Improvement Strategy for Supply Chain Performance of the Garment Industry to Decrease Logistics Costs and Enhance Competitiveness

Ina Primiana, Yudi Azis, Juaniem, Akhmad Yunani, and Aldrin Herwany
Department of Management and Business, Faculty of Economics and Business, Universitas Padjadjaran, Bandung, Indonesia
Email: ina.sagir@fe.unpad.ac.id

Abstract—The competitiveness of Indonesian product is low due to high logistics cost. The other emerging problem related to logistic is delivery time. Those are affected by conventional logistics facilities such as port and connectivity that relating between production center and consumption center. Textile Industry is national priority industry which is prospecting to develop. The aims of this study are (1) Knowing SME garment profile, (2) Identifying logistics cost (3) Identifying logistics activities (4) Knowing the barrier factors on supply chain (5) Defining the strategy to increase supply chain performance of SME's Garment. This study was undertaken to SME garment in Bandung City, Bandung Regency and Cimahi City. The number of sample are 72 respondent. The results of this study are (1) The logistics cost is in range 22%-32%, (2) The highest cost are warehousing cost included rent cost, security and logging service, (3) The barrier factors are raw material availability, human resources restriction, expensive transportation cost, road damaged and traffic jam. Recommendation to reduce logistics cost are (1) Providing cheap warehousing and transportation facilities, (2) Providing logistics services for SME garment industry (3) Improving infrastructure and connectivity by local government (4) Improving on planning activities to determine target and supplier management.

Index Terms—SMEs, garment industry, logistics, supply chain management

I. INTRODUCTION

Despite the decline due to the global crisis in 2008 and 2010, Indonesian textile products still sufficiently taken into account in the global market. In 2006, Indonesia was included into the top 10 countries as the world's largest exporter of textiles and textile products. Indonesian textile products are facing tough competition in the global market from several countries such as Vietnam, China, and India. Textiles and textile products (TPT) is a national priority of the Indonesian industry in which they have a good prospective to be developed. With a population of over 240 million, the Indonesia textile exports are included in the top 10 export of Indonesia commodities to US [1], [2]. The textile industry is a labor-intensive industry, which has absorbed at least 1.8 million workers [3]-[5].

Nevertheless, the textile industry is currently facing a variety of obstacles and constraints, particularly among other infrastructure problems and abundance of imported products, especially from China, both legally and illegally entering and suppresses the development of domestic industries [6]. The smooth and efficient flow of textile commodities remains a logistical problem unsolved. Garment is one which the proportion of textile products labor absorption is highest (almost 50%) of all textile products (textile products consisting of fibers, yarns, weaving and garment). Noting that it is to restore the absorbing performance of the textile industry workforce in large numbers in order to be able to continue to withstand competition in the era of trade liberalization, it is necessary to immediately note the real barriers that exist for this including the costs to be borne along the supply chain. Some of the objectives to be achieved is to know the profile of SMEs Garments respondents, identifying logistics costs incurred by SMEs garment, identifying the logistics activity in the SMEs garment, what factors inhibiting the SMEs garment supply chain, and what kind of strategies that can improve performance garment industry supply chain logistics to reduce costs and improve competitiveness.

II. LITERATURE REVIEW

The concept of the supply chain is a new concept in view of logistical problems. The old concept see logistics as an internal issue of each company, and the solution focused on solving internally in the company respectively. In this new concept, logistical problems are seen as broader issues that lie very long since the basic materials to finished goods used by end consumers, which is the chain of supply of goods. The supply chain is a network of organizations that interdependence and cooperation to control, regulate and improve the flow of materials and information from the supplier to the end user [7]. The supply chain is defined as well as logistics network consisting of suppliers, manufacturers, warehouses, distribution centers, and retail outlets, where the raw materials, semi-finished goods and finished goods flowing between these facilities [8].

In the context of SMEs, the characters are very different businesses with large companies [9].
Implementation of supply chain management is determined by four characters or factors: strategy, leadership, culture, and organizational capability [10]. Other studies also show that the integration of the supply chain management and supplier network management with customer order management and production planning and control are also neglected by SMEs [11], [12]. Logistics Management as part of the Supply Chain process that serves to plan, implement and control the efficient and effective flow of goods, storage of goods, services subscribers, and related information from point of origin to point of consumption in order to meet the needs of customers [13], [14]. Mission Logistics Management is delivering the right goods or services, in the right place, at the right time and at the desired quality, thus providing the greatest contribution to the company [15]-[17]. While the purpose of Logistics Management is delivering the right goods or services, in the right place, at the right time and at the desired quality, thus providing the greatest contribution to the company [15]-[17]. While the purpose of Logistics Management is delivering finished goods and an assortment of materials in the right quantity, at the required time, in a state that can be used, to the location where it is needed and at the lowest total cost.

III. RESEARCH METHODOLOGY

This research is descriptive analysis to provide a complete picture of the performance of the supply chain and logistics costs to be incurred by the garment industry, both upstream and downstream. Through the survey, the number of samples taken in the first year amounted to 90 entrepreneurs Garments in Bandung, Bandung and Cimahi regency which has not been exported but which can be processed only 72 questionnaires. This amount is considered to represent the population of the garment industry, which is approximately 1949 companies. Sampling was done by purposive random sampling and the snow-balling. In the first year, a survey carried out to companies who have not made the export and in the second year of the survey to companies that have been doing the export. Data collection using research instruments were questionnaires.

The necessary data in this study are primary and secondary data. Primary data needed to answer the research objectives primarily through descriptive statistical analysis and SWOT analysis. Field studies were carried out trying to obtain information about the strengths and weaknesses of the industry and macro environment faced by the garment entrepreneurs. Data collection instruments used are as follows (a) questionnaire, which is a structured list of questions addressed to the respondent in this case the garment entrepreneurs are selected as the sample, (b) Focus Group Discussion (FGD), is used as a support for the survey data collection with questionnaires and interviews, to strengthen the analysis results. FGD is done by the number of key persons between 12-20 which are a representation of all stakeholders that involved in the garment industry.

The approach used in this study is an approach that is the mix between quantitative and qualitative approaches. Quantitative approaches done by conducting a survey to entrepreneurs Garments in Bandung, Bandung and Cimahi regency, given the amount of the highest in the textile industry these areas. In addition to descriptive analysis, it is also done crosstab to see the association between variables by using Cremer V test and Kendall's Tau Test. Meanwhile, a qualitative approach done by in-depth interviews and Focus Group Discussion (FGD). Furthermore, the data processing is done by using SAS or SPSS for calculation Through the logistics cost components are analyzed using univariate (frequency table) and bivariate (cross-tabulation), and supported by: (i) Situation Analysis, (ii) and SWOT Analysis; (iii) an analysis of Porter's strategy of using Generic Strategic / Strategic Clock.

IV. RESEARCH FINDING

Several research finding as follows:

A. Business Performance for the Last 5 Years

Business performance illustrates the tendency of the garment SME businesses experienced the last 5 years. Some of them have increased, stable, but there are also decreased. Business performance profile of 72 SMEs surveyed garment illustrated in the following chart as can be seen on Fig. 1:

![Figure 1. Business performances for the last 5 years.](image)

B. Identification of the SME Garments Logistics Costs

Logistics costs incurred by SMEs in 1 year ranged between Rp 6.48 million – Rp 44.31 million or if monthly ranges between Rp 540,000 - Rp 3.6925 million. When associated with turnover, using the lowest mode, the highest ranges between Rp 20 million - USD 200 million, the percentage of logistics costs range between 22% - 32%, the larger the company, the smaller the cost of logistics for large volume. Calculation of logistic costs is shown in Table I as follow.

C. Dominant Cost Factor

Based on the results of the analysis are addressed four dominant factor in determining the cost of logistics, namely Rental Building, Communication Costs Order, logging fee, and the cost of building security. From all the data collected showed the rental cost of the building is the most dominant cost factor, reaching 63.74% of all costs incurred for the activity of the supply chain. The next factor is the cost of communication cost, which reached 25.19% reservations. whereas only 5.06% logging costs
and the cost of building security 4.82%. Detail about dominant cost factors can be seen on Fig. 2.

<table>
<thead>
<tr>
<th>Logistic Cost</th>
<th>Value (IDR)</th>
<th>Remark</th>
<th>Least</th>
<th>Highest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delivery</td>
<td></td>
<td>Fuel</td>
<td>360,000</td>
<td>9,600,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Driver</td>
<td>250,000</td>
<td>1,500,000</td>
</tr>
<tr>
<td>Maintenance</td>
<td></td>
<td></td>
<td>600,000</td>
<td>3,600,000</td>
</tr>
<tr>
<td>Retribution</td>
<td></td>
<td></td>
<td>300,000</td>
<td>1,000,000</td>
</tr>
<tr>
<td>Highway Toll</td>
<td></td>
<td></td>
<td>100,000</td>
<td>1,000,000</td>
</tr>
<tr>
<td>Parking</td>
<td></td>
<td></td>
<td>240,000</td>
<td>2,750,000</td>
</tr>
<tr>
<td>Warehouse</td>
<td></td>
<td>Rent</td>
<td>4,000,000</td>
<td>15,000,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Security</td>
<td>90,000</td>
<td>3,600,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Service</td>
<td>120,000</td>
<td>4,500,000</td>
</tr>
<tr>
<td>Ordering cost</td>
<td></td>
<td></td>
<td>300,000</td>
<td>360,000</td>
</tr>
<tr>
<td>Tipping</td>
<td></td>
<td></td>
<td>120,000</td>
<td>1,400,000</td>
</tr>
<tr>
<td>Total logistic cost/year</td>
<td></td>
<td></td>
<td>6,480,000</td>
<td>44,310,000</td>
</tr>
<tr>
<td>logistic cost/month</td>
<td></td>
<td></td>
<td>540,000</td>
<td>3,692,500</td>
</tr>
<tr>
<td>revenue/year</td>
<td></td>
<td></td>
<td>20,000,000</td>
<td>200,000,000</td>
</tr>
<tr>
<td>logistic cost percentage to revenue</td>
<td></td>
<td></td>
<td>0.324</td>
<td>0.22155</td>
</tr>
</tbody>
</table>

Source: Research Competency, 2013

V. CONCLUSION AND RECOMMENDATION

From this study, there are several conclusions that can be seen: the first, logistic costs borne by SMEs garment by 22% - 32% depending on the size of the company. The bigger the company gets smaller logistics costs incurred, due to a large volume, and lower cost per unit. Second, the largest costs are borne by the SME garment warehouse costs, which include rent warehouse, security and logging services. The third is inhibiting factors faced by SMEs garment are the availability of raw materials, limited human resources, high cost of transportation which occupied the top spot followed by damaged roads and road congestion. To reduce the cost of logistics, several things to do are to push the government to provide cheap of warehouse and transportation. Next is to encourage the growth of businesses providing logistics services for SMEs and reduce the cost of logistics in the range between 22% - 32% with improvements in infrastructure and connectivity by local authorities. Then the government is expected to provide ease of licensing. Finally, encourage improvements in the planning, target setting and management of suppliers.

REFERENCES

Association of Indonesia (ISEI), Chairman of Economic Forum Expert enterprise and industry. She has 100 research activities during 2000–

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cies (SME) 2015. Since 2000 she was invited as a speaker in 200 seminars and

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He has several publications on the international journal to name a few


Ina Primiana is a professor from Universitas Padjadjaran Indonesia. She was born in Bandung, Indonesia on February 13, 1962. She got the doctor in industrial management from Bandung Institute of Technology, Indonesia in 2002. Presently, she is a lecturer and researcher in operations management, strategy management, SME’s development, logistics and supply chain management. Most of her research focuses on small medium enterprise and industry. She has 100 research activities during 2000–2015. Since 2000 she was invited as a speaker in 200 seminars and discussion especially about competitiveness in SME’s and industry, international trade, logistics and infrastructure in national and international event. She has many articles on news paper, books, national journal and international journal. She is active in many organizations; She is a member of the Research Institute, Research and Economic Development (LPSE) Chamber of Commerce Industry Indonesia; the chairman of Focus Group of Small and Medium Enterprises (SME’s) sector, a central board of Graduate Economic Association of Indonesia (ISEI), Chairman of Economic Forum Expert in West Java, a senior advisor in Supply Chain Indonesia (SCI).

Yudi Azis was born in Subang, Indonesia, December 13, 1978. He holds a PhD in innovation management from Graduate School of Innovation Management, Tokyo Institute of Technology, Japan in 2012. He teaches several subject related to innovation management and operations management in some universities in Bandung, Indonesia. He is a full-time faculty member of economics and business in Universitas Padjadjaran, Indonesia. He is also a visiting senior lecturer at the Faculty of Industrial Management, Universiti Malaysia Pahang (UMP). Currently, he serves as a secretary in Master of Management, Faculty of Economics and Business, Universitas Padjadjaran, Bandung, Indonesia. He has several publications on the international journal to name a few international Journal of Lean Six Sigma, International Journal of Productivity and Quality Management, International Journal of Innovation and Technology Management, International Journal of Innovations in Business, Journal of Economics, Business and Management, etc. Dr. Yudi is a member of Indonesian Association of Bachelor of Economics (ISEI) Indonesia.

Juwani was born in Karawang, West Java, Indonesia on April 15, 1969. He completed an undergraduate degree from the Faculty of Economics, Universitas Pasundan Bandung in 1995. Getting a master's degree and PhD degree from the University of Padjadjaran Bandung, in 2003 and 2010, respectively. He currently serves as the vice dean of academic affairs of Faculty of Economic of Universitas Pasundan Bandung, Indonesia, since 2012 up to 2019, and he is also an associate professor. He has more than 15 years’ teaching experience of operation management, marketing management and research methodology. His areas of research interests are operation management and brand management. His article entitled ‘Knowledge Spillover through Foreign Direct Investment in Textile Industry’ in the process of publication in International Journal of Economic Policy in Emerging Economies.

Ahmad Yunani was born in Purworejo, Indonesia on January 21, 1967. He holds a doctor of science in management from Universitas Padjadjaran, Bandung, Indonesia in 2014. He teaches operations management, logistics and supply chain management, and ERP using SAP in some colleges in Bandung, Indonesia. He currently also serves as the chief of Center of Technology of Politeknik Pos Indonesia, Bandung, Indonesia, and a secretary to the Board of Commissioners of PT Kereta Api Logistik, a subsidiary of PT Kereta Api Indonesia (a state-owned company operates railway-based transportation in Indonesia). His article entitled ‘The influence of collaboration and business process on competitiveness and its implications for supply chain performance of garment industry’ was published in the Proceeding of the SIBR-UniKI Conference on Interdisciplinary Business and Economic Research, Kuala Lumpur, Malaysia, 16–17 February 2015 (now in the process of publication in International Journal of Economic Policy in Emerging Economies). His research interests are in the area of logistics and supply chain management, business process, and public policy in logistics and transportation. Dr. Yunani is a member of SupplyChain Indonesia, a professional and academicians society for supply chain and logistics.

Aldrin Herwany is an Indonesian economist. He was born in Tanjung Karang on June 16, 1969. He earned a bachelor's degree from Universitas Riau and magister of management from Universitas Padjadjaran and He holds a PhD from International Islamic University Malaysia (IIUM) Malaysia. He is a full-time faculty member of Economics and Business, Universitas Padjadjaran, Indonesia. He has a specialization in financial market, investment, banking and business management. Currently, he is a director of Center Management and Business Studies (CMBS-LMFE), Universitas Padjadjaran and He was elected for the chairman of Indonesia Economist Association (ISEI) Bandung Branch and a coordinator of West Java, Indonesia in 2015. He is also a member of Integration Committee of Governance for Bank JBIB in West Java, Indonesia. Aldrin has published more than 40 articles for international conference and journal and won some outstanding research awards, he is also hold top 20 academics from Campus Indonesia Magazine. Besides that, he is also a research reviewer for Indonesian Grant for Ministry of Research & Technology and Higher Education (Menristekdikti), Research Grant of Indonesian Endowment Fund for Education (LPDP), some national and international journal publications and he is contributor to electronic and print media.