



Influence Analysis of Supply Chain Management and Supply Chain Flexibility to Competitive Advantage and Impact on Company Performance of Fish Processing in Bitung City

Indrie Debbie Palandeng, Paul Kindangen, Altje Tumbel, James Massie
Faculty of Economics and Business Sam Ratulangi University, Indonesia.

Abstract

The purpose of this study is to determine the effect of supply chain management and supply chain flexibility on company performance through competitive advantage. Samples are used through survey method on all fish processing companies that conduct export activities amounting to 21 companies. Data collection method is interview and questioner then analyzed with Partial Least Square (PLS). This research develops dimensions of supply chain management ie customer relationship management, internal supply chain management, supplier relationship management and supply chain flexibility to test relationships with competitive advantage and firm performance

The results show that supply chain management has a positive influence on competitive advantage and firm performance. Likewise, supply chain flexibility has a positive effect on competitive advantage and firm performance. Competitive advantage also has a positive influence on the performance of fish processing companies in Bitung City. Based on the results of the study can be concluded that the improvement of company performance is highly dependent on supply chain management practices, supply chain flexibility and competitive advantage. From these findings it is recommended that the company's management maintain and improve relationships with suppliers, customers and improve the internal supply chain to produce better value-added products and demand fulfillment. Supply chain flexibility is essential for any fish processing company in Bitung to measure the extent to which the supply chain can respond to fluctuations in demand and change. New breakthroughs in delivering diverse products or improving work quality will enable the company to work as effectively and efficiently as possible. Supply chain management practices and supply chain flexibility will ultimately improve competitive advantage and improve the performance of fish processing companies in Bitung City.

Keywords: Supply Chain Management; Supply Chain Flexibility; Competitive Advantages; Company performance; Partial least Square.

1. Introduction

The performance of fish processing companies in Indonesia is faced with challenges, among others: First, the competition in the global market where some products and production processes of other countries are much more efficient compared to Indonesia. Second, competition in the domestic market such as product quality such as packaging requirements, labels, green labels, and content requirements (CPM). Therefore, there is a need for policy support in the form of increased infrastructure connectivity such as UPI development, port capacity, better road access, storage facilities and increased infrastructure capacity (such as water, electricity, telecommunication, human resources and science and technology) support, can be

sustainable (CTF, 2015). Company performance is influenced by various factors both internal and external. inter-company integration can improve company performance according to Lee et al., (1997); Lummus, et al., (1998). Performance is determined by the twin criteria of effectiveness defined as the ability to do the right things and the efficiency that is the ability to do things right. Company performance can be seen from profitability, the main achievement of the company, growth, innovation, and the rate of return on assets. The profitability is intended to determine the company's ability to generate profits and to know how far the company is managed effectively (Stonner et al., 2000).

This study examines the relationship of supply chain management, affordability and competitive advantage and its impact on company performance. Fish processing industry becomes the largest export commodity of marine and fishery products owned by Bitung City (KKP Sulut, 2013). The increase is marked by the world market demand which each year has increased. The strategy developed in dealing with the current phenomenon is through the implementation of supply chain management and supply chain flexibility. Supply chain management and corporate flexibility within the supply chain can have a significant impact on the availability of an improved raw material that will be tackled and enhanced competitive advantage over the product.

2. Literature Review

Heizer and Reinder (2004) supply chain management may include establishing: transporters, credit and cash transfers, suppliers, distributors and banks, accounts payable, warehousing, order fulfillment, dividing information on demand forecasts, production and inventory control activities. Supply chain management is an umbrella process whereby the process is created and delivered to the consumer from a structural angle. A supply chain refers to an intricate network of relationships that maintain an organization with its business associates to obtain a source of production in delivering to consumers (Kalakota, 2000: 197) where the goal to be achieved is to maximize the overall value generated (Chopra & Meindl, 2001: 5)

Supply chain flexibility is vital to the success of the supply chain since the supply chain exists in an uncertain environment. It can measure the degree to which the supply chain can respond to random fluctuations in the demand and supply changes. Flexibility may be defined in time, effort, cost or performance (Upton, 1994). Flexibility can enhance the competitiveness of enterprises, especially for decision-making processes applying technology (Jaikumar, 1986; Alvarez-Gil, 1994). (Brill & Mandelbaum, 1989; Gerwin, 1993) think that flexible operating systems require the management and control of different dimensions of flexibility, by analyzing the total system flexibility.

Competitive Advantage is a position of enduring superiority over competitors in terms of customer preference (Indrajit, 2002). It is further said that the source of competitive advantage lies in the company's ability to differentiate itself from competitors and how it works at a low cost. Dessler (2001) argues that competitive advantage can increase market share and retain the competitiveness of firms, while Porter (2004) competitive advantage essentially evolves from the value that a company can create for its buyers that exceeds the cost of the company in creating it.

Bernardin and Russell (2000) define performance as follows: "performance is defined as the record of outcomes produced on a specified job function or activity during the time period. Performance is a record of the results obtained from certain job functions or activities over a period of time. Gibson, et al (2003) Performance is the result of work related to organizational goals, efficiency and performance of other performance effectiveness.

2.1. Relationship Between Variables.

2.1.1. Linkage of Supply Chain Management Variables to Competitive Advantage

Supply chain management is an important competitiveness for companies in providing fast service with high product variety and low cost so that companies can survive in the increasingly fierce competition of Gimenez and Ventura (2003). The linkage of supply chain management and competitive advantage can be proven through the results of research from Bratic (2011) that there is a relationship between supply chain management with competitive advantage The results of Chonticha Mathuramaytha (2011) conducted a literature study on supply chain collaboration relationships affecting competitive advantage but relationships between supply chain collaboration and competitive advantage in moderation by environmental uncertainty variables. This research is also supported by Gimenez and Ventura (2002) supply chain management consisting of Internal Integration and External Intergration has contributed to gain competitive advantage. Said (2006) stated that the implementation of MRP improves its productivity level, supported by Watabene (2001) which states that the implementation of supply chain management will increase profits dramatically.

Variable Linkage Supply Chain Flexibility to Competitive Advantage

Supply chain flexibility can improve the competitiveness of enterprises, especially for the process of making technology implementation decisions. The Sanchez and Perez (2005) study explains that flexibility in the supply chain may well be a

potential source to improve enterprise efficiency. The results show that firms that can improve basic flexibility capabilities more than aggregate flexibility capabilities (at the customer-supplier level) will have the opportunity to improve competitiveness. Zhang et al., (2003) in his research showed that flexibility of manufactur competence (FMC) had an effect on competitive advantage. The results of Jie et al. (2007) also show that quality, flexibility and responsiveness have a significant influence on competitive advantage. Tiwari et al. (2015) found a supply chain flexibility relationship consisting of sourcing, delivery and logistic with implementation of competitive advantage.

Linkage of Supply Chain Management Variables to Company Performance

Supply chain management has a close relationship with company performance. This can be seen in Arawati (2011) study which states that there is a positive relationship between supply chain management, production quality, and company performance. The results of Martines Sanchez (2005) also say that there is a positive relationship between the performance of supply chain management and company performance. According to Hsu, Tan, Kannan and Leong (2009) supply chain management mediates the relationship between operating capabilities in this case just in time (JIT) and total quality management (TQM) with company performance. Gunasekaran, et al., (2004) also supports this research as evidenced by the results of supply chain activities / processes research: (1) plan, (2) source, (3) make / assemble, and (4) delivery / customer influence company performance . Performance measurement for the supply chain is an important aspect to measure the performance of a good supply chain management will bring improved cross-functional and intra-organizational planning processes and more complete control and supply chain integration. Research conducted by Arumugam et al., (2011) also supports this research. The results show that supply chain management (leadership, IT adoption, customer orientation, training, and communication) has an influence on the performance of service companies. The Chowa et al. (2006) study also supports this research, the results show that supply chain competencies have a positive influence on organizational performance in both countries of America and Taiwan. The goal of supply chain competencies satisfies customer needs. Supply chain practices, which form on the characteristics of the supply chain, supply chain integration and customer service have a direct influence on organizational performance in Taiwan but in the United States indirectly influence. The influence of supply chain management on operating performance is influenced by the integration process, cooperation, long-term relationships, information sharing through the process of improving the waiting time and supply of Cooper et al. (1997); Cooper and Ellram (1993); Bechtel and Jayaram (1997); Mentzer et al., (2001).

Linkage of Variables Supply Chain Flexibility to Company Performance

Flexibility is an important issue today because flexibility is often seen as an adaptive response to Gerwin's environmental uncertainty (1993); Upton (1994); Prater et al., (2001). Increasing flexibility in logistics systems can be a strategic response to the environmental uncertainties Barad and Sapir (2003). Arawati (2011) found that supply chain flexibility consisting of product flexibility, flexibility and new product flexibility have a positive influence on company performance, while Baron and Kenny (1986) supply chain flexibility had a partial mediating effect in the linkage between SCM and business performance, meaning supply chain flexibility has a partial impact between supply chain management and company performance. Sanchez and Perez (2005) explores the relationship between supply chain flexibility and company performance in automotive suppliers. The volume of flexibility found to be very important, such as the need to adjust the flexibility strategy with the supply chain characteristics provided. Research conducted by Vickery et al. (1999) studied the furniture industry, found a positive relationship between supply chain flexibility especially volume flexibility and launched the flexibility and performance of the company. Jung et al., (1999) found that suppliers who face smaller demand with high variation will invest more in flexible facilities. Das and Patel (2002) estimate the flexibility required to link the internal and external uncertainties experienced by manufacturing firms. Sanchez and Perez (2005) found a positive relationship between the flexibility of supply chain capabilities and firm performance.

The Linkage of Variables of Excellence Competing to Company Performance

Company performance depends on competitive advantage as required condition Spanos and S. Lioukas (2001). According to Li et al., (2006) increased competitiveness will improve the performance of the company. From the results of research competitiveness has a direct positive impact on organizational performance. The company has a competitive advantage when getting a higher rate of profit than its competitors. Foss and Knudsen (2003) stated to achieve a competitive advantage the company does not have to be the best in all dimensions. However, according to Peteraf and Barney (2003) should excel in value creation. Talaja and Ercegović (2013) state the interdependence of competitive advantage and company performance.

Hypothesis

Based on the theoretical framework that has been proposed, the hypothesis proposed in this study is suspected:

- i) Supply chain management has a positive effect on competitive advantage and company performance in fish processing industry in Bitung City.
- ii) Supply chain flexibility has a positive effect on competitive advantage and performance in fish processing industry in Bitung City.
- iii) Competitive advantage positively affects the company performance in fish processing industry in Bitung City.
- iv) Supply chain management has a positive effect on company performance through competitive advantage in fish processing industry in Bitung City.
- v) Supply chain flexibility has a positive effect on company performance through competitive advantage in fish processing industry in Bitung City.

RESEARCH METHODS

Research Design

This study provides an explanation of the effect of supply chain management and supply chain flexibility on company performance and competitive advantage of fish processing companies in Bitung. In this study hypotheses were built and tested for truth based on data collected through surveys at fish processing companies in Bitung City. Besides using primary data, this study also collects data from the Department of Fisheries and Marine Bitung, Central Statistics Agency of North Sulawesi Province and others or by accessing through the website. Based on the purpose, this research is descriptive and verifikatif.

Location and Object Research

This research was conducted in Bitung City, North Sulawesi Province with the object is a small-scale fish processing company that conducting export activities. The study was conducted in Bitung City because the Fishery Industry in North Sulawesi was concentrated in Bitung City.

Population and Sample

The population of this research is all fish processing companies in Bitung City, small and medium scale which exports in Bitung City which is 21 companies.

Data Determination Technique

In this study the unit of analysis used is a small-scale fish processing company that exports in Bitung City. The number of fish processing units conducting export activities in Kota Bitung amounted to 21 at the time of the research, then the technique of determining the data using census method where the entire population is used as research sample. (Arikunto, 2008).

Data collection technique

In order to achieve the research objectives, this study uses primary data sourced from the fish processing company into the sample. Source of data obtained through respondents research by using data collection tool in the form of questionnaires with answers that have been categorized in the form of numbers following the Likert scale scales and ordinal scale. According Sugiyono (2014: 93) Likert scale describes the attitudes, opinions and perceptions of respondents' answers.

Design of Analysis

This research uses partial least square analysis tool. PLS is one of the SEM-based statistical methods. According to Tenenhaus et.al., (2005) PLS is a tool to test prediction models. The quality of the measurement and the model can be seen through various statistical info calculated that is Convertible Validity (Convergent or Discriminant), Construction Reliability (cronbach's alpha or composite reliability), and loading significance. To apply the PLS model in this research using XLStat2016 software tool.

RESEARCH RESULT

Test Result Influence of MRP to Competitive Advantage and Performance of Fish Processing Company in Bitung City. From the calculation, it is known that supply chain management is formed by customer relationship management of 43.4 percent internal supply chain management of 48.7 percent and supplier relationship management by 40 percent. Based on R^2 of 0.998 this shows that the variables of supply chain management can be explained by its third dimension of 99 percent. The contribution of supply chain management to competitive advantage is 0,023 or in other words supply chain management has 23 percent contribution to competitive advantage in fish processing company in Bitung City. The contribution of supply

chain management to the company's performance of 0.141 or in other words, supply chain management has contributed 14.1 percent to the company's performance variable at fish processing companies in Bitung City.

Flexibility Test Result of Supply Chain Effect on Competitive Advantage and Performance at Fish Processing Company in Bitung City

The contribution of supply chain flexibility to competitive advantage is 0.017 or, in other words, supply chain flexibility contributes 17 percent to competitive advantage in fish processing in Bitung City. This means that any change of 1 unit to supply chain flexibility will increase the competitive advantage in fish processing industry in Bitung by 0,017. Then to see the contribution of supply chain flexibility to the company's performance of 0.282 or in other words, supply chain flexibility has contributed 28.2 percent to the performance of fish processing companies in Bitung City. It means that any change of 1 unit to supply chain flexibility will increase company performance at fish processing company in Bitung City equal to 0,282

Testing Results Competitive Advantage on Company Performance in Fish Processing Industry in Bitung City

From the calculation of the contribution of competitive advantage to the company's performance of 0.496 or in other words competing keunggulan contribute 49.6 percent of the performance of fish processing companies in the city of Bitung. It means that every change of 1 unit to competitive advantage will increase company performance at fish processing company in Bitung city equal to 0,496.

From the value of R^2 of 0.680 this means that the company's performance variable is able to be explained by competitiveness variable by 68 percent or competitiveness variable's ability to explain the company's performance variable by 68 percent while the rest is explained by other factors.

Results of Supply Chain Management Testing on Corporate Performance Through Competitive Advantage

Total contribution either directly or indirectly from supply chain management variable to company performance is 0,152. This means that supply chain management has contributed to the company's performance through a competitive advantage of 15.2 percent. From the result of R^2 equal to 0,680 this means that the variable of company performance can be explained by supply chain management variable and competitive advantage equal to 68 percent, while the rest by other variable not included in research.

Test Results Supply Chain Flexibility to Company Performance Through Competitive Advantage

The total contribution either directly or indirectly from variable supply chain flexibility to the company performance of 0.291. This means that supply chain flexibility has contributed to the company's performance through a competitive advantage of 29.1 percent

Discussion

Effect of Supply Chain Management on Competitive Advantage and Company Performance at Fish Processing Company in Bitung City

The results show that supply chain management with three dimensions of customer relationship management, internal supply chain management and supplier relationship management have a positive influence on competitive advantage and performance of fish processing company in Bitung City. The competitive advantage of the industry, especially the fish processing company in Bitung City, is highly dependent on the supply chain management. If supply chain management is well implemented, then the competitive advantage will also be good. Therefore, if the fish processing company in Bitung City wants to get competitive advantage, supply chain management is mainly internal supply chain management because this dimension has the biggest contribution in forming supply chain management. Planning of demand, supply and service should focus on determining inventory levels, scheduling and warehouse management

Besides internal supply chain management, fish processing company in Bitung City sees the improvement of external relations is also an important indicator in creating competitive advantage. External improvements are made through improved relationships with suppliers and customers. For example, in evaluating the performance of suppliers who have the ability to supply raw materials on an ongoing basis, quality at competitive prices so as to increase customer relationships in producing higher quality products, quick response at competitive prices.

In the midst of increasingly competitive competition, fish processing company in Bitung can expand its market share like to countries in Europe. From the data obtained from the Department of Fisheries and Marine in Bitung City, fish processed products are mostly exported to the Asian continent and partly to the US, while for Europe only a few countries because constrained by high quality standards set, so the company's products fish processing in Bitung is still not competing with

competitors.

The results support Bratic research (2011); Suhong Li et al., (2006) that supply chain management comprising Internal Integration and External Intergration has contributed to competitive advantage (price, quality, innovation, information sharing, delivery and time to market). Similarly, research conducted by Alipour and Mohammadi (2011); Nguyen, Sherif, and Newby (2007); Brkljack, Stancovik and Gajick (2013) that customer relationship management is a key element in achieving competitive advantage. According to Sukati, et al., (2012) ISCM integration proved to have an effect on competitive advantage. Similarly, the research of Chonticha Mathuramaytha (2011) that examines supply chain collaboration has an effect on competitive advantage (price / cost, quality, delivery dependability, product innovation and time to market). Based on some previous research results can be concluded that the company's competitive advantage will be created if the company made internal and external improvements. For example, companies pay attention to the price determined in accordance with the quality produced, faster response to fulfill orders, evaluate the performance of suppliers, sharing information about products and order approval with suppliers. So also with the planning and fulfillment of demand, warehouse management and inventory of each company. It is important to create competitive advantage of every company. Implementation of supply chain management is a strategy to create competitive advantage especially in entering global market by providing fast service with high product variety and low cost, so that company can survive in the middle of competition. Because the deployment of supply chain management will improve productivity and the company makes a profit (Watabene, 2001).

The results are in line with Li et al., (2006); Wullur and Wardaya (2015); Lambert and Cooper (2000); Eltram (1991) Betchel and Jayaram (1997) found that the higher the level of supply chain management implementation, the higher the competitiveness that will affect the performance and strategic considerations to achieve competitive advantage that will provide superior value to customers with low cost and satisfy stakeholders others. This means that the implementation of supply chain management will improve competitiveness, so that each company has a competitive advantage. The results did not support the research of Gimenez and Ventura (2002) who found internal integration insufficient to gain a competitive advantage. The fish processing industry has an opportunity to set Bitung as a Special Economic Zone, meaning the opportunity to enter the global market more open again, investment opportunities and hilirisasi will be more wide open so that there will be creation of business opportunities in the fishery sector. For that fish processing company must have competitiveness so as not to lose compete. Required government support related to regulation, policy and support of infrastructure and facilities and infrastructure. The problems that plague the existing fish processing companies in Bitung City now need serious attention from the government to accelerate the improvement of infrastructure, supporting infrastructure and policies that are enacted by providing business certainty for business actors. For example, the policy made by the government related to the ban of transshipment requires a quick solution from the government so as not to harm the business actor.

The results show that supply chain management has a positive effect on company performance. This means that the performance of industries, especially fish processing companies in Bitung City is influenced by supply chain management is done. This means that the performance of fish processing companies in Bitung depends on the supply chain management of each company. This research is in line with Gimenez and Ventura (2002) which finds a positive relationship between supply chain management (supplier and customer integration) and company performance. The results of Arumugam's research, Rouhollah Mojtahedzadeh (2011) found that supply chain management (leadership, IT adoption, customer orientation, training, and communication) had an influence on the performance of service companies. Similarly, research conducted by Arawati, (2011) which states that there is a positive relationship between supply chain management, production quality, and company performance. The results of the research from Gunasekaran, et al., (2004) also support the research, it is proved that supply chain activities (1) plan, (2) source, (3) make / assemble, and (4) delivery / customer influence company performance. Based on several previous studies it can be concluded that performance measurement for the supply chain is an important aspect as it will lead to improved cross-functional and intra-organizational planning processes and control and supply chain integration. The study also supports research conducted by Sumarow (2013) which states that supply chain management has a positive influence on the company's performance in the coconut industry in North Sulawesi Province. Similarly, Chowa, et al., (2006) supply chain competencies have a positive influence on organizational performance in both American and Taiwanese countries. The influence of supply chain management on operating performance is influenced by the process of integration, cooperation, long-term relationships, information sharing through the process of reducing waiting times and supplies (Cooper et al., 1997; Cooper and Ellram, 1993; Bechtel and Jayaram, 1997; Mentzer et al., 2001). To improve the performance, fish processing companies in Bitung City need to build a more modern and integrated production system from fish suppliers (fishermen, boat owners, small traders etc.) to product marketing in the hands of customers to strengthen local fishery structures that affect the economy and bring multiplier effect for people in North Sulawesi, especially people in Bitung City. Performance is not only determined by how to create a product with a low price, but the value, variation, speed of response, time, innovation and flexibility is very important to the company (Indrajit, et.al.,

2003). Companies need to maintain their market share and satisfy customers' needs by customer-oriented, suppliers by providing products with better price, quality and service. Therefore companies need to review the activities undertaken that provide added value for all business actors thus creating sustainability value chain for the related companies. Porter's (2008) sustainability value chain is an improvement of the main activities and supporting activities undertaken by the company from supplying raw materials from suppliers, transforming processes to distributing goods to consumers should emphasize coordination and collaboration both within organizations and between organizations on supply chain with attention to its impact on the surrounding environment. For example by managing transportation. The role of transportation in sustainability value chain involves moving raw materials from suppliers to fish processing companies. What needs to be done fish processing company in Bitung is the distribution and transportation management. For example products that are delivered on time will reduce inventory, storage costs, and material handling. Companies also need to pay attention to avoid damage to the product during transport activities, especially when there is temporary storage from the original location to the destination location. The loading and unloading costs of goods, warehouses from temporary storage of products may be greater than the cost of vehicle usage for temporary storage. Transport performance will determine procurement, procurement, and customer relationship management performance. If transportation is not managed it is ensured that almost all of the main activities of the supply chain will not operate effectively and efficiently. Improving customer satisfaction and maintaining it will have an impact on the sustainability of corporate activities. Companies must plan and manage factors that support better implementation of customer relationships. For example in a complaint consumer service

when the problem can not be solved, the company must be able to direct the consumer to the person who can handle their problems, in addition the company must be proactive in providing information relating to the development or the latest information of the company especially matters related to the interests of the customer. This will give pride to the company because it concerns the interests of customers. The fish processing company in Bitung should increase the level of after-sales service, for example by not letting customers wait long when delivering complaints and inputs. Customers will be disappointed when complaints and submitted submissions are ignored. When a good service customers will be satisfied and more confident about the performance of the company.

The Influence of Supply Chain Flexibility to Competitive Advantage and Company Performance in Fish Processing Company in Bitung City

Based on the results of research supply chain flexibility has a positive influence on competitive advantage and impact on the performance of fish processing companies in Bitung City. Delivery flexibility has the strongest value in the research results. That is, companies view the flexibility of delivery with various transport models and flexible amounts will affect the company's competitive advantage. Flexibility delivery is the ability to make changes in the acceptance and delivery of both suppliers and consumers with the most cost effective expenses possible (changes in consumer location, globalization and delays). This means that when the company is able to meet consumer demand with a good response quickly and according to consumer needs, the company will have more value in the eyes of consumers. This will affect the competitiveness of the company. Flexibility in production can be done through the improvement of human resources or arrangement of attention to the process for each machine. A flexible manufacturing system is a system that can adjust the needs of the parts that will be used to construct a particular product due to uncertain demand changes. Fish processing company in Bitung, looking at supporting facilities and employees who have the knowledge and skills are needed. Based on the available data, the average respondent has an adequate level of education. To achieve competitive advantage, currently the fish processing company in Bitung requires potential employees or experts in their field, innovative and able to generate ideas and master the latest technology, and memiliki good quality work. So the resulting product will be more qualified and varied.

According to theory, flexibility means the ability to change the shape of a production object according to the incoming demand (Groover, 2000). Understanding Flexibility in operational flexibility here is the ability to process a variety of objects with different forms of yang and on different work systems as well. Information systems are other indicators that affect competitive advantage. This means that information systems are important for companies that need to be managed and improved to avoid misunderstanding between supply chains. The results of this study are in line with research by Sanchez and Perez (2005) who found a positive relationship between performance in the flexibility of supply chain capabilities. Supply chain flexibility in view as an adaptive response to environmental uncertainty and technological complexity (Gerwin, 1993; Upton, 1994) argues that flexible firms, especially in the use of technology and information, will survive in an uncertain environment. It is very important for the fish processing companies in Bitung City to make the decision of using the latest technology to produce more efisien and innovative products. This research is also in line with the opinion of Vickery et al. (1999) who examined the furniture industry that found a positive relationship between volume flexibility in launching new products with company performance. This means companies that produce new products with a flexible volume will affect the company's performance. In line with the research of Jung et al., (1999) who found that suppliers who face smaller demand with high variation will invest more. This means that a flexible company in producing or developing new products with the

number of consumer orders will improve the performance of the company. Fish processing companies in Bitung see customer satisfaction is an important factor in improving company performance.

Currently, the single market application in Southeast Asia or known as the ASEAN Economic Community has opportunities and challenges for the manufacturing industry. Indonesia will be a big market from other countries because it has a comparative advantage that is owned resources. The relevance of the research is that competition among firms will be more competitive because trade will be more open to the flow of goods, services, investment, and labor, only companies that have competitiveness will survive. For that fish processing company in Bitung City, require investment support such as infrastructure provision, supporting facilities and infrastructure to help companies have competitiveness so as to have the advantage to compete with companies in the Asean countries.

According to Porter (2008) sustainability value chain is the improvement of main activities and supporting activities will affect the competitive advantage and improve company performance. The improvement of value-added activities is a way for fish processing companies to survive and improve company performance. For example by improving and improving the quality of human resources. Education and training for employees is very important for fish processing companies in Bitung to increase the number and quality of human resources both in terms of mindset and in skills, so that later can have insight and master the technology in the development of processed fish products. In sustainability value chain human resources is one of the activities that will provide added value for the company. For example, according to Muchtar, (1999) in order to improve the ability of utilizing marine fisheries resources, especially in the waters of ZEE, fishermen are required to possess knowledge and technical capabilities of operating large vessels. Having skilled human resources creates competencies for companies so that when they work they can share experiences, knowledge and skills through training and technical assistance to ensure that all human resources possess the ability and motivation to implement the work plan. Human resource development can be conducted jointly between government agencies, universities and private companies engaged in the field of marine science and technology as a whole to produce potential human resources. Pfeffer (1995) states that competitive advantage can be achieved through the effective management of human resources of the company. It means having potential human resources will give added value for the company. For example, UPI's flexibility to produce products through diversified fish processing products that are diverse and have added value requires knowledge and skills. So also in terms of product marketing, requires a reliable marketing strategy.

Therefore it is important for companies to have more qualified human resources. The research results are not in line with Zhang's research, Von Derembse and Lim (2003) who found that operations improvement practices have no positive effect on supply chain and performance flexibility. Because for fish processing companies in Bitung, operations improvement is very important because it deals with costs and prices for the products produced.

The Influence of Competitive Advantage on Company Performance in Fish Processing Company in Bitung City

From the calculation result, competitive advantage positively influence to company performance at fish processing company in Bitung City. This means that the performance of the company depends on the competitive advantage of each fish processing company in Bitung City. Apabilia good competitive advantage, it can be ascertained its performance will be good also. Therefore, industry players, especially fish processing companies in Bitung must try to maintain and enhance their competitive advantage, especially product differentiation which has the greatest contribution in forming competitive advantage in fish processing company in Bitung City.

The company will distinguish itself with its competitors if it has a uniqueness in something that is considered important by consumers. From several researches conducted competitive advantage can be concluded will improve company performance significantly. The Sumarow study, (2013) found a positive influence of competitive advantage over firm performance, along with Suhong Li's research, et al., (2006) also found competitive advantage to have a direct effect on organizational performance. This study indicates that competitive advantage has a direct positive impact on organizational performance, through price / cost, quality, delivery dependability, product innovation, time to market will affect market performance and financial performance. Based on the results of research stated that, companies that have competitive advantages of product quality, product innovation, competitive prices, faster response will affect the financial performance and market performance that can be concluded will affect the overall performance of the company. The research results are not in line with Anatan (2010) which examines the effect of SCM practice on supply chain performance and competitive advantage which says that there is no direct influence of competitive advantage on organizational performance. Porter (2005) states that competitive advantage provides an overview for companies in choosing and implementing common strategies to enhance and retain the competitiveness of enterprises, which ultimately will improve the performance of the company itself. The company's competitive advantage is expected not only to produce quality products, innovative, cheaper and faster response, but the company must pay attention to its environmental aspect, for example by procuring environmentally friendly technology and raw materials as well as paying attention to the waste of its products.

The implementation of ISO 14001 (environment) and 22000 (food safety) and ISO 9001 (quality) especially at fish processing company in Bitung is very important to be done so that Indonesian industry is not less competitive in international market. Because to enter the global market of fish processing enterprises is limited by international standards that are difficult to apply. ISO 14001 environmental quality management standard which is an international standard that regulates requirements for environmental management systems. This can be a framework for fish processing companies in Bitung City in running an effective environmental management system that is relevant to its operations. For example, by controlling air pollution, water and sewage, proper and responsible waste management and the use of more efficient resources. This can provide assurance to the management of the company, employees and stakeholders that the impact of the organization's activities on the environment can be measured and improved. Therefore, the government must require fish processing company in Bitung City to have Hazard Analysis Critical Control Point (HACCP) standard related to hazard analysis, method of handling processed product and sanitation and hygiene operational standard.

The results of this study are in line with Kevin Zheng Zhou, Brown and Chekitan (2008) which says that there is a relationship between customer value, market orientation, competitive advantage and firm performance. This means that competitive advantage is determined by the value of the company to the customer, so that the impact on performance. Similarly, Rose's research, Abdullah and Jenak (2010), which examined 127 manufacturing companies in Malaysia, found a link between competitive advantage and firm performance. It can be concluded the performance of the company depends on the competitive advantage offered by the company.

The Influence of Supply Chain Management to Company Performance through Competitive Excellence at Fish Processing Company in Bitung City

The results show that supply chain management positively affects performance through company competitive advantage. This means that the performance of fish processing companies in Bitung City is highly dependent on competitive advantage. This is because competitive advantage directly affects positively for company performance. So it can be concluded that the performance of fish processing companies will be better if the company has competitive advantage and supply chain management. To maintain performance, companies must have competitive strategy strategies by generating product differentiation at competitive prices compared to competitors and improving supply chain management. Thus expected to increase corporate performance.

The results are in line with research conducted by Chonticha Mathuramaytha (2011) who conducted a literature study on supply chain collaboration relationships on competitive advantage and company performance. The results of the study found that supply chain collaboration has a significant effect on competitive advantage and firm performance. Based on the above opinion the company's performance will be better if it is influenced by competitive advantage in creating innovative product, quality, competitive price, delivery ability and time to market. Supply chain collaboration in information sharing, decision syncing and incentive alignment will affect the uncertainty of customers and suppliers. This means that if the company has a competitive advantage and collaborate between the supply chain will improve the market performance and financial performance of the company. The results support Gimenez and Ventura (2003) because supply chain management practices are an important competitiveness for global companies in delivering rapid service with high product variety and low cost, so companies can survive in the midst of competition and will have an impact on performance company. Fish processing companies in Bitung generally perform export activities keberbagai countries in the world. Internal and external improvements will create a better competitive edge for the company. So supply chain management is a strategy to create competitive advantage that will have an impact both directly and indirectly for the performance of fish processing company in Bitung City.

The Influence of Supply Chain Flexibility to Company Performance through Competitive Excellence at Fish Processing Company in Bitung City

Based on the results of research supply chain flexibility positively affect the performance of the company either directly or through competitive advantage. The effect of supply chain flexibility on competitive advantage even though not too great. However, the performance of fish processing companies in Bitung city will be better if the company has competitive advantage. Competitive advantage directly affects positively for company performance. But from the results of research can be concluded that the performance of fish processing companies are directly dipegaruhi by competitive advantage and supply chain flexibility.

Company performance can be improved if fish processing companies in Bitung City are more flexible and increase their competitive advantage. Thus it is expected that the company's performance will run better. Supply chain flexibility is one of the key strategic and plays an important role to increase the company's effectiveness, competitiveness, better customer service and can improve the profitability of the company.

In line with research Sancez and Perez (2005) explain that the flexibility in the supply chain is a potential source to improve the efficiency of the company. The results show that firms that can improve their basic flexibility capabilities more than the ability of aggregate flexibility (customer-supplier level) will have the opportunity to increase competitive advantage. This means that flexibility will improve efficiency so that companies will achieve cost leadership. The results are also in line with Stevenson and Spring (2009) research which finds configuration flexibility consisting of collaboration, product design, supplier qualification and training, information sharing, shared resources, inventory policies, outsourcing and sourcing policies will affect the performance of companies that are along supply chain. Based on the results of this study can be concluded that the company's performance is influenced by supply chain flexibility and competitive advantage either directly or indirectly.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

- i) From the calculation results, it is known that supply chain management is formed by customer relationship management of 44.5 percent internal supply chain management of 50.6 percent and supplier relationship management suppliers by 38 percent. Contribution of supply chain management to competitive advantage equal to 0,016 and to company performance equal to 0,077 at fish processing company that exist in Bitung city. Based on the results of internal analysis of supply chain management has the greatest contribution in shaping supply chain management. So the internal considerations of SCM is the most dominant factor affecting competitive advantage and company performance.
- ii) From the calculation results, it is known that the contribution of supply chain flexibility to competitive advantage by 0,013 and to company performance equal to 0,488. Based on the results of research supply chain flexibility has a positive influence on competitive advantage and impact on the performance of fish processing companies in Bitung City. Based on the results of delivery flexibility analysis has the strongest value in the research results. So the consideration of delivery flexibility is the most dominant factor affecting competitive advantage and performance of fish processing company in Bitung City.
- iii) From the calculation of the contribution of competitive advantage to the company's performance of 0.252 Based on the results of differensiation analysis has the strongest value, so consideration differensiation is the most dominant factor affect the competitive advantage to improve company performance. To produce product differentiation depends on IT innovation, ideas, experts and mastery. Sehinggan performance of fish processing companies in Bitung depends on the competitive advantage of each company. Apabilia good competitive advantage, it can be ascertained its performance will be good also.
- iv) The results show that supply chain management positively affects performance through company competitive advantage. The contribution of supply chain management to the company's performance directly amounted to 0.077 or 7.7 percent while indirectly by 0.004. Total contribution either directly or indirectly from supply chain management variable to company performance is 0,081. The performance of fish processing companies will be better if the company has competitive advantages and supply chain management practices. To maintain and improve performance in addition to production efficiency, companies must have a strategy by generating product differentiation through improved supply chain relationships.
- v) The results show that supply chain flexibility positively influences performance through company's competitive advantage. The contribution of supply chain's flexibility to company's performance is directly equal to 0.488, while indirectly is 0,003. The total contribution either directly or indirectly from variable supply chain flexibility to the company performance of 0.491. The performance of the fish processing company will be better if the company has competitive advantage and its supply chain is more flexible, especially in the flexibility of delivery, production and information system.

Suggestion

- i) The supply chain management of the fish processing company in Bitung City is good enough, but it would be better if the companies to further improve the Internal Supply Chain Management are mainly related to the planning and fulfillment of customer demand because these dimensions and indicators contribute the most in shaping supply chain management, but other dimensions should not be ruled out, especially with regard to improving supplier relationship management, regarding supplier selection, supplier evaluation, pricing and order approval with suppliers since these dimensions and indicators make the lowest contribution in shaping supply chain management and enhancing and improve customer relationship management by delivering products that match the customer's wishes.
- ii) Supply chain flexibility in Fish processing companies in Bitung City is good enough but it would be better if the company is more flexible in its delivery system because these dimensions and indicators make the greatest contribution in shaping the flexibility of ranta supply, but other dimensions should not be ruled out especially related

with increased production, information systems and product development flexibility as these indicators provide the lowest contribution in shaping supply chain flexibility. Companies should be able to identify other variables such as machines, material handling systems, volumes, labor and so on, so companies can reduce the costs incurred and contribute significantly to compete.

- iii) Competitive advantage in fish processing company in Bitung City is good enough, but it would be better if the fish processing companies in Bitung City produce innovative products with the use of the latest technology of fish derived product that is produced to be more diverse and more quality . Thus, it is expected that fish processing company in Bitung City can have competitiveness to do product marketing to Europe and Middle East which have high quality product standard, so that consumer's trust level of quality of processed fish product from Indonesia will increase.
- iv) In order for the performance of fish processing company in Bitung City can be better, the company pay more attention to the relationship with the supplier, because the level of defect or lack of raw materials affect the sustainability of the company's production process. The company needs to improve the internal supply chain because the equipment / machine maintenance capabilities and the use of the latest technology are essential to streamline the production process so that the company can work more efficiently and better meet consumer demand and improve overall company performance. Government support for sustainability development of fisheries industry by conducting partnership is needed, through policy support in investment in fishery and marine sector, so investment in fish processing industry can develop better.

Limitations of Research

First, the study sample is limited to small medium scale fish processing company located in Bitung City. Sampling in Bitung City in because of the data taken in Bitung City contributed the largest in the export of processed products in North Sulawesi. What is not considered in this research is the number of fish processing companies in North Sulawesi amounted to 139 (micro, small, medium) so that the results obtained implications only on small and medium scale companies. Secondly, this research relies solely on the perception of the company leader (manager) on every fish processing company in Bitung City which is the respondent of the research. The results will be better if the respondents in expanding by involving employees and consumers. Third, the research sample is relatively small as many as 21 fish processing companies in Bitung City. The resulting data is limited potentially the result of biased analysis. Fourth, the measurement indicator of the limited variables from the limited source. Results will be better if using more indicators and resources.

Reference

- [1] Abdillah, W. dan Jogiyanto (2015) Partial Least Square (PLS) Alternatif Struktur Equation Model (SEM) dalam Penelitian Bisnis. Penerbit Andi Yogyakarta.
- [2] Adams, W. M. (2006) The Future of Sustainability Re-thinking Environment and Development in the Twenty-first Century. The World Conservation Union.
- [3] Agribisnis.co.id, (2017) Ekspor Perikanan Indonesia Mengalami Penurunan. Agribisnis Online.
- [4] Ainuddin, R.A., Beamish, P.W., Hulland, J.S. dan Rouse, M.J. (2007) Resource attributes and firm performance in international joint ventures. *Journal of World Business*, 42, 47-60.
- [5] Alipour, M. dan Mohammadi, M. H. (2011) The Effect of Customer Relationship Management (CRM) on Achieving Competitive Advantage of Manufacturing Tractor. *Global Journal of Management and Business Research*, 11(5), 26-36.
- [6] Allnoch A (1997) Efficient Supply Chain Practice Mean Big Savings to Leading Manufacturer, *IIE Solutions*,29(7),pp 8-9.
- [7] Alvarez-Gil, M.J. (1994) Capital Budgeting and Flexible Manufacturing, *International Journal of Production Economics*, No.36, pp.109-28.
- [8] Anatan, L (2010) Effect of Supply Chain Management Practices on Supply Chain Performance and Competitive Advantage. *Karisma Vol. 4 (2): 106-117*.
- [9] Anatan, Lina dan Ellitan Lena (2008) *Supply Chain Management. Teori dan Aplikasi: Edisi kesatu*. Bandung Alfabeta.
- [10] Arawati, Agus (2011) Supply Chain Management, Product Quality and Business Performance, *International Conference on Sociality and Economics Development IPEDR*. Vol 10 IACSIT Press, Singapore.

- [11], (2011) Supply Chain Management, Supply Chain Flexibility and Business Performance, Journal of Global Strategy Management Vol 5(1).
- [12] Arikunto, Suharsimi (2008) Metodologi Penelitian. Yogyakarta Bina Aksara.
- [13] Arsyad, L. (2004). Ekonomi Pembangunan. Penerbit BP STIE YKPN Yogyakarta.
- [14] Arumugam, Veeri Chettiar, Rouhollah, and Mojtahedzadeh (2011) Relationship between SCM practice and performance in the Iranian Industries: A Theoretical Approach. International Journal of academic Research 3(4) 594-599.
- [15] Assauri, Sofyan (2004). Manajemen Produksi dan Operasi edisi revisi. Penerbit FE IU Jakarta.
- [16] Badan Pusat Statistik (2016) Provinsi Sulawesi Utara dalam Angka 2016.
- [17] Badan Pusat Statistik. (2016) Persentase Penduduk Miskin Di Indonesia.
- [18] Badan Pusat Statistik dan Bappeda Bitung (2012) Laporan Tahunan Bitung Dalam Angka.
- [19] Bappenas, (2014). Kajian Strategi Pengelolaan Perikanan Berkelanjutan.
- [20] Barad dan Sapir (2003). Flexibility in Logistic Systems: Modeling and performance evaluation. International Journal of Production Economics. Vol 85(2) pp 155-170.
- [21] Barney, J.B. (1991). Firm resources and sustained competitive advantage. Journal of Management, 17(1), 99-120.
- [22] Baron, R. M., and Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. Journal of Personality and Social Psychology, 51,1173-1182.
- [23] Baxter LF, MacLeod AM. (2008) Managing Performance Improvement. New York: Routledg.
- [24] Beamon, B. M. (2009) Sustainability and the Future of Supply Chain Management. Operations and Supply Chain Management: An International Journal, Vol. 1, No. 1, pp. 4-18.
- [25] Bechtel, C., and Jayaram, J. (1997). Supply Chain Management – A Strategic Perspective. The International Journal of Logistics Management, 8(1), 15-34.
- [26] Bensaou, M (1999) Portfolio of Buyer- Supplier Relationship. Sloan Management Review 40(4): 35-44.
- [27] Bernardin and Russel, (2000) Human Resource Management Singapore. Mc Grow Hill,Inc.
- [28] Bhasin (2008). Lean and Performance Measurement. Journal of Manufacturing Technology Management. Vol 19(5): 670-684.
- [29] Blengini, G and D, Shiled (2010) Green labels and Sustainability Reporting: Overview of the building products supply chain in Italy. Management of Environmental Quality: An International Journal, Vol. 21 Iss: 4, pp.477 – 493.
- [30] Boddy, D., Cahill, D., Charles, M., Fraser-Kraus, H., and Macbeth, D. (1998) Success and failure in implementing partnering, European Journal of Purchasing and Supply Management, Vol 4 No. 2, pp. 143-151.
- [31] Bowersox, Closs, and Copper (1996) Logistical Management: Integrated Supply Chain Process International Edition Singapore: McGraw-Hill.
- [32] Brkljac M, Jelena Stankovic and Slaanda Gajic, (2013) Gaining a competitive advantage by integration of marketing and Logistic. Logistics International Conference Belgrade, Serbia.
- [33] Bratic Diana (2010). Achieving a Competitive Advantage by SCM. IBIMA Business Review.
- [34] -----, (2011). Six Sigma: A Key Driver for Process Improvement” Communications of the IBIMA, Vol. 2011, Article ID 823656.
- [35] Brill, D., Mandelbaum, M. (1989). On Measures of Flexibility in Manufacturing Systems, International Journal of Production Research, Vol. 27 No.5, pp.747-56.
- [36] Buckley, P. J. (1988) Measures of internasional competitiveness: A critical survey,” Journal of Marketing Management.

- [37] Candace Y. Yi, E.W.T. Hgai dan K.L Moon (2011) Supply Chain Flexibility in an Uncertain Environment: Explanatory finding from five case studies. *SCM: An International Journal*, 16(4), 271-283.
- [38] Carter and D. Rogers (2008). "A Framework of Sustainable Supply Chain Management: moving toward new theory", *International Journal of Physical Distribution and Logistics Management*, Vol. 38 Iss: 5, pp.360 – 387.
- [39] Chandler, (1962) *Strategy and Structure* MIT Press Cambridge.
- [40] Chang, H. H. (2007) Critical Factors and Benefits in the Implementation of Customer Relationship Management. *Total Quality Management*, 18(5), 483-508.
- [41] Chi, Ting, Kilduff, Petter PD and Gargeya, Vidyaranya B (2009). Alignment between business environment characteristics, competitive priorities, supply chain structures and firm business performance. *International journal of productivity and performance management*, 58(7),645-669.
- [42] Chin, W. W. (1998). The Partial Least Squares Approach for sStructural Equation Modeling. in G. A. Marcoulides (Ed.), *Modern methods for business research* (pp. 295–236). London: Lawrence Erlbaum Associates.
- [43] Chonticha Mathuramaytha (2011) *Supply Chain Collaboration – What’s an outcome?*
- [44] Chopra, Sunil and Peter Meindl. (2001). *Supply Chain Management: Strategy, Planning and Operations*. Second Edition. Prentice Hall Inc., Upper Saddle River, New Jersey.
- [45] Chopra, Sunil and Peter Meindl. (2007). *Supply Chain Management: Strategy, Planning and Operations*. Fifth Edition. Prentice Hall Inc., Upper Saddle River, New Jersey.
- [46] Chowa,Wing, Christian N. Madub, Chu Hua Kueib, Min H. Luc, Chinho Lind, and Hojung Tsengd (2006). *Supply chain management in the US and Taiwan: An empirical study*.
- [47] Claycomb, C., Droge, C., and Germain, R. (1999). The effect of just-in-time with customers on organizational design and performance. *International Journal of Logistics Management* 10(1), 37–58.
- [48] Cleveland, G., Schroeder, R., and Anderson, J. (1989) A theory of production competence, *Decision Sciences*, Vol. 20 No.4, pp.655-68.
- [49] Cokins G. (2004) *Performance Management: Finding the Missing Pieces (to Close the Intelligence Gap)*. New Jersey.
- [50] Council of Supply Chain Management Professional (2010)2009). *SCM Definitions*. http://supplychaininsights.com/sciwiki/index.php?title=Supply_Chain_Management.
- [51] Cooper, C. Ellram, Lisa (1993). *Characteristic of Supply Chain Management and The Implication for Purchasing and Logistics Strategy*. Emerald.
- [52] Cooper, Donald R., and Pamela, Schlinder (2006). *Business Research Methodes*. North America: Seventh Edition, Mc Graw-Hill International.
- [53] Dahuri, Rohmin. (2003). *Paradigma Baru Pembangunan Indonesia Berbasis Kelautan, Orasi Ilmiah*. Institut Pertanian Bogor.
- [54] Dahuri Rokhmin (2014): *Kontribusi Sektor Kelautan baru 22%*. [http:// jurnalmaritim.com/2014/8/1822/rokhmin-dahuri-kontribusi-sektor-kelautan-baru-22-persen](http://jurnalmaritim.com/2014/8/1822/rokhmin-dahuri-kontribusi-sektor-kelautan-baru-22-persen). Diakses pada tanggal 1 oktober 2014.
- [55] Dahuri Rokhmin (2015) *Menuju Indonesia Sebagai Poros Maritim Dunia* ISBN 978-602-70193-2-4 Cetakan Kedua Roda Bahari, Bogor.
- [56] Daugherty, Ellinger dan Gustin (1998) *Integrated Logistics: The performance connection*”; Council of Logistics Management Annual Conference Proceedings; Anaheim, California; pages 383-388.
- [57] Das, S. and Patel, P. (2002), “An audit tool for determining flexibility requirements in a manufacturing facility”, *Journal of Integrated Manufacturing Systems*, Vol. 13 No. 4, pp. 264-74.
- [58] Departemen Perindustrian (2009) *Roadmap Pengembangan Industri Pengolahan Hasil Perikanan Hasil Laut*.
- [59] Dinas Kelautan dan Perikanan Kota Bitung (2014) *Laporan Tahun Bitung Dalam Angka* .
- [60] Dinas Kelautan dan Perikanan Kota Bitung (2016).

- [61] Dinas Kelautan dan Perikanan Kota Bitung (2017).
- [62] Dinas Kelautan dan Perikanan Sulut (2013) Profil Kelautan dan Perikanan Provinsi SULUT Untuk Mendukung Industrialisasi KP.
- [63] Dyer and Singh, H (1998) The Relational View: Cooperative Strategy and Source of Interorganizational Competitive Advantage. *Academy of Management Review*, 23 (4): 660-679.
- [64] Duclos, L. K., Lummus, R. R., and Vokurka, R. J. (2001). A Conceptual Model of Supply Chain Flexibility. *DSI 2001 Proceedings*.
- [65] Easton, G (1992) *Industrial Network-Review*. University of Lancaster.
- [66] Ebrahim and Mahmoud (2014) analysing the impact of supply chain management practices on organitational performance through competitive priorities (case studi Iran Pump Company. *IJARAFMS Vol 4 No 1pp 1-15*.
- [67] Eisenhardt, K. M. 1989. Agency theory: An Assessment and Review. *Academy of Management Review*,14, 57-74.
- [68] Eltram, L.M. (1991) Supply Chain Management: The Industrial Organisation Perspective. *International Journal of Physical Distribution and Logistics Management*.
- [69] Esposito, Vinzi, V., Chin, W.W., Henseler, J., Wang, H. (2010) *Handbook of Partial Least Squeres, Concepts , Methods and Aplications*, springer handbooks of computational statistics, DOI 10.1007//978 3 540 32827-8-1 Springer –Verlag Berlin Heidelberg.
- [70] Fantazy, Kamel Aissa, Kumar, Vinod and Kumar, Uma (2009) An Emperical study of the relationships among strategy, flexibility and performance in the supply chain context. *Supply Chain Management: An International Journal*, 14(3), 177-188.
- [71] FAO (Food and Agriculture Organization of the United Nations), (2016) Year Book. Fishery and Aguaculture Statistic Database.
- [72] Fogarty, Donald W., Blackstone, John H. Jr., and Hoffman, T. R., (1991), *Production and Inventory Management*, Colledge Division South-Western Publishing Co, Cincinnati.
- [73] Foss, Nicolai and Knudsen, Thorbjørn (2003) “The Resource-Based Tangle: Towards a Sustainable Explanation of Competitive Advantage”, *Managerial and Decision Economics*, Vol. 24, No. 4, 291-307.
- [74] Garavelli., (2003) *Designing and Managing the Supply Chain: Conseptis, Strategis and Case Studies*, Mc Graw – Hill, Singapore.
- [75] Gerwin, D (1993), *Manufacturing flexibility, a strategic perspective*, *Management Science*, Vol. 39 (4), p 395-410.
- [76] Gibson, Ivancevic dan Donnely, (1998) *Organisasi dan Manajemen. Perilaku Struktur*. Edisi keempat. Erlangga Jakarta.
- [77] Gimenez,C, Eva Ventura (2003) Supply Chain Management as a Competititve Advantage In The Spanish Grocery. *The International Journal of Logistics Management* 14(1), 77-88.
- [78] Gimenez,C, Eva Ventura (2005) Logistic-production, logistic marketing and exsternal integration: Their impact on performance. *International Journal of operations and production management*, 25(1) 20-38.
- [79] Gordon, Ian H. (2002). *Competitor Targeting: Winning The Battle for Market and Customer Share*. Canada: National Libierary.
- [80] Ghozali (2008) *Model Persamaan Struktural Konsep dan Aplikasi dengan Program Amos 16.0*, Badan Penerbit UNDIP, Semarang.
- [81] Groover, M. P. (2002), *Fundamentals of Modern Manufacturing*, 2nd editon, John Wiley and Sons, Inc., New York.
- [82] Gunasekaran, A., Patel, C., Tirtiroglu, E., (2001), *Performance Measurement and Metrics in a Supply Chain Environment*, *International Journal of Production and Operations Management*.
- [83] Gunasekaran, C. Patelb, Ronald E. McGaugheyc “(2004). A framework for supply chain performance measurement *Int. Journal Production Economics* 87 333–347.

- [84] Gunasekaran, A. and Ngai, E.W.T., (2004). Virtual Supply-Chain Management. *Production Planning Control*, 15(6), pp.584–595.
- [85] Gupta Preveen (2004) Six Sigma Business Scorecard. McGraw-Hill Companies, Inc.
- [86] Gupta D. and Buzacott (1989) A Framework for Understanding Flexibility of Manufacturing Systems. *Journal of Manufacturing Systems*, 8(2), 89-97.
- [87] Halachmi A. (2005) Performance Measurement is Only One Way of Managing Performance. *International Journal of Productivity and Performance Management* 54 (7): 502 – 516.
- [88] Handoyo, (2011) Evaluasi Tingkat Flexibilitas Rantai Pasok. Penerbit Universitas Pembangunan Nasional Jawa Timur.
- [89] Handfield, Monezka, Giunipero and Patterson (2009). *Purchasing and Supply Chain Management: Fourth Edition United States of America: South Western.*
- [90] Handfield, R. B., and Nichols, E. L. (2002). *Supply chain redesign: Transforming supply chains into integrated value systems.* New Jersey: Financial Times- Prentice Hall.
- [91] Hatani, LA (2013). Pengaruh Implementasi Integrative Supply Chain management dan Supply Chain Flexibility terhadap Keunggulan Bersaing dan Kinerja Perusahaan. Universitas Brawijaya, Malang.
- [92] Heizer, Jay and Render, Barry. (2005), *Manajemen Operasi.* Buku 1 Edisi Ketujuh. Salemba 4, Jakarta.
- [93] -----(2008). *Operation Management Salemba Empat: Jakarta.*
- [94] ----- (2011). *Operation Management 10ed Pearson Practice hall.*
- [95] Hidayat R (2013) Supply Chain Flexibility: The Make to Stock- Based Production System. *IJRRAS* 15(2).
- [96] Hill, C. W. L., and Jones, G. R. (2009). *Essentials of strategic management.* Mason, OH: South-Western/Cengage Learning.
- [97] Himawan, A,F dan Juarsah (2005) Balanced Scorecard sebagai alat pengukur kinerja manajemen. *Esensi Vol 8 (1).*
- [98] Hitt M. A., R. D. Ireland, dan R. E. Hoskisson, (2005) *Strategic Management: Competitiveness and Globalization,* Thomson, South Western.
- [99] Hofer and Schendel (1978) *Strategy Formulation: Analitical Concept St Paul MN West.*
- [100] Hsu, C. C., Tan, K. C., Kannan, V. R., and Keong Leong, G. G. (2009). Supply chain management practices as a mediator of the relationship between operations capability and firm performance. *International Journal of Production Research*, 47(3), 835-855.
- [101] Ince, Huseyn, Imamoglu, Salih Zeki, Keskin, Halit, Akgun, Aliekber and Efe, Mahmet Naci. (2013) The impact of ERP system and supply chain management practices on firm performance. Case of Turkeys Companies. *Procedia-Social and Behavior Science*, 99(0),1124-1133.
- [102] Indrajit, Ricardus Eko dan Djokopranoto. (2002). *Konsep Manajemen Supply Chain: Strategi Mengelola Manajemen Rantai Pasokan bagi Perusahaan Modern di Indonesia.* PT. Gramedia Widiasarana Ind, Jakarta.
- [103] Indrajit, Richardus and Djokropranoto, (2003) *Supply Chain Management Concept, Edisi Pertama, Jakarta, PT. Grasindo.*
- [104] ----- (2005). *Konsep Manajemen Supply Chain.* PT Grasindo. Jakarta.
- [105] -----(2007). *Konsep Manajemen Supply Chain: Cara Baru Memanang Mata Rantai Penyediaan Barang.* Jakarta: PT. Grasindo.
- [106] Jaikumar, R. (1986), *Postindustrial Manufacturing,* Harvard Business Review, Vol. 64 No.6, pp.69-76.
- [107] Jie Ferry, Parton Kevin, Roger Jenkins, and Cox Rodney (2007) *Supply Chain Performance Indicators for Australian Beef Industry: An Empirical Analysis.*
- [108] Jung, H., Ahn, H. and Rhee, S. (1999), “Impact of buyer’s order batching on the suppliers demand correlations and capacity utilization”, *Production Planning and Control*, Vol. 10 No. 5, pp. 472-85.

- [109] Kalakota dan Robinson M (2001) *E-Business Roadmap For Success*, Massachusetts: Addison Wesley Longman.
- [110] Kao, J. (2007) *Innovation Nation: How America is Losing its Innovation Edge, Why it Matters, and What Can Do to Get Back*, Free Press, New York. 336 p.
- [111] Kaplan, R. and Norton, D. (1992), "The Balanced Scorecard – measures that drive performance", *Harvard Business Review*, Vol. 70, pp. 71-9.
- [112] -----,(1996) "The Balanced Scorecard: Translating Strategy Into Action", Massachusetts, Harvard Business School Press.
- [113] Kelautan dan Perikanan (2011) *Perikanan Indonesia* <http://prospekperikananindonesiasma4.weebly.com/>
- [114] Kelautan dan Perikanan Republik Indonesia dalam Angka (2015) .
- [115] Kelautan dan Perikanan Republik Indonesia dalam Angka (2016).
- [116] Kementerian Perindustrian (2015). *Roadmap Pengembangan Industri Pengolahan Hasil Laut* <http://ppi.kemenerin.go.id/kawasan/index.php/content/data/Ina/Bitung>.
- [117] Kementerian Perekonomian RI, (2016) *Siaran Pers Wujudkan Bitung sebagai Gerbang Ekspor Impor Indonesia Timur*.
- [118] Kevin Zheng Zhou, James R. Brown and Chekitan S. Dev (2008) *Market orientation, competitive advantage, and performance: A demand-based perspective*.
- [119] Kharis, Hidayat dan Utami (2011) *Fleksibilitas Supply Chain Pendekatan Pujawan Framework*. *Jurnal Teknologi* Vol 4(1).
- [120] Kim, Soo Wook (2006a). *Effect of supply chain management practices, integration and competition capability on performance*. *Supply Chain Management: An International Journal*,11(3), 241-248.
- [121] Klapper, L. S., Hamblin, N., Hutchinson, L., Novak, L., and Vivar, J. (1999), *Supply chain management: A recommended performance measurement scorecard*, Logistics Management Institute, McLean, VA.
- [122] Kompas, (2016) <http://print.kompas.com/baca/nusantara/2016/01/18/Pabrik-Ikan-di-Bitung-Krisis-Bahan-Baku>.
- [123] Kotler, Philip (2003) *Manajemen Pemasaran*. Edisi kesebelas, Jakarta: Indeks kelompok Gramedia.
- [124] Lambert DM, Cooper MC, dan Pagh JD. (1998) *Supply chain management: implementation issues and research opportunities*. *International Journal of Logistics Management* 1998;9(2):1-1.
- [125] Lambert, D. M. dan Cooper, M. C. (2000). *Issues in Supply Chain Management*. *Journal Industrial Marketing Management* Vol 29 page 65-83.
- [126] Lee, Hau L., V. Padmanabhan, and Seungjin Whang. (1997). *Information Distortion in a Supply Chain: The Bullwhip Effect*. *Management Science*. Vol. 43(4): 546-558.
- [127] Li, Ragu-Nathan, B., Ragu-Nathan, T. S. and Subba Rao, S. (2006). "The Impact of Supply Chain Management Practise on Competitive Advantage and Organizational Performance," *Omega*, 34(1). 107 – 124.
- [128] Lieberman, M. and Montgomery, D. (1988), "First mover advantages", *Strategic Management Journal*, Vol. 9 No.1, pp.41-58.
- [129] Longenecker, Moore and Petty, (2003) *Small Business Management an Entrepreneurial Empashis*, Thomson Southwestern.
- [130] Lummus, R.R., Vokurka, R.J., Alber, K.L., (1998), *Strategic Supply Chain Planning, Production and Inventory Management Journal*, Vol. 39, No. 3, pp. 49-58.
- [131] Lummus, R.R., Duclos, L.K. and Vokurka R.J (2003) *Supply Chain Flexibility: building a new model*", *Global Journal of Flexible Systems Management*, Vol. 4 No. 4, pp. 1-13.
- [132] McLaughlin, CP and Victor,B (1995) *Getting to mass customitation in service*. Paper presented at the paper presented at the National Decision Science Meeting, Boston, MA.

- [133] Mentzer, JT, Dewitt, W, Keebler, J, Soonhong Min, Nix N, Smith and Zacharia.Z. (2001). Defining Supply Chain Management, in: *Journal of Business Logistics*, Vol. 22, No. 2, pp. 1–25.
- [134] Mikkola, J.H. (2003b) ‘Modularity, component outsourcing, and inter-firm learning’, *RD Management*, Vol. 33, No. 4, pp. 439-454.
- [135] Mira Asmida Mohd Sah’ Habidin, Latip, Salleh (2014) A Review of Structural Relationship Between Supply Chain Management and Organizational Performance in Malaysian Automotive Industry. *Universal Journal of Industrial and Business Management* 2(1): 1-5.
- [136] Moran, W.T. (1981). Research on discrete consumption markets can guide resource shift help increase profitability, *Marketing News* 14(23), 4.
- [137] Mulyadi (2006). Alternatif Pemacuan Kinerja Personel dengan Pengelolaan Kinerja Terpadu Berbasis Balance Scorecard. BPFU-UGM Yogyakarta.
- [138] ----- (2007). Sistem Terpadu Pengelolaan Kinerja Personel Berbasis Balanced Scorecard. Sekolah Tinggi Ilmu Manajemen YKPN, Yogyakarta.
- [139] Nguyen, T. U. H., Sherif, J. S. and Newby, M. (2007). Strategies for Successful CRM Implementation. *Information Management and Computer Security*, 15(2), 102-115.
- [140] Noble, D. (1997). Purchasing and supplier management as a future competitive edge. *Logistics Focus* 5(5), 23–27.
- [141] Nunnally, J. C., and Bernstein, I. H. (1994) *Psychometric theory* (3rd ed.). New York, NY: McGraw-Hill, Inc.
- [142] Oliver, R.K. and Webber, M.D. (1982), *Supply chain management: Logistic catches up with strategy*. Outlook. (cit. Christopher, M.G. *Logistic, The strategic issue*, London: Chapman and Hall, 1992).
- [143] Olsen EO, Zhou H, Lee DMS, Padunchwit P. (2007). Performance Measurement System and Relationships with Performance Results. *International Journal of Productivity and Performance Management* 56 (7): 559 – 582.
- [144] Parmenter D. (2010). *Key Performance Indicators*. Jakarta: PT Elex Media Komputindo.
- [145] Penrose, (1959) *The Theory of the Growth of Firm*. Oxford University, New York.
- [146] *Perikanan dan Kelautan Bitung*, BPS Sulut 2013.
- [147] Peteraf, Margaret and Barney, Jay (2003) “Unraveling The Resource-Based Tangle”, *Managerial and Decision Economics*, Vol. 24, 309-323.
- [148] Porter, M.E. (1985) *Technology and Competitive advantage*; The Free Press; New York.
- [149] -----, (1986) *Competition in Global Industry*, The Free Press, New York.
- [150] -----, (1990). *The Competitive Advantage of Nations*. New York: Free Press.
- [151] -----, (1993) *Keunggulan Bersaing: Menciptakan dan Mempertahankan Kinerja Unggul*. Edisi 2 Jakarta, Erlangga.
- [152] -----, (1998). *Cluster and the New Economics of Competition* Free Press, New York. *Harvard Business Review* 76 (6), 77-90
- [153] -----, (2004) *Building the microeconomic foundations of prosperity: findings from the business competitiveness index*, In Sala-i-Martin, X. (ed.), *The Global Competitiveness Report 2003–2004*. Oxford University Press: New York.
- [154] -----, (2005) *Competitiveness Framework—Recent Learnings and New Research Priorities*.
- [155] -----, (2008) *Competitive Advantage: Creating and Sustaining Superior Performance*, Harvard Business School.
- [156] ----- and Mark R. Kramer (2011) "Creating Shared Value." *Harvard Business Review* 89, nos. 1-2 (January–February 2011): 62–77.
- [157] Prater, E., Biehl, M., and Smith, MA (2001) International supply chain agility - tradeoff between flexibility and uncertainty. *International Journal of Operations and Production Management* 21, 823-839.

- [158] Pujawan, I.N. (2004) *Ekonomi Teknik*. Penerbit Guna Widya. Surabaya.
- [159] Pujawan, I.N. (2005). *Supply Chain Management*. Penerbit Guna Widya. Surabaya.
- [160] Pujawan, I. N., dan Mahendrawati. (2010). *Supply Chain Management*. Surabaya.: Penerbit Guna Widya.
- [161] Pusat Data Statistik dan Informasi Sekretariat Jenderal Kementerian Kelautan dan Perikanan (2013).
- [162] Radnor ZJ, Barnes D. (2007). Historical analysis of performance measurement and management in operations management. *International Journal of Productivity and Performance Management* 56: 384 – 396.
- [163] Rakhman, A., Surachman, Mintarti Rahayu dan Sumiati (2016). The effect of supply chain integration, supply chain flexibility and supply chain management practices on competitive advantage and their performance moderated by environment uncertainty in manufacturing industry go public in Jabodetabek. *IJABER Vol 14, No 3:2015-2042*.
- [164] Riley, M. and Lockwood, A. (1997), Strategies and Measurement for Workforce Flexibility: an application of functional flexibility in a service setting, *International Journal of Operations and Production Management*, Vol. 17 No.4, pp.413-9.
- [165] Robinson, W., Fornell, C., and Sullivan, M. (1992) Are Market Pioneers Intrinsically Stronger than Later Entrants? *Strategic Management Journal*, Vol. 13 No.6, pp.609-24.
- [166] Rusindiyanto dan Ernawati (2005) Pengukuran dan Analisa Fleksibilitas rantai pasokan, Seminar Nasional Teknik Industri, UPN Veteran Surabaya.
- [167] Salazar, Ronald. (2012) The effect SCM processes competitive advantage and organizational performance. Airforce institute of technology, OHIO.
- [168] Saunders, M., Mann, R., Smith, R. (2007). Benchmarking strategy deployment practices. *Benchmarking*. 145:609-623.
- [169] Sanchez, A.M. and Perez, M.P. (2005), “Supply chain flexibility and firm performance: a conceptual model and empirical study in the automotive industry”, *International Journal of Operations and Production Management*, Vol. 25 No. 7, pp. 681-700.
- [170] Schroder, R.G., Aderson, J.C., Cleveland, G., (1986). The Content of Manufacturing Strategy. *Journal of Operation Management*. 6,4: pp. 367-389.
- [171] Schroder, R.G (2004) *Operation Management. Contemporary Concept and Cases 4 edition* McGraw Hills New York.
- [172] Seri Analisis Pembangunan Wilayah Provinsi Sulawesi Utara, (2015).
- [173] Shahin and Mahbod (2007) "Prioritization of Key Performance Indicators: An integration of analytical hierarchy process and goal setting", *International Journal of Productivity and Performance Management*, Vol. 56 Iss: 3, pp.226 – 240.
- [174] Sheridan, J. H. (1998). The supply-chain paradox. *Industry Week* 247(3), 20–29.
- [175] Simanjuntak, Payaman J. (2005). *Manajemen and Evaluasi Kinerja*. Jakarta: FE UI.
- [176] Simchi-Levi, David and Kaminsky (2004). “Managing the Supply Chain: The Definitive Guide for the Business Professional”, McGraw-Hill.
- [177] Soo W.K. (2006). Effects of Supply Chain Management Practices, Integration and Competition Capability on Performance. *Supply Chain Management: An International Journal*. Vol. 11. No. 3, pp. 241-248.
- [178] Soon, Quah Hock and Udin, Zulkifly Mohamed, (2001). Supply Chain Management from the perspective of value chain flexibility: an exploratory studi *Manufacturing Technology Management*,22(4),506-526.
- [179] Spanos and S. Lioukas, (2001). An examination into the causal logic of rent generation: contrasting Porter's competitive strategy framework and the resource-based perspective", *Strategic Management Journal*, vol. 22, pp. 907-934.
- [180] Spekman, R. E., Kamauff, Jr., J. W., Myhr, N. (1998), An empirical investigation into supply chain management: a perspective on partnerships, *Supply Chain Management*, Vol 3, No. 2, pp. 53-67.

- [181] Stank, Keller and Daugherty. (2001). Supply Chain Collaboration and Logistical service Performance. *Journal of Business Logistic* 22(1) 29-48.
- [182] Stevenson and Spring (2007) Flexibility from Supply Chain Perspective. Definition and Review *International Journal of Operations and Production Management* 27(7), 685-713.
- [183] Stevenson and Spring (2009). Supply Chain Flexibility: an inter firm empirical study. *International Journal of Operations and Production Management* 29 (9), 946-971.
- [184] Stiffler MA. (2006). *Performance: Creating the Performance-Driven Organization*. New Jersey: John Wiley and Sons Inc.
- [185] Stock,G.N., Greis,N.P. and Kasarda,J.D. (2000). Enterprise Logistics and Supply Chain Structure: The Role of IT. *Journal of operation management*,18(5):531-547.
- [186] Stoner, James A.F., Freeman Edward and Andiel Gilbert, (1996), *Manajemen*. Edisi Bahasa Indonesia. Gramedia Group, Jakarta.
- [187] Stoner, James A.F and Freeman Edward (2000) *Manajemen*. Edisi Bahasa Indonesia. Prenhalindo, Jakarta.
- [188] Stuart dan McCutcheon (1996) Sustaining Strategic Supplier Alliances: Profiling the dynamic requirements for continued development", *International Journal of Operations & Production Management*, Vol. 16 Issue: 10, pp.5-22
- [189] Sugiyono, (2002) *Metode Penelitian Administrasi*, Bandung: CV. Alfabeta.
- [190] -----, (2004) *Metodologi Penelitian Bisnis Bandung*: PT Alfa Beta.
- [191] -----, (2014) *Metodologi Penelitian Kuantitatif, Kualitatif dan Kombinasi (Mixed Method)* Bandung: PT Alfa Beta.
- [192] Sukati. Inda, Baharun.R, Alifah.MN and Anuar M.A, (2012). Competitive Advantage through Supply Chain Responsiveness and Supply Chain Integration. *International journal of business and commerce*. Vol 1, No 7 pp 1-11.
- [193] Sumiharjo, Tumar (2008) *Daya Saing Berbasis Potensi Daerah*. Bandung: Puskomedia.
- [194] Sumarow, Jacky. (2013) Pengaruh Manajemen Rantai pasokan Terhadap Keunggulan Bersaing serta Dampaknya Terhadap Kinerja Perusahaan pada Industri Kelapa di Propinsi Sulawesi Utara. Disertasi.
- [195] Swafford, P. Ghosh's, Murthy, N., (2001) A Model of Global Supply Chain Activity and It's Impact on Competitive.
- [196] Talaja, Josipa and Ercegović (2013) Competitive Advantage and Company's Performance: exploring the differences and relationship. *Advanced research in Scientific Area* SBN: 978-80-554-0825-5 ISSN: 1338-9831.
- [197] Tan, K. C., Kannan, V. R., and Handfield, R. B. (1998). Supply Chain Management: Supplier performance and firm performance. *International Journal of Purchasing and Materials Management* 34(3), 2–9.
- [198] Tangen S. (2004). Performance Measurement: From Philosophy to Practice. *International Journal of Productivity and Performance Management* 53 (8): 726 – 737.
- [199] Tenenhaus M, Vinzi VE, Chatelin YM, Lauro C (2005) PLS path modeling. *Comput Stat Data Anal* 48(1):159–205.
- [200] Thomas, J. (1999), Why your supply chain doesn't work, *Logistics Management and Distribution Report*, Vol. 38 No.6, pp. 42-44.
- [201] Tiwari,K.,A.Tiwari.,and Cherian Samuel (2015) "Supply chain flexibility: a comprehensive review", *Management Research Review*, Vol. 38 Iss: 7, pp.767 – 792.
- [202] Toyin , A.I. (2012). Supply Chain Management (SCM) Practices in Nigeria Today: Impact on SCM Performance. *European Journal of Business and Social Sciences*, Vol. 1, No. 6, pp 107 – 115.
- [203] Tracey, M., Vonderembse, M. A., and Lim, J. S. (1999), "Manufacturing Technology and Strategy Formulation: Keys to Enhancing Competitiveness and Improving Performance", *Journal of Operations Management*, 17(4), pp. 411-428.
- [204] Turban, Rainer, and Porter (2004) *Supply Chain Management*. <http://id.wikipedia.org/wiki/manajemen-rantai-supply>.

- [205] United Nations Development Programme (UNDP), (2011) Human Development Report 2011 Sustainability and Equity A Better Future For All, New York, USA. 185p.
- [206] Upton, D. (1994), The Management of Manufacturing Flexibility, California Management Review, Vol. 36 No.1, pp.72-89.
- [207] Vickery, S. K., Droge, Cornelia, Markl and Robert.E (1997) Dimension of manufacturing Strength in The Furniture Industry. Journal of Operation Management Elsevier 15. 317-330.
- [208] Vickery, S. K., Calantone.R, Droge, Cornelia, (1999) Supply Chain Flexibility: An empirical study. Journal of Supply Chain Management Vol 35(16-24).
- [209] Vickery, S. K., Jayaram, J., Calantone.R, Droge, Cornelia, (2003) The effects of an integrative supply chain strategy on customer service and financial performance: an analysis of direct versus indirect relationships. Journal of Operations Management. 21, 523–539.
- [210] Walker, Gordon (2003) Modern Competitive Strategy. New York. The MacGraw Hill Companies.
- [211] Wibisono D. (1999). Analisis Keterkaitan Variabel Kinerja dalam Perusahaan Manufaktur. Jurnal ISTMI 3 (2): 27-35.
- [212] Williamson, Oliver (1975) Markets and Hierarchies: Analysis and Antitrust Implications: A study in the economics of internal organization. New York: Free Press.
- [213] -----, (1985) The Economic Institutions of Capitalism: Firms, markets, relational contracting. New York: Free Press.
- [214] -----, (1989) Transaction cost economics vol. 1, pp 135-182 Elsevie.
- [215] World Bank (IBRD, Annual Report Look (2013), IMF Annual report.
- [216] Yamin dan Kurniawan (2011) Partial Least Square Path Modeling. Salemba Infotek.
- [217] Zaroni, (2015) Menilai Kinerja Perusahaan Published in Artikel SupplyChain Wednesday, 20 May 2015 .
- [218] **Zaroni** (2016) Transportasi Dalam Rantai Pasok dan Logistik. Artikel Supply Chain Indonesia. <http://supplychainindonesia.com/new/transportasi-dalam-rantai-pasok-dan-logistik/>.
- [219] Zhang, Q. Y. (2001). “Technology Infusion Enabled Value Chain Flexibility: A Learning and Capability Based Perspective,” Doctoral dissertation, University of Toledo, Toledo, OH, USA.
- [220] Zhang, Q., Von Derembse, M. A., Lim, (2003) Manufacturing Flexibility: Defining and Analizing Relationship Among Competence, Capability, and Customer Satisfaction, Journal of Operation Management 21(2003) 173-191.
- [221] Peraturan Menteri Nomor 56 Tahun 2014 tentang moratorium dan Peraturan Menteri Nomor 57 Tahun 2014 tentang alih muatan.
- [222] Peraturan Presiden Nomor 26 tahun 2012 Bitung ditetapkan sebagai International Hub Sea Port (IHP).