

Integration of trust supplier with supply chain capability and application towards supply chain performance: Minimarket competition during the Covid-19 pandemic

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ABSTRACT

Article history:

Received March 3, 2023

Received in revised format March 18, 2023

Accepted April 27 2023

Available online

April 27 2023

Keywords:

Structural Equation Model

Trust Supplier

Supply Chain Capability

Supply Chain Application

This research aims to analyze the impact of supply chain during the Covid-19 pandemic. The study examines the integration of trust with supply chain capability and application on supply chain performance. The novelty in this research is to find out the effects of supply chain applications on supply chain performance with supply chain capability as a mediator. The research location is in East Java while sampling from mini market in cities and regencies includes Surabaya, Malang, Jember, Sumenep, Madiun and Sidoarjo. The sample size in this study consists of 240 respondents. Respondent criteria are minimarket employees who have worked for at least two years. The technique for analyzing data uses the SEM-PLS program. The results indicate that trust suppliers influence supply chain performance meaning that supplier trust for raw material supply companies must be maintained and both parties must have a good relationship with evidence of commitment and mutual trust. Second, supply chain capability also influences supply chain performance and the ability of suppliers to buyers must be maintained. Third, the relationship between supply chain application variables and supply chain performance is also positive and significant. Therefore, cooperation that can be relied upon must still be maintained together. Fourth, there is the influence of supply chain application on supply chain capability, and based on the test results the effect is very dominant, so that the variable supply chain application is the superiority of the results of this study. Fifth, there is a positive and significant indirect effect of SCA variable on SCP through SCC as mediation.

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1. Introduction

Retail companies have faced competition and people have felt that shopping is looking for safer alternatives for health during the Covid-19 pandemic. Therefore, the management of PT Indomarco Pristama explained the strategy for its physical retail to survive during the Covid-19 pandemic. Marketing Director Indomarco Prismatama said his company follows the pattern of changing people's shopping behavior. The economic situation, lifestyle, especially spending patterns have changed since the pandemic. The retail sector is certainly affected by this situation. The point is how retail can change according to changing situations. Now people tend to like to shop at shops that are practical and close to home to meet their needs. In addition, people are also starting to switch to shopping online. Overall, minimarket companies are networked, and the control function of logistics management has not been carried out optimally, so this is a weakness that must be the focus of improvement. Even though there are logistics distribution companies that have implemented or implemented logistics distribution, such as the example of PT. Indomarco Prismata so that it will affect the company's performance (Bagher, 2018; Sezhiyan et al., 2011), and PT. Indomarco Prismatama has only one who manages all Indomaret outlets throughout Indonesia. According to Ariani (2013), each company was highly prioritized to survive and get tougher in facing market competition. Therefore, the company creates good performance not only for consumers but also for suppliers and parties that are integrated in market share (Srnita, 2018). Trust occurs in a mutually beneficial relationship between the two parties, so they have a commitment to maintain

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price fluctuations and the number of products needed by the market (Kim et al., 2016). The existence of this trust besides being able to maintain a balance of prices and the number of product needs for consumers, because the continuity of the supply of raw materials as well as the company's trust in partners is very important to maintain the contract that has become an agreement, and if there is a problem internally, both parties look to each other respective solutions (Kulangara et al., 2016). The ability of a company's supply chain or supply chain capability has an impact on the relationship between both parties between suppliers and users regarding production schedules, orders, and based on demand (Rajaguru & Matanda, 2019). The working relationship between companies and suppliers influences company performance (Panahifar et al., 2018; Basana et al., 2022). Supply chain performance is measured to identify problems, monitor processes supply chain, smooth communication, decision making and fulfill customer needs. Effective supply chain performance measurement must be measurable and consistent (Maaz & Ahmad, 2022). In literature, there are two distinct groups for supply chain performance studies. The first group, cost-oriented, profit, return on investment, customer satisfaction, and sales volume and profit. Many researchers use this framework as a basis for measuring supply chain performance. The second group learns how to improve the performance of the supply chain, one of which is with big data analytical capabilities. To this study, special focus is given to end customer satisfaction in terms of quality and cost (Bahrami et al., 2022). The novelty of this research is to discuss the influence of supply chain applications with supply chain capability as a moderating effect on supply chain performance. While supply chain application is an application created to accompany a company's supply chain management process. In this application there are various features that can help work on the supply chain management process. The results of empirical research have found that there is an influence between the integration of supplier and customer capabilities on improving company performance (Flynn et al., 2010). Then, if integration of suppliers with customers is going well, the supply chain application factors are expected to be more supportive of company performance. The need for integrated of supply chain management among them: (a) trust; (b) supply chain capabilities; and (3) supply chain applications in this study will have an impact on increasing company performance (Cao et al., 2014, Dominguez et al., 2014; Nagashima et al., 2015; Aityassinea et al., 2022).

2. Literature Review and Hypothesis

2.1 Supply Chain Performance (SCP)

The concept of an optimal supply chain is to create an effective and efficient flow of information between networks of various interconnected company organizations that have the same goal of producing maximum satisfaction to customers. The concept of an optimal and coordinated supply chain means that each channel of the company's supply chain will not experience a shortage of goods nor too many excess goods (Yong, 2016). Supply chain management is about managing a business from material procurement, production, to distribution, customer service, and product rework/reprocessing and disposal. Every supply chain wants to improve its performance to achieve customer expectations (Jagan Mohan Reddy et al., 2019). According to Munir and Dwiyanto (2018), that supply chain performance is what governs management related to the delivery of raw materials from suppliers then raw materials are produced into finished goods and in the end finished goods are distributed to final consumers, and also materials or finished goods must be in accordance with the quality of the product requested, responsive, including efficiently and effectively (Ariani, 2013; Huo et al., 2014; Lim et al., 2017; Nyaga et al., 2010).

Supply chain management aims to improve the relationship between suppliers and buyers if the relationship is good and if it shows commitment, supply chain performance will increase (Zainurossalamia & Hidayati, 2020; Miguel & Brito, 2011), of course there is commitment and there is an element of trust (Feng et al., 2012). If supply chain performance is improved, it will become more effective and efficient (Yusoft et al., 2016), although the notion of supply chain performance can be said to be mutually supportive. However, the definition of supply chain management can be regarded as an indicator that the product delivery process runs smoothly based on planning. Supply chain performance is an indicator of various assessments of organizational performance, both short and long term (Deshpande, 2012). According to (Johnson & Templar, 2011; Ou et al., 2010), between suppliers, material requisitioners and distributors to end users.

2.2 Trust Supplier (TSP)

Trust built by both parties will potentially improve company performance (Arvidsson & Melander, 2020). Trust between the two parties of suppliers and buyers will provide business continuity and increase the level of cooperation which means it will improve company performance (Şahin et al., 2017). The ability of suppliers is necessary for companies so that the supply of raw materials is still fulfilled so that production companies run smoothly, the needs of distributors are met until the final needs are customers (Setiawan et al., 2022). According to Panahifar et al. (2018), trust consists of three important characteristics including: (a) reliability, (b) predictability, and (c) fairness. Furthermore, in the electronics industry, it turns out that trust is not only the main thing in interaction, but productivity is a system that can motivate the cooperation of both suppliers and customers (Chang et al., 2014). Trust means acknowledging one's honesty and ability to truly meet expectations. Thus, trust is the belief in someone to occupy a certain position because it is recognized that he has the ability and honesty to assume that position so that he can truly meet expectations (Bunduchi, 2013). Trust is very important in establishing a cooperative relationship, in the will to do something, and this includes expertise (Zhang et al., 2018). According to Bowersox (2013), to increase trust, the first step that must be carried out is evidence showing that the company can be accounted for and

demonstrates proven good performance. Trust is a major factor and a very important one so that the phenomenon of building an integrated system. (Majid 2017). According to Almeida et al. (2017), companies prefer suppliers to end users and it is hoped that all parties will have the same opportunity to make a profit, so that product quality is good, prices are affordable and stable (Delbufalo, 2012). In this case, it can be concluded that trust is very important in the effort to build communication and cooperation, so it is hoped that the relationship between the two parties will be harmonious.

H₁: *Trust supplier has a positive effect on SCP.*

2.3 Supply Chain Capability (SCC)

Supply chain capability refers to the company's skills in managing and utilizing its resources. This allows owners to optimally exploit resources to maximize their productivity and profits in the supply chain process (Lee et al., 2022; Rajaguru & Matanda, 2013). According to Bagher (2018), that very important part because supply chain capability is a set of SCM: (a) skills, (b) knowledge, (c) routines and there is a competency phenomenon that is developed through complex interactions, both internal and external to the company, where the company can coordinate SCM activities and apply resources according to consumer demand. (Liu, et.al, 2016; Shafiei & Tarmost, 2014) and reliable service at minimum cost (Roghianian et al., 2012). Manufacturing or industrial environment supply chain the electronics industry is more focused and equipped with technology fully automated systems. The ability of the company will contribute to supply chain performance (Torasa & Mekhum, 2020). SCM must be understood because it is an important matter as well as the ability of one of the integrated supply chain partners who have a role in efforts to increase activities as a supply chain. The results of previous research explained that previous studies described relational capabilities, information capabilities and it is not clear that organizational culture as a priority indicator has a very strong influence on supply chain performance, so that the level of their interaction has a significant impact on supply chain related changes. Changes that occur in the supply chain for management business activities require several implementations including a variety of information, information quality, customer and supplier cooperation on supply chain performance (Sukwadi et al., 2013). Yu et al.'s (2001, 2018) findings state that data-based supply chain information has a positive and significant effect on capabilities of supply chain The hypothesis is as follows.:

H₂: *Supply chain capability has a positive effect on SCP.*

2.4 Supply Chain Application (SCA)

Supply chain applications refer to networks that interconnect information technology partners, to make it easier to provide or share information (Cheng et al., 2014; Zeng & Koutny, 2019). Therefore, besides being a facilitator, supply chain applications also support an increase in the distribution of resources, including aspects of information technology and market share. Besides that, it can also improve integration more effectively and efficiently (Ngai et al., 2011). Feng, et al. (2012), supply chain applications owned by each company to develop product innovation or create new products, thereby as new product requires integration & system innovation. Supply chain applications that function as forecasting market needs, so that it really helps the occurrence of an operational cost risk within the company and will increase the efficiency of managing the information system used by the company (Cheng et al., 2014). Thus, then all vendors or suppliers can provide information to each other, and information systems can work both those used by vendors and suppliers by system. Therefore, that company size greatly influences the application of information technology for supply chain capabilities that are applied in each business unit. (Chen et al., 2011; Rezaei et al., 2015;). Therefore, this study hypothesis:

H₃: *Supply chain application has a positive effect on SCP.*

H₄: *Supply chain application has a positive effect on SCA.*

H₅: *Supply chain application has a positive effect on SCP through SCC.*

2.5 Framework Research

The conceptual research can be seen in Fig. 1

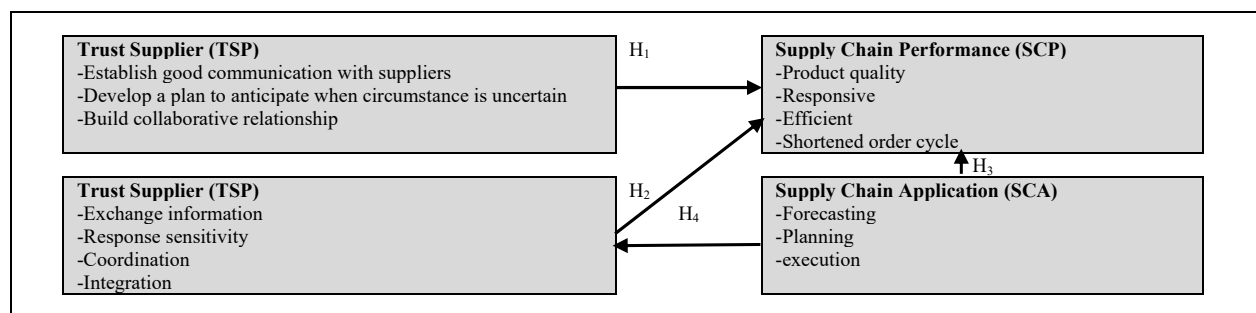


Fig. 1. Framework research

3. Research Method

3.1. Research Measurement

Measurement is important for research because only with measurement can researchers connect abstract concepts with reality. Through measurement the researcher tries to represent the phenomenon referred to by the concept he uses. Data analysis techniques in quantitative research are processes of processing data that have been collected from respondents in the field or other reliable references. Examples of data processing such as grouping data based on the type of respondent, making tabulations, and performing hypothesis testing calculations. The research data were analyzed using the PLS program, which PLS is a powerful analysis method because it can be applied to all data scales, it doesn't require a lot of assumptions. Besides being able to be used as confirmation of theory can also be used to build relationships where there is no theoretical basis or for testing propositions. (Hair et al., 2021).

3.2 Population and Sample & Measurement Scale

The research location was conducted in East Java and samples were taken from several regencies and cities, namely Surabaya, Malang, Jember, Sumenep, Madiun and Sidoarjo. The total sample size is 240 respondents. According to Taherdoost, (2019), the measurement scale in this study uses a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree).

3.3 Research Instruments

The research instrument is the method used to measure and collect data on scientific work. The research instrument is very important because it can affect the validity of the data used in the research and the data collection instrument is a tool used to collect data (Yeah et al., 2016).

3.4 Test of Validity & Reliability Instrument

Item Validity Test is a statistical test that is used to determine how valid an item question measures the variable under study. Item Reliability Test is a statistical test used to determine the reliability of a series of question items in their reliability of measuring a variable (Surucu & Maslakci, 2020).

3.5 Hypothesis Test

Data analysis was performed using software that method using SmartPLS version 3 (Hair et al., 2017). This is an indicator that is needed as a measure, which is known as a latent variable, which in SEM PLS are exogenous latent and endogenous latent variables (Hair et al., 2019; Avkiran & Riegle, 2018).

3.6. Outer Models and Inner Model

The implementation or application of a model in SEM-PLS will be evaluated using the outer model and inner model. Where the outer model shows the specification of the relationship between the estimated indicators or parameters and their latent variables (Ali et al., 2018; Henseler, 2017).

3.6.1 Outer Model

The outer model is to explain and determine indicator variables and it can be interpreted that the outer model. Testing of outer model as follows:

- a. Indicator reliability: can be seen from the outer loading value, if the value is greater than 0.7 then the indicator variable is feasible (Rasoolimanesh & Ali, 2018).
- b. Composite reliability, when research is carried out based on theoretical testing, the Cronbach's Alpha value is more than 0.7 (Hair et al., 2017b).
- c. Convergent Validity is the AVE value is at least 0.5 (Hair et al., 2017a)
- d. Discriminant Validity: consists of two approaches, the first is variable cross-loading indicators and the second is Fornell-Larcker. Meanwhile, the value of Fornell-Larcker for each latent variable has a greater correlation (Ali et al., 2018).

3.6.2 Inner Model

Inner model, which describes a model (Ali et al., 2018). Then, to evaluate of inner model there are two approaches, including:

- a. First, through a bootstrap process, an the estimated T value is more than 1.96 or the T value is less than 0.7 and as assuming for confidence level is 0.5 (Kock, 2018)
- b. Second, if the R square value is more than or equal to 0.7 it is stated that the results have high quality because it shows that the independent variable (Rasoolimanesh & Ali, 2018).

4. Findings

4.1 Instrument Test Results

For a measuring instrument declared valid, so that the instrument can be used to measure something that must be measured. Meanwhile, the reliability test, whether the results are consistent from next to time (Hair et al., 2019).

Table 1

Validity and Reliability Test Results

	Items	Pearson-Correlation	Significant	Result	Cronbach's Alpha If Deleted	Cronbach's Alpha	Result
TRUST SUPPLIER (TSP)	TSP1	0.966	0.000	valid	0.813	0.872	reliable
	TSP2	0.949	0.000				
	TSP3	0.938	0.000				
SUPPLY CHAIN CAPABILITY (SCC)	SCC1	0.840	0.000	valid	0.822	0.844	reliable
	SCC2	0.855	0.000				
	SCC3	0.890	0.000				
	SCC4	0.908	0.000				
SUPPLY CHAIN APPLICATION (SCA)	SCA1	0.947	0.000	valid	0.798	0.869	reliable
	SCA2	0.900	0.000				
	SCA3	0.930	0.000				
SUPPLY CHAIN PERFORMANCE (SCP)	SCP1	0.929	0.000	valid	0.802	0.844	reliable
	SCP2	0.935	0.000				
	SCP3	0.895	0.000				
	SCP4	0.891	0.000				

Table 1 has shown that all indicators are declared valid because all indicators have a significance level value of less than 0.05. While the Cronbach Alpha value is more than 0.60 and also the Cronbach Alpha If Delete value is smaller than the Cronbach Alpha.

4.2 Outer Model Evaluation

The results of the estimation of the PLS analysis algorithm to evaluate the measurement of the outer model in Fig. 2.

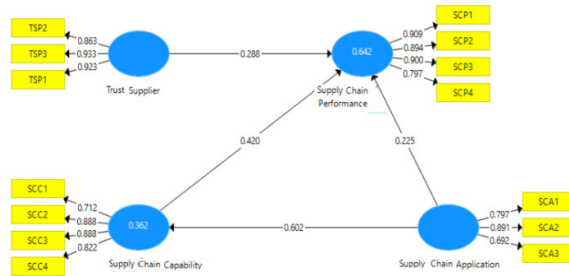


Fig. 2. Path Analysis Diagram Outer Model

4.2.1 Convergent and Construct Validity

In PLS analysis the outer loading on each variable. Outer loading values that meet the value of convergent validity must be greater than 0.5. Meanwhile, the construct validity in the PLS analysis is evaluated by using the AVE value whose determination is more than 0.5. The result in Table 2 is as follows.

Table 2

Value of Outer Loading & AVE

Variables	Items	Outer Loading	AVE	Remarks
Trust Supplier	TSP1	0.863	0.822	Good Convergent & Construct Validity
	TSP2	0.933		
	TSP3	0.923		
Supply Chain Capability	SCC1	0.712	0.690	Good Convergent & Construct Validity
	SCC2	0.888		
	SCC3	0.888		
	SCC4	0.822		
Supply Chain Application	SCA1	0.797	0.636	Good Convergent & Construct Validity
	SCA2	0.891		
	SCA3	0.692		
Supply Chain Performance	SCP1	0.909	0.768	Good Convergent & Construct Validity
	SCP2	0.894		
	SCP3	0.900		
	SCP4	0.797		

Source: Data Processing Result (2023)

Table 2 shows the results of the outer loading value of each measured indicator with the variable value greater than 0.5 which indicates that the convergent validity of the measurement variable is good. Meanwhile, AVE value is more than 0.5 and shows construct validity if the measurement is fulfilled.

4.2.2 Discriminant Validity

Evaluation was carried out using of Fornell Larcker as criterion method and the results are summarized in Table 3 as follows,

Table 3
Value of Discriminant Validity

Variable	TSP	SCC	SCA	SCP
TSPr	0.907			
SCC	0.625	0.831		
SCA	0.525	0.602	0.797	
SCP	0.668	0.735	0.629	0.876

Sources; Data Processing Result (2023)

Table 3 shows the results of the evaluation using the Fornell Larcker criterion and it is clear that the AVE root value has a greater value than other variables. Thus, the discriminant validity of variable measurement has been fulfilled.

4.2.3 Composite Reliability

Evaluation of the composite reliability of the results of the PLS analysis is shown in the following in Table 4.

Table 4
Value of Composite Reliability

Variables	Cronbach Alpha	Composite Reliability
TSP	0.892	0.933
SCC	0.847	0.898
SCA	0.713	0.838
SCP	0.898	0.930

Sources; Data Processing Result (2023)

Table 4 explains the results of Cronbach alpha are greater than 0.6. In addition, for the composite reliability value of each variable the value is also greater than 0.7. Thus, based on concluded that the evaluation of composite reliability for measuring variables has been fulfilled.

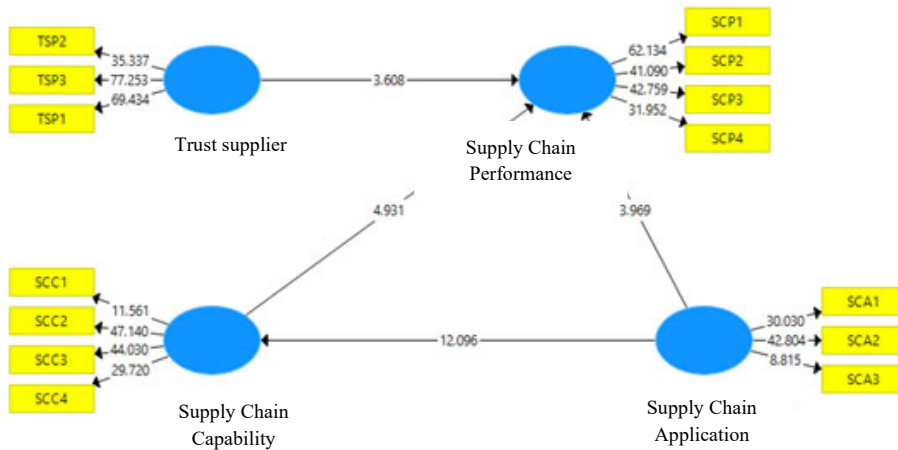


Fig. 3. Path Analysis Diagram Inner Model

5. Discussions

5.1. Inner Weight

The results of the PLS analysis bootstrapping estimation as shown in the graph can be displayed in the influence test Table 5 as follows.

Table 5
Path Coefficient of Inner Weight

	Original Sample	T Statistics	P Value	Remarks
TSP → SCP	0.288	3.608	0.001	positive & significant
SCC → SCP	0.420	4.931	0.001	positive & significant
SCA → SCP	0.225	3.969	0.001	positive & significant
SCA → SCCy	0.602	12.096	0.001	positive & significant
SCA → SCC → SCP	0.253	4.262	0.001	positive & significant

Source: Data Processing Result (2023)

The hypothesis:

1. It is concluded that trust suppliers have a positive & significant effect on supply chain performance based on an estimated value is 0.288 and T Statistics 3.608 > 1.96 and a p value <0.001.
2. It is concluded that supply chain capability has a positive & significant effect on supply chain performance based on an estimated value is 0.420 and T Statistics 4.931 > 1.96 and a p value <0.001.
3. Supply chain application is concluded to have a positive & significant effect on supply chain performance based on an estimated value of 0.225 and T Statistics 3.969 > 1.96 and a p value <0.001.
4. It is concluded that the supply chain application has a positive & significant effect on supply chain capability based on an estimated value of 0.602 and T Statistics 12.096 > 1.96 and a p value <0.001.
5. There is a positive & significant indirect effect of SCA on SCP through SCA as mediation. This is based on T Statistics value is 4.262 > 1.96 and a p value < 0.001.

5.2 R Square

The R Square value resulting from the structural model can be displayed as follows.

Table 6
R square

Variable	R Square
SCC	0.362
SCP	0.642

Source: Data Processing Result (2023)

Based on Table 6, the R-Square value of the Supply chain capability variable is 0.362 explaining that the diversity of perceptions that exist in the Supply chain capability variable explained by the supply chain application is 36.2%. Meanwhile, the R Square value for the Supply chain performance variable is 0.642 explaining that the diversity of perceptions that exist in SCP can be explained by the TSP, SCA and SCC variables is 64.2%.

6. Conclusions

We can conclude firstly that trust suppliers influence supply chain performance meaning that supplier trust for raw material supply companies must be maintained and both parties must have a good relationship with evidence of commitment and mutual trust. Second, supply chain capability also influences supply chain performance and the ability of suppliers to buyers must be maintained. Third, the relationship between supply chain application variables and supply chain performance is also positive and significant. Therefore, cooperation that can be relied upon must still be maintained together. Fourth, there is the influence of supply chain application on supply chain capability, and based on the test results the effect is very dominant, so that the variable supply chain application is the superiority of the results of this study. Fifth, there is a positive and significant indirect effect of SCA variable on SCP through SCC as mediation.

Acknowledgments

We express our appreciation to Universitas Ciputra Surabaya Indonesia and Universiti Teknologi PERTONAS, Malaysia. For their support in conducting collaboration in the field of research.

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