which become the internal environment of the Beauty Clinic Rafa Healthy Lifestyle and Beauty. The following are the internal environmental factors that have analysis at the Rafa Beauty Clinic:

Table 3 – Internal Environmental Factors

INTERNAL ENVIRONMENT			
STRENGTHS		WEAKNESSES	
1	A very strategic business location	1	Marketing limitations
2	Competitive prices	2	Limitations of raw materials
3	Having special and quality human resources	3	Facilities and infrastructure
4	Having a work culture with a family system	4	Do not have an optimal workforce
5	Has a branch	5	There are not many beauty specialists

The internal environmental factors are then included in the IFAS table to get the weight and rating that shows the importance of a factor compared to other factors. The value given in the weight column is a number between 1.0 (very important) to 0.0 (not important) according to the state of the factors being assessed. And the value given for the rating column is as follows: (Very good = 4); (Good = 3); (Good enough = 2); (Not good = 1).

The value of weight for positive strength is given according to the most prominent strategic factors or the size of the strength factor compared to other strategic factors. Whereas the negative weakness weight value is given in the opposite way of strength, where if the weakness is below the average it is given a value of 4, but if the weakness is above the average is given a value 1. The IFAS weighting and calculations table can be seen in the following table:

Table 4 – IFAS Matrix

Internal Strategic Factors	Weight	Rating	Total Weight x Rating
<i>Strengths</i>			
• A very strategic business location	0.15	4	0.6
• Competitive prices	0.25	3	0.75
• Having special and quality human resources	0.065	3	0.195
• Having a work culture with a family system	0.025	4	0.1
• Has a branch	0.09	4	0.36
Sub Total	0.58		2.005
<i>Weaknesses</i>			
• Marketing limitations	0.1	1	0.1
• Limitations of raw materials	0.065	3	0.195
• Facilities and infrastructure	0.09	2	0.18
• Do not have an optimal workforce	0.055	3	0.165
• There are not many beauty specialists	0.11	1	0.11
Sub Total	0.42		0.75
TOTAL	1.00		2.755

From the results obtained in the IFAS matrix above, the strengths have a subtotal of 2005 while the weaknesses have sub-total of 0.75.

The external environmental factors are then included in the EFAS table to get the weight and rating that shows the importance of a factor compared to other factors. The value given in the weight column is a number between 1.0 (very important) to 0.0 (not important) according to the state of the factors being assessed. And the value given for the rating column is as follows: (Very good = 4); (Good = 3); (Good enough = 2); (Not good = 1).

The following are the external environmental factors that have been analyzed from the Rafa Beauty Clinic:

Table 5 – External Environmental Factors

EXTERNAL ENVIRONMENT			
OPPORTUNITIES		THREATS	
1	Good market growth	1	Intense competition
2	Customer loyalty	2	Raw material supply
3	Sophisticated technology	3	Country economy
4	Business location environment	4	Issues about the content of hazardous substances
5	Good relationships with stakeholders	5	Product licensing policy

The weight values for positive opportunities are given according to the most prominent strategic factors or the size of the opportunity factors compared to other strategic factors. Whereas the value of the weight of the negative threat is given using the opposite of the opportunity which if the threat is small or small, then given a value of 4, but if the threat is greater the value is 1. The EFAS weighting and calculations table can be seen in the following table:

Table 6 – EFAS Matrix

External Strategic Factors	Weight	Rating	Total Weight x Rating
<i>Opportunities</i>			
• Good market growth	0.33	4	1.32
• Customer loyalty	0.11	4	0.44
• Sophisticated technology	0.09	4	0.36
• Business location environment	0.055	4	0.22
• Good relationships with stakeholders	0.035	3	0.105
Sub Total	0.62		2.445
<i>Threats</i>			
• Intense competition	0.11	1	0.11
• Raw material supply	0.09	2	0.18
• Country economy	0.025	2	0.05
• Issues about the content of hazardous substances	0.015	1	0.015
• Product licensing policy	0.14	1	0.14
Sub Total	0.38		0.495
TOTAL	1.00		2.94

From the results obtained in the EFAS matrix above, the opportunity factors have a subtotal of 2,445 while the threat factor has a subtotal of 0.495.

Based on the results obtained from the IFAS and EFAS matrices found in the previous discussion, IFAS and EFAS are included in the matrix of combining IFAS + EFAS as follows:

Table 7 – IFAS + EFAS merging matrix of Rafa Beauty Clinic

No.	Strengths	Weight	Weakness	Weight
1	Very strategic business location	0.6	Marketing limitations	0.1
2	Competitive prices	0.75	Limitations of raw materials	0.195
3	Have special and quality human resources	0.195	Facilities and infrastructure	0.18
4	Having a work culture with a family system	0.1	Do not have an optimal workforce	0.165
5	Has a branch	0.36	There are not many beauty specialists	0.11
	Subtotal (A)	2.01	Subtotal (B)	0.75
	Opportunities		Threats	
1	Good market growth	1.32	Intense competition	0.11
2	Customer loyalty	0.44	Raw material supply	0.18
3	Sophisticated technology	0.36	Country economy	0.05
4	Business location environment	0.22	Issues about the content of hazardous substances	0.015
5	Good relationships with stakeholders	0.105	Product licensing policy	0.14
	Subtotal (C)	2.45	Subtotal (D)	0.495
	Total S+O atau (A)+(C)	4.45	Total W+T atau (B)+(D)	1.245

In the matrix table combining IFAS + EFAS above, we can see the comparison that:

$$\text{Strengths} + \text{Opportunities} (4.45) > \text{Weaknesses} + \text{Threats} (1.245)$$

Strengths representing strong internal factors and opportunities are environmental factors that support the creation of excellence at the Rafa Beauty Clinic. Strength and Opportunity are positive for the company. So that the total Strengths and Opportunities (S-O) values are positive. Weaknesses represent weak internal factors and threats are environmental factors that do not support the company and even become a threat that drops. So that Weaknesses and Threats (W-T) are negative. The final value indicated by the SWOT matrix is S-O which is 4.45, while W-T is -1.245, so it will form the position of the SWOT quadrant.

From the results of the analysis of internal and external factors of the Rafa Health and Beauty Beauty Clinic using the matrix internal factor analysis strategy (IFAS) and matrix external factor analysis strategy (EFAS), the results of the matrix are poured into the SWOT quadrant diagram. The strategic position shown from the SWOT results is in Quadrant II, which is the position of W-O with an X-axis value of -1.245 and axis-Y of 4.45. The position of W-O in quadrant II is a strategy produced through exploiting opportunities by overcoming weaknesses in the Rafa Health and Beauty Beauty Clinic.

So to overcome weaknesses and threats from outside the company, strategic strength and opportunity factors will support the achievement of the way out of the existing problems to get the expected recommendations. And the diagram, and from the previous analysis, the SWOT Quadrant Matrix can be seen as follows:

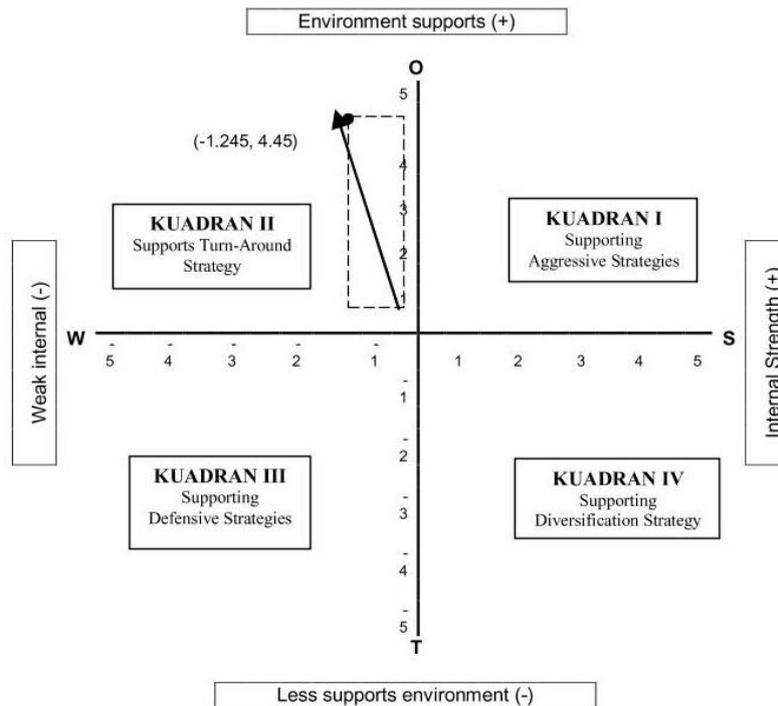


Figure 3 – SWOT Diagram Analysis of Rafa Beauty Clinic

Quadrant I: A favorable situation. the company has strengths and opportunities, so that it can direct all the potential of the internal environment to take advantage of existing opportunities. The strategy that must be applied in this condition is to support an aggressive growth policy, but the clinic is not yet in this position.

Quadrant II: Despite facing various threats, the company still has internal strength. The strategy that must be implemented is to use the power to take advantage of long-term opportunities using diversification strategies. Diversification of the RAFA clinic is to make a different strategy (other than usual) by utilizing the strength of the internal environmen, so that in the future it will enable the creation of opportunities.

Quadrant III: companies get opportunities from a large external environment, but on the other hand, always face several obstacles/weaknesses. The company's focus in this position is to minimize the company's internal problems so that it can seize the opportunity from these external conditions well.

Quadrant IV: this position is a very unfavorable situation, the company faces various threats and weaknesses. The strategy that must be used in this position is to defend ourselves to build internal strengths and minimize weaknesses.

From the diagram above, it can be determined that the strategies that need to be implemented to develop the business strategy of the Rafa Health and Beauty Lifestyle Beauty Clinic are Turn-Around Strategies where the Beauty Clinic of Rafa Health and Beauty Lifestyle faces very large market opportunities, but on the other hand faces several obstacles or problems internal. The focus of the strategy is to minimize internal problems so that they can win better market opportunities.

The Rafa Health and Beauty Lifestyle Beauty Clinic is in an industry where the market is growing rapidly, intensive or aggressive strategies are usually the first choice to think about. However, if the Rafa Health and Beauty Lifestyle Beauty Clinic does not have unique competence or competitive advantage, it will be difficult to balance the internal capabilities of the business with existing market opportunities. So to overcome this, the Rafa Health and Beauty Lifestyle Beauty Clinic needs to use several alternatives and more strategic strategies based on the results of the SWOT quadrant analysis which results in a reference to using a turn-around strategy. This is to find solutions to internal problems and to create a strategy for developing the Rafa Health and Beauty Beauty Clinic so that it can be superior to competitors and win the market.

Based on the results of the research conducted, the Rafa Health and Beauty Lifestyle Beauty Clinic is a Beauty Service in the criteria for the level of realization, namely goods service, according to (Stephen P. Robins, 2012) Strategic management is important because it can make a difference in how well an organization performs and relates to reality that organizations of all types and sizes face a changing situation. Rafa Beauty Clinic has been able to compete with its competitors and has greater opportunities because it can reduce prices and provide good and optimal services to consumers.

Based on the results of the external and internal environmental analysis of this business using the EFAS matrix method (External Factors Analysis Summary) and the IFAS (Internal Factors Analysis Summary) matrix showing that the Rafa Beauty Clinic on strength has a total of 2,005 while the weaknesses has a total of 0.75, and opportunity factors have a total of 2,445 while the threat factor has a total of 0.495. Which then all the sub-totals are poured into the SWOT diagram and produce the Rafa Beauty Clinic in Quadrant II, that is, the right strategy implemented is a turn-around strategy (Retrenchment) that is designed to strengthen the basic competencies of a unique organization.

According to (Banister, 2006) Companies that are in Quadrant II need to evaluate their current approach to the market seriously. Even though their company is growing, they are unable to compete effectively and need to determine why the company's current approach is ineffective and how the company can change in the best way to improve its competitiveness. Because Quadrant II companies are in industries whose markets are growing rapidly, so several strategies can be used, namely market development, market penetration, product development, and horizontal diversification. According to (Banister, 2006) Companies that are in Quadrant II need to evaluate their current approach to the market seriously. even though their company is growing, they are unable to compete effectively and need to determine why the company's current approach is ineffective and how the company can change in the best way to improve its competitiveness. Because Quadrant II companies are in industries whose markets are growing rapidly, so several strategies can be used, namely market development, market penetration, product development, and horizontal diversification.

Based on the results of the initial observation, it was found that the phenomenon of competitive behavior among the fashion industry specifically the beauty clinic was very unique. There is competition marked by the many competitive actions carried out by beauty

clinics or skin care companies, such as price cuts, the emergence of sophisticated tools that support skincare clinics, the existence of special programs that attract the hearts of consumers, and massive promotions.

Furthermore, in the results of the SWOT matrix analysis, the Rafa Beauty Clinic business produces several alternative strategies, namely: Increasing promotional activities in efforts to develop and penetrate markets; improve product quality to obtain customer loyalty to be able to repeat orders; Rafa Beauty Clinics must be selective in choosing suppliers that offer great benefits for both parties; Make or add services and facilities in efforts to horizontal diversification; Train new employees and set standards of expertise for employees to be able to compete based on HR aspects, then recruit professional beauty specialists; add a network of raw material suppliers to improve production capacity and then develop products by utilizing technology to meet market demands.

The alternative strategy is designed in such a way as to increase the income of the Rafa Beauty Clinic so that it can develop into a larger business. Thus, if the Rafa Beauty Clinic has implemented a strategy based on the advice given by the SWOT matrix, it will be able to create a competitive advantage. Special attention also lies in the Long-term strategy so that Rafa Beauty Clinic can create competitive advantage continuously.

## **CONCLUSION**

The Rafa Health and Beauty Lifestyle Beauty Clinic is in an industry where the market is growing rapidly, intensive or aggressive strategies are usually the first choice to think about. However, if the Rafa Health and Beauty Lifestyle Beauty Clinic does not have unique competence or competitive advantage, it will be difficult to balance the internal capabilities of the business with existing market opportunities. So to overcome this, the Rafa Health and Beauty Lifestyle Beauty Clinic needs to use several alternatives and more strategic strategies based on the results of the SWOT quadrant analysis which results in a reference to using a turn-around strategy.

Based on the results of research through SWOT analysis (Strengths, Weaknesses, Opportunities, and Threats Analysis), the researcher will conclude the conditions and environmental factors faced by the Rafa Health and Beauty Clinic, and how to compete. The conditions of the internal environmental factors of the Beauty Clinic Rafa health and Beauty Lifestyle include Strength (Strength), including a very strategic business location, Competitive prices, Special and qualified human resources, Having a work culture with a family system, Having branches. Whereas in the aspect of weakness, among others are the limitations of marketing, Limited raw materials, Facilities, and infrastructure, Not yet having an optimal workforce, Beauty specialist experts have not supported Rafa much.

The conditions of the external environmental factors of the Beauty Clinic Rafa health and Beauty Lifestyle include the opportunities which include good market growth, customer loyalty, technological sophistication, business location environment, good relationships with stakeholders. Then the weaknesses are a tight competition, raw material supply, the country's economy, dangerous substance content issues, product licensing policies.

Based on the research that has been done on the efforts of the Beauty Clinic. So the researcher provides recommendations that can be used as input for strategic planning. there are two recommendations given, namely for short and long term plans, namely as follows:

- Short-term alternative strategies include; Increase promotional activities regularly through online media, develop products by utilizing technology to meet market desires, add a network of suppliers of raw materials to improve services, recruit professional beauty specialists.
- Long-term alternative strategies include; Improve product quality to obtain customer loyalty, selectively choose suppliers that offer large profits, add or provide facilities for customers, train new employees and set standards of employee expertise.

## REFERENCES

1. Ansoff, H. I. (1968). *Corporate strategy: an analytic approach to business policy for growth and expansion*. Pelican library of business and management.
2. Ansoff, H. I. (2005). *Strategic Management*. *Management*, 29, 1–56.
3. Ansoff, I. (1965). *Concept of Strategy*. In *Corporate Strategy*.
4. Assauri, S. (2011). *Manajemen Pemasaran Dasar Konsep dan Strategi*. PT RajaGrafindo Persada, Jakarta.
5. Banister, D. (2006). Michael Banister (1918-2006). *Transport Reviews*, 26(5), 535.
6. Bryson, J. M. (1988). *A strategic planning process for public and non-profit organizations*. Long Range Planning.
7. Chang, T. Y., & Horng, S. C. (2010). Conceptualizing and measuring experience quality: The customer's perspective. *Service Industries Journal*.
8. Corrocher, N., & Guerzoni, M. (2009). Product variety and price strategy in the ski manufacturing industry. *Journal of Evolutionary Economics*.
9. David, F. R. (2011). *Strategic Management: Concepts and Cases (Thirteenth Edition)*. Prentice Hall.
10. David, F. R., & Carolina, S. (2011). *Strategic Management Concepts and Cases*. *Zeitschrift für Personalforschung*.
11. David, F. R., & David, F. R. (2017). *Strategic Management A Competitive Advantage Approach Concepts and cases*. Pearson.
12. Dey, P. K., Clegg, B. T., & Bennett, D. J. (2010). Managing enterprise resource planning projects. *Business Process Management Journal*.
13. Fleisher, C., & Bensoussan, B. (2007). McKinsey 7S Framework. *Financial Times*.
14. Ginsberg, A., & Venkatraman, N. (2011). Contingency Perspectives if Organizational Strategy: A Critical Review of the Empirical Research. *Academy of Management Review*.
15. Gunawan, I. (2013). *Metode penelitian kualitatif*. Jakarta: Bumi Aksara.
16. Haines, S. (2010). *Revolutionary Changen The Systems Thinking Approach to Strategic Planning and Management*.
17. Kaplan, R. S. (2005). *Strategy & Leadership How the balanced scorecard complements the McKinsey 7-S model* How the balanced scorecard complements the McKinsey 7-S model. *Strategy & Leadership Strategic Outsourcing: An International Journal Iss Management Decision Iss Management Decision*.
18. Kerzner, H. (2001). *Strategic Planning for Project Management Using a Project Management Maturity Model*. Assessment.
19. Kerzner, H. (2004). *Strategic planning for a project office*. *IEEE Engineering Management Review*.
20. Nickols, F. (2016). *Strategy, Strategic Planning, Strategic Thinking, Strategic Management*. Nickols.
21. Pearce, J., & Robinson, A. (2011). *Strategic management : Formulation, implementation & control*. In *Mcgraw Hill Higher Education; 12th Revised edition, 2011*.
22. Porter, M. E. (1980). *Competitive Strategy. Techniques for Analyzing Industries and Competitors*, 1(2), 396.
23. Porter, M. E. (1996). What Is Strategy? *Harvard Business Review*, 74(6), 61–78.
24. Porter, M. E. (1997). *Competitive strategy. Measuring Business Excellence*.
25. Porter, M. E. (2008a). *Strategy Strategy the Five Competitive*. *Harvard Business Review*, 86(January), 78–94.
26. Porter, M. E. (2008b). *The five competitive forces that shape strategy*. *Harvard Business Review*.
27. Rangkuti, F. (2013). *Teknik Membedah Kasus Bisnis Analisis SWOT Cara Perhitungan Bobot, Rating, dan OCAI*. PT. Gramedia Pustaka Utama. Jakarta.
28. Rangkuti, F. (2015). *Personal SWOT Analysis*. *Free-Management-Ebooks*.
29. Ravanfar, M. M. (2015). *Analyzing Organizational Structure based on 7s model of McKinsey*. *International Journal of Academic Research in Business and Social Sciences*, 5(5).

30. Ravanfar, M. M. (2017). Analyzing Organizational Structure based on 7s model of McKinsey. *International Journal of Academic Research in Business and Social Sciences*.
31. Rulmet, R. (1984). Competitive strategic management. In *Towards a strategic theory of the firm*.
32. Rumelt, R. P. (2012). Good Strategy/Bad Strategy: The Difference and Why It Matters. *Strategic Direction*.
33. Rumelt, R. P., Schendel, D., & Teece, D. J. (1991). Strategic management and economics. *Strategic Management Journal*, 12(2 S), 5–29.
34. Savkin, A. (2015). 7-S Framework – Get a Big Picture of a Problem and Have Insights to Achieve Desired Results. *Business Scorecard*.
35. Simons, R. (1994). How new top managers use control systems as levers of strategic renewal. *Strategic Management Journal*.
36. Slater, S. F., & Narver, J. C. (1994). Does Competitive Environment Moderate the Market Orientation-Performance Relationship? *Journal of Marketing*.
37. Sugiono. (2016). Metode penelitian kombinasi. In *Metode penelitian kombinasi*.
38. Sugiyono. (2010). *Metode Penelitian Kombinasi (Mixed Methods)*. Bandung: Alfabeta.
39. Teece, D. J. (2010). Business models, business strategy and innovation. *Long Range Planning*, 43(2–3), 172–194.
40. Thune, S. S., & House, R. J. (1970). Where long-range planning pays off Findings of a survey of formal, informal planners. *Business Horizons*.
41. Tunggal AW. (2009). *Supply Chain Management (Manajemen Rantai Pasokan)*. Jakarta (ID) : Harvarindo.
42. Ward, J., & Peppard, J. (2002). *Strategic planning for information systems / John Ward and Joe Peppard*. Wiley Series in Information Systems.
43. Waterman, R. H., Peters, T. J., & Phillips, J. R. (1980). Structure is not organization. *Business Horizons*.
44. Wheelen, T. L., & Hunger, J. D. (2010). *Basic concepts of strategic management. Concepts in Strategic Management and Business Policy*.

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## **MICRO FINANCE INSTITUTIONS AND THEIR IMPORTANCE IN GROWING ECONOMIC DEVELOPMENT: A STUDY OF RURAL INDIAN ECONOMY**

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### **ABSTRACT**

In a country like India 70 percent of the population lives in rural areas while the rest of the population i.e. 30 percent resides in urban areas and 60 percent approx. depend on agriculture (according to the World Bank reports. In this rural India with having second largest population needs NGOs like SHG needs cooperative helping hands. Non-Government organization is playing crucial in the economic development of India. Non-Government organization is not confine up to registered organization like big renowned NGOs its includes small level social help group i.e. Self Help Group on village level, local women skilled help group etc. The purpose of this research paper is to identify how microfinance is made available in the rural areas for needy people and also how the microfinance institutions can check or reduce the poverty with the help of providing microfinance. For critical analysis of the research, data has been collected through secondary available sources and comparative analysis has been done for reaching to conclusion.

### **KEY WORDS**

Microfinance institutions, microfinance products, rural finance, banking system, microfinance, poverty alleviation.

The credit of introducing Microfinance goes to Dr. Mohammad Yunus, who suggested the idea of making small loans, which he funded himself, to women in Bangladesh making bamboo furniture who had previously relied on usurious loans to purchase raw materials. He discovered these very tiny loans, which traditional banks did not want to make due to the perceived risks and costs, could make a disproportionate difference to a poor person and given the chance they would pay them back creating a viable business model. He would go on to found Grameen Bank in 1983 and win the Nobel Peace Prize in 2006.

Kiva Microfunds (commonly known by its domain name, Kiva.org) is a non-profit organization that lends money by way of Internet to low-income people in over 80 countries. Kiva's mission is to lend money to more and more people for reducing poverty. Kiva was founded in 2005 after being inspired by the work of Dr. Mohammad Yunus. Kiva allows low income people, for as little as \$25, to help a borrower start or grow a business, to have finance for personal purposes.

Kiva has expended its network over the past ten years and has enabled more than 1.5 million people to fund over 2 million borrowers in over 80 countries. The result of which is that Kiva has lent approximate \$1 billion dollars to the borrowers which was repaid at a rate greater than 97%.

Microfinance refers to the affordable financial services which are provided to the low income people. Microfinance is a word that is closely associated with microcredit. Microfinance refers to the broad spectrum of providing financial services to the low-income people. Whereas, Microcredit is a small loan provided to the persons of below poverty line to make them self-employed. The scheme is offered to the people of below poverty line who lack collateral and are not eligible to take a loan in a traditional way. As Microcredit is a financial service provided in microfinance, the terms are used interchangeably by the people. Microfinance is a universal term to describe financial services, such as deposits, instalment payments, loans, money payment services, money transfers, insurance, savings, micro-credit services, fund transfers to entrepreneurs who lack access to traditional banking services. Microfinance institutions work in the directions to provide microfinance services to the low- income people.

Microfinance refers to those financial services like loans, insurance, savings etc which are provided to poor entrepreneurs and small business owners who are unable to take any bank loan and have no collateral. Most often, microloans are given to those living in still-developing countries who are working in a variety of different trades, including carpentry, fishing and transportation.

Microloans typically are not more than several hundred dollars. Examples of uses include money for tools to start work in construction, or makeup and other supplies needed to become a cosmetologist. Because they are the ones that commonly use their profits to provide for their families with things like food, clothing, shelter and education, women currently comprise roughly two-thirds of all microfinance clients. The main aim of microfinance is to provide small loans so that they can easily invest in their small businesses and can tackle the problems of finance very easily. The micro loans are provided for a time period of six to one year without having any collateral security.

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National Bank for Agriculture and Rural Development (NABARD) introduced Self-help group (SHG) - bank linkage programme 1992. SHG firstly introduced microfinance in India. No doubt this programme has proved to be very successful and also the most popular model of micro finance in India. There are other approaches like micro finance institutions (MFIs) established after SHG in the country.

Recognizing the potential of micro finance to positively influence the development of the poor, the Reserve Bank, NABARD and Small Industries Development Bank of India (SIDBI) have taken several initiatives over the years to give a further fillip to the micro finance movement in India.

Objectives of study:

- To understand the concept of microfinance, and delivery models of microfinance in India;
- To define features, role and importance of microfinance in India;
- To examine the current status and growth of microfinance in India;
- To suggest measures for making Micro Finance Institutions more efficient in credit;
- To introduce low income people with verities of Microfinance Products.

## **METHODS OF RESEARCH**

This is a descriptive research paper based on secondary data. Data have been collected through books of references, publications of recent research papers available in different websites and magazines, newspapers, Research Articles, dissertations of the

scholars, standard publication, E- Journals, periodicals, internet, RBI Report, Report of NABARD, Bharat Microfinance Report, The micro finance institution (development and regulation) bill, 2012, etc.

## LITERATURE REVIEW

The earlier researchers have evolved that there are various institutions that helps people below poverty line to have small loans in order to fulfil their purposes. Self-help group (SHG) - bank linkage programme (SBLP) is an autonomous association of people united voluntarily to meet the needs of the common people. Also the Micro Finance Institutions aims at fulfilling the same purpose of providing microfinance in the rural areas.

It has been proved that microfinance is the tool to help poor family moved out of poverty and to contribute to the economy of a country by increasing their income generating capacity. Studies have shown with the microcredit provided by Grameen bank in Bangladesh 48% of the families below the poverty line have exit from poverty. According to some studies with microcredit 5% of the poor could exit the poverty line each year as it is an investment in human capital and improve people's life. Microcredit is an opportunity for the poor to realize their dreams. Microfinance is a strategic tool to trim down poverty and help the poor to participate in the social and economic life of a country. Microfinance helps the households not only to fulfil their present needs but also to plan accordingly for their better future.

According to the research conducted by World Bank, India is famous as home to almost one third of the world's poor (surviving on an equivalent of one dollar a day). There are many central and state government poverty alleviation programs activated in India, microfinance plays a major contributor to financial inclusion. Microfinance has made its contribution in reducing poverty from last few decades. There are various reports that show people have raised their income levels and standard of living with the help of microfinance.

Thus Microfinance plays a major role in development of Indian economy in following ways:

**Credit to Rural Poor** - financial institutions fulfil the credit needs of poor people by providing microfinance. Rural people are based on non- institutional agencies to fulfil their financial purposes. Micro financing helps the people to cater the needs of the poor people and make them economically and socially sound.

**Tool for Poverty Reduction** - with the help of microfinance people are able to get employment which helps them to have a good income and also helps to reduce the poverty.

**Women Empowerment** - women's economic empowerment refers to the improvement in the economic status of women by providing them the freedom to use their rights in a proper manner. There is more than % of SHGs which are established by women. This is really a wonderful step that has been taken by the government for providing safety and security to women. Thus, microfinance helps the poor women to grow economically.

**Economic Growth and Development** - for the purpose of economic growth and development finance plays a vital role. Finance is the life blood for any organization or business. Financial institutions and government provides microfinance on a large scale to people that increase the production of goods and services. This increase leads to an increase in GDP and contributes to economic growth and development of the country.

**Mobilization of Savings** - saving is the main source for meeting the contingencies. Microfinance is a helpful tool that develops the habits of saving among people. The finance that is generated by way of savings are used to be provided as loans and credit to its members. Thus microfinance helps in mobilisation of savings.

**Development of Skills** - micro financing helps to get employment to the poor people. It also helps them to set up their own businesses and motivates them to become potential rural entrepreneurs. SHGs encourage its members to set up business units jointly or individually. They are also being provided training accordingly to operate their businesses. Thus micro finance plays a vital role for development of skills.

Mutual Help and Co-operation - microfinance is a helping and co-operative tool for the poor and needy people. People can face the economic crises easily if they have the availability of microfinance.

Social Welfare - micro financing also aids in employment generation, this employment generation also helps to increase the level of income of people. They may go for better education, health, family welfare etc. Thus micro finance helps in social welfare.

The availability of credit and banking facilities to the poor segment of the society can be reached through Microfinance. The Government and the Reserve Bank of India have taken several steps like providing loans to the weaker section of society, declaration of rules and regulations for banks, guidelines for nationalization of banks, and low interest rate for the weaker section of society. It was, however, realized that further direct efforts were required to address the credit needs of poor people. In response to this requirement, the Micro finance was introduced in India by the establishment of SHG bank linkage programme (SBLP) in the early 1990s. At present, there are mainly two models for providing Microfinance in India SBPL model and the MFI model.

The SBPL model had more borrowers and loans outstanding in comparison with other models of Microfinance. SBPL model is recognized as largest Microfinance programme in all over the world as per its coverage. Apex Institutions like RBI, SIDBI, and NABARD have also taken a number of steps to drive movement of Microfinance programs in India. The developments relating to evolution of various models of the Micro finance movement are detailed in the present section. The Micro finance sector started getting recognition in India after the launch of the SBLP.

The concept of Microfinance in India had been coined forward since 1980s. There are various models which are used to provide microfinance as there is no any specific model which fits into all conditions. Each model has to be modified as per different situation and local requirements. For this purpose Microfinance Institutions have adopted various delivery models and they can be categorized in to following broad categories.

Self-help group was originated in India. These groups have contributed towards the rural development and spread in all parts of the country and growing day by day in terms of its numbers all over the country. These Groups are formed by Non-Government as well as Government organisations and are used as channels for various development programmes.

Self-Help Group is an association of generally up to 20 members (not exceeding 20 members). Self-Help Group refers to self-governed, peer controlled, informal group of people with same socio-economic background and having a desire to collectively perform common purposes. Here poor people voluntarily come together to save whatever amount they can save conveniently out of their earnings and they mutually agree to contribute the amount to a common fund and lend the money to the members for meeting their productive and emergent needs. These groups are helped by Government agencies or NGOs for members to come together for discussing and solving their common problems either financial or social through mutual help. An SHG can be all-women group, all-men group, or even a mixture of both men and women.

SHGs are well recognized and accepted by government, SHGs can open bank accounts in the name of SHG. They can also receive government grants and funds for development activities.

SHGs do not restrict their functions only to financial transactions. SHGs are often involved in many social activities. There are example where SHGs have taken up social issues and fought against social evils like alcoholism, violence, against women, dowry, getting into village politics and being elected as Sarpanch.

SHGs maintain their own books of accounts. They keep the records of their savings, money lending, Income and expenditures. Strong SHGs also prepare their Final Accounts and Income statements.

SHGs are based on a formal hierarchy in which they include a Group President, Secretary and Treasure. They all are elected by the group.

SHGs are more autonomous in nature as they decide their own rules and regulations.

SHGs mobilize thrift and rotate it internally.

SHGs can hold bank account and can also borrow from banks and other financial institutions.

MFIs in India exist in a variety of forms like trusts registered under the Indian Trust Act, 1882/Public Trust Act, 1920; societies registered under the Societies Registration Act, 1860; Co-operatives registered under the Mutually Aided Cooperative Societies Acts of the States; and nonbanking financial companies (NBFC)-MFIs, which are registered under Section 25 of the Companies Act, 1956 or NBFCs registered with the Reserve Bank. These MFIs are scattered across the country and due to the multiplicity of registering authorities.

The four most important Micro Finance models in India are:

- Model I - individuals or group borrowers are financed directly by banks without the intervention/facilitation of any Non-Government Organisation (NGO);
- Model II - borrowers are financed directly with the facilitation extended by formal or informal agencies like Government, Commercial Banks and Micro-Finance Institutions (MFIs) like NGOs, Non Bank Financial Intermediaries and Co-operative Societies;
- Model III - financing takes place through NGOs and MFIs as facilitators and financing agencies;
- Model IV - is the Grameen Bank Model, similar to the model followed in Bangladesh.

Self Help Groups are successful in empowering women by providing direct and indirect benefits to them. SHGs are small in size generally 10 – 15 members having limited in the types of financial services they can provide to its members. Federation of SHGs have more than 1000 members In Federated SHG model, there is a three tier structure the first tier is the SHG, the second tier is a cluster and the third tier is an apex body, which represents the entire SHG. At the cluster level, each SHG is represented by two of its members. The apex body usually made up of 10 – 15 members and they form the link between the SHGs and the NGO which is supporting to them. With the help of federations and NGO with limited resources, it has impact on a large number of poor people. Examples of Federated Self Help Group model are PRADAN, Chaitanya and SEWA.

In this model, the bank works as a lender and the role of MFI is to act as an agent for performing the tasks of lending, credit facilities and recovery of the money, while the borrower is the individual. In Bank Partnership model Microfinance institutions acts as an agent of bank. Microfinance institutions are only concerned with dealing with clients for granting loan to final repayment. In this model MFI for larger funding access holds the borrower loan on its account for some time and refinance through the mean of securitization.

Grameen model is based on the concept of joint liability. It is the brainchild of Prof.. Muhammad Yunus, founder of Grameen Bank in Bangladesh. Grameen model is the most accepted and prevalent micro-finance delivery model in the world today. Many MFIs have accepted the model as it has high focus on standardization and discipline.

Grameen model is a joint liability group model. Here five-member groups are formed and eight such groups form a Center. So there are total 40 members (8 x 5). However, over the years people have experimented with Centers of different sizes and now there are variations of 5-8 groups within a Center. Center is the operational unit for the MFI, which means that MFI deals with a Center as a whole. In Grameen model meetings are held only at central level and the individual groups do not meet. All the members are jointly responsible for the repayment. If all the members make default in the repayment, MFI recovers full money from center.

Some other features of Grammen Model are:

- The group meeting take place every week;
- Interest rate are charged on flat basis (iii)
- MFI staff conducts the meeting;
- MFI staff conduct the center meetings on all transactions;
- Low transaction costs;
- Loans are collateral free;
- Repayment of loans in small and short interval;

- Quick loan sanctions with little or no paper works.

Repayment of loans in small amount is one of the major reasons of high loan recovery rate of a Grameen Bank.

SHG and Grameen model have originated with two different approaches. SHG model has been developed with holistic view of development and empowerment of society where financial transactions are only one part of it. While Grameen model is specifically focused on providing financial services to the low-income clients.

In 1970s Grameen Bank model was launched in village area of Bangladesh to empower the poor people through Microfinance. After great success of GB Model it was created as formal Bank under special Law in 1983. The bank is owned by the poor borrowers mostly women. The Grameen bank eliminates the concept of collateral security for taking loan from bank and upturned the conventional banking practice. It is formed on mutual trust and provides credit facilities for self employment and profit making activities to low income people. The main feature of Grameen bank model is it provides door step service to poor people. In India Grameen bank model was adopted by CASHPOR financial and technical limited, SHARE Microfinance limited, and Activist for social alternatives (ASA).

Joint Liability Group is usually a group of five to ten who come together to borrow from an MFI. The members in a JLG are also from similar socio-economic backgrounds and usually the same village. A JLG is different from SHGs in that the members share liability, or stand guarantee for each other. In Joint Liability Group, The borrowers make a group among themselves and the microfinance institutions give loan to that group. One person in that group is appointed as leader of the group and each person is responsible for the loan taken by any member of the group. If any one person in the group defaults then other group members will have to pay for that.

It is very much costlier to provide financial services to the needy and poor people in developing countries. The cost is one of the biggest reasons why traditional banks don't make small loans, the resources required for a 50\$ loan is the same as for a 1000\$ loan.

Data from the Micro Banking Bulletin reports that 63 of the world's top MFIs had an average rate of return, after adjusting for inflation and after taking out subsidies programs, of about 2.5% of total assets. This lends to the hope that microfinance can be sufficiently attractive for investors, as well as the mainstream in the retail banking sector.

Table 1 – Typical microcredit products

Product	Purpose	Terms	Interest rate
Income Generation Loan (IGL)	Income generation, asset development	50 weeks loan paid weekly	12.5% (flat) 24% (effective)
Mid-Term Loan (MTL)	Same as IGL, available at middle (week 25) of IGL	50 weeks loan paid weekly	12.5% (flat) 24% (effective)
Emergency Loan (EL)	All emergencies such as health, funerals, hospitalization	20 weeks loan	0% Interest free
Individual Loan (IL)	Income generation, asset development	1-2 years loan repaid monthly	11% (flat) 23% (effective)

The Income Generating Loan is used for a variety of activities that generate income for their families. For this purpose the Clients submit a loan application and collect the amount of the loan after one week as the application is approved. The clients are being given the facility to pay the loans in 50 equal, weekly instalments. Once the previous loan is completed a new application for further loan can be submitted by the client.

The Mid Term Loan is given to the clients after 25 weeks of repaying their IGL loan. Only if the client has not taken the maximum amount of IGL, he can be granted to take MTL. The clients are being given the facility to pay the loans in 50 equal, weekly instalments. Once the previous loan is completed a new application for further loan can be submitted by the client. The terms and conditions would be same as in case of IGL.

The Emergency Loan is available to all clients over a year. The amount of such loan is small as compared to income generating products. This loan is provided to meet the expenses such as funerals, health, hospitalization, prenatal care and other crisis situations.

Here the clients are being given the facility to pay the loans in 20 equal instalments. Such kinds of loans are 0% interest free.

The Individual Loan is designed for clients and non clients that have specific needs such as Income generation, asset development etc. The clients are being given the facility to pay the loans within 1-2 years, monthly instalments.

There are some restrictions regarding what the money is used for. Usually micro credits can't be used for the purposes like:

- Payments of other loans or other debts;
- Production of tobacco and liquor;
- Forming turnover capital of trade and intermediary business;
- Organization or purchasing products for gambling or entertainment services for the population;
- Establishing trading points;
- Purchase of property that's not used for business.

Microfinance Institutions are introducing lot of new products to help the poor people in their needs and also focusing on raising their standards of living. This shows the growth of the microfinance sectors year after year. The different products common used in the microfinance sector today is:

Micro savings – micro saving refers to small deposit account for the lower income families for depositing funds for the future requirements. This account is as similar as a saving account, though the amount which is kept in this account is small. The amount of balance of this account is low,

The minimum balance requirements are often waived or very low, allowing users to save small amounts of money and not be charged for the service.

Micro insurance – gives the entrepreneurs the chance to focus more on their core business which drastically reduces the risk affecting their property, health or working possibilities. There are different types of insurance services like life insurance, property insurance, health insurance and disability insurance. The spectrum of services in this sphere is constantly expanded, as schemes and terms of providing insurance services are determined by each company individually;

Micro leasing – for entrepreneurs or small businesses who can't afford buy at full cost they can instead lease equipment, agricultural machinery or vehicles. Often no limitations of minimum cost of the leased object.

Money transfer – people always feel the need to transfer the money from one place to another as per their requirements. Sometimes they also have to transfer the money overseas to their friends or relatives. A number of commercial banks provide the facility of international money transfer without opening current accounts. Such banks are Western Union, Money Gram, and Anelik. Though these banks provide the services of small money transfer but they actually make the transaction of millions of money all over the world each week. According to the World Bank, the annual global market for remittances – money transferred home from migrant workers – is around 167 billion US dollars. Remittances are also an important source of income for many developing countries including India, China and Mexico, all of which receive over 20 billion dollars each year in remittances from abroad.

Sa-Dhan, India's premier body of development finance institutions has reported the latest report on the status of microfinance in India for the FY2015-16. The report titled as Bharat Microfinance Report provides the latest data and statistics about the micro-finance sector in India. The next report with up-to-date statistics on Indian Microfinance Companies will be released in September 2017.

Microfinance has a long history of helping the bottom of the economic pyramid to build assets and achieve a standard of living. Indian Government has considerably enhanced allocation for the provision of education, health, sanitation and other facilities which promote capacity building and wellbeing of the poor. The Indian government puts emphasis on providing financial services to the poor and underprivileged since independence.

The microfinance sector has made tremendous growth today. The credit of such growth of Microfinance goes to national bodies like Small Industries Development Bank of

India (SIDBI) and National Bank for Agriculture and Rural Development (NABARD). They have given a well recognition to Micro finance sector in India. The strength of the microfinance organizations (MFOs) in India is in the diversity of approaches and forms that have evolved over a period of time. While India has its home-grown model of SHGs, and mutually aided co- operative societies (MACS) there is significant learning from other microfinance experiments across the world, particularly Bangladesh, Indonesia and Thailand.

### **CONCLUSION**

This research paper is completely based on the secondary data collection and therefore the accuracy and the reliability of the data is based on the same.

Economic and financial services institutions long term growth is depend on the manner that Financial Institutions approaches and taps untapped rural areas in India. Microfinance is often portrayed in literature as a tool that allows individuals excluded from the financial system to get access to sources of funding, which will help for theirs development and growth. From the above study it can be viewed that Self help Groups are playing vital role in delivery of microfinance services which leads to increase the saving habits of poorest strata of society and contributing towards the development of poor people in India.

Microfinance uses as a tool for eliminating poverty in India and other developing nations. Micro Finance Industry has the huge potential to grow in future, if this industry grows then one day we'll all see the new face of India, both in term of high living standard and happiness. After all, microfinance has the appeal of bringing financial power to the people who need it most and whose resourcefulness and ingenuity it will fuel. Nationalized banks have not encouraged loans for SHGs because of lack of creditworthiness, but these banks have excellent reach to SHGs so that they should come forward to exploit this business opportunity. SHG programme has indeed helped in the social and economic empowerment of rural poor, especially for women, time delivering essential and much-needed financial services at low transaction costs for banks, poor borrowers and villagers. However, slow progress of graduation of SHG members, poor quality of group functioning, dropout of members from groups etc., have also been reported various study findings in different parts of the country, which need to be taken into account while designing the road map for the next phase of the SHG programme The microfinance institution (development and regulation) bill , 2012 has passed to design interventions that increase the impact of microfinance on borrowers, lenders, company and other institutions. Further, bank officials do not have sufficient interest to go beyond their routine job, so that the aggressive drive for financial inclusion is attained. These problems are overcome in the microfinance institutions model. With more stable regulatory environment which provide steady availability of funds, improving profitability with comfortable asset quality & capital adequacy and relatively lesser impact of concentration risk. Financial inclusion has been recognized as a priority goal of the microfinance sector and efforts were made in this report to identify the critical areas of interventions for greater success of the initiatives in the future.

The importance of microfinance in the developing countries like India cannot be undermined it play a vital role for socio-economic uplift of poor and low income peoples. Since 1990s, poverty reduction has taken priority at both national and international development levels. Within this framework, various initiatives have been taken by government. Microfinance has caught the attention as an effective tool for poverty reduction and socio- economic development. Hence Microfinance can play a vital role for improving the standard of living of poor. The economic development of any country is severely influenced by the availability of financial services. Microfinance is the form of a broad range of financial services such as deposits, loans, payment services, money transfers, insurance, savings, micro-credit etc. to the poor and low income individuals. A well- developed financial system promotes investment opportunities in an economy. Therefore it is necessary that govt. of India have to focus on extending financial services to both rural and urban to ensure sustainable and inclusive growth. From the above study it can be viewed that SHG's and MFI's are playing a vital role in delivery of microfinance services which leads development of

poor and low income people in India. However, slow progress of graduation of SHG members, poor quality of group functioning, dropout of members from groups etc., have also been reported various study findings in different parts of the country, which need to be taken into account while designing the road map for the next phase of the SHG programme.

## RECOMMENDATIONS

When there was the introduction of microfinance, no close focus was made on the regulation and individual institutions were free to bring in innovative operational models. However, with the passage of time as the sector grew the government made certain regulations so that the interest of the stakeholders can be protected and the micro finance sector can be developed.

Microfinance sector is based on many rules and regulations, very often field visits can be adopted as a medium for monitoring the conditions on ground and initiating corrective action if needed. This will help to have the information about the staff working on ground level and also on their recovery practices. It will also encourage MFIs to abide by proper code of conduct and work more efficiently.

It has been seen that in lieu of reducing the initial cost, MFIs are opening their branches in places which already have a few MFIs operating. Encouraging MFIs for opening new branches in areas of low microfinance penetration by providing financial assistance will increase the outreach of the microfinance in the state and check multiple lending. This will also increase rural penetration of microfinance in the state.

MFIs should provide range of products to the poor or low income people. These products may include financial services like deposits, instalment payments, loans, money payment services, money transfers, insurance, savings, and micro-credit services to the poor and low income individuals. They also provide training and support to these people for the use of such products and services. MFIs provide all the financial services to the rural people where people do not have access to banks.

It has been observed that MFIs often allow different patterns of charging interest rates and few of them also charge additional charges and interest free deposits. This is the reason for the borrowers to feel incompetent in terms of bargaining power. So in order to make the Microfinance sector more competitive it will be beneficial to follow a common practice for charging interest by all MFIs. MFIs should use new technologies and IT tools & applications so that they can reduce their operating costs. They should also apply cost effective measures in order to reduce such costs. In absence of adequate funds the growth and the reach of MFIs become restricted and to overcome this problem MFIs should look for other sources for funding their loan portfolio.

## REFERENCES

1. ADRA-Nepal (2006), "Key Principle and Characteristics of Micro Finance" <https://www.scribd.com/doc/25094006/Key-Principle-and-Characteristics-of-Micro-Finance>
2. Al-Kake, F. (2019) problems of Internal Auditing in the Educational Sector (A Field study at the private university in Erbil – Iraq). *Journal of Arts, Literature, Humanities and Social Sciences*, 35(1)
3. Al-Kake, F., Ahmed, Dler Mousa (2019) The Role Of The Sarbanes-Oxley Act (Sox) In Reducing Agency Costs Exploratory Study Of A Sample Of Auditors In The Kurdistan Region Of Iraq. *Qalaai Zanist Journal*, 4(2).
4. Dixit, P. and Lal, R. C. (2016) "Role of Gandhi's Khadi Textile Industry towards Inclusive Growth and Corporate Social Responsibility", *Int. J. of Trade and Commerce-IIARTC*, Vol. 5, No. 1, pp. 115-120, DOI 10.13140/RG.2.2.36573.26086.
5. Dixit, P., Lal, R. C. (2019), "Inclusive Growth and Social Responsibility - A Critical Analysis of Indian Textile Industry", *MERC Global's International Journal of Management*, Vol. 7, Issue 2, pp. 202-210.

6. Dixit, P., Tyagi, A. (2018) "A Study of Downturn Trends of Crude Oil Price – An Economic Advantage for Indian Government and Consumers" 10.13140/RG.2.2.27345.79207.
7. FinDevGateway (2019), "MICROFINANCE FAQs" "What is microfinance" <https://www.microfinancegateway.org/what-is-microfinance>.
8. India Microfinance (2017), "Bharat Microfinance Report 2017-18", <http://indiamicrofinance.com/2017-2016-bharat-report.html>
9. International Journal of Current Research and Academic Review 1(1), 78-83.
10. M.Kannan and A. Panneerselvam (2013), "The microfinance in India- An overview",
11. Ministry of Finance (2012), "The Micro Finance Institutions (Development and Regulation) Bill, 2012", "PRS Legislative Research", "<http://www.prsindia.org/billtrack/the-micro-finance-institutions-development-and-regulation-bill-2012-2348/>".
12. Mousa qadrAhmed, D., & Al, F. A. K. A. K. (2019). Application of Accrual Basis in the Public Sector and its Role in Providing Useful Information Exploratory Study of a Sample of Academic Specialists in the Kurdistan Region of Iraq. Qalaa Zanist Journal, 4(1).
13. Nag, Jayeek (2019) MicroFinance Current Status and Growing Concerns in India [http://www.academia.edu/6800954/MicroFinance\\_Current\\_Status\\_and\\_Growing\\_Concerns\\_in\\_India](http://www.academia.edu/6800954/MicroFinance_Current_Status_and_Growing_Concerns_in_India).
14. Pankaj Dixit, Ramyar Rzgar Ahmed, Arvind Kumar Yadav and R. C. Lal (2019). Diversification of economy - an insight into inclusive growth & food security with special reference to Pakistan's agriculture economy. Asian Journal of Agriculture and Rural Development, 9(1), 82-98.
15. Pankaj, D., Lal, R. (2019). A Critical Analysis of Indian Textile Industry: An Insight Into Inclusive Growth And Social Responsibility. Russian Journal of Agricultural and SocioEconomic Sciences, 88(4), 53-61. doi:10.18551/rjoas.2019-04.08.
16. Pankaj, D., Ramyar, R. (2019). Diversification of Economy – An Insight into Economic Development with Special Reference to Kurdistan's Oil Economy and Agriculture Economy. Russian Journal of Agricultural and Socio-Economic Sciences, 85(1), 395-404.
17. Pankaj, D., Ramyar, R. (2019). Economic Diversification: An Insight into Sustainable and Inclusive Agriculture with Special Reference To Pakistan. Russian Journal of Agricultural and Socio-Economic Sciences, 85(1), 32-44
18. Reserve Bank of India (2008), "Publication-Micro Finance", <https://www.rbi.org.in/scripts/publicationsview.aspx?id=10932>
19. Roy, Suranjana (2016), "India's microfinance industry clocked 60% growth in fiscal 2016: Report", "Live mint" <http://www.livemint.com/Industry/4Zb0zp5yOh0toqEdBFz4jL/Indias-microfinance-industry- clocked-60-growth-in-fiscal-2.html>.
20. Tripathi, Vivek and Tripathi, Vineet, Recent Development of Microfinance in India (July 3, 2014). Available at SSRN: <https://ssrn.com/abstract=2462251>
21. UK ESSAYS (2017), "The concepts of microfinance and microcredit", <https://www.ukessays.com/essays/economics/the-concepts-of-microfinance-and-microcredit- economics-essay.php>

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## **TRAINING AS DETERMINER OF COMPETITIVE POWER AND HUMAN RESOURCES**

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### **ABSTRACT**

The purpose of this study to determine training as competitive power and human resources. Training is a form of technical and non-technical skill development which in the future is expected to improve the competitiveness of workers in Indonesia. In this paper uses qualitative approach with study literature analysis. Individual competencies in the form of skills and knowledge can be developed through education and training. Competence-based human resource development may benefit both employees, organizations, industries, regional and national economies. Development of human resource quality can also be done with human capital approach that emphasizes on 3 approaches, that is approach of intellectual capital, social capital approach, soft capital approach. Author's identify the problem of the Indonesian population today. The development of Indonesian human resources is a complex issue. To solve it requires an accurate strategy and cost is not small, because this development is not only limited to improving technical quality but other qualities that allow a person to be superior and whole man. It seems that the economic crisis that plagued the Indonesian nation before the collapse of the new order regime has now dragged back the quality of the Indonesian population. Competence is a characteristic that underlies a person and is related to the effectiveness of the individual in carrying out his work. Individual competencies in the form of skills and knowledge can be developed through education and training. Competence-based human resource development may benefit both employees, organizations, industries, regional and national economies.

### **KEY WORDS**

Training, competitiveness, human resource development, productivity employee.

To facing the ASEAN Economic Community (MEA) companies are required to have adequate competence. Entering the era of globalization as it is today, highly competent human resources will be the center of organizational excellence and as a supporter of organizational competitiveness. According to Managing Consultant Watson Wyatt, companies in Indonesia face a slightly larger challenge in attracting and retaining high performing employees compared to Asia Pacific countries. Competence is very important in a company. With the existence of competence, the company can determine the standard of knowledge, skills and ability of one's work. Competence allows companies to describe how a person performs. The development and growth of the company needs to be supported with competent human resources and have superior performance.

One of the organizational resources that has an important role in achieving its objectives is (HR) human resources. Human resources are a very central factor in the organization. The importance of human resources in an organization, requires every organization to get qualified and productive employees to run the organization. Human resource development in the global era should take precedence, because in that time period the application of super-advanced technology has penetrated in all sides of human life. If we do not anticipate it, then the human position will be shifted. Large numbers of workers do not get a chance, the competition is getting tougher because the available jobs are mostly filled by machines/robots that are actually more practical and efficient than human power.

As stated by Kwik Kian Gie, emphasizing the need for Indonesia to give higher investment priority to human development efforts. It is intended to fulfill the basic rights of Indonesian citizens as well as to lay a solid foundation for economic growth and ensure long-

term sustainability of democracy. Kwik, concludes that the Government should invest more in human development programs to improve the quality of Indonesia's human resources. This shows that improving the quality of human resources becomes an important thing and should be the attention of all parties.

Discussion of human resource development, can actually be seen from from two aspects, namely quantity and quality. The notion of quantity concerns the number of human resources. Quantity of human resources without accompanied by good quality will be a burden on the organization. While the quality, concerning the quality of human resources related to the ability, both physical abilities and non-physical abilities (intelligence and mental). Therefore, for the sake of acceleration of the main duties and functions of any organization, improving the quality of human resources is one of the main requirements. The quality of human resources concerning two aspects, namely physical aspect (physical quality) and non physical (non-physical quality) concerning ability to work, thinking, and other skills. Therefore, efforts to improve the quality of human resources can be directed at both aspects. To determine the physical quality can diupayakan through programs to improve welfare and nutrition. Meanwhile, to improve non-physical quality, education and training efforts are needed. This effort is meant by the development of human resources.

Thus, it can be said that what is meant by the development of human resources (human resources development) in macro, is a process of improving the quality or human ability in order to achieve the nation's development goals. The upgrading process here includes human resource development and management planning. In a micro-sense, in the sense of the environment of a work unit (department or other organization), then human resources are labor or employees within an organization, which has an important role in achieving success. A sophisticated and complete facility, it is not a guarantee of the success of an organization without offset by the human quality that will utilize the facility.

Based on Kwik's explanation above clearly focuses on urgency or role of human resource in a country. In a more micro-scope, the HR function is essential in all organizational units or companies. In a very hypercompetitive and uncertain business situation and condition, as revealed by Richard D'Aveni, HR becomes the key answer for all organizations or companies to be able to survive and winning the future, if not want to experience the incident as reported by Arie de Geus from Royal Dutch/Shell: The number of companies collapsed (bankruptcy) caused by not being able to learn and non-adaptive, fail to adjust to the changes that occur. It is therefore no exaggeration if the leading management expert, James Stapleton in "Executive's Guide To Knowledge Management," suggests that knowledge and human resources are the only "weapons" left to date to create a competitive advantage.

What characterizes the era of globalization is the rapid development in the field of transformation, telecommunications and information. Between one country with another country as if no distance. In addition, economic conditions are also growing rapidly. Large multinational corporations with capabilities and technology have been able to increase their economic efficiency by learning about and getting inputs from human resources (HR), and capital from the most effective sources around the world. Furthermore, new information and communications technologies enable organizations to market their products internationally, expand their scope by taking action and improving their economic efficiency.

So, globalization which in essence is an economic engineering that has made human life so open. This causes the increasingly sharp competition between countries and organizations in seizing the market and business produces excellent performance and product quality. For all this, then in turn the business organization involved in the competition will demand high quality human resources and be able to compete. In short, in nature the openness of human quality is the key to success in competition in the global era. The quality of human resources in Indonesia according to Human Development Index (HDI), an annual survey conducted by United Nations for Development Programs (UNDP) on Indonesia's Human Development Index scored for 2015 is 0.689. This places Indonesia in the middle human development category, and ranks 113 out of 188 countries and territories. With the

rapid flow of globalization, causing the sharper competition between countries and between organizations, therefore to compete demands the existence of quality human resources.

## RESULTS AND DISCUSSION

Human Resources in the Era of Crisis. Due to the economic crisis at the end of 1997 that hit the countries in Asia give influence also to Indonesia. This condition also triggered the slump of Indonesian society which resulted in increasing poverty level in Indonesia. In this multi-economic crisis conditions resulted in low employment, especially for college graduates. While on the other hand the number of college graduates continue to increase. The condition of economic slump that lasted long enough indicates that the basis of Indonesian economy and its human resources in it is not strong facing the shock of economic shock from outside and also the exposure of globalization which is getting stronger in the moral order of the nation.

*Human Resources in the Era of Globalization.* Massive change in this global era, human development is faced with a complex problem and dilemma. On the one hand we seek to industrialize by applying a variety of cutting-edge technologies, when it is well known that the consequences of application of machinery and various other technologies will further reduce human employment opportunities (especially unskilled labor). Meanwhile on the other hand we are faced with the problem of population (large population) which has not been effectively utilized, so that the existence of this population is at a critical point as the burden of development.

The problem of the Indonesian population today, should not be on how to create the population from the burden of being the development capital, but how to create the same human beings into a better quality capital. The development and development of Indonesian human resources is a complex issue. To solve it requires an accurate strategy and cost is not small, because this development is not only limited to improving technical quality but other qualities that allow a person to be superior and whole man. It seems that the economic crisis that plagued the Indonesian nation before the collapse of the new order regime has now dragged back the quality of the Indonesian population.

According to Schuler and Youngblood in Rivai emphasized that studying human resource development from organization, human being as part of organization so disclosed that human resource development in an organization will involve various factors that is education and training. According to Dessler in Gaol. training gives new or existing employees the skills they need to carry out the work. In other words, training focuses on the skills needed to carry out the current job, while development is a long-term exercise, the goal being to develop current or future employees for upcoming organizational work or to resolve organizational problems. Exercise is more on job requirement / skill issues, while development focuses not only on skills or job demands but also on motivation and behavior.

*Human Resource Development To Improve Competitiveness.* The competitiveness of a country has always been an interesting discussion, whether in economics, politics, social, and technology. The competitiveness of a country is considered as one source of the resilience of a country facing all barriers in building the nation's civilization. A civilization that can only be built through superior economic, political and cultural strength. With my high competitiveness, the economy can maintain its economic growth and begin to build a regular state life and then the construction of civilization begins. Technological satisfaction and productivity improvement are key in winning competitiveness in trading. Because this is what makes the production of goods more efficient, the development of human resources is essential in this era to improve the competitiveness of our workers.

The type of development undertaken for increased employee capability depends heavily on the individual conditions and capabilities the organization needs. In general, however, human resource development in improving employee capability is in terms of work orientation, quality of decision making, ethical values and technical skills. In the case of non-technical capabilities will be effectively done through the process of job socialization or informal path. In practice, development is an all-time process when employees work on their

organizations. This means that development is needed as an organization and individual needs continuously in accordance with external dynamics. Thus, HR assets in the form of knowledge, skills and attitudes need to be prepared and developed for adjustment with new jobs, promotions and new jobs after retirement employees. Human resource development stage as Simamora (2001):

1. Stages of HR development begin from the identification stage of development needs. In this stage, the process of development is developed which is most suitable for certain individuals by conducting an assessment of the strengths and areas for development of each individual (employee). Assessment can be done through the assessment center pattern or also through observation and evaluation of their respective superiors (this is more practical than using an assessment center);
2. From the assessment results, the next step formulate what development program suitable for the employees concerned. In the formulation of the assessment program the development of assessment results is not only based on employee weakness, but it should be more based on the strength of the employee (this approach is called as strength-based development). The type of program or development process that is organized also should not be in the form of classroom training. There are many other alternative development programs such as: 1) Mentoring (employees who are considered senior and have special skills to mentor to a number of other employees, 2) Project / special assignment (3) Job enrichment (enrich the weight of work ), 4) On-the-job training;
3. The next stage is monitoring and evaluation of the implementation of development programs that have been prepared. In this phase, every progress of program implementation is monitored its effectiveness and then at the end of the program is evaluated its impact on the improvement of employee performance concerned, and also on business performance.

The series of steps above, from the identification phase, the development phase and the monitoring/evaluation phase, should be standardized in a systematic and lean mechanism. It should also be prepared as a complete guide book to perform a series of processes above, along with the necessary tools. Thus, every manager or employee knows what to do. In order for human resources development to run properly there must be a manager from the HR department who has a special duty to ensure that a series of processes above can be done correctly and orderly. This is the kind of pattern that should be done if the organization you lead really want to utilize the potential of each HR optimally.

The quality of human resources basically relates to the skills, abilities and skills of a person doing various activities to produce goods and services that participate and determine the quality of life. So if we talk about the development of the quality of human resources means an effort to improve the skills, skills and skills of a person. Broadly speaking, operational personnel on technical-operational quality issues, the intermediate level concerns the operational technical, supervisory and managerial qualities, and who work at a high level of managerial and communication quality.

For the purpose of improving the quality, basically can be done through 3 main lines, namely the formal education path, work training path and development / experience in the workplace, among others:

- Formal Education Path. It consists of general and vocational education from elementary, junior and senior high schools, and colleges. This formal education channel aims to equip one with the foundations of knowledge, theory and logic, general knowledge, analytical skills, and the development of character and personality;
- Work Training Path. This path is a process of skill development and work skills. The purpose of this workshop is to improve professional skills and prioritize practice rather than theory. The work training system can be viewed as a supplement or completeness of the formal education system. The assertiveness of community values concerning the mental attitude, morals and dedication of a person is developed through the formal education system. While the mental attitude, morale

and dedication to the implementation of tasks can be developed through a system of work training. Basically the value of talent development, creativity, innovation, skills and work motivation are grown in the formal education environment and developed in the process of work training;

- Work Experience Path. That is a vehicle where a person can improve his technical knowledge as well as his work skills by observing others, imitating, and doing his own work tasks that he/she is engaged in. By doing repetitive work, someone will be more adept at doing his job, besides it will be able to find more practical, efficient and better ways to carry out their work.

Approach to work training and experience can be done jointly in the form of apprenticeship and on the job training. The path of work experience can be well developed if a person has the basics of knowledge, skills and skills acquired from the formal education and training path. These three channels are conducted as an effort to improve or develop the quality of human resources.

Besides the three pathways that can be used to improve the quality of human resources, there is a business called learning organization (The Organization Learning or Knowing Organization). Senge became a figure who popularized the terminology of organizational learning (The Organization Learning or Knowing Organization) through his work "The Fifth Discipline: The Art and Practice of The Learning Organization" (1990). In Senge's view, organizational learning can be defined as "an organization in which members of an organization continually expand its ability to continue to desire learning and develop self-potential (team learning).

According to Senge, learning and learning organizations are the essence of future success. Organizations or companies that will survive is a company that is able to foster commitment for all human beings in the organization to learn and continue to learn. The Organization Learning is related to the learning process, whether it is related to formal and informal education that can expand the ability and can develop self potential. It is hoped that in the application of learning, there is a superior psychomotor aspect (skill) or know-how that combines cognitive (intellectual) and affective (emotional control) aspects, which in turn can enhance the degree and competence of individuals, organizations and ultimately the existence of a nation in the eyes of the international world.

Learning organization is a long term contextual. It takes a lot of tips, effort, and breakthrough to do that, especially to change the paradigm and mindset, as well as the mental attitude of all members of the organization. One of the things that is important in the application of learning organizations is the drive factor (motivation) and motivation of every individual within the organization or company, which will determine the progress of an organization. Organizational learning will run if there is an individual learning process in it as well as the transformation of communication for mutual learning among existing individuals. The desire to move forward and grow between them.

Individuals in the organization must be supported by an atmosphere conducive to continuing learning within an organization. This is where the role of management is required to play an active role, in realizing the learning organization. Development of human resource quality can also be done with human capital approach that emphasizes on 3 approaches, that is approach of intellectual capital, social capital approach, soft capital approach. The third explanation of human capital approach is as follows:

- Intellectual Capital is a necessary tool for finding opportunities and managing threats in life. Many scholars say that intellectual capital is a very big part in adding value to an activity. A variety of organizations that excel and achieve many achievements is an organization that continuously develops its human resources. Based on this approach humans must have a proactive and innovative nature to manage the changing environment of life (economy, social, politics, technology, law etc.) very high speed. Under conditions marked by super-fast changes man must continue to expand and sharpen his knowledge. And development of intellectual capital can be done through formal or informal education;

- Social capital is the ability to build social networks. The wider the social interaction and the wider the social networking network the higher the value of a person. Social capital is also manifested in the ability to live in differences and appreciate diversity. Recognition and respect for differences is a requirement of creativity and synergy. The ability to mingle with different people, and appreciate and take advantage of these differences will bring goodness to all. Can be done through education, especially training programs. In recent years more and more talk about the importance of the role of emotional intelligence in supporting the success of human life. Efforts to grow social capital are mostly pursued through emotional intelligence training packages, the Seven Habits of Highly Effective People training package. In addition, team building training through outdoor training approach/outbound management training. Training with direct experience (experiential learning) in the open becomes more necessary. Training this model will make it easy to understand how important the presence of others to the success of together as a nation;
- Soft Capital is the capital needed to cultivate social capital and intellectual capital. The destruction of this nation because of the lack of trustworthiness, honesty, good ethics, trustworthiness and trust in other people (trust), able to withstand emotions, discipline, forgiving, loving, sincere, and always want to please others. Such a trait is indispensable to efforts to build a civilized and high-performing society. Thus was the effort to develop the quality of human resources, which can be done through three channels, namely first: education: both general and vocational, formal and informal education. Organizational Learning can enter the path of education (both formal and informal) because the learning organization is an all-time education, which can be done by individuals to develop their abilities, cultivate the desire to learn and develop self-potential. The three approaches are intellectual capital, social capital, and soft capital can be included in education and training programs.

The second track is the work-out track, which is a supplement to the path of education. The third track is the work experience, by observing others, applying knowledge and skills directly in a job repeatedly will be able to generate new creativity and innovation in the work. There is also the development of human resources by way of competence-based human resource development. Development of competence-based human resources are conducted in order to provide results in accordance with the goals and objectives of the organization determined with the standards that have been determined.

## **CONCLUSION**

Competence is a characteristic that underlies a person and is related to the effectiveness of the individual in carrying out his work. Competence is something inherent in the individual and can be used to predict the level of individual performance. Individual competencies in the form of skills and knowledge can be developed through education and training. Competence-based human resource development may benefit both employees, organizations, industries, regional and national economies, as Ryllat et al (1999) argues as follows.

Benefits for employees:

- Clarity of relevance of previous learning, the ability to transfer skills, values, from recognized qualifications and career development potential;
- There is an opportunity for employees to obtain education and training through access to existing standards-based national certification;
- Target placement as a career development tool;
- Current competencies and benefits will add value to learning and growth;
- Clearer career change options. To be able to change in a new position, one can compare their competency now with the required competencies in the new position;
- More objective performance assessment and feedback based on clearly defined competency standards;

- Improve skills and "marketability" as employees.

Benefits for the organization:

- Accurate mapping of required job competencies;
- Increase the effectiveness of recruitment by adjusting the competencies required in the job of the applicant;
- Education and training is focused on the not-for-skill and skill requirements of more specialized firms;
- Access to education and training is more cost-effective in terms of industry-based needs and identification of familiar, extension-based internal and extension supervisory training providers;
- Decision makers in the organization will be more confident as employees have the skills to be gained in education and training;
- Assessment of previous learning and assessment of educational and training outcomes will be more reliable and consistent;
- Facilitate change by identifying the competencies needed to manage change.

Benefits for Industry:

- Better identification and adaptation of the skills needed for the industry;
- Greater access to public sector education and training relevant to industry;
- The establishment of a common and clear understanding base on the outcomes of education and in-industry training through certification of achievement of individual competencies;
- Greater confidence as the needs of the industry have been met as a result of a standard-based assessment;
- Establishment of the basis of the relevant national qualification system for industry;
- Greater delivery efficiency and reduced duplication of education and training efforts;
- Increased responsibility of education and education supervisors and training of educational and training outcomes;
- Encourage the development of broad and relevant skills in the future.

Benefit for regional and international economies:

- Increased skill formats for competition in domestic and international markets;
- Encourage new international investment in industries where skilled labor is indispensable;
- More efficient in terms of cost, vocational education and education and training standards are relevant and responsible;
- Individuals access to recognized industries, and relevant competencies and in accordance with industry wishes;
- A nationally consistent assessment of relevant industry standards becomes possible;
- Increased capital and individual access through the recognition of clear industry needs and through the recognition of previous learning against existing standards.

## REFERENCES

1. Cardoso Gomez, Faustino, 2003, Manajemen Sumber Daya manusia, Andi Offset, Yogyakarta
2. Dessler, G. (2004). Manajemen Sumber Daya Manusia Edisi 9. Jakarta: PT. Indeks.
3. Forum Human Capital Indonesia (2007). Excellent People Excellent Business, Pemikiran Strategik Mengenai Human Capital Indonesia. Cetakan Pertama. Jakarta: Gramedia Pustaka Utama.
4. Fakhri, Mansour. 2002. Runtuhnya Teori Pembangunan dan Globalisasi. Yogyakarta: Pustaka Pelajar dan Insist Press
5. Haris, Abdul dan Nyoman Adhika. 2002. Gelombang Migrasi dan Konflik Kepentingan Regional (Dari Perbudakan ke Perdagangan Manusia). Yogyakarta: Penerbit LESF

6. Mangkunegara, P. A. (2006). Perencanaan dan Pengembangan Manajemen Sumber Daya Manusia. Jakarta: PT. Refika Aditama.
7. Mangkunegara A. 2007. Evaluasi Kinerja SDM. Bandung (ID): PT Refika Aditama
8. Mangkuprawira, Sjafri. 2008. Pengembangn SDM VS Daya Saing Global. Indosdm.
9. Mangkuprawira, Sjafri. 2002. Manajemen Sumber Daya Manusia Strategik, Cetakan Ketiga. Jakarta: Penerbit Ghalia.
10. Manullang, M. 2004. Manajemen Personalialia. Yogyakarta: Gajahmada University Press.
11. Rivai, V. 2008. Manajemen Sumber Daya Manusia Untuk Perusahaan: Dari Teori ke Praktik: Jakarta: PT. Raja Grafindo Persada
12. Ryllatt, Alastair, et.al. 1999. "Creating Training Miracles". Australia: AIM
13. Senge, P. 1990. The Fifth Discipline: The Art And Practice Of The Learning Organization. New York: Doubleday.
14. Simanjuntak, Payaman J. 1992. Kualitas Sumber Daya Manusia dan Masyarakat. Jurnal Ilmu-ilmu Sosial, 3: 24-36.
15. Simamora, Henry. 2001. Manajemen Sumber Daya Manusia. Yogyakarta: STIE YKPN.

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## **MIGRATION AND SOCIAL CHANGES OF ETHNIC BUGIS IN KUPANG CITY, INDONESIA**

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### **ABSTRACT**

The ethnic Bugis migration to Kupang besides being a source of income, also as a means or means that determine access to resources power in city Kupang. Various dynamics encourage a number of people to migrate permanently to the city of Kupang. This study aims to identify the motives for migration and social change in the people of Kupang. This study was conducted at Kota Kupang East Nusa Tenggara by using a qualitative approach. Her results showed that the migration of ethnic motif Bugis because of the driving factors originating from the area of origin and the pull factors that are in the city of Kupang. The driving factor consists of low income as a result of lack of employment opportunities in the area of origin. Factors above are where broader employment opportunities, and high income and wages. Ethnic Bugis the profession trader has spawned a new social class in the structure of society. The social class of the merchant consists of the upper class (Large merchant group), middle class (medium merchant group), lower class (retailer group).

### **KEY WORDS**

Ethnic bugis, migration, social changes, social class.

Migration is generally interpreted as the movement of people geographically from one place of origin to the destination. Migration for some people is a strategic diversification of livelihood development in an effort to get out of the problem of shortages and poverty, get a job, increase income, and earn better public services (Stark, 1991; deHaan, 1999; Ellis , 2003; Skeldon, 2008; UNDP, 2009). Generally, people move past social and spatial boundaries to expand capacity and rights to improve welfare (Tirtosudarmo, 2009). They move from places with economic opportunities it feels less towards a place that is expected to have economic opportunities better. Migration itself is more synonymous with urbanization than ruralization, because more movement from village to city than from city to village and population movement activities are a cause of the process of urbanization, in addition to other causes such as the natural growth of urban residents, regional expansion, and change the status of the area from rural areas to urban areas (Purnomo, 2009: 84). Efforts to overcome the problems of life-poverty and goals other positives encourage the Indonesian people to move the population (permanent, non-permanent - both internal and international). As well with development programs in Indonesia, it has increased mobility Indonesian population (Wahyuni, 2000). Results of the 2010 Population Census recorded 5,396,419 residents or 2.5% of the population are incoming migrants risen between provinces. The percentage of risen migrants in urban areas tripled higher risk migrants in rural areas, each at 3.8% and 1.2%. The two dimensions of migration are the time dimensions and regional dimensions. According to Young (1994 ), inter-village migration usually occurs in pre-industrial conditions because of limited transportation (long distance). In the expansion, migration impact changes in the social order, as well as bringing together people who have attitudes and behavior patterns that vary (Weeks, 1978). According to White and David (2005), two of the contributing factors is the preferred place to stay and a job. Migration aside from being a source of income, it is also a mean or means that determine access to resources. According to the 2015 Kupang City BPS data, the number of Bugis ethnic groups in Kupang is 6,652. So, to reside in traditional markets, namely, market Inpres Naikoten I, Pasar Oeba, Pasar Oesapa. The success of Bugis ethnic in the city of Kupang is inseparable from the cultural values they embrace. Therefore, this study aims to analyze the motives of ethnic Bugis migration and social changes.

## METHODS OF RESEARCH

This paradigm places observation and objectivity in finding a reality or science (Guba, Lincoln, Denzin & Linclon, 2000). This study uses the descriptive qualitative method, done in East Nusa Tenggara Kupang city. The choice of location was done purposefully on the consideration of Kupang City as a city the majority of ethnic Bugis migration in East Nusa Tenggara. Data collected includes primary data and secondary data. Primary data was obtained from observation, in-depth interviews and focus group discussions or focused group discussions (FGD). Secondary data was obtained from the Village Office, Statistics Central Agency, Population Office and previous research reports. Data analysis techniques are data collection, data analysis, data reduction, data presentation, and conclusion.

## RESULTS AND DISCUSSION

*Historical Study of Bungis Arrival to Kupang City.* The people of South Sulawesi specifically ethnic Bugis are known to have a habit of migrating, based on the spirit of "massompe", the spirit of wandering looking for life experiences and new life in other areas in order to gain economic and knowledge opportunities and improve welfare (Lineton, 1975) also confirms that the centrifugal forces of Bugis in South Sulawesi are more dominant compared to centripetal strength. However, internal migration comes out of South Sulawesi has a tendency towards the nearest area (Kahar, 2001). Historical studies on ethnic Bugis arriving in Kupang, there are no references to the reasons why Bugis are found migrate to Kupang City. However, the second reason is identical to the actions of Bugis people those who go abroad because of si'ri problems in their home areas. Some studies show that the transfer of Bugis is driven by a number of factors, namely politics, economics, individual prestige and culture (Acciaoli, 1989; Aditjondro, 1986). Causal theory cumulative views that the social context influences migration decisions, the presence of waves of migration creates feedback that causes current migration takes place continuously (Massey, 1990). There are six factors potential that can be cumulatively affected by migration activities what happens is income distribution, land distribution, organization agricultural products, culture, regional distribution of human resources, and social change. Furthermore, factors related to gender, the satisfaction of residence, and socioeconomic status are relevant estimators towards aspirations to migrate (Creighton, 2013). The migration history of the first Bugis ethnic group is an immigrant tribe from the island of Muna, Southeast Sulawesi. The arrival of the Bugis tribe to the city of Kupang was estimated in 1512. Ethnic Bugis occupy the island of Sulamu. Thus a brief history of the origins of the Bugis tribes who lived and settled in the Sulamu village and the condition of the population based on the religion they embraced was the religion of Islam and their livelihoods were fishermen (Hasyim W, 2000).

*Bugis Ethnic Motives Migrate to Kupang City.* In the Indonesian context, the concept used in the BPS survey census, migration is the movement of residents with the aim of staying from one place to another over certain administrative boundaries (BPS, 2011). There are several reasons that are the basis of ethnic Bugis migrate. Various the results of previous studies on migration indicate that a factor the economy is a strong reason and the main driver most ethnic Bugis migrate. Factors that cause migration are distinguished become a driving factor originating from the area of origin and the pulling factor that is in the destination area. The push-pull theory explains, that the movement of the population occurs because of the results of positive and negative factors which simultaneously occur in the area of origin and destination (Lee, 1966; Abustam, 1989). The driving factor is distinguished by factors in low income, and lack of employment opportunities in the area of origin. Attractive factors that are the motives of migration are opportunities for broader employment opportunities, and high income and wages. Low income is the reason affecting ethnic Bugis migrating to Kupang. Generally, migrants work as traders in the city Kupang in the hope of increasing revenue. Migrants who just came to Kupang generally settled in relatives for a while. The availability of jobs in the city of Kupang has attracted some ethnic Bugis to migrate to that city. The existence of ethnic Bugis is also inseparable from the help of migrants who have

already gone and helped find work in the city. Bugis ethnic income that migrates is higher than those who do not migrate.

The appeal of the city of Kupang has also influenced ethnic Bugis in migrating. Kupang City offers broader employment opportunities and higher income compared to the area of origin. Difficult employment conditions in the area of origin resulted in ethnic Bugis migrating to find work in the city of Kupang. The pattern of migration of ethnic Bugis in Kupang City is a pattern of vertical migration. Difficult employment conditions in the area of origin resulted in ethnic Bugis migrating to the city of Kupang. It means that some residents are forced to find work in Kupang. In addition, migrating has become a custom for Bugis people. The narrow employment opportunities in the agricultural sector in the area of origin caused some villagers to find work in the trade sector to the city of Kupang. Initially working in the city of Kupang was those with a middle to lower economy and low education.

Other factors this ethnic to consider to move to cities is a factor to high revenues and wages. Factors higher incomes in the city also influence to migrating. They work in the percussion area in the hope that they can get better income to increase their welfare level. Generally, they migrate in the destination area live with relatives who also circulate. Ethnic Bugis that have migrated to cities Kupang in bringing information about jobs in the city to present to relatives region of origin. When they returned to their home country, they provided information and invited relatives to work in the town. The influence of friends or relatives in the city is a source of work in the city of Kupang. The factor of friends or relatives in the city also has an important meaning for the mechanism of the occurrence of chain migration among ethnic Bugis. Information about the current spread of the city will continue to affect the number of migration.

*Changes sosial ethnic Bugis migrants in Kupang.* Economic development is closely related to social change and migration. Migration in this context is an important aspect of changing demographics and regional economic growth. The migration facilitates mobility between sectors and plays a role in structural change. According to Fielding (2104), the linkages between population migration and economic development usually show two-way causality. Rapid economic development in a region will result in high in-migration, and high levels of in-migration cause rapid economic growth in the region. According to Black et al., (2006), migration is a symbol of power from wage inequality, employment opportunities, or lifestyle. This ethnic make migration as a livelihood strategy to achieve prosperity symbol even surpassed the symbol. The impact of the movement of residents has been affecting social and economic life. Bugis ethnics in Kupang city currently number 6,652 and the majority work as traders and entrepreneurs. The profession has contributed to the economy of the city of Kupang. the merchant profession has also resulted in new classes in the Bugis ethnic social structure; the class is the class of financiers, middle class and retailers.

From the results of interviews with six ethnic Bugis representing elite/ financier classes, it is known that those who occupy the capital class have extensive trading networks, large businesses, and ownership of luxury vehicles. The middle class in the Bugis ethnic group in the city of Kupang is a retail class merchant with the following characteristics: having a place of business/stalls in the market, with goods traded very complete but do not have an extensive network of trade. The essential character of a growing middle class in the cities they display characteristic to perform as the bourgeoisie, but on the other side of the show also figure controller on class society. The sword class is a small retail trade that operates in the crowd. Retailers do not have much capital and extensive trading networks. the retailer class still depends on the middle class. Interdependence and mutual help have created fellow Bugis ethnic solidarity. This can be seen from the collaboration activities in the form of mutual assistance, social gathering, participation in ethnic Bugis groups in the city of Kupang. But the reality is inversely proportional to the ethnic Kupang. Ethnic Kupang cannot do anything because of limited capital and market access. Ethnic Kupang can only sell labor as workers and expect wages.

## CONCLUSION

In general, the migration factor occurs because of the driving and pulling factors. The driving factor is the factor found in the area of origin and towing factors are factors found in the destination. The occurrence of migration entry into low-income provinces due to attracting factors at the province of migration destination. The driving factor consists of a lack of low income and a lack of employment opportunities in the area of origin. Ethnic Bugis migration factor to Kupang is for employment opportunities wider, and higher incomes and wages. Ethnic Bugis whose profession of traders has given many new social classes in the structure of society. The social class of the merchant consists of the upper class (Large merchant group), middle class (medium merchant group), lower class (retailer group).

## REFERENCES

1. Abustam MI. 1989. Gerak Penduduk, Pembangunan, dan Perubahan Sosial: Kasus Tiga Komunitas Padi Sawah di Sulawesi Selatan. Jakarta (ID): UI Press.
2. Acciaoli, G. 1989. Searching for Good Fortune: The Making of a Bugis Shore Community at Lake Lindu, Central Sulawesi. Unpublished Ph.D. Thesis. Canberra: The Australian National University.
3. Aditjondro, GJ. 2006. Terlalu Bugis Sentris, Kurang Perancis. Jakarta.
4. Black R, Natali C, Skinner J. 2006. Migration and inequality. Development Research Centre on Migration, Globalisation and Poverty, University of Sussex.
5. deHaan A. 1999. Livelihoods and poverty: the role of migration -a critical review of the migration literature. *Journal of Development Studies*, 36(2):1-47.
6. Creighton MJ. 2013. The role of aspirations in domestic and international migration. *The Social Science Journal* 50 (2013): 79-88.
7. Ellis F. 2003. A livelihoods approach to migration and poverty reduction. Paper Commissioned by the Department for International Development (DFID). CNTR 03 4890.
8. Fielding T. 2014. Population mobility and regional development. Working Paper No 74. Sussex Centre for Migration Research. University of Sussex
9. Kahar SA. 2001. Migrasi keluar dari Sulawesi Selatan analisis data supas 1995 [Tesis]. Jakarta (ID): Universitas Indonesia.
10. Lee ES. 1984. A theory of migration: *Demography* 3(1): 47-57.
11. Lineton J. 1975. Pasompe' ugi': bugis migrants and wanderers. 10(1).
12. Stark O. 1991. The migration of labor. Cambridge (US): Basil Blackwell Ltd.
13. Skeldon R. 2008. Migration and development: a global perspective. London (UK): Longman
14. Tirtosudarmo R. 2009. Mobility and human development in Indonesia. Human Development Research Paper 2009/19. Human Development Reports Research Paper. United Nations Development Programme.
15. United Nations Development Programme. 2009. Human development report 2009 overcoming barriers: human mobility and development. New York (US): United Nations Development Programme.
16. Wahyuni ES. 2000. The Impact of Migration Upon Family Structure and Functioning in Java, Thesis Submitted in Fulfillment of requirements the Doctor of Philosophy Degree in Population and Human Resources, Department of Geography The University of Adelaide Australia. Australia (AU).
17. White MJ, David PL. 2005. Internal Migration. In *Handbooks of Population: Handbooks of Sociology and Social Research*. Poston DL and Miclin M. (Edited). America (US): Kluwer Academic/Plenum Publiser.
18. Young E. 1994. Internal Migration. Lucas D, Meyer P. Editors. In *Beginning population studies*. Edisi ke-2. Canberra (AU): National Center for Development Studies - ANU.

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**EFFECT OF E-PERFORMANCE AND GRANTING OF ADDITIONAL PERFORMANCE INCOME ON EMPLOYEES PERFORMANCE AT THE REGIONAL ENVIRONMENT SECRETARIAT OF LAMONGAN DISTRICT, INDONESIA**

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**ABSTRACT**

This study aims to determine how much influence E-Performance has on improving employee performance, then the effect of giving TPP (Employee Income Supplement) on improving employee performance, as well as the effect of E-Performance and providing Employee Income (TPP) on employee performance improvement at the Regional Secretariat Lamongan Regency. This research according to the level of exploration uses a correlational type of quantitative research method, using the exposed facto method. The purpose of the research is to be able to assist researchers in producing objective research, and can be accounted for based on the data obtained. In accordance with the nature of correlational research, researchers try to describe data and facts in accordance with the actual situation. Furthermore, the data and facts are processed and analyzed to see the effect of independent variables with the dependent variable using correlation analysis. The results obtained will be used to describe the characteristics of the population based on the variables specified. From the results of testing the hypothesis that has been done,  $H_0$  is rejected and  $H_a$  is accepted. This shows that E-Performance and Additional Employee Income (TPP) have a significant effect on employee performance in the Lamongan Regency Regional Secretariat. The contribution of E-Performance and Additional Employee Income (TPP) influence on employee performance in the Regional Secretariat of Lamongan Regency can be seen from the coefficient of determination ( $R^2$ ). Based on the results of calculations, the  $R^2$  value is 56.3%. That is, E-Performance and Additional Employee Income (TPP) only have an effect of 56.3% on employee performance in the Regional Secretariat of Lamongan Regency, while the remaining 43.7% is influenced by other factors not explained in this study.

**KEY WORDS**

E-performance, additional employee income, employee performance, regional secretariat, Lamongan regency.

In Government Regulation No. 58 of 2005 concerning Regional Financial Management in article 63 paragraph (2) which states that "Regional Governments can provide additional income to regional Civil Servants based on objective considerations by taking into account regional financial capabilities and obtaining DPRD approval in accordance with regulatory provisions legislation". In the explanation article, it is stated that additional income is given based on work performance, place of duty, working conditions and the scarcity of the profession.

With the existence of Government Regulations and the Minister of Home Affairs Regulations, the Lamongan Regency Regional Secretariat issues Regulations on Lamongan Regent Number 04 of 2017 concerning the provision of Additional Income to Employees. Additional income is provided in the context of improving employee welfare based on workload, place of duty, working conditions, professional scarcity, work performance and or other objective considerations. Additional workload based income is given to employees who are burdened with jobs to complete tasks that are considered to be beyond normal workloads. Additional income based on working conditions is given to employees who in carrying out their duties are in a high risk work environment. The purpose of providing additional income is to motivate employees to work actively and creatively so that they can

increase work productivity with measurable quality and quantity. Providing additional income for employees in the Lamongan city government is intended to provide employee welfare to work optimally.

At present the level of internet usage as a means of searching information and communication media is very high. Similarly, in the development of the current government system, the government is expected to maximize the use of information technology, especially the internet, to support performance and improve the quality of services to the public.

Based on the phenomena that occur, the Lamongan Regency Government carries out the recording of the performance of Civil Servants (PNS) working on all government agencies in Lamongan Regency which is a periodic assessment of the implementation of the work of a Civil Servant (PNS) in the Regional Device Organization (OPD). The purpose of recording this performance is to find out the success or failure of a Civil Servant (PNS), and to find out the weaknesses and strengths possessed by the Civil Servants (PNS) concerned in carrying out their duties and functions. The results of recording performance are used as material for consideration in fostering Civil Servants (PNS), including appointments, promotions, appointments, education and training, and the provision of additional income support.

The performance evaluation of Civil Servants (PNS) is carried out based on Government Regulation Number 10 of 1979 concerning Evaluation of the Implementation of Civil Servants' Work. The elements assessed in carrying out the assessment of the implementation of work are loyalty, work performance, responsibility, obedience, honesty, cooperation, initiative and leadership. The implementation of employee work is the process of activities carried out to evaluate the level of implementation of work or performance (Performance Appraisal) of an employee. In the Civil Servants (PNS) environment it is known as SKP (Employee Performance Target) which is regulated in Government Regulation Number 46 of 2011. The way to assess quality aspects in a job / activity is to refer to the parameters in BKN Head Regulation Number 01 of 2013 on page 20, so based on the description above, the Lamongan District Government through the Lamongan District Civil Service Agency in order to follow and utilize the progress of information technology that is developing so as to make an E-Performance application to facilitate the Civil Servants (PNS) of the Lamongan Regency Government to do daily journal entries that are done daily.

Table 1 – Employee's performance data of regional secretariat of Lamongan district (Quarter IV 2017 and quarter I in 2018)

NO	BAGIAN	KETEPATAN WAKTU PEKERJAAN (%)		KESESUAIAN TARGET (%)		ORIENTASI PELAYANAN (%)		KEPEMIMPINAN (%)	
		2017	2018	2017	2018	2017	2018	2017	2018
1	PEMERINTAHAN	72	75	73	75	73	76	78	81
2	ADM. PEMERINTAHAN DESA	75	77	74	79	73	76	77	80
3	KESMAS	75	77	72	76	74	74	76	79
4	HUKUM	71	69	72	73	73	75	74	78
5	PEREKONOMIAN	76	74	70	69	70	67	76	77
6	ADM. PEMBANGUNAN	72	76	76	80	73	77	79	82
7	UNIT LAYANAN PENGADAAN	-	70	-	71	-	74	0	75
8	BUMD	74	74	72	73	73	76	77	81
9	BINA ASET	73	74	75	80	76	80	80	82
10	ORGANISASI	75	76	77	81	77	78	81	82
11	HUMAS & PROTOKOL	72	68	75	71	75	76	78	80
12	UMUM	75	77	77	78	77	74	77	79
	RATA-RATA	67,5	73,9	67,8	75,5	67,8	75,3	71,1	79,7

Source: BKD Kab. Lamongan, 2017.

The Lamongan District Government has overseen the performance and determination of the amount of performance money as a form of reward for employee performance that will be given based on the results of the implementation of E-Performance since December 2017. Through the implementation of this E-performance, employees are given the authority to participate in E-Performance applications by filling in work data or daily journals. E-Performance is an employee performance management information system that is more

objective, measurable, accountable, participatory and transparent, so employees can be formed based on work performance and employee career systems in the Lamongan Regency Government.

The initial data that the authors collected related to the performance of employees in the Lamongan Regency Regional Secretariat in the fourth quarter of 2017 and the first quarter of 2018 are as follows in Table 1.

Table 2 – Level of attendance of regional secretariat employees in Lamongan district (Quarter IV 2017 and quarter I in 2018)

No	BAGIAN	KETEPATAN WAKTU FINGER PRINT (%)		TINGKAT KEHADIRAN APEL (%)	
		2017	2018	2017	2018
1.	BAGIAN PEMERINTAHAN	65	67	65	66
2.	ADMINISTRASI PEMERINTAHAN DESA	67	70	68	70
3.	KESEJAHTERAAN MASYARAKAT	63	69	65	69
4.	HUKUM	65	69	66	71
5.	PEREKONOMIAN	65	67	65	68
6.	ADM. PEMBANGUNAN	66	68	66	67
7.	UNIT LAYANAN PENGADAAN	-	68	-	69
8.	BUMD	69	73	70	72
9.	BINA ASSET	70	73	72	75
10.	ORGANISASI	66	69	66	67
11.	HUMAS & PROTOKOL	63	65	62	65
12.	UMUM	63	64	63	65
RATA-RATA		60,2	68,5	60,7	68,7

Source: Office of Communication and Information, Kab. Lamongan in 2018.

## LITERATURE REVIEW

Theory has the function of explaining and guiding in research. Therefore, the researcher explained several theories relating to the Effect of E-Performance and Additional Employee Income (TPP) on Employee Performance in the Regional Secretariat of Lamongan Regency.

E-Performance is a performance management information system that is used in the framework of assessing employee work performance that is more objective, measurable, accountable, participatory and transparent so that employee development based on work performance and career systems can be realized. This E-Performance application is being piloted in December 2017 and applied directly in January 2018.

The application of E-Performance applications in all Regional Device Organizations (OPD) within the Lamongan Regency Government has several objectives including the following:

1. As a manifestation of the attention of the Lamongan Regency Government in shaping the work culture of professional and integrity bureaucracy that is integratedly built through the development of integrated performance systems;
2. As a method of evaluation of performance contracts held every beginning of the year as a form of institutional consistency and individual commitment in the management of the Regional Budget (APBD);
3. As a medium for making daily journals as a benchmark for the performance of Civil Servants (PNS);
4. As a form of routine control and evaluation as the basis for decision making for the following year; and
5. As a basis in determining the amount of granting additional Employee Income (TPP).

This E-Performance is one of the bases for providing an additional Employee Income (TPP) of 60% while the remaining 40% is assessed from the discipline of attendance. To anticipate a fictitious performance report, your immediate boss or leader will be the filter. Each performance report on E-Performance becomes valid only if it has been checked by the direct supervisor of the employee concerned. Not all can access the application to validate performance in this application. The right of access is only given to officials in high-ranking positions, administrator positions and positions of supervisors to approve the activities carried out by the posts below to each Regional Organization Organization (OPD) structure.

The filling time is the time of the activity. While the working hours of Lamongan employees according to the Regulations of the Lamongan Regent Number 04 of 2017 concerning Providing Additional Employee Income (TPP) are at 7:00 a.m. to 3:00 p.m. during the effective day. This application has been socialized in turns to all employees in Lamongan Regency from 16 to 29 November 2017.

Additional Employee Income (TPP) of Civil Servants (PNS) are stipulated in Government Regulation Number 14 of 1980 dated March 13, 1980. The government in implementing the provision of Additional Employee Income (TPP) has a goal in order to improve quality, work performance and to achieve effective as much as possible.

Additional Employee Income (TPP) is an addition given to employees related to attendance and performance. Regional performance allowances are improvements to existing benefits and will be a specific allowance to boost performance while ensuring fairness in the provision of benefits. Providing regional performance allowances to carry out bureaucratic reform in line with the rapid development of the times and the increasingly complex problems faced by the state, there has also been the development of governance to realize good governance with efforts to increase transparency and accountability in the management of state finances, because it needs to provide the best service for the community.

Performance is the work of an employee for a certain period compared to various possibilities, performance targets, or criteria that have been determined in advance and agreed upon.

Performance according to A.A Anwar Prabu Mangkunegara (2009: 9) suggests "Performance is the result of work achieved by someone in carrying out their duties in accordance with the responsibilities carried out achieved in the union of time periods in carrying out their work duties".

According to Rivai, Basri (2005: 14) that performance is the result or level of success of a person or the whole during a certain period in carrying out tasks compared to various possibilities, such as standard work results, targets or targets or criteria that have been predetermined and agreed upon not doing his job, then an organization will experience a failure.

This is based on the idea that the government will not run well if the Human Resources (HR) Apparatus supporting the running of the government does not have the ability to show performance and professionalism in carrying out their duties and functions. So that in this case we need a continuous development and development of Human Resources (HR) Apparatus that is supported by facilities and infrastructure as well as adequate levels of employee welfare.

Performance according to A.A Anwar Prabu Mangkunegara (2009: 9) suggests "Performance is the result of work achieved by someone in carrying out their duties in accordance with the responsibilities carried out achieved in the union of time periods in carrying out their work duties".

According to Rivai, Basri (2005: 14) that performance is the result or level of success of a person or the whole during a certain period in carrying out tasks compared to various possibilities, such as standard work results, targets or targets or criteria that have been predetermined and agreed upon.

## **METHODS OF RESEARCH**

The location of this study took place at the Lamongan Regency Regional Secretariat, KH. Ahmad Dahlan No. 01, Lamongan and research conducted from December 2017 to December 2018.

In this study the author uses 2 (two) types of data, namely primary data and secondary data. The data sources used by researchers came from interviews, literature studies and questionnaires.

The data used in this study are quantitative data with primary data, where the main instrument is a questionnaire containing statements regarding E-Performance, Additional

Employee Income, and Employee Performance in the Lamongan Regency Regional Secretariat.

This study uses a population and sample of employees who get Additional Employee Income (TPP) in the Regional Secretariat of Lamongan Regency. Population is a generalization area consisting of objects / subjects that have certain qualities and characteristics set by researchers to be studied and drawn conclusions. The population in this study were all employees who received additional Employee Income (TPP) in the Lamongan District Regional Secretariat, amounting to 207 people spread over 12 (Twelve) Sections.

Table 3 – Number of Local Secretariat Staff in Lamongan Regency who Received Additional Employee Income (TPP)

NO	UNIT KERJA	PEGAWAI
1	SEKDA	1
2	ASISTEN	3
3	STAF AHLI	3
4	BAGIAN ULP	14
5	BAGIAN ADM. PEMERINTAHAN DESA	11
6	BAGIAN PEMERINTAHAN	17
7	BAGIAN BPKA	11
8	BAGIAN KEMASYARAKATAN	11
9	BAGIAN BUMD	9
10	BAGIAN PEREKONOMIAN	12
11	BAGIAN UMUM	57
12	BAGIAN HUMAS	23
13	BAGIAN HUKUM	16
14	BAGIAN ORGANISASI	9
15	BAGIAN PEMBANGUNAN	10
JUMLAH		207

Source: *Bagian Bina Pengelolaan Keuangan and Asset, 2018.*

From the population 137 people were taken as the research sample. The number was obtained using the Taro Yamane or Slovin formula at a significant level of 5%.

$$n = \frac{N}{N d^2 + 1}$$

Where: n = Measure sample; N = population size; d = Significance level (5% = 0.05).

Proportional Random Sampling is used to determine the number of samples in each section, namely random sampling of population groups by taking into account the proportion of each group in the population strata so that the smallest proportion of the population.

The number of samples for each school is as shown in the following table:

Table 4 – Number of Population and Sample of Respondents

NO	UNIT KERJA	PEGAWAI	S = (X/Y).n	Pembulatan (Jumlah Sampel)
1	SEKDA	1	0.662	1
2	ASISTEN	3	1.986	2
3	STAF AHLI	3	1.986	2
4	BAGIAN ULP	14	9.266	9
5	BAGIAN ADM. PEMERINTAHAN DESA	11	7.280	7
6	BAGIAN PEMERINTAHAN	17	11.251	11
7	BAGIAN BPKA	11	7.280	7
8	BAGIAN KEMASYARAKATAN	11	7.280	7
9	BAGIAN BUMD	9	5.957	6
10	BAGIAN PEREKONOMIAN	12	7.942	8
11	BAGIAN UMUM	57	37.725	38
12	BAGIAN HUMAS	23	15.222	15
13	BAGIAN HUKUM	16	10.589	11
14	BAGIAN ORGANISASI	9	5.957	6
15	BAGIAN PEMBANGUNAN	10	6.618	7
JUMLAH		207	137.0	137

Source: *The results of observations and calculations of researchers, 2018.*

After the data is collected, the next step is data processing. The data processing techniques used in this study are data editing, coding data and tabulating data. Meanwhile the data analysis in this study is a data analysis technique with inferential statistics, where inferential statistics are concerned with data modeling and making decisions based on data analysis, namely by testing hypothesis by making influence modeling (regression) using the test formula F.

In this study, researchers used regression analysis modeling, where one method for determining causal relationships between one variable and another variable. The causal variable is called the independent variable, the independent variable, or variable X. Whereas the variable affected is known as the affected variable, the dependent variable, the dependent variable, or the variable Y.

## RESULT OF STUDY

The data used in this study are primary data. Primary data is obtained by distributing questionnaires to employees of the Lamongan Regency Regional Secretariat. The questionnaire is related to the variables E-Performance, TPP (Additional Employee Income) and Employee Performance. The respondents in this study included the entire population of employees of the Regional Secretariat of Lamongan Regency, 137 people.

In this study, the first data analysis was done by testing the validity of the instrument. This is intended to maintain the accuracy and accuracy of a measuring instrument in performing its measuring function. The validity test is used to determine how precise an instrument or measuring instrument is a questionnaire to be able to do its function.

A good research instrument is of course a valid instrument, so it can be used for measurement in order to collect data. The validity of the instrument illustrates that an instrument is truly able to measure the variables to be measured in the study and is able to show the degree of conformity between the concept and the measurement results. The formula used is using ProductMoment correlation statistics.

In the validity test of this instrument, researchers used a sample of 137 respondents as a trial to calculate instrument validity. The criteria for statement items used are:

1. If  $r \text{ count} \geq r \text{ table}$ , it means the item statement is declared "valid";
2. If  $r \text{ count} \leq r \text{ table}$ , it means the item statement is declared "invalid".

The formula used by researchers in the study of the Effect of e-Performance and Giving TPP (Additional Employee Income) on Employee Performance in the Lamongan Regency Regional Secretariat is to use product moment statistics with the help of SPSS statistics version 21. Here is the table:

Table 5 – Test Results for Validity of Variable Instruments X1

Item Pernyataan (No Instrumen)	r hitung	r table	Keterangan
1	0,344	0,176	Valid
2	0,476	0,176	Valid
3	0,321	0,176	Valid
4	0,278	0,176	Valid
5	0,347	0,176	Valid
6	0,433	0,176	Valid

Source: Researcher, SPSS Data Output, 2019.

The output of the SPSS version 21 program data above is the result of the validity test of the score scores of each variable statement X1. Each statement is considered valid if r count is greater than the rtable value searched with  $n = 137$  at the significance level of 5% so as to produce a value of 0.176. In this validity test it represents the indicator.

Then it can be concluded based on table 4.1 obtained values for each item statement from variable X1 greater than 0.176. That is, each item statement is declared valid. In variable X1 all items are declared valid. After testing the variable X1, E-Performance.

The researcher tests the X2 variable validity, namely TPP (Additional Employee Income) with 5 statements as the next stage. Researchers use the SPSS version 21 program to test TPP validity (Additional Employee Income). Can be seen in the table as follows:

Table 6 – Test Results for the Validity of Variable Instruments X2

Item Pernyataan (No Instrumen)	r hitung	r table	Keterangan
1	0,762	0,176	Valid
2	0,548	0,176	Valid
3	0,389	0,176	Valid
4	0,187	0,176	Valid
5	0,325	0,176	Valid

Source: Researcher, SPSS Data Output, 2019.

It is concluded that based on table 4.2, all values for each statement item of variable X2 are greater than 0.176. That is, each item statement is declared valid. After testing the X2 variable, namely TPP (Additional Employee Income).

The researcher also tested Y variable validity, namely Employee Performance Improvement with 24 statements as the next stage. Researchers used the SPSS version 21 program to test the validity of Employee Performance Improvement. Can be seen in the table as follows:

Table 7 – Test Results for the Validity of Variable Instruments Y

Item Pernyataan (No Instrumen)	r hitung	r table	Keterangan
1	0,289	0,176	Valid
2	0,449	0,176	Valid
3	-0,021	0,176	Tidak Valid
4	0,253	0,176	Valid
5	0,359	0,176	Valid
6	0,383	0,176	Valid
7	0,029	0,176	Tidak Valid
8	0,511	0,176	Valid
9	0,309	0,176	Valid
10	0,197	0,176	Valid
11	0,352	0,176	Valid
12	0,439	0,176	Valid
13	0,332	0,176	Valid
14	0,410	0,176	Valid
15	0,449	0,176	Valid
16	0,416	0,176	Valid
17	0,361	0,176	Valid
18	0,289	0,176	Valid
19	0,449	0,176	Valid
20	0,018	0,176	Tidak Valid
21	0,123	0,176	Tidak Valid
22	0,289	0,176	Valid
23	0,301	0,176	Valid
24	0,380	0,176	Valid
25	1	0,176	Valid

Source: Researcher, SPSS Data Output, 2019.

The researcher compares the value of r hitung as an item statement about Improving the Performance of Employees of the Regional Secretariat in Lamongan Regency with a r tabel value. If  $r \text{ hitung} \geq r \text{ tabel}$  then each item of variable Y statement is declared valid. Based on table 4.2 shows that there are 4 Statement Items which are less than r tabel so that the data is declared invalid. While the 20 Statement Items the remaining r hitung is greater than r tabel so the data is declared valid.

After testing the validity, the next step is reliability testing. Reliability is used to maintain the reliability of an instrument or measuring instrument. By conducting this reliability test, it will produce an instrument that is truly precise and accurate.

In this study, reliability testing was carried out using Cronbach's Alpha technique measured on an alpha cronbach scale 0 to 1. If the scale is grouped into five classes of the same range, then the size of alpha stability can be interpreted as follows:

1. Cronbach Alpha Value 0,00 d. 0,20, means less reliable
2. Cronbach Alpha Value 0.21 to 0.40, means it is somewhat reliable
3. Cronbach Alpha Value 0.42 dd 0.60, means sufficient reliability
4. Cronbach Alpha Value 0.61 to 0.80, interpretable
5. Cronbach Alpha Value 0.81 d. 1.00 means very reliable (Triton in Azwar2000: 3)

This reliability test uses the help of SPSS version 21, here are the results of the calculation:

Table 8 – Variable Reliability Test Results X1

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.614	.570	7

Source: Researcher, SPSS Data Output, 2019.

Table 9 – Variable Reliability Test Results X2

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.631	.529	6

Source: Researcher, SPSS Data Output, 2019.

Table 10 – Variable Reliability Test Results Y

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.663	.680	25

Source: Researcher, SPSS Data Output, 2019.

Based on table above, the reliability value for the E-Performance variable (Variable X1) is 0.614 and the TPP variable (Additional Employee Income) (Variable X2) is 0.631 and the Employee Performance variable (Y variable) is amounting to 0.663. To find out this reliability test, we refer to Triton in the book Azwar which classifies the scale to 5. The results of the data calculation using the SPSS Program above the X1 variable is 0.614 and X2 variable is 0.631 and the Y variable is 0.663 entered on the Number 4 scale, namely the value Cronbach Alpha 0.61 up to 0.80 which means this research is reliable and can be used as a measurement tool for further analysis.

Analysis prerequisite test is a requirement that must be fulfilled so that the analysis of research data can be done well.

The normality test is done to see whether the population of the data is normally distributed or not (Siregar, 2014). The normality test aims to test one of the basic assumptions of multiple regression analysis, namely the independent and dependent variables must be normally or near normal distribution (Ghozali, 2011). The simple statistical test used to test the assumption of normality is to use the normality test from Kolmogorov Smirnov. The normal method of testing data distribution is done by looking at the variable significance value, if it is significantly greater than 0.05 at the alpha significance level of 5%, then it shows a normal distribution.

Based on the results of the above normality test it is known that the kolmogorov-Smirnov value is 0.365 greater than 0.05 in (sig> 0.05). Then it can be concluded that all variables are normally distributed.

This multiple correlation analysis is used to determine the relationship between two independent variables (X1 and X2) to the dependent variable (Y) simultaneously. This coefficient shows how much the relationship occurs between the independent variables (X1 and X2) simultaneously towards the dependent variable (Y). R value ranges from 0 to 1, if

the value is getting closer to 1 means the relationship that occurs is getting stronger, conversely if the value is getting closer to 0 then the relationship that occurs is getting weaker.

Table 11 – Table Normality Test Results

One-Sample Kolmogorov-Smirnov Test

n/n	X1 (E-Performance)	X2 (Tambahan Penghasilan Pegawai)	Y (Kinerja Pegawai)	Unstandardized Residual	
N	137	137	137	137	
Normal Parameters <sup>a,b</sup>	Mean	3,9504	3,9066	3,9724	,0000000
	Std. Deviation	,21744	,25788	,11576	,07649299
Most Extreme Differences	Absolute	,203	,208	,128	,079
	Positive	,154	,208	,112	,039
	Negative	-,203	-,135	-,128	-,079
Kolmogorov-Smirnov Z	2,381	2,431	1,502	,921	
Asymp. Sig. (2-tailed)	,000	,000	,022	,365	

a. Test distribution is Normal.

b. Calculated from data.

According to Sugiyono (2007) guidelines for providing interpretations of correlation coefficients as follows:

1. If the value of R is 0.00 - 0.199 means very low;
2. If the value of R is 0.20 - 0.399 means low;
3. If the value of R is 0.40 - 0.599 means medium;
4. If the value of R is 0.60 - 0.799 means strong;
5. If the value of R is 0.80 - 1,000 means very strong.

From the results of the regression analysis, look at the output model summary and are presented as follows:

Table 12 – Table Double Correlation Analysis Results

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0,751 <sup>a</sup>	0,563	0,557	,07706

a. Predictors: (Constant), X2 (Tunjangan Tambahan Penghasilan), X1 (E-Performance).

Based on the table above, the R number is 0.751. This shows that there is a strong relationship between E-Performance and TPP (Additional Employee Income) on Employee Performance.

To calculate how much influence between E-Performance (variable X1) and Additional Employee Income (variable X2) on Employee Performance (Y variable), then it can be done by calculating the coefficient of determination from the number of Product Moment correlations that have been calculated, by squaring the coefficient which is determined. R<sup>2</sup> is equal to 0, so there is not the slightest percentage of the contribution of influence given E-Performance (variable X1) and Additional Employee Income (variable X2) to Employee Performance (Variable Y). On the other hand R<sup>2</sup> equals 1, then the percentage contribution of influence given by E-Performance (variable X1) and Additional Employee Income (variable X2) on Employee Performance (Y variable) is perfect. To facilitate the calculation of coefficients, researchers are assisted by the SPSS 21 program.

From the results of the regression analysis, look at the output module summary and presented as follows in Table 13.

Based on the table above, the number R<sup>2</sup> (R Square) is 0.563 or (56.3%). This shows that the contribution percentage of the variables X1 and X2 (E-Performance and TPP (Additional Employee Income)) on variable Y (Employee Performance) is 56.3%. Or variations in the variables X1 and X2 used in the model (E-Performance and TPP) are able to explain as much as 56.3% variable variation Y (Employee Performance). While the

remaining 43.7% is influenced or explained by other variables not included in this research model.

Table 13 – Table Analysis of Determination Results (Model Summary)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,751 <sup>a</sup>	,563	,557	,07706

a. Predictors: (Constant), X2 (Tunjangan Tambahan Penghasilan), X1 (E-Performance).

The test that must be fulfilled for regression analysis is linearity test, aiming to ensure the relationship between the independent variables (X1 and X2) and the dependent variable (Y) is linear. The guideline to see this linearity is to use a scatter plot, if the data is spread from the lower left to the upper right to form a straight line it means the regression is linear.

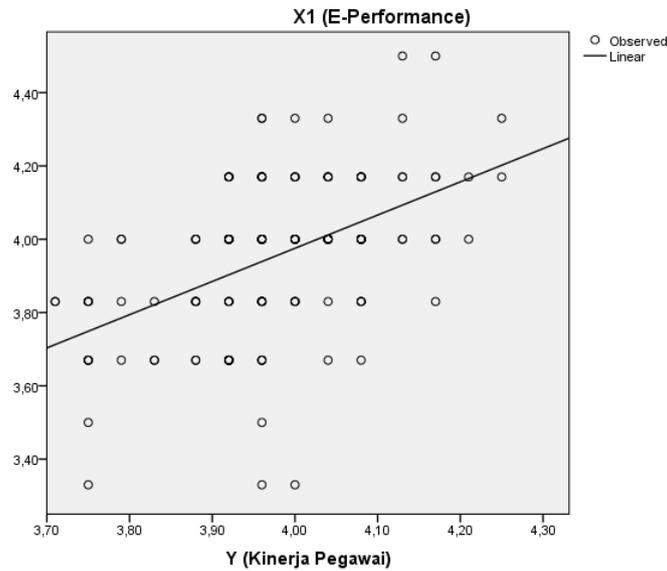


Figure 1 – Curve Scatter Plot E-Performance (Variable X1)

In the figure above shows the lines of the E-Performance curve (Variable X1) spread from the lower left to the upper right in a straight line. That means the regression is linear.

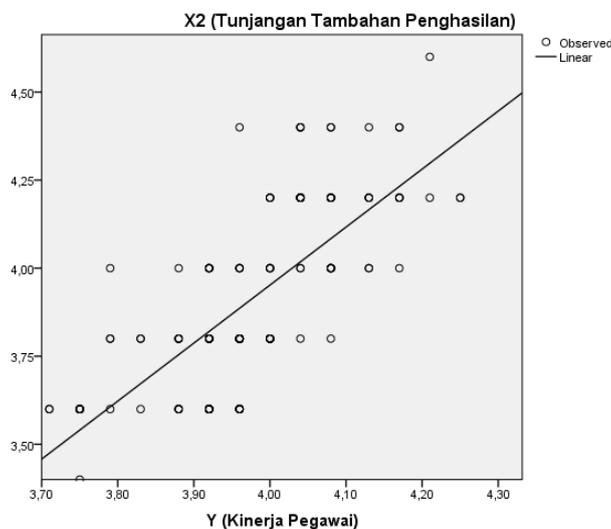


Figure 2 – Scatter Curve Employee Income Added Plot (Variable X2)

In the figure above shows the curve of the Employee Income Supplement (Variable X2) spread from the lower left to the upper right in a straight line. That means the regression is linear.

Multiple linear regression analysis is a linear relationship between E-Performance and Additional Employee Income (variables X1 and X2) with Employee Performance (variable Y). This analysis is to determine the direction of the relationship between variables X1 and X2 with variable Y whether each variable X1 or X2 is positively or negatively related and to predict the value of variable Y if the value of variable X1 or X2 has increased or decreased. In this case, the researcher was assisted by the SPSS 21 program. The basic equation for multiple linear regressions:

$$Y = a + b_1X_1 + b_2X_2 + \dots$$

$$Y (X_1) = a (X_1) + b_1 (X_1)^2 + b_2X_1X_2 + \dots$$

$$Y (X_2) = a (X_2) + b_1X_1X_2 + b_2 (X_2)^2 + \dots$$

Where: Y = Dependent variable (predicted value); X1 and X2 = Independent variables; A = Constants (Y value if X1 and X2 = 0); B = Regression coefficient (value of increase or decrease).

Table 14 – Variable Coefficients X1 and X2 against Y

Coefficients<sup>a</sup>

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics		
	B	Std. Error	Beta			Tolerance	VIF	
1	(Constant)	2,492	,129		19,342	,000		
	X1 (E-Performance)	,080	,035	,150	2,280	,024	,750	1,333
	X2 (Tambahan Penghasilan Pegawai)	,298	,030	,664	10,074	,000	,750	1,333

a. Dependent Variable: Y (Kinerja Pegawai).

From the table above can be made multiple linear regression equations as follows:

$$Y = 2.429 + (0.080) X_1 + (0.298) X_2$$

From the regression equation above can be explained as follows:

1. Constant of 2,429; meaning that if E-Performance (Variable X1) and additional income of employees (variable X2) the value is 0, then the performance of employees (Y) value is 2.429.

2. E-Performance regression coefficient (Variable X1) of 0.080; meaning that if the value of X2 is fixed and E-Performance (Variable X1) has a 1% increase, then employee performance (Y) will increase by 0.080. The coefficient is positive, meaning that there is a positive relationship between E-Performance (Variable X1) and an increase in employee performance (Y), the higher E-Performance (Variable X1), the higher employee performance (Y).

3. The variable regression coefficient for additional employee income (variable X2) is 0.298; meaning that if the value of X1 is fixed and the additional income of the employee (variable X2) has a 1% increase, then the employee's performance (Y) will increase by 0.298. The coefficient is positive, meaning that there is a positive relationship between additional employee income (variable X2) and employee performance (Y), the increase in additional employee income (variable X2), the more employee performance increases (Y).

Hypothesis testing is done to test the proposed hypothesis. The hypothesis proposed in this study is related to disciplinary variables and work environment on employee performance. Multiple regression analysis was chosen to analyze the submission of

hypotheses in this study. The following are the results of multiple regression analysis using the SPSS 21 program.

Simultaneous Test (F Test) aims to determine the effect of E-Performance variable (X1) and Additional Employee Income variables (X2) on Employee Performance variables (Y).

Table 15 – Simultaneous Regression Coefficient Test Results (Test F)

ANOVA<sup>a</sup>

	Model	Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1,027	2	,513	86,431	,000 <sup>b</sup>
	Residual	,796	134	,006		
	Total	1,822	136			

a. Dependent Variable: Y (Kinerja Pegawai).

b. Predictors: (Constant), X2 (Tunjangan Tambahan Penghasilan), X1 (E-Performance).

The stages for conducting the F test are as follows:

1. Formulate hypotheses:

- Ho: = 0, meaning that X1 and X2 simultaneously (together) have no significant effect on Y;
- Ho: ≠ 0, meaning that X1 and X2 simultaneously (together) have a significant effect on Y.

The rules for decision making are as follows:

- If Sig F count > Sig F table then Hoditolak;
- If Sig F count < Sig F table then Hod is accepted.

2. Determining the level of significance. The level of significance uses  $\alpha = 5\%$  (0.05). A significance of 5% or 0.05 is a standard measure that is often used in research.

3. Determine Fcount. From the results of the SPSS calculation shown in the table above, the calculated F value is 86.431.

4. Determine Ftable. By using a 95% significance level,  $\alpha = 5\%$ ,  $df_1 = k - 1 = 2 - 1 = 1$ ,  $df_2 = n - k = 137 - 2 = 135$  (n is the number of respondents and k is the number of variables), the results obtained for Ftable is 3.91.

5. Determining significance. From the calculation of SPSS, the Sig value is 0,000.

6. Criterion Testing Test F (Simultaneous). In this study using two testing criteria, namely:

H0 is accepted if Fcount < Ftable;

H0 is rejected if F count > Ftable;

H0 is accepted if the significance value is > 0.05;

H0 is rejected if the significance value is < 0.05.

Based on table 4.3, the Fcount value is 86.431 with a Sig value of 0.000. This shows that the value of Fcount is greater than Ftable 3.91 and the Sig value is smaller than 0.05. Thus H0 is rejected and Ha is accepted. That is, E-Performance and TPP (Additional Employee Income) together have a significant effect on employee performance.

Partial Test (T Test) aims to determine the effect of the variable e-Performance (X1) partially (individually) on Employee Performance variables (Y) and Employee Income Additional variables (X2) on Employee Performance variables (Y). The hypothesis of the influence of X1 and X2 on Y partially (T Test) submitted in this test, as follows:

- Ho = 0, meaning that X1 and X2 partially (individually) have no significant effect on Y;
- Ha ≠ 0, meaning that X1 and X2 partially (individually) have a significant effect on Y.

The rules for decision making are as follows:

a. If Sig thitung > Sig ttable then Hoditolak;

b. If Sig count < Sig t table then H is accepted.

Table 16 – Partial Regression Coefficient Test Results (T Test)

Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2,492	,129		19,342	,000		
	X1 (E-Performance)	,080	,035	,150	2,280	,024	,750	1,333
	X2 (Tambahan Penghasilan Pegawai)	,298	,030	,664	10,074	,000	,750	1,333

a. Dependent Variable: Y (Kinerja Pegawai)

To find out the number of T tables in this study used the formula:

$$Df = n - k = 135$$

Where: n = Number of respondents; k = Number of variables (X and Y).

It is known that the value of df is 135, so that it can be seen that the T table is 0.67631 in the T Distribution table with a significance of 5% or (0.05).

Based on table above, it can be seen the value of tcount for each variable.

1. Effect of E-Performance (X1) on employee performance (Y). Look at the Coefficients column where there is a sig value of 0,000, the value is smaller than the probability value of 0.05 or 0,000 < 0.05, then H1 is accepted and H0 is rejected. The variable X2 has tcount 10,074 with t table 0,67631. So tcount > t table so it can be concluded that Additional Employee Income (variable X2) has a contribution to employee performance (variable Y). Positive t value indicates that variable X1 has a relationship that is in line with variable Y. So it can be concluded E-Performance has a significant influence on employee performance.

2. Effect of Additional Employee Income (X2) on employee performance (Y). Seen in the Coefficients column there is a sig value of 0.024, the value is smaller than the probability value of 0.05 or 0.024 < 0.05, then H1 is accepted and H0 is rejected. X1 variable has tcount 2,280 with t table 0,67631. So thitung > t table so it can be concluded that E-Performance (variable X2) has a contribution to employee performance (variable Y). Positive t value indicates that variable X2 has a relationship that is in line with variable Y. So it can be concluded that Additional Employee Income (TPP) has a significant influence on employee performance.

## CONCLUSION

From the results of testing the hypothesis that has been done, H0 is rejected and Ha is accepted. This shows that E-Performance and Additional Employee Income (TPP) showed a significant increase in employee performance in the Lamongan Regency Regional Secretariat. The contribution of E-Performance and Additional Employee Income (TPP) influence on employee performance in the Regional Secretariat of Lamongan Regency can be seen from the coefficient of determination (R<sup>2</sup>). Based on the results of calculations, the R<sup>2</sup> value is 56.3%. That is, E-Performance and Additional Employee Income (TPP) only achieved 56.3%. on the performance of employees in the Lamongan Regency Regional Secretariat, while the remaining 43.7% is needed by other factors not resolved in this study.

## SUGGESTIONS

Based on the results of these studies, the researchers hope that the E-Performance application will be further enhanced both to its implementation to all employees and included physical evidence of the results of employee performance to be more motivating for all employees to work. In addition, evaluation and a review of the differences in the amount of Additional Employee Income (TPP) are needed because this can also be a motivation for the work of employees. And also possible to be given sanctions if there are employees who do

not fill in E-Performance because this will also affect the performance of government agencies in Lamongan Regency.

## REFERENCES

1. Anwar Prabu Mangkunegara. 2009. Human Resource Management. Bandung: PT. Teenager Rosdakarya.
2. Azwar, S. 2000. Human Attitude, Theory and Measurement. Jogjakarta: Offset Jogja Student Library.
3. Basri, Rivai. 2005. Performance Appraisal. First print. Jakarta: PT. Raja Grafindo Persada.
4. Ilham, Muh. 2008. Resource Management and Performance of Regional Government Apparatus. Bandung: CV. Indra Pahasta.
5. Lucas, Henry J. 2000. Information Technology For Management, Irwin / Mcgraw Hill.
6. Mulyadi and Johny Setiawan, 2001, Management Planning and Control Systems, Issue 2, Jakarta: Salemba Empat.
7. Ronny Kountur. 2004. Research Methods. Jakarta: PT. Raya Grafindo Persada.
8. Sinambela, Lijan Poltak. 2012. Employee Performance. Yogyakarta: Graha Ilmu.
9. Sudarmanto. 2009. HR Performance and Competence (Theory, Dimensions of Measurement and Implementation in Organizations). Yogyakarta: Student Library.
10. Sugiyono. 2011. Business Research Methods. Bandung: Alfabeta.
11. Taniredja, Tukiran and Hidayati Mustafidah. 2012. Quantitative Research An Introduction. Bandung: Alfabeta
12. William B. Werther, Jr., Keith Davis, 1993, 4th Human Resource and Personal Management, Singapore: Mc Grow-Hill International Edition.
13. 1945 Constitution of the Republic of Indonesia.
14. Law No. 43 of 1999 concerning Amendment to Act No. 08 of 1974 concerning Staffing Principles.
15. Law No. 58 of 2005 concerning Management of Regional Finance.
16. Government Regulation Number 46 of 2011 concerning Assessing the Implementation of Civil Servants (PNS) Work.
17. Regulations of Lamongan District Head Number 04 of 2017 concerning Additional Provision of Income to employees.

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**RELATIONSHIP BETWEEN PARTICIPATORY DECISION MAKING AND  
JOB SATISFACTION: A CASE STUDY OF PRIVATE SECTOR ORGANIZATIONS  
IN KURDISTAN-LFU**

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**ABSTRACT**

The research examines relationships between Participation in Decision Making (PDM) and job satisfaction amid educational staff in private organization sector in Kurdistan region - Lebanese French University (LFU). This research was showed Behavioral on the positive method to the study. The study approved a quantitative survey research design. The area of the study including all management member stuff of the LFU private university of Kurdistan region. arranged survey questionnaire was organized and distributed to all respondents which is a member of the organization. The study includes of two main variables that is job satisfaction which was the dependent variable and PDM, which was the independent variable. Moreover, four-point scale was used to collect data and analysis was based on frequency, bivariate correlation, coefficient and linier regression. A strong relationship was found between PDM and job satisfaction in context of decision making among their organization with the correlation rate of consultation ( $r=.616^{**}$ ), problem solving and engagement ( $r=.736^{**}$ ), informative decision ( $r=.815^{**}$ ) and job satisfaction ( $r=>1^{**}$ ) which is dependent variable. According the study level of satisfaction of the workers increase on participatory decision making.

**KEY WORDS**

Job satisfaction, decision making, participatory, private sector, organization.

Globalization affected everything in the world and changes always. Also, business, organizational flow and work flow as important aspects in the world of business has been affected by globalization to meet the running requirement, challenges of new world systematic methods and effectiveness of their workflow (DeSantis & Durst, 1996). Always, these changes run by humans by trying to implement in standard patterns in away sometimes in systematic farms and sometime in manual methods. For meeting of targets and facing of new challenges every department play a very important part for growing and developing of their business and outcome results always done by team efforts and effectiveness. Human resources and industrial relations department always played very important role for merging of team and hiring of perfect candidate in exact position for getting up to the mark performance and results. Every industry wants loyalty from their employees with best performance. For getting results they provide high purges, increments, promotions acceptance of employee work and their participation in an organizational projects or regular job duties. When employee gets benefits of their work, they feel comfortable and outcome result became very positive, more recognizable and beneficiary for industry/organization. For employees Participation in any department or organizational forum is very important and played a key role for their career. Further, participation in any decision-making job will be a glory for employees and make then in comfort zone. On other hand, everyone tries to play an important role within department or within industry/ organization (Tietjen & Myers, 1998).

Job satisfaction and participation in business always enhance the ability of work and outcome results are always positive for both ends of employee and employers. In our case we submitted some questionnaires' to the employees of LFU in Kurdistan region for observing how many employees participate in decisions, how many employees were satisfied with their jobs and how many employees can benefit after doing some extra ordinary activeness (Iaffaldano & Muchinsky, 1998).

In this theses we try to found out the results and trying to prove with some practical results why PDM and job satisfaction is very necessary and import for both employee and employer. Good human resource & managerial decisions how change the shape of any industry. How satisfying employees affect industry and organization in the contest of their good work. How industry can get more benefits by providing their employees a benefits and comfort zone including job security. The objective of the research is to examine the relationships between PDM and job satisfaction amid educational staff in private organization sector in Kurdistan region - LFU.

## LITERATURE REVIEW

There are many researches that have been done in the past relation to participatory decision making and job satisfaction. The researcher has selected few of them as mention below.

Programmed and non-programmed are the definition of the rate and the face of decision in the decision making filed. Decision rules can be improved by the reputation of the programmed decision most enough. The decision makers can have a clear idea to choose alternative through the decision rule whenever the condition has predefined by the decision makers and a fit rule will choose once the same condition is met. Programmed decisions familiar as highly organized which mean aims are well-defined and clear, the process of the decision making has been proven and the data channels and reference well-known (Zubair et al. 2015).

Uniqueness and non-encountered of problems or conditions are known as non-programmed decisions when the decision is made which needs problem solving process. Problem solving can be counted as one of the special method of decision making which means the problem is rare, so these kind of problems needs improving and assessing without the help of decision rules. Moreover, the clear-cut of the data and information plus the non-clear process make the non-programmed decisions be unwell structured, then in this case the aims mostly be unclear (Moorhead & Griffin, 2004).

As Cohen, Bennet (1997) state that, levels of decisions making are classified to four types (strategic decisions, tactical decisions, operational decisions and policies). First of all, wide decisions around the organization's direction and the relationships with the outside world counted as strategic decisions. The organizational objectives have been established by these decisions and agendas will be executed for directing the activities of the organization. As a level these decisions will made by the senior management (Cohen & Bennett, 1997).

Despites of, operational decisions are stock levels length production which run by the minor administrative mainly contain daily activities (Cohen & Bennett, 1997). The decisions of a specific task or action define as policies when a set ground instructions and principles has been applied which will be the level of decision making.

As study mentioned that the approaches of decision making are divided in two main part in any organization. The first way is authoritarian approach which the decision made by an executive figure for the group in a way the group decides what should be done which means the decision will be made by the manager based the knowledge has been gathered as an experience. Then, the decision should be clarified by the manager to the group in order to collect their acceptance of it. The group is the second approach of decision making where the group proposes idea, examines and agrees upon a decision to implement (Muindi, 2011).

In most cases, employees are asked about their point of view regarding the working style that does not specifically affect the employer's decision. Different strategies could be used for implementation of consultation. Process of consultation improves business in different ways, and it also creates harmony among employees and employer. Where operational matters are concerned, consultations lead to participation in decision making (Cole, 1997). The employees confident and they feel themselves worthy if they got job enrichment, it does not only create confidence but enhance the quality and quantity of work and it improves the quality of decisions taken. However, it does not offer real opportunities to

participate in even the operational decisions taken in the organization (Graham & Bennet, 1998).

Delegation of power causes the participative management style. Employees might get chance to participate in the decision making that have a concrete effect on their work, in general it is a patronizing method through which employees can express their views. However, where a bona fide approach to participation is adopted, then it is likely that employees will in fact become 'empowered' by being able to fully share in decisions affecting their immediate work (Graham & Bennet, 1998; Cole, 1997).

An organization can be equipped with various benefits by participative style. According to Rice (1987) If decision is being done on the actual spot of performance that would be very beneficial. Participation in decision making leads to harmony in the organization (Ward & Pascarelli, 1987) and improves staff morale and support (Pashardis, 1994). By ensuring every employee that his presence and output plays an important role in achieving the mutual exclusive goals of the company and themselves, can only be obtained through participative style. Employees feel themselves as a stakeholder of an organization when their views are listened and considered. Managers can change the thinking of employees to accept any change if they are being allowed to speak in such matters. Any change can be effectively implemented by this way. Through these style employees are well aware about any upcoming change that could might affects them or not. Organization should create a culture of dynamic approach rather than responsive approach (Helms, 2006).

According to Cole (1997), some managers are not very keen to share strategic decisions that could be caused by different reasons, one of which is to keep the strategies undisclosed and other can be to protect organization to face the unviable consequences. In every case participative style does not cover the problems of any organization. Every manager should carefully understand this style in every aspect. Pashardis (1994) in the article, 'Teacher Participation in Decision Making', mentioned that, organizational policies should be in line with this style, and all required components should be organized and implemented for successful implementation of participative style.

One thing that is very important for an employee is job satisfaction. For both employee and employer job satisfaction carries equal importance, from employee prospective, employee feel himself secure and in return he fulfills his duties with due care and for employer an active and productive work by an employee is the only thing that is needed (Muindi, 2011). The studies of Hawthorne related to job satisfaction was an important step. These studies (1924-1933), primarily credited by (Mududa, 2014) of the Harvard Business School, is related to the effective and productive work of an employee. By changing novel changes occur in productivity of an employee (called the Hawthorne Effect). People do not only work for pay, there are some other factors that encourage a person to do job.

Job satisfaction is also affected by scientific management (also known as Taylorism). According to Taylor's, (1998) book, Principles of Scientific Management, every task has a way to be well performed. This book highlighted the different styles at work place, as assembly lines and hourly wages. That technique was very effective initially but with passage of time it becomes reluctant and some other factors arises that were unanswered. Maslow's Hierarchy of need theory of motivation also laid the foundation for job satisfaction theory. This theory explains that people seek to satisfy five specific needs in life – physiological needs, safety needs, social needs, self-esteem needs, and self-actualization. This theory was somehow better than the early studies, according to views of different scholars there are different factors such as higher pay, participative management style, being involved during management decisions, that increases the job satisfaction for an employee. However, every employee has its own scale of job satisfaction (Anderson et al. 1984; Prabhu et al. 2019). According to Armstrong (2006) Job satisfaction is basically the fulfilment of one's expectations from the specific job and job dissatisfaction results in absenteeism and turnover.

Satisfaction is very clearly defined by different theories. These are: Maslow's theory, Equity Theory, Value Theory, Discrepancy Theory, Vroom's Expectancy Theory and Herzberg's two factors theory. For this study, Herzberg's two factor theory will be

considered. According to those theory two factors affects the satisfaction and dissatisfaction. These were termed as satisfiers (or motivators) and dissatisfies (or hygiene factors). According to Armstrong (2006) and Cole (2002) the factor that pushes a person to perform his duties in a good manner is motivators that are directly related to the content of job. Motivators could be recognition, autonomy, self-esteem, and work. On other side hygiene includes factors that cause dissatisfaction to a person that could be company's policies, administration and the context of the job. They observe that motivators appeared to produce motivated behavior while hygiene factors produced either dissatisfaction or no response. In nutshell the motivators factors exist long term because they are self-adopted while hygiene factors are for short term because they are effective from outside and they are the aggressive and immediate response.

Herzberg et al. (1957) argued that answering question, "what does the worker want from his/her job?", is a way to measure the job satisfaction. That will assist management to search for new methods of motivation for employees. Highly motivated employees are more concerned about the quality of work and their commitment towards organization. Organizations are more concerned about the job satisfaction of employees. Employees turnover is a measure of job satisfaction. Luthans et al. (2005), argued that job satisfaction can only be measured by self-examination, some methods can be used to measure job satisfaction as rating scales, critical incidents, interviews and action tendencies.

Rating scale is the most effective way to measure job satisfaction. Question can be related to remuneration, work environment, the way of work and co-workers. Some question are close ended questions that can be only responded by YES or NO, other method can be offer a range of digits from 1-5, 1 the least and 5 the most. One of the most popular rating scales is the Minnesota Satisfaction Questionnaire (Weiss et al. 1967). MSQ provides a tool to measure satisfaction and dissatisfaction. Minnesota Satisfaction Questionnaire is very credible design backed by different scholars (Albright, 1972; Anderson et al. 1993; Brown et al. 1998; Decker & Borgen, 1993; Levinson et al. 1988; Khan & Abdullah 2019; Ganeshkumar et al. 2019).

Various authorities claimed that job satisfaction is affected by relationship between work environment and job satisfaction. Perceived job satisfaction can be obtained by management style and job design. According to Herzberg et al. (1957) Job satisfactions is affected by responsibility, degree of freedom to act rewards and quality of supervision. Different studies show that commitment can be achieved by participative style. Making and executing a decision more successfully is done by the persons who feel themselves responsible while they were in a part of decision making. By participating in decision making, employees may better understand linkage between their performance and rewards they want most (Moorhead & Griffin, 1989). Employees performance and job satisfaction is highly effected by participative style. However (Guion, 1998) notes that the degree of satisfaction will depend on individual needs and expectations, and the working environment. Some questions should be answered to measure the job satisfactions, according to these studies, some questions are Do employees participate in decisions making? Do the level of pay, the work itself, responsibility, achievement, recognition, opportunity for growths, supervision, work groups and working conditions determine job satisfaction? Does Employee participation in decision making increase intrinsic and extrinsic job satisfaction?

H1: There is a positive relationship between employee's consultation and job satisfaction.

Improve management performance and decision making encourages the environment for employees to provide their input that could be helpful for managers and supervisors during implementation of new practices and procedures. improve employees' performance and commitment- performance of employees could be better if they are clear about their responsibilities and proper information is being provided to them, further, if they are very clear about the goals of organization. help develop greater trust – providing an opportunity for each employee to express their issues can make a better relation between employee and employer. increase job satisfaction – motivation within employees can be achieved only when they can better understand their work and position within organization. encourage a

more flexible working environment – Work-life balance can be made better by employers if they promote a culture of flexible working policies and practices.

H2: There is a positive relationship between employee's problem solving engagement and job satisfaction.

Interactive mode is active when employee is engaged in work, it comprised of all kinds of challenges and inspiration, it also provides job satisfaction to employees. According to Lu et al. (2016) work engagement is comprised of individual dimensions, and job satisfaction is the outcome of these dimensions. As per Karanika et al. (2015) employees, who are strongly and positively engaged to their work and show energy and dedication to their work, consequently, have satisfaction with their job. Garg et al. (2017) found that employees, who have high level of engagement with their work and the organizations, get negatively affected by negative events they encounter while working and consequently are affected by work-related stressors.

H3: There is positive relationship between informative decision and job satisfaction.

If we compare the past and present situation of organizations with regards to their employees' in past organization secures loyalty of employees by giving them job security in present organizations are adopting different policies in response of their competitors as downsizing and restructuring (Madi et al. 2012). Maintaining employee organizational commitment remains one of the challenges faced by organizations in this competitive world (Bergmann et al. 2000). Organization wants to maintain its commitment with employees by its existence (Yavuz, 2010). As such, organizational commitment is the level of allegiance an employee feels for his employer (Demirel & Goc, 2013; Khan & Abdullah 2019). If employees have strong commitment with organization, they are more productive and more responsible towards their work (Demirel & Goc, 2013; Khan et al. 2019). Relationship between job satisfaction and organizational commitment has been studied by many of experts, they concluded it as, they both have almost same affect, which is important for employees and organization success (Bodla & Danish, 2009). As such, these variables - job satisfaction & organizational commitment are even more significant to study in higher education institutions. In the South African higher education context, Mabasa & Ngirande, (2015) suggests that, higher education plays an important role in human development and human resources management.

## METHODS OF RESEARCH

This research has been done by using quantitative research method. The items of this study adopted from Pacheco & Webber (2012). Moreover, it focuses on payment, rewards, skills, encourage, connection, opportunities, relationship and satisfactions. Furthermore, the most satisfaction points are, job satisfaction, problem solving engagement, consultation and informative decision. Thus, all these items that have been used inside the questionnaires had been matched and redesigned according to the Lebanese French University in order to make it more relevant. The data which is being used in this study is collected from different staff of the Lebanese French University. These employees are varying among their roles and education level. The researcher collected data for 63 respondents and applied statistical tools like correlation analyses for analyzing the data with the SPSS version 22 software package. The factors were deemed to be most relevant to keenly observe, understand and give any fruitful results. In the context of this study Stratified sampling was used in this study. The given questionnaires have been designed for two-part personal detail and general question. The personal details include age, gender, education level, position and work experience. Additionally, this study mainly focuses on level of education and work experience due to the level of participant. Also, general questions are a part of the questionnaires which contain dependent and independent variable. Dependent variable is job satisfaction and independent variable is decision making. The study combines consultation, problem solving engagement and informative decision under independent variables. If we examine the data in context of "*Level of Education*", the persons participated in the survey presents their point of view in relevancy of all hypothetical factors directly correlated with Job satisfaction as, PhD

(34.9%) while Masters (46%) and Bachelor (17.5%). Moreover, if the data is being observed within Context of their “*Position*”, the results were as Top-Level Manager (38.1%), Manager (23.8%) and Assistant Manager (19%).

## RESULTS AND DISCUSSION

The result of the analysis demonstrates a positive correlation ( $r=.616^{**}$ ,  $n=63$ ,  $p< .01$ ) between consultation and job satisfaction at 0.01 level (2-tailed).

Table 1 – Correlation between Consultation and Job Satisfaction

Correlations		Consultation	Job Satisfaction
Consultation	Pearson Correlation	1	0.616 <sup>**</sup>
	Sig. (2-tailed)		.000
Job Satisfaction	Pearson Correlation	0.616 <sup>**</sup>	1
	Sig. (2-tailed)	0.000	

<sup>\*\*</sup> Correlation is significant at the 0.01 level (2-tailed).

In the above table 1 revealed that H1: “There is a positive relationship between consultation and job satisfaction”. In this case the studies refer the fact that if the style of working conditions is job satisfaction and consultative then it would allow organization to work in a successful way.

Table 2 – Correlation between Problem Solving Engagement and job satisfaction

Correlations		Problem Solving Engagement	Job Satisfaction
Problem Solving Engagement	Pearson Correlation	1	0.736 <sup>**</sup>
	Sig. (2-tailed)		0.000
Job Satisfaction	Pearson Correlation	0.736 <sup>**</sup>	1
	Sig. (2-tailed)	0.000	

<sup>\*\*</sup> Correlation is significant at the 0.01 level (2-tailed).

Table 3 – Correlation between Informative Decision and Job Satisfaction

Correlations		Informative Decision	Job Satisfaction
Informative Decision	Pearson Correlation	1	0.815 <sup>**</sup>
	Sig. (2-tailed)		0.000
Job Satisfaction	Pearson Correlation	0.815 <sup>**</sup>	1
	Sig. (2-tailed)	0.000	

<sup>\*\*</sup> Correlation is significant at the 0.01 level (2-tailed).

In the table 2, there is also strong and positive correlation ( $r=.736^{**}$ ,  $n=63$ ,  $p< .01$ ) between Problem Solving Engagement and job satisfaction at 0.01 level (2-tailed). Thus, H:2, “There *is positive relationship between Problem Solving Engagement and job satisfaction*”. This study reveals the positive and strong relationship between two factors that play a vital and important role in job satisfaction and organizational behavior towards the prosperity of an organization. Many of experts are of the view that job satisfaction cannot be obtained by implementing either only one factor affecting that directly. A suitable mix is necessary to being placed in a structured manner to get the desired results.

In the table 3, there is moderate and positive correlation ( $r=.815^{**}$ ,  $n=63$ ,  $p< .01$ ) between Informative Decision and Job satisfaction at 0.01 level (2-tailed). Thus, H:3, “There *is positive relationship between Informative Decision and Job satisfaction*”. According to this study there is strong and positive relationship between these two variables. If the organizations deal with the problem through 360-degree problem solving technique, the result would be very effective and positive.

## CONCLUSION

Decision making play a profound role in any industry and organization in term of making the industries more professional and more suitable for employees. Moreover, having such an environment helps employee to be more productive which leads to run any industry quite smooth. Nowadays, quality of organization evaluated by the participating in decision making of all employees in the all department of the organization. Organizations will be more reliable if and only if let their employee to decide upon issues, internal threats and external threats that face the organization. Despite of organization which does not let employees to participate in decision making counted as not reliable organization. This study has been done for clarifying the relationship between participatory decision making and job satisfaction. Job satisfaction includes all facilities that make an employee to be productive and achieve organization goals. Moreover, reviewing old researches has been done for make sure there are relationships between participatory decision making and job satisfaction. Besides that, questionnaire has distributed among academic staff of private organization sectors in KRG for instance, LFU. However, this study contains three hypotheses. After analyzing the data which has been given from participants we understood that there are strong relationships between participatory decision making and job satisfaction. Results contain consultation, problem solving engagement and informative decision making among job satisfaction. the result of the mentioned dependent variables and independent variable show that employee has a profound impact on decision making and job satisfaction in their organization.

## REFERENCES

1. Albright, D. W. (1972). Expectancy theory predictions of the satisfaction, effort, performance, and retention of naval aviation officers. *Organizational Behavior and Human Performance*, 8(1), 1-20.
2. Albright, D. W. (1972). Expectancy theory predictions of the satisfaction, effort, performance, and retention of naval aviation officers. *Organizational Behavior and Human Performance*, 8(1), 1-20.
3. Anderson, W. T., Hohenshil, T. H., & Brown, D. T. (1984). Job satisfaction among practicing school psychologists: A national study. *School Psychology Review*, 13, 225-230.
4. Anderson, W. T., Hohenshil, T. H., & Brown, D. T. (1984). Job satisfaction among practicing school psychologists: A national study. *School Psychology Review*.
5. Anderson, W. T., Hohenshil, T. H., & Brown, D. T. (1984). Job satisfaction among practicing school psychologists: A national study. *School Psychology Review*, 13, 225-230.
6. Anderson, W. T., Hohenshil, T. H., & Brown, D. T. (1984). Job satisfaction among practicing school psychologists: A national study. *School Psychology Review*.
7. Armstrong, M. (2006). *A handbook of human resource management practice*. Kogan Page Publishers.
8. Armstrong, M. (2006). *A Handbook of Human Resource Management Practice*. *Human Resource Management*, edition 10, 123-134.
9. Armstrong, M. (2006). *A handbook of human resource management practice*. Kogan Page Publishers.
10. Armstrong, M. (2006). *A Handbook of Human Resource Management Practice*. *Human Resource Management*, edition 10, 123-134.
11. Bergmann, T. J., Lester, S. W., De Meuse, K. P., & Grahn, J. L. (2000). *Journal of Applied Business Research*, (16)3, 15-26.
12. Bergmann, T. J., Lester, S. W., De Meuse, K. P., & Grahn, J. L. (2000). Integrating the three domains of employee commitment: An exploratory study. *Journal of Applied Business Research*, 16(4), 15-26.

13. Bodla, M. A., & Danish, R. Q. (2009). Politics and workplace: an empirical examination of the relationship between perceived organizational politics and work performance. *South Asian Journal of Management*, 16(1), 44-62.
14. Bodla, M. A., & Danish, R. Q. (2009). Politics and workplace: an empirical examination of the relationship between perceived organizational politics and work performance. *South Asian Journal of Management*, 16(1), 44-62.
15. Brown, M. B., Hohenshil, T. H., & Brown, D. T. (1998). Job satisfaction of school psychologists in the United States: A national study. *School Psychology International*, 19(1), 79-89.
16. Brown, M. B., Hohenshil, T. H., & Brown, D. T. (1998). Job satisfaction of school psychologists in the United States: A national study. *School Psychology International*, 19(1), 79-89.
17. Cohen, D. J., & Bennett, S. (1997). Human Perception and Performance Why can't most people draw what they see? *Journal of Experimental Psychology*, 23(3), 609-621.
18. Cohen, D. J., & Bennett, S. (1997). Human Perception and Performance Why can't most people draw what they see? *Journal of Experimental Psychology*, 23(3), 609-621.
19. Cole, G. (1997). *Personnel Management: Theory and Practice*. Thomson learning 2002, 5th edition, 27.
20. Cole, G. (1997). *Personnel Management: Theory and Practice*. Thomson learning 2002, 5th edition, 27.
21. Cole, G. (2002). *Personnel and Human Resource Management*. Cengage Learning EMEA, 5, 14.
22. Cole, G. (2002). *Personnel and Human Resource Management*. Cengage Learning EMEA, 5, 14.
23. Decker, P. J., & Borgen, F. H. (1993). Dimensions of work appraisal: Stress, strain, coping, job satisfaction, and negative affectivity. *Journal of Counseling Psychology*, 40(4), 470.
24. Decker, P. J., & Borgen, F. H. (1993). Dimensions of work appraisal: Stress, strain, coping, job satisfaction, and negative affectivity. *Journal of Counseling Psychology*, 40(4), 470.
25. Demirel, Y., & Goc, K. (2013). The impact of organizational commitment on knowlegde sharing. *European Scientific Journal*, ESJ, 9, 19.
26. Demirel, Y., & Goc, K. (2013). The impact of organizational commitment on knowlegde sharing. *European Scientific Journal*, ESJ, 9, 19.
27. DeSantis, V. S., & Durst, S. L. (1996). Comparing job satisfaction among public-and private-sector employees. 26(3), 327-343.
28. DeSantis, V. S., & Durst, S. L. (1996). Comparing job satisfaction among public-and private-sector employees. 26(3), 327-343.
29. Ganeshkumar, C., Prabhu, M & Nabaz Nawzad Abdullah. (2019). Business Analytics and Supply Chain Performance: Partial Least Squares-Structural Equation Modeling (PLS-SEM) Approach, *International Journal of Management and Business Research*, 9(1), 91-96
30. Garg, Kanika, Dar, Ishaq, Mishra, Mridula. (2017). Job Satisfaction and Work Engagement: A Study Using Private Sector Bank Managers. book, 235-243.
31. Graham, H & Bennet, R. (1998). *Human Resource Management*. Pearson Education Limited 01 Dec 1998, 9th edition.
32. Guion, R. (1998). The role of perception in the sound change of velar palatalization. *Personnel Psychology*, 55(1-2), 18-52.
33. Helms, M. M. (2006). Theory X and Theory," *Encyclopedia of Management Education*. Retrieved November 1, 2008, pp.11-13.
34. Herzberg, F., Mausner, B., & Peterson, R. O., & Capwell, DF . (1957). *Job attitudes: Review of research and opinion*. Pittsburgh: Psychological Service of Pittsburgh. New York: Wiley, pp.138-152.
35. Iaffaldano, M. T., & Muchinsky, P. M. (1998). Job satisfaction and job performance: A meta-analysis. 97(2), 251.

36. Karanika-Murray, Maria, Michaelides, George. (2015). PURPOSE – Although both job design and its broader context are likely to drive motivation, little is known about the specific workplace characteristics that are important for motivation. The purpose of this paper is to present the Workplace Characteristic. *Journal of Organizational Effectiveness: People and Performance*, 2, 224-243.
37. Khan, S. I & Abdullah, N.N. (2019). The effect of ATM Service quality on customers satisfaction and loyalty: An Empirical Analysis, *Russian Journal of Agricultural and Socio-Economic Science*, 5(89), 227-235
38. Khan, S. I & Abdullah, N.N. (2019). The Impact of staff training and Development on teacher's productivity. *Economic, Management and Sustainability*, 4(1), 37 – 45.
39. Khan, S. I., Sultan A. A., and Alsamarai S. (2019). Social media and its adverse effect on academic performance of students. *Bulletin of Social Informatics Theory and Application*, 3(1), 38 – 44.
40. Levinson, E. M., Fetchkan, R., & Hohenshil, T. H. (1988). Job satisfaction among practicing school psychologists revisited. *Job satisfaction among practicing school psychologists revisited*, (6)2, 365.
41. Lu Lu et al , Gursoy, & Neale. (2016). Work engagement, job satisfaction, and turnover intentions: A comparison between supervisors and line-level employees. *International Journal of Contemporary Hospitality Management*, 28, 58-71.
42. Luthans, F., Avolio, B. J., Walumbwa, F. O., & Li, W. (2005). The psychological capital of Chinese workers: Exploring the relationship with performance. *Management and Organization Review*, 1(2), 249-271.
43. Mabasa, F. D., & Ngirande, H. (2015). Perceived organisational support influences on job satisfaction and organisational commitment among junior academic staff members. *Journal of Psychology in Africa*, 25(4), 364-366.
44. Madi, M., Abu-Jarad, I., & Alqahtani, A. H. (2012). Employees' perception and organizational commitment: A study on the banking sector in Gaza, Palestine. *International Journal of Business and Social Science*, 3, 16.
45. Moorhead, G. & Griffin, R. (1989). *Organisational Behaviour*. Boston, Houghton Mifflin Company, 2nded, 11.
46. Moorhead, G. and Griffin, R. (2004). *Organisational Behaviour: Managing People and Organisations*. Scientific Research an academic publisher journals, 8, 306-321.
47. Mududa, E. O. (2014). *Employing Trained Personnel for Improved Job Satisfaction: A Case Study of the Kenya Civil Service*. Routledge ,University of Nairobi, edition 12, 187.
48. Muindi, F. K. (2011). The relationship between participation in decision making and job satisfaction among academic staff in the school of business, university of Nairobi. *Journal of Human Resources Management Research*, 3-34.
49. Muindi, F. K. (2011). The Relationship between Participation in Decision Making and Job Satisfaction among Academic Staff in the School of Business, University of Nairobi. *Journal of Human Resources Management Research*, Vol. 2011 (2011), 15-34.
50. Pacheco, G., & Webber, D. J. (2012). Culture, participative decision making and job satisfaction. *The International Journal of Human Resource Management*, 23(13), 2661-2679.
51. Pashiardis, P. (1994). Teacher Participation in Decision Making,. *International Journal of Education Management*, 8(5), 14-17.
52. Prabhu, M., Nabaz Nawzad Abdullah and Madan Mohan, G. (2019), An Empirical Study on the Satisfaction Level of National and International Tourists towards Natural Attractions in Kurdistan. *African Journal of Hospitality, Tourism and Leisure*, 8 (2), 1-8.
53. Rice, R. E. (1987). *Managing organizational innovation: The evolution from word processing to office information systems*. Columbia University Press.
54. Taylor's, F. W. (1998). *The principles of scientific management*. 1911. In T. p. management.. Routledge.
55. Tietjen, M. A., & Myers, R. M. (1998). Motivation and job satisfaction. 36(4), 226-231.
56. Ward, B., & Pascarelli, J. (1987). Networking for Educational Improvement,' in Goodlad. *The Ecology of School Renewal*, Chicago University Press, Chicago, J.I. (Ed.), 192-209.

57. Weiss, D. J., Dawis, R. V., England, G. W., & Lofquist, L. H. (1967). Manual for the minnesota satisfaction questionnaire. Minnesota studies for vocational rehabilitation (No. XXII). Work Adjustment Project,. University of Minnesota Industrial Relations Center, Minneapolis, MN, 45-63.
58. Yavuz, M. (2010). The effects of teachers perception of organizational justice and culture on organizational commitment. *African Journal of Business Management*, 4(5), 695-701.
59. Zubair, A., Bashir, M., Abrar, M., Baig, S. A., & Hassan, S. Y. (2015). Employee's Participation in Decision Making and Manager's Encouragement of Creativity. *Journal of Service Science and Management*, 8(03), 306-308.

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## HAKAWAK CULTURE IN IMPROVING CULTURAL SOCIAL RESILIENCE AT WEOE VILLAGE

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### ABSTRACT

The objectives of this study are 1) to explore new forms of *hakawak* culture in the present (*hakawak malae*); 2) to analyze the contributions that can be found in the *Hakawak Malae* culture in enhancing socio-cultural resilience in Weoe Village; 3) develop strategies for the culture of *hakawak* in facing the challenges of the times in the future. This study uses a qualitative method. The results of the study showed that the *hakawak* culture experienced transformation in three forms, namely farmer groups, money gathering, and cooperatives. Although transformed in three completely new forms, the enthusiasm in it is still a true spirit of *hakawak*. *Hakawak* also contributes to people's lives. The presence of *hakawak malae* actually strengthens the existing *hakawak* tradition. Therefore, in order not to fall into the old *hakawak* romanticism, an understanding of *hakawak* must always be in accordance with the period in which humans live. If this period is the 21st century, then the meaning of *hakawak* must be in accordance with this 21st century.

### KEY WORDS

Culture, Hakawak, New Form, Socio-cultural resilience.

The discourse about mutual cooperation is not new to the people of Indonesia. In Indonesia, every culture has the term to express the mutual cooperation. In the Tetun tribal community, Malaka Regency, East Nusa Tenggara Province (NTT), mutual cooperation is known as *hakawak*. The concept of *hakawak* is known in all contexts of life together.

Along with the development of the times, globalization was born which comes with a double face. On the one hand, it presents many new hopes for a better life. The development of Science and Technology is a positive thing presented by globalization (Huda, 2019; Singla et al., 2019). It cannot be denied that on the other hand, without realizing it, it actually gives a bad hope for human life. This becomes evident as can be found in social life, for example life is increasingly individualistic, gloomy moral and ethical values in shared life, loss of native culture of a region or country, erosion of cultural values, decreasing sense of nationalism and patriotism, and loss of kinship and mutual cooperation (Suneki, 2012). In addition, globalization can also produce opinions that can develop wildly and can affect the behavior of individuals, communities, and countries (Irfan, 2017; Tsui et al., 2018; Jamali & Karam, 2018; De Mooij, 2019; Singla et al., 2019; Huda, 2019).

In line with that, it cannot be denied that the *hakawak* culture is gradually being eroded by the flow of globalization that is increasingly heating up. The concept of *hakawak* was finally engulfed by the vortex of the times.

Faced with globalization which continues to develop science and technology, questions that are quite crucial arise in the meaning of *hakawak* along with the times, will it fade or even disappear? In addition, will this activity still be feasible in the midst of a society that has changed considering that for the Weoe Village community in particular and Indonesia in general, *hakawak* is not only talking about behavior, but also acting as moral values? Furthermore, considering the paradigms in society are beginning to change, will *hakawak*

also be able to change form in other forms, when human life shifts according to the development of science and technology?

*Hakawak* is a milestone in life in community life. This culture must be revived, although not in its initial form, so that the community can work hand in hand so that the *bonum commune* (common good) is achieved. *Hakawak*, which was once understood as mutual cooperation in the garden, had to be moved to its meaning and found a new form for the world today. If some time ago, *hakawak* occurred in the context of development, this time *hakawak* must be transformed to be able to break through the limits of meaning so that it can be lived in the midst of society. If some time ago, *hakawak* was considered as a fairly constructive thing in community life, nowadays the *hakawak* culture must be revitalized in a new form so that it can build a community life towards a better direction. In other words, the culture of *hakawak* for this age, must be re-explored, re-seen, and revived in a new form.

## METHODS OF RESEARCH

The type of research used in this study is qualitative research. The use of this qualitative research method departs from the curiosity of the researchers to explore the problems related to the *hakawak* culture in Weoe Village. According to Bodgan and Taylor (1975: 5, in Idrus, 2009), Qualitative methods are research procedures that produce descriptive data in the form of written or oral words from people and observable behavior. Thus, through qualitative research, a detailed description of the situation or process under study will be carried out (Idrus, 2009).

The qualitative research approach used by researchers to study the *hakawak* culture in Weoe Village so that it can improve social cultural resilience in Weoe Village is a phenomenological and ethnographic approach.

The sources of data and information to be obtained in this study are very important so that they need to be accurately determined. The goal is that the information obtained really comes from sources that have relevance, closeness, and authority with this research. Thus the information obtained is accurate, reliable information, so that it can be used as valid data for research on this *hakawak* culture.

Primary data, is data obtained directly from the object under study. Secondary data is obtained through literature studies from books, the results of previous studies such as undergraduate theses, theses, dissertations, journals and the internet which of course relate to this *hakawak* culture. In this study, researchers used qualitative data analysis based on data analysis models revealed by Creswell (Creswell, 2012: 274-284).

## RESULTS AND DISCUSSION

*Hakawak* is also known as "*Karian Serikat*" (United Work). Literally, *karian serikat* can be understood as the work of an association or work in an association. Of course this means that the work is carried out by many people, carried out jointly, hand held together "all by all" to reach the *bonum commune*.

*Hakawak* or *karian serikat* actually occur in groups. Work carried out using energy, coupled with hard work, is very unlikely to be done alone, whether it is working in the garden or building a new roof house. Therefore, it is a necessity if the work is carried out jointly. If it is associated with groups and the spirit of *hakawak* that was previously lived by the community, then it is not an exaggeration to say that the *hakawak* performed by the community are the forerunner to the formation of groups that are developing. Groups such as money gathering, cooperatives, and farmer groups are manifestations of *hakawak* that have long been lived by the community.

The flourishing of several groups is enough to give its own color to the life of the Weoe Village community. If a straight thread is drawn, then will find the spirit of *hakawak* found in the groups that are flourishing. In the context of Weoe Village, *hakawak* transformed into three new forms, namely Farmers Group, Money Gathering and Cooperatives. This transformation of *hakawak* culture can also be called modern *hakawak*. Even though it is

transformed in a new form, the spirit of *hakawak* that underlies it remains a true spirit of *hakawak*.

Discourse on socio-culture means discourse on the two main aspects of human life, namely the social aspect in which humans for the sake of their survival must cooperate with fellow human beings, and aspects of culture which are the whole way of life, whose manifestations appear in behavior and institutionalized behavioral outcomes. Social culture in a broad sense covers all aspects of life. while in a narrow sense, social culture is placed as an aspect of national life in addition to ideology, politics, economics, and defense security (Verdery, 1991; Ball, 1993; Lemhanas: 1995: 73; Katzenstein, 1996; Inglehart, 2018; Berg-Schlosse, 2019; Ponsioen, 2019; De Mooij, 2019; Lo et al., 2019; Elander & Gustavsson, 2019). Human beings for the sake of their survival must establish cooperation with fellow humans. If it is connected with the *hakawak malae* that occurs, then a meeting point will be found. To carry out their lives, the community cooperates with each other. This collaboration is evident in farmer groups, money gathering and cooperatives. In other words, human beings always have connections with others. This connectedness presupposes that "I" must get out of him to be able to meet " the other I". The meeting between "I" and " the other I" forms into "us". In "us" this is the manifestation of cooperation being realized.

The manifestation of this collaboration is in line with one of the factors that influence socio-cultural resilience, namely socio-economic conditions (Lemhanas, 1995: 78). To be able to fulfill its economic life, the community conducts *hakawak*. *Hakawak* is carried out such as money gathering and cooperatives. In addition, this manifestation of socio-economic conditions also appears in farmer groups. Some of the crop yield from the farmer groups are sold. Money from the sale of the crop yield is used to meet the needs of the farmer groups.

The presence of *hakawak malae* reinforces the existing culture. The spirit that underlies farmer groups, money gathering and cooperatives is *hakawak*. This is in line with the culture lived by the community, namely *hakawak*. Thus, *hakawak malae* affirms the existence of the *hakawak* culture. In addition to strengthening the existing culture, the presence of *hakawak malae* can be read in the context of revitalizing culture that has begun to be rarely done. As previously stated, *hakawak* is rarely done. With the presence of *hakawak malae*, the *hakawak* culture which is rarely carried out can be revived. Thus, it can be seen that *hakawak malae* also contributes to tradition, which is one of the factors of socio-cultural resilience.

On the other hand, one of the dimension of socio-cultural resilience is transformative capacities (Keck and Patric in Lestari, 2016: 141; Fastenrath et al., 2019; McOmber et al., 2019; Wilson & Wilson, 2019; Santo & Moragues, 2019; Lemos et al., 2019; Hostettler et al., 2019; Wardani & Kusumasari, 2019; Bakker et al., 2019). If a straight thread is pulled, then there will be a very close relationship. The starting point of the development of *hakawak malae* is the *hakawak* that has been lived by the community for a long time. *Hakawak* also has the capacity to transform. The transformation of this *hakawak* culture became evident in farmer groups, money gathering and cooperatives. Thus the flourishing of the *hakawak malae* in Weoe Village provides strong evidence that social cultural resilience also increases.

Actually *hakawak* is carried out together. This indicates that *hakawak* can only occur if humans gather into a single unit, gathering to join hands together. This is certainly formed because there is a human awareness that humans are always connected with others, always needing others. In order *hakawak* can continue to live facing the flow of globalization, then the strategy offered is about the meaning of *hakawak*, that *hakawak* must be interpreted in accordance with the times. Because this period is the 21st century, the understanding of *hakawak* must be in accordance with the current context. In the sense that *hakawak* must be understood in the context of the rapid development of science and technology, it must be able to be understood as modern *hakawak*. To actualize this, what needs to be done is to borrow knowledge and technology that has developed to be able to join hands together. A simple example, when there was an earthquake and tsunami in Palu and Donggala, there were some Indonesian people who used social media such as Facebook, Instagram and WhatsApp to raise funds. This is proof that the development of science and technology can be borrowed for *hakawak*.

## DISCUSSION OF RESULTS

Traditional wisdom is all forms of knowledge and beliefs, understanding or insight as well as customs or ethics that guide human behavior in life within an ecological community. All this wisdom is lived out, practiced, taught, and passed down from one generation to another which at the same time forms the pattern of everyday human behavior, both to fellow human beings and to the unseen nature. Thus local wisdom here not only concerns the knowledge and understanding of indigenous people about humans and how good relations between humans (Sillitoe, 2019; Sabinot & Lescureux, 2019; Shawoo et al., 2019; Page-Reeves et al., 2019), but also concerning knowledge, understanding, and customs about humans, nature, and how is the relationship between all residents and ecological communities this must be built (Keraf, 2002: 289).

To be able to understand *hakawak malae*, the fundamental thing that must be understood is the starting point of the *hakawak malae*. The discourse on the starting point of *hakawak malae* is a necessity to re-explore the *hakawak* that occur in the community, especially the Weoe Village community. To arrive at this, it must be understood that *hakawak* is traditional wisdom. Therefore, the effort to re-explore this great thing is simply and solely by returning to traditional society, especially the Weoe Village community.

As previously stated, *hakawak* in the lives of the Weoe village community takes place in two forms, namely *hakawak ema mane* (*hakawak* performed by men) and *hakawak ema fetu* (*hakawak* performed by women). *Hakawak ema mane* usually occurs in gardens, while *hakawak ema fetu* includes *hakawak hiri kabas* (spun yarn) and *soru tais* (woven fabric). Besides that, *hakawak* also occurs in various spheres of human life such as party or death activities, building new houses, and so on.

*Hakawak* in the Weoe Village community can be read as traditional group solidarity. In this context, community solidarity to help others. Even though it is carried out in a small (local) scope, but the community always draws good from the *hakawak* that is done. This means that when the *hakawak* are carried out, the goals to be achieved are realized. In addition, in general public understanding, something can only be done if done together. Just say the construction of a new house, because it requires a lot of raw materials and energy, then cooperation is a necessity. Thus in the *hakawak* community, individualist attitude is a mistake. Because for the *hakawak* community, the common good is a shared task. In other words, the true *hakawak* man is in the community, because the persona of *hakawak* people is fully fulfilled when manifested in society. The solidarity of this traditional group also found its shape for the present. In Weoe Village, the solidarity of this traditional group is manifested in the form of farmer groups, money gathering and cooperatives. Although in different forms, solidarity within these groups remains the same as the solidarity that occurs in society.

In traditional groups there is a dimension of local knowledge (Mitchell, 2003 dalam Humannira, 2016: 30). Local knowledge is understood as the ability of the community to adapt to their environment. The environment cannot be understood in human relations with nature alone, but wider than that. Adaptation to the environment can also be understood in human relations with their social life. In this local knowledge, there is knowledge about *hakawak*. From the knowledge of the *hakawak*, humans adapt to their environment. Adaptation to the environment has a very close relationship with meeting human needs. And to fulfill their needs, humans do *hakawak*. For example, when a time when humans need cloth to cover their bodies, women do *hakawak hiri kabas* and *soru tais* so that all family members can wear cloth. Human knowledge, especially about *hakawak*, is not something that is massive. But on the contrary, knowledge of *hakawak* develops over time, as previously explained. For example, once the community only understood *hakawak* in the sense of *hakawak* in the garden, *hiri kabas*, *soru tais*, and so on, now that knowledge is developing. The community now understands that *hakawak* also occurs in farmer groups, money gathering and cooperatives. Thus, it can be said that local knowledge about *hakawak* also developed.

From the explanation above, it can be seen that *hakawak* is traditional wisdom. In this traditional wisdom found local group solidarity, whose manifestation is real in *hakawak*. In

addition, there is a growing traditional knowledge. Community understanding of *hakawak* also developed. This understanding of *hakawak* is not only about local group solidarity but is broader than that. This solidarity with the true spirit of *hakawak* is manifested in institutionalized groups such as farmer groups and cooperatives, as well as in non-institutional groups namely money gathering. By seeing the *hakawak* that was previously carried out by the people and drawn a thread by the solidarity of this new group, it is true that it is said that *hakawak* gets a new face. Farmer groups, money gathering and cooperatives are clear evidence of this new face of *hakawak. hakawak malae*. In other words, because *hakawak* is traditional wisdom, it can be said that traditional wisdom has a new face. Therefore, it is no exaggeration to say that *hakawak* is always new local wisdom.

## CONCLUSION AND RECOMMENDATIONS

*Hakawak* always develops from time to time. The development of *hakawak* from time to time affirms that the *hakawak* soul always lives in society. In Weoe Village, it was found that *hakawak* transformed in a new form. The transformation of *hakawak* can be found in three forms, namely farmer groups, money gathering, and cooperatives.

The presence of *Hakawak Malae* gave its own contribution to the socio-cultural resilience of the Weoe Village community. Indeed, human beings for the sake of their survival must establish cooperation with fellow humans. If it is connected with the *hakawak malae* that occurs, then a meeting point will be found. To carry out their lives, the community cooperates with each other. This collaboration is evident in farmer groups, money gathering and cooperatives. The manifestation of cooperation is evident in the contributions of *hakawak malae*. One form of contribution from *hakawak malae* to the lives of the Weoe Village community is solidarity. The presence of *hakawak malae* actually strengthens this solidarity. In addition to self-help, education is one form of contribution from *hakawak malae* to the people of Weoe Village. In *hakawak*, education grows thriving. In socio-cultural resilience, one of the factors that contributes to socio-cultural resilience is education. Because education from *hakawak malae* thrives, it cannot be denied that social cultural resilience also grows. Thus, it can be seen that education from *hakawak malae* provides its own contribution in enhancing social and cultural resilience in Weoe Village. In *hakawak malae*, the value of self-help is strengthened. In addition, the embodiment of this cooperation is in line with one of the factors that influence socio-cultural resilience, namely socio-economic conditions. To be able to fulfill its economic life, the community conducts *hakawak*.

Keontjaraningrat divide *hakawak* into two types, namely mutual help *hakawak* and mutual aid community work.

*First*, mutual cooperation for mutual help. The system of mutual help (which is also called mutual cooperation) is indeed not always given willingly and sincerely, but there are several levels of willingness, depending on the type of activities in social life.. Thus it can be distinguished between: (1) mutual help in agricultural activities, (2) mutual help in activities around the household, (3) mutual help in preparing for the party and ceremony, and (4) mutual help during the disaster. *Second*, mutual aid community work. In addition to the habit of helping each other among a small community in various social lives, there are activities that are jointly worked out, called "mutual cooperation". Such activities are carried out by a large number of community members to work together to complete a certain project that is considered beneficial for the public interest, namely community work activities or community service. There are two types of mutual aid community work, namely (1) cooperate in projects initiated by the community members themselves, and (2) collaborating on projects ordered by the Village Head. The projects initiated by the community members themselves of course the benefits are truly felt, because of that they are done with sincerity and full of enthusiasm. On the other hand, projects that are ordered from above, often they do not understand the true benefits, and are perceived as obligations that they cannot avoid except by representing them to others (by rewarding money). To get a positive response from community members, the Government or the Village Head must indeed be able to convince the villagers of the

benefits of a project for the entire village so that they are willing to work enthusiastically (Koentjaraningrat, 2005: 152-153).

Reflecting on what was expressed by Koentjaraningrat, it was necessary to explore every *hakawak malae*. In general, *hakawak malae* that occur in Weoe Village can be categorized mutual help *hakawak*. This is because the *hakawak* that occur always assume that everyone must join hands together to do something. *Hakawak* is used as a "calling power" when *hakawak* human suffer. For example, when *hakawak* people need money to fulfill their needs, the community carries out money gathering *hakawak*.

*Mutual help Hakawak* then divided into mutual help in farming activities, mutual help in activities around the household, mutual help in preparing parties and ceremonies, and mutual help during the disaster. Mutual help in agricultural activities manifested in the form of farmer groups. Because farmer groups occur within the scope of agriculture, it is certain that the mutual help that happened was certainly in agricultural activities. In other words, farmer groups as *hakawak malae* are the mutual help *hakawak* in agricultural activities.

Money gathering as *hakawak malae* included in the mutual help around household activities and mutual help during the disaster. Mutual help in activities around the household is evident when the money earned from the money gathering is used to meet the household needs of each member of the money gathering *hakawak*. In addition, money gathering is also included in the mutual help when the disaster occurs because there is solidarity in the money gathering provided by each member of the money-gathering to members who experience grief..

Cooperatives can be categorized into mutual help around the household and mutual help when disaster occurs. Cooperatives are a place where humans can help each other. Money collected by members can be used by other members to meet their household needs. This mutual help can be said as indirectly mutual help, because the money collected is still accommodated by the cooperative, then it is only forwarded to other members in need. Even so, the mutual help still materialize. This mutual help relationship can be read as follows: from members, accommodated by cooperatives, and return to members. The cooperative is also included in the mutual help during the disaster. The solidarity of grievances given to members' heirs is clear evidence of mutual help during this disaster.

*Research Suggestions.* *Hakawak* is an Indonesian culture. Therefore this very great culture needs to be maintained and preserved so that it still exists and can be used to build a society. In this paper, some suggestions will be given, as follows:

- Need for further research on the transformation of the culture of *hakawak*. This needs to be done because the research related to the transformation of the *Hakawak* culture is still very little. This means that with the continued research on the transformation of *hakawak*, the Indonesian culture of *hakawak* is increasingly enriched. It is also intended that the understanding of *hakawak* be expanded.
- Need for efforts to "institutionalize" the *hakawak*. "Institutionalizing" *hakawak* can be understood as follows: *First*, by reflecting on what was revealed by Soekarno that the *ekasila* of *pancasila* is *hakawak* (mutual cooperation), and further elaborated by Driyarkara as the philosophical (life view) of the Indonesian nation, it is necessary to instill this philosophical in Indonesian people. The point is that of course it is not excessive if this great philosophy is taught on every level of education, starting from elementary to university level, as a special subject.

*Second*, because *hakawak* is a characteristic of the Indonesian nation, the Government must also contribute to maintaining the existence of *hakawak* by forming a special institution on *hakawak*.

- One of the factors that caused the start of *hakawak* is rarely carried out by Indonesian people in general is politics. Therefore, it is necessary to carry out reconciliation efforts from those who won the election, for example the Village Head to the President.
- Recently Indonesian people have easily formed in groups through the development of social media such as Facebook, Instagram and WhatsApp and other social media. It is no exaggeration if through social media like this, *hakawak* groups are formed.

## REFERENCES

1. Bakker, Y. W., de Koning, J., & van Tatenhove, J. 2019. Resilience and social capital: The engagement of fisheries communities in marine spatial planning. *Marine Policy*, 99, 132-139.
2. Ball, D. 1993. Strategic culture in the Asia-Pacific region. *Security Studies*, 3(1), 44-74.
3. Berg-Schlosser, D. 2019. Comparative Methods in Transformation Research: Political Culture. *The Handbook of Political, Social, and Economic Transformation*, 231.
4. Creswell, John W., 2012. *Research Design: Pendekatan Kualitatif, Kuantitatif, and Mixed*. Yogyakarta: Pustaka Pelajar.
5. De Mooij, M. 2019. *Consumer behavior and culture: Consequences for global marketing and advertising*. SAGE Publications Limited.
6. De Mooij, M. 2019. *Consumer behavior and culture: Consequences for global marketing and advertising*. SAGE Publications Limited.
7. Elander, I., & Gustavsson, E. 2019. From policy community to issue networks: Implementing social sustainability in a Swedish urban development programme. *Environment and Planning C: Politics and Space*, 2399654418820077.
8. Fastenrath, S., Coenen, L., & Davidson, K. 2019. Urban Resilience in Action: the Resilient Melbourne Strategy as Transformative Urban Innovation Policy?. *Sustainability*, 11(3), 693.
9. Hostettler, S., Jöhr, A., Montes, C., & D'Acunzi, A. 2019. Community-based landslide risk reduction: a review of a Red Cross soil bioengineering for resilience program in Honduras. *Landslides*, 1-13.
10. Huda, M. 2019. Empowering application strategy in the technology adoption: insights from professional and ethical engagement. *Journal of Science and Technology Policy Management*, 10(1), 172-192.
11. Humannira, Raden Regia, 2016. "Proses Internalisasi Nilai Kearifan Lokal Masyarakat Banten Pada Mahasiswa yang Tergabung dalam Organisasi Kedaerahan (Studi Deskriptif di Organisasi Kedaerahan Perhimpunan Mahasiswa Banten Bandung)", *Institutional Repositories & Scientific Journals (September) E~Journal on-line*. Melalui <http://repository.unpas.ac.id/13175/5/BAB%202.pdf>. [21/08/2018].
12. Idrus, Muhammad, 2009. *Metode Penelitian Ilmu Sosial: Pendekatan Kualitatif and Kuantitatif, Edisi Kedua*. Jakarta: Erlangga.
13. Inglehart, R. 2018. *Culture shift in advanced industrial society*. Princeton University Press.
14. Irfan, Maulana, 2016. "Crowdfunding sebagai Pemaknaan Energi Gotong Royong Terbarukan", *SHARE: Social Work Journal (Juni) E~Journal on-line*. Melalui <http://fisip.unpad.ac.id/jurnal/index.php/share/article/view/67>. [13/08/2018].
15. 2017. "Metamorfosis Gotong Royong Dalam Pandangan Konstruksi Sosial", *Prosiding Penelitian & Pengabdian Kepada Masyarakat (Januari) E~Journal on-line*. Melalui <http://jurnal.unpad.ac.id/prosiding/article/view/14204/6868>. [4/09/2018].
16. Jamali, D., & Karam, C. 2018. Corporate social responsibility in developing countries as an emerging field of study. *International Journal of Management Reviews*, 20(1), 32-61.
17. Katzenstein, P. J. (Ed.). 1996. *The culture of national security: Norms and identity in world politics*. Columbia University Press.
18. Katzenstein, P. J. 1998. *Cultural norms and national security: Police and military in postwar Japan*. Cornell University Press.
19. Keraf, Sonny, 2002. *Etika Lingkungan*. Jakarta: Kompas.
20. Koentjaraningrat, 2005. *Pengantar Antropologi: Pokok-pokok Etnografi II*. Jakarta: Rineka Cipta.
21. Lemhanas, 1995. *Ketahanan Nasional*. Jakarta.
22. Lemos, M. F., Saback, L., Rego, L. F., Antunes, M. C., & Lopes, R. A. (2020). PUC-Rio Socio-environmental Agenda: New Steps Towards Sustainability in the University. In *Universities as Living Labs for Sustainable Development* (pp. 733-746). Springer, Cham.

23. Lo, K. W., Ip, A. K., Lau, C. K., Wong, W. S., Ngai, G., & Chan, S. C. 2019. Integrating Majors and Non-majors in an International Engineering Service-Learning Programme: Course Design, Student Assessments and Learning Outcomes. In *Service-Learning for Youth Leadership* (pp. 145-163). Springer, Singapore.
24. McOmber, C., Audia, C., & Crowley, F. 2019. Building resilience by challenging social norms: integrating a transformative approach within the BRACED consortia. *Disasters*, 43, S271-S294.
25. Page-Reeves, J., Marin, A., Moffett, M., DeerInWater, K., & Medin, D. 2019. Wayfinding as a concept for understanding success among Native Americans in STEM: "learning how to map through life". *Cultural Studies of Science Education*, 1-21
26. Ponsioen, J. A. 2019. *The analysis of social change reconsidered: A sociological study* (Vol. 4). Walter de Gruyter GmbH & Co KG.
27. Sabinot, C., & Lescureux, N. 2019. Local Ecological Knowledge and the Viability of the Relationships with the Environment. In *Coviability of Social and Ecological Systems: Reconnecting Mankind to the Biosphere in an Era of Global Change* (pp. 211-222). Springer, Cham.
28. Santo, R., & Moragues-Faus, A. 2019. Towards a trans-local food governance: Exploring the transformative capacity of food policy assemblages in the US and UK. *Geoforum*, 98, 75-87.
29. Shawoo, Z., & Thornton, T. F. 2019. The UN local communities and Indigenous peoples' platform: A traditional ecological knowledge-based evaluation. *Wiley Interdisciplinary Reviews: Climate Change*, e00575.
30. Sillitoe, P. 2019. *Investigating local knowledge: New directions, new approaches*. Routledge.
31. Singla, A., Sethi, A. P. S., & Ahuja, I. S. 2018. A study of transitions between technology push and demand pull strategies for accomplishing sustainable development in manufacturing industries. *World Journal of Science, Technology and Sustainable Development*, 15(4), 302-312.
32. Suneki, Sri, 2012. "Dampak Globalisasi Terhadap Eksistensi Budaya Daerah." *Civis* (Januari) E-Journal on-line. Melalui <http://journal.upgris.ac.id/index.php/civis/article/view/603>. [7/08/ 2018].
33. Tsui, A. S., Enderle, G., & Jiang, K. 2018. Income inequality in the United States: Reflections on the role of corporations.
34. Verdery, K. 1991. *National ideology under socialism: identity and cultural politics in Ceausescu's Romania* (Vol. 7). Univ of California Press.
35. Wardani, A. P., & Kusumasari, B. 2019. Socio-Cultural Dynamics of Resilience Building: Lesson Learned from Sleman, Indonesia. *JKAP (Jurnal Kebijakan and Administrasi Publik)*, 23(1), 63-76.
36. Wilson, G. A., & Wilson, O. J. 2019. Assessing the resilience of human systems: a critical evaluation of universal and contextual resilience variables. *Resilience*, 7(2), 126-148.

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## **THE INFLUENCE OF CAREER GROWTH AND JOB INSECURITY ON TURNOVER INTENTION OF OUTSOURCING WORKERS IN PORT SERVICES FIELD COMPANIES**

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### **ABSTRACT**

The purpose of this study was to determine the effect of career growth and job insecurity on turnover intentions on X company outsourcing workers in port services and to compare the influence of both independent variables on turnover intentions. This research was conducted on outsourcing workers with a total subject of 80 people. The data collection instrument used in this study is a questionnaire consisting of a translation of career growth measurement tools belonging to Weng and Hu (2009 in Weng et al, 2010), the global job insecurity measure (Mauno et al, 2001), and turnover intentions from Mobley et al (1978). Data analysis was performed using statistical techniques of multiple regression analysis with the help of IBM SPSS Statistics 21 software. Based on the results of the analysis obtained the R square value of 0.425 with a significance level of 0.00. These results indicate that career growth and job insecurity variables have a significant influence on turnover intentions. The comparison of the results of the two independent variables shows that career growth has a contribution of 45% with a coefficient of -0.641 and a significance level of 0.00. On the other hand, job insecurity has a contribution of 7.5% with a coefficient of 0.20 and a significance level of 0.852. Based on these results it can be concluded that the effect of career growth on turnover intentions is stronger than job insecurity.

### **KEY WORDS**

Career growth, job insecurity, turnover intention, outsourcing worker, port services.

In the current industrial development, the growth of exports and imports of goods is growing rapidly. Countries that are agents of export and import of trade commodities must be able to adapt well in order to have a positive impact on the country's economy. One of the most important parts of the export and import process is the availability of port services and infrastructure. Indonesia is one country that has a considerable role in the world of export and import of trade commodities. Therefore, national and international ports operating in Indonesia are vital objects of the state.

As one of the vital objects of the state, the port needs to be managed optimally. Through a service company that manages port activities it is expected to be able to support the export and import trade flows in Indonesia. Service companies in carrying out their business are very dependent on the human resources they have. Human resources who have high quality can make maximum contributions to the organization. Thus human resources are an important capital for the organization in carrying out a port service business optimally.

When looking at the importance of the role of human resources for the organization, the company must pay attention to this component. One problem that needs to be considered by organizations in managing human resources is turnover. Based on a survey conducted by HayGroup (2013), the turnover rate in Indonesia was 25.8%. This figure is greater than the average turnover that occurred in the Asia Pacific region which is estimated to reach 24%. The high turnover rate in Indonesia can have both positive and negative impacts. Positive consequences can be accepted by the organization if the party that does

the turnover is a less competent employee. Perez (2008) explains that companies will benefit when substitutes for less competent employees have better qualifications. However, Sverke et al (2002) explained that what often happens is that turnover is done by employees who have good competence so that the organization bears the loss of turnover. Three negative impacts of turnover are cost overruns, operational disruptions, and decreased employee motivation. Thus the organization should start thinking about ways to keep employees from being tempted to leave the organization.

The turnover phenomenon that occurs in outsourcing workers in company X which is engaged in port services has increased. Based on the data obtained shows an increase in turnover from the previous year which was 8% to 13%. This increase is quite significant because Helen (2014; Radjasa, 2012) states that the highest turnover rate in the banking services sector is around 10-15%. Outsourcing workers are operational employees who work for other companies within a certain period of time and can be extended according to employee performance or organizational needs. The outsourcing workers offered by company X are workers who have special skills in operating port heavy equipment. Therefore, this phenomenon is quite disturbing the performance of service user organizations in providing port services both export, import and domestic.

Based on interviews with resource persons from company X explained that there were three factors that influenced employee turnover, namely job security, career growth, and the amount of incentives they received. Sverke et al (2006) explain that job insecurity occurs more often with non-permanent employees. Further, Van Vuuren and Klandermans (in Sverke et al, 2002), anxiety about the continuity of work in the future is the definition of job insecurity. Then, career growth is the possibility of employees to obtain promotions or additional abilities for career advancement (Weer in Karavardar, 2014). Based on previous studies, it was shown that turnover intentions were influenced by job insecurity (Blau et al., 2006; Sverke et al. 2002) and career growth (Karavardar. 2014; Weng & McElroy, 2012). In this study, the author tried to develop the research by comparing the strength of the influence of the two factors on different subjects and contexts. Thus company X can focus on one factor to control labor turnover.

## LITERATURE REVIEW

In an effort to prevent turnover, organizations need to know the possibility of employees wanting to turnover through measuring turnover intentions. Ajzen and Fishbein 1980 (in Jeswani and Dave, 2012) intentions are important concepts to be studied because they are related to individual perceptions and drivers of behavior that will occur. Turnover intention is the desire of individuals to leave the organization or the work currently undertaken voluntarily (Jeswani and Dave, 2012). Several factors can influence one's turnover intentions including:

- Job Satisfaction. Job satisfaction is job satisfaction as an emotion arising from a positive assessment of the results of work obtained (Locke, 1969 in Perez, 2008). Yucel (2012) explains from the results of his research that satisfaction with turnover intentions.
- Organizational Commitment. A sense of trust from individuals towards organizational values and goals followed by individual efforts to do the best for the organization (Mowday et al, 1979 in Perez, 2008). The results of the study from Cooper-Hakim and Viswesvaran (2005 in Chughtai & Zafar, 2006) state that commitment has a negative correlation with turnover.
- Job Insecurity. Greenhalgh and Rosenblatt (1984 in Sverke et al., 2006) explain that job insecurity is a feeling of a person's inability to maintain his job in a threatening situation. Furthermore, the results of research conducted by Silla et al (2010) state that job insecurity correlates with job dissatisfaction, low commitment, and turnover intention.
- Career Growth. Jans (in Kim et al., 2015) explains career growth as an individual's awareness of opportunities to develop in an organization. Based on the results of a

study conducted by Jawahar (2012 in Kim et al., 2015) stated that career growth has a negative correlation with turnover intention. In other words, when an organization is able to provide good career opportunities for the employees it will make the employee stay in the organization.

- Personality. Personality is an individual factor that influences one's turnover intentions. In general, the personality type commonly used as a factor of turnover intention is big five personality. Big five personality consists of 5 personality types namely agreeableness, extraversion, conscientiousness, neuroticism, and openness to experience. Jeswani and Dave (2012) explain that agreeableness and extraversion have an influence on turnover intentions.

Career Growth is a person's perception of the opportunity to develop in an organization (Jans, 1989 in Weng & McElroy, 2012). This definition is supported by Weng (2010 in Weng & McElroy) by stating 4 dimensions possessed by career growth, namely the achievement of career goals, improvement in professional abilities, speed of promotion, salary increases. Career growth is a concept based on social exchange theory (Karavardar, 2014). In the career growth concept, social exchange theory is in the reciprocal relationship between work providers and workers. The relationship will be maintained even stronger if each of the needs can be met with each other.

Weng et al (2010 in Weng & McElroy, 2012) explain that there are 4 factors in career growth, namely:

- Achievement of career goals is the consideration of individuals regarding the opportunity to increase in accordance with the career goals set at the work done now.
- Professional proficiency enhancement is an opportunity that can be obtained by individuals to get new knowledge and skills from the current job.
- Promotion speed is the duration of the possibility of individuals to get a promotion or position in accordance with the hierarchy of organizational structures.
- An increase in wages is an individual's perception of the opportunity to obtain an increase in compensation. Increased compensation is not only in terms of quantity, but also how quickly the compensation increases.

Job insecurity is a feeling of someone's inability to maintain their existence at work in threatening situations (Greenhalgh and Rosenblatt, 1984, in Sverke et al, 2006). The concept of job insecurity is subjective because it is based on the perceptions and interpretations of each individual. At first, job insecurity was considered a motivator for employees at work. However, at this time job insecurity is more seen as a stressor because in the long term it can generate bad reactions to mental and physical health in individuals (Greenhalgh & Rosenblatt in Sverke et al, 2006).

There are several factors that are the background of the emergence of job insecurity that is suggested by Sverke et al (2006). These factors include:

- Age. Based on several studies showing that older employees have higher job insecurity levels (Hartley et al, 1991; Mohr 2000; Naswall & De Witte, 2003; in Sverke et al, 2006). Hartley et al (in Sverke et al, 2006) explain that this is because older employees will find it difficult to get a new job so the level of fear of losing a job becomes high.
- Gender. Based on the results of the study, male employees tended to be more worried about losing their jobs than female employees (Kinnunen, 1998; Rosenblatt et al., 199; in Sverke et al., 2006). This is because there is an assumption that the role of a man is a provider for his family. On the other hand, there are results that show that women who have a role as family providers also have a high level of job security (De Witte in Sverke, 2006).
- Personality. Individuals with external locus of control have a tendency to worry about losing their jobs. In addition, individuals who have high self esteem tend to have low job insecurity levels (Ashford et al, 1989; Hartley et al, 1991; Kinnunen et al 1999; Sverke et al, 2004; in Sverke et al, 2006).

- Socio-Economics. Employees who have low social status are also likely to have low salaries. Low status correlates with the low level of education. With the low level of education resulting in not many skills and knowledge obtained so that alternative jobs become fewer and fewer. This results in high fears of losing jobs to employees who have low status with low salaries (Frese, 1985; Kinnunen et al, 1999; in Sverke et al, 2006).
- Type of Contract. Employees with permanent or full-time contracts have lower job insecurity levels compared to contract employees. This is because employees with permanent contracts have legal agreements that if violated by the company can harm the company itself. Permanent employees will also feel an important part of the company compared to contract employees (Barling & Gallagher, 1969; Sverke et al, 2000; in Sverke et al, 2006).

Social Support. Lazarus and Folkman (1984 in Sverke et al, 2006) social support is one of the factors that can reduce stress. Job insecurity can be one of the stressor factors. Social support can be obtained from family, work colleagues, and labor organizations. Therefore, individuals who get social support will have lower job insecurity levels (Armsstrong-Stassen in Sverke et al, 2006).

The explanation above shows the alleged effect of career growth and job insecurity on turnover behavior that occurs in the outsourcing company X. Therefore, the author feels the need to prove these allegations by examining the factors that have been mentioned for turnover intentions in outsourcing workers who are still working in company X.

Hypothesis:

H1: There is an effect of career growth on turnover intentions in outsourcing workers in company X.

H2: There is an effect of job insecurity on turnover intentions in outsourcing workers in company X.

H3: Career growth has a stronger influence on turnover intentions in outsourcing workers in company X.

## METHODS OF RESEARCH

Based on the data collection technique, this study included quantitative research with survey methods. This can be seen from the data collection process using the questionnaire. Based on the objectives of his research, this research is included in the type of explanatory research. The sample used as the subject of this study is outsourcing workers from company X. The subjects taken are outsourcing workers who have worked for at least 2 years. The qualification was taken because in accordance with article 59 paragraph 6 of labor law number 13 of 2003 that the renewal of a certain time work agreement can only be held after exceeding the 30 (thirty) day grace period for the expiration of a long time work agreement, renewal of the work agreement this particular time can only be done once and for a maximum of 2 years. Based on these qualifications, the total population in this study amounted to 80 people.

The sampling technique used in this study was the snowball sampling technique. Data collection in this study used 3 questionnaires. The first questionnaire was to measure career growth which is the result of the translation process of career growth instruments developed by Weng and Hu (in Kim et al, 2015). In this questionnaire there are 15 items with 4 dimensions of career growth. Reliability using stratified alpha obtained in this study was 0.93. The second questionnaire is the job insecurity questionnaire used in this study is the result of the process of transition from the global job security measure obtained from the article Mauno et al (2001). This instrument obtained Cronbach Alpha reliability value of 0.698. The third questionnaire is the turnover intention questionnaire used in this research which is the result of the translation process of turnover intention instruments compiled by Mobley et al (1978). This questionnaire has a reliability value of 0.871. The three questionnaires are in the Likert scale with ranges of 1 to 5. The data analysis technique used in this study is multiple

linear regression analysis techniques. This technique is used because the purpose of this study is to determine the effect of independent variables on the dependent variable.

## **RESULTS AND DISCUSSION**

This study aims to determine the effect of career growth and job insecurity on turnover intentions on outsourcing workers in company X and compare the contribution of the influence of each independent variable. Based on the data analysis that has been done in this study, it is known that the variables of career growth and job insecurity have an effect on turnover intentions in outsourcing workers in company X. It can be seen from the significance value in ANOVA multiple linear regression modeling of 0.00 or smaller than 0.05. In addition, the influence of the independent variables on the dependent variable shows a value of 42.5%.

Based on the data analysis of each independent variable, the influence of career growth on turnover intentions was 0.641 with a significance of 0.00. This shows a significant effect of career growth on turnover intentions. The beta coefficient value of career growth variable towards turnover intention is negative so that the higher career growth given by the organization will reduce the turnover intention level. These results are in line with the results of research from Karavadar (2014), Shahzad et al (2011), and Weng and McElroy (2012) so that if the career growth is of low value, then turnover intention will be higher.

In the job insecurity variable, the influence on turnover intention is 0.20 with a significance of 0.85. This shows that the effect of job insecurity on turnover intentions is not significant. Based on the results of research conducted by Chirumbolo and Hellgren (2003), the effect of job insecurity on long-term consequences, one of which is turnover intention, is mediated by short-term consequences, such as unproductive behavior and absenteeism.

Based on the two results, it shows that career growth has a stronger influence on turnover intention than the effect of job insecurity. So far there have been no studies that support the results of this study, so the authors suspect that this result occurs because the variable career growth can directly influence turnover intention (Karavadar, 2014). On the other hand, the effect of job insecurity on long-term consequences, one of which is the intention to turn over, must be mediated by short-term consequences, such as unproductive behavior and absenteeism (Chirumbolo and Hellgren, 2003).

This research can not be separated from several weaknesses. These weaknesses are likely to influence the results of this study. One drawback of the study is the possibility of the existence of social desirability. Social desirability is the tendency of subjects to respond according to things that are socially acceptable. The absence of researchers when the subject filled out the questionnaire also became a weakness in this study. This is due to the possibility that the subject does not understand the intent of the statement stated in the questionnaire so that the answer is not in accordance with the actual conditions.

## **CONCLUSION AND RECOMENDATIONS**

Based on the results of the research conducted, it can be concluded that a significant effect was found in the career growth variable towards turnover intentions but was not significant in the job insecurity variable. For this reason, the authors give suggestions to researchers who want to test the effect of job insecurity on turnover intentions in order to use mediation of unproductive behavior or absenteeism. In addition, this study can be enriched with additional social support for outsourcing workers by adding marital status to the demographic characteristics of the subject.

Another suggestion that can be given to company X is to add responsibility and duties to outsourcing workers. It aims to develop knowledge and skills for the workforce. In addition, with the addition of responsibilities and tasks, outsourced workers can get reward or incentive money. Especially for outsourced workers who operate specialized port equipment, companies can make changes to labor status and promotion systems (career paths) so that

there is clarity regarding employee status and career goals that can be achieved by outsourcing workers.

## REFERENCES

1. Blau, G., Daymont, T., Hochner, A., Koziara, K., Doyle, K., & Ellinger, P. (2006). Exploring the impact of certification activity, years of laboratory experience, highest degree held, occupational commitment, and job loss insecurity on intent to leave occupation for medical technologists. *Journal of Allied Health*, 35(4), 208-214.
2. Chirumbolo, A., & Hellgren, J. (2003). Individual and organizational consequences of job insecurity: A European study. *Economic and Industrial Democracy*, 24(2), 217-240.
3. Chughtai, A.A. & Zafar, S. (2006). Antecedents and consequences of organizational commitment among Pakistani university teachers. *Applied H.R.M. Research*, 11(1), 39-64.
4. Haygroup. (2013). Preparing for Take Off
5. Jeswani, S. & Dave, S. (2012). Impact of individual personality on turnover intention: A study on faculty members. *Management and Labour Studies*, 37(3), 253-265.
6. Karavardar, Gulsah. (2014). Organizational career growth and turnover intention: An application in audit firms in Turkey. *International Business Research*, 7(9), 67-76.
7. Kim, B., Rhee, E., Ha, G., Jung, S.H., Cho, D., Lee, H.K., & Lee, S.M. (2015). Cross-cultural validation of the career growth scale for Korean employees. *Journal of Career Development*.
8. Mauno, S., Leskinen, E., & Kinnunen, U. (2001). Multi-wave, multi-variable models of job insecurity: Applying different scales in studying the stability of job insecurity. *Journal of Organizational Behavior*, 22, 919-937.
9. Mobley, W.H., Horner, S.O., & Hollingsworth, A.T. (1978). an evaluation of precursors of hospital employee turnover. *Journal of Applied Psychology*. Vol. 63, No. 4. pp. 408-414.
10. Perez, Mylene (2008). Turnover Intent. Thesis: University of Zurich.
11. Radjasa, Satya. (2012, 21 Mei). Hidden cost of employee turnover. Portalhr [on-line]. Downloaded on 12 February 2018 from <http://www.portalhr.com/komunitas/opini/hidden-cost-of-employee-turnover/>
12. Shahzad, K., Hussain, S., Bashir, S., Chishti, A.F., & Nasir, Z.M. (2011). Organizational environment, job satisfaction and career growth opportunities: A link to employee turnover intentions in public sector of Pakistan. *Interdisciplinary Journal Of Contemporary Research In Business*, 2(9), 45-56.
13. Silla, I., Gracia, F.J., Manas, M.A., & Peiro, J.M. (2010). Job insecurity and employees' attitudes: The moderating role of fairness. *International Journal of Manpower*, 31(4), 449-465.
14. Sverke, M, Hellgren, J., & Naswall, K. (2006). *Job Insecurity: A literature review*. Stockholm: SALTSA.
15. Sverke, M., Hellgren, J., & Naswall, K. (2002). No security: A meta-analysis and review of job insecurity and its consequences. *Journal of Occupational Health Psychology*, 7(3), 242-264.
16. Undang-Undang Nomor 13 Tahun 2003 tentang Ketenagakerjaan.
17. Weng, Q., & McElroy, J.C. (2012). Organizational career growth, affective occupational commitment and turnover intentions. *Journal of Vocational Behavior*, 80, 256-265.
18. Weng, Q., McElroy, J.C., Morrow, P.C., & Liu, R. (2010). The relationship between career growth and organizational commitment. *Journal of Vocational Behaviour*, 77, 391-400.
19. Yucel, Ilhami. (2002). Examining the relationship among job satisfaction, organizational commitment, and turnover intention: An empirical study. *International Journal of Business and Management*, 7(20), 44-58.

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## **CRISIS DOMINATION AND CRISIS RESPONSE STRATEGIES OF INDONESIAN STATE-OWNED COMPANIES IN ONLINE MEDIA DURING JANUARY 2007 – JULY 2018**

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### **ABSTRACT**

A crisis is an unexpected event that threatens the important expectations of stakeholders and has a serious impact on organizational performances. By understanding the type of crisis that exists, it will help organization to choose the right crisis response strategy. This study uses positivistic paradigm with quantitative method through content analysis for collection data techniques. The purpose of this study is to describe domination of crisis types and crisis response strategies of state-owned companies in Indonesia, PT. Pertamina (Persero) and PT. Telkom Indonesia (Persero) Tbk, which was reported by detik.com within 10 years. Content analysis was conducted on total of 189 news crisis obtained from news on detik.com for the period Januari 2007 – July 2018. The results of the study based on Situational Crisis Communication Theory by Coombs and Holladay (2002). This study shows that there are different styles between two companies in responding to the current crisis situation.

### **KEY WORDS**

Content analysis, crisis type, crisis response strategy, situational crisis communication theory, state-owned companies, Indonesia.

As a manager, consultant, or researcher cannot rule out the crisis which occurs in the organization, even it is in small forms, such as pollution, industrial accidents, and product defects (Mitroff, Shrivastava, and Udwardia, 1987). According to Regester and Larkin (2005), a crisis is an event which makes the organization as the public spotlight and has the potential to be disliked. Companies which experience a crisis are defined as companies which get unexpected events that cause problems and threaten the priority goals of an organization (Seeger, Sellnow, and Ulmer, 1998 in Dean, 2004).

There are several statements from different writings which reveal that the crisis experienced by an organization can affect the reputation of an organization. Dean (2004) states that the crisis experienced by an organization will have an impact on negative publicity so that it can threaten the reputation of the organization. Meanwhile, Winkleman (1999) states that the reputation of an organization is recognized as one of the resources which have high value and can affect the image of the organization. Besides being able to damage the reputation of an organization, it turns out that crises can also influence the behavior of stakeholders towards the organization (Dowling, 2002).

Rising crises have caused pressure on organizations in responding the crises so that crisis management is needed (Coombs, 2001). Crisis management aims to minimize the negative impact of an event through the preparation and implementation of several strategies and tactics (Kriyantono, 2015, p. 220). Sturges (1994, p. 298) in his paper mentions three areas of crisis management, namely preparation for crisis challenges, organizational and public behavior during the crisis period, and the importance of communication between organizations and their public during the crisis.

Sturges (1994) emphasizes the importance of communication with the public during a crisis has an aim to provide the correct information and it is expected to form positive opinions after the crisis. Coombs (1999) also emphasizes that when an organization faces a crisis, the organization needs to communicate with its public as a form of crisis response. To protect the reputation of an organization, a situational approach is needed in choosing a crisis response strategy to find out what the organization must say and do (Coombs and Holladay, 2002). One of the theories of a comprehensive situational approach for responding the crises and protecting the organizations is Situational Crisis Communication Theory (Coombs and Holladay, 2002).

The basic assumption of Coombs (2007) in formulating Situational Crisis Communication Theory (SCCT) is an advantage in understanding the crisis communication which can protect the reputation of the organization as an asset during a crisis. Coombs (2007) states that the SCCT provides an evidence-based framework which has purpose to understand how to protect an organization's reputation through post-crisis communication. What is believed in this theory is that a crisis manager in an organization must be able to understand the crisis situation well, including assessing the level of threats caused by the crisis, to determine crisis management strategies which can maximize reputation protection (Coombs, 2007). SCCT has a crisis response strategy, which is divided into two parts, namely the primary crisis response strategies and secondary crisis response strategies (Coombs, 2007, p. 170). In the SCCT study is divided into 3 crisis divisions, namely victim clusters, accidental cluster, and intentional clusters (Coombs and Holladay, 2002, p. 179).

Barton (1990) explains that the crisis stage experienced by an organization can be seen from the news in the media around. Barton (1990, p. 7) states that the effectiveness of a relation among the media is one of the important aspects of crisis management. In addition, Kriyantono and McKenna (2017, p. 9) also mention that one of the principles which must be applied in public relations theory in Indonesia is to tell the truth. From the research conducted by Barton (1990), many cases stated that the organization was less alert and unavailable in providing information to the media, from this situation the public opinion formed would tend to be negative. Coombs (2006) also mentions the importance of seeing how media frames the crisis faced by organizations because it will affect public perceptions and the image of the organization.

This content analysis study will look at how media coverage will be reflected in crisis dominance and crisis response strategies used by an organization. The media that will be chosen by researchers is online media, namely detik.com. There are two selected subjects of state-owned companies in this study, namely PT. Pertamina (Persero) and PT. Telekomunikasi Indonesia (Persero) Tbk. Analysis of the news will be selected through citations, either directly or indirectly, expressed by the internal parties of the company which are restated by the media.

Furthermore, this research is carried out by referring to the two main problem formulations. First, the dominant type of crisis which occurred in the two Indonesian state-owned companies in the period of January 2007 - July 2018. Second, the dominant crisis response strategy was most often used by the two Indonesian state-owned companies.

## **LITERATURE REVIEW**

So many writings define the meaning of the crisis, Rodriguez, Quarantelli, and Dynes (2007) mention that crises have become part of human experience since humans lived in groups. From the definitions cited by Coombs and Holladay (2010, p. 18-19), they define crises as perceptions of unexpected events which threat to the important expectations of stakeholders and have a serious impact on organizational performance and produce negative results. Therefore action is needed to prevent crises or minimize damage caused by crises. Coombs and Holladay (2002) in his writing also explain that before deciding on a crisis response strategy to be used, a crisis manager needs to identify the type of crisis, then by knowing the type crisis faced, it aims to find out the level of crisis responsibility which

would become a public attribute in a crisis situation. Coombs (2007) identifies 3 crisis clusters based on the attribution of crisis responsibility from the type of crisis

- The victim cluster: this cluster has a low level of responsibility attribution to the crisis. This shows that organizations are as the victims of an event, such as natural disasters, workplace violence, rumors, and so on;
- The accidental cluster: this cluster has a minimal level of responsibility attribution to the crisis. This shows that the events which cause the crisis occur accidentally and are out from the control of the organization, such as accidents due to technical errors, product damage due to technical errors, and challenges;
- The intentional cluster: this cluster has the highest level of responsibility for crisis. This shows the existence of organizational errors is considered done intentionally, such as accidents due to human error, product damage due to human error, and organizational misdeeds.

In this study, the researcher will describe the crisis response strategy which refers to the SCCT theory. SCCT is a theory developed by Coombs and Holladay (2002) through their writing entitled *Helping Crisis Managers Protect Reputational Assets: Initial Tests of the Situational Crisis Communication Theory*. This SCCT is a development from the previous Coombs' (1995) study which discusses matching crisis response strategies and crisis situations. Coombs (1995) in his writing suggests that the formulation of crisis response strategies is an important aspect that must be mastered by organizational management. Assessment of crisis situations is a factor which mostly affects the choice of communication strategies (Ware and Linkugel, 1973; Coombs, 1995; Coombs & Holladay, 1996). Attribution theory will be the basis in explaining the relationship between crisis response strategies and crisis situations (Coombs, 1995, p. 448). Contributions created in the public mind will create the perception that the organization is responsible but not for the crisis. Coombs (1995, p. 449) emphasizes that correct attribution is when a perception is created and the crisis is caused by external parties, is uncontrolled, and has various causes. Clarification related to an event by an organization or individual can influence public attribution in two ways, namely a message which can shape how the way the public sees that there are three public dimensions and a message which can influence public feelings created by attribution (Coombs & Holladay, 1996, p. 282). In other words, the message in a communication is said to be able to influence someone's attribution or the next feeling attached to that attribution.

The SCCT is built from a number of assumptions, one of which is to believe that an organization's reputation includes high-value resources that can be threatened by the existence of a crisis (Coombs & Holladay, 2002). The SCCT offers a framework for understanding these dynamic patterns. The framework offered by SCCT is based on the evidence to understand how to maximize reputation protection during and after a crisis. A crisis manager, before choosing a crisis response strategy will identify the type of crisis first. The results of the identification will be used by the public as a frame to interpret the event. From the frame formed in the minds of the public, it will create attributions related to the crisis faced by the organization. After assessing the level of crisis responsibility based on the type of crisis, crisis managers will determine crisis response strategies based on these assessments. This SCCT study demands a theoretical relationship between crisis situations and crisis response strategies. The following is the SCCT study reference crisis response strategy (Coombs, 2007):

Primary Crisis Response Strategies, namely strategies which contain the denial. Consists of:

- Attack the accuser: crisis managers face the people or groups of people who think something is wrong with the organization;
- Denial: crisis managers insist that there is no or no crisis;
- Scapegoat: crisis managers blame people or groups of people outside the organization for the crisis;
- Excuse: crisis managers minimize organizational responsibility by denying the intention to harm the organization and / or inability to control a crisis-triggering event;

- Justification: crisis managers minimize the damage felt by the crisis. In this case rebuilding the crisis response strategy;
- Compensation: crisis managers offer money or other gifts to victims;
- Apology: crisis managers show a sense of full responsibility for the occurrence of a crisis and ask for apologize from stakeholders.

Secondary Crisis Response Strategies, namely strategies that broadly seek strength or support. Consists of:

- Reminder: remind stakeholders about the good performance of the organization in the past;
- Innovation: crisis managers give praise to stakeholders and or remind them of good performance by the company;
- Victimage: crisis managers remind stakeholders that the position of the organization is also a victim of the crisis.

Coombs (2006) reviews the study of how stakeholders see that the selection of crisis response strategies can be identified through the SCCT. From his study, Coombs (2006, p. 253-254) proves that the denial, attack the accuser, and scapegoat strategies fall into groups when the organization believes that no crisis occurs, excuse and justification strategies are included in the group when organizations try to minimize responsibility for events, and the strategies of compensation, apology, reminder, ingratiation, and victimage fall into groups when the organization has a high responsibility for events. The accuracy of choosing a crisis response strategy with assessment of crisis situations will result in maximum success in crisis management (Coombs & Holladay, 2002).

Heider (1958 in An and Gower, 2009) states that people's perceptions and opinions about an event depend on information which appears around them. In addition, Fombrun and van Riel (2004) also state that organizational reputation is formed from information obtained by stakeholders. Carton (1990, p. 7) emphasizes that one important and crucial aspect of crisis management is the effectiveness of the relationship between organization with the media.

## **METHODS OF RESEARCH**

This research refers to the positivistic paradigm. Bungin (2005) describes the criteria of science having a positivistic view that it is objective (theory must be value-free), phenomenalism (science is only focused on the observed universe), reductionism (the universe is reduced to be observable as the hard facts), naturalism (universe is a moving object mechanically). Regarding the positivistic approach, this study will use quantitative methods. Robert Donmover (in Given, 2008) mentions that quantitative research is research which has an approach through the empirical studies to collect, analyze, and display data in numerical form on the narrative. This will be descriptive research which has a purpose that to describe the dominance of the crisis and the crisis response strategies exist in the two Indonesian SOE companies.

This study will use a quantitative type of research with quantitative content analysis techniques by collecting data from events or events that have already taken place. Favorite (2015) concludes that the purpose of content analysis is to obtain the strong descriptions of the communication studied samples. Supported by the study of Martono (2014, p. 95) which mentions one of the objectives of content analysis is to describe dominance in communication content.

The sampling method used in this study was simple random sampling which received a total of 189 news stories from the two companies, PT. Pertamina (Persero) totaling 116 news and PT. Telkom Indonesia (Persero) Tbk totalling 73 news in the reporting period from January 2007 - July 2018. Furthermore, news samples will be coded by researchers and two other coders using coding sheets. The categorization which becomes the reference in coding data is as follows:

- Type of crisis: victim cluster (1), accidental cluster (2), intentional cluster (3);

- Crisis response strategy: attack the accuser (1), denial (2), scapegoat (3), excuse (4), justification (5), compensation (6), apology (7), reminder (8), ingratiation (9), victimage (10).

The reliability test method used by researchers in this study is intercoder reliability, which uses two or more coders to check the consistency of coding (Martono, 2014). The study uses three coders including researchers. The research reliability test refers to the recommendations of content analysis research by Nurhayati, Ardianto, and Komariah (2000) which use the Pearson contingency coefficient formula (C).

$$C = \sqrt{\frac{\chi^2}{N + \chi^2}}$$

To find out the percentage of agreement coding, it uses the formula  $IR = (1-C) \times 100\%$ . The level of news sample agreement for PT. Pertamina (Persero) amounting to 99.96% and the level of agreement coding for news samples of PT. Telkom Indonesia (Persero) Tbk amounting to 99.54%. In this study we will use a frequency distribution table to process the data obtained by researchers. Through the frequency distribution table, it will help researchers to read the percentage spread of each category. Then it will be moved in the form of a percentage namely numbers and the dominant item appeared.

## RESULTS AND DISCUSSION

The results of research conducted by researchers to get an the dominance idea of the crisis type experienced by Indonesian state-owned companies were analyzed by the news published in detik.com from two companies, namely PT. Pertamina (Persero) and PT. Telkom Indonesia Tbk. Analysis which has been done on 116 news about PT. Pertamina (Persero) and 73 news about PT. Telkom Indonesia Tbk, obtained the results that the crisis reporting for PT. Pertamina (Persero) belongs to the victim cluster crisis type totaling 43.1%, followed by the intentional cluster type totaling 32.8%, and finally the accidental cluster type totaling 24.1%. And, the results of the crisis reporting for PT. Telkom Indonesia (Persero) Tbk is classified as a crisis type cluster totaling 54.8%, followed by the type of accidental cluster totaling 38.4%, and the last type intentional cluster totaling 6.8%.

The results of the researcher's calculations for the crisis response strategy category, the three dominant crisis response strategies used by PT. Pertamina (Persero) published in detik.com's online media portal is a crisis report which uses denial crisis response strategies of 29.3%, followed by justification of 19.0%, and finally scapegoat of 15.5%. As well as the results of the researcher's calculations for the crisis response strategy category, the three dominant crisis response strategies used by PT. Telkom Indonesia (Persero) Tbk which is published in detik.com's online media portal is a crisis report which uses an excuse crisis response strategy of 26.0%, followed by denial strategy of 23.3%, and finally justification of 13.7%.

## CONCLUSION

The dominance of the type of crisis faced by PT. Pertamina (Persero) based on the results of an analysis of the news in detik.com in the period of 10 years from January 2007 - July 2018 is a type of victim cluster crisis. Just like PT. Pertamina (Persero), the dominance of the type of crisis faced by PT. Telkom Indonesia Tbk based on the analysis of news on detik.com in the 10 years period from January 2007 - July 2018 is also a type of victim cluster crisis. When referring to the crisis type theory formulated by Coombs (2007), the two Indonesian state-owned companies are more often faced the crises which cannot be controlled by the company. This shows that the two Indonesian state-owned companies have low or minimal levels of responsibility attribution to the crisis.

Regarding the description of the most dominant crisis response strategy used by the two Indonesian state-owned companies, PT. Pertamina (Persero) and PT. Telkom Indonesia (Persero) Tbk, are within 10 years period from January 2007 - July 2018. For PT. Pertamina (Persero), the most dominant crisis response strategy used is denial strategy. This strategy is a form of rejection or denial of the company against the crisis. Meanwhile, the most dominant crisis response strategy is carried out by PT. Telkom Indonesia Tbk is an excuse strategy. This strategy is a business enterprise by minimizing corporate responsibility by denying the company's inability to respond to the crisis. When it is associated with the Coombs (2007) of SCCT theory, organizations which have cluster victim crisis situations are recommended to use denial crisis response strategies. Whereas, the use of excuse crisis response strategies is more recommended for organizations in the cluster accidental.

## REFERENCES

1. Barton, L. (1990). Crisis management: Selecting communications strategy. *Management Decision*, 28(6), 5-8.
2. Barton, L. (1993). *Crisis in organizations: Managing and communicating in the heat of chaos*. Cincinnati, OH: College Divisions South-Western Publishing.
3. Barton, L. (2001). *Crisis in organizations II* (2nd ed.). Cincinnati, OH: College Divisions South-Western Publishing.
4. Coombs, W. T. (2007). Protecting organizations reputations during a crisis: the development and application of situational crisis communication theory. *Corporate Communication Review*, 10(3), 163-176.
5. Coombs, W. T. (2015). *Ongoing Crisis Communication: Planning, Managing, and Responding* (fourth edition). California: Sage Publishing.
6. Coombs, W. T. (2010). Why a concern for apologia and crisis communication? *Corporate Communication: An International Journal*, 15(4), 337—349.
7. Coombs, W. T., Holladay, S. J. (2002). Helping crisis managers protect reputational assets: initial test of the situational crisis communication theory. *Management Communication Quarterly*, 16(2), 165-186.
8. Coombs, W. T., Holladay, S. J. (2006). Unpacking the halo effect: reputation and crisis management. *Journal of Communication Management*, 10(2), 123-137.
9. Coombs, W. T., Holladay, S. J. (2010). *The Handbook of Crisis Communication*. UK: Blackwell Publishing Ltd.
10. Dowling, G. (2002). *Creating Corporate Reputations: Identity, Image, and Performance*. New York: Oxford University Press.
11. Krippendorff, K. (2004). *Content Analysis: An Introduction to Its Methodology*. California: Sage Publications.
12. Kriyantono, R. (2014). *Teknik Praktis Riset Komunikasi*. Jakarta: Prenada Media.
13. Kriyantono, R. (2014). *Teori Public Relations Perspektif Barat dan Lokal: Aplikasi Penelitian dan Praktik*. Jakarta: Kencana.
14. Kriyantono, R. (2015). *Public Relations, Issue & Crisis Management: Pendekatan Critical, Etnografi Kritis & Kualitatif*. Jakarta: Kencana.
15. Kriyantono, R., McKenna, B. (2017). Developing a Culturally-Relevant Public Relations Theory for Indonesia. *Malaysian Journal of Communication*, 33(1), 1-16.
16. Martono, N. (2014). *Metode Penelitian Kuantitatif: Analisis Isi dan Analisis Data Sekunder*. Jakarta: Rajawali Pers.
17. Mitroff, I. I. (1994). Crisis management and environmentalism: a natural fit. *California Management Review*, 36(2), 101-113.
18. Mitroff, I. I., Shrivastava, P., Udwadia, F. E. (1987). Effective crisis management. *The Academy of Management Executive*, 1(4), 283-292.
19. Riffe, D., Lacy, S., Fico, F. (2014). *Analyzing Media Messages: Using Quantitative Content Analysis in Research*. New York: Routledge.
20. Sturges, D. L. (1994). Communicating through crisis: a strategy for organizational survival. *Management Communication Quarterly*, 7(3), 297-316.

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## **THE EFFECTIVENESS ANALYSIS OF VILLAGE FUND PROGRAMS AND THEIR EFFECT ON DEVELOPMENT, EMPOWERMENT, AND WELFARE OF VILLAGE COMMUNITIES IN MENDOYO, JEMBRANA**

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### **ABSTRACT**

Development disparity between villages and cities has led the government to implement village funds policies to improve better development and reduce income inequality between villages and cities. This study aims to analyze the following: 1) the effectiveness of village fund programs; 2) the effect of village fund programs on village development and empowerment of village communities; 3) the effect of village fund programs, village development and empowerment of rural communities on community welfare; 4) the role of village development and empowerment of village communities in mediating the effect of village fund programs on community welfare. This study was conducted in Mendoyo, Jembrana. The samples of this study were 115 respondents taken using simple random sampling with lottery method. Data collection methods used was observation, interviews and in-depth interviews. The data analysis technique used was descriptive statistical analysis and Structural Equation Modeling (SEM) and the Partial Least Squares (PLS) are conducted to statistically test the model. The results of the analysis show that the village fund program in Mendoyo, Jembrana is relatively effective. Village fund programs have a positive and significant effect on village development and empowerment of rural communities. The village fund program does not have a significant effect on community welfare, but village development and empowerment of rural communities have a positive and significant effect on community welfare. Village development and empowerment of village communities fully mediate the influence of village fund programs on community welfare; given that village fund programs are directly insignificant towards community welfare.

### **KEY WORDS**

Effectiveness, village funds, development, empowerment, welfare.

National development in its implementation is facing problems of development such as development disparity between villages and cities. Inequality between regions will make population migration and capital migration from underdeveloped regions to developed regions (Cherodian and Thirlwall, 2013). Inequality in development is also caused by demographic differences between regions. The government's strategy to resolve the development disparity is implementing nation-wide development which focuses on village development.

The Undang-undang (UU) No. 32 of 2004 as amended by UU No. 23 of 2014 concerning Regional Government, explains the existence of a decentralized system, like the delegation of government affairs by the Central Government to Regional Governments. The village is the lowest level of regional government. Villages have a strategic role in the development and improvement of community welfare. The UU No. 6 of 2014 concerning Villages, where villages are given adequate authority and sources of funds through village funds to manage their potential for economy and prosperity improvement of the community. The purpose of the Village Fund is to improve public services in the village, alleviate poverty, advance the village economy, overcome inter-developmental disparities, and strengthen village communities as subjects of development (UU No. 6, 2014). Based on Government Regulation Number 8 of 2016, the priority of village funds is to develop and empower the rural communities.

Based on the policy of reformulating the distribution of village funds in 2018, the distribution of Village Funds was channeled by calculating 77 percent based on equity (Basic Allocation), 3 percent based on affirmation for disadvantaged villages and very lagging villages (Affirmation Allocation) and 20 percent (Formula Allocation) based variable number of villagers (10 percent), number of poor people (50 percent), village area (15 percent), and village geographical difficulty level (25 percent). The Village Fund Distribution is divided into two stages, such as the first stage (to be finished soon in March and the latest in July) of 60 percent and the second stage (to be finished soon in August) of 40 percent (PMK 50/2017).

The success of the Village Fund Program can be seen through the Village Development Index (IPD). IPD is a measure prepared to assess the level of progress or development of villages in Indonesia with its unit of analysis which substantially and together describes the level of development in the village. In the period of 2014 to 2018, there were three villages which has increased their status from the developing village into independent village. The number was classified as very small compared to the number of village status improvements in other Districts or Cities. This has caused Jembrana need of Village Fund assistance to improve village development and the empowerment of rural communities to increase the village development index.

The obstacles on managing village funds are the capacity of human resources in the village government and the low level of community participation (Aziz, 2016). According to the Supreme Audit Agency, there are problems in village financial management such as in governance and financial reporting due to the lack of knowledge of village officials, so that there is potential for fraud or corruption. Village development can be successful due to several factors, like village capacity, community participation and village head leadership (Nurjaman, 2015).

The purpose of this study is to analyze as follows: 1) the effectiveness of the village fund program; 2) the effect of village fund programs on village development and empowerment of village communities; 3) the effect of village fund programs, village development and empowerment of rural communities on community welfare; and 4) the role of village development and empowerment of village communities in mediating the effect of village fund programs on community welfare.

## LITERATURE REVIEW

Economic development is a process that causes rise of income per capita of a country's population continuously in the long period. According to Todaro (2006) the success of economic development is shown by three basic values, such as the development of the people's ability to meet basic needs, the increasing sense of self-esteem of people as humans, and the increased ability of the community to choose (freedom from servitude) which is one of human rights.

Administration of development is the efforts that carried out by the village to grow, develop, and change consciously and planned in all aspects of the life and livelihood of the village concerned to achieve the ultimate goal. Development activities in villages by Jayadinata (2006: 87) are the fields of economy, social, physical and infrastructure and government. Village Development is an effort to improve the quality of life and life for the greatest welfare of the village community. Rural development is a rural concept of development which focuses on the social and cultural characteristics of people in rural areas. Effective development is not solely caused by opportunities but it is the result of determining priority choices of activities by good planning (Jafar, 2015).

Effectiveness is the utilization of resources, facilities and infrastructure in a certain amount which is consciously set beforehand to produce a number of goods for the services of the activities carried out. Effectiveness is always related to the relationship between the actual results achieved (Wambrauw, 2013). Effectiveness is a measure that states how far the target (quantity, quality and time) has been achieved by management, which target has been determined in advance.

Empowerment--based on the Indonesian Ministry of Social Affairs--implies the recognition of the potential for giving trust and opportunities to encourage independence and increase the ability to solve problems. The meaning of empowerment for government circles can be identified as an effort to foster. The community can achieve their welfare must be fostered because they are in poor condition. This effort includes three things, such as first, encouraging, motivating, increasing awareness of its potential and creating a climate or atmosphere to develop. Second, strengthen the power of potential and positive steps to develop it. Third, providing various inputs and opening up access to opportunities.

Village government based on UU Number 72 of 2005 concerning Villages, Article 6 states that the Village Government is the administration of government affairs by the Village Government and the Village Consultative Body in regulating and managing the interests of the local community based on local origins and customs that are recognized and respected in the system of Government of the Republic of Indonesia. The Village Head is a policy implementer while the Village Consultative Body is a policy making and supervisory institution (village regulation). Village finance is all village rights and obligations that can be valued with money and everything in the form of money and goods related to the implementation of village rights and obligations. The rights and obligations referred cause income, expenditure, financing, and management of village finances.

Village Funds are aid funds allocated to the Village Government that are used to improve community service facilities, institutions, and village infrastructure that are needed and prioritized by the community, whose utilization and administration are carried out and accounted for by the Village Head. The purpose of the Village Fund is to provide stimulant assistance or stimulant funds to encourage the funding of the Village Government program which is supported by the participation of community self-help in implementing government activities and community empowerment.

Harrod Domar's theory of savings and investment emphasizes that community development is only a matter of providing capital and development investment is nothing but investment. This theory is based on the assumption that development problems are basically a problem of adding capital investment. The problem of underdevelopment is the problem of lack of capital. Development requires investment as a driver of production. From this productivity, it will absorb the workforce that forms labor regulations while contributing to the state in the form of taxes.

Human Capital Theory: David McClelland is based on the assumption that development problems are basically a problem of adding capital investment. This theory explains that the higher the level of education, the higher the level of income. The higher the level of income, the higher the skills and knowledge. With the higher skills and knowledge, the higher the level of productivity. With the existence of high skills and knowledge, it encourages high levels of income.

The level of welfare includes food, education, health, sometimes also associated with employment opportunities, old age protection, and freedom from poverty and so on. According to Albert and Robin (1999), the theory of community welfare is basically divided into two, such as social welfare theory and economic welfare theory. Social welfare theory can be classified into utilitarian classical, neoclassical welfare theory, and new contractarian approach. Classical utilitarian approaches emphasize pleasure (pleasure) or satisfaction (utility).

## **CONCEPTUAL FRAMEWORK**

Village development is an effort made to improve the quality of life and the lives of people in an area where village development is carried out by all levels of both government and society (Sutoro, 2014). Based on a study conducted by Feiby, et al (2017), the Village Fund program policy has an impact on increasing the economy of the community. It is due to an increase in infrastructure of agricultural roads so that access to transportation from plantation locations can be easier and speed up the process of selling results- agricultural product.

A study conducted by Dydha (2017) on the influence analysis of Village Funds on the village infrastructure development and rural communities empowerment showed that the Village Fund had a positive effect on the development of village infrastructure as a support for the economy in the form of increasing SMEs. The community will become more economically prosperous if empowerment is carried out more intensively and well-structured which is supported by good cooperation by the community and the government. Community empowerment is carried out so that people are more independent in economic terms so that they will be strong enough in competition. Based on research from Yamulia (2018) regarding the management of village funds in empowering rural communities, it was shown that the first supporting factor for managing village funds was support from a complete policy. The second one would be the socialization of village fund management that had been followed by village officials. Empowerment activities are prioritized for physical empowerment such as road and waste construction, while non-physical empowerment is related to official village government training and Family Welfare Empowerment (PKK).

The study conducted by Muhammad, et al (2017) regarding the effectiveness of village funds for the development of community participation-based economic potential shows that the use of the Village Fund is very effective, especially in the development of village economies to empower people who can ultimately help improve the economy. The participation or initiative of the village government is also very important in the context of empowering rural communities because the main authority of the village government is planning. In the process of development planning the community is always actively participating, especially in musrenbang (Musyawarah Rencana Pembangunan, development plan discussion) activities so that community empowerment can run well.

In this section we will describe the relationship between research variables to clarify which variables function as independent variables and dependent variables. The conceptual framework of this research shows the relationship between independent variables and dependent variables, where the dependent variables are village development, community empowerment, and community welfare while the independent variables include the Village Fund program.

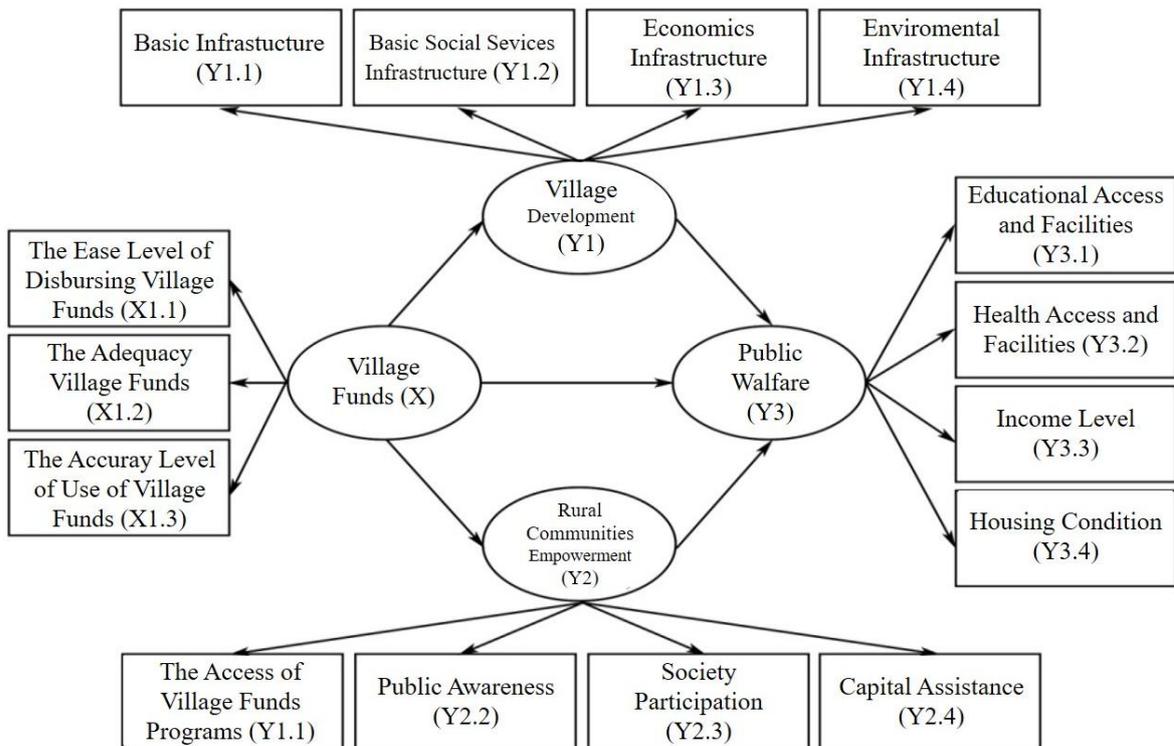


Figure 1 – The Effectiveness Analysis of Village Fund Programs and Their Effects on Development, Empowerment, and Village Community Welfare in Mendoyo, Jembrana

Based on empirical studies, hypotheses can be formulated to provide direction for research analysis:

- The Village Fund Program has a positive effect on village development and the empowerment of rural communities in Mendoyo District, Jembrana Regency;
- The Village Fund Program, village development, and village community empowerment have a positive effect on community welfare in Mendoyo District, Jembrana Regency;
- Village development and empowerment of village communities mediate the influence of the Village Fund Program on community welfare in Mendoyo District, Jembrana Regency.

## METHODS OF RESEARCH

This study used a quantitative method that aims to test the hypotheses that have been determined, besides that, this study also used descriptive statistical analysis and analysis of Structural Equation Modeling (SEM) using Partial Least Square PLS. The location of this study is in Mendoyo District, Jembrana Regency, Bali Province. The objects of this study are the effectiveness of the Village Fund Program, the influence of the Village Fund Program on village development, the empowerment of village communities, and the welfare of the community in Mendoyo District, Jembrana Regency.

The variables analyzed in this study include the Village Fund Program variable as measured by indicators of the ease of disbursing village funds, the adequacy of village funds, and the level of accuracy of the use of village funds. Village development variables which are measured by indicators of basic infrastructure, facilities for basic social services, economic infrastructure, and environmental infrastructure. Community empowerment variables measured by indicators of access to village fund programs, public awareness, community participation, and capital assistance. Community welfare variables measured by indicators of education access and facilities, access and health facilities, income level, and housing conditions.

The type of data in this study used is quantitative data which included the number of villages that received the Village Fund Program in Bali Province, the number of villages in Jembrana Regency, the number of village officials and community elements in Mendoyo District, Jembrana Regency, and qualitative data which included information about the research location and regarding government programs in an effort to improve village quality and community welfare. This research uses primary data sources by conducting observations, interviews and in-depth interviews with village officials and community elements as well as quantitative data such as a list of villages receiving village fund allocation programs, the number of village officials and elements of the village community in Mendoyo, the amount of village funds given to each village, the demographics of the sub-districts declined. The population in this study were village officials and community elements totaling 161 people with a sample of 115 respondents determined by the Slovin method and the sampling technique used was simple random sampling using the lottery method. The data analysis used was descriptive statistical analysis and Structural Equation Modeling (SEM) using Partial Least Squares (PLS). The model of the equation in this study in accordance with Figure 1 is formulated as below.

$$Y_1 = \beta_1 X + \varepsilon_i \quad (1)$$

$$Y_2 = \beta_2 X + \varepsilon_i \quad (2)$$

$$Y_3 = \beta_3 X + \beta_4 Y_1 + \beta_5 Y_2 + \varepsilon_i \quad (3)$$

Where:  $X$  = village fund program,  $Y_1$  = village development,  $Y_2$  = village community empowerment,  $Y_3$  = community welfare,  $\beta_1, \dots, \beta_5$  = loading factor,  $\varepsilon_i$  = noise or measurement error.

## RESULTS OF STUDY

*Characteristics of Respondents.* Respondents of this study were dominated by male as much as 84.3 percent and women as much as 15.7 percent. It means that the respondents in this study were dominated by male, because generally jobs as village officials and community leaders tend to be done by men. Respondents with age range of 20-29 years occupy the smallest position that is equal to 6.1 percent of the total samples available, while respondents with the highest number are in the age range of 40-49 years with a percentage of 39.1 percent of the total samples available. This means that work as village officials and community leaders is still dominated by people of productive age.

Respondents have educational levels ranging from junior high school to graduate level. In this study, the majority of respondents were educated to graduate high school, amounting to 80.9 percent, then Diploma-educated respondents by 2.6 percent, and respondents who were educated up to the Bachelor level were 15.7 percent. In this study, respondents who had a low education level did not dominate. Only a small percentage of respondents are junior high school graduates. Respondents who were only able to reach the junior high school level were 0.9 percent. Education is very influential in managing village funds. With high or enough education allows the respondent to be able to manage assistance from the village fund program on target. In general education has a positive influence on productivity.

All respondents in this study included village officials and community elements which included the village head, village secretary, village affairs head, village section head, neighborhood or hamlet head, BPD chairman, and LPM chairman. Respondents in this study were dominated by respondents as head of the neighborhood or hamlet with a percentage of 32.2 percent. Respondents as village heads accounted for at least 5.2 percent of the total sample. This means that the management of village funds is carried out by village officials and village institutions involving village communities.

*Outer Model Testing.* Convergent validity of a measurement model that has a reflective indicator can be assessed from loading factors (i.e. a correlation between item score or component score and construct score) indicators that measure the construct. An indicator can be declared valid if it has a loading factor above 0.6 for the intended construct. All loading factors in this research indicator have values greater than 0.6. This shows that the terms of convergent validity have been fulfilled. Furthermore, to test discriminant validity, measurement of discriminant validity from the measurement model can be assessed based on cross-loading measurement indicators with the construct. Correlation of construct indicators in this study has a higher value than the correlation of these indicators with other constructs, it is said that the construct has high discriminant validity. Cronbach's Alpha measures the lower limit of the reliability value of a construct, whereas Composite Reliability measures the true value of the reliability of a construct (Chin and Gopal in Salisbury et al, 2002). The Role of thumb of the value of Cronbach's Alpha or Composite Reliability must be greater than 0.7, but if the results obtained are close to 0.7 (such as 0.6), this is still acceptable in exploratory studies (Hair et al, 2006). The Cronbach's Alpha and Composite Reliability values from each construct in this study are greater or close to 0.70 so that the measure used in this study is reliable. The result of Q2 calculation is 0.876 so that it can be said to have a strong predictive prevalence, so that the resulting model is feasible to predict. The number of 0.876 can be interpreted that the variation in community welfare by 87.6 percent can be explained by variations in the village fund program, village development, and empowerment of rural communities, while the remaining 13.4 percent is explained by other variables outside the model.

*Effectiveness of the Village Fund Program.* The effectiveness of the village fund program implementation in the village fund program variable is quite effective with an effectiveness value of 78.50 percent. Effectiveness of implementing village fund programs on variables village development is classified as effective with the effectiveness of 78.75 percent. Effectiveness the implementation of the village fund program on the variable of empowering village communities is classified as effective with an effectiveness value of 75.50 percent. Effectiveness of implementing village fund programs on variables community

welfare is classified as effective with an effectiveness value of 78.50 percent. Based on the results of the effectiveness values of each of these variables, the effectiveness of the village fund program is classified as effective in Mendoyo District, Jembrana Regency with an effectiveness value of 77.75 percent.

*Effect of Village Fund Programs on Village Development.* The village fund program has a positive and significant effect on village development with p value = 0,000 with the equation function:  $Y_1 = 0.529 X$ . Village funds really help the village government to realize infrastructure policies and development and can prosper the village community which is far from prosperous for the central government. Sujiono (2006) states that there are several factors that can influence the level and direction of village development, such as location factors, regional facilities and infrastructure including connecting roads. Before the existence of village funds, the changes in the community were very slow, especially those caused by low income, inadequate education, and employment status that was far from normal. This result is reinforced by research from Rini (2016) The existing Village Fund usage policy has been targeted for village development and the results can also be felt by the community. This shows that the village fund program has things that can increase village development especially in physical infrastructure related to the interests of the village community. Some studies state that the existence of infrastructure is closely related to the level of development of a region, characterized by the rate of economic growth and community welfare (Calderón & Servén, 2004; Charlery et al., 2016; Chatterjee & Turnovsky, 2012; Démurger, 2001; Maryaningsih et al., 2014; Umiyati, 2012). From the results of interviews with the Chief of Finance of Delod Berawah Village, Ms. Ni Luh Wirani, on April 18, 2019 at the Delod Berawah Village Office also said the results were in line.

"With the assistance of this village fund program, development in the village can be more helpful in terms of funding, because in the past development was constrained by limited funding and since there was a village fund program, in the village, we became very helpful in terms of development such as the provision of infrastructure facilities education, health, connecting roads, the environment and others as well as the infrastructure that is a priority can be fulfilled".

*Effect of the Village Fund Program on the Empowerment of Village Communities.* The village fund program has a positive and significant effect on the empowerment of rural communities with p value = 0,000 with the equation function:  $Y_2 = 0.732 X$ . The use of village funds must involve the community at large, because in village funds use the needs and attitudes of the community are very important, especially in level of community participation. All village governments in Mendoyo, Jembrana have involved the community on developing their own potential and their own regions. This is supported by village funds channeled to the community, whereby the community is able to accept and participate on developing their potential and village potential. First, when planning activities and budgets, the community actively participated in planning and development meetings at the hamlet (banjar) level, which then continued to the village level. Secondly, at the time of program implementation, the role of the village community was needed, because with community support the programs and activities that had been established could run well. Third, the monitoring and evaluation process. Monitoring and evaluation must be carried out by the government to see the realization of planned programs or activities.

In addition, the government is also required to provide accountability reports for programs and activities along with the budget used at the end of each year. The report was aimed transparently at the village community. In its implementation, each village government in Mendoyo District always reports activities to the community. In addition, the village government has also reported the process carried out during the year starting from planning to evaluation. From the results of an interview with the Head of the Pergung Village Service Office, Ms. Ni Ketut Sutarmia at the Pergung Village Office on April 16, 2019 the results were in line: "In the village fund program in terms of empowering rural communities, the village government supported by all elements of the community has tried to participate in socializing the village fund program so that the community can know and be aware of its position as a community member and participate and oversee the village fund program. We have also

given village communities access so that we can play an active role in activities from the village fund program".

This result is supported by Dyah's research (2018) which states that the types of community empowerment activities that have been carried out so far can be seen from two perspectives, first if based on the concept of law, then activities that have been implemented such as training and assistance or capital are in line with the paradigm empowerment. Research from Fossati (2016) found several things that had an effect on the success of implementing the ADD program to empower rural communities including human resource factors and socialization in the allocation of funds.

*The Effect of Village Fund Program, Village Development and Village Community Empowerment on Community Welfare.* Village development has a positive and significant effect on community welfare with p value = 0,000 with the function equation:  $Y_3 = 0.031 X + 0.513 Y_1 + 0.352 Y_2$ . Empowerment of rural communities has a positive and significant effect on people's welfare with p value = 0.019. Except for the influence of the village fund program on community welfare that is not significant with p value = 0.792. The government cannot directly provide assistance, like money to the community. The government could facilitate community welfare through village development and empowerment of village communities. The form of village development can be directed by providing basic infrastructure, economic, social and environmental facilities. Similarly, the empowerment of village communities can be directed in the form of providing access, awareness, participation and capital.

All these things must also involve the community, so they can participate on managing various potentials that may be developed. Of course this will have an impact on people's welfare. Community welfare shows a measure of the results of community development in achieving a better life that includes capacity building and equitable distribution of basic needs such as housing, health, then increased income, and better education, and increased attention to human values (Todaro and Stephen C. Smith, 2006). This is in line with the results of interviews with Mr. I Gusti Agung Kd. Bambang, as the Village Head of Mendoyo Daging Tukad at the Mendoyo Daging Tukad Village Office on 12 April 2019 that: "Community welfare in the village fund program is channeled through rural development activities and empowerment accordance with the priorities of the existing rules, besides that it can also control the funding provided to be more directed accordance with the needs of the community and can be felt directly by the community".

This result is supported by the research of Vitasurya (2016) and Zhang & Xu (2016) which shows that the priority of the utilization of village funds is related to the development of village facilities and infrastructure and the empowerment of village communities based on the conditions and potential in the village, in line with the achievement of Village RPJM (Medium-term Development Plan) and RKP (Government Action Plan) targets every year.

*The Role of Village Development and Empowerment of Village Communities in Mediating the Effect of Village Fund Programs on Community Welfare.* Village development and empowerment of village communities mediate the influence of village fund programs on community welfare with a p value = 0,000. The use of the majority of village funds for development is based on several considerations, first, the construction of physical infrastructure is a real need of the community. Second is the outcome, benefits and impacts of development directly felt by the community. Third, accountability is easier. Fourth, the benefits can be enjoyed by the entire community. Fifth, can create jobs for the community. Some empirical facts from the research of Calderón & Servén (2004); Démurger, (2001); Maryaningsih, et al (2014) show that the development of infrastructure capacity in a region goes hand in hand with its economic development, this is because economic development has demanded the availability of adequate infrastructure facilities and infrastructure. The existence of infrastructure encourages increased productivity of production factors. Infrastructure improvement increases investment and economic growth, because investment will increase employment.

Inequality of infrastructure development will also play a role in the gap in economic development which leads to inter-regional welfare inequality (Démurger, 2001; Fan & Chan-Kang, 2008; Surd, Kassai, & Giurgiu, 2011; Warr, Menon, & Rasphone, 2015). The results

are supported by research from Roy Stevensen Iver Turere, et al (2018) which states that the Village Fund is quite capable of increasing community income, adequate education levels, providing employment opportunities, and being able to improve community development in Pineleng Subdistrict, and village funds. On supporting the level of welfare of the existing community in terms of education, health, and community income. The discussion was also supported by the results of interviews with the Chairperson of the LPM of Yeh Sumbul Village, Mr. M. Hadori on April 23, 2019 at the Yeh Sumbul Village Office, which said:

"The presence of village development as a result of the village fund program here does not only encourage the emergence of opportunities for the community in terms of income and employment, but also concerning the social status of the community".

This is in line with research from Majumder (2012) showing that adequate infrastructure can increase average living standards and reduce poverty. The same thing can be supported by Feiby (2017) research which states that the community economy is increasing after the Village Fund program. This is due to an increase in infrastructure of agricultural roads, so that access to transportation from the plantation site is easier, thus accelerating the process of selling agricultural products. Infrastructure facilities can play an important role in regional development (Kateja & Maurya, 2011).

According to Chambers (1995) community empowerment is an economic development concept that summarizes social values. This concept reflects the new development paradigm, which is "people-centered, participatory, empowering, and sustainable". Community empowerment as a model of community-based development is an effort to increase the dignity of our people who are still trapped in poverty and underdevelopment. If viewed from the point of administering State administration, the community empowerment is not solely an economic concept but implicitly contains the notion of enforcing economic democracy, it is an economic activities that take place from the people, by the people and for the people (Dyah et al. 2018).

The purpose of community empowerment is basically to help authentic and integral human development from weak, poor, marginal and small communities and empower these community groups in a socio-economic manner so that they can be more independent and can fulfill their basic needs, but are able to play a role and in community development (Sumaryadi, 2005). Empowerment refers to the conditions or outcomes that a social change wants to achieve, like, a empowered community, has the power or knowledge and ability to fulfill its needs, both physical, economic and social, such as having self-confidence, being able to express aspirations have a livelihood, participate in social activities, and be independent in carrying out their life's tasks.

## **CONCLUSION AND SUGGESTIONS**

The effectiveness of the Village Fund Program, which is seen from the village fund program variable, village development, village community empowerment and community welfare, is classified as successful and effective in Mendoyo, Jembrana, Bali with an effectiveness value of 77.75 percent. This can be seen from the effectiveness of the village fund program variable of 78.50 percent which is considered effective, the effectiveness of the village development variable is 78.75 percent which is classified as effective, the effectiveness of the village community empowerment variable is 75.50 percent which is classified as effective, and the effectiveness of the community welfare variable is 78.50 percent which is considered effective. Village fund programs have a positive and significant effect on village development and empowerment of rural communities in Mendoyo, Jembrana. The village fund program directly does not have a significant effect on community welfare, but village development and empowerment of rural communities have a positive and significant effect on the welfare of the community in Mendoyo, Jembrana, Bali. Village development and empowerment of village communities fully mediate the influence of village fund programs on community welfare in Mendoyo District, Jembrana District, given that village fund programs are not directly significant to community welfare.

Based on the results of the analysis and conclusions obtained, we suggest that the role of officers is expected to be more active in disseminating and providing explanations regarding village fund programs so that the elderly and those who have low education can understand well. Collaboration between the government and the community is also necessary in this regard so that the village fund program really provides great benefits for the community in particular and the village in general.

## REFERENCES

1. Albert, Michael and Robin Hahnel. 1999. *Marxism and Socialist Theory: Socialism in Theory and Practice*.
2. Aziz Nyimas Latifah Letty. 2016. Otonomi Desa dan Efektivitas Dana Desa. *Jurnal Penelitian Politik*, 13(2), 193–211.
3. Calderón, C., & Servén, L. 2004. The Effects of Infrastructure Development on Growth and Income Distribution (Working Papers No. 3400). Working Papers No. 3400. doi: 10.1596/1813-9450-3400.
4. Cantarero, Rodrigo., Potter, James. 2014. Quality of Life, Perceptions of Change, and Psychological Well-being of the Elderly Population in Small Rural Towns in the Midwest. *International Journal of Aging and Human Development*. Vol. 78. pp: 1-18.
5. Chambers, R. 1995. *Rural Development: Putting the Last First*. London; New York.
6. Charlery, L. C., Qaim, M., & Smith-Hall, C. 2016. Impact of Infrastructure on Rural Household Income and Inequality in Nepal. *Journal of Development Effectiveness*, 8(2), 266–286.
7. Chatterjee, S., & Turnovsky, S. J. 2012. Infrastructure and Inequality. *European Economic Review*, 56(8), 1730–1745.
8. Cherodian, Rowan dan A. P. Thirlwall. 2013. *Regional Disparities in Per Capita Income in India: Convergence and Divergence?*. Discussion Papers. School of Economics, University of Kent, Canterbury, Kent.
9. Chin, W. W. 1998. The Partial Least Squares Approach for Structural Equation Modeling. In G. A. Marcoulides (Ed.), *Modern Methods for Business Research* (pp.295–236). London: Lawrence Erlbaum Associates.
10. Démurger, S. 2001. Infrastructure Development and Economic Growth: an Explanation for Regional Disparities In China? *Journal Of Comparative Economics*, 29 (1), 95–117.
11. Dyah Adriantini Sintha Dewi, Habib Muhsyin Syafingi, Alan Bayu Aji. 2018. Paradigma Aparatur Desa dalam Penggunaan Dana Desa untuk Pemberdayaan Masyarakat. *Jurnal Pandecta*. Vol. 13.No. 2. Page 139-149.
12. Dydha, Dimas Okta. 2017. Analisis Pengaruh Dana Desa Terhadap Pembangunan Infrastruktur Desa dan Pemberdayaan Masyarakat Desa (Studi pada Desa Randuagung Kecamatan Kebomas Kabupaten Gresik). *Jurnal JS Local Government Municipal Government*.
13. Fan, S., & Chan-Kang, C. 2008. Regional Road Development, Rural and Urban Poverty: Evidence From China. *Transport Policy*, 15(5), 305–314.
14. Feiby Vencentia Tangkumahat, Vicky V. J. Panelewen, Arie D. P. Mirah. 2017. Dampak Program Dana Desa terhadap Peningkatan Pembangunan dan Ekonomi di Kecamatan Pineleng Kabupaten Minahasa. *Jurnal Agri-Sosio Ekonomi Unsrat*, ISSN 1907– 4298, Volume 13 Nomor 2A.
15. Fossati, D. 2016. Beyond “Good Governance”: The Multi-level Politics of Health Insurance for the Poor in Indonesia. *World Development*. Vol. 87, Page : 291-306.
16. Hair, et al. 2006. *Multivariate Data Analysis*. Sixth Edition. New Jersey: Pearson Education
17. Jafar, Marwan. 2015. *Perencanaan Pembangunan Desa*. Kementerian Desa, PDTT. Jakarta.
18. Kateja, A., & Maurya, N. 2011. Inequality in Infrastructure and Economic Development: Interrelationship Re-Examined. *The Indian Economic Journal*, 58(4), 111–127.

19. Li, T. M. 2016. Governing Rural Indonesia: Convergence on the Project System. *Critical Policy Studies*, Vol. 10(1), 79-94.
20. Majumder, R. 2012. Removing Poverty and Inequality in India: The Role of Infrastructure. Munich Personal Repec Archive. (MPRA Paper No. 40941).
21. Maryaningsih, N., Hermansyah, O., Savitri, M. 2014. Pengaruh infrastruktur terhadap pertumbuhan ekonomi Indonesia. *Buletin Ekonomi Moneter dan Perbankan*, Vol. 17(1), Hal: 61–98.
22. Menkhoff, Lukas. & Rungruxsirivorn, Omsiri. 2010. Do Village Fund Improve Access To Finance? Evidence From Thailand. *Journal of World Development*, Elsevier Ltd, Volume 39.
23. Muhammad Eko Atmojo, Helen Dian Fridayani, Aulia Nur Kasiwi, Mardha Adhi Pratama. 2017. Efektivitas Dana Desa untuk Pengembangan Potensi Ekonomi Berbasis Partisipasi Masyarakat di Desa Bangunjiwo. *Jurnal Umpo*, Vol. 5. No. 1.
24. Nurjaman, R. 2015. Dinamika dan Problematika Implementasi UU Desa: Pembelajaran dari 2 Daerah di Jawa Barat. *Jurnal Desentralisasi*. 13(1).
25. Peraturan Menteri Keuangan Nomor 49/PMK.07/2016 tentang Tata Cara Pengalokasian, Penyaluran, Penggunaan, Pemantauan, dan Evaluasi Dana Desa.
26. Rini Listiyani. 2016. Efektivitas Implementasi Kebijakan Penggunaan Dana Desa Tahun Anggaran 2015 di Desa Gunungpring Kecamatan Muntilan Kabupaten Magelang. *Fakultas Ilmu Sosial, Universitas Negeri Yogyakarta*.
27. Roy Stevensen Iver Turere, Debby Ch. Rotinsulu, Een N. Walewangko. 2018. Efektivitas Dana Desa (DD) Terhadap Peningkatan Kesejahteraan Masyarakat di Kecamatan Pineleng, Kabupaten Minahasa. *Jurnal Pembangunan Ekonomi dan Keuangan Daerah*, Vol. 19, No. 6, Hal.16 .
28. Sujiono. P. 2006. *Manajemen Pelayanan Publik*. Cendekia. Jakarta hal. 235.
29. Sumaryadi, I Nyoman. 2005. *Perencanaan Pembangunan Daerah Otonom dan Pemberdayaan Masyarakat*. Jakarta: Citra Utama .
30. Surd, V., Kassai, I., & Giurgiu, L. 2011. Romania Disparities in Regional Development. In *Procedia - Social and Behavioral Sciences*. Vol. 19. Page: 21–30.
31. Sutoro Eko, Khasanah, Titik Istiyawatun, Dyah Widuri, Suci Handayani, Ninik Handayani, Puji Qomariah, Sahrul Aksa, Hastowiyono, Suharyanto, Borni Kurniawan. 2014. *Desa Membangun Indonesia*. Yogyakarta: Forum Pengembangan Pembaharuan Desa (FPPD).
32. Todaro, Michael P. dan Stephen C. Smith. 2006. *Pembangunan Ekonomi (Edisi Kesembilan, Jilid I)*. Jakarta : Erlangga
33. Umiyati, E. 2012. Analisis Tipologi Pertumbuhan Ekonomi dan Disparitas Pendapatan dalam Implementasi Otonomi Daerah Di Propinsi Jambi. *Jurnal Paradigma Ekonomika*, Vol. 1(5), Hal: 15–21.
34. Undang-Undang Nomor 6 Tahun 2014 Tentang Desa.
35. Undang-Undang Republik Indonesia Nomor 12 Tahun 2008 tentang perubahan Kedua Atas UU Nomor 32 Tahun 2004 tentang Pemerintahan Daerah.
36. Vitasurya, V. R. 2016. Local Wisdom for Sustainable Development of Rural Tourism, Case on Kalibiru and Lopati Village, Province of Daerah Istimewa Yogyakarta. *Procedia Social and Behavioral Sciences*, Vol. 216, pp: 97-108.
37. Wambrauw Ari Yohan. 2013. Efektivitas Pelaksanaan Peraturan Daerah Perpajakan dan Retribusi Daerah dalam Memperoleh Pendapatan Asli Daerah di Kabupaten Supiori Provinsi Papua. *e-Journal. Fakultas Hukum Universitas Atma Jaya Yogyakarta*.
38. Warr, P., Menon, J., & Rasphone, S. 2015. Public Services and the Poor in Laos. *World Development*, 66, 371–382.
39. Yamulia Hulu, R., Harahap, Hamdani, Nasution, Muhammad Arif. 2018. Pengelolaan Dana Desa dalam Pemberdayaan Masyarakat Desa. *Jurnal Pendidikan Ilmu-Ilmu Sosial* Volume 10 (1), Hal: 146-154.
40. Zhang, J., & Xu, L. C. 2016. The Long-run Effects of Treated Water on Education: The Rural Drinking Water Program in China. *Journal of Development Economics*, 122, 1-15.

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## **WOMEN EMPOWERMENT LEVEL AT BEEF CATTLE RANCHERS IN KAMPUNG TERNAK, DASIN VILLAGE, TAMBAKBOYO SUB-DISTRICT OF TUBAN REGENCY**

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### **ABSTRACT**

This study aims to analyze the women empowerment level and the pattern of women empowerment of beef cattle ranchers in *Kampung Ternak*, Dasin village, Tambakboyo sub-district, Tuban Regency. There were 15 respondents involved in this study, they consisted of female ranchers and key informants (community leaders and Village Head of Dasin Village, Tambakboyo sub-district, Tuban Regency). The data were analyzed by employing quantitative and qualitative descriptive methods. The women empowerment level was analyzed by utilizing Longwe method (welfare, access, participation, critical awareness of the problems faced, decision making) and it was modified with an index formula developed by the Ministry of Rural Areas. This study applied qualitative descriptive analysis using the cycle of Miles and Huberman. The results of the analysis showed that the welfare indicator index was 0.622 (developing), the access index was 0.741 (developed); participation index was 0.752 (developed), critical awareness index of problems faced was 0.722 (developed), and decision-making index was 0.743 (developed). The lowest empowerment variable is the welfare index. This is due to the lack of knowledge and creativity in processing livestock products and waste of cattle farming to become valuable things. That condition lowers other sources of income. Thus it can be concluded that the women empowerment level of beef cattle ranchers is fine, but it still needs to be improved by exploring other sources of income, especially processing livestock products into a high-value processed products such as shredded beef, *rendang*, and others, and processing the waste into compost and/or bio gas.

### **KEY WORDS**

Women empowerment of ranchers, empowerment index, women, environment.

Development in Indonesia is one of the efforts to ensure the welfare of the community, so far it still prioritizes the growth aspects of beef cattle to produce a variety of needs, especially beef, and other products such as manure, compost, biogas, skin, bones and so on (Siregar, 2009). Beef cattle are included in the business components that play a role in rural agribusiness, especially in integration system with other agricultural sub-sectors, as a biological and economic chain of farming system (Mariyono et al., 2010).

Mubyarto (1994) states that one of the agricultural sectors that employs many female labors is the livestock subsector. The role of female labors is needed in terms of their patience and tenacity that are believed to be more suitable to work on this sector. Ervinawati, et al. (2015) adds that rural female ranchers have long been known to have an important role as one of the pillars of food production. The involvement of women in livestock business has a contribution to the total outpouring of working time in beef cattle farms. Suradisastra and Lubis (2000) argue that there are several aspects related to the role of women: access, control, decision making and benefits. Access belongs to women who have lack of equal

access to information on resources. In this case, women are treated or considered as second-class citizens. Control aspect is related to the control in the division of labor in beef cattle business which considers women as unpaid labors in the family. Men labors generally dominate all beef cattle business activities based on the highly physical participation. However, women's participation is very influential on the business activities of beef cattle. Decision making aspect is the role of women in decision making. They tend to have less involvement in the decision to buy livestock or products, sell or determine the selling price. A wife's contribution has a lower tendency compared to her husband. Benefits aspect deals with the business activities that can provide benefits to all family members.

Women have significant roles in the family, both in household and economic activities that can support the income. Women (ranchers' wives) are directly or indirectly involved and responsible for managing business activities related to improving family welfare. However, women are generally rewarded with lower wages than men. Frequently, a wife's wage is considered as the result of a husband's contribution to their family income. This is because a woman is often seen as the second person who only helps or supports (subordinate), has low education, and has limited skills to produce economic contributions to the family (Zehra, 2008). This issue also happens in the Dasin village, Tambakboyo Sub-district, Tuban Regency. Based on this background, it is necessary to conduct research on Women Empowerment Level of Beef Cattle Ranchers in Dasin village.

### METHODS OF RESEARCH

This research is a women and environmental study. It examines the experiences, social and economic conditions that occur in women and their surrounding environment. This research combined qualitative and quantitative research method. According to Johnson and Cristensen (2007) in Fitriani (2015), Mixed Method is an approach in research that combines or connects qualitative and quantitative research method, and mixes the use of both approaches in research. According to Sugiyono (2017), qualitative research method is a research method that is based on postpositivism or enterpretive philosophy, researchers plays role as key instruments in data collection techniques (observation, interview, documentation); the data obtained tend to be qualitative data, the data analysis is inductive - qualitative, and the results of qualitative research have tendency to understand meaning, understand unity, construct phenomena, and find hypotheses.

The location of the research chosen by the writer was *Kampung Ternak* in Dasin village, Tambakboyo, Tuban. The researches chose the location based on the fact that the area is a clustered beef cattle village, where female labors have high enthusiasm in playing an active role in beef cattle farming. The study was conducted in January - February 2019.

The focuses of the research in this study are as follows:

- The extent of women empowerment in beef cattle farms in *Kampung Ternak*, Dasin Village, Tambakboyo Sub-district, Tuban Regency;
- The pattern of women empowerment of beef cattle ranchers in *Kampung Ternak*, Dasin village, Tambakboyo sub-district, Tuban Regency in fulfilling household needs, including the role of women in the family and the community (ecology).

The data for this research were obtained from several sources, namely: informants, phenomena or events, and documents. The process of collecting data from each source used the "direction" from the research focus, so that the data could be separated between truly needed and relevant data (fulfilling inclusion criteria) and data that had to be set aside because they were irrelevant (fulfilling exclusion criteria).

The informants in this study were all women who were actively involved in beef cattle farms in the Dasin Villafe, Tambakboyo Sub-district, Tuban Regency. The numbers of informants in this study were 15 people consisting of female ranchers, community leaders, and Village Head in Dasin Village, Tambakboyo Sub-district, Tuban Regency.

The data analysis method was quantitative analysis on the women empowerment index in beef cattle farming business with a combination of women empowerment variable based on Longwe model (welfare, access, participation, critical awareness and decision making)

with an index formula developed by the Ministry of Rural Areas. Women empowerment index =  $\sum$  Women's Empowerment indicator score / maximum total score (ideal score). Furthermore, the pattern analysis of women empowerment applied qualitative analysis from Miles and Huberman cycles which included data reduction, data presentation (data display), and data conclusion or verification (conclusion drawing / verification). These three activities are interrelated and chains as a series (Sugiyono, 2017). The classification of the women empowerment index can be seen in the following table:

Table 1 – Empowerment Index Classification (welfare, access, participation, critical awareness and decision making)

Number	Empowerment Variable	Status Classification				
		Very lagging	Lagging	Developing	Developed	Independent
1	Welfare	≤ 0.491	> 0.491 and ≤ 0.599	> 0.599 and ≤ 0.707	> 0.707 and ≤ 0.815	> 0.815
2	Access					
3	Participation					
4	Critical awareness					
5	Decision making					

Source: Ministry of Rural Areas, *Development of Disadvantaged Regions and Transmigration (2015)*, modified.

## RESULTS AND DISCUSSION

The results of research on women empowerment index from welfare indicator shows that the additional income made by women in utilizing spare time is fine specifically in fulfilling the needs for food and shelter. The income of female beef cattle ranchers is not feasible in fulfilling needs other than basic needs. This is proved by the classification including the status of developing when respondents were asked about the fulfillment of income for health. It can be seen as follows table 2.

Table 2 – Index per Item for Welfare Indicator

Number	Item for Welfare Indicator	Classification	Description
1	Monthly income to fulfill family needs	0.747	Developed
2	Monthly income to fulfill educational needs	0.747	Developed
3	Monthly income to fulfill health needs	0.693	Developing
4	Other sources of income obtained regularly	0.680	Developing
5	Other income from big sources	0.547	Lagging
6	Own more than one house as a source of income	0.507	Lagging
7	Own more than one two-wheeled mode of transportation	0.747	Developed
8	Own more than one four-wheeled mode of transportation	0.467	Very lagging
9	Spend more than IDR 500.000/month	0.493	Lagging
10	Follow the development of technology	0.653	Developing
11	Give more than 50% of income contribution	0.560	Lagging
Overall welfare index		0.622	Developing

The overall welfare index is in the state of developing category. According to the in-depth interviews with respondents, the possible causes are:

- Lack of sources that can generate additional income outside of beef cattle farming businesses, such as four-wheeled vehicles, houses and low ability and creativity in processing beef into processed high-value products such as shredded beef, *rendang*, and processing of waste business in beef cattle farming;
- high level of spending;
- the small number of additional sources of income;
- the small number of cows owned, even 1 cow is owned by more than 1 person.

This beef cattle farm business by women is used to meet the large number of sudden and accidental needs in households. According to Tidaro and Smith (2006), welfare is a subjective matter so that everyone has a view of life, life goals, and different ways of life. Welfare is measured by indicators of food security such as food availability, nutritional

adequacy, availability of access to food to household behavior. This is reinforced by the opinion of Haryadi et al., (2014) that state social capital is defined as social and economic contributions in formal groups in Indonesia which has a positive impact on family welfare. Participation in formal groups can be a benchmark in the sustainability of livestock business. Social capital in developing countries is a fairly convincing investment, but still has to consider and involve the physical capital and human resources.

Empowerment is often used in the context of the ability to improve individual economies which is a prerequisite for empowerment. Empowerment is also a concept that contains the meaning of struggle, especially the struggle of women. These definitions reflect that the empowerment process is a business action to improve economics, socio-culture, politics and psychology, both individually and collectively (Priyono and Pranarko, 1996, in Follyani et al., 2009).

The women empowerment index from the access indicator shows that 4 indicator items belong to the developed category; and only 1 indicator item is in developing category, the opportunity to obtain non-formal education. This has to do with the welfare index that the low income of one beef cattle rancher is due to lack of ability in creativity to increase added value in creating high-value beef-based processed products and beef cattle farm waste. The index per access indicator item towards the resources in the business of female beef cattle ranchers can be seen in Table 3 below:

Table 3 – Index per Access Indicator Item

Number	Item for Access Indicator	Classification	Description
1	Opportunities to use equipment / technology	0.733	Developed
2	Opportunities related to human resources management	0.813	Developed
3	Opportunities related to interaction with community	0.733	Developed
4	Opportunities to access non-formal education	0.707	Developing
5	Opportunities to set goals and planning in the organization	0.720	Developed
Overall Index of Access		0.741	Developed

The result of this study is supported by Carr (2011), explaining that the concept of empowerment is "the ability of individuals to obtain control both socially, politically, economically, or psychologically through access to information, knowledge and expertise, decision making, self-awareness, community participation, and perceived control." Empowerment can also be interpreted as a process to increase self-awareness among members of the organization through identifying conditions of helplessness through efforts to eliminate them, both by using formal and informal techniques from the organization.

The result of the index calculation based on the item of participation indicator on resources shows that the lowest category is participation in setting goals and planning in the organization. The results of the calculation of the indicator item index can be seen in the table 4 below:

Table 4 – Index per Item for Participation Indicator

Number	Item for Participation Indicator	Classification	Description
1	Participation in using equipment	0.787	Developed
2	Participation related to human resources management	0.827	Independent
3	Participation related to interaction with community	0.707	Developing
4	Participation to access non-formal education	0.773	Developed
5	Participation to set goals and planning in the organization	0.667	Developing
Overall Index of Participation		0.752	Developed

Women's participation in the socio-economic improvement of the family is not less important than men. Women are able to do reproductive thing, as well as working to earn a direct income (income earning work) for economic sustainability and household welfare. Women or wives involved in work are driven by the husband's low income, so they work as ranchers, small traders, housemaids, laborers, employees and so on. From this description, it is implied that the husband's economic condition is relatively low which encourages the

wife to participate in seeking income by changing her role from the domestic sector (inside the household) to the public sector (outside the household) (Amirudin, 2014).

From the table above, it can be seen that the lowest status of women's participation index in beef cattle farming is about their participation in setting goals and planning. This shows that the gender equality issue in women's participation in beef cattle farms of Dasin village is still marginal.

This is in accordance to the opinion of Haryanto (2008), stating that the increase in women's participation in economic activities is due to: firstly, a change in the views and attitudes of the community about the importance of education for women and men, and the awareness of the need for women to participate in development; secondly, the willingness of women to be independent in the economic field is trying to fund their living needs and perhaps also the necessities of life of those who are dependent on their own income.

Based on various studies, the participation of women in livestock business activities is able to contribute financially in the form of increasing family income. As a family member, women are also able to control production assets. The participation of family members in the livelihood activities is an effort to increase income in order to overcome the problems of their household needs (Abdullah and Amrawaty, 2008).

The results of the calculation of the index of critical awareness of problems showed that rank problem in business has the lowest score. The results of the calculation of critical awareness of the problems indicator can be seen in the table 5 below:

Table 5 – Index per Item for Critical Awareness of Problems Indicator

No	Item for Critical awareness of problems Indicator	Classification	Description
1	Identify problems	0.813	Developed
2	Rank problems in business	0.693	Developing
3	Identify resource potential	0.747	Developed
4	Able to prepare action plans to overcome problems	0.733	Developed
5	Able to carry out an action plan to improve business capacity	0.773	Developed
6	Get the freedom to complete the work from the environment	0.827	Independent
7	Always communicate and coordinate with Human Resources	0.773	Developed
8	Independent in decision making	0.813	Developed
9	Overall index of problems faced	0.772	Developed

The result of the study is supported by the statement of Mrs. Sulikah, one of the ranchers, in an interview as follows:

"Yes ma'am, The overall ranchers in this village have been trained since they were children. So, there are no difficulties in raising cattle. Everyone is well-experienced. Once, when it is the time to mate a cow and my husband is not around, I can immediately call the officer to mate them" (interview on February, 1<sup>st</sup> 2019 in *Kampung Ternak*).

This awareness has the same approach and analysis as secular modernists who become the mainstream of development. According to them, poverty is happening in Indonesia because they are not able to actively participate in the development process and globalization. Therefore, they tend to see values in mental attitude, creativity, culture and theological understanding as the main issues, rather than focusing on the class, gender and social structure as forming the fate of society.

This conscious society basically shares the mind of secular modernization regarding poverty and powerlessness. They believe that the problems faced by the poor are rooted in problems because there is something wrong with their mental, cultural, or theological attitudes (Widayanti, 2012).

The index of item for decision making indicator that has the lowest category is performing activities in identifying problems and solutions. The results of the calculation can be seen in the table 6.

It is supported by statement of Ms. Ummu Hanik, one of the female ranchers in the interview:

"Yes ma'am, after knowing and getting used to or being involved directly in taking care of my cattle, I have the permission from my husband to buy more beef cattle. Back then, I

quit selling snacks because I knew the opportunity of this business. I felt that more cattle would increase our income. Now, I have some savings for my children's education and their marriage later" (interview on February, 1<sup>st</sup> 2019 in *Kampung Ternak*).

Table 6 – Index per Item for Decision Making Indicator

No	Item for Decision Making Indicator	Classification	Description
1	Perform activities in identifying problems frequently	0.707	Developing
2	Perform activities in identifying problems and solutions frequently	0.693	Developing
3	Improve the ability to identify problems and find solutions frequently	0.760	Developed
4	Able to solve problems	0.813	Developed
Decision Making Index		0.772	Developed

Willingness and ability to take risks are the main values in entrepreneurship. Entrepreneurs who do not want to take risks will find it difficult to start or take the initiative. An entrepreneur should be brave enough to make decisions in uncertainty situations, while considering the possibility of loss and success (Suryana, 2003).

This is also in accordance with Karmila (2013) that states that factors of ranchers' decision-making are capital, ranchers' knowledge, desire to earn income, desire to obtain high social status, government support, availability of supporting facilities and infrastructure, interest and courage to take a risk.

Family is an inseparable part of life. It is the first place for someone in starting life. Family forms a very close relationship between father, mother and child. This relationship occurs between family members who interact with each other. Family as the smallest social institution is the foundation and initial investment to build a social life and create a better community life. In this case, social values and norms in the family are far more effective than through other institutions outside the family.

The roles and duties of women in the family depend on their roles in the family itself as a wife, child, father-in-law etc. Broadly speaking, they are divided into two roles, namely the role of women as mothers, as wives, and family members. The duty of women is to foster mental health for their children, as well as their families. In order to be able to perform the role or task properly, it is necessary to be aware of the goals and objectives of the role (Zahrok and Suarmini, 2017).

From the research results in Dasin Village, Tambakboyo Sub-district, women have two roles, as housewives and as ranchers to help the family's economy. The result of the study is also known by the involvement of women role in beef cattle farming business which can increase awareness of family problems. With the role of women who can help family's economy in livestock businesses, they can have a better quality of life and tackle poverty. According to the research results above, it includes developed village classifications.

In accordance with Nitimiharjo (1999), the involvement of women in the public sector is also inseparable from the demands of the family economy. Due to economic difficulties, especially as a result of the prolonged monetary crisis in Indonesia, has encouraged women to take an active role in overcoming family economic problems by doing various jobs outside their homes. By having women in the public sector, it means that their roles are no longer as a wife and mother who are responsible for the socialization of their children but also as workers. The involvement of women in both sectors, the domestic sector (home) and the public sector (employment), create a new term as what is called the dual role.

The big roles that women carry in the public sector cannot be separated from the cultural factors that exist in a society. Haviland (1988) argues that the special forms contained in the division of labor based on gender. In addition to the consideration of biological aspects, it must also be seen as the development of certain ethnic traditions (Nitimiharjo, 1999).

The application of a technology by ranchers is closely related to their skills and the complexity level of the technology operation. In this case, successful application of technology depends on the compatibility between the ability of ranchers and the technology that will be applied. Basically, cow dung can be used as raw material for making biogas,

compost and biourine. Ranchers who have 2-3 livestock with intensive maintenance can make biogas with a 1m<sup>3</sup> digester made of fiber that can be purchased at their respective locations, the manufacturing method is very simple and the manufacturing techniques can be done by ranchers (Baba, S. 2007).

Waste management aims to improve public health and environmental quality and make waste as a resource. From the environmental health stand point, waste management is favorable if the waste does not become a breeding medium for a disease and does not become an intermediary medium in spreading illness. Other requirements that must be met are: not polluting air, water and land, not causing odors (not disturbing aesthetic values), not causing fires and others (Azwar, 1986 in Marliani, 2014). It is in accordance with Ms. Heni's statement as the head of PKK (Family Welfare Program) as follows:

"Natural resources around Dasin Village, both in the form of agricultural and livestock products, are still easily available to be utilized by the community. For example, to utilize existing agricultural and livestock waste such as straw, or cow dung used as organic fertilizer without process. So, it has not been commercialized yet." (interview on February 6<sup>th</sup>, 2019 at Ms. Heni's house).

It is affirmed by Ms. Mzidatun Ni'mah:

"Cow dung that is available in the community does not have a good processing, so far it has only been collected or just buried them in the hole. Then, if it is full, it will be covered by rice husk, and then dried and burned. Lastly, it will be transported to agricultural fields both fields and rice fields." (interview on February 6<sup>th</sup>, 2019 in *Kampung Ternak*).

Waste management is also constrained by raw materials, where people's access to get starter in compost processing is very limited, so compost processing can only be done on a small scale. Ranchers are also constrained by collecting stool as a large-scale raw material because the farms are still on a small scale and are mostly traditional and semi-intensive maintenance systems. It is in accordance with Ms. Alfiah's statement in the interview as follows:

"Yes ma'am, we only have 1 biogas in *Kampung Ternak*, and it is no longer functioning. Back then, we could use it to accommodate cow dung and could also be used as energy for LPG stoves. Now, it is broken. Hopefully, there will be assistance from the government so that the surroundings don't smell too bad." (interview on February, 6th 2019 in *Kampung Ternak*).

Livestock waste is a very good source of organic fertilizer, if it is managed using the standard rules for processing organic fertilizers. The way how to make organic fertilizers are vary, one of which uses EM4 and uses star bio (stardec) (Murbando, 2000; Musnamar, 2005). There are many kinds of nutrient content in organic fertilizers, depending on the materials composted, the way of composting, and how to store it. In general, the nutrient content in compost consists of: carbon 8.2%, nitrogen 0.09%, phosphor 0.36%, potassium 0.81%, compost components consist of 41% liquid and dry matter 59%. The level of C / N in compost is generally 23. C/N is a ratio of carbon and nitrogen. High C / N ratio of fertilizers should not be given to plants because further decomposition processes will occur in the soil. The CO<sub>2</sub> produced from the decomposition will have an adverse effect on plant growth. Similar as manure, compost that is going to be used must be good. Physically, it is difficult to identify which one is a good compost and poor compost. However, in general, it has finer and slightly blackish granules. With compost, agricultural culture will return to organic matters. Organic materials will improve the structure of plant tissue, meaning that composted plants no longer need to be sprayed with pesticides because pests are not interested in eating them.

Manure is an organic fertilizer from fermented solid animal waste from mammals and poultry. Organic fertilizers (manure) contain complete nutrients needed by plants for their growth. Besides containing macro nutrients such as nitrogen (N), phosphor (P), and potassium (K), manure also contains micro elements such as calcium (Ca), magnesium (Mg), and sulfur (S). The phosphorus element in manure mostly comes from solid impurities, while nitrogen and potassium come from liquid manure (Santoso, 2002).

## CONCLUSION

Based on the results of a quantitative descriptive analysis on five indicators, it can be concluded that the welfare indicator reached 0.622 points including the classification of developing welfare; access indicator reached 0.741 points including classification of developed access, participation indicator reached 0.752 points including classification of developed participation; decision making indicator reached 0.743 points including classification of taking developed risks; and critical awareness of problems indicator reached 0.722 points including the classification of critical awareness of developed problems.

Women also take an active role in overcoming family economic problems by doing various jobs outside the homes. By having women in the public sector, it means that their roles are no longer as a wife and mother who are responsible for the socialization of their children, but also as workers. The involvement of women in both sectors, the domestic sector (home) and the public sector (employment), creates a new term called the dual role. Thus there are three gender roles for women and men that are classified as follows: Reproductive Role (Domestic Role), Productive Role, and Society Role (social).

## SUGGESTIONS

Considering the significant role of women in beef cattle farming at Dasin Village, Tambakboyo Sub-district, women labors deserve an attention from the government in terms of assistance and guidance to further expand the business; especially, the management of livestock products that is very suitable for women.

Future researchers are suggested to examine groups of ranchers in mountainous areas to determine the level of women empowerment.

## REFERENCES

1. Siregar, A.S. 2009. Analisis Pendapatan Sapi Potong di Kecamatan Stabat, Kabupaten Langkat. Skripsi. Fakultas Pertanian Universitas Sumatera Utara.
2. Mariyono., Anggraeni, Y., Rasyid, A. 2010. Rekomendasi Teknologi Peternakan dan Veteriner Mendukung Program Swasembada Daging Sapi (PSDS) Tahun 2014. Badan Penelitian dan Pengembangan Pertanian.
3. Mubyarto. 1994. Pengantar Ekonomi Pertanian. Cetakan keempat. LP3ES, Jakarta.
4. Suradisastra, K. dan Lubis, A. 2000. Aspek Gender Dalam Kegiatan Usaha Peternakan. Pusat penelitian Sosial Ekonomi Pertanian. Bogor. Jurnal Wartazoa 10(1) 13-19.
5. Licuanan, P.B. 1996. International Perspective On Women And Productivity. In : Women and Productivity. Asian Productivity Organization.
6. Zehra. 2008. The Economic Contribution of Pakistan Women Through Unpaid Labour. Pakistan: Society for Alternative Media and Research.
7. Fitriani, 2015. Mixed Methods Research. PPs Prodi Pendidikan Matematika. FMIPA UNY. Yogyakarta
8. Sugiyono. 2017. Metode Penelitian Kualitatif. Bandung : Alfabeta hal. : 181-185.
9. Suryaden. 2016. Permenkesadaran akan permasalahan PDT Trans Nomor 2 Tahun 2016 Tentang Indeks Kesadaran akan permasalahan Membangun. Jakarta
10. Mastuti, S dan Hidayat NN. 2013. Peranan Tenaga Kerja Perempuan dalam Usaha Ternak Sapi Perah di Kabupaten Banyumas. Fakultas peternakan universitas jenderal Soedirman : Purwokerto
11. Todaro, M. P. dan S. C. Smith. 2006. Ekonomi Pembangunan. Erlangga, Jakarta.
12. Haryadi, F. T., B. Guntoro, E. Sulastri, R. A. Romadhoni, And S. Andarwati. 2014. The Effectiveness Of Farmers' Group Functions In Creating Self-Sustain Of Beef Cattle Farming Activities. Gadjah Mada University, Yogyakarta.
13. Follyani FH., Idris A., Swasto B., 2009. Pemberdayaan Perempuan Dalam Pembangunan. Universitas Brawijaya. Vol.12 No.3
14. Amiruddin, Fitriah. 2014. Faktor Yang Mempengaruhi Partisipasi Perempuan Dalam

- Pemeliharaan Ternak Sapi Potong Di Kesadaran Akan Permasalahan Taraweang Kecamatan Labakkang Kabupaten Pangkep.Fakultas Peternakan Universitas Hasanuddin. Makasar [Skripsi]
15. Haryanto, S. 2008. Pekerja Wanita Pada Industri Rumah Tangga Sandang Dan Kontribusinya Terhadap Pendapatan Rumah Tangga Di Kecamatan Sukun Malang. Universitas Merdeka Malang. Jurnal Ekonomi Pembangunan 9 (2) : 216 - 227.
  16. Suryana. 2003. Kewirausahaan, Pedoman Praktis, Kiat Dan Proses Menuju Sukses. Jakarta: PT.Salemba Empat.
  17. Karmila. 2013. Faktor Faktor Yang Menentukan Pengambilan Keputusan Peternak Dalam Memulai Usaha Peternakan Ayam Ras Petelur Di Kecamatan Bissappu Kabupaten Bantaeng. Skripsi. Fakultas Peternakan Universitas Hasanuddin.
  18. Widayanti,S. 2012. Pemberdayaan Perempuan :Pendekatan Teoritis. Jurnal Ilmu Kesejahteraan Sosial: Vo.1 No.1
  19. Zahrok, S., Suarmini W. 2017. Peran Perempuan Dalam Keluarga. UPT PMK Sosial Humaniora, FBMT, Institut Teknologi Sepuluh Nopember
  20. Nadhira,VF. 2017 Analisis Gender Dalam Usaha Ternak Dan Hubungannya Dengan Pendapatan Rumah Tangga Peternak Sapi Perah. Departemen Sains Komunikasi Dan Pengembangan Masyarakat Fakultas Ekologi Manusia Institut Pertanian Bogor. Bogor
  21. Hubeis AVS. 2010. Pemberdayaan Perempuan dari Masa ke Masa. Bogor [ID]: IPB Press.

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## **THE INFLUENCE OF CELEBRITY ENDORSEMENT ON PURCHASE INTENTION OF WARDAH LIPSTICK PRODUCTS THROUGH BRAND IMAGE AND BRAND CREDIBILITY**

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### **ABSTRACT**

This study aims to analyze the influence of celebrity endorsement, brand image, brand credibility and purchase intention on consumers of Wardah lipstick products in Kediri City. The population of this study is consumers of Wardah lipstick products in the city of Kediri. The sampling technique used purposive sampling with 120 respondents and the data were analyzed using smartPLS 3.0. The test of research instruments includes the inner model test, outer model, path diagram conversion, and hypothesis testing. The results of this study indicate that celebrity endorsement directly does not affect the purchase intention of Wardah lipstick products. The role of brand image is able to mediate the influence of celebrity endorsement on purchase intention of Wardah lipstick products. The role of brand credibility is able to mediate the influence of celebrity endorsement on the purchase intention of Wardah lipstick products.

### **KEY WORDS**

Celebrity endorsement, brand image, brand credibility, purchase intention.

Beauty is the basic capital for modern women who always want to show their existence in sociality. There are many ways that women can do in their efforts to achieve the coveted beauty. Cosmetics are the unique product because in addition to these products have the ability to fulfill women's basic needs for beauty at the same time is often a means for consumers to clarify their social identities in the eyes of society. Nowadays beauty products have been found on the market, ranging from beauty products that are specific to certain skin types, to beauty products (cosmetics) that have halal licenses for Muslim women. Many cosmetic products offered provide benefits in the use that is needed by consumers drive the spirit of the producers to achieve existing business opportunities, so that from these opportunities produce maximum profits. Thus companies are required to make a marketing strategy to attract consumers that will lead to purchase intentions with these strategies in various ways, one of which is by providing information about products to attract attention and create positive associations (Pangastuti and Purnami, 2015).

Marketing has an important role in which companies must always adjust the strategies. This strategy is used so that the condition of a company will be better in driving fast sales as well as making consumers and customers feel satisfaction. In this case the marketer must be able to change the attitude of a person (consumer), how marketers communicate persuasively to someone (prospective customers) to be able to change their attitude (to choose to buy or not) (Solomon, 2018). One of the marketing strategies carried out by the company in order that their products win the market and attract the attention of consumers so that arise the intention to buy is through advertising, like Wardah produced by PT. Paragon Technology and Innovation. The advantage of Wardah products compared to other cosmetic products is that there is a halal guarantee that is authorized by MUI. In marketing Wardah lipstick products so that it can be accepted by the wider community, especially Muslim

women, Wardah performs various forms of sales strategies with the aim of attracting as many consumers as possible to buy Wardah products, especially in Kediri City. The city of Kediri is one of the cities with a population that is fairly dense because there are many universities, shopping centers. Life in the city is fairly luxurious, so if someone lives in an urban center, they will care more about their appearance.

One of the strategies used by Wardah in attracting people to buy Wardah products is through advertising. The advertising strategy that is popularly used today is the celebrity endorsement strategy which is the use of celebrities to make advertisements more attractive and easily known. Sonwalkar, et al (2011) states that celebrity endorsement is a form of communication where a celebrity acts as a spokesperson for a particular product or brand. Celebrity endorsement as an effort to introduce products is also conducted by PT. Pusaka Tradisi Ibu in promoting cosmetic products, namely wardah. Some research conducted concluded that Celebrity endorsement can have a positive effect on Purchase Intention, (Joseph, 2003; Liu et al, 2007; Jasmina Ilicic and Chintya, 2011) said that Celebrity endorsement has an effect on Purchase Intention, meaning that the use of celebrity endorsement can increase consumer buying interest. In Cormick's (2016) study, research findings show that there is no direct influence from celebrity endorsement on purchase intention. Cormick (2016) said that the experience with celebrity endorsement is not enough to cause purchase intention, an intermediary is needed to strengthen the relationship.

Wardah is a pioneer of halal cosmetics in Indonesia and is also one of the brands that succeeded in becoming the Top Brand of Indonesia compared to other brands. Wardah lipstick products include products that already have a good brand image and product quality and already have halal certificates from LP POM MUI. Celebrity endorsers can bring benefits to products and brands. Celebrity endorsers can increase the brand image of the products that they brought. Consumer assessment of a product is not only seen from celebrity endorsement factors, but also seen from the brand image of the product. Brand image can indicate a certain quality level, so that satisfied buyers can more easily choose products. Shimp et al in Sangadji and Sopiah (2014) said that brand image can be considered as a type of association that arises in the minds of consumers when remembering a particular brand. A pleasant or unpleasant feeling towards a brand will shape that image and will be stored in the consumer's memory. A good and positive brand image will create a good impression in the minds of consumers to consume a brand. Brands play an important role in consumer decision making and choice behavior (Erdem and Swait, 2004). To overcome this problem, companies can use the brand as a signal to effectively convey information about quality to consumers (Erdem and Swait, 2004).

Credibility is considered to be the most important characteristic of brand signals (Erdem and Swait, 2004; Spry et al., 2011). Brand credibility refers to the trust in the position of information on products or services contained in a brand (Erdem and Swait, 2004). In creating interest in buying, companies are required to be able to provide good brand credibility. Brand credibility can be influenced by the credibility of the information sources used in communicating these products. Celebrity endorsement can also be used to form a Brand Credibility of a product and also to drive fast sales.

This study aims to examine and analyze the influence of celebrity endorsement on the purchase intention of Wardah lipstick products through brand image and brand credibility.

## **LITERATURE REVIEW**

Sonwalkar, et al (2011) states that celebrity endorsement is a form of communication where a celebrity acts as a spokesperson for a particular product or brand. The reason why that celebrities are very interested by manufacturers to advertise their products is that the messages delivered by interesting sources (celebrities that are popular) will get greater attention besides being very easy to remember (Royan, 2004). Celebrity can be a marketing tool for a product that is very important, the extraordinary attractiveness and having many fans can be things that no one else has.

Shimp et al in Sangadji and Sopiah (2014) says that brand image can be considered as a type of association that arises in the minds of consumers when remembering a particular brand. According to Tjiptono (2015) Brand image (Brand Image) is observation and trust that is held by consumers, as reflected in the association or in consumer memory.”

From some of the opinions of the experts above, it can be concluded that brand image is a series of consumer beliefs about a particular brand so that the brand association is attached in the minds of consumers.

Brand credibility according to Baek and King (2012) is believability (the ability to be trusted) of the product and information embedded in the brand, which depends on consumer perception whether the brand has the ability and willingness to continue to give what has been promised. From the above opinion it can be concluded that brand credibility is the ability to be trusted from the brand of a product and information embedded in the brand, which also depends on consumer perceptions whether the product brand has the ability and willingness to continue to provide and be able to fulfill what has been promised.

Purchase intention is the tendency to buy a brand and in general based on the suitability of the buying motive with the attributes or characteristics of the brand that can be considered (Belc, 2004). Fandos and Flavian (2006) explain that purchase intention is a consumer behavior that can be predicted to occur in the near future regarding the repurchase of a product. Thus it can be concluded that purchase intention includes the interest of someone to buy a product.

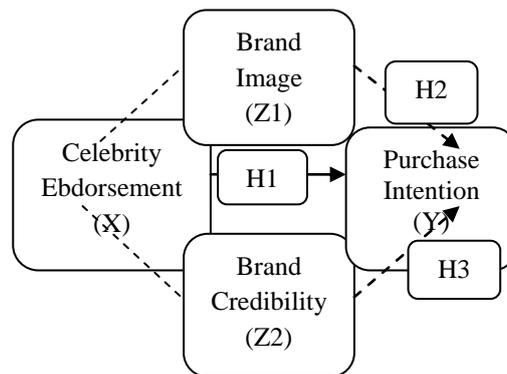


Figure 1 – Conceptual Framework

Note:

= Direct influence

= Indirect influence

The hypothesis of this study are:

H<sub>1</sub>: Celebrity endorsement has a significant influence on Purchase Intention;

H<sub>2</sub>: The role of brand image is able to mediate the influence of celebrity endorsement on purchase intention;

H<sub>3</sub>: The role of brand credibility is able to mediate the influence of celebrity endorsement on purchase intention.

## METHODS OF RESEARCH

This study uses quantitative methods with explanatory research.

The population and sample of this study are consumers of Wardah lipstick products in the city of Kediri. The sampling technique used purposive sampling, namely (10 x 11 (Indicator) = 110 respondents (Roscoe in Sugiyono, 2017), but researchers added as much as 10%, so it becomes 120 respondents. Sampling is done by data collection techniques through questionnaire distribution. Data from this study were analyzed using Partial Least Square (PLS) using smartPLS 3.0.

This study consisted of four variables, namely celebrity endorsement as an independent variable, brand image variable and brand credibility as intervening variables and purchase intention variables as dependent variables.

The variable of celebrity endorsement has three indicators namely Attractiveness, Trustworthiness, and Expertise (Shimp 2006 in Suki 2014), Brand image variables have two indicators, namely the superiority of brand associations, the strength of brand associations, and the uniqueness of brand associations (Kotler Keller, 2013), Brand credibility variable using indicators from Erdem and Swait (2006), namely Expertise and Trustworthiness and purchase intention variables have three indicators namely Transactional Interest, Referential Interest, and Preferential Interest (Ferdinand, 2006).

## RESULTS OF STUDY

The results of path analysis of each variable are obtained as follows:

Table 1 – Results of the Determination Coefficient ( $R^2$ )

Variable	Determination of Coefficient ( $R^2$ )
Brand Image	0,559
Brand Credibility	0,532
Purchase Intention	0,584

Source: Primary Data Processed (2019).

After knowing the coefficient of  $R^2$  then the next step is to calculate  $Q$  -square predictive relevance as follows.

$$Q^2 = 1 - (1 - R_1^2)(1 - R_2^2)(1 - R_3^2) = 0,91414$$

Where:  $Q^2$  = predictive relevance;  $R_1^2$  = coefficient of determination of brand image;  $R_2^2$  = coefficient of determination of brand credibility;  $R_3^2$  = coefficient of determination of purchase intention.

Based on the results of the above calculations, it can be concluded that this research model is categorized on a strong/solid model (Ghozali & Latan, 2015). This means that 91,41% of purchase intention variables can be predicted by the variable of celebrity endorsement, brand image, and brand credibility. The rest which is equal to 8,59% is explained by other variables that not found in this research model.

Table 2 – Path Coefficient

Hypothesis	Inter-Variable Relationships		Path Coefficient	t-statistics	p-value	Information
	Independent Variables	Dependent Variable				
$H_1$	Celebrity Endorsement	Purchase Intention	0,083	0,643	0,521	Not significant / $H_1$ rejected
	Celebrity Endorsement	Brand Image	0,748	14,751	0,000	Significant
	Celebrity Endorsement	Brand Credibility	0,729	12,757	0,000	Significant

Source: Data processing, 2019.

The results of the first hypothesis testing indicate that the  $H_1$  path coefficient value is 0,083 with the t-statistics value of 0,643 and the significance level (p-values) of 0,521. Looking at the parameter provisions the value of t-statistics > 1,96 and the significance level <0,05, then the  $H_1$  result is not significant. This shows that celebrity endorsement does not have a significant direct effect on purchase intention, thus Celebrity Endorsement does not have a significant effect on purchase intention.

The results of testing the second hypothesis indicate that the relationship of celebrity endorsement on purchase intention mediated by brand image has a t-statistics value that is greater than t-table (> 1.96) namely equal to 3,833, so that it can be declared significant. This shows that the image brand is able to mediate the influence of celebrity endorsement on

purchase intention. Thus the role of Brand Image is able to mediate the influence of Celebrity Endorsement on Purchase Intention.

Table 3 – Indirect Influence Results

Hypothesis	Relationship	Indirect Coefficient	t-statistics	p-value	Information
H <sub>2</sub>	Celebrity endorsement → brand image → purchase intention	0,301	3.833	0,000	Significant / H <sub>2</sub> accepted
H <sub>3</sub>	Celebrity endorsement → brand credibility → purchase intention	0,270	3,426	0,001	Significant / H <sub>3</sub> accepted

Source: Processing data with PLS, 2019.

The results of testing of the third hypothesis indicate that the relationship of celebrity endorsement on the purchase intention mediated by brand credibility has a t-statistics value that is greater than t-table ( $> 1,96$ ) which is equal to 3,426, so that it can be declared significant. This shows that brand credibility is able to mediate the influence of celebrity endorsement on purchase intention. Thus the role of Brand Credibility is able to mediate the influence of Celebrity Endorsement on Purchase Intention.

## DISCUSSION OF RESULTS

*Influence of Celebrity Endorsement On Purchase Intention.* The findings in this study indicate that celebrity endorsement has no influence on buying interest. In other words, the use of celebrity endorsement received by consumers from Wardah brand lipsticks is not able to directly influence consumers' buying interest in Wardah brand lipstick. The results of this study contradict with the results of previous studies conducted by Joseph, (2003); Liu et al, (2007); Jasmina Ilicic and Chintya, (2011), As well as Krikatika Nagdev and Raman Preet Singh (2016).

The overall research shows that there is a direct influence of celebrity endorsement on purchase intention. The use of celebrities as endorsers becomes the prediction in influencing purchase interest Liu et al (2007). Jasmina Ilicic and Chintya, (2011), also agreed to this opinion and stated that the use of celebrities as endorsers was considered to get attention, be liked and impacted, although in general it was not considered too convincing or credible.

The credibility and trust that perceived from endorsers are found as two characteristics of the source with the greatest influence on product purchase intentions. However, Cormick (2016) states that celebrity endorsement is not enough to arise the purchase intentions. In order to create a consumer purchase intention, an intermediary or mediation is needed to strengthen the relationship. The findings of this study are in line with Cormick's (2016) study. The use of celebrities as an endorser of the Wardah brand lipstick products has not been able to create consumer buying intentions on Wardah lipstick products.

*The role of Brand Image as a mediation of the influence of Celebrity Endorsement on Purchase Intention.* Another finding in this study is that brand image has a mediating role in the relationship of the influence of celebrity endorsement on purchase intention. In this study, celebrity endorsement has not been able to provide direct influence on purchase intention. But when mediated by a brand image, a celebrity endorsement is found can affect purchase intention. In other words, the brand image here has a role as full mediation in accordance with the conditions conveyed by Hasan (2014), in the study, consumer celebrity relationships were assessed and emphasized that celebrity attributes (Local or Indian) were not too important to intend to buy existing products, but quality, brand image, and brand loyalty are key factors in the intention to buy. The results of this study are also in accordance with the research conducted by Adamantios Diamantopoulos, et al (2018), stating that a strong brand image has a positive impact on the product and can generate interest in consumer purchases, therefore, marketers must develop effective marketing communication programs that creating a brand image to motivate consumers to have purchase intentions.

Based on the analysis result, the reasons for respondents choosing Wardah is because of halal products from Wardah lipstick. These results indicate that Wardah succeeded in

creating a mindset as halal cosmetics in the minds of consumers and became a reason for some Muslim women to choose Wardah brand lipstick cosmetics.

*The role of Brand Credibility as a mediation of the influence of Celebrity Endorsement on Purchase Intention.* Another finding in this study is that brand credibility has a mediating role in the relationship of the influence of celebrity endorsement on purchase intention. Based on the discussion in the previous sub-chapter, it is known that celebrity endorsement has not been able to provide direct influence on purchase intention. But when mediated by brand credibility, celebrity endorsement found can affect purchase intention. According to Wang, et al (2017) in the previous sub-chapter, said that a company can work to build brand credibility driven by the quality of information conveyed by the company through a marketing strategy namely by using celebrity endorsement. So that buying interest arises from consumers to obtain these products because they have been well informed about the company's brand.

When consumers get positive and reliable information from Wardah lipstick, there is a deep sense of trust in Wardah brand lipstick products, this trust will affect them to make purchases on Wardah lipstick products.

### **CONCLUSION AND RECOMMENDATIONS**

Based on the testing of the hypothesis, the results of the discussion, and the findings of the study, it can be stated the following conclusions:

- Celebrity endorsement has no effect on purchase intention. This means that as good as any use of celebrities as endorsers is increased, it is not able to increase interest in buying Wardah lipstick in the city of Kediri;
- Celebrity endorsement influences purchase intention with the brand image as full mediation. This shows that the more the brand image increases it can influence and determine the influence of celebrity endorsement on the purchase intention of consumers of Wardah lipstick products in Kediri City;
- Celebrity endorsement has an effect on purchase intention with brand credibility as full mediation / full mediation. This shows that a company can work to build brand credibility driven by the quality of information conveyed by the company through marketing strategies, namely celebrity endorsement, so that buying interest arises from consumers to obtain these products because they are well informed about Wardah brand lipstick products.

For further researchers it is recommended to add several variables that affect purchase intention, such as price, quality or other variables that can support research, so that able to increase product purchase intentions. Further researchers are advised to increase the age range of the sample, because the age of puberty from the age of 12 years already knows cosmetics.

### **REFERENCES**

1. Shimp, Terence. 2014. *Komunikasi Pemasaran Terpadu dalam Periklanan and Promosi*. Jakarta: Salemba Empat.
2. Chan, Kara, et al. 2013. Impact of celebrity endorsement in advertising on brandimage among Chinese adolescent. *Journal of Consumer Marketing*. Vol. 14, No. 2 pp. 167-179.
3. Cronin, M Joseph. 2013. *The Effect Of Celebrity Endorsment On Attitudes TowardAdvertisements Brand And Purchase Intentions*, Disertation, Doctor of Philosophy, University at Albany, State University of New York.
4. Erdem, T. And J. Swait. 2004. Brand Equity as a Signalling Phenomenom. *Journal of Consumer Psychology*, Vol. 7, No. 2 pp. 131-157.
5. Erdem, T. And J. Swait. 2004. Brand Equity as a Signalling Phenomenom. *Journal of Consumer Psychology*, Vol. 7, No. 2 pp. 131-157.

6. Fandos, Carmina and Flavia'n, Carlos. 2006. Intrinsic and Extrinsic Quality attributes, loyalty and buying intention: An analysis for a PDO product, *British Food Journal*. Vol. 108, No 8 pp 646-662.
7. Ferdinand, Augusty. 2006. *Metode Penelitian Manajemen: Pedoman Penelitian untuk Skripsi, Tesis, and Desertasi*. CV. Indoprint. Semarang.
8. Frans M Royan. 2004. *Distributorship Management*. PT.Gramedia Pustaka Utama. Jakarta.
9. Ghozali, Imam, Hengky Latan. 2015. *Konsep, Teknik, Aplikasi Menggunakan Smart PLS 3.0 Untuk Penelitian Empiris*. BP Undip. Semarang.
10. Hasan, UI Rameez Syed. 2014. Influence of Celebrity Endorsement on Consumer Purchase Intention for Existing Products: A Comparative Study. *Journal of Management*. 4(1), 1-23 (2014).
11. Ilicic, J., and Webster, C. M. 2011. Effects of multiple endorsements and consumer-celebrity attachment on attitude and purchase intention. *Australasian Marketing Journal (AMJ)*, 19(4), 230-237.
12. Kotler, Philip and Kevin Lane Keller. 2013. *Manajemen Pemasaran*, ed. Ketiga Belas Jilid 2 Terjemahan oleh BOB Sabran MM. Erlangga.
13. Kotler, Philip. and Gary Armstrong. 2014. *Principle of Marketing*, 15<sup>th</sup> edition. New Jersey: Pearson Prentice Hall.
14. McCormick, K. 2016. Celebrity endorsements: Influence of a product-endorser match on Millennials attitudes and purchase intentions. *Journal of retailing and consumer services*, 32, 39-45.
15. McCracken, G. 1989. Who is the celebrity endorser? Cultural foundations of the endorsement process. *Journal of consumer research*, 16(3), 310-321.
16. Michael A. Belch & George E. 2004. *Advertising and promotion: An Integrated Marketing communication Perspective*, Sixth Edition. McGraw-Hill. New York.
17. Pangastuti A, Gst.A., Purnami N.Md. Peran Persepsi Nilai dalam memediasi pengaruh kredibilitas celebrity endorser ada niat beli produk kosmetik maybelline di kota denpasar. *Universitas Udayana. Jurnal Manajemen, Strategi Bisnis and Kewirausahaan*. 9 (2), h: 123-134.
18. Peter and Olson. 2013. *Perilaku Konsumen and Strategi Pemasaran*. Edisi Kesembilan. Diterjemahkan oleh: Diah Tantri Dwiandani. Salemba Empat.
19. Roslina. 2010. Citra Merek: Dimensi, Proses Pengembangan Serta Pengukurannya, *Jurnal Bisnis and Manajemen*, Mei 2010. Vol. 6, No. 3 p. 333-346.
20. Solomon, Michael R. 2018. *Consumer Behaviour, Buying, Having and Being*. Twelfth Edition: Pearson Education.
21. Spry, A., Pappu, R. and Cornwell, T.B. 2011. Celebrity Endorsement, Brand Credibility and Brand Equity, *European Journal of Marketing* 45(6): 882-909.
22. Sugiyono. 2017. *Metodelogi Penelitian Kuantitatif, Kualitatif and R&D*. ALFABETA. Bandung.
23. Suki, Mohd Norazah. 2013. Does celebrity credibility influence Muslim and non-Muslim consumers' attitudes toward brands and purchase intention, *Journal of Islamic Marketing*. Vol.5, No. 2.
24. Till B.D. and Busler M. 2000. The match-up hypothesis: Physical Attractiveness, expertise and the role of fit on brand Attitude, Purchase Intent and Brand Belief, *Journal of Advertising*. Vol 29, No 3 pp 23-31.
25. Tingchi Liu, M., Huang, Y. Y., & Minghua, J. 2007. Relations among attractiveness of endorsers, match-up, and purchase intention in sport marketing in China. *Journal of Consumer Marketing*, 24(6), 358-365.
26. Tjiptono, Fandy, 2015. *Brand Management & Strategy*. Yogyakarta: Andi.

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## TAX PLANNING AS A TAX AVOIDANCE STEP IN INDONESIA

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### ABSTRACT

Tax planning is the first step in tax management. Tax management itself is a means to fulfill tax obligations correctly, but the amount of tax paid can be reduced to a minimum to obtain the expected profit and liquidity. *Tax planning* aggressive ones are very dangerous and can erode the tax base. The taxation system in Indonesia that is now being used is a development of the system that was originally carried out since the development of the manufacturing industry. For legal certainty for both taxpayers and the government, provisions regarding tax planning, tax avoidance, and anti tax avoidance in the form of Specific Avoidance Rule (SAAR) and General Anti Avoidance Rule (GAAR) must be clearly and detailed in the provisions of legislation - tax invitations, both for formal provisions, which are related to sanctions, as well as in the material provisions.

### KEY WORDS

Tax, planning, public service, provision, profit.

In order to improve efficiency and competitiveness, companies must reduce costs as optimally as possible. Similarly, the obligation to pay taxes, because tax costs will reduce profit after tax, the *rate of return*, and cash flow (Damayanti, 2009: 15). Cao and Xu (2009) stated that, a company has a large space to make tax efficiency on their income tax because corporate income tax occupies an important status in paying taxes.

Suandy (2011: 8) states, managers must reduce tax costs as optimally as possible to improve the efficiency and competitiveness of companies by managing tax obligations. Management of taxation obligations is carried out by conducting a tax management which is part of financial management, so that the objectives of tax management must be in line with the objectives of financial management, namely obtaining adequate liquidity and profit.

Minimizing the amount of tax burden can be done in various ways both tax avoidance and tax evasion. Tax avoidance is a term in tax planning that is used to signify that taxpayers have used legitimate schemes to reduce their tax obligations (Potas, 1993). According to Logue (in McLaren 2008), simple tax avoidance can be defined as regulating all matters of corporate taxation to minimize taxes in a way that is consistent with the law, while tax evasion involves an intentional element of breaking the law in payment tax. According to Adawiah (2011), to implement tax avoidance properly and not be trapped into a tax evasion, it is necessary to have a tax management.

Tax Planning is the first step in tax management. Tax management itself is a means to fulfill obligations taxation correctly, but the amount of tax paid can be reduced . The Director General of Taxes once revealed that Tax Planning for the company is considered correct insofar as it does not violate tax regulations applicable. Because it must be admitted that there is no one in the Tax Law which prohibits tax planning.

### LITERATURE REVIEW

According to Zain (2003: 12), understanding economically (tax as transfer of resources from the private sector to the government sector) or understanding juridically (tax is a contribution that can be imposed).

According to Ahmadi (2006: 6), states that: "Tax is a coercive contributions from individuals to the government to finance expenses related to the interests of the public without it can be shown that there are special advantages to it".

According to R. Santoso Brotodiharjo, in the book *Introduction to Tax Law* (1993: 2), where is tax considered as an obligation to surrender a portion of assets to cash the state is caused by a situation, an event and an act that gives certain position, but not as a punishment, according to the rules determined by the government and can be forced, but there is no reciprocal service from the state directly, to maintain public welfare.

According to Zain (2003: 54), tax planning is a related action with the consequences of the potential tax, which is emphasized in control every transaction that has tax consequences. The goal adal ahhow such control can minimize the amount of tax will be given to the government through what is called tax avoidance and tax evasion which is a fiscal crime. Zain (2003: 47) describes tax management as a means for fulfill taxation obligations correctly but the amount of tax paid can be reduced as low as possible to obtain profit and liquidity expected. Theoretically, *tax planning* is part of functions tax management consisting of: *planning, implementation* and *control*. Tax Planning according to Susan (2003: 303) is "*Arrangement of a person 's business and / or private affairs in order to minimize tax liability*".

Eskew (2008: 762) mentions *Tax Planning* is "*The practice of evaluating the tax effects of integrated actions or transactions, while Spitz (2003: 1) states that "Tax Planning is the process of taking into consideration of all revelant tax factors, in light of the material non tax factors, for the purpose of determining": whether; and if so; how; and with whom, to enter into and conduct transactions, operations and relationships, with the object of keeping the tax on events and persons as low as possible while attaining the desired business, personal and other objectives. Tax Planning is a systematic analysis of deferring tax options aimed at the minimization of tax liability in current and future tax periods.*

Suandy (2003: 119) mentions forms of tax planning consists of:

Taking advantage of a wide choice of legal form (*legal entity*) that is appropriate for the needs and type of business. When viewed from Sometimes the selection of taxation perspective of the legal entity(*legal entities*) individual forms, firms and partnerships are forms that are more profitable than limited liability companies that hold individual or entity shares but less than 25%, will resulttax on company income is imposed twice, at the time income is obtained by the company and at the time of income distributed as dividends to individual shareholders or entities which is less than 25%.

Choose the location of the company to be established. Generally the government provide a kind of tax incentives / tax facilities especially for certain regions, a lot of income tax deductions are given as referred to in Article 26 of Law No. 17 of 2000. D it is also given facilities such as shrinkage and amortization accelerated, longer compensation for losses. For example: company expanding its business by establishing a new company in the area remote in eastern Indonesia. Therefore the area has economic potential that is feasible to develop but difficult to reach, then the government provides some relief in taxes such as permission to reduce the *fringe benefit* of gross income as regulated in SE-29 / Pj.4 / 1995 June 5, 1995.

Take maximum profit or as much as possible from various exceptions, deductions or deductions for taxable income taxes allowed by law.

Establish a company in a business company so that regulated regarding the use of the most favorable tax rates between each business entity. This can be done considering that many countries including Indonesia regulate that inter-corporate dividend distribution is not subject to tax.

Establishing a company is a profit center and some are only functions as a *cost center*. From this, benefits can be obtained by spreading income into income from several taxpayers in one group as well as costs so they can gains obtained from tax shifting, namely avoiding highest / maximum rate.

Provide benefits to employees in the form of money or cash and pleasure (*Fringe Benefit*) could be one option for avoid maximum tarif layers (shif to lower bracket). Because on essentially giving in kind and enjoyment (*fringe benefits*) can be deducted as a fee by the employer throughout the administration these are calculated as income taxed for employee who receives it.

Selection of inventory valuation methods. There are two valuation methods allowed by tax regulations, the method of the mean (average) and first entry first method (first in first out). In condition economies tend to have inflation, averaging method (average) will result in a higher cost than the method first entry first ( first in first out ). The higher cost of goods sold (HPP) will result in smaller gross profit.

For funding, fixed assets can consider leasing with option rights (finance lease ) in addition to direct purchases due to the term lease time is generally shorter than the age of assets and payments leasing can be fully covered. Thus, these assets can be financed faster than through depreciation if the purchase done directly.

Through the selection of allowable depreciation methods applicable taxation. If the company has a profit prediction large enough, it can be used accelerated depreciation method (balance decrease) so that the depreciation costs can reduce profits taxable and vice versa if estimated at the beginning of the investment year yet can give a profit or loss, the choice is use a depreciation method that provides a smaller cost (straight line) so that depreciation costs can be delayed for the following year.

Avoid tax imposition by directing to transactions that are not tax objects.

Optimizing tax credits per person, for this taxpayer must be observant to obtain information regarding the payment of taxes can be credited.

Delays in payment of tax obligations can be done in a way make payment when it approaches the due date. Special to postpone VAT payments can be done by delaying issuance of tax invoices up to the specified time limit on credit sales. The company can issue tax invoices on end of delivery month (Director General of Taxes No: 53 / PJ / 1994).

Avoid tax audits, tax inspection by the Directorate General tax is carried out on taxpayers who:

- a. SPT is overpaid;
- b. SPT loss;
- c. Did not enter SPT or was late in submitting SPT;
- d. There is information on violations;
- e. Meet certain criteria set by the Director General of Taxes;
- f. Avoiding overpayments can be done by:
  - 1) Submitting a reduction in lump sum payments (installment period) PPh Article 25 to the relevant CTF, if estimated in years current tax will be overpaid taxes;
  - 2) Submitting an importation request for Article 22 of PPh if the company imports.
- g. Avoid violations of applicable tax regulations.

## RESULTS AND DISCUSSION

In the current Indonesian tax laws and regulations, there is no clear definition of *tax planning*, *aggressive tax planning*, *acceptable tax avoidance* and *unacceptable tax avoidance* . Thus, in practice it often leads to different interpretations between taxpayers and tax officials. From the Taxpayer's point of view, it would certainly be argued that as long as the tax avoidance schemes that they do are not prohibited in tax laws and regulations, they are certainly considered legal. On the other hand, the government certainly also has an interest that not a tax provision is misused by taxpayers for the sole purpose of taxation that is detrimental to state revenues . Therefore for legal certainty for both taxpayers and the government, provisions regarding tax planning, tax avoidance, and anti tax avoidance in the form of Specific Avoidance Rule (SAAR) and General Anti Avoidance Rule (GAAR) must be clearly and detailed in the provisions tax laws and regulations, both for formal provisions, which are related to sanctions, as well as in the material provisions.

Many people both personally and in groups feel reluctant to pay taxes. This reluctance may be due to the lack of direct counter-performance given due to the payment, it could also be because the tax is considered by them as a burden so there are efforts to reduce it. For large companies, managing a minimum amount of tax will be very beneficial for them, because there is cash flow.

*Tax planning* aggressive ones are very dangerous and can erode the tax base. The taxation system in Indonesia that is now being used is a development of the system that was originally carried out since the development of the manufacturing industry. Tax planning is a legal effort that can be done by taxpayers. The action is legal because tax savings are only done by using loopholes. Plans to minimize tax can be taken, for example, taking the maximum possible provisions from the provisions regarding exclusion and allowable deductions or deductions. In general, tax planning is to minimize tax obligations. Plans to minimize taxes can be taken by means of taking maximum advantage of the provisions regarding exceptions and allowances or deductions that are permissible, this can utilize income excluded as tax objects in accordance with article 4 paragraph 3.

Tax planning types can be divided as follow.

Domestic Tax Planning (national Tax Planning). National tax planning only pays attention to the Domestic Law, the election is carried out or not a transaction in the national tax planning depends on the transaction, meaning to avoid / reduce taxes, taxpayers can choose what types of transactions must be carried out in accordance with existing tax laws, for example, it will be subject to final special tax rates or not

International Tax Planning. International tax planning in addition to paying attention to the Domestic Law, must also pay attention to the law or tax treaty from the countries involved.

While the strategy can be used in tax planning can be divided as follow.

Tax saving. Efforts to streamline the tax burden through the selection of alternative taxation at a lower rate. Ex: In general giving to employees is generally not permitted to be charged as a cost in calculating corporate income tax. The natural granting policy can be converted into non-natural gifts and included as employee income so that it can be deducted as a fee. This treatment will result in the corporate income tax decreasing, but Article 21 Income Tax increases. Decrease in corporate income tax will be greater than the increase in Income Tax Article 21 (assuming the company gets taxable income above Rp. 100 million and corporate income tax is not final).

Tax avoidance. tax avoidance carried out by taxpayers by alleviating the tax burden / avoiding taxes legally (not violating the law) by utilizing loopholes contained in tax laws and regulations. Such as avoiding the imposition of taxes instead of tax objects.

Delaying Payment of Taxes. Delays in paying taxes can be done without breaking the rules. Example: To postpone VAT payments can be done by delaying the issuance of tax invoices until the allowable time limit, especially for credit sales, because the seller can issue tax invoices at the end of the following month after the tax submission month.

Optimizing Allowable Tax Credit. Taxpayers often lack information about payments that can be credited. For example: Article 22 Income Tax for the purchase of diesel fuel from Pertamina which is final if the buyer of the company is engaged in oil and gas distribution. But if the buyer is engaged in manufacturing, the Article 22 Income Tax can be credited with the corporate income tax. Crediting is more profitable than being charged as a fee. When compared, the profits obtained are equal to 75% of the value of the tax credited (for corporate taxable income above 2008). If credited, then all tax amounts are claimed by the taxpayer. However, if it is charged as a cost, the impact of the tax deduction is only 23%, assuming that the cost is deductible expenses (deductible costs).

Avoiding Tax Audits by Avoiding More Pay. Submitting a reduction in the payment of installments to Article 25 PPh concerned, if based on the estimation in the tax year concerned there will be an overpayment of tax. The submission can be done at the latest 3 months after the tax year has passed and the taxpayer can show that the income tax payable for the tax year is less than 75% of the income tax payable as the basis for calculating the amount of Income Tax Article 25.

So that it can be concluded that tax planning is useful:

- In order for the calculation of taxes or taxes to be paid by the taxpayer right or in accordance with the applicable tax regulations so that if research or inspection is carried out by the tax office there is no tax that has to be paid again and does not cause tax penalties for taxpayers;

- In order for taxes to be paid by taxpayers to be smaller, it is done by using the loopholes in the tax regulations without violating existing tax regulations. To realize a tax planning that does not violate tax regulations, it is necessary to understand the tax regulations themselves, because the tax regulations that make people possible there are loopholes in regulations that can be used by taxpayers to avoid taxes without violating the law.

## CONCLUSION

Tax planning (*tax planning*) refers to the reverse process and transaction business taxpayer that the tax debt is in minimal amounts, but still within the framework of tax regulations. However, tax planning can also be interpreted as planning the fulfillment of tax obligations in a complete, correct and timely manner so that they can optimally avoid waste of resources. Tax planning is the first step in tax management. Tax management itself is a means to fulfill tax obligations correctly, but the amount of tax paid can be reduced to a minimum to obtain the expected profit and liquidity. The next step is the implementation of tax implementation and tax control. At this stage of tax planning, collection and research on tax regulations is carried out. The aim is to be able to choose the type of tax saving measures that will be carried out. In general, the emphasis on tax planning is to minimize tax obligations.

## REFERENCES

1. Adawiah, Diyah. 2011. Analisis Penerapan Perencanaan Pajak atas Biaya Kesejahteraan Karyawan pada Yayasan AI – Muhajirin Kota Depok. Jurusan Akuntansi Fakultas Ekonomi and Bisnis Universitas Islam Negeri Syarif Hidayatullah: Jakarta.
2. Ahmadi. 2006. Perlindungan Hukum Bagi Wajib Pajak Dalam Penyelesaian Sengketa Pajak. Cet.1. Bandung: PT. Refika Aditama.
3. Brotodihardjo R. Santoso (1993), Pengantar Ilmu Hukum Pajak, 3rd ed, Bandung:PT Eresco.
4. Cao, Hongceng & Xiaohui Xu. 2009. Study on The Tax Planning Enterprise Income Tax. International Journal of Business and Management, 4(5), Mei 2009.
5. Chen, S., Chen, X., Cheng, Q and Shevlin, T. 2010. "Are Family Firms More Tax Aggressive than Non-Family Firms?" Journal of Financial Economics. 95: 41-61.
6. Damayanti. 2009. Perpajakan Indonesia - Mekanisme dan. Perhitungan. Edisi ke-I. Yogyakarta: ANDI.
7. Jensen, M. C. and Meckling, W. H. 1976. "Theory of the Firm: Managerial Behaviour, Agency Cost, and Ownership Structure". Journal of Financial Economics. 3(4): 305-360.
8. McLaren, John. 2008. The Distinction Between Tax Avoidance and Tax Evasion has Become Blurred in Australia: Why has it Happened?. Journal of the Australasian Tax Teachers Association, 3(2), pp: 141-163.
9. Pohan, A. C. 2011. Kajian Perpajakan and Tax Planning-nya Terkini. Jakarta: Bumi Aksara.
10. Potas, Ivan. 1993. Thinking about Tax Avoidance. Trends and Issues No. 43, Australian Institute of Criminology, Australia.
11. Scott, William, R. 2009. Financial Accounting Theory. International Edition. New Jersey: Prentice-Hall, Inc.
12. Suandy, Erly. 2011. Perencanaan Pajak. Jakarta: Salemba Empat.
13. Wilson, R. 2007. An Examination Of Corporate Tax Shelter Participants. Working paper. University of Washington Business School.
14. Zain, Mohammad. 2008. Manajemen perpajakan. Penerbit: Salemba Empat.

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## **THE EFFECT OF LEADERSHIP, CAREER DEVELOPMENT AND COMPENSATION ON WORK SATISFACTION IN THE FINANCIAL MANAGEMENT AGENCY AND REGIONAL ASSETS OF THE PROVINCE OF WEST NUSA TENGGARA, INDONESIA**

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### **ABSTRACT**

This research was motivated by the role of job satisfaction in the outcome of work. Job satisfaction can be influenced by leadership, career development and compensation. The purpose of this study were to analyze the influence of leadership on job satisfaction; analyze the effect of career development to job satisfaction; analyze the effect of compensation on job satisfaction. Data analysis and hypothesis testing is done with the approach of this study Partial Least Square (PLS) using software SmartPLSversi 3.0. Menunjukkan research results that (1) leadership has positive and significant impact on job satisfaction, (2) career Development has a positive and significant impact on job satisfaction, (3) compensation has a positive and significant impact on job satisfaction.

### **KEY WORDS**

Job satisfaction, leadership, careers, compensation.

Human Resources Management (HRM) in a business organization or a public organization certainly has its goals and objectives are to achieve the expected performance, a high level of attendance, turnover as low as possible, and high job satisfaction.

Job Satisfaction (job Satisfaction) as an emotional state that is favorable or unfavorable to which employees view their job. Job satisfaction is very important because it affects absenteeism, labor turnover, morale, complaints, and issues other vital personnel. (Handoko, 2014: 193)

Career development factors influence job satisfaction. Employees who work in an organization will be more motivated to work if leaders pay attention to the career development of his subordinates.

Career development (career development) is a lifelong series of activities that contribute to the exploration, establishment, success, and fulfillment of one's career (Dessler, 2015: 379). Career is a formal approach used by the organization to improve his position through the appropriate qualifications and experience when needed. Formal career development will be critical to maintaining the motivation and commitment of employees (Mondy and Noe, 2005: 237).

Other factors that can increase employee job satisfaction are compensation. Compensation is everything received by the employee / employees as remuneration for their work. (Handoko, 2014: 155). Compensation of employees / employee (employee compensation) includes all forms of payment given to the employee / employee and arising from their employment relationship (Dessler, 2015: 417).

Studies on the relationship of leadership on job satisfaction has been done by Suryadharma et al (2016), with the results that the leadership of significant positive effect on employee satisfaction. While the research Tondok and Andarika (2004), Brahmasari and Suprayitno (2008) as well as research by Pratt (2012) found that leadership significant negative effect on job satisfaction.

Gunawan (2017) conducted a study that showed that career development is significant positive effect on employee job satisfaction. While the research Khotimah (2014), and Hadiwijaya (2016), as well as Mabruh et al (2017) found that career development is not significant positive effect on job satisfaction.

Suryadharma et al (2016), carried out with hOutcome studies show that compensation significant positive effect on job satisfaction karyawan. Sedangkan on Pioh research and alum (2016) and Mabruroh et al (2017) showed that compensation significant negative effect on job satisfaction.

Differences may occur research results are expected for an object of research/studies differ, the measurement of the indicator variables and different variables, analytical tools used and the location and the object under study, so as to provide an opportunity for researchers to conduct studies with the same title today. Given that there are a number of studies on the private sector which found that leadership, career development and compensation effect positive/negative significantly to job satisfaction, the researchers wanted to try to reexamine these variables in sectors public. Atas this basis, the researchers wanted to test the variables of leadership, career development and compensation for that job satisfaction conducted research on job satisfaction.

Based on the description of the importance of research on job satisfaction, leadership, career development and compensation and their research found a gap in the relationship between variables. Thus, researchers interested in conducting further research into the public organizations in Finance and Asset Management Agency for the Province of West Nusa Tenggara.

So the hypotheses that can be revealed through this research are:

H1: It was alleged that the leadership of significant positive effect on job satisfaction of Finance and Assets Management Agency of the Province of West Nusa Tenggara;

H2: Suspected career development significant positive effect on job satisfaction of Finance and Assets Management Agency of the Province of West Nusa Tenggara;

H3: Suspected compensation significant positive effect on job satisfaction of Finance and Assets Management Agency of the Province of West Nusa Tenggara.

## **METHODS OF RESEARCH**

This research is associative with the shape of a causal relationship. According Sugiyono (2017: 59) the causal relationship is a relationship that is both cause and effect. So, here are the independent variables (influence) and the dependent variable (affected). This means that the research focuses on the Effect of Leadership, Career Development and Compensation on Job Satisfaction in Finance and Assets Management Agency of the Province of West Nusa Tenggara.

The population in this study is all Civil Servants who work in the Finance and Assets Management Agency of the Province of West Nusa Tenggara number of 124 respondents. The main techniques of data collection in this research are by using a questionnaire / questionnaire technique. Questionnaire technique is a method of data collection using a number of written questions that are used to obtain information from respondents. Questionnaire used was a questionnaire immediately and closed, meaning that the questionnaire given directly to respondents and respondents can choose one of the alternative answers that have been provided. Data collection tools in this study are questionnaires which is a written statement that is used to obtain information from respondents.

A quantitative approach used in this analysis is a model approach Partial Least Square. (Ghozali, 2011:18) states PLS is a factor indeterminacy powerful analytical methods because it does not assume the data must be with a certain scale measurements and small sample size. PLS approach used by the consideration that PLS has an advantage compared with other quantitative approaches.

## **RESULTS AND DISCUSSION**

To determine the level of significance of the path coefficient, p value generated by running a bootstrapping algorithm must be lower than the level of 0.05 means that the

hypothesis would be supported if the p value is less than the critical value of 0.05. The test results can be seen in the level of significance in the image below.

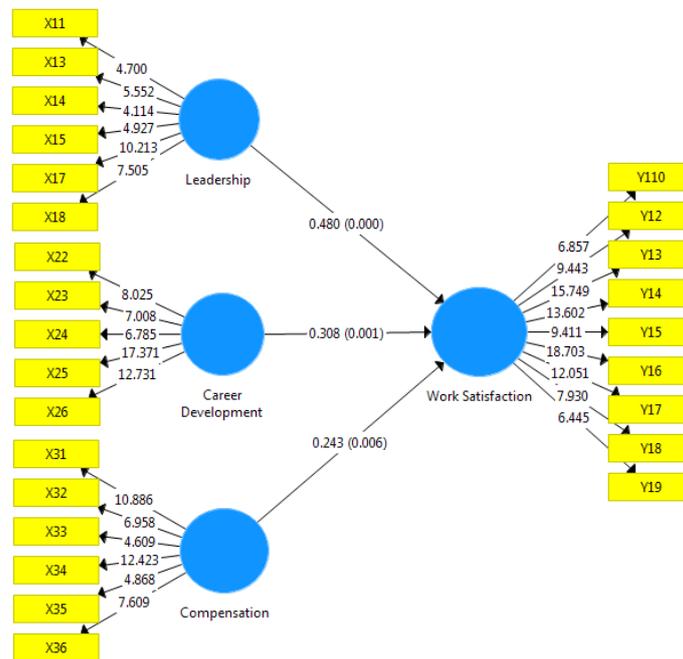


Figure 1 – Test Results bootstrapping In SmartPLS

Based on the above figure can be seen that the leadership has a positive effect of 0.480 on Job Satisfaction in Finance and Asset Management Agency Nusa Tenggara Province Baratdangan significance level of 0.000, which means a significant, so it can be concluded that the first hypothesis can be accepted. It can be stated that the leadership has a positive and significant impact on job satisfaction. The statement can be interpreted that if the implementation of more effective leadership behavior then certainly employee satisfaction will be more satisfied and vice versa if the less effective leadership behaviors that will decrease job satisfaction (dissatisfied).

Career development have a positive effect amounting to 0,308 on Job Satisfaction in Finance and Asset Management Agency Nusa Tenggara Province Baratdangan significance level of 0.000, which means a significant, so it can be concluded that the second hypothesis is acceptable. From these results it can be stated that the career development and significant positive effect on job satisfaction. This means that if more and more career development opportunity for employees, employee satisfaction will also be satisfied; otherwise if the employee career development opportunities for the less likely the employee satisfaction decreases/the less satisfied.

Compensation has a positive effect amounting to 0,243 on Job Satisfaction in Finance and Assets Management Agency of the Province of West Nusa Tenggara with a significance level of 0.004, which means a significant, so it can be concluded that the third hypothesis is accepted. From these results it can be stated that the compensation positive and significant effect on job satisfaction. This means that if the compensation received by employees felt more fair, equitable or appropriate then employee satisfaction will be increased/more satisfied; conversely if the compensation received by the perceived lack of a fair, equitable or less fit then employee satisfaction will decline or the less satisfied.

## CONCLUSION AND RECOMMENDATIONS

Leadership has a positive and significant impact on Job Satisfaction in Finance and Asset Management Agency NTB Provincial. The more effective the behavior of leaders' in his leadership will be followed by a higher level of employee satisfaction at work. Conversely the

less effective in carrying out its leadership of leader behavior will be followed by the lower level of employee satisfaction at work.

Career development has a positive and significant impact on Job Satisfaction in Finance and Asset Management Agency NTB Provincial. The more definite career development opportunities within the organization, will be followed by a higher level of employee satisfaction at work.

Compensation has a positive and significant impact on Job Satisfaction in Finance and Asset Management Agency NTB Provincial. The more fair and adequate provision of compensation to every employee, will be followed by a higher level of employee satisfaction toward work and institutions.

*Recommendations:*

The Chairman of the Finance and Assets Management Agency Nusa Tenggara Province Barat perlu to continue directing subordinates morale through activities undertaken apples every morning as well as in formal meetings and informal. This needs to be done as an effort to improve the morale of the employees so that the objectives of the institution to be more easily achieved.

Finance and Asset Management Agency Nusa Tenggara Province Barat perlu open access to the good cooperation in the academic and private sectors in the realm of human resource development. Through this policy, the direction of development of the human resources possessed becomes more directed to the front.

Empowerment through more active by providing training that is practical and directly related to the work of the employees so that the training conducted become more real to the needs of the employees work. So that the problems qualifying knowledge and skills are still not in accordance with the demands of employee tasks can be resolved.

## REFERENCES

1. Andarika, Rita., (2004), The Relationship Between Perceived Transformational and Transactional Leadership Styles with Job Satisfaction. PSYCHE Vol. 1 No. 1.
2. Brahmasari Ida Ayu and Suprayetno, Agus., (2008) .Pengaruh Work Motivation, Leadership and Organizational Culture on Employee Satisfaction and Impact on Corporate Performance (Case Study at PT. Pei Hai International wiratama Indonesia) .e-Journal of Management and Entrepreneurship. Vol.10, NO. 2, September 2008: 124-135.
3. Dessler, G. 2015. Human Resource Management (Translation). Jakarta: Four Salemba.
4. Gunawan, Andri., (2017), Effect of Compensation and Career Development Job Satisfaction Motivation Nurses Who Work At mediated by Bina Kasih Hospital Pekanbaru.E Fekon JOM-Journal Vol. 4 No. 1, February 2017.
5. Hadiwijaya, Hendra., (2016), Effect of Incentives and Job Satisfaction Career Development Through Employee Performance As an intervening variable. National .Seminar Information Technology, Business and Design, PalComTech, 12 May 2016.
6. Handoko, Hani T. (2014). Personnel Management and Human Resources, Issue 2.
7. Khotimah (2014), Effect of Leadership and Career Development And Job Satisfaction on Employee Performance impact. E-Journal of Management Science, 2(2) April 2014.
8. Mabruroh (2017), Effect of Career Development and Work Environment on Employee Satisfaction Dungus Madiun.Vol Pulmonary Hospital. 5 No. 1, October 2017. 86-97.
9. Mondy, R. (2005). Human Resource Management.9th ed. Pearson Prentice Hall. USA.
10. Pih, Nancy L. (2016), Effect of Compensation and Working Environment Against Job satisfaction and employee performance (Study on civil servants in the District Office Sonder Minahasa District) .e-Journal EMBA Vol.4 No. 838 June 2, 2016, p. 838-848.
11. Primary, Christian Yogi., (2012), Effect of Autocratic Leadership Style on Job Satisfaction. E-JurnalJournal of Social and Industrial Psychology JSIP 1 (2) (2012).
12. Sugiyono, 2017 Business Research Methods, fourth printing, CV Alfabeta, Bandung.
13. Suryadharma (2016), Effect of Leadership and Compensation Committee on Job Satisfaction and Employee Performance (Study at PT. Bpr Sri Artha Sustainable Denpasar) E-Journal of Economics and Business University Udayana 5.2: 335-358.

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## **PERFORMANCE OF THE SLASH AND BURN FARMING SYSTEM IN THE UPSTREAM AREA OF MANIKIN WATERSHED, WEST TIMOR, INDONESIA**

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### **ABSTRACT**

The purpose of this study was to determine the performance of the slash-and-burn farming system in the Upper Area of the Manikin Watershed along with a number of aspects behind it. The method used is the mixed model method. The data collected consists of primary data and secondary data. Primary data was gathered from key informants consisting of community leaders, traditional leaders, and government officials; while secondary data were obtained from government agencies, and private institutions. Qualitative data collection was carried out through in-depth interviews using instruments in the form of a list of in-depth questions, and field observations recorded in field log books. Two villages were selected purposively as sample villages namely Soba and Oben villages. These two villages represent the upper area of the Manikin watershed. Data analysis was carried out using case-oriented techniques. The case orientated technique used was the thematic analysis of the transcripts of in-depth interviews with stakeholders. The results of the study showed that: (1) The maize farming system in the Manikin watershed is still managed extensively traditionally without using modern production input, (2) Weeds and uncertainty in the pattern of rain are inhibiting factors which resulted in very fluctuating of the farming system productivity; and (3) Farmers in the Manikin watershed are faced with a dilemmatic choice between cultivating fields according to conservation rules with the consequence of low production, or cultivating fields on sloping land with the risk of accelerating land quality degradation due to erosion.

### **KEY WORDS**

Extensive farming, low productivity, Manikin watershed, slash and burn farming system.

The upstream area of a watershed is an important area because it has the function of protecting the entire watershed area. This protection is mainly towards the preservation of land and water resources. Physically, this area is a region with hilly and mountainous topography, and it has a degree of slope that is large enough to be very sensitive to erosion. Therefore, regional planning is often the focus of watershed planning, considering that in some watersheds, upstream and downstream areas have biophysical relationships through hydrological recycling.

In fact, the upstream area of a watershed is not only used for conservation efforts, but also for activities related to the agricultural sector, especially dry land agriculture. In line with this, Satari (1988) argues that agricultural development in dry land areas, especially in the upstream areas of a watershed, is far more complex than in the lowlands. The potential of existing land resources is very limited by slope, severe erosion rates, and is also limited by the low accessibility of infrastructure. This condition will affect the ease of obtaining government facilities, and the socio-economic conditions of the community.

All the conditions stated above also occur in the upper reaches of the Manikin Watershed. Although it is not a large watershed in West Timor, the Manikin watershed has an important meaning, namely as a river basin between Kupang Regency and Kupang Municipality. In addition, in the downstream area are rice fields where irrigation water is sourced from the Manikin River. This rice field is one of the rice producing centers in Kupang Regency. Meanwhile, the middle and upstream parts of the watershed are dominated by

slash-and-burn farming.

Similar to farming in general, the slash-and-burn cultivation system is seen as an agricultural system that damages the environment (Uhl, 2006). Mudita (2000) and Kleinman, et al., (1995), stated that slash-and-burn cultivation causes more negative impacts than it is as the most likely option for people in dry climate regions. Few researchers have revealed that in addition to the negative impacts mentioned above, slash-and-burn cultivation is actually the most feasible choice in the various limitations faced by people living in dry climate regions in West Timor (Ataupah 2000; Pollini 2007, Kapa, 2017).

Slash-and-burn farming in West Timor is carried out on a rotating basis. According to Monk et al (1997), such cultivation is relatively less destructive compared to shifting cultivation. The reason for this is because in rotating cultivation, the land to be abandoned is first planted with perennials. But according to McWilliam (2000), planting perennials is actually more aimed at obtaining legality on abandoned land and not to accelerate the succession process to the forest. Moreover, shifting cultivation according to McWilliam (2000) can still cause environmental damage when the fallow period is getting shorter due to the pressure of an increasingly dense population. In such circumstances, rotating cultivation will also have an impact that is not much different than irregular shifting cultivation. One of the effects that McWilliam (2000) is very concerned about is the threat to biodiversity considering that forests in West Timor are dry forest areas with very limited and fragmented areas. In contrast to the results of the research of McWilliam (2000), the research conducted by Mudita et al. (2001) in villages around the Mutis Mount Natural Reserve area, showing an increase in population was not significantly related to fallow time. For villages around the Mutis Mount Natural Reserve area, this occurs because the right to open land for cultivation is not limited by administrative boundaries, but rather on communal rights, so that residents from one village still have access to land in another village. Moreover, according to the community there is no point in clearing land with short fallows because the results will not be as expected. So that if land with a minimum fallow period is not available, they will be more likely to extend the cultivation period than shorten the fallow period which requires more energy and greater costs.

By paying attention to the polemics as stated above, it is important to know how the performance of the farming system as a form of slash and burn cultivation is practiced in the upstream of the Manikin watershed, to be used as a foundation in formulating management policies for both the upstream region and the entire watershed. Therefore, the purpose of this study was to determine the performance of the cultivation system in the upper reaches of the Timor Manikin Watershed along with a number of aspects behind it. The aim of this study was to determine the performance of the cultivation system in the Upper Area of Manikin Watershed along with a number of aspects underlying it.

## **METHODS OF RESEARCH**

This research was conducted using a mixed model method (Teddlie & Tashakkori, 2003). The data used consists of primary and secondary data. The primary data was obtained from 36 key informants consisting of community leaders, traditional leaders, and government officials; while secondary data was collected from government agencies, and other parties, including researchers who have conducted research at the location of this study.

Qualitative data collection was carried out through in-depth interviews and field observations, while quantitative data collection was required to support the qualitative data.

Primary data includes data on field management, production, production adequacy, as well as various existing inhibiting factors and how to overcome them, and so on. Meanwhile, secondary data such as potential areas, policies, etc. are obtained from relevant agencies and literature as well as the results of previous studies.

Data collection is done by using instruments in the form of a list of in-depth questions (in the form of open questions), and field activity books (field log book). Two villages were selected purposively as sample villages based on considerations that the two villages

representing the upper area of the Manikin watershed, the number of people involved in slash-and-burn farming systems, and accessibility of locations. Based on these criteria, two villages were selected, namely Soba Village and Oben Village.

Data analysis was carried out using case oriented techniques. The case orientation technique used is thematic analysis of the transcripts resulted from in-depth interviews with stakeholders (Falk et al. 2008).

## RESULTS AND DISCUSSION

*Farm Management System.* Farming enterprise in the study area can be divided into two groups based on the main component arrangement, namely Maize, and rice farming. Nonetheless, Maize cultivation is the most predominantly cultivated. The decision to operate a Maize field and/or paddy field is mainly based on the needs of farmers and the conditions of soil fertility. Rice plants, generally local cultivars, are more preferred to be planted in new opening land with relative deep soil solum. On the other hand, for the Maize field, such criteria are not very important.

Traditional mixed intercropping is a form of dominant cropping pattern that reflects diversification in space. Diversification in space is done by mixing various plants not only in one plot but also in one planting hole to save time and work. In addition, the reason for choosing this system is based on the consideration of minimizing the overall risk of failure, in addition to the benefits of the possibility of Nitrogen contributions by types of legumes combined with non-legumes.

The types of plants mixed in one planting hole with the main plants are turis beans (*Cajanus cajan*), nasi beans (*Phaseolus calcaetus*), arbil beans (*Phaseolus lunatus*), and pumpkin (*Cucurbita moscata*). Especially in the maize field, in one planting hole is usually filled with five local cultivar maize seeds plus one seed of another plant. The types of plants planted in one plot with the main plants are cassava (*Manihot esculenta*), watermelon (*Citrullus sp.*), and sweet potato (*Ipomoea batatas*) on land that allows it.

The spacing used is generally between 75 cm x 75 cm x 75 cm to 100 cm x 100 cm x 100 cm, depending on the slope of the land. Setting the spacing based on the slope of the land combined with the use of fallen resistant cultivars is more directed at minimizing wind disturbances, especially in sloping areas. In managing the fields, land management and fertilization actions are practically not carried out. This seems to be closely related to land conditions that are generally relatively flat or rocky with a shallow solum. Therefore, burning is a shortcut to restore soil fertility. This is in line with the opinion of Sanchez (1980) cited by Rambo (1984) which states that biomass combustion will help produce a number of nutrients that are beneficial for plant growth.

The application of chemical pesticides in controlling pests, diseases, and weeds is practically not done. To control the presence of pests such as stem borer caterpillars on corn plants, it is enough to do with fumigation that is by burning raw leaves around the cultivation area. Although the odds are still in doubt, the cultivators believe that this method is able to reduce the attack of these pests.

*Productivity and Inhibiting Factors.* Weed is a major factor in reducing dry field production in the research area. Thus, farmers' attention to weeds is far more meaningful when compared to other disturbing microorganisms. This is evident from the weed control efforts that have begun to be carried out since the preparation of land for dry fields, namely through burning and selection of relatively sloping land.

Based on the experience of farmers, burning biomass in arable land besides being able to fertilize the soil, is also able to suppress weed growth. Akobundu (1980) cited Shenk (1986) stated that if done well, combustion can suppress weed disturbances for some time, and even reduce the frequency of weeding. However, according to Moody (1973; 1975) and Nyoka (1982) cited by Shenk (1986) stated that if the heat produced by the combustion process is inadequate because at least the biomass is burned, it will stimulate the germination and re-growth of weeds.

Apparently the phenomenon as stated by the last two experts is now being

experienced by farmers in the research area. This is evident from a large amount of time and energy allocated by farmers to hoe weeds (Figure 1). Weeding is done manually by removing or gouging with machetes, which are carried out for almost the entire life of the corn crop.

The productivity of the farming system in the study area is very volatile, but in general, it is actually experiencing a downward trend. Quantitative calculation of the trend of production of this system is difficult, given the unit of measure of production used - especially for corn - is not a common unit of measurement that refers to units of weight such as kilograms or quintals, but local units of measurement which refer to units of quantities in this case corn. What's interesting here, the number of corn grains is fixed for each unit of measure and is not influenced by the size of the corn grain. Therefore, it is difficult to convert this number-based local unit into a plurality of units based on weight. The results of interviews in the field indicate that production fluctuations are mainly determined by two factors, namely climate, in this case, the pattern of rain, and weeds. By itself, the climate and weeds are a disturbance in this system.

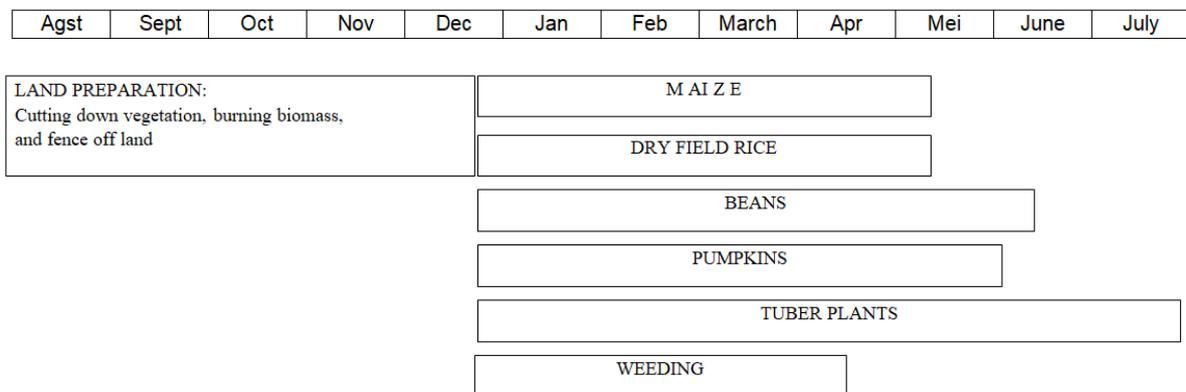


Figure 1 – Calendar of farmer activities in cultivating dryfields in the Upper Area of Manikin Watershed

If the rainfall is sufficient and evenly distributed in space and time dimension, and weeding is performed well, then the yield obtained is adequate for food needs a year, sometimes even more so that it will be sold for cash. Conversely, if the rainfall is less favorable and the weeding process does not go well because of a shortage of labor, for example, the results obtained are very small. If this occurred then sometimes the seeds set aside for the next planting season are consumed. The latter circumstance is more common nowadays, giving rise to the phenomenon of ordinary hunger. To overcome this, farmers have several choices, namely increasing the number of parcels of cultivated land or looking for alternative foodstuff.

The above explanation is basically a strong indication of the occurrence of land degradation that has been predicted half a century ago by Ormeling (1955) who stated that if the development of field management techniques is not in line with population growth, the threat of land quality degradation and weed infestation becomes serious and very affect productivity. The result is that both the planting period and the fallow period are shorter. This condition does not indicate a rapid recovery of land, but the opposite. Another interesting thing related to accelerating land quality degradation is the strong tendency of farmers to open fields on sloping land without terrace. According to farmers, the presence of weeds on such land both in the number of individuals and the number of species is less.

*Dilemma of the Farming System in the Upper Area of the Manikin Watershed.* Seeing the phenomenon as above, it seems that field farmers in the Upper Manikin Watershed may even be on the island of Timor in a dilemmatic choice. Trying to cultivate fields on land with physical conditions in accordance with the principle of feasibility and then be ready to compete with weeds, or sacrifice the principle of feasibility to minimize competition with

weeds are two difficult choices, because they both carry myrageous implications for decreased productivity.

To obtain a comprehensive picture of the appearance of the farming system in the Upper Manikin Watershed, in Figure 2 a flow chart of the system is presented. The interesting thing in Figure 2 is that it relates to the existence of traditional leaders and Field Agricultural Extension (PPL). Customary leaders are local institutions that have authority in licensing and determining the location of farms in this region. Therefore, this institution is basically the key to improving field management. However, it seems that this role has not been fully utilized in the pattern of approaches both by the PPL and by other motivators in incorporating innovations.

*The Dilemma of the Agricultural System in the Upper Areas of the Manikin Watershed.* Looking at the above phenomenon, it seems that the field farmers in the Manikin upper watershed may even be on the island of Timor in a dilemma choice. Trying to process land on the ground with physical conditions in accordance with the principle of feasibility and then being ready to compete with weeds, or sacrificing the principle of feasibility to minimize competition with weeds are two difficult choices, because both have enormous implications for reducing productivity.

To get a comprehensive picture of the appearance of the agricultural system in the Manikin upper watershed, Figure 2 presents a system flow chart. The interesting thing in Figure 2 is that it relates to the existence of traditional leaders and Agricultural Extension Field worker (PPL). Customary leaders are local institutions that have authority in licensing and determine agricultural locations in this region. Therefore, this institution is basically the key to improving field management. However, it seems that this role has not been fully utilized in the pattern of approaches both by the PPL and by other motivators in incorporating new innovations.

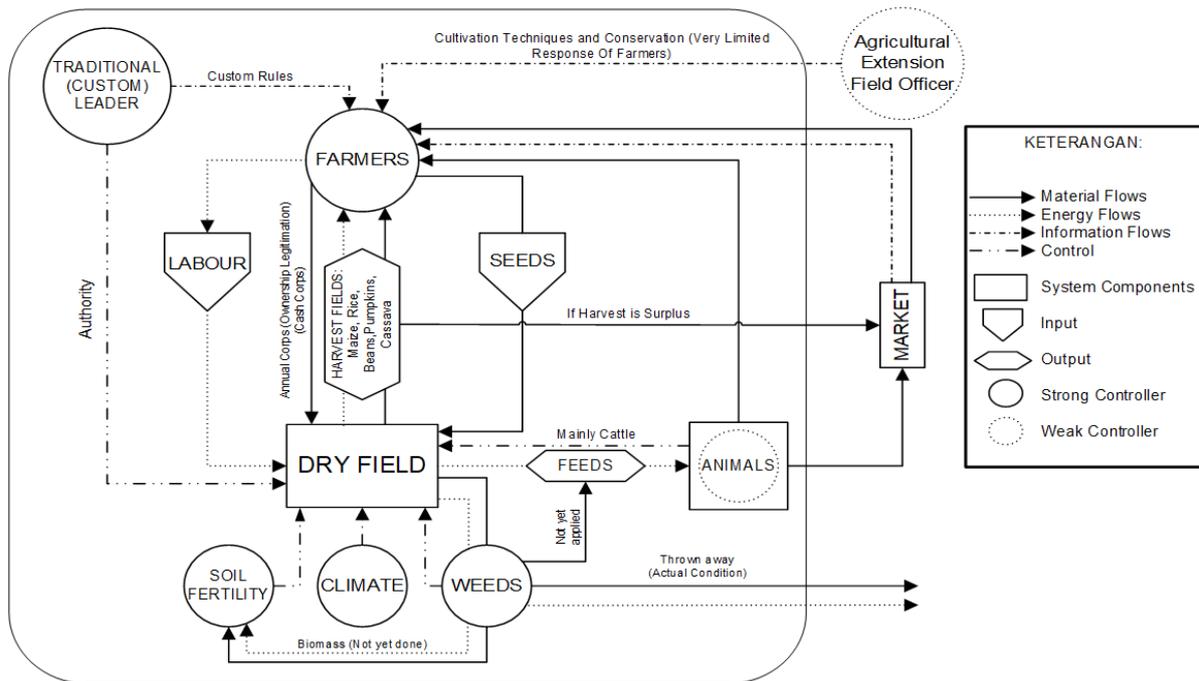


Figure 2 – Flows of Slash and Burn Cultivation Systems in Manikin Upper Watershed.

This fact has caused especially the role of Agricultural Extension institutions as a source of information to be weak, because it is as if this institution is outside the system. This condition is also exacerbated by other weaknesses which include the educational background of the majority of PPLs based on wetland agriculture, extensive working areas with heavy terrain but very facilities, and the behavior of early adopter farmers in accepting and adopting new innovations.

For future improvements, then of course the two institutions must establish a coherent collaboration, which must first be based on mutual understanding, so that PPLs are no longer "outsiders" who "patronize" and even traditional leaders are no longer considered "inhibitors" the entry of new innovations into the PPL program.

### CONCLUSION AND RECOMMENDATIONS

The Maize farming system in the Manikin watershed is still managed extensive traditionally, by diversifying the types of commodities in one area as a strategy for food security and availability. In addition, inputs of modern production facilities such as superior seeds, synthetic fertilizers and pesticides are practically not used.

Weeds and uncertainty in the pattern of rainfall are inhibiting factors which result in very fluctuating productivity of the farming system.

Farmers in the Manikin watershed are faced with a difficult choice between cultivating fields according to conservation rules (on flat land) with low production consequences due to disturbance of weeds that are quite high in this condition, or cultivating fields on sloping land with the risk of accelerating degradation. land quality due to erosion.

#### *Recommendations:*

- A more in-depth study needs to be carried out regarding the strength of the slash-and-burn based farming system which, although it has been practiced for a long period of time but in fact still persists to this day.
- Improvements to the farming system should begin with improvements in terms of plant arrangement both from the aspect of species composition and spatial aspects, perceptions of weed biomass which have not been reused in the system as a source of organic material, as well as soil conservation efforts that support two actions.

### REFERENCES

1. Ataupah, H. 2000. Fire, traditional Knowledge and Cultural Perspectives in Nusa Tenggara Timur. In: Fire and Sustainable Agricultural dan Forestry Development in Eastern Indonesia and Northern Australia. J. Russel-Smith, G. Hill, S. Djoeroemana, & B. Myers (eds.). ACIAR Proceedings No. 92.
2. Falk, I., Surata, S.P.K. Mudita, I W. Martiningsih, E. & Myers, B. 2008. Community management of biosecurity: Overview of some Indonesian studies. Kritis-Learning Communities, Special Co-publication, 1-40. Sumberdaya Alam, Risiko Bencana & Perencanaan Pembangunan). Australian Aid-GPFD Funded Project. Kupang.
3. Gunawan S, 1987. Pidato Pengarahan pada Lokakarya KEPAS, Penelitian Agroekosistem Lahan Kering, Malang 2 – 3 Juli 1987.
4. Kleinman, P. J. A., Pimentel, D., and Bryant, R. B. (1995). The ecological sustainability of slash-and-burn agriculture. *Agriculture, Ecosystems and Environment*, 52(2–3), 235–249. [https://doi.org/10.1016/0167-8809\(94\)00531-1](https://doi.org/10.1016/0167-8809(94)00531-1)
5. McWilliam, A., 1995. Rhetoric and Reticence: Notes on Anthropology of Development in West Timor, Indonesia. *Journal of Developing Societies* 11.
6. Monk, K.A., de Fretes, Y., & Reksodihardjo-Lilley, G., 1997. The Ecology of Nusa Tenggara and Maluku (Vol. The Ecology of Indonesia Series). Hong Kong: Periplus.
7. Mudita, I W. 2000. Fire and the Management of Agricultural System in East Nusa Tenggara Timur. In: Fire and Sustainable Agricultural dan Forestry Development in eastern Indonesia and Northern Australia. J. Russel-Smith, G. Hill, S. Djoeroemana, & B. Myers (eds.). ACIAR Proceedings No. 92.
8. Mudita, I.W., Soetedjo., I N.P. Naraheda, Z. Kia Duan, F. Aspatria., U. Ataupah., H.& Jelahun, Y.E. 2001. Studi Aspek Lingkungan Perubahan Fungsi Cagar Alam Gunung Mutis dalam Wilayah Kabupaten Timor Tengah Selatan Menjadi Bagian dari Kawasan Taman Nasional. Kerjasama Bagian LH Setda Kabupaten TTS dan PPLHSA Lembaga Penelitian Undana, PPLHSA Lemlit Undana, Kupang.

9. Ormeling, F. (1955). *The Timor problem: A geographical interpretation of an underdeveloped island*. Djakarta & Groningen: J.B. Wolters.
10. Polini, J. 2007. *Slash-and-Burn Cultivation and Deforestation in the Malagasy Rain Forests: Representations and Realities*. PhD Dissertation. Cornell University, Ithaca. Available at <http://www.people.cornell.edu/pages/jp267/>.
11. Rambo, A.T., 1984. No Free Lunch: A Reexamination of The Energetic Efficiency of Swidden Agriculture. In: A.T. Rambo and P.E.Sijise (eds): *An Introduction to Human Ecology Research on Agricultural System in Southeast Asian*. Univ. Publication Program UPLB – Laguna, The Philippines.
12. Shenk, M.D., 1986. Weed Control in Maize in The Tropics. In : Keith Moody (ed): *Weed Control in The Tropical Crops Vol. II*. Weed Science Society of The Philippines Inc. and Southeast Asian Regional Center for Graduate Study and Research in Agriculture.
13. Teddlie, C., & Tashakkori A. 2003. Major Issues and Controversies in the Use of Mixed Methods in the Social and Behavioral Sciences. In: *Handbook of Mixed Methods in Social & Behavioral Research*. Pp. 3-50. A. Tashakkori & C. Teddlie (eds.). SAGE Publications: Thousand Oaks, London, New York.
14. Uhl, C. 2006. Factors Controlling Succession Following Slash-and-Burn Agriculture in Amazonia. *The Journal of Ecology*, 75(2), 377. <https://doi.org/10.2307/2260425>
15. Kleinman, P. J. A., Pimentel, D., & Bryant, R. B. 1995. The ecological sustainability of slash-and-burn agriculture. *Agriculture, Ecosystems and Environment*, 52(2–3), 235–249. [https://doi.org/10.1016/0167-8809\(94\)00531-I](https://doi.org/10.1016/0167-8809(94)00531-I).
16. Kammerbauer, J., & Ardon, C. 1999. Land use dynamics and landscape change pattern in a typical watershed in the hillside region of central Honduras. *Agriculture, Ecosystems and Environment*, 75(1–2), 93–100. [https://doi.org/10.1016/S0167-8809\(99\)00071-7](https://doi.org/10.1016/S0167-8809(99)00071-7).
17. Juo, A. S. R., & Manu, A. 1996. Chemical dynamics in slash-and-burn agriculture. *Agriculture, Ecosystems and Environment*, 58(1), 49–60. [https://doi.org/10.1016/0167-8809\(95\)00656-7](https://doi.org/10.1016/0167-8809(95)00656-7)
18. M.J. Kapa, T.Gunawan, dan S.R. Hardoyo, *Sistem Pertanian Perladangan Tebas Bakar Berbasis Kearifan Lokal pada Wilayah Bercurah Hujan Eratik di Timor Barat*. JPG Vol. 4. No. 2, pp. 10-19, 2017.
19. Metzger, J. P. (2003). Effects of slash-and-burn fallow periods on landscape structure. *Environmental Conservation*, 30(4), 325–333.
20. Styger, E., Rakotondramasy, H. M., Pfeffer, M. J., Fernandes, E. C. M., & Bates, D. M. (2007). Influence of slash-and-burn farming practices on fallow succession and land degradation in the rainforest region of Madagascar. *Agriculture, Ecosystems and Environment*, 119(3–4), 257–269. <https://doi.org/10.1016/j.agee.2006.07.012>
21. Rodrigues, G. S., Kitamura, P. C., Sá, T. D. de A., & Vielhauer, K. (2003). Sustainability assessment of slash-and-burn and fire-free agriculture in Northeastern Pará, Brazil. In *Proceedings of the Second Biennial Energy Conference* (pp. 95–107). Center of Environmental Policy.

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## **TRUE SHALLOT SEED PRODUCTION OF LOWLAND SHALLOT (BIRU LANCOR VARIETIES) UNDER THE APPLICATION OF SEAWEED EXTRACT AND N FERTILIZER**

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### **ABSTRACT**

The major problem on the improving shallot production is due to availability of quality tuber seeds required by farmers in sufficient quantities. One effort that can be done in order to fulfill the seed production is to use TSS or True Seed of Shallot technology. For this reason, efforts are needed to improve nitrogen fertilizer efficiency following the application of seaweed extract along with different source of N fertilization. The research was carried out in the village of Sidomulyo, Batu, with an altitude of 923 m asl with planting material from seed growers in Probolinggo who have experienced on shallot seed production with seed a dormancy period of approximately 2 months. Seaweed Extract (RL) uses *Citorin* and ammonium nitrate using Calcium Ammonium Nitrate Fertilizer. For seeds to be planted, vernalization is carried out by inserting seeds into the refrigerator at  $\pm 10^{\circ}\text{C}$  for 3-4 weeks. The study began in September 2018 and ends in January 2019. The study used a Factorial Randomized Group Design of 1 factor, namely the dose of Ammonium Nitrate with several concentrations of seaweed extract (RL). The dose of Ammonium Nitrate consists of 0% (0 kg / ha), 50% (from the total N dose of 178 kg / ha and 100% (as much as 178 kg / ha). The dosage of N 178 kg per hectare comes from the calculation of N content in doses recommendation is NPK 600 kg / ha (NPK fertilizer contains 15% N), ZA 200 kg / ha (ZA fertilizer contains N 26%), Urea 100 kg/ha (urea fertilizer containing N 46%), and KCl 150 kg/ha Seaweed extract with a concentration of 0 ppm, 120 ppm, 240 ppm, 360 ppm and 480 ppm. Thus the treatment is as follows: (1) Control = 0% N and 0 ppm RL; (2) N1 RL 120 ppm (50% dose N and 120 ppm RL); (3) N1 RL 240 ppm (50% N and 240 ppm RL); (4) N1 RL 360 ppm (50% dose N and 360 ppm RL); (5) N1 RL 480 ppm (50% dose N and 480 ppm RL); (6) N2 RL 120 ppm (100% N and 120 ppm RL) (7) N2 RL 240 ppm (100% N and 240 ppm RL) (8) N2 RL 360 ppm (100% N and 360 ppm RL); (9) N2 RL 480 ppm (100% dose N and 480 ppm RL). The variables observed were plant height, number of leaves, number of tillers and number of tubers per plant, 50% bloom time, number and height of stem, root dry weight, canopy dry weight, number of flowers per stem, number of kernels per stem, percentage of flowers being kernels, weight of 1 seed, seed weight per 1000 m<sup>2</sup>, mini tuber production. Data from the observations were analyzed using ANOVA and if there was a significant effect followed by LSD at the level of 5% to see the differences between treatments.

### **KEY WORDS**

Ammonium nitrate, flowering, vernalization, shallot seed, seaweed extract.

The production of new national shallot bulb seeds can meet 15-16% of the total demand (Director General of Horticulture, 2010). Data for red onion production in Indonesia in 2013 was recorded at 1.010.733 tons, with an import volume of 124.544,25 tons resulting in an average requirement of 2.07 kg person<sup>-1</sup> year<sup>-1</sup>. In 2017, the need for shallots tuber is projected to increase to 1.244.278 ton, which could divided into several segments: (1) consumption at 994,378 ton, (2) 104,900 ton for seeds, (3) 40.000 ton for industry and (5)

105.000 ton for fulfilling exports. When the average productivity of shallots is projected to reach 10.22 tons ha<sup>-1</sup>, then in 2017 there will be around 121.749 ha of harvested area. Referring to the 2012 harvest area, which was equal to 99.519 ha, the fulfillment of the demand for shallots in 2017 requires an additional expansion of the harvested area of around 22.230 ha. An additional area of 22.230 ha requires additional tuber seeds (1.5 ton ha<sup>-1</sup>) of 33.345 tons so that the total need for 2017 tuber seeds should be in the range of 138.245 ton. However, the quality tuber seeds needed by farmers are not sufficient in quantity and those availability at the market, due to achieving rapid grow of the shallot production it is required to optimize seed tuber production (Hilman et al., 2014; Rosliani et al., 2016).

The availability of tuber seeds is predicted to only be able to meet 75.87%. If the tuber demand are replaced with TSS (*True Shallot Seed*) (5 kg/ha) then the requirement for this in 2017 is 111 ton (processed BPS data, 2014). Red shallot (*Allium ascalonicum* L.) is one of the important vegetable species which is a national superior commodity (Rosliani et al., 2013; Fritsch and Fiesen, 2002; Sopha et al., 2014). As a result, farmers meet the needs of seeds by producing their own seeds. The use of seeds themselves which is carried out continuously can cause a decrease in productivity and is prone to root tuber diseases such as *Fusarium* and *Colletotrichum* (Sumarni and Rosliani, 2010; Rosliani, 2013). Some other problems faced in the production and use of tuber seeds are more expensive especially when the tuber seed stock is limited, requires greater storage space, higher transportation costs due to volume, and tuber seed production ratio is lower than seed production ratio. The average tuber production ratio is 1: 10 while the seed production ratio can reach 1: 200. The onion seed dormancy period is 2-3 months and if stored for a longer period (> 3 months) there will be a decrease in quality. The advantage of using tuber seeds is that they do not require pollination and complicated technology to replant because the bulb size is quite large (Sumarni and Rosliani, 2010; Rosliani, 2013).

In order to meet the demand of shallot seeds, use the TSS method or botanical seeds. TSS seeds that are an alternative to tuber seeds have several advantages, among others, are healthier seeds, have a higher seed production ratio than tuber production and have a longer dormancy period of more than 2 years (Rosliani et al., 2016). TSS production still faces several challenges, among others, the percentage of flowering and seed formation is still low. Therefore the production of red onion TSS is a very interesting study material because TSS can be an alternative to meet the demand of seeds at the farmer level, thus opening opportunities in efforts to increase national shallot production. Khokar (2014) stated that flowering stimulation in shallots in TSS seed production is influenced by many factors starting from the vernalization process, bulb size, environmental conditions after planting and varieties.. Biostimulants are known as ingredients and/or microorganisms that can increase absorption of nutrient absorption by rooting plants, especially nitrogen. At present the use of biostimulant seaweed extract on shallots is still limited. Farmers generally use GA<sub>3</sub>. Seaweed extract has several advantages compared to GA<sub>3</sub> because in addition to containing gibberelin there is also a cytokinin which, among others, functions to accelerate flowering and increase uniformity of flowering time in addition to its function in increasing fertilizer efficiency. Research on the nutrient requirements of Nitrogen, especially Ammonium Nitrate (NH<sub>4</sub>NO<sub>3</sub>) in TSS production is still not widely used. The aim of the study was to study the potential of ammonium nitrate and seaweed nitrogen in shallot seed production.

The Ministry of Agriculture has issued a package of TSS production technology consisting of components of site selection technology, vernalization, fertilization, and the application of GA<sub>3</sub> and BAP biostimulants (Rosliani et al., 2016) The solution to increase the percentage of seed formation is by using the vernalization technique. Regarding the vernalization technology component, research that looks at the mechanism of shallot seed production through vernalization techniques is still very limited (Wu et al., 2016). The use of 10°C vernalization temperatures in the highlands in Bima varieties has provided information that TSS production can reach 8.12 grams per 12 plants (Hilman et al., 2014). Besides that the fertilizer component is an important strategy in increasing shallot production. However, irrational use of N and carried out continuously will cause an imbalance of nutrients in the soil and degradation of soil fertility which has an impact on decreasing yields. Biostimulant

applications such as the application of Growth Regulating Substances (ZPT) and growth stimulants such as Benzyl Amino Purine (BAP) and Giberellic Acid ( $GA_3$ ) are also important components that influence TSS production. It's just that a number of previous studies have shown that the effect of the application of  $GA_3$  growth regulators is still varied or unstable, increasing the productivity of shallots. The results of the study (Rosliani et al., 2016) showed no interaction between varieties (Pancasona and Mentas) and the way  $GA_3$  was applied to plant growth, flowering and TSS yield of shallots.

In view of this, the improvement of TSS seed production technology components is a very interesting study material, among others studies on tuber vernalization aspects (storage of tubers at low temperatures), application of N sources in the form of ammonium, nitrate and ammonium nitrate for N availability evaluation. the use of biostimulant using alternative ingredients such as seaweed extract (*Eucheima spinosum*) so that it can be seen the effectiveness in increasing productivity of the results of onion TSS. The objective of this study was to evaluate the response of shallot varieties to the type and dose of biostimulant and the dosage and source of N fertilizer as a component of TSS production technology in increasing the speed of flowering initiation and yield of TSS seed varieties of specific location, namely Blue Lancor variety.

## METHODS OF RESEARCH

The study was conducted in Sidomulyo Village, Batu City with an altitude of 923 m above sea level. The study was performed in a plastic house (greenhouse) starting at September 2018 to January 2019. This location was approximately 30 miles from the central city of Malang, with geographic position at  $7^{\circ}51'12.29''$  S and  $112^{\circ}31'25.62''$  E.

The research will be carried out using onion seeds which previously have been vernalized at  $10^{\circ}C$  for 2-4 weeks. Plastic houses (greenhouses) are made with an area of approximately 150-300  $m^2$ . Silver black (SB) plastic mulch is used to cover beds, biostimulants in the form of seaweed extract (using Citorin), Calcium Ammonium Nitrate fertilizer as a source of Ammonium Nitrate, SP-36 as a source of P and KCl for K. N,P, and K fertilizers are given in 2 periods, starting from the planting period to optimal vegetative growth and the period of flowering formation to harvest. Fertilizer is being applied according to the recommendation level, which were equal to  $600\text{ kg ha}^{-1}$  NPK,  $200\text{ kg ha}^{-1}$  Urea and  $100\text{ kg ha}^{-1}$  ZA (Ministry of Agriculture, 2014). The second period, fertilizer was given in the form of Ammonium nitrate, SP-36 and KCl equivalent to a dose of  $100\text{ kg ha}^{-1}$  NPK and boron as much as  $3\text{ kg ha}^{-1}$ . Pesticides was used for controlling plant pest organisms, manure or petroganics were applied for fulfilling basic fertilizers. Boron fertilizer as much as  $3\text{ kg ha}^{-1}$  and additional SP-36, KCl, and Ammonium nitrate fertilizer as much as  $100\text{ kg ha}^{-1}$  to support flower growth. The supporting equipment for research were used including ruler, raffia, measuring cup, micro pipette, analytic scales, minimum-maximum thermometer, hand sprayer and oven, pollinator insects that help pollinate and tray processes for harvesting and bamboo stick to support flower stalks (*belalo*) during flowering to seed harvest.

The study was used Randomized Complete Block Design (RCBD), whereas the application of Nitrogen Ammonium Nitrate under the combination of Seaweed Extract (RL) and this were repeated 3 times. The list of treatments is given in Table 1.

Table 1 – The detail information of each treatments

Code	Treatments combination	Remarks
(A0)	Control	0 % N dosage (equal to = $0\text{ kg N ha}^{-1}$ ) + 0 ppm RL
(A1)	N1 RL 120 ppm	50% N dosage (equal to = $89\text{ kg N ha}^{-1}$ ) + 120 ppm RL
(A2)	N1 RL 240 ppm	50% N dosage (equal to = $89\text{ kg N ha}^{-1}$ ) + 240 ppm RL
(A3)	N1 RL 360 ppm	50% N dosage (equal to = $89\text{ kg N ha}^{-1}$ ) + 360 ppm RL
(A4)	N1 RL 480 ppm	50% N dosage (equal to = $178\text{ kg N ha}^{-1}$ ) + 480 ppm RL
(A5)	N2 RL 120 ppm	100% N dosage (equal to = $178\text{ kg N ha}^{-1}$ ) + 120 ppm RL
(A6)	N2 RL 240 ppm	100% N dosage (equal to = $178\text{ kg N ha}^{-1}$ ) + 240 ppm RL
(A7)	N2 RL 360 ppm	100% dosis N (equal to = $178\text{ kg N ha}^{-1}$ ) + 360 ppm RL
(A8)	N2 RL 480 ppm	100% dosis N (equal to = $178\text{ kg N ha}^{-1}$ ) + 480 ppm RL

The use of UV plastic shade on plastic housing or greenhouse was carried out during the research in an effort to minimize crop failure. The structure UV plastic shade uses a bamboo frame and the shape of a semi-circular roof with a circle peak height of approximately 4 meters and a height of the right and left side of the shade of 2 meters. Around the house the plastic is installed with paranet to control pest and disease outbreak.

The study used experimental plots in the form of beds with a size of approximately 2 m x 1 m. The distance between beds in the replication is 30 cm and the distance between beds between replications is 50 cm. The land is processed perfectly by hoeing and leveling the soil surface. After that, manure is given at a dose of 20 tons per hectare or approximately 0.5 kg per bed.

Silver black plastic mulch is installed along the beds by installing wooden pegs around the beds. Installation of mulch is done a week before planting. Mulch used is with a width of 120 cm plastic size x length of the bed.

Planting holes are made by heating iron rings by burning wood charcoal on top. This tool is specifically designed for making planting holes above plastic mulch. Making a planting hole by observing the spacing of 15 x 20 cm, which is 15 cm between lines and 20 cm in distance so that there are approximately 5 x 10 plants = 50 plants per bed.

Planting is done on seeds that have been vernalized for 2-4 weeks at 10°C. Before being planted, first the seed bulbs are sprayed with a 2 ml per liter biostimulant solution according to the concentration of the treatment then dried. After that the bulb seeds are cut 1/3 the end for the bulbs ready to be planted. Planting by making a planting hole 1-2 cm deep and the tubers covered with a mixture of soil and manure.

Watering is done twice a day in the morning before sunrise and evening or according to land conditions and weather in the field. Watering uses a stringy so that it does not damage the tuber seeds and the seeds are not thrown from the planting hole.

In the rainy season, it is estimated that more diseases attack the onion plants compared to pests. The main disease is fusarium which can cause plants to not grow normally and must be eradicated so as not to spread to other plants around it. Pest and disease control is controlled by the application of pesticides as recommended. To prevent severe attacks, monitoring is carried out every day morning and evening together with watering activities.

Fertilization with a distance of 5 cm from the base of the plant. After that watering is done. P and K fertilizers are in accordance with the recommended dosage which is equivalent to 600 kg NPK ha<sup>-1</sup>, 200 kg ha<sup>-1</sup> Urea, and 100 kg ha<sup>-1</sup> KCl. Fertilization is done twice, namely when the plants are 15 and 30 days after planting. When the plants are out, SP-36, KCl, and Ammonium nitrate fertilizers are added at a dose of 100 kg / ha for plant maintenance in supplying the nutritional needs of plants starting from flowering to harvesting seeds. The time of application of additional fertilizers according to the conditions of the plants in the field, carried out up to 5 times at 10-day intervals and added boron with a dose of 3 kg ha<sup>-1</sup> to help improve the ability of plants in seed formation.

Mounting the support to support the erection of the umbel or the main flower stem that appears. In 1 clump of plants usually grow 2-3 tubers. If no attachment is installed, the umbel will break or collapse and die. Installation is done when the plants are 35-40 days after planting.

Biostimulant is applied when the plant is approaching the tuber formation phase and the flower has not yet come out. This phase is estimated when the plants are 25-45 days after planting. Biostimulant application 3 times at 7 days interval. The spray volume is 300 liters per hectare so that the volume of spray per plant is 1.2 milliliters.

Insect pollinator intervention to help pollinate the shallot seed production. Insect pollinators use the intervention of green flies (*Calliphora vomitoria*)

Harvesting of seeds is done when plants start 88 days after planting and are harvested three times until the plants are 99 days after planting with harvest intervals 3-4 days depending on plant conditions and weather on the land. Mini bulbs are tubers produced by shallots after the seeds are harvested.

Measurement were made in the vegetative phase, generative planting. Variables and time of observation are as follows:

Observations were made by calculating the number of flower stalks that appeared with flowers that had been fully bloomed in all plants in each treatment plot. Observations were made at 63 HST.

It is done by calculating the shallot seed weight produced. Observations were made by weighing the seeds produced in all kernels in each treatment plot. Observations are made at harvest time, after finishing processing the seeds. The stages are as follows: the harvested flowers are dried, separated from the stover, and manually extracted seeds in the kernel, then weighed using a scale.

Observations were carried out by weighing the harvested tubers which at the same time as the shallot seed harvest, collecting from the tubers weight produced per plot of the treatments.

Root dry weight and above ground biomass dry weight were carried out by destructive sampling and weighing the harvested their fresh weight before placing into the oven overnight at 60°C to derive dry weight for the next following days measurement.

The data obtained were analyzed by ANOVA and if there was a significant effect followed by Fisher LSD analysis (5%) to find out the differences between treatments.

## RESULTS OF STUDY

The results the analysis of variance showed that the treatment had a significant effect on time of flower with 75% of flower in full blooming period and stalk height per plant ( $P < 0.05$ ) but not significantly effected on the number of stalk observed at 63 DAP (days after planted) (Table 2).

Table 2 – The time flower appears with 75% of flowers in full blooming period, the number and height of flower stalks 63 HST due to the application of seaweed extract and ammonium nitrate fertilizer

Treatment	Time of flower appear with 75% of flower in full blooming period (DAP)	Height of stalk (cm) 63 HST	Number of stalk 63 DAP (stalk per seed bed)
Control	50,67 ab	52,17 b	10,67
N1 RL 120 ppm	50,33 a	54,19 ab	12,33
N1 RL 240 ppm	50,67 ab	49,37 a	10,67
N1 RL 360 ppm	52,67 abc	56,50 c	13,67
N1 RL 480 ppm	53,00 abc	54,17 bc	12,00
N2 RL 120 ppm	54,00 bc	51,35 ab	12,67
N2 RL 240 ppm	54,33 c	53,40 bc	14,33
N2 RL 360 ppm	55,33 c	52,94 b	15,00
N2 RL 480 ppm	54,67 c	49,43 a	12,33
CV (%)	3,80	9,1	16,60
LSD	3,484	3,448	3,632
Probability	(*)	(*)	(ns)

Note: The numbers accompanied by the same letters in each column show no significant differences at LSD (5%); N1 = 96 kg ha<sup>-1</sup> N-NH<sub>4</sub>.NO<sub>3</sub>; N2 = 178 kg ha<sup>-1</sup> N-NH<sub>4</sub>.NO<sub>3</sub>, RL = seaweed extract, (\*) = significant, ns: not significant at P (<0.05).

The growing time required for flower being appeared with a 75% of flower in full blooming period at control treatment was 50.67 DAP, which was not significantly different to those N1 treatment at all RL concentrations (120, 240, 360 and 480 ppm), except for N2 treatment. This meant that the application of higher dose of 178 kg ha<sup>-1</sup> N-NH<sub>4</sub>.NO<sub>3</sub> (N2) exaggerating time for shallot for producing flower slower than low dose application. In addition, the treatment of control was not significantly different to all N1 treatment (lower dose of N fertilizer).

In term of flower stalk height, the greatest was obtained from the treatment of N1 RL 360 ppm, which is not significantly different to N1 RL 480 ppm and N2 RL 240 ppm treatments. In comparison to control, generally the height of the stalk at the N1 dose

treatment increased with the addition of RL concentrations except at 480 ppm but on the contrary, at the higher N2 dose the stalk height decreased with increasing RL concentration so that N2 480 ppm treatment produced the lowest stalk height. The treatment of N1 RL 240 ppm producing the lowest height of stalk which was not significantly different to N1 RL 120 ppm, N2 RL 120 ppm and N2 RL 480 ppm.

The results of the variance analysis showed that the treatment had no effect on the variable number of flowers per flower and the percentage of flowers into capsules ( $P < 0.05$ ) but it was significantly affected the variable number of capsules per stalk (Table 3).

Table 3 – Amount of flower, number of capsules and percentage of flower amount to be capsules due to application of seaweed extract and ammonium nitrate

Treatment	Average amount of flowers (flower/stalk)	Number of capsules (capsule/stalk)	Percentage of flower amount to be capsules (%)
Kontrol	59,67	6,60 a	15,42
N1 RL 120 ppm	57,00	9,87 a	20,11
N1 RL 240 ppm	65,58	12,00 bc	27,05
N1 RL 360 ppm	75,00	10,29 ab	17,49
N1 RL 480 ppm	73,58	12,75 bc	23,56
N2 RL 120 ppm	63,67	13,76 c	27,51
N2 RL 240 ppm	73,25	15,57 cd	29,14
N2 RL 360 ppm	89,67	16,69 d	25,18
N2 RL 480 ppm	67,83	15,57 cd	33,76
CV (%)	22,6	15,52	27,4
LSD	27,17	4,317	11,57
Probability	ns	(*)	ns

Note: The numbers accompanied by the same letters in each column show no significant differences at LSD (5%); N1 =  $96 \text{ kg ha}^{-1} \text{ N-NH}_4\text{.NO}_3$ ; N2 =  $178 \text{ kg ha}^{-1} \text{ N-NH}_4\text{.NO}_3$ , RL = seaweed extract, (\*) = significant, ns: not significant at  $P < 0.05$ .

The highest number of capsules per stalk was found in the treatment of N2 RL 360 ppm as many as 16.69 capsules per stalks in which it was significantly different to controls which only able to produce capsules as much as 6.60 capsules per stalks. However there was no significantly different on the number of capsules per stalk between N2 RL 360 ppm and lower application of RL (N2 RL 240 ppm) or even higher (N2 RL 480 ppm). The average number of capsules per stalk at lower N fertilizer (N1) under various concentrations of RL was contributed to the increasing of those value by 70.15% compared to controls. In addition, the application of higher dose of N fertilizer (N2) at all concentrations of RL (120, 240, 360 and 480) was resulting in the raising of an average number of capsules per stalk by 133%. The number of capsule per stalk in the treatment of N2 at various concentrations of RL (120, 240, 360, and 480 ppm) was higher than that those treatment of N1.

Table 4 – Weight per 1 seed, seed weight per 1000  $\text{m}^2$ , tuber weight per plot size of 2  $\text{m}^2$  due to application of seaweed extract and ammonium nitrate

Treatment	Seed weight		Tuber weight per plot (g per 2 $\text{m}^2$ )
	(mg per seed)	(g per 1000 $\text{m}^2$ )	
control	1,79	578,67 a	32.00 a
N1 RL 120 ppm	1,28	663,33 b	50.33 bc
N1 RL 240 ppm	1,33	680,67 bc	60.00 e
N1 RL 360 ppm	1,65	921,67 d	61.00 f
N1 RL 480 ppm	1,69	729,67 c	57.67 e
N2 RL 120 ppm	1,78	903,17 d	45.33 b
N2 RL 240 ppm	1,17	687,67 bc	56.33 de
N2 RL 360 ppm	1,15	983,33 e	53.33 cd
N2 RL 480 ppm	1,27	895,67 d	57.33 de
CV (%)	23,9	28,4	15,73
LSD	0,6026	507,1	4,77
Probability	ns	(*)	(*)

The results of the variance analysis showed that the treatment did not significantly influence the weight per 1 seed but it was significantly affected the seed weight in each 1,000 m<sup>2</sup> and tuber weight (Table 4).

In general, seed weight in all treatment were significantly higher than those of control ( $P < 0.05$ ). The lowest seed weight per 1,000 m<sup>2</sup> is in the control (578.67 grams), whilst the highest was found under the treatment of N2 RL 360 ppm (983.33 grams). Among the treatments, N2 RL 360 ppm produced highest seed weight (983,33 g per 1000 m<sup>2</sup>), in which those value are almost twice than the control, and it was significantly different to other treatment, before it was drop to 895,67 g per 1000 m<sup>2</sup> at the treatment of N2 RL 480 ppm. The average seed weight in treatment N1 (at all concentrations of RL 120, 240, 360, 480 ppm) was 748.84 g in which it was lower than those average seed weight of N2 (at all concentrations of RL 120, 240, 360, 480 ppm), reached 867.46 g. This means that there was an increasing on seed weight by 29.41% and 49.90% compare to control treatment, respectively.

In contrast, in term of tuber weight, the highest was detected under N1 RL 240 ppm treatments (60 g per 2 m<sup>2</sup>) which was not significantly different to the treatment of N1 RL 480 ppm, N2 RL 240 ppm and N2 RL 480 ppm, producing tuber weight at 57.67, 56.33 and 57.33 g per 2 m<sup>2</sup>, respectively.

The average tuber weight produced in the N1 treatment at all RL concentrations was 58.00 g while for the N2 treatment in all concentrations produced an average tuber weight at of 53.08 g per 2 m<sup>2</sup>. This accounted for the increasing of tuber weight at 81.25% for low fertilizer dose (N1) and 65.88% for high dose N fertilizer (N2) treatment.

The results of analysis of variance showed that the treatment significantly affected the root dry weight and aboveground biomass dry weight  $P < 0.05$  (Table 5). The lowest root dry weight were found in control (0.09 g/plant) and the highest was treated with N1 RL 480 ppm (0.28 g/plant) which was not significantly different to N1 RL 120 ppm. The higher dose of fertilizer (N2) did not influence root dry weight since there was no significantly different to all RL concentrations (120, 240, 360 and 480 ppm).

Table 5 – Root dry weight and aboveground biomass dry weight due to application of seaweed extract and ammonium nitrate fertilizer

Treatment	Root dry weight (g/plant)	Aboveground biomass dry weight (g/plant)
Control	0,09 a	0,81 a
N1 RL 120 ppm	0,24 cd	1,67 bc
N1 RL 240 ppm	0,16 ac	1,15 ab
N1 RL 360 ppm	0,14 ab	1,33 abc
N1 RL 480 ppm	0,28 d	1,87 c
N2 RL 120 ppm	0,15 ab	1,35 abc
N2 RL 240 ppm	0,20 bc	1,35 abc
N2 RL 360 ppm	0,20 bc	1,68 bc
N2 RL 480 ppm	0,19 bc	1,70 bc
CV (%)	22,10	23,90
LSD	0,07010	0,5931
Probability	(*)	(*)

Note: The numbers accompanied by the same letters in each column show no significant differences at LSD (5%); N1 = 96 kg ha<sup>-1</sup> N-NH<sub>4</sub>.NO<sub>3</sub>; N2 = 178 kg ha<sup>-1</sup> N-NH<sub>4</sub>.NO<sub>3</sub>, RL = seaweed extract, (\*) = significant, ns: not significant at  $P < 0.05$ .

Generally, the additional of N fertilizer increase root dry weight and above ground biomass at the range of 20 to 100 % in all treatments compare to control, eventhough there were no clear evidence that under higher concentration of N fertilizer (N2) was given better result. The lowest aboveground biomaas weight was detected in the control which is not significantly different to N1 RL 240 ppm, N1 RL 360 ppm, N2 RL 120 ppm and N2 RL 240 ppm. The treatment of low N fertilizer (N1) and high N fertilizer (N2) at all concentrations of RL caused an average increasing in dry weight by 85.80% and 87% respectively. The dry weight of the aboveground biomass has the similar pattern to root dry weight affected by those treatment.

## DISCUSSION OF RESULTS

Related to the time the flower stalk to be appeared, Rosliani et al. (2016) have conducted in-depth research related to the flowering phase of shallots for seed production. The results of the study showed that flowering time with 75% of flower in full blooming occurred at 62-66 DAP while in this study the flowering time were found at 50.33 - 54.67 DAP, which meant the period was coming earlier. Harvesting time in Rosliani et al. (2016) up to 107 days, whilst on this experiment were reduced to 99 days. This is due to the effect of treatment which adding seaweed extract, therefore the period of flowering was changes. In addition there was also a differences on the locataion, which from the climatic, geographic and also evelation perspective was different. The difference of shallot flowering to be appeared with 75% of flower in full blooming period between low dose fertilizer application (N1) and high dose fertilizer application (N2) was due to a shortage of N in the plant, therefore under N1 or even in control becomes flowering faster. The results of this study in line with Gebretsadik and Dechassa (2018) explain that nitrates or nitrogen at lower doses encourage flowering while nitrates or nitrogen at high doses delay flowering. Likewise with the results of the study of Kant et al. (2011), Castro Marin et al. (2011), and Yuan et al (2016) that nitrogen lower than the optimal dose will encourage flowering while nitrogen at higher doses will extend the period vegetative period of plants (Gebretsadikdan Dechassa, 2018). There are differences in the response of plants to flowering due to nitrogen treatment because nitrogen is an important macronutrient for plants, and regulates many aspects of plant growth and development. Nitrogen has been reported to regulate flowering (Lin and Tsay, 2017). It was also explained that only nitrogen was found to have an effect other than the plant height, it also affected the number of plant days to flowering and seed yield (Abdissa et al., 2011). However, the results of this study are different from some of the studies conducted by Castro Marín et al. (2011), Yuan et al., 2016) which explained that plants grown at low N levels will experience slower flowering. In term of number of capsule per stalk which is the lowest to be found in control is also being affected by the low N supply to this treatment. The increasing number of capsule per talk were between 70 to 133 % under the treatment of low application of N fertilizer (N1) and high dose N fertilizr (N2), respectively. This research is in line with (Gustfson, 2010) that the fruit and seed resistance is higher in plants with higher nitrogen doses because nitrogen can increase phospor and potassium uptake coupled with research conducted by Du Jurdin (2015) that the addition of biostimulants increases the effectiveness absorption of nutrients by roots to N, P and K. In this research research, ammonium nitrate was used, where nitrate itself is a common form of nitrogen and influences plant regulation in various aspects of plant development. Nitrates provide nutrients and are reported to affect the growth of seeds, roots and leaves, root architecture, flowering time, branch formation, and plant aging, and affect crop yields (Crawford and Forde, 2002; Guiboileau et al., 2012; Stitt, 1999; Vidal et al., 2014). Meanwhile, flowering is the transition between the vegetative phase and plant reproductive growth so that this flowering period is a critical period in the role of future generations of plant sustainability and is very influential on fertility or the ability to support plant growth (Srikanth and Schmid, 2011).

In this study, flowering and seeding occurred in the rainy season at the end of November 2018. According to Rosliani et al. (2016) that during the rainy season pollinating insect activity decrease when compared to its activities in the dry season, especially in *Apis serana* and *Vespidae* insects. The emergence of 75% of flowers in full blooming period of all treatments were 52.85 days which is between December (weeks 3-4), in which by this period it rains frequently, whereas the average amount of rainfall in December is at 4.84 mm. According to Rosliani et al. (2005) the planting time affects flowering and seed production. The dry season is the right time for flowering and onion seed production (Rosliani et al., 2005). Furthermore, as stated by Rosliani et al. (2016) which mentioned that the production of shallots seeds should produced during the dry season because at that time, besides the high activity of pollinating insects, there was also a low attack of pests and diseases. This could be potentially reducing seed yields. On this experiment, the main diseases were

fusarium and caterpillar (*Agrotis sp.*). To anticipate the disease attack, prevention and control of disturbing organisms has been carried out regularly once a week with the application of fungicides and insecticides in accordance with the recommendations. The main pests that arise when plant growth are controlled by the *Furadan* application. To anticipate rain water exposure at the study site, plastic houses were used because of planting shallots to ensure that the treatment was not washed away by rainwater. Thus, plants can carry out vegetative growth until they succeed in entering the generative period and seed formation.

Instead of genetic and endogenous factors of the plant itself such varieties Rikanth and Schmid (2011) stated that flowering time can be influenced by various environmental factors. To increase yield, research needs to be done by under a higher altitude. This study was conducted at an altitude of 923 m above sea level while according to (Rosliani et al. 2016) that the production of optimal shallot seeds is cultivated at altitudes above 1,000 m above sea level. This is because flowering onions requires a low temperature of 7-12°C to induce flowering and 12-18°C to increase the size and time of flowering. The novelties of this study was the successfulness on producing lower altitude of shallot (Biru Lancor varieties) seeds under various different treatments to detect the different level of N fertilizer and seaweed extract.

Observation to the weight of 100 seeds is very influential on overall seed yield. The higher the weight of 100 seeds, the higher the yield of seeds produced per unit area. However, there is no significant effect from all treatments in this study. Lack of water during seed filling or seeding phase can reduce yields as a result of reduced seed size (Akil et al., 2007). Adding to this, total seed yields were calculated per 1000 m<sup>2</sup> area. The results of the seeds in this study showed that the average seed yield on N1 was 748,835 g while the average yield on N2 was 867.46 g in which those values are significantly different compared to control treatment. Average seed yields of seeds per 1000 m<sup>2</sup> can reach 11.529 g (Rosliani et al., 2018), which meant higher than those values compared to the seed yield in this study. The differences may be due to the difference on shallot varieties and those geographical positions. The effect of the addition of seaweed extract as biostimulant successfully increases the seed yield in the area in 1000 m<sup>2</sup>. The results of this study are in line with the research conducted by Du Jurdin (2015) on soybean plants which suggested that biostimulant had a significant effect on the number of crop pods, number of seeds per pod, number of branches, seed harvest. This is due to an increase in the absorption of N, P and K (Rathore, 2015)

The observation of tuber weight at 99 DAP showed that the lowest results were in the control (32 grams per plot size 2 m<sup>2</sup>) which was significantly different from all other treatments. The average tuber weight produced in the N1 treatment at all RL concentrations were at 58.00 grams while the N2 treatment in all concentrations produced a tuber average of 53.08. When compared with the control, tuber weight of N1 at all concentrations increased by 81.25% while in N2 treatment the increase was only 65.88%. The results of this study are in line with the research conducted by Gebretsadik and Dechassa (2018) that the lower the nitrogen, the higher the formation of tubers were produced.

The lowest dry weight of shoots and roots were detected in the control, which is equal to 0.81 g and 0.09 g per plant which were significantly different from all other treatments particularly when it was compared to those of N2 treatment (high application of N fertilizer). When it was compared to controls, the treatment of N1 at all RL concentrations caused an average increasing of dry weight at 85.80% while treatment N2 at all concentrations resulted in an average increase in higher dry weight at 87.65%. This variable is closely related to plant height which has a pattern that is almost the same where the treatment of N2 doses produces a higher plant height compared to treatment N1. The dry weight of roots and leaves was measured at tuber harvesting 56 DAP. At the time of harvest, root and canopy formation is under maximum condition. Bertoni (1992) states that the dry weight of plant roots increases rapidly until the beginning of tuber formation and then slows down during the bulb enlargement phase.

Bertoni's (1992) study provides information that the dry weight of leaves and roots is known to be almost the same in all treatments of nitrate levels but the levels of nitrate in roots are known to increase significantly until near harvesting period. This result is along with

the Jurdin et al. (2015) statement who also reported that at harvest time the absorption of nitrate in roots is known to be high. The addition of biostimulant applications to nitrogen treatment increases the efficiency of absorption of nutrients including the mobilization and uptake of nutrients from the soil, transportation, storage and assimilation. The absorption of nutrients in these plants is also influenced by the density of plant roots. The results of this study indicate that crown and accrual dry weight were highest in the N2 RL 480 treatment but were not different from the other treatments. In biostimulants, there are cytokinins, gibberellins and auxins. According to Aryanti (2012) that auxin increases the content of organic and inorganic substances in cells. These substances are converted into proteins, nucleic acids, Polysaccharides, and other molecular complexes. These compounds will form tissues and organs so that the wet weight and dry weight increase. Auxin can also increase plant osmosis pressure and softened cell walls which can increase water absorption and nutrients.

## REFERENCES

1. Abdissa. Y., Tekalign. T. And Pant. K. M. 2011. Growth, bulb yield and quality of onion (*Allium cepa* L.) as influenced by nitrogen and phosphorous fertilization on vertisol growth attributes, biomass production, and bulb yield. *Afr. J. Agric. Res.*, 6(14): 3253-3258.
2. Achard. P, Cheng. H, de Grauwe. L.2006. Integration of plant responses to environmentally activated phytohormonal signals. *Science* (311): 91–94.
3. Anggria. L., A. Kasno., S. Rochayati. 2012. Effect of Organic Matter in Nitrogen Mineralization in Flooded and Dry Soil. *J. Agr. and Biol. Sci.*, 7(8): 586-590.
4. Aryanti, W. S. 2012. Kinerja Zat Pemasu Pertumbuhan dari Cairan Rumput Laut *Sargassum Polycistum* dalam Meningkatkan Pertumbuhan Kedelai (*Glycine Max* L Merrill). *Anatomi Fisiologi*. 17(2): 41-47.
5. Asli. S. And P.M. Neumann. 2010. Rhizosphere Humic Acid Interacts with Root Cell Walls to Reduce Hydraulic Conductivity and Plant Development. *J. Plant and Soil*, 336: 313–322.
6. Aqil, M., I.U. Firmansyah, and M. Akil. 2007. Pengelolaan airtanaman jagung. Balai Tanaman Serealia, Maros. <http://balitsereal.litbang.deptan.go.id/>
7. Balasubramanian S, Sureshkumar S, Lempe J, Weigel D. 2006. Potent induction of *Arabidopsis thaliana* flowering by elevated growth temperature. *PLoS Genetics* 2, e106.
8. Bashan. Y. and Holguin. G.1998. Proposal for Division of Plant Growth Promoting Rhizobacteria into Two Classifications: Biocontrol-PGPB (Plant Growth - Promoting Bacteria) and PGPB. *J. Soil Biol. Biochem.*, 30(819): 1225–1228.
9. Bashan. Y., L.E.De-Bashan, S.R Prabhu, J.P. Hernandez. 2014. Advances in Plant Growth-Promoting Bacterial Inoculant Technology-Formulations and Practical Perspectives. *J. Plant. Soil.*, 378: 1-33
10. Baswarsiati. 2005. Upaya BPTP Jatim dalam Penyediaan Benih Sumber, Aspek Teknis dan Pola Kemitraan Penyediaan Benih Sumber Bawang Merah. Makalah Pertemuan Apresiasi Penangkar Benih Bawang Merah di Brebes. Kementerian Pertanian. Jakarta.
11. Basuki R. S. 2009. Analisis Kelayakan Teknis dan Ekonomis Teknologi Budidaya Bawang Merah dengan Biji Botani dan Benih Umbi Tradisional. *J. Hort.*, 19(2) Bernier. G., J. M. Kinet, and R. M Sachs. 1981. *The Physiology of Flowering*. CRC Press Inc., Boca Raton. Florida. 148 p.
12. Bäurle I, Dean C. 2006. The timing of developmental transitions in plants. *Cell*; 125(4): 655-664.
13. Berg. G. 2009. Plant–Microbe Interactions Promoting Plant Growth and Health: Perspectives for Controlled Use of Microorganisms in Agriculture. *J. Appl. Microbiol. Biotechnol.*, 84: 11-18.
14. Bertoni, G. F. Morard, C. Soubieille and J.M. Llorens. 1986. Growth and nitrogen nutrition of garlic (*Allium sativum* L.) during bulb development. *Sci. Hort.J.*, 50(1992): 187-195.

15. Biostimulant Coalition. 2018. What are Biostimulants? <http://www.Biostimulantcoalition.org/about/>.1 September 2018.
16. Bocanegra. M.P., J.C.Lobartini, G.A. Orioli. 2006. Plant Uptake of Iron Chelated by Humic Acids of Different Molecular Weights. *J. Commun Soil Sci. Plant. Anal.*, 37: 1–2.
17. Brewer. J.L. 2008. Onion and other Vegetable Allium. 2<sup>nd</sup> Edition CAB International, Wallingford. UK. 36p.
18. Buwalda, J.G., 1986. Nitrogen nutrition of garlic (*Allium sativum* L. ) under irrigation. Crop growth and development. *Sci. Hort. J.*, 29(1-2): 55-68.
19. Cszinzsky, A.A., 1986. Response of tomatoes to foliar biostimulant sprays. *Proceedings of the Florida State Horticultural Society*, 99: 353-358.
20. Calvo P., L. Nelson, J.W.Kloepper. 2014. Agricultural Uses of Plant Biostimulants. *J. Plant Soil*, 383: 3–41.
21. Chen T.H.H. and N.Murata. 2011. Glycinebetaine Protects Plants Against Abiotic Stress: Mechanisms and Biotechnological Applications. *J. Plant. Cell Environ.*, 34: 1–20.
22. Chouliaras. V., M. Tasioula, C. Chatzissavvidis, I. Therios, E. Tsabolatidou. 2009. The Effects of a seaweed extract in Addition to Nitrogen and Boron Fertilization on Productivity, Fruit Maturation, Leaf Nutritional Status and Oil Quality of The Olive (*Olea europea* L..) Cultivar Koroneiki. *Journal of the Science of Food and Agriculture*, 89: 984-988.
23. Craigie. J.S. 2011. Seaweed Extract Stimuli in Plant Science and Agriculture. *J. Appl. Physiol.*, 23: 371–393.
24. DirektoratJendralHortikultura. 2010. Statistik Produksi Hortikultura Tahun 2009 (AngkaTetapan). Kementerian Pertanian. Jakarta.
25. Dodd. I.C. and J.M. Ruiz-Lozano. 2012. Microbial Enhancement of Crop Resource Use Efficiency. *J. Biotechnol*, 23: 236–242.
26. Du Jurdin, P. 2015. Plant biostimulants: Definision, concept, main categories nand regulation. *Sci. Hort.J.*, 196: 3-14.
27. Eldardiry. I, M, Entisam, A. El-Hady, M.S.A. Aboelli, Aboe-El-Kheirand. 2015. Effect of Organic Manure Sources and NPK Fertilizer on Yield and Water Productivity of Onion (*Allium cepa* L). *Global Advanced Research J. Agr. Sci.*, 4(11): 803-808.
28. Esteves da J.C.G Silva, A.A.S.C.Machado, C.J.S Oliveira.1998. Effect of pH on Complexation Fe(III) with Fulvic Acids. *Environ Toxicol Chem*, 17: 1268–1273.
29. European Biostimulants Industry Council. 2012. What are Biostimulants? <http://www.biostimulants.eu/about/what-arebiostimulants/>. 17 Januari 2017.
30. Fan. J., H.Mingde, S.S. Malhi. 2010. Accumulation of Nitrate-N in the Soil Profile and its Implications for the Environment under Dryland Agriculture in Northern China: A Review. *Canadian J. of Soil Sci.* p. 429-440.
31. Fritsch. R.M. and N.Friesen. 2002. Evolution, Domestication and Taxonomy. In: Rabinowitch D., Currah L. (Eds), *Allium. J.Crop Sci.: Recent Advances*. Wallingford, Cab International, p. 5–30.
32. Gebretsadik. K and N. Dechassa. 2018. Response of onion (*Allium cepa* L.) to Nitrogen fertilizer rates and spacing under rain fed condition at Tahtay Koraro. *Scientific Reports*, (2018) 8: 9495, Tanggal akses 19 April 2019.
33. Ghoname, A.A, Mona. G, G.S. Riad and W.A. El Tohamy. 2009. Effect of Nitrogen Form and Biostimulants Foliar Application on Growth, Yield, and Chemical Composition of Hot pepper Grown under sandy soil conditions. *Res. J. Agric. And Biol. Sci.*, 5(5): 840-852.
34. Ghosh P., A.K. Kashyap. 2003. Effect of Rice Cultivars on Rate of N-Mineralization, Nitrification and Nitrifier Population Size in an Irrigated Rice Ecosystem. *J. Applied Soil Ecology*, 24: 27-41.
35. González. A, J.Castro, J.Vera, A.Moenne. 2013. Seaweed Oligosaccharides stimulate Plant Growth by Enhancing Carbon and Nitrogen Assimilation, Basal Metabolism, and Cell Division. *J. Plant Growth Regul.*, 32: 443–448.
36. Gustfson, A. A. Hand book of fertilizers, their source makes up, efect and use 3rd ed. India pp78-88 (Agrobios, 2010).

37. Hayat. R., S..Ali, U.Amara, R.Khalid, I.Ahmed. 2010. Soil Beneficial Bacteria and Their Role in Plant Growth Promotion: a Review. *Ann Microbiol*, 60: 579–598.
38. Hilman. Y, R. Rosliani,R. P.Endah. 2014. Pengaruh Ketinggian Tempatterhadap Pembungaan, Produksi, dan Mutu Benih Botani Bawang Merah. *J. Hort.*, 24(2).
39. Hilman. Y, G. A. Sopha, and L. Lukman. 2014. Nitrogen effect on production, nutrients Uptakes and Nitrogen Use Effeciency of shallot (*Allium cepa* var *aggregatum*). *ABB Bioflux*; (2): 128-133.
40. Jung. C, Müller AE. 2009. Flowering time control and applications in plant breeding. *J. Trends in plant. Sci.*, 14(10): 563-573.
41. Kato. T., M. Yamagata, S. Tsukaraha. 1987. Nitrogen: Nutrition its Diagnostic and Post Harvest Bulb Rot in Onion Plant. *Bull.Shikoku.Nat.Agric.Exp.Station*, 48: 26-49.
42. Kementerian Pertanian. 2014. Budidaya Bawang Merah di BPTP Bangka. BPTP Bangka. Badan Litbang Pertanian. Kementerian Pertanian. Jakarta.
43. Khan. W, U.P.Rayirath, S.Subramanian. 2009. Seaweed Extracts as Biostimulants of Plant Growth and Development.*J Plant. Growth Regul*, 28: 386–399.
44. Kim. D-H, Doyle. M. R, Sung. S, Amasino R. M. 2009. Vernalization: winter and the timing of flowering in plants. *Annual Review of Cell and Developmental*25: 277-299.
45. Kloepper. J.W., R.Lifshitz, R.M.Zablotowicz. 1989. Free Living Bacterial Inocula for Enhancing Crop Productivity. *Trends Biotechnol*, 7: 39–44.
46. Krontal. Y, R. Kamenetsky, H. D. Rabinowitch. 2000. Flowering physiology and some vegetative traits of short-day shallot: A comparison with bulb onion *Journal of Horticultural Science & Biotechnology*, 75(1): 35-41.
47. Lee. J, Lee. I. 2010. Regilation and function of SOC1, a flowering pathway integrator. *J. of exp. botany* 61(9): 2247-2254.
48. Lobartini, J.C, K.H.Tan, C. Pape. 1998. Dissolution of Aluminum and Iron Phosphate by Humic Acids. *Commun Soil Sci Plant Anal*, 29: 535–544.
49. Mancuso, S., Azzarello, E., Mugnai, S., Briand, X. 2006. Marine Bioactive Substances (IPA Extract) Improve Foliar Ion Uptake and Water Stress Tolerance in Potted *Vitis Vinifera* Plants. *J. Adv Hort. Sci*, 20: 156–161.
50. Marschner, H. 1995. Mineral Nutrition of higher Plants. 2nd. edition, Academic Press, San Diego, London.
51. Martínez. C, Pons. E, Prats. G, León. J. 2004. Salicylic acid regulates flowering time and links defence responses and reproductive development.*The Plant J.*, 37: 209–217.
52. Michaels. S. D, Amasino R. M. 2000. Memories of winter: vernalization and the competence to flower. *J. Plant Cell and Env.*, 23(11): 1145-1153
53. Mikha M.M., C.W.Rice, J.G.Benjamin. 2006. Estimating Soil Mineralizable Nitrogen Under Different Management Practices. *J. Soil Sci. and Society of America*, 70: 1522-1531.
54. Milton. R.F. 1964. Liquid Seaweed as a Fertilizer. *Proc Int Seaweed Symp*, 4: 428–431.
55. Mouradov A, Cremer F, Coupland G. 2002. Control of flowering time interacting pathways as a basis for diversity. *The Plant Cell Online* 14 (suppl 1): S111-S130.
56. Ngullie. E., V.B Singh, A.K.Singh, H.Singh. 2011. Fertilizing for Sustainable Onion Production System. *Better Crop*, 95(1).
57. Nasreen. S., Haque. M. M., Hossain, M. A. and Farid, A. T. M. Nutrient uptake and yield of onion as influenced by nitrogen and sulphur fertilization. *Bangladesh J. Agric. Res.*, 32(3), 413–420.
58. Norrie. J. and J.P Keathley. 2006. Benefits of *Ascophyllum nodosum* Marine-Plant Extract Applications toThompson Seedless Grape Production. *Acta Horti*, 727: 243–247.
59. Putterill. J, Laurie. R, Macknight. R. 2004. It's time to flower: the genetic control of flowering time. *Bioessays* 26(4): 363-373.
60. Putrasamedja S. 1995. Pengaruh Jarak Tanampada Bawang Merah (*Allium cepa* Var. *Ascalonicum Baches*) dari Bijit terhadap Produksi. *J. Hort*, 5(1).

61. Rosliani, R, Suwandi & Sumarni, N 2005, 'Pengaruh waktu tanam and zat pengatur tumbuh mepiquat klorida terhadap pembungaan and pembijian bawang merah (TSS)', J. Hort., vol. 15, no. 3, pp. 192–198.
62. Rosliani. R, E. R.Palupi, danY.Hilman. 2013. Pengaruh Benzil Amino Purindan Boron terhadap Pembungaan, Viabilitas Serbuk Sari, Produksidan Mutu Benih Bawang Merah di DataranRendah. J. Hort, 23(4).
63. Rosliani. R. 2014. Teknik Aplikasi Benzil Amino Purin dan Pemeliharaan Jumlah Umbelper Tanamanuntuk Meningkatkan Produksidan Mutu Benih Botani Bawang Merah (True Shallot Seed) di DataranTinggi. J. Hort, 24(4).
64. Rosliani. R, Y. Hilman, N. Waluyo, M. P. Yufdy. 2016. Dissemination of Technology for Shallot (*Allium Ascalonicum* L.) Seed Production Using True Shallot Seed (TSS) in Indonesia. *ActaHorticulturae*1143: VII International Symposium on Edible Alliaceae.
65. Rosliani. R. 2016. Pengaruh GA<sub>3</sub> terhadap Viabilitas dan Vigor Benih Bawang Merah. Prosiding Seminar Nasional Pengembangan Teknologi Pertanian Politeknik Negeri Lampung.
66. Rosliani. R, Y. Hilman, I. Sulastrini, M. P. Yufdy. 2018. Evaluasi paket teknologi produksi benih TSS Bawang Merah varietas Bima Brebes di dataran tinggi. J. Hort. Vol. 28 No. 1, Juni 2018: 67-76
67. Schiavon. M., D. Pizzeghello, A.Muscolo, S. Vaccoro,O.Francioso, Nardi. 2010. High Molecular Size Humic Substances Enhance Phylpropanoid Metabolism in Maize (*Zea mays* L.).*J. Chem. Ecol.*, 36: 662–669.
68. Searle I, Coupland G. 2004. Induction of flowering by seasonal changes in photoperiod. *The EMBO J.*, 23(6): 1217-1222.
69. Setjen Pertanian. 2017. Outlook TPHORTI. Kementerian Pertanian Republik Indonesia. <http://epublikasi.setjen.pertanian.go.id>. 18 September 2018.
70. Simpson. A.J., W.L.Kingery, M.H.B.Hayes. 2002. Molecular Structures and Associations of Humic Substances in the Terrestrial Enviornment.
71. Sivasankari S., Venkatesalu V, Anantharaj, M. Chandrasekaran M. 2006. Effect of seaweed extract on the growth and biochemical constituents of *Vigna Sinensis* L. *Bioresiurce Technology*, 97 1745-1751
72. Srikanth. A, Schmid. M. 2011. Regulation of flowering time: all roads lead to Rome. *J. Cell. and Mol. Life Sci.*,68, 2013–2037*Naturwissenschaften*, 89: 84– 88.
73. Stevenson. F.J. 1994. *Humus Chemistry: Genesis, Composition, Reactions*. Wiley, New York.
74. Stirk, W.A., van Staden, J. 1997. Comparison of Cytokinin and Auxin like Activity in Some Commercially Used Seaweed Extracts.*J Appl Phycol*.
75. Sulistiono. R. 2010.
76. Sumarni. N and Rosliani. R. 2010. Pengaruh Naungan Plastik Transparan, Kerapatan Tanaman, and Dosis N terhadap Produksi Umbi Bibit Asal Biji Bawang Merah. J. Hort., 20(1).
77. Sumarni. N, R.Rosliani, R. S.Basuki. 2012. ResponsPertumbuhan, HasilUmbi, danSerapan Hara NPK Tanaman Bawang Merah Terhadap Berbagai Dosis Pemupukan NPK pada Tanah Alluvial. *Jurnal Hortikultura*, 22(4).
78. Sumiati. E. and Gunawan. O. S. 2007. Application of mychorizha biofertilizer to increase NPK uptake and influence on yield and quality of shallot. *J. of Hort*; 17(1): 34-42.
79. Sung. S. B, Amasino R. M. 2004. Vernalization in arabidopsis thaliana is mediated by the PHD finger protein VIN3. *Nature*; 427(6970): 159-164.
80. Sytar. O., A.Kumar, D.Latowski. 2013. Heavy Metal-Induced Oxidative Damage, Defense Reactions, And Detoxification Mechanisms In Plants. *J. Acta Physiol Plant*, 35: 985–999.
81. Taiz L, Zaiger E. 2006. *Plant physiology* (4th ed.). Sinauer Associates, Inc.: Massachusetts.
82. Tarakhovskaya. E. R, Y. I.Maslov, M. F.Shishova. 2007. Phytohormones in Algae. *Russ. Plant Physiol J*, 54: 163–170.

83. Varanini. Z and R. Pinton. 2001. Direct Versus Indirect Effects of Soil Humic Substances on Plant Growth And Nutrition. In: Pinton R, Varanini Z, Nannipieri P (eds) The rhizosphere. Marcel Dekker, Basel.p.141–158.
84. Vessey. J.K. 2003. Plant Growth Promoting Rhizobacteria as Biofertilizers.J Plant Soil, 255: 571–586.
85. Yohannes. K.W., D.Blew, A.Debela. 2013. Effect of Farmyard Manure and Nitrogen Fertilizer Rate and Yield Component of Onion (*Allium cepa*) at Jimma, Southwest Ethiopia.Asian J. Plant Sci. DOI: 10.3923/ajps.
86. Yusuf R., Syakur A, Budiarno. 2016. Application of some types of seaweed on the growth and yields of shallot (*Allium ascalonicum* L.). Agroland: the Agricultural Sciences Journal 3(2).
87. Zhang J., J. Qin., W. Yao., L. Bi., T. Lai., X. Yu. 2009. Effect of long-Term Application of Manure and Mineral Fertilizers on Nitrogen Mineralization and Microbial Biomass Paddy Soil During Rice Growth Stages. J. Plant Soil Environ., 55(3): 101-109.
88. Zimmerli. L., B. H.Hou, C. H.Tsai. 2008. The Xenobiotic Beta Aminobutyric Acid Enhances Arabidopsis Thermotolerance. J. Plant, 53: 144–156.

## SCREENING OF CHEMICAL COMPONENTS IN THE PROTEIN HYDROLYZATE EXTRACT FROM VISCERA OF TILAPIA (*OREOCHROMIS NILOTICUS*) WITH COLOR ASSAY

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### ABSTRACT

The production of Tilapia increased the impact on the increase of fish waste, such as viscera. One of the efforts to overcome and reduce fishery waste are by using them optimally. One of the efforts is hydrolysis technology, which can produce extracts that have bioactivity. This research aimed to find out and obtain an overview of the chemical components in the protein hydrolyzate extract from viscera of Tilapia (*Oreochromis niloticus*). The screening was performed for flavonoids, alkaloids (Meyer, Dragendorf, Bouchardat), tannins, terpenoids (steroids, triterpenoids), polyphenols, and saponins. The color intensity or the precipitate formation was used as analytical responses to these assays. The results of screening and identification showed the presence of chemical components of alkaloids, tannins, triterpenoids, polyphenols, saponins from the protein hydrolyzate extract of viscera of Tilapia (*Oreochromis niloticus*), on the other hand, flavonoids and steroids were not detected. These chemical components have the potential bioactivity as antioxidants, anti-nociceptive, anti-inflammatory, anti-HIV, anti-fungal, cardioprotective, immunoregulative, anti-malarial, anti-inflammatory, Cerebro-protective, anti-mutagenic, vaso-relaxing, anti-bacterial, anti-anxiolytic, analgesic, anti-nociceptive and anxiolytic. The extract has the potential to be developed in the field of health as pharmaceutical or nutraceutical products.

### KEY WORDS

Alkaloids, tannins, triterpenoids, polyphenols, saponins, pharmaceutical, nutraceutical.

Tilapia is one of the Indonesian fisheries commodities that are in high demand by domestic and foreign consumers. The demand for Tilapia commodities increases every year; this can be seen from increased Tilapia production. Production of Tilapia (*Oreochromis niloticus*) in Indonesia for 5 (five) years has increased by 18%. The volume of Tilapia production in 2011 was 567,078 tons and improved in 2015 by 1,084,281 tons (Ariansyach, 2017).

The Processing of Tilapia usually only takes part in the white meat; the yield is  $\pm$  50%. The waste from the production of Tilapia consists of scales, heads, bones, skin, and innards. The contents of the stomach or commonly called innards include liver, heart, spleen, hepatopancreas, gonads, ren, bile, and intestines. Tilapia waste has not been utilized. Even bones, skin, and stomach contents tend to be thrown away or discarded. This is very unfortunate because fishing industry waste, for example, viscera, has high levels of unsaturated fat and protein (Bhaskar & Mahendrakar, 2008). The viscera of Tilapia still contains 16% protein (Khalil, 2012). One of the efforts to overcome and reduce fishery waste are by using them optimally. The processing of fishery waste products, including viscera, has been investigated as a source of protein, including enzymes and fats (Villamil, Vquiro, & Solanilla, 2017).

The protein in an intact form has low bioactivity, whereas proteins that have been hydrolyzed by the enzyme will increase bioactivity because the protein has been separated from the long bonds fragments (Daliri, Oh, & Lee, 2017). Bioactive peptides have potential as

antihypertensive (Riyadi, 2018), antioxidants (Chi, Hu, Wang, Li, & Luo, 2015), opioid antagonists, antibacterial (Hajfathalian, Ghelichi, García-Moreno, Moltke Sørensen, & Jacobsen, 2017), antithrombotic, and immunomodulators (FitzGerald, Murray, & Walsh, 2004). Peptides produced from food proteins can lower blood pressure, maintain weight balance (Liu, Wang, Peng, & Wang, 2013), inhibit proline-specific endopeptidase activity, enhance the immune system, inhibit blood platelet aggregation, inhibit HIV proteinase and the oxidation process, have antibacterial, binds to ions and assists mineral transport and improves food nutritional value (Chakrabarti, Jahandideh, & Jianping, 2014); (Li & Yu, 2015); (Hayes, 2018). A number of research that utilize fisheries industry waste which have the potential to become bioactive peptides include the heads and innards and fish heads of sardine (*Sardinella aurita*) by Bougatef et al. (2008), innards and skin of squid (*Sephia officianalis*) (Balti et al., 2010), smoothhound innards (*Mustelus mustelus*) in Tunisia (Abdelhadi et al., 2016), and utilization of heads, fins and tails from Tilapia (*Oreochromis niloticus*) (Roslan, Faezah, Abdullah, & Mazlina, 2014). This is an opportunity to develop waste protein innards of Tilapia into pharmaceutical or nutraceutical products.

This research aimed to find out and obtain an overview of the chemical components in the protein hydrolyzate extract from viscera of Tilapia (*Oreochromis niloticus*) based on the color assay. This research is expected to provide useful information about the chemical components of the extract to be developed in the field of health as pharmaceutical or nutraceutical products.

## MATERIALS AND METHODS OF RESEARCH

The material used in this research was viscera of Tilapia from the freezing industry of PT Aquafarm Nusantara, Semarang Industrial Estate. Viscera of Tilapia was cleaned, where the fat covering the viscera was removed, then the viscera was weighed, and the hydrolysis process was carried out. The protease enzyme used was the enzyme alcalase (Sigma Aldrich) with activity of  $\geq 0.75$  of Anson units/mL. The tools used were test tubes, test tube clamp, stainless steel spatula, drop pipette, measuring cup, Bunsen, glass funnel, micropipette, beaker glass, incubator, 1000 ml Erlenmeyer, vacuum filter, rotary evaporator.

Viscera and distilled water (1: 1) were mixed using a blender until it became homogeneous, then it was heated at 85 °C for 20 minutes to inactivate endogenous enzymes. The samples were centrifuged at 10 °C for 20 minutes at 5,800 rpm to separate fat and protein, the fat was removed, and the result was a residue rich in protein. The protein in solids was extracted three times with distilled water at 1: 1 (w/v) to collect protein extracts until the fat was reduced. Protein extracts were hydrolyzed to the desired level with 1 N sodium hydroxide using a digital pH meter (Cyberscan 1001, Eutech, Singapore). The solution was activated at a temperature (80-85) °C for 20 minutes to stop the hydrolysis process. After that, the sample was left at 4 °C for 24 hours and was cold centrifuged for 20 minutes and was dried using a freeze dryer. The degree of hydrolysis was calculated by the SN-TCA method (Hoyle & Merrit, 1994) referenced in (Amiza, Kong, & Faazaz, 2012). A total of 20 mg of protein hydrolyzate was added to TCA of 10% (b/v) as much as 20 mL. The mixture was then allowed to stand for 30 minutes for precipitation to occur, and then centrifuged (speed of 7,800 g, for 15 minutes). The supernatant obtained was a protein hydrolyzate extract from viscera of Tilapia (*Oreochromis niloticus*). Then, further color assay will be carried out.

Screening and identification analysis of chemical components from the protein hydrolyzate extract from viscera of Tilapia (*Oreochromis niloticus*) based on color assay refers to the Harbone (1984) method, which is indicated by the color change of the extract after the addition of specific reagents. The parameters for the screening include flavonoids, alkaloids, tannins, terpenoids, polyphenols, and saponins. The data obtained are presented in table form and was analyzed descriptively, after that, a conclusion was drawn from the analysis.

*Identification of Flavonoids.* 2 ml of sample extract was added with 8 ml of aquadest, which was heated for  $\pm 10$  minutes. The resulting filtrate was filtered and put in a test tube.

Then a few drops of concentrated HCl was added. Next, a little mg powder was added. Positive result was indicated when dark red/pink colored filtrate was produced.

**Identification of Alkaloids.** 2 ml of sample extract was added with 8 ml of aquadest, which was heated for  $\pm 10$  minutes. The resulting filtrate was filtered and put in a test tube. Then 6 drops of Meyer reagent were added to the first test tube, 6 drops of Dragendorf reagent were added to the second test tube, 6 drops of Bouchardat reagent were added to the third test tube. Positive result was indicated when white sediment was produced in Meyer's reagents, orange sediment was deposited in Dragendorf reagents and brown sediment was deposited in Bouchardat reagents.

**Identification of Tanins.** 2 ml of sample extract was added with 8 ml of aquadest, which was heated for  $\pm 10$  minutes. The resulting filtrate was filtered and put in a test tube. Three drops of  $\text{FeCl}_3$  1% was added to the filtrate. Positive result was indicated when either blackish brown, blackish blue or blackish green colored filtrate was produced.

**Identification of Terpenoids.** 2 ml of sample extract was added with 8 ml of aquadest, which was heated for  $\pm 10$  minutes. The resulting filtrate was filtered and put in a test tube. Three drops of Bouchardat was added to the filtrate. Positive results contain steroids when bluish green colored filtrate was formed, and the results contain terpenoids when a brownish orange colored filtrate was formed.

**Identification of Polyphenols.** A total of 105  $\mu\text{g}$  of methanol extract was put into 206 L of 96% ethanol in a test tube. The mixture was added with 515  $\mu\text{L}$  of distilled water and 520  $\mu\text{L}$  of Follin-Ciocalteau reagent (50% v/v), then the mixture was left for 5 minutes. Then it was added with 103  $\mu\text{L}$  sodium carbonate solution (7,5% b/v), was homogenized and incubated at room temperature for 1 (one) hour under no-light conditions (dark). Positive result was indicated when either blackish green, blackish blue, or blackish brown colored filtrate was formed.

**Identification of Saponins.** 2 ml of sample extract was added with 8 ml of aquadest, which was heated for  $\pm 10$  minutes. The resulting filtrate was filtered and put in a test tube. Two ml of hot water was added to the filtrate. The test tube containing the filtrate then was shaken firmly. Positive result was indicated when the stable foam was not lost.

## RESULTS AND DISCUSSION

Table 1 – Color Assays of the Protein Hydrolyzate Extract from Viscera of Tilapia for flavonoids and alkaloids

Sample	Chemical Components			
	Flavonoids	Alkaloids		
		Meyer	Dragendorf	Bouchardat
The protein hydrolyzate extract from viscera of Tilapia ( <i>Oreochromis niloticus</i> )				

Table 2 – Color Assays of the Protein Hydrolyzate Extract from Viscera of Tilapia for tannins, triterpenoids, polyphenols, saponins

Sample	Chemical Component			
	Tannins	Triterpenoids	Polyphenols	Saponins
The protein hydrolyzate extract from viscera of Tilapia ( <i>Oreochromis niloticus</i> )				

Table 3 – Screening and Identification of Chemical Components in the Protein Hydrolyzate Extract from Viscera of Tilapia (*Oreochromis niloticus*)

No	Chemical Components	Parameter	Results
1	Flavonoid	Brick red, pink, dark red	Negative
2	Alkaloids	-	-
	Meyer Method	White sediment	Positive
	Dragendrof Method	Orange sediment	Positive
	Bouchardat Method	Brown sediment	Positive
3	Tannins	Blackish green, blackish blue, blackish brown	Positive
4	Steroids	Bluish green	Negative
5	Triterpenoids	Orange, Brownish orange	Positive
6	Polyphenols	Blackish green, blackish blue, blackish brown	Positive
7	Saponins	Stable foam	Positive

The qualitative results of chemical component screening using Harbone (1983) method found that protein hydrolyzate extract of viscera of Tilapia (*Oreochromis niloticus*) contained alkaloids (table 1 and 3). Pelletier (1983) defined alkaloids as cyclic compounds containing nitrogen in a negative oxidation state, which is a limited distribution between living organisms. Alkaloids almost always have physiological activity in animals, although some have limited effects (Seigler, 1998). Alkaloids have benefits as tranquilizers (Guides *et al.*, 2005), antioxidants (Bribi *et al.*, 2013), Anti-nociceptive (Bribi *et al.*, 2015), Anti-inflammatory (Bribi *et al.*, 2016). Even berberine alkaloids have activities as anti-HIV, anti-fungal, cardioprotective, immunoregulative, anti-malarial, anti-inflammatory, antioxidant, Cerebro-protective, anti-mutagenic, vaso-relaxing, anxiolytic, and analgesic activities (Akao *et al.*, 2006).

Protein hydrolyzate extract of viscera of Tilapia (*Oreochromis niloticus*) contains tannins (table 2 and 3). Tannins are a heterogeneous group of water-soluble polyphenolic compounds of high molecular weight (500-3000 Daltons) - with as many as 20 hydroxyl groups - and are present in plants, foods and beverages (de Jesus *et al.*, 2012). Tannins have antioxidant activities (Skrovankova, 2015), Anti-cancer (Gollucke *et al.*, 2013), Antimicrobial (Marín *et al.*, 2015), Cardioprotective, Anti-diabetic and anti-obesity (Gonzalez-Abuin *et al.*, 2015).

Protein hydrolyzate extract of viscera of Tilapia (*Oreochromis niloticus*) contains triterpenoid compounds (table 2 and 3). About 60% of known natural products are terpenoids (Firm, 2010). Triterpenoids have activities as anti-inflammatory and anti-cancer potential (Salminen *et al.*, 2008), antioxidants (Melanie, 2009), anti-colon cancer, Hepatoprotective, anti-bacterial, anti-anxiolytic, Analgesic and Anti-Nociceptive (Battineni, 2018).

Protein hydrolyzate extract of viscera of Tilapia (*Oreochromis niloticus*) contains polyphenol compounds (table 2 and 3). A growing body of research indicates that polyphenol consumption may play a vital role in health through the regulation of metabolism, weight, chronic disease, and cell proliferation. Over 8,000 polyphenols have thus far been identified, though their short- and long-term health effects have not been fully characterized (Lecour and Lamont, 2011). Animal, human and epidemiologic studies show that various polyphenols have antioxidant and anti-inflammatory properties that can have preventive and therapeutic effects for cardiovascular disease, neurodegenerative disorders, cancer, and obesity (Pérez-Jiménez *et al.*, 2010); (Singh *et al.*, 2011).

Protein hydrolyzate extract of viscera of Tilapia (*Oreochromis niloticus*) contains saponins compounds (table 2 and 3). Saponins, according to Firdous *et al.* (2009); Apri (2014), is a non-polar active compound which has a strong surface and can create foam when the compound is shaken with water. Marliana *et al.* (2005); Octaviani (2009) stated that the emergence of foam indicates the presence of glycosides, which can form a foam in hydrolyzed water into glucose and other compounds. This can happen because saponin compounds also have a hydrophobic group, namely aglycone. The saponin structure consists of aglycones (triterpene or steroids) and glucose groups. The process of synthesizing glycosides is a detoxification process. In this detoxification process, it is possible for toxic compounds to be bound to crude extracts. Farnsworth (1996); Yoshikawa

et al. (2005); Ruiz et al. (2005); Bakhuni (2005); Zhang et al. (2006) stated that saponins has many biological and pharmacological functions, including cardiogenic, hypoglycemic, hemolysis, hypocholesterolemic, immune modulator, hepatoprotection, antioxidant, anti-cardiogenic, anti-microbial, anti-inflammatory, low toxicity. Saponins may function as anti-biotics and cholesterol-lowering agent, and it may also have biological effects, including as an anti-fungal, cytotoxic against tumor cells, hemolysis, immune activity, and anti-cancer.

### CONCLUSION

The results of screening and identification showed the presence of chemical components of alkaloids, tannins, triterpenoids, polyphenols, saponins from the protein hydrolyzate extract of viscera of Tilapia (*Oreochromis niloticus*), on the other hand, flavonoids and steroids were not detected. The extract has the potential to be developed in the field of health as pharmaceutical or nutraceutical products.

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### REFERENCES

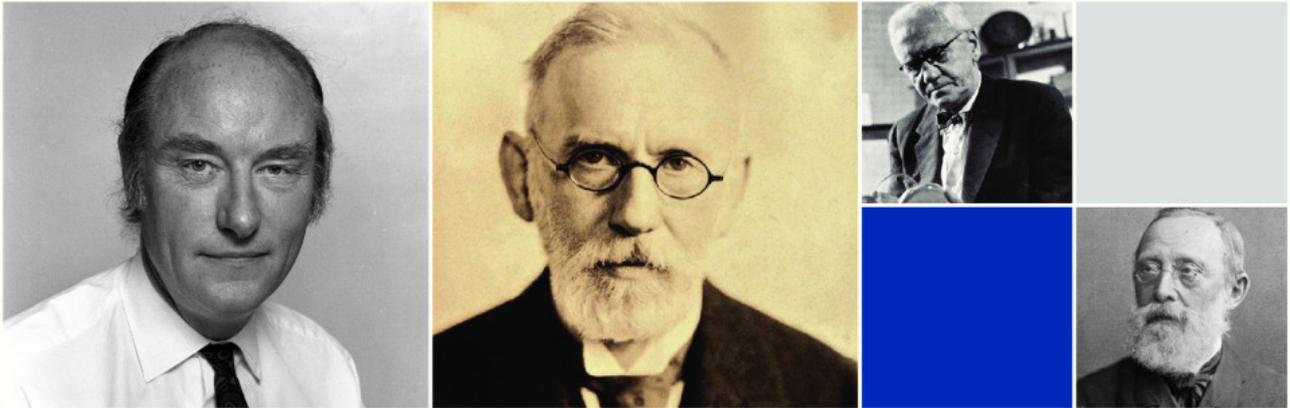
1. Abdelhadi, O., Jridi, M., Jemil, I., Mora, L., Toldra, F., Aristoy, M.-C., Nasri, R. 2016. Combine biocatalytic conversion of smooth hound viscera: Protein hydrolysates elaboration and assessment of their antioxidant, anti-ACE and antibacterial activities. *Food Research International*, 86, 9–23.
2. Amiza, M. A., Kong, Y. L., & Faazaz, A. L. 2012. Effects of degree of hydrolysis on physicochemical properties of cobia (*rachycentron canadum*) frame hydrolysate. *International Food Research Journal*, 19(1), 199–206.
3. Apri R. 2014. The active compound content and phytochemical test of *Sinularia* sp. and *Lobophytum* sp. from the waters of Pongok Island, South Bangka." Institut Pertanian Bogor, Indonesian [Tesis]: Institut Pertanian Bogor.
4. Ariansyach, I. 2017. Fisheries Country Profile: Indonesia. Retrieved from <http://www.seafdec.org/fisheries-country-profile-indonesia/>
5. Balti, R., Bougatef, A., Ali, N. E. H., Zekri, D., Barkia, A., & Nasri, M. 2010. Influence of degree of hydrolysis on functional properties and angiotensin I-converting enzyme-inhibitory activity of protein hydrolysates from cuttlefish (*Sepia officinalis*) by-products. *Journal of the Science of Food and Agriculture*, 90(12), 2006–2014. <https://doi.org/10.1002/jsfa.4045>
6. Battineni, Jainendra Kumar, Praveen Kumar Koneti, Vasudha Bakshi, Narender Boggula. 2018. Triterpenoids: A review. *International Journal of Research in Pharmacy and Pharmaceutical Sciences*, 3 (2): 91-96
7. Bhakuni, R. 2005. *Bioactive Marine Natural Product*. Anamaya Publishers, New Delhi, India.
8. Bhaskar, N., & Mahendrakar, N. S. 2008. Protein hydrolysate from visceral waste proteins of Catla (*Catla catla*): Optimization of hydrolysis conditions for a commercial neutral protease. *Bioresource Technology*, 99(10), 4105–4111. <https://doi.org/10.1016/j.biortech.2007.09.006>
9. Bougatef, A., Nedjar-Arroume, N., Ravallec-Plé, R., Leroy, Y., Guillochon, D., Barkia, A., & Nasri, M. (2008). Angiotensin I-converting enzyme (ACE) inhibitory activities of sardinelle (*Sardinella aurita*) by-products protein hydrolysates obtained by treatment with microbial and visceral fish serine proteases. *Food Chemistry*, 111(2), 350–356. <https://doi.org/10.1016/j.foodchem.2008.03.074>

10. Bribi, Noureddine., Francisca Algeri, Alba Rodriguez-Nogales. 2015. Anti-nociceptive and anti-inflammatory effects of total alkaloid extract from *fumaria capreolata*. Evidence-Based Complementary and Alternative Medicine, 736895(7): 1-8.
11. Bribi, Noureddine., Francisca Algeri, Alba Rodriguez-Nogales. 2016. Intestinal anti-inflammatory effects of total alkaloid extract from *fumaria capreolata* in the DNBS model of mice colitis and intestinal epithelial CMT 93 cells. Phytomedicine, (23): 901–913.
12. Bribi, Noureddine., Yacine Bouguezza, Fadila Maiza. 2013. Evaluation of erythrocytes toxicity and antioxidant activity of alkaloids of *fumaria capreolata*. Inter J of Pharma and Bio Scien, (4): 770-776
13. Chakrabarti, S., Jahandideh, F., & Jianping, W. 2014. Food-Derived Bioactive Peptides on Inflammation and Oxidative Stress. BioMed Research International, 2014, 1–11. <https://doi.org/10.1155/2014/608979>
14. Chi, C., Hu, F., Wang, B., Li, Z., & Luo, H. 2015. Influence of Amino Acid Compositions and Peptide Profiles on Antioxidant Capacities of Two Protein Hydrolysates from Skipjack Tuna (*Katsuwonus pelamis*) Dark Muscle, 2580–2601. <https://doi.org/10.3390/md13052580>
15. Daliri, E. B., Oh, D. H., & Lee, B. H. 2017. Review: Bioactive Peptides. Foods, 6(32), 1–21. <https://doi.org/10.3390/foods6050032>
16. de Jesus NZ, de Souza Falcão H, Gomes IF, de Almeida Leite TJ, de Moraes Lima GR, Barbosa-Filho Jmet. 2012. Tannins, peptic ulcers and related mechanisms. Int J Mol Sci, 13: 3203–3228.
17. Farnsworth, N. R., 1996. Biological and Phytochemical Screening of Plants, of Pharm. Sci., Vol 5, No. 3.
18. Firdous M, Koneri R, Sarvaraidu CH, Shubhapriya KH. 2009. NIDDM antidiabetic activity of saponins of *Momordica cymbalaria* in streptozotocin-nicotinamide NIDDM mice. Journal of Clinical and Diagnosis Research. 3: 1460-1465.
19. Firn, Richard. 2010. Nature's Chemicals. Oxford: Biology.
20. FitzGerald, R. J., Murray, B. A., & Walsh, D. J. 2004. Hypotensive Peptides from Milk Proteins. The Journal of Nutrition, 134(4), 980S-988S. <https://doi.org/10.1093/jn/134.4.980S>
21. Gollucke AP, Aguiar O Jr, Barbisan LF, Ribeiro DA. 2013. Use of grape polyphenols against carcinogenesis: putative molecular mechanisms of action using in vitro and in vivo test systems. J Med Food, 16: 199–205.
22. Gonzalez-Abuin N, Pinent M, Casanova-Marti A, Arola L, Blay M, Ardevol A. 2015. Procyanidins and their healthy protective effects against type 2 diabetes. Curr Med Chem, 22: 39–50.
23. Guides DN, Leitao Da-Cunha EV, Fachine IM,. 2005. Protoberberine alkaloids, in: The alkaloids; Chemistry and Biology, 1 st edition, ISBN: 0-12-469562-0. Elsevier Academic Press, London
24. Hajfathalian, M., Ghelichi, S., García-Moreno, P. J., Moltke Sørensen, A.-D., & Jacobsen, C. 2017. Peptides: Production, bioactivity, functionality, and applications. Critical Reviews in Food Science and Nutrition, 0(0), 1–33. <https://doi.org/10.1080/10408398.2017.1352564>
25. Harborne, J.B. 1984. Phytochemical methods, 2nd edition. Chapman And Hall Publications, Vol. 288.
26. Hayes, M. 2018. Food Proteins and Bioactive Peptides: New and Novel Sources, Characterisation Strategies and Applications. Foods (Vol. 7). <https://doi.org/10.3390/foods7030038>
27. Hoyle, N. T., & Merrit, J. H. 1994. Quality of Fish Protein Hydrolysates from Herring (*Clupea harengus*). Journal of Food Science, 59(1), 76–79. <https://doi.org/10.1111/j.1365-2621.1994.tb06901.x>
28. Khalil, A. A. 2012. Protein Characterization of the Aqueous Soluble Phase of Acidified and Autolyzed Bolti Fish (*Tilapia nilotico*) Viscera. Asian Journal of Biotechnology, 1–12. <https://doi.org/10.3923/ajbkr.2012>

29. Lecour S, Lamont KT. 2011. Natural polyphenols and cardioprotection. *Mini Rev Med Chem.* (11):1191–1199. doi: 10.2174/13895575111091191
30. Li, Y., & Yu, J. 2015. Research Progress in Structure-Activity Relationship of Bioactive Peptides. *Journal of Medicinal Food*, 18(2), 147–156. <https://doi.org/10.1089/jmf.2014.0028>
31. Liu, L., Wang, Y., Peng, C., & Wang, J. 2013. Optimization of the preparation of fish protein anti-obesity hydrolysates using response surface methodology. *International Journal of Molecular Sciences*, 14(2), 3124–3139. <https://doi.org/10.3390/ijms14023124>
32. Marín L, Miguélez EM, Villar CJ, Lombó F. 2015. Bioavailability of dietary polyphenols and gut microbiota metabolism: antimicrobial properties. *Biomed Res Int*, 905215.
33. Marlina, S., V. Suryanti, Suyono. 2005. Skrining Fitokimia dan Analisis Kromatografi Lapis Tipis Komponen Kimia Buah Labu Siam (*Sechium edule* Jacq. Swartz.) dalam Ekstrak Etanol. *Jurnal Biofarmasi* Vol. 3(1): 26-31.
34. Melanie, Laszczyk,. 2009. Pentacyclic Triterpenes of the Lupane, Oleanane and Ursane Group as Tools in Cancer Therapy. *Planta Medica*, 75(15):1549-60.
35. Octaviani, Y. 2009. Isolasi dan Identifikasi Aglikon Saponin Kecambah Kacang Hijau (*Phaseolus radiates* L.). Jurusan Farmasi. Universitas Sanata Dharma. Yogyakarta.
36. Pelletier, S.W. 1996. Alkaloids: Chemical and Biological Perspectives, Volume 1. Institute for Natural Products Research, Chemistry Building, The University of Georgia, Athens, Pergamon Publish. pages 392. Georgia USA
37. Pérez-Jiménez J, Neveu V, Vos F, Scalber A. 2010. Identification of the 100 richest dietary sources of polyphenols: an application of the PhenolExplorer database. *Eur J Clin Nutr*, 64:S112–S120. doi: 10.1038/ejcn. 2010.221
38. Riyadi, P. H. 2018. Bioactive Peptide for Lowering Pressure Blood from Fisheris by-Product. *J. Peng & Biotek Hasil Pi*, 7(1), 1–6. Retrieved from <http://www.ejournal-s1.undip.ac.id/index.php/jpbhp>
39. Roslan, J., Faezah, K., Abdullah, N., & Mazlina, S. 2014. Characterization of Fish Protein Hydrolysate from Tilapia (*Oreochromis niloticus*) by-Product. *Agriculture and Agricultural Science Procedia*, 2, 312–319. <https://doi.org/10.1016/j.aaspro.2014.11.044>
40. Ruiz N, Falcone B, Kahne D, Silhavy TJ. 2005. Chemical conditionality: a genetic strategy to probe organelle assembly. *Cell*. 12(2):307-17.
41. Seigler, David. 1998. Plant secondary metabolism. Springer Science Business Media New York. 1 st Edition. Page : 506-507
42. Singh A, Holvoet S, Mercenier A. 2011. Dietary polyphenols in the prevention and treatment of allergic diseases. *Clin Exp Allergy*, 41:1346–1359. doi: 10.1111/j.1365-2222.2011.03773.x
43. Skrovankova S, Sumczynski D, Mlcek J, Jurikova T, Sochor J. 2015. Bioactive Compounds and Antioxidant Activity in Different Types of Berries. *Int J Mol Sci*, 16: 24673–24706.
44. Villamil, O., Váquiro, H., & Solanilla, J. F. 2017. Fish viscera protein hydrolysates: Production, potential applications and functional and bioactive properties. *Food Chemistry*, 224, 160–171. <https://doi.org/10.1016/j.foodchem.2016.12.057>
45. Yoshikawa M, Toshio M, Ning L, Akifumi N, Zian L, Hisashi M. 2005. Bioactive saponins and glycosides. XXIII.1) triterpene saponins with gastroprotective effect from the seeds of *Camellia sinensis* teasaponins E3, E4, E5, E6, and E7. *Chemical and Pharmaceutical Bulletin*. 53(12):1559-1564.
46. Zhang, B, H. Ryuji , Z. Pengxiang, K. Sato , W.Tong-Chun, L. Yang , H. Fujita , N. Mitsuda , J. Tanaka , K. Samukawa , N. Maeda, M. Sakanaka. 2006. Prevention of ischemic neuronal death by intravenous infusion of a ginseng saponin, ginsenoside Rb1, that upregulates Bcl-xL expression. *Journal of Cerebral Blood Flow & Metabolism* (2006) 26, 708–721.

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