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The Effect of Supplier Relationship Management on Firm Performance through Supply Chain Risk and Practice

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Abstract

Garments provide a high contribution to economic growth outside of non-oil and gas and have a large workforce. The manufacturing industry in Indonesia has become a mainstay in delivering economic growth. This study obtained the results of distributing questionnaires from garment retailers regarding the company's relationship with suppliers as many as 100 respondents. The study used a partial least square to test the validity, reliability, and research hypotheses. The results of data processing obtained validity and reliability tests that met the requirements. The results showed that supplier relationship management directly affects supply chain risk management, supply chain practices, and firm performance. Supply chain risk management has affected supply chain practice and firm performance. The practical supply chain can significantly increase firm performance. This study contributes to building supply chain risk and supplier relationship management.

Keywords: Supplier relationship management, supply chain risk and practice, firm performance

1. INTRODUCTION

Government establishes a coordinated Indonesian macroeconomic policy framework to sustain stable economic growth amid global turmoil and several natural disasters. Real GDP growth strengthened to 5.2 % in 2018 from 5.1 % in 2017. One of the contributors to the Indonesian economy is the garment sector (Djalil, 2019). The garment industry is a significant contributor to Indonesia's economy. It became the fifth-largest manufacturing export figure from 2014 to 2017, contributing to Indonesia's non-oil and gas, growing an average of 1.1% during that period (Wear, 2020). Domestic demand for garment products is also found to increase due to the increasing purchasing power of the public, new fashions, expansion of internet retail, and increased sales channels. This phenomenon makes garment manufacturers increasingly strive to boost their production rates. However, for now the entire manufacturing sector is affected by the COVID-19 outbreak. Indonesia's manufacturing industry has been badly affected by the COVID-19 epidemic, primarily when social distancing norms are enforced and manufacturing activities are suspended (Parama, 2020).

Wear (2020) describes that Indonesia's garment industry's impact also occurs in Supply Chain Management (SCM). Kosgei and Gitau (2016) explain that understanding SCM has become very important for entrepreneurs to maintain their competitive advantage. The company determines SCM in carrying out its business operations by synchronizing suppliers, manufacturers, and customers to improve organization performance (Tarigan et al., 2019). The garment industry must always communicate with retailers because it acts as an intermediary for product delivery. A decrease in operational activities will undoubtedly impact many aspects, such as decreased production rate. A reduction in the quantity of production reduces the delivery rate and the inventory value retailer. Besides, suppliers and retailers need to establish communication in dealing with problems that arise in supply chain management activities due to the COVID-19 pandemic. Supplier Relationship Management (SRM) shows the integration of information and physical flows throughout the supply chain, thus enabling collaborative planning and forecasting with suppliers for joint plans for process improvement (Al-shobul et al., 2018).

Supplier relationship management helps increase competitiveness by building a purchasing strategy according to its conditions (Tarigan et al., 2020; Wietsika, 2016). Good Supplier Relationship Management will also enable all companies that are members of one SCM stream to have the ability to adapt to dynamic markets. An understanding of the topic or field of supplier relationship management is becoming increasingly important. The development of the concept of business to business in SRM is a form of relationship between suppliers and buyers (Teller et al., 2016). The proper application of SRM will enable companies to develop and maintain strategic relationships with critical suppliers and form a transparent supply chain concept (Rucha & Abdallah, 2017). Supplier relationship management can increase firm performance (Momelo et al., 2017). Supplier relationship management also increases its ability to control the risks faced by implementing an effective supply chain risk management (Eber et al., 2019). Adaptability to dynamic market conditions

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requires a policy and implementation of risk management that is practically easy to apply. Companies' risks in the supply chain flow are closely related to the problems procurement of raw materials, the production process, the transportation process or delivery of goods, and demand from the market (Munyuko, 2015). Dynamic market conditions cause the risks that occur in the supply chain flow. Supplier relationship management determines the strategic steps that a company has to interact with suppliers (Nyamasege & Biraori, 2015). Companies need to develop relationships with their customers. Companies also need to cultivate relationships with their suppliers to ensure quality goods and services, timely and guaranteed delivery, and information flow to assist planning organisations.

The application of SRM can support the implementation of Supply Chain Risk Management (Hoek, 2013). SCRM (Supply Chain Risk Management) is one of the objectives of initiating its SRM program. A well-controlled SCRM in the company impacts increasing firm performance (Abeysekara et al., 2019). The SCRM that companies face from one another can vary. These risks can arise from factors within the company as well as on the company's suppliers. Risks that occur within the company can be inaccurate production planning, coordination between departments is not going well, providing data that is not fully integrated. Suppliers cause the risks that occur: delivery of raw materials that do not match the stipulated lead time, quality of raw materials not according to the specified requirements, and others. The implementation of supply chain risk management enables the company to identify risk points that need to be managed in advance to have a more effective performance (Bavarsad et al., 2016). Improvements in operational efficiency and operational flexibility affect increasing firm performance (Shou et al., 2018; Tarigan et al., 2018). The application of SCRM in manufacturing companies in process control and delivery of raw materials can improve SCP (Supply Chain Practice) implementation in companies (Tang, 2006).

The implementation of SCRM in a company can determine the risk profile and performance driver. A risk profile and performance driver are synchronized to achieve supply chain practice (Ritchie & Brindley, 2007). SCRM will strengthen several aspects of SCP, namely planning and control risk, supply risk, process risk, demand risk, and environmental risk (Teuteberg, 2008). SCP analyzes a set of practices that integrate suppliers, manufacturers, distributors, and customers to improve firm performance (Gandhi et al., 2017). Supply chain practice applies to strategic partnerships, information sharing, supply chain process, and lean practice. The SCP can provide an increase in firm performance (Khalil et al., 2019). The application of SCP is very closely related to these aspects; it is suspected that it will impact company innovations where the innovations formed will improve company performance. Adequate and consistent implementation of SCP can improve company performance by carrying out customer focus, internal integration, and even implementing quality management (Al-shobul et al., 2018). The continuous implementation of SCP impacts, improving company performance (Amedofu et al., 2019; Dogi et al., 2021). The garment industry's supply chain flow, starting from producers to retail, has experienced significant disruption due to the COVID-19 pandemic. However, the relationship between each party, such as producer-distributor and retail, is still well established. Several factories are always carrying out production activities even though they have decreased. Risk management is carried out by reducing purchases and stocks of goods and selling goods in less affected areas by the COVID-19 pandemic. Based on the explanation above, this study examines the relationship between supplier relationship management, supply chain practice, supply chain risk management and firm performance simultaneously. This study divides three research problems, namely, first, examining the magnitude of the impact of supplier relationship management on supply chain risk management, supply chain practice and firm performance. Second, testing the importance of supply chain risk management on supply chain practice and firm performance. Third, direct effect relationship of supply chain practical for firm performance.

2. LITERATURE REVIEW OF

Supply Chain Management (SCM) covers the management of transportation or flow of goods and services includes storage, shelf life, analysis of goods purchased and logistics of goods sold and others (Mukhamedjanova, 2020). As the integration with customers through suppliers, SCM provides products, services, and information that add value to customers and other stakeholders (Tarigan et al., 2019). SCM reflects the task of integrating organizational units along the supply chain and coordinating material, information, and financial flows to meet customer demands to improve the entire supply chain's

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competitiveness. SCM integrates various key business processes to end-users through suppliers who provide different products and services and information for the benefit of increasing customer value (Anca, 2019).

2.1. Supply Relationship Management

SRM is a comprehensive approach to managing interactions within the organization towards product and service suppliers. Practical SRM activities will enable a company to gain a competitive advantage, especially during a crisis (Gandhi et al., 2017). SRM can create an effective process between the company and its suppliers. The involvement of suppliers in product development will enable the company to take advantage of the suppliers' capabilities and technology and the resources they must create higher quality and competitive products. SRM can be considered a form of help intended to reduce costs, increase flexibility, quality, and improve overall company performance (Gyampah et al., 2018).

Coordinating operational activities through structured planning will also reduce the number of stock items, smoothing production activities, improving product quality, and reducing lead times. Effective SRM requires a clear understanding of which suppliers are most strategic to the organization and less critical (Scottish, 2019). The formation of a company SRM will overcome problems that arise due to uncertainty in a series of supply chain activities (Nyamasege & Biraori, 2015). Research indicators of supplier relationship management are adopted from research by Gyampah et al. (2018) and Al-Abdallah et al. (2014), namely: information sharing, Lead time reduction and Supplier quality improvement.

2.2. Supply Chain Risk Management

Risk is the possibility that an event will occur that can harm the achievement of company performance objectives and the entire supply chain's successful functioning. Risk can also be defined as the likelihood of an unusual event occurring and the negative effect on the organization (Bavarsad et al., 2016). Risk can be described in two senses when it comes to causes; risk has a definition that focuses on the lack of information needed for a decision-making activity to assess an event. Decisions are taken when the company has risk factors that will create uncertainty conditions for the company in considering/making decisions. Supply chain risk management is essential so that companies' risks related to supply chain strategies and policies can be regarded (Pfohl et al., 2010).

Risks can impact a company in three possibilities: internal and external impacts on the company and supply chain activities (Eber et al., 2019). SCRM is a formal process that involves identifying potential losses, understanding possible potential losses, and determining the significance of those losses. SCRM can also be a systematic process, assessment and mitigation of potential disruptions in the logistics network to reduce the logistics network's performance's negative impact (Ceryno et al., 2013). Risk supply chains are divided into various categories according to their effects on the organization and the business environment (Bavarsad et al., 2016). Measurement indicators for variables are supply chain risk management adopted from research by Munir et al. (2020), which are used to prevent operation risk, detect operation risk, respond to operation risk, and recover from operational risk.

2.3. Supply Chain Practice

Supply Chain Practice (SCP) includes a set of functional entities and individual practices to improve the long-term competitive performance of respective companies and their supply chain by integrating internal functions within the company and effectively linking them to external operations of suppliers, manufacturers, distributors, customers, and other channel members. SCP is implemented to improve performance through the supply chain, which requires cross-functional integration within the company and external integration with suppliers and customers (Al-shobul et al., 2018). SCP is considered a function or operational activity of an organization that determines its supply chain's effectiveness and efficiency (Dogi et al., 2021). Effective SCP monitoring helps companies ensure that they are on the path to financial stability and service excellence (Sundram et al., 2016).

Other common SCP item measurement used: material forecasting and accuracy, on-time delivery capability, delivery reliability and consistency, precise supply chain cost knowledge and control, fast customer response, direct coordinated product flow from supplier to shop, inventory management, rationalization and responsiveness to changing needs (Gandhi et al., 2017). SCM's practice refers to a series of activities carried out by companies to promote effective supply chain management (Amedofu et al., 2019; Tarigan et al., 2019). Managing corporate suppliers strategically has been identified as a critical SCM practice. A higher level of SCM practice brings higher performance to the organization and helps reduce costs in various

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activities. It helps in reducing costs in multiple activities (Gharakhani, 2012). SCM practices help balance forecasting and distribution to improve operational performance (Kumar et al., 2020). Supply chain practice indicators adopting research by Gandhi et al. (2017) are: including forecasting accuracy, time-delivery, consistency, cost management, and customer response, and inventory management.

2.4. Firm Performance

Organizational performance refers to how well the organization can achieve the goals that have been set (Tarigan et al., 2020). Companies can evaluate the actual output against the desired result in financial and marketing. Companies that implement SCP will try to pay attention to consumer needs and build relationships with consumers. Consumers are the company's spearhead, mainly because consumers benefit the company (Gandhi et al., 2017). SCP is implemented to improve performance by enabling cross-functional integration within the company and external integration with suppliers and customers (Al-shobul et al., 2018). The application of SCRM increases operational efficiency, and operational flexibility will improve firm performance (Shou et al., 2018). company performance refers to the extent to which the company achieves its production, human resources, marketing, and financial goals (Tarigan et al., 2018). Performance measurement can be defined as a process and metric to determine an action's effectiveness or efficiency (Abeysekara et al., 2019). Indicators for measuring firm performance adopting research by Bavarsad et al. (2016) which include: productivity, work productivity, flexibility, and responsiveness.

4. RESEARCH METHODS

The population is an area of generalization consisting of objects or subjects with specific qualities and characteristics determined by the researcher to be studied and then conclude (Sekaran & Bougie, 2010). The population used in this study is a garment retail company in East Java. The study describes the population with the criteria set is a garment retail company in East Java that is still operating as a garment retail company. Data was collected by communicating via WhatsApp and sending questionnaires via email to respondents. Research analysis in examining the relationship between variables using partial least squares. PLS performs a reliability test to measure the internal consistency of the measuring instrument and minimum 0.700. The validity of the instrument is based on a coefficient *factor loading* minimum of 0.500 for each indicator. The results of the validity and reliability tests are shown in Table 1.

Table 1. Validity and reliability test

Item Statement	***Outer Loading***	**Mean**	**Composite Reliability**
Supplier Relationship Management			**0.917**
Information exchange with suppliers	0.805	4.170	
Utilizing the exchange of information with suppliers	0.850	4.270	
Retail companies decreased lead times	0.868	3.980	
Retail company in sync with suppliers	0.829	4.240	
Suppliers understand the needs of companies	0.742	4.130	
The supplier can meet the criteria of the Company	0.725	4.120	
Supply Chain Practice			**0.961**
Forecasting firm high accuracy	0.825	4.240	
Company retail has its suppliers Timely	0.601	4.520	
Suppliers of consistent core in distribution activities	0.812	4.440	
Knowledge to manage costs	0.726	4.690	
Able to respond to customers quickly	0.891	4.360	
System inventory management flexible	0.646	4.600	
Retail companies have systems forecast inventory	0.857	4.400	
Provides a system to be accessed by suppliers	0.818	4.330	
Having a monitoring system supplies	0.772	4.390	
Supply Chain risk Management			**0.931**
Select suppliers who are considered reliable	0.696	4.140	
Implementation of safety procedures with suppliers	0.898	4.370	
Implementation of the strategy of precautions	0.889	4.390	
Evaluation of the performance suppliers is continuously	0.891	4430	

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Company tracks the credibility of suppliers	0.865	4.060	
Company has a supplier reserve	0.897	4.230	
Company has an extra production capacity	0.811	3.940	
Company has a distribution fleet	0.663	4.180	
Company always has a backup work plan	0.906	4.320	
Company has set a list of responsibilities work	0.767	3.970	
Determination of a person in charge of all activities	0.851	4.270	
Firm Performance			**0.873**
Production effectiveness	0.566	4.250	
Sales volume	0.593	4.630	
Flexibility in product distribution	0.840	4.550	
Flexibility in the production process	0.776	4.350	
Response to customers	0.828	4.660	
Fulfilling consumer demand	0.759	4.610	

Based on processing results, PLS in Table 1. The validity test results are shown in the results of outer loading with a minimum value on supply relationship management with a value of 0.725 on the item being supplier able to meet the company's criteria. Supply chain practice 0.601 on items retail companies have suppliers that are on time, supply chain risk management 0.663 on items the company has a distribution fleet and 0.566 firm performance on the item of production effectiveness. The outer loading value has been above 0.50, indicating valid. For composite reliability, the lowest score for firm performance was 0.873 and was above 0.70, so that it could be said to be reliable.

5. RESULTS AND DISCUSSIONS

Research data was obtained by distributing questionnaires filled offline through questionnaire sheets distributed using enumerators to visit garment retailers throughout East Java. The researcher used data from the garment retailer's association and contacted them to serve as research respondents. Having a willingness to fill out a questionnaire, the researcher asked the enumerator to provide a questionnaire and email them. The respondents' profile results are shown in Table 2, male (89%) and female (11%). Based on age, it is divided into four groups, namely respondents 17-30 years old (3%), 31-40 years old (47%), 41-50 years old (36%), and above 50 years old (14%). Income is divided into three groups, namely income IDR 10,000,001-15,000,000 (24%), IDR 15,000,001-20,000,000 (62%) and above IDR 20,000,000 (15%).

Table 2. Profile of research respondents

Profile	Category	Frequency	Percentage
Gender	Male	89	89
	Female	11	11
Age	17-30 years old	3	3
	31-40 years old	47	47
	41-50 years old	36	36
	Above 50 years old	14	14
Income Level	IDR 10,000,001-15,000,000	24	24
	IDR 15,000,001-20,000,000	62	62
	Above IDR 20,000,000	15	15

The inner model determines the relationship between variables, as mentioned in the research hypothesis. The relationship between the variables for each research hypothesis has a positive effect. The original sample value is positive, and the t statistical value is greater than the t table, namely 1,960.

Table 3. Path Coefficient

	Original Sample (O)	T Statistics (| O / STDEV |)	Hypothesis
SRM -> SCP	0.434	3,501	Accepted
SCRM -> SCP	0.674	4.944	Accepted
SRM -> SCRM	0.819	15.201	Accepted
SRM -> FP	0.247	2.069	Accepted
SCP -> FP	0367	2284	Accepted

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SCRM -> FP	0.278	2.101	Accepted

The results obtained showed that the Supplier Relationship Management positive effect on Supply Chain Risk Management, which means that the better the quality of Supplier Relationship Management applied by retail companies' garment, the better its implementation. The results obtained confirm the results of studies that the supplier relationship management a positive influence on supply chain risk management (Eber et al., 2019; Nyamasege & Biraori, 2015; Hoek, 2013; Ritchie and Brindley, 2007). The results obtained show that supplier Relationship management has a positive effect on supply chain practice, which means that the more successful supplier relationship management is implemented by retail companies, the more successful supply chain activities are implemented. The results obtained confirm the research results, which states that supplier relationship management positively affects supply chain practices (Nyamasege & Biraori, 2015; Pires, 2010). The results obtained indicate that supplier relationship management has a positive impact on firm performance, which means that the better the quality of Supplier Relationship Management applied by retail companies as the object of research, the higher its firm performance level. The results support the research results, which states that supplier relationship management positively affects firm performance (Momelo et al., 2017; Al-Abdallah et al., 2014; and Oduro et al., 2020).

The results obtained show that supply chain risk management has a positive effect on supply chain practices, which means that the more successful the implementation of supplier chain risk management by retail companies, the more successful its implementation of supply chain practices. These results confirm the research results, which states that supply chain risk management positively affects supply chain practice (Pfohl et al., 2010; Ritchie and Brindley, 2007). The results obtained indicate that supply chain risk management has a positive effect on firm performance, which means that the more successful the implementation of supplier chain risk management by retail companies, the higher its performance. The results obtained confirm the research results that state that supply chain practice positively affects firm performance (Abeysekara et al., 2019; Bavarsad et al., 2016; Shou et al., 2018). The results obtained show that supply chain practice has a positive effect on firm performance, which means that the more successful the implementation of supplier chain practices by retail companies, the higher its performance. The results obtained confirm the research results stating that supply chain practice positively affects firm performance (Gandhi et al., 2017; Al-shobul et al., 2018; Amedofu et al., 2019; and Khalil et al., 2019).

The results show a mediating effect of supply chain risk management on firm performance through supplier relationship management. The results obtained further confirm the results of research, which state that supply chain risk management mediates the relationship between supplier relationship management and firm performance (Momelo et al., (2017); Al-Abdallah et al., (2014) and Oduro et al., 2020). Supplier relationship management can improve supply chain risk management because, with supplier relationship management, the company can be more effective in carrying out supply chain risk management. In this study, supply chain risk management also affects firm performance, which is positive. The results show a mediating effect of supply chain practice on supplier relationship management's influence on firm performance. The results obtained confirm that supply chain practice mediates the relationship between supplier relationship management and firm performance (Momelo et al., 2017; Al-Abdallah) et al., 2014; Oduro et al., 2020). The results showed a mediating effect of supply chain risk management on the impact of supply chain risk management on supply chain practice. The results confirmed that this study supports the research results, stating that supply chain risk management mediates the relationship between supplier relationship management and supply chain practice (Nyamasege & Biraori, 2015; Pires, 2010). This research contributes to the development of supply chain relationship theory and practice. The practical contribution of research provides retail garment managers input to build good relationships and collaborate with suppliers and risk management to improve company performance.

6. CONCLUSIONS

Garment retail contributes to the improvement of the national economy and the use of many workers in Indonesia. Garments are a mainstay for the government outside the non-oil and gas sector. Based on the research and discussion results, the following conclusions can be established: supply relationship management has a positive effect on supply chain risk management, supply chain practice, and firm performance. The company's ability to take advantage of information exchange with suppliers and decrease lead time can determine the increase in supply chain risk management, supply chain practice, and firm performance. Supply chain risk management has a positive effect on supply chain practice and firm

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performance. Having a backup work plan, supply chain risk management, implementing safety procedures with suppliers and having backup suppliers can improve supply chain practice and firm performance. Supply chain practices determined by the ability to respond to customers quickly and have a forecast system inventory can affect company response to customers and flexibility in product distribution in increasing firm performance. This study suggests that retailers can conduct tenders by first making *the* criteria *supplier* and assessment to maximize selection activities *suppliers.* Companies can seek to rearrange production work plans and synchronize based on supplier relationship management and supply chain risk.

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