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THE STRATEGY OF LOCAL GOVERMENT IN INCREASING THE COMPETITIVENESS OF LAMPUNG SHRIMP EXPORT

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ABSTRACT

This study aims to analyze the strategy of the local government in increasing the competitiveness of Lampung shrimp exports to be the National Shrimp Barn. The data was obtained by reviewing several primary and secondary documents and in-depth interviews with the Head of the Department of Marine Affairs and Fisheries in Lampung Province. In this study, we use a quantitative approach using RCA (Revealed Comparative Advantage) to find the competitiveness of Lampung shrimp export value and Diamond Porter theory to analyze the strategies in increasing the competitiveness of Lampung Shrimp Export. The results indicate that the competitiveness of Lampung shrimp exports is very strong. The strategy used by Lampung Government to increase the competitiveness of Lampung shrimp exports is by a collaboration between the central and district governments realized by providing access to capital through Kartu Petani Pintar (Smart Farmer Card), technical assistance by forming cross-sector Working Groups (Pokja), and intensive pond constructions in several areas in Lampung.

Keywords: *Competitiveness of shrimp export, Revealed Comparative Advantage, Local government's strategy.*

1. INTRODUCTION

Lampung is targeted to be the National Shrimp Barn because Lampung is one of the largest shrimp producing areas in Indonesia based on the results of the 2018 National Shrimp Cultivation Coordination Meeting in Bandar Lampung. This is a follow up on the President's orders to increase foreign exchange that one of which was through the export of shrimp commodities. Lampung supplies 40% of the national shrimp needs (Republika, 2018) and exports 2 trillion IDR in 2019 with the utilization of only 10% of the land (Republika, 2019). Shrimp also dominates exports with a percentage of 70% of Lampung's total exports (Republika, 2019). President Jokowi instructed to make a strategic plan for fishery production by prioritizing shrimp and tuna. In 2019, Indonesia was the fourth largest frozen shrimp exporter in the world with 17.2 billion USD or about 232.2 trillion IDR (Widowati, 2019). Shrimp contributes for about 42% of Indonesia's

balance of fisheries trade (Hadiyantono, 2018) and contributes 1.3 billion USD in foreign exchange or 36.96% of the total export value (Sholeh, 2018). The main destinations for Indonesian shrimp exports are the USA, Japan and the European Union countries.

In 2019, Lampung shrimp exports were only 144 thousand tons per year, while the government's target is to reach 450 thousand tons per year (Republika, 2019). Lampung shrimp exports are facing obstacles such as business licensing experienced by shrimp farmers in South Lampung (Republika, 2019) and shrimp diseases in several areas (Kompas, 2015). The land conversion in Pesisir Barat also affects Lampung shrimp exports (Republika, 2019). In addition, conflicts between shrimp farmers and companies such as those in Dipasena and Bratasena also affect shrimp production in Lampung. Besides, shrimp exports in the international market also faced obstacles that some countries have strict regulations on shrimp imports from Asia. For example, the European Union applies zero tolerance for the chloramphenicol content of shrimp products that enter the European Union. In addition, there are cases of rejection of Indonesian shrimp by USA because the shrimps contain salmonella and histamine, causing the shrimp to have a bad smell and pale color.

Regarding these problems, comprehensive efforts are needed to increase the competitiveness of Indonesian shrimp exports in the international market. This is because countries with high competitiveness can dominate the international market. According to Laursen (2015), many countries produce the same products with better quality so that the competition in the global market is getting tighter (Laursen, 2015). By increasing the competitiveness of shrimp in the quantity and quality of shrimp production, Indonesia can dominate the international market. Therefore, a strategy of the Lampung Provincial Government is needed to increase the competitiveness of Lampung shrimp exports. So, the government's target to make Lampung as a national shrimp barn can be realized.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

This study refers to several previous studies. First, Ririn Aristiyani (2017) conducted a study aiming to determine the market structure, competitiveness, and prospects of Indonesian shrimp exports in the international market. This research shows that from 1991 to 1997, the Indonesian shrimp market was an oligopoly and from 1998 to 2014 it was a monopolistic competition market that is more likely to an oligopoly market. The results show that Indonesia has a competitive advantage with an RCA value which is greater than 1 (> 1). Second, research with the title "Competitiveness of Indonesian Shrimp in the International Market, An Analysis with a Market Share Approach Using an Econometric Model" in the Journal of Development Economics in 2004 which aims to analyze the

competitiveness of Indonesian shrimp in the international market and to formulate a market development strategy. The results show that Indonesian shrimp is relatively competitive, dominating the Japanese and UN markets.

Third, Ulfira Ashari, Sahara, and Sri Hartoyo conducted a study which aims to analyze the position of Indonesian fresh and frozen shrimp in the main export destination countries. In addition, this research analyzes the factors that affect the competitiveness of Indonesian fresh and frozen shrimp in the main export destination countries. The results indicate that the competitiveness of Indonesian fresh shrimp is lower than the frozen shrimp. Besides, the total production of Indonesian fresh shrimp is the factor that affect the short-term competitiveness of Indonesian fresh shrimp exports to Malaysia. Meanwhile, the competitiveness of Indonesian frozen shrimp to the USA was affected by the level of competitiveness of the shrimp exports to the USA in the previous period, frozen shrimp export price in Vietnam, and Indonesian frozen shrimp production.

Fourth, the research entitled "Dynamics of Export Competitiveness of Indonesian Frozen and Processed Shrimp in the International Market" conducted by Samsul Mashari, Rita Nurmalina, and Suharno aims to analyze the level of competitiveness and the dynamic position of Indonesian products and frozen shrimp exports among competing countries in the international market. For the analysis, this research used RCA and Dynamic Revealed Comparative Advantage (DRCA). The results show that both Indonesian frozen shrimp and shrimp products have strong competitiveness in the international market. The competitiveness of Indonesian shrimp products tends to increase among the 9 main competitors in two periods. In the first period, it was in a falling star position while in the second period it reached the rising star position. Likewise, the competitiveness of Indonesian frozen shrimp in the first period was in the falling star position and reached the rising star position in the second period. Indonesia needs to increase exports of frozen shrimp and shrimp products by ensuring the availability of raw materials and increasing the quality in exporting frozen shrimps and shrimp products.

Fifth, the research entitled "Analysis of Export Competitiveness of Indonesian Shrimp Commodities in European Markets 2008-2016" was written by Puput Ayu Pudyastuti, Herman Sambodo, and Kikin Windhani. This study aims to analyze Indonesia’s position of shrimp competitiveness in six destination countries in the European market from 2008 to 2016, namely UK, Germany, the Netherlands, France, Italy and Belgium. To analyze the competitive advantage of shrimp commodities, the Export Product Dynamic (EPD) was used in this study. This study indicates that Indonesian shrimp in UK, Germany, Holland, Italy and Belgium was in the "Failing Star" position, while in France it was in the "Rising Star" position. Then, from 2008 to 2016, the volume of Indonesian shrimp exports

in the European market fluctuated due to a decrease in volume in several export destination countries of shrimp exports in the European market and others.

Sixth, the research entitled "Strategy to Increase the Productivity of Pond Shrimp" was written by M. Syamsul Maarif, and Agus Somamiharja. This study aims to determine the successing factor of shrimp farming for each component of its subsystem, determine the priority of activities carried out to increase the productivity of pond shrimp to support Gema Protekan 2003, and to determine a suitable cultivation system to be implemented in accordance with current capabilities of the government and the farmers. The analysis used in this study is Analytic Hierarchy Process (AHP). The results show that the quality of shrimp farmers is the first priority that must be improved to increase the productivity of pond shrimp. Then, the activities needed include increasing theoretical understanding of shrimp farming, improving technical skills and improving attitudes (value systems) including social and entrepreneurial value systems.

Seventh, a research entitled "Analysis of Export Competitiveness of Indonesian Shrimp Commodities" was conducted by Mufa'ah and Mardiyah Hayati. This study aims to determine the competitiveness and performance of Indonesia's shrimp export commodities and the factors that affect the competitiveness to form a strategy to increase the competitiveness of Indonesian shrimp commodities in the international market. In this study, the analysis used are RCA, Literacy Test, and SWOT analysis. The results of this study indicate that Indonesian shrimp export commodities have strong competitiveness (RCA> 1) and an increase in performance between the current year and the previous year (RCA index> 1). Meanwhile, the most influential factors are labor, land, management program, amount of shrimp production, capital, product diversification, environment, human resources, raw materials, seeds, demand, price, competitors, standards and quality.

Eighth, the research entitled "Analysis of the Diversification of the Indonesian Shrimp Commodity Export Market" was conducted by Bagas Haryotejo. This study aims to analyze the diversification of the export market, the competitiveness of the shrimp commodity in the main export market and to formulate policy implications related to the development of the shrimp export market. In this study, the analysis used are the Aggregate Specialization Index (SPE), Hirschman Index (HI), and RCA. The results show that the shrimp export market had not been diversified. This is indicated by the SPE and the Hirschman Index. The SPE shows a value of close to 1, which means the market is not well diversified. Meanwhile, based on RCA analysis, Indonesian shrimp commodity has great competitiveness in the US and Japanese markets indicated by the RCA value which is much greater than 1. On the other hand, in the European Union market, the average RCA value is close to 1. This shows that the competitiveness

of Indonesian shrimp commodities is relatively weaker in the European Union market.

Ninth, the research entitled "Competitiveness Comparison between Indonesian Shrimp and Thailand Shrimp in Export Market" written by Lina Asmara Wati, Weni Chang, and Moch Muslich Mustadjab. This study aims to compare the competitiveness of shrimp exports between from Indonesia and Thailand to Japan and USA. The analysis used in this study is RCA. The results show that Indonesia's RCA value is greater than 1, which indicates the competitive advantage of Indonesian shrimp exports in the liberalized market. However, Indonesia was relatively disadvantaged than Thailand.

Tenth, the research entitled "Competitiveness Analysis and Factors That Influence The Export of Indonesian Shrimp Commodities" was conducted by Muryani, Dian Ratna Sari, and Erlangga Agustino Landiyanto. This study aims to analyze the competitiveness of countries in the shrimp market and the factors of shrimp export in major importing countries. In this study, the analysis used are RCA and Panel Gravity Model. The results indicate that GDP per capita and the distance of country have a relationship with shrimp commodity exports. Meanwhile, GDP per capita for importing countries, export prices, and population are positively related.

Those previous studies lead this study to continue with a more specific case study, namely the Regional Government's strategy in increasing the competitiveness of Lampung shrimp exports. This study was conducted from 2015 to 2019, or after the election of Lampung as the National Shrimp Barn.

3. RESEARCH METHODOLOGY

In this study, We use quantitative and qualitative approaches to answer two research questions. The quantitative approach involves estimating parameters, testing hypotheses, establishing a confidence interval, and the relationship between two or more variables for parameters that have a normal distribution. We use RCA to analyze the competitiveness of Lampung shrimp exports; and the Diamond Porter model to analyze the strategies used by the Lampung Government to increase the competitiveness of shrimp exports.

The conception of competitiveness is discussed at three levels of understanding, namely product competitiveness, national competitiveness and international competitiveness. These conception helps tracing the comparative advantage of shrimp products, product contribution in national export value, and product contribution as well as product urgency in international markets.

The competitiveness of export products in international competition can be seen from three aspects (Amir, 2003: 281):

(1) Price, production costs that are lower than production in the export destination country create a comparative advantage of the product.
(2) Product quality, the product must satisfy consumers
(3) The forwarding time must suit the situation and market conditions in the destination country. Delays can be a reduced desire and loss of market.

The RCA index introduced by Bela Balassa is a method of measuring comparative advantage used in this study. RCA is a percentage of total exports from a country. At the world level, if the percentage is higher than the market share for the same goods, it means that the country has a comparative advantage on the production and export of a product (Tambunan, 2004: 110). The RCA formula is as follows:

$$RCA = \left(\frac{X_{IK}}{X_{IM}}\right) / \left(\frac{X_{WK}}{X_{WM}}\right)$$

Where:
XIK = export value of product I in country K
XIM = total export value in country K
XWK = world export value of product I
XWM = total world export value

Peter Lang AG (2009) reviews various definitions of national competitiveness. He concludes that the concept of competitiveness does not have a standard definition. Many thinkers provide a measurement of competitiveness according to various indicators and depending on the researchers' needs. Peter Lang AG (2009: 28) underlines the approach of competitiveness in the book *National Competitiveness of Vietnam: Determinants, Emerging Key Issues and Recommendations* by Hien Phuc Nguyen. He takes the point that national competitiveness refers to the ability of a country to create and sustain economic growth, and improve the living standard of its people by increasing national productivity within the framework of a market economy. Therefore, this study analyzes the government's steps to increase the shrimp exports and its impact on people's welfare.

In the model of national competitiveness or the "Diamond" model by Porter (1990. P. 1-5), there are four environmental factors that can be considered in national competitiveness:

a. The Factor Condition or the position of a country in production factors including labor factors, resources or infrastructure, and other factors in industry.
b. The demand condition or the characteristics of domestic demand for certain industrial products and services.

c. The related and supporting industries, i.e. the presence or absence of a provider, supporting and related industries that are competitive in the international level.
d. The firm strategy, structure and rivalry or the strategy and control of a country in how a company manages domestic competition.

By reflecting on this model, the strategic position of shrimp products will be considered as an export products in the international market, particularly the contribution of Lampung as a national shrimp producer.

Data were collected through interview and documentation study. Interviews were conducted with the Head of the Lampung Marine and Fisheries Office. Documentation was done by collecting data from documents (document-based research). Document materials were taken from primary and secondary documents. Primary documents belong to the Indonesian Ministry of Marine Affairs and Fisheries and the Lampung Office of Marine Affairs and Fisheries as well as annual reports from the Central Bureau Statistics (BPS) of Lampung.

4. RESULTS AND DISCUSSIONS

Development of Export Products in Lampung Province

Lampung has several export commodities, such as fishery products, agriculture and coal. Among these commodities, three products are superior products of Lampung such as robusta coffee, pepper, and cassava. Meanwhile, shrimp products contribute to the largest national export (Lampost, 2020). Apart from agricultural products, fishery products have great potential for Lampung Province. In 2018, fishery product exports contributed 3% of national fishery exports with 2.7 trillion IDR. The fishery product exports consist of fresh shrimp, processed shrimp, processed crabs, processed squid, fish feed, seaweed and groupers (Lampost, 2019). The Lampung Provincial Government commit to develop aquaculture businesses. The government is also working on restocking endemic fish such as jelabat, baung and belida in rivers and retention basins (Lampost, 2020).

Commodity exports in Lampung Province from 2018 to January 2019 increased. The total of commodity exports in Lampung Province in 2018 were 256.23 million USD, and it increased 9.19 million USD to be 265.42 million USD in January 2019 (Republika, 2019). Several commodities that increased were coffee, tea, spices, pulp, and the products of fruit and vegetables. Export can increase economic growth in an area. The exported commodities from Lampung to other countries depend on the demand. There are five main commodity export destinations for Lampung Province including USA, China, South Korea, India and Pakistan. The export value of each country can be seen in the following table:

Table 1. Main Export Destinations of Lampung

No	Country	Export value (in USD)
1	USA	30,17
2	China	29,16
3	South Korea	25,57
4	India	24,04
5	Pakistan	21,61

Source: republika.co.id (Republika, 2019)

The Competitiveness of Lampung Shrimp Export

The competitiveness of a commodity can be seen from its price, product quality, and delivery time. The higher the export price of Indonesian shrimp, the lower the competitiveness of the shrimp exports and vice versa. Shrimp price fluctuation is influenced by many factors such as competition between shrimp exporting countries. The shrimp sales in the international market were still dominated by India, followed by Ecuador and Vietnam, while Indonesia was the fourth largest shrimp exporter. In 2019, shrimp prices declined in the international market due to intense competition between shrimp exporting countries (Maharani, 2020). The increase and decrease in demand for shrimp can also affect the shrimp prices. Also in 2019, the shrimp prices in Lampung declined so it negatively affected shrimp farmers because their income was less than the capital issued (Muklasin, 2019).

Apart from price, quality also determines the competitiveness of a commodity. Shrimp is a food commodity that is susceptible to disease in its cultivation process. As a result, shrimp are susceptible to contamination by bacteria such as Salmonella, E. Coli, and Vibrio parahaemolyticus which can cause a poor quality of the shrimp and be rejected by importing countries. Therefore, the quality of shrimp is essential to meet the strict import standards and requirements applied by importing countries. In this case, the role of quality assurance (certification) is very important. To ensure the quality of shrimp, the national shrimp industry applies the HACCP (Hazard Analysis Critical Control Point) system in shrimp cultivation and processing. Several shrimp industries in Lampung that have implemented HACCP are PT Central Pertiwi Bahari, PT Indomina Langgeng Sejahtera, and PT Bumi Menara Inetrnusa.

Besides, competitiveness is also influenced by the delivery time of export products to the destination country. The development of transportation technology is no longer an obstacle to the delivery of export products to destination countries. However, administrative procedures sometimes hamper the punctuality of export delivery. Currently, Indonesia has implemented the INSW (Indonesia National Single Window) to support the smooth process at ports. This is highly appreciated

by shrimp industries in Lampung, as conveyed by Rudi Siregar in the research interview at his office, PT Central Pertiwi Bahari, Tanjung Bintang.

These three factors can affect the competitiveness of shrimp exports. Even so, many other factors that affect the competitiveness of shrimp exports are production, exchange rates, export volume, and purchasing power. Therefore, regarding competitiveness, several factors need to be considered. To see the competitiveness of shrimp exports in Lampung, here is the data on the Lampung shrimp export value of and its comparison with the national shrimp export value (throughout Indonesia):

Table 2. Export value (USD) of Lampung Shrimp, Indonesian Shrimp, All Commodities of Lampung and Indonesia In 2015-2019

Year	Lampung Shrimp Export Value	Lampung Export Value for All commodities	Indonesian Shrimp Export Value	Indonesia Export Value for All Commodities
2015	154.308.963,00	387.141.000,00	1.390.000.000,00	150.393.300.000,00
2016	155.896.653,00	319.173.000,00	1.380.000.000,00	144.489.700.000,00
2017	194.170.852,00	387.341.000,00	1.380.000.000,00	168.828.200.000,00
2018	190.124.102,00	344.011.000,00	1.350.000.000,00	180.012.700.000,00
2019	161.536.011,00	292.948.000,00	1.231.530.957,00	167.497.000.000,00

Source: Central Bureau of Statistics and the Observatory of Economic Complexity

Table 2 shows that the shrimp export value in Lampung Province increased continously. However, there was a decline of 0.98% from 2017 to 2018 and a decline of 1.18% from 2018 to 2019. In contrast, the export value of all commodities in Lampung Province tended to fluctuate. It declined in 2016, then increased in 2017, declined in 2018, and declined again in 2019. The increase in shrimp export value in Lampung from 2015 to 2017 is better than Indonesian shrimp export value, which declined continously from 2015 to 2019. Indonesia's export commodities fluctuate from year to year.

The competitiveness of Lampung shrimp exports is calculated using the RCA method. This method is used to measure comparative advantage in an area. If the RCA value is more than 1 (> 1) then the competitiveness of Lampung shrimp exports is higher than the average competitiveness of Indonesia and vice versa. Meanwhile, if the RCA value is 1 (= 1), then the competitiveness of Lampung shrimp exports is the same as the average competitiveness of Indonesia. The following is the value of the competitiveness of Lampung shrimp exports:

Table 3. RCA Value of Lampung Shrimp in 2015-2019

Year	Lampung Shrimp Export Value	Lampung Export Value for All commodities	Indonesian Shrimp Export Value	Indonesia Export Value for All Commodities	RCA Value
2015	154.308.963	387.141.000	1.390.000.000	150.393.300.000	43,1256519
2016	155.896.653	319.173.000	1.380.000.000	144.489.700.000	51,1409096
2017	194.170.852	387.341.000	1.380.000.000	168.828.200.000	61,3276707
2018	190.124.102	344.011.000	1.350.000.000	180.012.700.000	73,6943552
2019	161.536.011	292.948.000	1.231.530.957	167.497.000.000	74,9964172

Source: Processed Secondary Data from The misnistry of Marine Affairs and Fisheries and The Observatory of Economic Complexity

Based on the RCA value in the table 3, Lampung shrimp exports have very strong competitiveness seen from the very high RCA value. The highest RCA value was in 2019 at 74.99, while the lowest RCA was in 2015 at 43.12. Even though the export competitiveness in 2015 was the lowest, but the value was very high. So, in 2015, the competitiveness of Lampung shrimp exports was quite strong and increase continously every year. With an RCA that is greater than 1 (> 1), it indicates that the export value of Lampung shrimp has a comparative advantage with very strong competitiveness and continues to increase from 2015 to 2019.

Goverment's Strategies in Increasing the Competitiveness of Lampung Shrimp Exports

The results of RCA calculations indicate that the competitiveness of Lampung shrimp exports in Provinc is very strong. Strategic efforts are required to increase it. Based on the Diamond Potter method, there are four factors that affect the competitiveness of a region, i.e supporting and demand conditions, supporting industries, firm strategy, as well as the role of the government.

The Factor Condition

a. Geographical Location

Lampung Province, especially South Lampung Regency, is one of the main pilot locations for national shrimp ponds. The South Lampung Regency is from Muara Way Sekampung in Sragi District in the North to Bawang Village, Punduh Pidada District, Pesawaran Regency in the South with a coastline length of 45 km. Geographically, South Lampung Regency is between 105 'to 105'45' East Longitude and 5'15 'to 6' South Latitude. Regarding shrimp cultivation, the potential pond land in South Lampung Regency is 15,000 hectares spread over 6 sub-districts including Sragi, Ketapang, Penengah, Kalianda, Sidomulyo and Katibung districts (Utojo, 2009: 413).

b. Land

The Lampung Government wants to again achieve success in the shrimp farming sector. This step begins by building demonstration ponds (demfarm) in three districts, which have been the centers for shrimp production in Lampung. Head of the Marine and Fisheries Service (DKP) of Lampung Province, Setiato, said the three districts are South Lampung, East Lampung, and Pesawaran. The pilot ponds to be built in each regency are about 7-10 hectares. This pond belongs to fishermen and the government only helps facilitate cultivation needs such as waterwheels, plastics, feed, and others. In addition to building pilot ponds, the government assists for production facilities and pond infrastructure provided for shrimp farmers (Lampungprov.go.id, 2015).

In this case, the Ministry of Marine Affairs and Fisheries (KKP) designed a pilot-shrimp-cultivation area in South Lampung Regency. These activities are to support social forestry programs in various regions. The shrimp farming was chosen because in those areas, there had been existing cultivation area of approximately 312 hectares, but it had not been optimally and productively utilized. The Social Forestry program launched by President Jokowi is an attempt of the Government to provide access to the local people in utilizing Perhutani land for productive business activities that can improve their welfare. The Directorate General of Aquaculture said that the KKP is committed to the success of the social forestry program initiated by the President. He stated that the potential land owned by Perhutani in several regions can be optimized to be more productive and has a positive effect on the community's economy (Dirjen Perikanan Budidaya, 2020).

c. Infrastructure

KKP, through the Directorate General of Aquaculture, will be involved especially in designing the shrimp ponds, rehabilitating irrigation canals and supporting cultivation facilities. Meanwhile, other cross-sectoral sectors are expected to support with their authorities such as Perhutani related to land legality and community groups, State Electricity Company PLN related to access to electricity; The Ministry of Public Works and Public Housing (PUPR) for access to infrastructure such as production roads; State-owned Enterprise (BUMN) of Banking for access to finance and other related Ministries. Currently, the local government is identifying and verifying locations to ensure that activities will run well. The Ministry of Marine Affairs and Fisheries plans to build a pilot shrimp-cultivation area in social forestry activities of about 5 hectares for initial development,

with a productivity target of 6 tons/hectare (Directorate General of Aquaculture, 2020).

d. Employee

Apart from the availability of land and infrastructure, the number of fishermen/cultivators from 2015 to2019 reached 42,729 people (KKP: 2018). Especially for the KKP, the governmrnt would appoint the Lampung Center for Aquaculture and Fisheries (BBPBL) to provide technical assistance and the necessary cultivation facilities. In addition, the Directorate General of Fisheries and Aquaculture also distributed 175 immune packages to BBPBL Lampung employees who got the impact of tidal flooding. This is expected that the assistance provided can increase morale and productivity (Directorate General of Aquaculture, 2020).

The Demand Condition

The Minister of Marine Affairs and Fisheries, Edhy Prabowo with the Chairman of Commission IV of The People's Representative Council of the Republic of Indonesia (DPR RI) visited East Lampung Regency on July 19, 2020. The government was ready to work on the potential of ponds through shrimp cultivation. Edhy said that the KKP would encourage for intensification and development of the wanamina or silvofishery system ponds. Edhy saw that the ponds in East Lampung has high productivity with an average harvest of about 20 tons. Besides, the price of shrimp during the Covid-19 pandemic is better than the pre-pandemic conditions. It is expected that the existing land can be utilized by paying attention to plants, especially mangroves because mangrove forests can also be used for other fisheries cultivation (Director General of Aquaculture, 2020).

In order to boost productivity to achieve the target of increasing shrimp production by 250% by 2024, KKP through the Directorate General of Aquaculture (DJPB) has designed a cultivation model by prioritizing a more-integrated technical management that is environmentally friendly. This pilot is expected to encourage farmers and investors to imitate the model. Then DJPB added that the government focus on improving productivity through intensification. By upgrading the productivity of traditional ponds with technology, productivity can be increased from 1 ton/ha/cycle to around 10 - 20 tons/ha /cycle. So, there will be an additional shrimp production of at least 400,000 tons per year. However, the Covid-19 pandemy also affects the economy, especially the performance of the national shrimp business. The decline in shrimp prices

due to falling export demand also suppressed the added value of shrimp cultivators in various regions in Indonesia.

The Related and Supporting Industries

a. PT Robert Bosch

Bosch, a leading technology and service provider company, presents a Smart Aquaculture: Aquaeasy. Aquaeasy is a holistic technology that can monitor water quality and shrimp pond management with complete solutions including sensors, software and services. Aquaeasy is more focused on increasing shrimp production that will help Indonesian farmers maintain quality while increasing their yields in a sustainable manner. Aquaeasy recommends optimal harvest periods, prevention of risk of failure and estimation of feed ratios. This technology is supported by Artificial Intelligence, which provides more in-depth information. The Aquaeasy also supports government programs that are going towards industry 4.0 in which digital use including digital use in the shrimp farming sector must be prioritized. Currently, Aquaeasy technology has been used in several Indonesian ponds, one of which is in Lampung. The sensors allow the pond owners to control parameters, pH, temperature, salinity and conductivity of water only via a smartphone because Aquaeasy technology can be downloaded with the subscription cost of IDR 1 million per month (Investor.id, 2019).

b. PT. Central Centralpertiwi Bahari

PT. Centralpertiwi Bahari was established on June 9, 1994, located in Tulang Bawang Lampung, with an area of more than 20,000 hectares. This company started by building several modules, irrigation systems to support the farmers. Then, this company provides special training to farmers and employees to cultivate shrimp with good results. As an integrated aquaculture company reputable worldwide, PT Central Pertiwi Bahari combines traditional and modern resources to support shrimp farming such as HDPE lined, high-tech laboratories, power plants, as well as the factory for processing fresh shrimp and food products. CP Prima as the parent company of PT Central Pertiwi Bahari supplies several high-quality and nutritious feeds for shrimp produced with high standards to prevent water pollution (CPP Prima, 2020).

The Firm Strategy, Structure and Rivalry

To improve the competitiveness of shrimp commodities, business actors play an important role in the shrimp commodity. Therefore, in order to succeed in the Lampung program as a national shrimp Barn, a strategy is

needed the shrimp companies in Lampung such as PT. Central Pertiwi Bahari (CPB), Bumi Menara Internusa (BMI), and INDOPOM.

In the global market, the high demand for shrimp and packaging of shrimp products to meet the strandards of export destination country, so that the export value will be greatly influenced by market demand. If the company can meet this demand, it will further increase the export value of the product. In this case, the characteristics of the United States' demand for shrimp products are quite flexible. in contrast, European countries prioritize product quality that meets their standards. Then, in meeting the demand for shrimp in the global market, there are several obstacles faced by companies, i.e the certificates needed such as health certificates for exporting, dynamic market demand and raw materials to meet market demand. Therefore, there are several company's strategies in dealing with these problems, including:

(1) Providing guidance and training for both technology and improving the quality of shrimp farmers. In this case, all companies engaged in the shrimp commodity in Lampung conducted training for shrimp farmers regarding shrimp farming, expecially the use of technology to accelerate and produce sustainable and quality harvests.
(2) Improving technological facilities such as laboratories to control water quality and manage shrimp ponds.
(3) Cooperating with one another to support Lampung to be a national shrimp barn such as by sharing technology and the advantages of each company. Its is expected that in the future, the results of such collaboration can be used as a strategy in supporting the shrimp cultivation in Lampung to produce quality and sustainable shrimp.
(4) Understanding the global market, especially about the demand and trend of the global market. For example, PT. Central Pertiwi Bahari participated in the largest seafood exhibition in Europe, namely Boston Seafood for 25 years. This was done as an effort to follow the trend of global market development for the shrimp commodity.
(5) Equally important, every company must always innovate on the shrimp products. Shrimp companies must always innovate their shrimp products. Not only to produce raw, the company needs to process the shrimp into various shrimp products.
(6) Maintaining shrimp quality. In supporting the province of Lampung to become a national shrimp barn, the shrimp companies must also pay attention to the shrimp quality. With a good quality, it can meet all the standards of demand for the shrimp commodity market.

The Role of Goverment

Increasing national shrimp production is one of the programs major project in the RPJMN 2020-2024 realized by revitalizing shrimp ponds by optimizing existing land. This program is an implementation of President's Instruction Number 7 of 2016 concerning the Acceleration of National Fisheries Industry Development. Increasing the productivity of national shrimp is also expected to raise the people's economy that is affected by the COVID-19 pandemic (Presidential Staff Office, 2020).

Currently, the KKP is mapping potential land in various areas for optimization. Likewise, the Chairman of Commission IV DPR RI, Sudin, said that the DPR will provide full support in intensification and development of silvofishery system shrimp ponds, which means that the development of ponds does not damage mangroves because mangroves have ecological functions such as protecting the coast from abrasion. On the same occasion, the Governor of Lampung, Arinal Djunaidi, stated that in October, the Prosperous Farmers Card would be launched, including for fishpond farmers and fishermen. It was expected pond farmers could use it to maximize production results (Dirjen Perikanan Budidaya, 2020).

a. The Prosperous Farmers Card Program (PKPB)

   The PKPB is a program, which connects all agricultural interests to achieve the welfare of farmers and all parties involved in the agricultural process. This program aims to increase productivity, farming income and increase the farmer exchange rate (NTP). PKPB is a program of the Governor of Lampung that aims to increase farmers' income and welfare by solving problems in a structured, systematic and integrated manner using information technology (PKPB, 2020).

   With an application-based program, the PKPB membership system is closed. The members are Farmers as the main members who get convenience from access to capital, provision of agricultural facilities and sales of agricultural products; distributor of seeds, Fertilizer and Medicine needed by farmers in the cultivation process; farmer group as the manager of the distribution of agricultural facilities from suppliers to farmers, Managing agricultural products from farmers to buyers; Trainer as the maker of the Definitive Plan of Farmers Group (RDK); The stall of agricultural facilities as a place for supplying and selling agricultural facilities for farmers; Financial Institutions in the form of Banks, Cooperatives, BUMDES, which channel capital to farmers; Buyers of agricultural products from farmers; and Local Governments

that monitor regional agricultural conditions, make policies, ensure the stability of the selling price of agricultural products.

The PKPB can provide detailed and accurate information for producers of goods and services needed by farmers in the form of Profiles and Farming Business Plans to provide initial data for the production, stock and distribution, access to capital and markets for agricultural products in the form of harvest estimation. Besides, KKP and the government reallocate direct production input support for small-scale shrimp farmers affected by Covid-19. Through the Center for Brackish Water Cultivation Fisheries (BBPBAP) Jepara, a total of 2.2 million vannamei shrimp seeds were given to a shrimp farmer in Lampung Province.

b. Establishment of Cross-Sector Working Groups (POKJA)

The Covid-19 pandemic also caused an economic impact, especially on the performance of the national shrimp business. The decline in shrimp prices in the market due to falling export demand also suppressed the added value of shrimp cultivators in various regions in Indonesia. On the other hand, the increase in shrimp feed prices also increase the production costs. Meanwhile, to maintain shrimp productivity, KKP has provided support for quality-vannamei-shrimp seeds in various regions through the Technical Implementation Unit (UPT) of Directorate General of Aquaculture. The head of the Center for Brackish Water Cultivation Fisheries (BBPBAP) Jepara, Sugeng Raharjo, said that he had prepared various anticipations in facing the impact of the economic downturn due to the COVID-19 pandemic among fish farmers. He stated that Jepara BBPBAP as the center of national shrimp manipulation, has provided direct support for shrimp seeds for small-scale farmers. The KKP team went to Lampung to provide support for 2,208,000 vaname shrimp seeds for fosh-farming group of Citra Jaya. It is expected that this support can reduce production costs and maintain the added value of income in the current downturn of the national shrimp business (KKP, 2020).

The strategy that has been applied by the government and the KKP is to conduct a coordination meeting for Working Group (POKJA) regarding the National Shrimp Production Acceleration by starting the acceleration of shrimp farming development in several targeted areas. The team consisting of cross-sectoral elements immediately held a coordination meeting in South Lampung Regency on July 2, 2020. South Lampung Regency is one of the five districts/cities that are the target of shrimp cultivation development in 2020. Several supporting programs are being prepared by the Government to accelerate the

realization of the target. Meanwhile, the Regent of South Lampung, Nanang Ermanto, hopes that South Lampung can advance in the agriculture and fisheries sectors. He also hopes that the collaboration with the Central Government can realize South Lampung as one of the national shrimp barns (KKP, 2020). The main points in the Coordination Meeting held by the POKJA Team for the Acceleration of National Shrimp Production include (KKP, 2020):

(1) The shrimp culture development program would be discussed at a ministerial level meeting to encourage the active involvement of other Ministries/Agencies because it is directly monitored by the President;
(2) The status of social forestry land would be finalized in two weeks;
(3) The formation of Regional Working Groups would be followed up that week to start working immediately;
(4) The technical design and the to-do list of POKJA would be prepared by the KKP within two weeks; and
(5) The second coordination meeting was scheduled for the fourth week of July to discuss design and fundraising besides the APBN (state budget) and APBD (local government budget).

5. CONCLUSION

Lampung Province is targeted to become the National Shrimp Barn based on the 2018 National Shrimp Cultivation Coordination Meeting. Lampung is considered to have great potential to advance national shrimp cultivation. This can be seen from several aspects such as large areas to maximize cultivation, strategic geographic location with many beaches, and the experience of long-established shrimp industries in Lampung. Therefore, the competitiveness of Lampung shrimp exports must be improved. Based on the results of RCA calculation, the competitiveness of Lampung shrimp exports in is very strong. The Lampung Provincial Government made a collaboration with central government and the regional goverments to increase the competitiveness of shrimp exports. This collaboration includes providing access to capital through Smart Farmers Cards, technical assistance by forming cross-sector Working Groups (Pokja), and intensive pond building in several areas in Lampung.

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