

The Influence of Product Standardization and Infrastructure Industry Development on Performance and Competitiveness

(Study on the Commodity of Cocoa in West Sulawesi, INDONESIA)

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Abstract:- This research is a survey research-shaped explanatory (explanatory research), the population in this study consists of an exporter/industry, Wholesalers Gatherers and Collector there are six Regency in West Sulawesi province Government namely Polmas Regency, Majene regency, Makassar City, Mamasa Regency, North Mamuju Government and Middle Mamuju regency.

The technique of the sample in this study using simple random sampling. Then specify the sample size using the formula Slovin. As for the samples in the Research is 200 people respondents. The research uses data analysis techniques are quantitative analysis of SEM (Structural Equation Modeling) that operate using program AMOS release 6.0 (Analysis of Structural Moment). According to Pindky and Rubinfeld, 1998: Gujarti, 1995; Hair et al., 2006).

The results showed, 1. Standardization products do not affect significantly to competitiveness, but a positive and significant effect against competitiveness when mediated by supply chain performance. Standardization of the products a positive and significant effect directly against the performance of the supply chain, 2. infrastructure development is not significant effect directly against competitiveness, yet positive and influential significantly to competitiveness when mediated by supply chain performance. The infrastructure of the industrial development of positive and significant effect directly against the performance of the supply chain, 3. supply chain performance is positive and significant effect against the competitiveness.

I. INTRODUCTION

Indonesia is the third largest producer of cocoa beans in the world. In the year 2013 (FAO) noted Indonesia's

production of 777 thousand tons with the land area 1,774,307 ha, Ivory Coast production 1,499 million tons with an area of 1,448,992 ha of land and the production of Ghana 835 tons with land area 835,466. Indonesia gives only (17%) contributions on Trade cocoa world, Côte d'Ivoire (31.6%) and Ghana (18.2%). Based on the above the above comparison land area and Indonesia's cocoa production has low productivity compared to the Ivory Coast and Ghana.

One of the areas of cocoa producers Indonesia, West Sulawesi was the result of the expansion of the South Sulawesi province flagship into commodities, cocoa because other than giving great contribution towards the gross Regional domestic product (GDP), also his role as a provider of employment for most of the population. West Sulawesi cocoa development has lasted long since the 1980 's. the Development is done by local people so that the existing cocoa plantations is entirely cocoa people.

Based on the data of the Central Bureau of statistics of West Sulawesi province (2016) cocoa crop land area 153.694 thousand hectares and total production of 83,745 thousand tons. the largest cocoa production Polewali Mandar Regency comes from with 49.167 thousand hectares of land area and production of 31.969 thousand tons (38.17%). The largest cocoa-producing County is Mamuju Regency with 41.06 thousand hectares of land area and production amounted to 20.824 thousand tons (24.87%) followed by the Central land area of Mamuju 21.966 hectares and production 9.536 thousand tons (11.38%), Mamasa Regency with a land area of thousands of acres and production 15.499 8.383 thousand tons (10.01%), land with an area of Makassar District 13.184 thousand hectares and the production of 7.111 tons (8.49%) and North Mamuju with land area 12.801 thousand acres and production of 5,922 thousand tons (7.08%).

Competitiveness can be achieved in the performance of work in either. One of the essential and fundamental aspects

in the management of the supply chain is the performance management and improvement on an ongoing basis. To create an effective performance management system is needed that is able to evaluate the performance of the supply chain holistically (Pujawan 2005). However, the process for selecting the size of the right supply chain performance is quite difficult because of the complexity of the system at hand. One of the most difficult areas in the supply chain performance measurement selection is the development of performance measurement system (Beamon 1996). One of the problems in the supply chain performance measurement literature is very various design measurement. According to Neely et al. (2005) writer on performance measurement are likely to focus on the different aspects in the design of the measurement system. In General, the performance measurement aspect of the supply chain can be associated with quality, time, flexibility and cost.

Bhatnagar and Sohal (2005); Li et.al. (2006) tested the relationship between SCM practices, competitiveness, and organizational performance in the manufacturing industry, the proposed dimensions of competitiveness is the delay time (lead time), price/cost, quality, reliance shipping (delivery dependability), flexibility, and time to market (time-to-market.) In the context of the beef industry, (Jie, Parton and Cox (2012) putting together a conceptual framework of competitiveness on the SCM company beef cattle in Australia, and proposes four dimensions of competitiveness that is the price, the quality, the growth of sales (domestic and export) and time to market. The operations four dimensions as follows: (1). Price, (2) quality, (3) the time to market, (4) sales growth

The cocoa processing industry development efforts already done Government Indonesia since the early years of the decade 2000 's. But in 2007 rising pro-Government cocoa industry policy with the abolition of VAT 10% and a series of other policies to then exit Out of customs policy (BK) by the year 2010. The Government's efforts need to be supported by strengthening the information about what to expect of the industry and what options strategies for cocoa industry can flourish.

Some researchers such as Liu (2010), Becker et al. (2011) and Wagner and Neshat (2011). The third such research became a cornerstone in this dissertation discussion in determining performance-based industrial development policy of supply chain

The application of Compulsory SNI widely aims to improve the quality of cocoa on the entire chain of trade in cocoa beans. It is not detached from the application of the quality standard of cocoa which is still voluntary and lax quality requirements in it. The expansion of the provision of the application of quality standards on a consistent basis will encourage (educate) quality improvement and gradually and will improve the image quality of the cocoa in global trade (Wahyudi et al. 2008).

A. *The Problem*

- What Standardization Affects the competitiveness of Products both directly and Through the performance of supply chain In West Sulawesi Cocoa Commodity?
- The development of Industry influence on the competitiveness of either directly or Melaluikinerja On the commodity supply chain of cocoa In West Sulawesi?
- If performance of the supply chain Effect Directly And significantly to the competitiveness of the commodity In West Sulawesi Cocoa?

II. A REVIEW OF THE LITERATURE

A. *The influence of Product Standardization on performance and Competitiveness*

Free trade is forcing manufacturers increasingly tight competition he, who would or would not, manufacturers should increase efficiency and produce a product that meets the standards on a consistent basis in order to survive and win the competition, both in the face of international market. Standard measurement and testing will result in a certification approved by the accrediting agencies that have technical competence so as to produce a product ready to go into the international market and compete with the products of other countries.

With the application of the quality standard and the consumer obtain the assurance of quality and safety of products. While the public is protected in terms of security, health, safety, and sustainability of the environment. The community has the interests of the social product to be dikonsumsinya either side of health (health of human today and future as well as the health of the animal), security (safety for the consumers especially children), as well as products that do not damage the environment. From the producers of noteworthy business interests, in particular kualitasproduk that will concern the quality standards and considering the consumer has already shifted the pattern of his life from Price Oriented to Quality Oriented.

To avoid the use of standardization as barriers in international trade, in various international fora such as ASEAN or APEC there has been agreement to harmonize the national standards of each Member with the standard International, including how the assessment against the standard implementation to facilitate the achievement of mutual recognition activities of standardization. On a global level, the Tokyo Round 1973-1979 and Uruguay Round of the General Agreement on Tariffs and Trade 1994 yielded the WTO Agreement on Technical Barriers to Trade (TBT) to deal with particular issues of international standards to promote trade the signing of that agreement among the free. It also produces the SPS (Sanitary and Phytosanitary Measures) to the security of the farm. The WTO agreement has been ratified by the Government of Indonesia with Undangundang

Number 7 in 1994. In the "Agreement on Technical barriers to Trade TBT agreement or which may be technical barriers in trade are standards and technical regulations. It is therefore for the Member countries of the WTO, if want to set a standard or technical regulation must be transparent, i.e. before the standards and technical regulations in force must be dinotifikasikan to the Member States to get a response/ input.

Number of products that have a standard National Indonesia Indonesia (SNI) and dinotifikasi by the World Trade Organization (WTO) year 2008 lagged far compared to other countries. This led to Indonesia's hard enough to penetrate into the international market (Cooperation Centre for Standardization of Bsn, 2012). Indonesia recently has 66 kinds of products that already have been dinotifikasi and SNI to WTO. When compared with Thailand and Singapore, Indonesia that has the SNI ternotifikasi in WTO.

Understanding the standardization includes the coat of arms, units of measurement, the method of images, product specifications, test methods, management systems and methods of sampling, methods of analysis, standards of products, processes and services, quality and safety, when applied correctly will yield something for the public, consumers and users who are supposed to be better and more reliable. The standard can also be used as learning materials and training for human resources or used to enhance understanding of technical know-how, technology transfer, the Foundation for innovation. (BSN 2009)

Application of SNI basically is voluntary, meaning that activities and products that do not meet the conditions of the SNI is not prohibited. However, for the purposes of protecting the public interest, State security, national economic development, and the preservation of environmental functions, the Government can only enact specific SNI compulsorily. Indonesia national standard for products related to the interests of safety, security, health and sustainability of environmental functions, enacted its application compulsorily by a technical agency, hereinafter referred to as SNI is mandatory. The enactment of a mandatory STANDARD set by the Minister authorized against most or all of the technical specifications and or the parameters of the product in the SNI with regard to the interests of safety, security, public health or conservation function of environmental and economic considerations or on the basis of (National Standardization Agency, 2009).

By definition (ISO/IEC Guide 2:2004) standard is understood as a security, safety, the environment, development of science and technology as well as based on experience, the development of the present and the future to benefit deepest gratitude. Because it is organized by the consensus of all the parties concerned, the standard is a normative document. In the meantime, (ISO/IEC Guide 2:2004) also gives the definition of normative documents, including the application of standards, as: the use of a normative documents by parties with an interest in the production, trade and other fields. The application of standards

in this definition essentially voluntari/love-willingly and can be done by the various parties concerned with these standards.

The nature of the application of this standard are voluntari can turn into compulsory (mandatory) if the standard referenced by the regulations set by the Government in a country. (ISO/IEC Guide 2:2004) and signified by the term "reference to standard in regulation" (reference to standard in regulation) which has a definition: a reference to one or more standards to the provisions detailed in the regulations. A technical regulation may contain provisions that require compliance with one or more standards to meet the regulation, so that such standards be mandatory standards (mandatory standards). The only way to meet the technical regulations which require a standard is the fulfillment of the mandatory requirements of the standard overall.

Requirements in a standard, specifically related to the products, expressed in bentuknilai quantitative values measuring results, so any interested parties with the application of these standards should also refer to the reference the same measurement through a recognized system of metrology. Therefore the standard can only be implemented effectively if the available system of conformity assessment and metrology system is competent and recognized parties concerned with the application of the standard.

Standards used in the Federation of regional or international standard bodies with bilateral development cooperation schemes, ataustandar exports to overseas markets. This process caused the autonomy demands of the industry for the harmonization of standards demands in facilitating market integration (Casella, 2001), Jones et al. (1994) defines the standardization as the process of setting the General characteristics of the uniform for goods or services certain. Standardization is used to help control the management, predict and minimize errors, and reduce the deviation between the employees. Standardization as well as a means to maintain reliability and free from defects. Other benefits-related standardization include the monitoring of implementation and the price in terms of service, enhance consumer protection, and enhance the trust and satisfaction of the consumer. On the contrary, customized products or services defined in a context where new products are given with a variation on an existing configuration.

Product certification is the written assurance by the publishing activities of the parties independently to certify that a product has met the requirements of reference (National Standardization Agency, 2006). As for the objective certification of the product, namely: (a) Give confidence to the public that a product has been paying attention to the safety, health, and environmental sustainability,;(b) form the trust of consumers, users and other interested parties about specific eligibility; (c) Facilitating the manufacturer to enhance market acceptance against their products.

III. RESEARCH METHODS

A. Research Design

This research is a survey research-shaped explanatory is (explanatory research), the population in this study consists of an exporter/industry, Wholesalers Gatherers and Pegumpul are there in 6 (six) Regency of West Sulawesi province i.e. Government Polmas, Kab. Mamuju, Kab. Makassar, Kab. Mamasa, Mamuju Utara Government and Kab. Mamuju.

The technique of the in this study using simple random sampling. Then specify the sample size using the formula

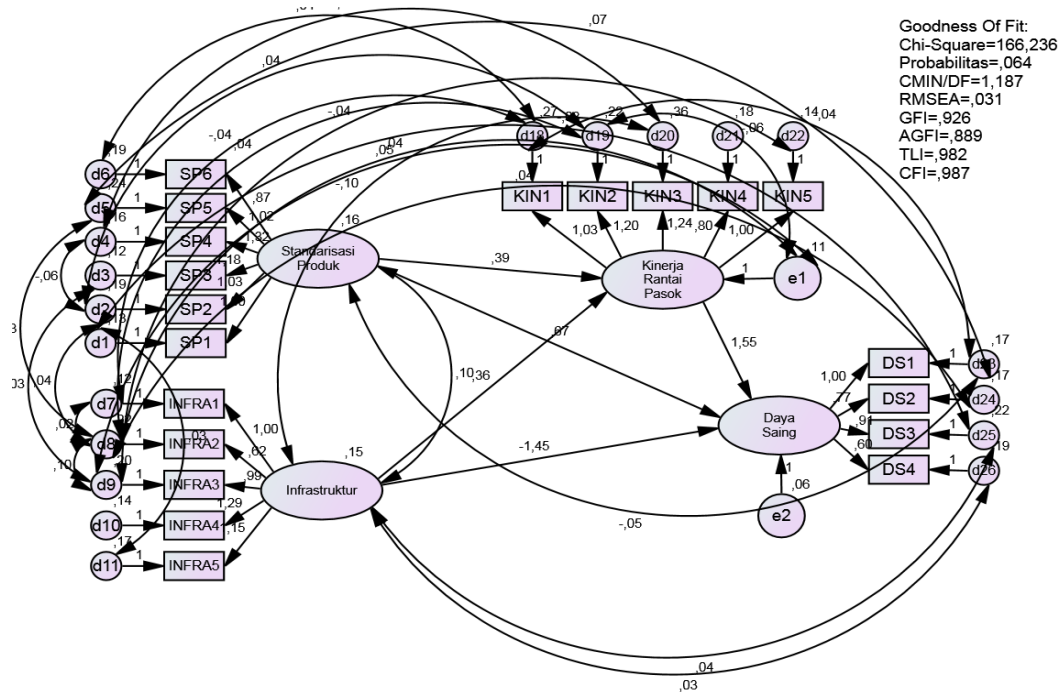
Slovin. As for the samples in the penellitian is 200 people respondents

B. Data Analysis Techniques

The research uses data analysis techniques are quantitative analysis of SEM (Structural Equation Modeling) that operate using program AMOS release 6.0 (Analysis of Structural Moment). According to Pindky and Rubinfeld, 1998: Gujarati, 1995; Hair et al., 2006)

IV. DISCUSSION

The results of the estimation of Determining the competitiveness of Cocoa In West Sulawesi based on the results of the statistical tests have been done, all models meet the requirements/can be confirmed to serve as a measurement model in this study as in the picture below:



Further interpretation about the image above can be explained as follows:

This type of influence			Standardized	C.R	P-Value	Description	
performance	<=	Standardization of the products	0,199	4,199	0,000	significant	accepted
performance	<=	infrastructure industry development	0,330	3,620	0,000	significant	accepted
competitiveness	<=	Standardization of the products	0,384	3,676	0,000	significant	accepted
competitiveness	<=	infrastructure industry development	-0,816	-7,107	0,000	significant	rejected
competitiveness	<=	performance	0,954	8,794	0,000	significant	accepted

Table 1.Direct Influence Test Result

Source: Data processed, 2018

Var Independen	Var Intervening	Var Dependen	C.R	P-Value	Description	
Standardization of the products	performance	competitiveness	3,722	0,000	significant	accepted
infrastructure industry development	performance	competitiveness	3,353	0,000	significant	accepted

Table 2.The Test Results of Indirect Influence and Impact The Total

Source: Data processed, 2018

Based on the information the statistical figures are listed in table 1 and table 2. can be explained the results of hypothesis testing of this study.

Hypothesis 1 (standardization of influential products directly and significantly to competitiveness) is acceptable or is not supported by empirical facts.

The results of statistical hypothesis testing is retrieved the value of the p-value of $0.000 < 0.05$ (cut of value), and the value of the critical ratio (t-female) amounting to $3.676 < 2.0$. That is, there is a positive influence but not significant between the standardization of product competitiveness against assuming that other factors affecting competitiveness expressed constant. Based on these results, it can be concluded that the increased standardization of products, does not affect the improvement of competitiveness.

The influence of product standardization towards competitiveness based on estimation of value (coefficient) of 0.384 or 38.4%. These values indicate that an increase in product standardization will impact directly on increasing the competitiveness of 38.4%.

Hypothesis 2 (standardization of product direct and significant effect on performance) can be accepted or supported by empirical facts.

The results of statistical hypothesis testing is retrieved the value of the p-value of $0.00 < 0.05$ (cut of value), and the value of the critical ratio (t-female) amounting to $4.199 > 2.0$. That is, there is a positive and significant influence standardization products on performance with the assumption that the other factors that affect the performance of a constant declared. Based on these results, it can be concluded that the increased standardization of the product, effect on performance improvements.

The influence of product standardization on performance based on value estimation (coefficient) of 0.360 or 36%. These values indicate that an increase in product standards have an impact on performance improvement of 36%.

Hypothesis 3 (indirect effect product Standardization and significantly to competitiveness through performance) is acceptable or is not supported by empirical facts.

The results of statistical hypothesis testing is retrieved the value of the p-value of $0.00 < 0.05$ (cut of the value) and the value of the critical ratio (t-count) of $3.722 > 2.0$. That is, there is a positive and significant influence between the standardization of products towards competitiveness through performance.

Hypothesis 4 (influential industrial development Infrastructure directly and significantly to competitiveness) are not acceptable or is not supported by empirical facts.

The results of statistical hypothesis testing is retrieved the value of the p-value of $0.000 < 0.05$ (cut of value), and the value of the critical ratio (t-count) of $7.107 < 1.9$. That is, there is no significant influence between the infrastructure development of the competitiveness of industry against assuming that other factors affecting competitiveness expressed constant.

Influence of developing industrial infrastructure towards competitiveness based on estimation of value (coefficient) of 0.816.

Hypothesis 5 (infrastructure, industrial development direct and significant effect on performance) can be accepted or supported by empirical facts.

The results of statistical hypothesis testing is retrieved the value of the p-value of $0.040 < 0.05$ (cut of value), and the value of the critical ratio (t-count) of $3.620 > 2.0$. That is, there is a significant positive influence between infrastructure development on performance with the assumption that the other factors that affect the performance of a constant declared. Based on these results, it can be concluded that increased infrastructure development industry, will affect the performance improvements.

Influence of developing industrial infrastructure on performance based on value estimation (coefficient) of 0.330 or 33%. These values indicate that an increase in infrastructure development industry will have an impact on performance improvement of 33%.

Hypothesis 6 (influential industrial development Infrastructure not directly and significantly to competitiveness through performance) can be accepted or supported by empirical facts.

The results of statistical hypothesis testing is retrieved the value of the p-value of $0.05 > 0.05$ (cut of value), the value of the critical ratio (t-count) of $3.353 \geq 2.0$. That is, there is a significant positive influence on the development of the infrastructure of the industry towards competitiveness through performance.

Hypothesis 7 (direct effect performance and significantly to competitiveness) be accepted or supported by empirical facts.

The results of statistical hypothesis testing is retrieved the value of the p-value of $0.000 < 0.05$ (cut of value), and the value of the critical ratio (t-count) of $8.794 > 2.0$. That is, there is a significant influence of performance against the competitiveness of assuming that other factors affecting competitiveness expressed constant.

Influence of performance towards competitiveness based on estimation of value (coefficient) of 0.954 or 95.4. These values indicate that improved performance will have an impact on improving competitiveness of 95.4%.

A. Analysis and Implications of the Influence the Standardization of the Products Against Competitiveness

The findings of this research show that the standardization of products for the empirical evident do not affect significant against the competitiveness of West Sulawesi cocoa traders. Based on the facts in what traders accepts research flow of goods from farmers in the form of wet or dry which is not standard which is set in the SNI later was a merchant in processing with considering the effectiveness and cost efficiency for gain margin from the sales of the beans so sometimes ignore the standards required. By him that, product standards can not be can not affect the competitiveness of cocoa traders.

Cocoa traders also usually consider the aspects of product turnover acceleration in dealing with sales growth so that the appropriate disregard standard products.

Traders in West Sulawesi average in offering products continues in the form of cocoa beans not fermented derived this also caused the absence of significant price difference against fermented cocoa beans. In spite of the provisions of the SNI nationally but in the standard merchant still meet many obstacles such as equipment, facilities, quality of the cocoa products continually decline due to factors plants that average already aged above 20 (twenty) years old or so is very susceptible to pests and diseases like rotten fruit and cancer of the stem.

B. Analysis and Implications of the Influence of Standardization of Supply Chain Performance the Products Against

The findings of this research show that the empirical base of product standardization variables turns out to be significantly influential to competitiveness. The path coefficients were found between both these variables are statistically significant.

The implications of this research indicates that the variable is a variable product standardization can predict the performance of the supply chain. Moreover this fact shows that the performance of the supply chain in the context of this study due to the standardization of the product. This means that the empirical base especially in the commodity of cocoa in West Sulawesi province, supply chain performance turned out to be influenced by the standardization of the product. These findings indicate that cocoa certification issued by certification agencies such as UTZ, Cocoa Life and Rain Forest through the company's Industrial exporters and encourage more traders increases performance with certification of cocoa traders earn Premium, training,

counseling, mentoring by expert directly affect performance improvement in West Sulawesi cocoa traders.

C. Analysis and Implications of the Influence the Standardization of the Products Against Competitiveness Through Performance of the Supply Chain

Refers to the data of this research results, product standardization in the empirical variables turns out to be influential significantly to competitiveness through supply chain performance. The path coefficients were found between the three statistically significant variables. Variable indirect contributions to the standardization of the product against the competitiveness of supply chain performance through significant influence, so the standardization of products and the performance of the supply chain is a good predictor for the competitiveness of the commodity of cocoa in the province of West Sulawesi.

The implications of this research indicates that the standardization of the product can have an effect on Competitiveness if connected with the performance of the supply chain means that Cocoa Traders will helpless competitiveness if improved supply chain performance that ultimately the Standard cocoa Products to have implications for the better.

The application of Compulsory SNI cocoa beans are widely against the entire trading chain of cocoa beans. The deterioration of image quality of the cocoa Indonesia is inseparable from the actual application of the quality standard of cocoa which is still voluntary and lax quality requirements in it. Implementation and extension of the application of quality standards on a consistent basis will encourage quality improvement (educate) and will gradually improve the image quality of the cocoa in global trade (Greetings 2011; Wahyudi et al. 2008)

D. Analysis and Implications of Infrastructure Development Influences the Industry's Response to the Competitiveness

The findings of this research show that a variable in empirical industrial development infrastructure turns out to have no effect significantly to competitiveness. The path coefficients were found between both these variables are statistically significant. Direct contributions to the infrastructure development of variable industry's response competitiveness is relatively small and its influence significantly, so that infrastructure development is a Predictor that is less good for the competitiveness of the commodity of cocoa in the province West Sulawesi.

Facilities, supplies, transportation, information and Sourcing of them already fulfilled but in fact on the site research there are still supporting infrastructure development industry has yet to match the expectations of the respondents like the road traffic flow support for the delivery of cocoa products there are still areas in West Sulawesi has yet to

support a smooth shipping traffic present its main cocoa village and sub-district, telecommunications network to access market information deemed respondents have not provided the benefits that fit the expectations of the main traders in the remote areas of West Sulawesi. By him it was keen Trader, required an increase in infrastructure to support industrial development of cocoa in West Sulawesi.

The role of industry in development of cocoa traders are merely as recipients or users, the Government of West Sulawesi who has a major role in developing the industry in an attempt to increase the competitiveness of the supply chain of cocoa this so development are contradictory with the competitiveness of cocoa traders.

E. Analysis and Implications of The Influence of Developing Industrial Infrastructure Against the Performance of Supply Chain

Research findings suggest that a variable in empirical industrial development infrastructure turns out to be a significant effect on performance supply chain. The path coefficients were found between both these variables are statistically significant. Direct contributions to the development of the infrastructure of the industry's response to the variable is the performance of the supply chain is relatively large and its influence significantly, so that infrastructure development is a good predictor of performance for supply chain at commodity cocoa in West Sulawesi province.

The implications of this research indicate that industrial development infrastructure variables can predict a variable supply chain performance means the availability of the infrastructure to support the development of the cocoa merchants are going to make in West Sulawesi will perform well. Moreover this fact shows that the performance of the supply chain in the context of this research infrastructure caused by industrial development. This means that the empirical basis especially in the commodity of cocoa in West Sulawesi province turned out supply chain, performance is affected by infrastructure development industry.

F. Analysis and Implications of the Influence of Developing Industrial Infrastructure Against the Competitiveness of Supply Chain Performance Through

The findings of this research show that a variable in empirical industrial development infrastructure is apparently significant effect against competitiveness through performance of the supply chain. The path coefficients were found between the three statistically significant variables. The contribution of indirect variable infrastructure industrial development against the competitiveness of supply chain performance through relatively large and significant influence, so the infrastructure for industrial development and the performance of the supply chain is a Predictor that's good for the competitiveness of the commodity of cocoa in West Sulawesi province.

Supply chain become important considerations in the development of the cocoa industry in Indonesia including in West Sulawesi. Aspects of logistics (logistic drivers) such as facilities, supplies, transportation, as well as the aspects of cross-functionality (cross-functional driver) which consists of information, sourcing, and the price is the elements in the supply chain is very influence the development of agro-industries of cocoa that will lead to improvements to the performance of the supply chain and to increase competitiveness have implications for cocoa in West Sulawesi.

G. Analysis of The Implications and Influence the Performance of the Supply Chain Against Competitiveness.

The findings of this research show that the chain's performance supply in the empirical variables turns out to be influential significantly to competitiveness. The path coefficients were found between both these variables are statistically significant. Direct contributions to the variable performance supply against chains competitiveness of relatively small but significant influence, so the performance of the supply chain is a good predictor for the competitiveness of the commodity of cocoa in West Sulawesi province.

The implications of this research indicates that the variable performance of the supply chain can predict the variables of competitiveness. Moreover this fact shows that the competitiveness in the context of this research caused by supply chain performance. This means that the empirical basis of performance especially commodities cocoa in West Sulawesi province turned out to be affected by competitiveness.

Certification program conducted by certification institutions the world directly contributed to the improved performance of traders, this is because the merchant gain knowledge through the education of the/ training added on a regular basis, the existence of a team mentoring on farmer and traders by subcontractors certification, the premium price that can improve the income of farmers and traders that will eventually lead to increased competitiveness.

These results are in line with the results of research conducted by Newbert (2008) which claimed that the competitive advantage linked to performance. Likewise, the results of research conducted by David K Tse and Albaum, (2001) which States that the competitive advantage of the company will affect performance.

V. CONCLUSIONS

- Standardization of products do not affect significantly to competitiveness, but a positive and significant effect against competitiveness when mediated by supply chain performance. Standardization of the products a positive and significant effect directly against the performance of the supply chain,

- Infrastructure development is not significant effect directly against competitiveness, yet positive and influential significantly to competitiveness when mediated by supply chain performance. The infrastructure of the industrial development of positive and significant effect directly against the performance of the supply chain.
- Supply chain performance is positive and significant effect against the competitiveness of

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