

# Uncertain Supply Chain Management

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## The effect of supply chain organizational and supply agility on supply chain performance: The mediation role of supply chain strategy in retail shops

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### ABSTRACT

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This research aims to analyze the effect of supply chain organizational and supply agility on the performance of supply chain performance through the mediation role of the supply chain strategy in the retail industry. Retail business design creates novelty, it is very important for manufacturers to stay focused on producing goods. The presence of a retail shop will make it easier for consumers to get the goods and services they want. The research sample includes 180 companies or respondents. The results indicate that the supply chain strategy had no significant effect on the supply chain operational performance, while the other hypotheses were stated to be significant, and the supply chain strategy as a mediator had a positive and significant effect on the supply chain operations performance of retail shops. The research includes discovering that supply chain strategy bridges organizational supply chains and supplier agility performance in retail outlets. The research will directly contribute to the growing literature on innovation in supply chain management implementation of retail shops in Indonesia and other countries.

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### 1. Introduction

While retail economic activities, particularly in Indonesia, continue to rise in popularity year after year, one of the factors contributing to recent variations is the Covid-19 pandemic. As a result, commercial operations will face high competition, including conditions of fierce competition between enterprises. Thus, various parties must be involved, starting with suppliers, manufacturers that make finished items, networks of distribution that disseminate products to wholesalers, distributors, and retailers, and finally, the link between suppliers and final buyers. Now, retailers are still attempting to boost operational performance through more effective supply chain management. A retailer, or retail corporation, is a marketing system that concentrates on consumer-to-consumer (C2C) transactions, or Business to Consumer (B2C). These businesses innovate internally to ensure long-term competitiveness and viability in a regional setting (Gil-Gomez et al., 2020; Jermisittiparsert & Wajeetongratana, 2019). Supply chain management is a multidisciplinary subject that encompasses marketing, purchasing, manufacturing management, and information system management. It operates as an absolute system via a coordination process (Srinita, 2018). Supply chain management is a technique for integrating suppliers, warehouses for raw materials and manufacturing replacement parts, as well as efficient distributors, to ensure that goods are delivered on schedule, the manufacturing process runs smoothly, distributed channels are delivered on time, and operational costs are minimized (Wang, 2021). Not only can effective SCM improve company performance and competitive advantage, but it also helps sustain consumer loyalty (Zaid et al., 2021). There are multiple major stakeholders in the supply chain, all of which are businesses with similar interests. According to Shafiei and Tarmost (2014), these are the following: supply; manufacturing processes; delivery; retail outlets; and customers.

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Many claim that if organizational personnel have a basic understanding on the supply chain, interrelationships between supply chain management will become more challenging. Supply chain organization (SCO) is the organization's responsibility to facilitate improvement to increase supply chain efficiency and effectiveness, such as knowledge, skills, and abilities that aid in the implementation. Since the supply chain encompasses all organizations and activities involved in all processes, from product or service manufacturing to consumption, it is a significant component affecting a business's performance. The supply chain achieves optimal performance by optimizing linkages among its enterprises to boost overall productivity (Dey et al., 2019; Lee & Nam, 2016). Several findings, however, show that adjustments to the internal organization must be undertaken, as well as a shift in thinking toward SCO implementation of supply chain management operations (Orji et al., 2022; Omar et al., 2012; Hossain et al., 2019). Because, any firm, environmental variables must be established prior to operationalizing supply chain management activities (Rekha & Sowmya, 2019).

The benefit of supply chain management is to provide the appropriate items in terms of quantity, quality, location, time, conditions, customers, and costs (Asad & Siddiqui, 2019), so that the goal of SCM is more focused on performance and power. In other words, the collaboration will bolster the supply chain strategy, which is critical to the supply chain's and business's success. Supply chain management capability is one aspect affecting a company's performance and the capacity of the enterprise to collaborate completely with other businesses on supply chain activity procedures (Mosteanu et al., 2020). The importance of strategic relationships in organizations, for businesses to achieve and improve the performance of the supply chain, need correlation to organizational agility and some supply chain partners (Mukhsin & Suryanto, 2021; Mukhsin et al., 2022), and supply agility improves company performance (Sheel & Nath, 2019; Benzidia & Makaoui, 2020). Indicators of agility to supply chain management can be demonstrated by capacity to adapt fast, save money, be sensitive to market and consumer demands, preserve flexibility, and perform at its peak level of productivity consistently. Agility encompasses a variety of concepts, including adaptability, awareness, rapidity, assertiveness, and accessibility (Abdel-Basset, 2018).

According to Kalaitzi et al. (2018), inter-company supply chain methods have been demonstrated to be efficient in attaining common goals across all departments, from procurement to production, distributors, retail, and consumers (Lee, 2021). Organizations are beginning to recognize that increasing efficiency within a company alone will not be enough in today's dynamic global market environment; the entire supply chain must be competitive (Moradinasab et al., 2018). Organizations with a strong culture will benefit employee performance. According to Meng and Berger (2019), organizations have a connection between organizational culture, strategy, and overall performance. Younis and Sundarakani, (2019) state that organizations also execute operations to evaluate business performance, which includes internal manufacturing processes, employee engagement, capacity utilization, quality control, and methods. Numerous studies indicate that firms should increase their focus on supply chain operations since they play a critical role in overall company performance (Asad & Siddiqui, 2019; Jimenez-Jimenez, 2018; Suifan, 2020; Pinheiro et al., 2022). In addition, supply chain management contributes and is very effective in facilitating the distribution of goods from producers to consumers in general, retail businesses have the following objectives: price competition; consumer demands and needs; internal communications, the impact of the digital age, and maintaining customer loyalty (Bag et al., 2018; Cheng et al., 2016; Fayezi & Zomorodi, 2015; Kumar et al., 2020; Odoom, & Mensah, 2019). Meanwhile, Marchiori et al. (2022) believe that successfully using technology which is integrated so that it has an impact related to the internal strategy of the organization so that there will be an increase in the performance of supply chain operations.

The purpose of this study is to explore the impact of supply chain organizational variables and supply agility on supply chain performance variables: through supply chain strategy as a mediating variable in retail shops. Therefore, the purpose of this study can be a reference as well as to add insight with a new framework and to clarify the interactions between the variables studied.

## 2. Literature review

### 2.1 Business of retail shops

Retail is a very vital link in the distribution network. With the existence of retail, it makes it easier for producers to focus on producing goods without having to think about where their products end up (Bruni & Piccarozzi, 2022). That is why most large companies do not sell their products directly to consumers. Even so, large companies do not establish subsidiaries that sell their products directly to consumers since the distribution of goods to the final consumer cooperates with retail players. The meaning of retail is also different from wholesale. Wholesalers sell goods in bulk, and they will not have to deal with many final consumers (Barbosa & Casais, 2022). Types of retailing according to Berman et al. (2017); Levi et al. (2018); and Thayne et al. (2019), classify retailers to the product lines they sell, namely: Store Retailing, which this category are:

1. Specialty Shops: is a special store that sells a narrow product line with a variety of goods contained in that line. In this case, retailers try to serve consumers from one or a small number of market segments by providing specialized products. In general, the volume is not too large, privately owned, and the legal entity is in the form of an individual business. Retail shops specializing in electronic goods and a Holland Bakery selling only bread.

2. Convenience Shops: are relatively small stores located in residential areas or high traffic lanes, have long opening hours (24 hours) seven days a week, have a high turnover rate, and sell a limited line of convenience products such as beverages, snacks, candy, cigarettes, etc. The long opening hours and because consumers only buy in this store as a “complementary” make this store a high-priced operation.
3. Grocery Shops, this type of retail business provides many product categories which are generally intended to meet the daily needs of consumers. Some of the product categories available include fresh food, canned food, snacks, beverages, cosmetics, kitchen needs, bathroom needs, and other household needs. Physical examples of convenience stores are department stores, supermarkets, mini-markets, and so on.

## 2.2 Supply Chain Management

Supply chain management (SCM) is a word that relates to the process of operations starting with suppliers, manufacturers, distributors, and retail outlets, and ending with the customer or user. SCM is an umbrella phrase that refers to a multitude of functions, including production, purchasing, and information systems management (Bagher, 2018). Supply chain management is a collection of interconnected approaches for increasing vendor efficiency, manufacturing processes, warehouses, distributors, and retailers. As a result, inventory optimization occurs beginning from raw materials from suppliers, then entering the warehouse as inventory as input and continuing the production process until they become goods that are ready to be marketed, as well as the procedure by which manufactured commodities are distributed to customers at a reasonable price (Shafiei, & Tarmost, 2014; Kilay et al., 2022). According to Tay and Low (2017); Huang et al. (2018); Yu et al., (2019), SCM is a process to streamline from upstream to downstream to ensure that the product is delivered with the appropriate quantity and volume, place, schedule, thereby efficiency costs and ultimately ensuring the satisfaction of the customer (Nguyet et al., 2021; Khoironi et al., 2018; Bagher, 2018). According to Thatte et al. (2013), SCM improves firm performance and competitive advantage. Maulina and Nankusumah (2020) state that effective SCM can help firms improve their financial and operational performance (Horská et al., 2020)

## 2.3 Supply Chain Organizational

An organization is a group of people coming together to work toward a common goal, participating in cooperative activities, and developing professional relationships. It is not a goal in and of itself but a tool for achieving goals; a place for people to come together and work together; a dynamic series of hierarchies; and the ability to conduct business with efficiency and competitiveness while releasing human imagination (Coller, 2022). The supply chain is the network that transports resources, payments, information, and services from raw material suppliers to enterprises that create products, after that to warehouses, and lastly to customers. The supply chain organization is in charge of managing supply chain activities in order customer value must be maintained for the future (Ojha, et al., 2018).

Faced with a rapidly changing market, corporations are always pursuing ways to maintain their unique strength through ongoing product and service quality improvement, response time, and cost-effectiveness. Typically, an organization's performance is evaluated on a variety of levels throughout a time defined by objectives. Assessments of organizational performance can be viewed as a way for all stakeholders in order to get a better explanation of the problem and solutions for performance, provide transparent information to facilitate collaboration, and improve efficiency is synonymous with improvement following the performance evaluation (Menne et al., 2022). The term organizational performance; financial objectives and market criteria successfully (Masadeh, et al. 2018; Lovett, et al., 2022; and Rahman et al., (2022), by categorizing organizational performance into two aspects: marketing and logistic. Logistics performance is a business's capacity to provide products and services in an acceptable quantity and on time in response to client requests, whereas marketing performance is a company's ability to increase revenue in contrast to its competitors. Rekha and Sowmya (2019), address the measurement of an organization's performance.

Supply chain organization is very important for the next discussion, therefore motivating organizations to modify activities to impact supply chain operational performance (Lozano & Haartman, 2018; Moktadir et al., 2018). Predicting the future need to change to focus on supply chain operational performance, business, economy, and society are primarily looking for innovative solutions to assist organizational change to improve operational performance (Ivanaj et al., 2017; Saavedra et al., 2018; Zhu & Geng, 2013). Apart from that, changes in supply chain organization for operational efficiency to create new building trust in consumers (Moktadir et al., 2018). The existence of challenges and obstacles will prevent organizations from implementing supply chain organizations to reach the target of operational performance (Uyara et al., 2014). Implementing a supply chain organization for different organizations will of course affect different supply chain strategies. The supply chain strategy can be implemented in supply chain management (Gamage et al., 2020). Supply chain is a series of value-added activities found between companies as a supplier of raw materials to the company to become finished goods and finally to consumers or users. Considering the above discussion, we present below:

**H<sub>1</sub>:** *There is a direct impact of supply chain organizations on supply chain operational performance.*

**H<sub>2</sub>:** *There is a direct impact of supply chain organizations on supply chain strategy.*

## 2.4 Supply Agility

Tan, et al. (2017), agility is a critical element of the innovation part of the supply chain (Abdallah & Nabass, 2018; Arora & Gigras, 2018; Samdantsoodol et al., 2017). Additionally, agility is recognized as the most crucial success aspect in today's competitive environment due to its position in assisting in meeting market needs (Bidhandi & Valmohammadi, 2017). The agility of a company's supply chain has an impact on its financial performance. Furthermore, Arora & Gigras, (2018) found that increasing supply chain agility could potentially improve the financial performance of firms in their analysis. Agility has been proven in the past to boost performance (Munteanu et al., 2020; Chan et al., 2017; Yeow et al., 2019; Suresh et al., 2019). According to previous studies, the performance of the supply chain increases when the supply chain occurs agile. (Bag et al., 2020). When the supply chain management's situation is endangered, agility is a vital component of the supply chain management's ability to endure environmental uncertainties. Businesses can deliver the correct things at the right time because of agility (Rane & Narvel, 2021). Sangari and Razmi (2015) reported the critical components necessary for supply chain agility success. Hutahayan, (2021), supply chain agility was evaluated using a structural equation model that included internally or externally in an integrated manner from upstream to downstream organizations, as well as external flexibility. Schniederjans et al. (2016) examined the effect of cloud computing on humanitarian supply chains' collaboration and agility. The importance of an agile organization is to quickly meet customer needs, introduce new products promptly to achieve strategic alliances with their customers (Gligor & Holcomb 2012). Therefore, SC agility serves as a very important supply chain operational performance to improve business performance (Chiang et al. 2016; Um, 2017). This idea has been supported by Tse et al. (2016), that SC agility positively affects the company's performance. Kumar and Bhatia, (2021), found that an organization's supply chain agility and performance were correlated. Considering this more recent literature, we propose as follow:

**H<sub>3</sub>:** *There is a direct impact of supply agility on supply chain strategy.*

**H<sub>4</sub>:** *There is a direct impact of supply agility on supply chain operational performance.*

## 2.5 Supply Chain Strategy

A strategy is an organization's action plan for achieving its objective (Fernando et al., 2018). A strategy is a pattern or plan that encapsulates an organization's primary objectives, policies, and actions (Seclen-Luna et al., 2021). According to Kiptoo and Koech (2019), corporate performance is based on supply chain capabilities to meet the supply chain's end needs (Patel, 2017), SCS is critical and must be created in order for nivation to perform better. Aldakhila et al. (2020), supply chain plans are critical for firm success; additionally, supply chain management strategies have evolved into a strategic instrument for increasing competitiveness and have become a major concern for companies with senior management roles. However, an integrated supply chain management approach should also be considered. According to Abbasi et al. (2021) and Ryu et al. (2016), supply chain strategy is positively correlated with supply chain management commitment. According to Lee (2021), supply chain strategy improves supply chain management and capabilities in logistics, this could result in improved business performance. Supply chain strategy, according to (Dubey et al., 2018a; Patel, 2017), rules both things at the same time (regulation of universality and integration in the business of doing business). Considering the above theoretical reasoning and empirical evidence we advance the following hypothesis:

**H<sub>5</sub>:** *There is a direct impact of supply chain strategy on supply chain operational performance.*

## 2.6 Supply Chain Operational Performance

Operational performance can be characterized as the ability to meet customer needs, respond to changes in the market, deliver items on schedule and in good quality, reduce the time it takes to fill orders, reduce overhead, and reduce inventory costs (Rajaguru & Matanda, 2019; Munir, et al., 2020). The term an organization's strategic collaboration with other enterprises is a logical, efficient, and effective job to do things. Supply chain operational performance consists of a series of procedures and activities that begin with the acquisition of raw materials and end with the delivery of completed items to consumers (Boutayeba, 2017). Organizational performance is a basic issue for all organizations, whether for-profit or non-profit (Abdissa et al, 2012). All these metrics measure performance of pre-sale and post-sale customer service levels as well as overall product quality and product support; delivery reliability and volume flexibility (Wong, et al., 2021; Zhao, et al.,2013). Organizational performance is the sum of a company's operational capabilities and the competitiveness characteristics obtained from supply chain integration (Rajaguru & Matanda, 2019; Doan, 2020). Managers must grasp the variables impacting the performance of the organization to generate positive organizational performance and achieve goals. The ability of a business to fulfill its objectives via the effective and efficient use of its resources is referred to as performance (Hong et al., 2019). Quality of service, overall quality of products, product support, reliability, pre-sale customer care, product delivery, and production volume are all factors that influence operational performance (Yu & Huo, 2018; Battesini et al., (2021). Organizational strategy is sometimes misinterpreted for the organization's performance (Hani, 2021). Organizational performance is constantly monitored and regulated to advance the organization's strategy (Tarigan & Siagian, 2021). The performance indicators used to assess an organization's operational performance are product quality, requirement fulfillment, service quality, time of delivery, and flexibility (Wong, et al., 2021).

Based on hypotheses H1 – H5, which have been described in each of the previous literature reviews, while for hypotheses H6 and H7, it is a differentiation from the results of previous studies, and besides that, empirically researchers want to know strategy variable as a mediating variable against variable. Therefore:

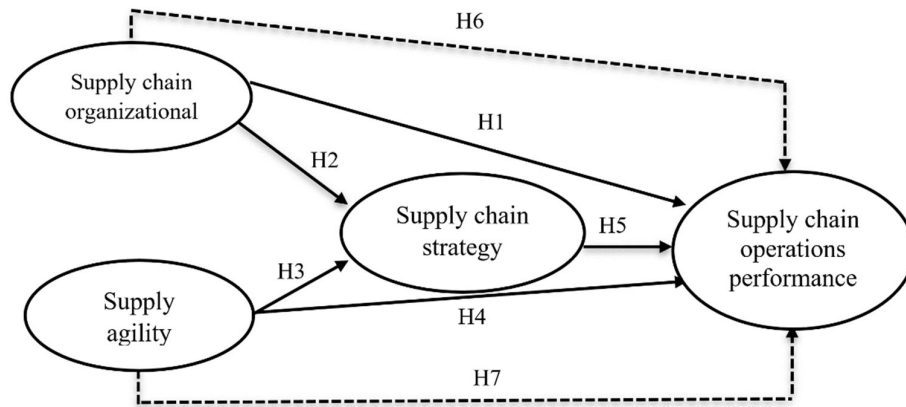
**H<sub>6</sub>:** *There is an indirect impact of supply chain organizations on supply chain operational performance through supply chain strategy.*

**H<sub>7</sub>:** *There is an indirect impact of supply chain agility on supply chain operational performance through supply chain strategy.*

**3. Research Method**

*3.1. Research Design and Research Framework*

Starting with hypotheses and their operational implications, the research design is a thorough plan for the research that covers everything that the researcher will accomplish, from developing hypotheses to doing data analysis. Both the structure of the research problem and how it will be investigated are stated in a research design, which is also known as an investigation plan. A quantitative strategy is used in this study, which is a method for addressing research questions including numerical data and statistical programs. A quantitative approach is an approach in which the research results are presented in a descriptive form using statistical figures. While the type of research design is experimental on the quality of an event by manipulating the object of research, as well as controlling it. In this study, about these variables as a research framework. This research was conducted within the following frameworks, as illustrated in Fig. 1.



**Fig. 1.** Research Framework

*3.2 Data Source*

This study uses primary data whereby conducting a survey directly to the respondents. This survey was conducted directly by filling out the research instrument that had been prepared in advance by the researcher. This survey was conducted twice, the first is the preliminary survey and the second is the actual survey. Where a preliminary survey to test the validity of knowing whether there are questions that are not valid and test the reliability of the study method by experimenting. A total of 180 participants were surveyed for this study. While the sample was chosen via a purposive sampling strategy. Retail sites are located throughout Indonesia's cities and regencies, including in Surabaya city; in Semarang city; Jakarta City; in Denpasar city; and Yogyakarta city. Respondents must be supervisors of retail shops and the characteristics of companies that have been open for at least three years, as shown in Table 1 below:

**Table 1**  
Characteristics of Retail Shops of Minimarket

Location	Start operational (Year)			
	3 - 5	6 - 10	11 -15	>15
Surabaya	11	18	8	3
Semarang	15	16	4	-
Jakarta	2	18	14	6
Denpasar	14	16	5	-
Yogyakarta	2	23	5	-
<b>Total</b>	44	91	36	9
<b>Percentage (%)</b>	24.44	50.56	20.00	5.00

Sources: Data processed in 2021

### 3.3 Measurement Scale

The statistical approach is strongly tied to the measurement scale, so defining it is critical. A Likert scale of 1-5 was utilized in this survey (Taherdoost, 2019).

### 3.4 Research Instruments

Research instruments are tools used by researchers in collecting data, to facilitate the research process and obtain systematic results. A research instrument is a research tool for measuring natural and social phenomena that are the focus of researchers, which are all specific.

#### 3.4.1 Validity Test

According to Surucu and Maslakci (2020), when a questionnaire's questions reveal anything that is measured by the questionnaire, it is considered legitimate. A measuring instrument's validity can be determined by determining whether or not it measures what it claims to. If someone wants to measure the weight of an object, then he must use a scale. Scales are valid tools when used to measure weight because scales are meant to measure weight. If the researcher uses research instruments or questionnaires in collecting research data, the questionnaire that is compiled must measure what it is supposed to measure. The process in testing the validity are: (1) define operationally the concept to be measured; (2) conduct trials of the measurement scale on several respondents; (3) prepare the answer tabulation; and (4) calculate the correlation between a question and to determine the total score by using the product moment correlation formula. In this study, the researcher tested the validity using SPSS 25. To test the validity of the instrument

#### 3.4.2 Reliability Test

According to Surucu and Maslakci (2020), reliability is a measurement result that can be trusted from a measuring instrument. The measurement results can be trusted or relied on only if several times the implementation of measurements on the same group of subjects obtains the same results if the object being measured in the subject has not changed. A good instrument will not be tendentious, or direct respondents to choose certain answers. This study used a questionnaire, then used Cronbach Alpha with the help of SPSS 25. Cronbach's Alpha value of 0.60 must be used to determine whether the instrument item is dependable. More than a 0.60 global Alpha coefficient establishes the source's trustworthiness.

### 3.5 Hypothesis test

This research uses a quantitative method approach and uses a Structural Equation Modeling approach. This method is a powerful method of analysis because it lacks dependence on the measurement scale, sample size, and distribution of residuals (Garson, 2016). In Structural Equation Modeling, variables are divided into two types, namely manifest variables, and latent variables. For this study, researchers used latent variables because the variables cannot be directly measured (work environment, employee engagement, and employee performance). The variables that make up this analysis model will then be evaluated with the evaluation stages of measurement and structural models. These are required indicators as a measure, which are known as latent variables (Avkiran & Riegle, 2018). In SEM, there are two types of latent variables: endogenous latent variables and exogenous. Both the exogenous latent variable and the endogenous latent variable serve as independent lags.

#### 3.5.1 Partial Least Squares (PLS)

Several dependent and independent variables using the statistical approach of Partial Least Squares (PLS) analysis. PLS analysis is frequently used to create causal models of linear relationships between exogenous and endogenous latent variables with little theoretical support (Garson, 2016; Shiau, et al., 2019).

#### 3.5.2 Evaluation of the Goodness of FIT Model PLS

At this point, the model's applicability is being evaluated using a variety of goodness-of-fit metrics. The outer and inner models of the PLS model are evaluated to determine the model's performance (Ali, et al., 2018; Henseler, 2017). The outer model (measurement model) is a concept that determines the relationship between latent variables with indicators (Ali, et al., 2018). When it comes to models, the inner model is a model that focuses on latent and exogenous variables (Ali, et al., 2018). For the Structural Equation Modeling test, SmartPLS version 3.2 is used, and the outer model and the inner model are the two key components. According to (Garson; 2016; Avkiran & Riegle, 2018) the two keys are:

##### 3.5.2.1 Outer Models

These variables are linked to each indicator in a way that is detailed in this model. As another way to put it, the outer models define how each indication is connected to the latent variable. Tests on the exterior model are included:

- 1) Indicator reliability: based on outer loading, if the value  $> 0.7$  then variable indicators need to be maintained for theoretical test (Rasoolimanesh & Ali, 2018)

- 2) Discriminant Validity: Cross-loading variable indicator and Fornell-Larcker are the two approaches. There must be a greater difference in value between the cross-loading indicator variable and the other latent variables. Fornell-Larcker each latent variable must correlate larger than the correlation between latent variables (Ali, et al., 2018)
- 3) Internal consistency is assessed using composite reliability. The value theory test research must be more than 0.7 (Hair, et al.,2017b). In addition, Cronbach's alpha can also be used where the value must be  $> 0.7$ .
- 4) Convergent Validity is the correlation across indicator values and latent variable scores in the research. As an indicator of convergence, we look at the AVE (Average Variance Extracted) value, which ought to be at least 0.5 (Hair, et al., 2017a)

### 3.5.2.2 Inner Model

Inner models, which describe the effects independent and dependent latent variable, must be evaluated after the outer model has been evaluated. At this point, there are two primary evaluations, namely:

- 1) First, using the t-test, we may determine the significance and magnitude of the independent latent variable. To see if the independent latent variable influences the dependent latent variable, a T-test is used. Path analysis coefficients can also be used to evaluate the impact of each independent latent variable. Through the bootstrapping process, an estimated T value of  $> 1.96$  can be produced. You can't have the value of 1.96 less than the value of 1.96 (Kock, 2018)
- 2) A study with an  $R^2$  greater than or equal to 0.7 is considered high-quality since it indicates that the independent variable's change is more stable than the dependent variable's (Rasoolimanesh & Ali, 2018).

## 4. Findings

### 4.1. Testing of Validity and Reliability

According to Hair et al., (2019), a measurement instrument is said to be legitimate if the statements contained within it may be used to demonstrate anything to measure. Meanwhile, the dependability test validates that the technology used to collect dependable data may also reveal data in its natural state. According to Hair, et al., (2019), a reliability test determines if the results are consistent over time.

**Table 2**  
Reliability and Validity Test Result

Variables.	Indicator.	Validity Testing			Reliability Testing		
		Pearson-Correlation	Sig.	Remarks.	Cronbach's Alpha If Deleted	Cronbach's Alpha	Remarks
Supply chain organizational (SCO)	SCO1	<b>0.829</b>	<b>0.000</b>	valid	<b>0.821</b>	<b>0.859</b>	reliable
	SCO2	0.781	0.000		0.831		
	SCO3	<b>0.808</b>	<b>0.000</b>		<b>0.826</b>		
	SCO4	0.701	0.000		0.846		
	SCO5	<b>0.758</b>	<b>0.000</b>		<b>0.835</b>		
	SCO6	0.611	0.000		0.832		
	SCO7	<b>0.659</b>	<b>0.000</b>		<b>0.852</b>		
Supply agility (SA)	SA1	0.650	0.000	valid	0.735	0.869	reliable
	SA2	<b>0.513</b>	<b>0.000</b>		<b>0.860</b>		
	SA3	0.705	0.000		0.839		
Supply chain strategy (SCS)	SCS1	<b>0.750</b>	<b>0.000</b>	valid	<b>0.804</b>	<b>0.849</b>	reliable
	SCS2	0.575	0.001		0.837		
	SCS3	<b>0.513</b>	<b>0.004</b>		<b>0.730</b>		
Supply Chain Operational Performance (SCOP)	SCOP1	0.792	0.000	valid	0.906	0.915	reliable
	SCOP2	<b>0.795</b>	<b>0.000</b>		<b>0.904</b>		
	SCOP3	0.753	0.000		0.908		
	SCOP4	<b>0.766</b>	<b>0.000</b>		<b>0.909</b>		
	SCOP5	0.827	0.000		0.901		
	SCOP6	<b>0.777</b>	<b>0.000</b>		<b>0.906</b>		
	SCOP7	0.820	0.000		0.902		
	SCOP8	<b>0.832</b>	<b>0.000</b>		<b>0.900</b>		

Source: Data Processing Results (2022)

Table 2 shows the validity assessment of items for each variable with a significance level of  $0.000 < 0.05$ . As a result, all signs have been determined to be authentic. While doing Cronbach Alpha reliability testing on all indicators are 0.6.

### 4.2 Outer Model Evaluate

With the aim of confirming the validity and reliability of the model. While the outer model is utilized as a calibration model in partial least squares analysis. The estimation method for the PLS model is summarized in Fig. 2.

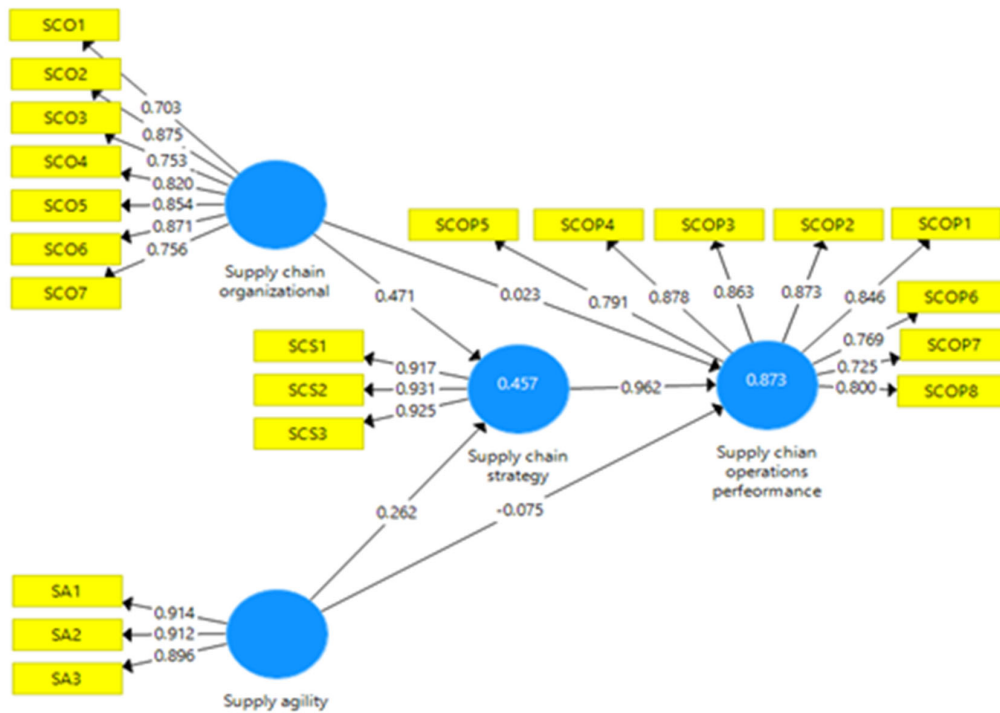


Fig. 2. Path Analysis Diagram Outer Model

The test also includes evaluating the outer model as follows:

#### 4.2.1 Indicator Reliability

Table 3

Value of Outer Loading

Indicators	Supply Chain Organizational (X1)	Supply Agility (X2)	Supply Chain Strategy (Z)	Supply Chain Operations Performance (Y)
1 SCO1	0.703			
2 SCO2	0.875			
3 SCO3	0.753			
4 SCO4	0.820			
5 SCO5	0.854			
6 SCO6	0.871			
7 SCO7	0.756			
8 SA1		0.914		
9 SA2		0.912		
10 SA3		0.896		
11 SCS1			0.917	
12 SCS2			0.931	
13 SCS3			0.925	
14 SCOP1				0.846
15 SCOP2				0.873
16 SCOP3				0.863
17 SCOP4				0.878
18 SCOP5				0.791
19 SCOP6				0.769
20 SCOP7				0.725
21 SCOP8				0.800

Source: Data Processing Results (2022)

As shown in Table 3, for value of outer loading of each question indication is  $> 0.5$  for all variables, meaning that the structural of model's question indicators are already greater than 0.5.

#### 4.2.2 Discriminant Validity

After determining of convergent validity, discriminant validity is determined through cross-loading value evaluations. The results are summarized in Table 4.



**Table 4**  
Cross Loading

Indicators	Supply Chain Organizational (X1)	Supply Agility (X2)	Supply Chain Strategy (Z)	Supply Chain Operations Performance (Y)
1	SCO1	<b>0.703</b>	0.913	0.579
2	SCO2	<b>0.875</b>	0.465	0.568
3	SCO3	<b>0.753</b>	0.477	0.437
4	SCO4	<b>0.820</b>	0.423	0.551
5	SCO5	<b>0.854</b>	0.514	0.530
6	SCO6	<b>0.871</b>	0.913	0.579
7	SCO7	<b>0.756</b>	0.465	0.568
8	SA1	0.694	<b>0.914</b>	0.570
9	SA2	0.587	<b>0.912</b>	0.528
10	SA3	0.550	<b>0.896</b>	0.476
11	SCS1	0.609	0.535	<b>0.917</b>
12	SCS2	0.598	0.545	<b>0.931</b>
13	SCS3	0.590	0.529	<b>0.925</b>
14	SCOP1	0.577	0.518	0.898
15	SCOP2	0.600	0.547	0.916
16	SCOP3	0.571	0.514	0.914
17	SCOP4	0.626	0.588	0.858
18	SCOP5	0.340	0.209	0.584
19	SCOP6	0.326	0.220	0.566
20	SCOP7	0.303	0.180	0.566
21	SCOP8	0.391	0.260	0.613

Source: Data Processing Results (2022)

According to Table 4, when discriminant validity is evaluated using cross-loading, it is well-known that the cross-loading of indicator items on latent variables is greater than that of other latent variables; thus, referring this result demonstrates that discriminant validity can be properly evaluated using cross-loading values.

4.2.3 Composite Reliability

The reliability and alpha Cronbach coefficients of the outer model can be analyzed. There were more than 0.70 Cronbach's alpha and reliability values for each of the composites. Cronbach's alpha and reliability values are listed here. Each variable in the study model of a Cronbach's alpha and reliability value > 0.6, as shown in Table 5. We can infer from our results that all of the variables in our study satisfied the composite reliability standards.

4.2.4 Convergent Validity

Finally, if the outer loading value > 0.7, AVE values larger than 0.50 are another indicator of validity convergence. (Sekaran & Bougie, 2016). Outer loading is shown in Table 6.

**Table 5**  
Cronbach Alpha and Composite Reliable

No		Cronbach Alpha	Composite Reliability
1	Supply chain organizational	0.910	0.929
2	Supply agility	0.893	0.933
3	Supply chain strategy	0.915	0.946
4	Supply chain operations performance	0.931	0.942

Source: Data Processing Results (2022)

**Table 6**  
Average Variance Extracted Value

	Indicators	Outer Loading	Average Variance Extracted (AVE)
Supply chain organizational (SCO)	1 SCO1	0.703	0.651
	2 SCO2	0.875	
	3 SCO3	0.753	
	4 SCO4	0.820	
	5 SCO5	0.854	
	6 SCO6	0.871	
	7 SCO7	0.756	
Supply agility (SA)	8 SA1	0.914	0.824
	9 SA2	0.912	
	10 SA3	0.896	
Supply chain strategy (SCS)	11 SCS1	0.917	0.854
	12 SCS2	0.931	
	13 SCS3	0.925	
Supply chain operations performance (SCOP)	14 SCOP1	0.846	0.672
	15 SCOP2	0.873	
	16 SCOP3	0.863	
	17 SCOP4	0.878	
	18 SCOP5	0.791	
	19 SCOP6	0.769	
	20 SCOP7	0.725	
	21 SCOP8	0.800	

Source: Data Processing Results (2022)

4.3. Evaluation of inner model

This follows the examination of inner model (Henseler et al., 2015). Using the inner model, researchers can predict causal connections (causal interactions) between latent variables or non-quantifiable variables. Using the theory's substance of structural model or inner model explains of link between latent variables. For structural models, a variety of tests exist, such as the following: (1) R Square on endogenous constructions (Sekaran & Bougie, 2016). (2) Path coefficients, or the size of the relationship/influence between latent components, should be estimated. (3) Dimensions of Impact (F Square). Endogenous buildings fitted with reflective indicators make this possible. (Henseler et al., 2015). For the first step, the relevance of structural model is determined by studying the interactions between the constructs/variables. Path coefficients are used to quantify the strength of a relationship between two different concepts. The route coefficient's sign or direction must be consistent with the posited theory, and its significance can be determined using the t-test or the CR (critical ratio) produced by the bootstrapping method (Fig. 3).

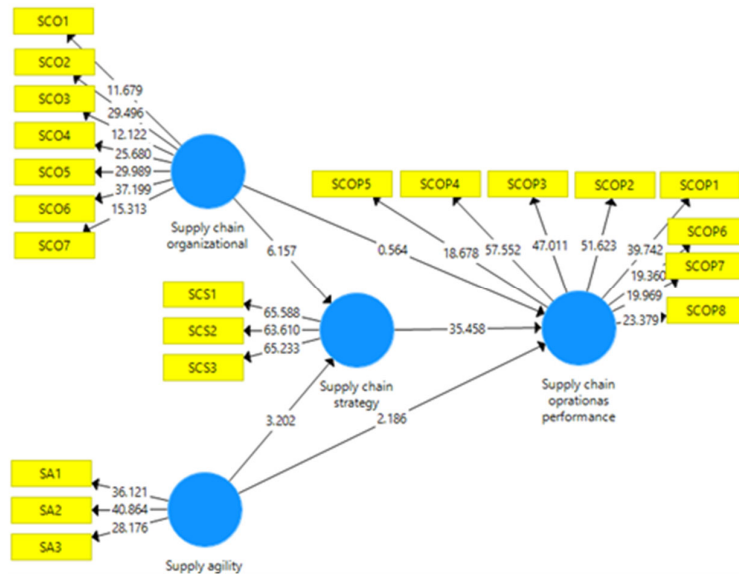


Fig. 3. Diagram of Inner Model

4.3.1 R-Square

For R-squared ( $R^2$ ) test is used to determine a structural model's Goodness of Fit. The R-squared ( $R^2$ ) value is used to determine the degree to which specific independent latent variables affect the dependent latent variable. This quality of fit is determined by examining the R-square value provided by each path's Smart PLS estimation. The R-square is calculated as follows data is processed using the PLS method (Table 7).

Table 7  
R Square

	R Square
SCS	0.457
SCOP	0.873

Source: Data Processing Results (2022)

The overall coefficient of determination, Total  $R^2 = 1 - (Pe_1^2 \times Pe_2^2)$ , and the error parameter,  $Pe_i$ , is derived using the formula  $Pe_i = (1 - R_i^2)^{0.5}$ .  $Pe_1$  and  $Pe_2$  values were calculated using the analytical data, with  $R_1^2 = 0.457$  and  $R_2^2 = 0.873$ , resulting in the following  $Pe_1$  and  $Pe_2$  values:

$$Pe_1^2 = (1 - 0.457)^{0.5} = 0.2715$$

$$Pe_2^2 = (1 - 0.873)^{0.5} = 0.0635$$

The following equation yields the overall coefficient of determination:

$$\text{Total } R^2 = 1 - (Pe_1^2 \times Pe_2^2)$$

$$\text{Total } R^2 = 1 - (0.2715 \times 0.0635)$$

$$\text{Total } R^2 = 1 - 0.01724 = 0.9828$$

## 5. Discussions

### 5.1. Respondent Description

The subjects of this research are the supervisors of each minimarket: Alfamidi; Alfamart; Infomart; and Circle K. According to the Indonesian Standard Classification of Business Fields (KBLI) in 2009, the criteria for minimarket businesses include small-scale businesses. Based on the calculations, the cumulative determination coefficient (Total  $R^2$ ) is 0.9828, suggesting that the structural model can account for 98.28 percent of the variance in the research data.

**Table 8**  
Respondent Description of Minimarket in 2022

Description	Frequency	Percentage (%)
<b>Gender</b>		
Male	103	57.22
Female	77	42.78
<b>Minimal of Education</b>	All respondents graduated is Bachelor's degree (S1)	
<b>Total</b>	180	100.00
<b>Age</b>		
22 – 24 Years	41	22.78
25 – 27 Years	57	31.66
28 – 30 Years	82	45.56
<b>Total</b>	180	100.00

Source: Data Processing Results (2022)

As seen in Table 8, there are a total of 180 respondents, of which 57.22% are male and 42.78% are female. As a supervisor, you have worked for at least 3 years, and judging by the age of the Supervisor it is correlated with the length of work, so that if you see that the age is getting higher, the frequency is also high, as can be seen in Table 8. Note: during the employee recruitment process, the maximum age requirement is 25 years

### 5.2. Direct Effect Evaluation

The correlational analysis was used to test the research hypotheses developed previously. The following are the findings from a direct effect evaluation of the research hypothesis (Table 9)

**Table 9**  
Result of Direct Effect

	Original Sample (O)	Standard Deviation (STDEV)	T Statistics ((O/STDEV)	P Values	Remarks
SCO → SCOP	- 0.075	0.033	2.269	0.024	negative & significant
SCO → SCS	0.262	0.084	3.123	0.002	positive & significant
SA → SCS	0.471	0.078	6.015	0.000	positive & significant
SA → SCOP	0.023	0.038	0.593	0.533	positive & not significant
SCS → SCOP	0.962	0.026	36.531	0.000	positive & significant

Source: Data Processing Results (2022)

Based on Table 9 as follows:

**H<sub>1</sub>:** A T-Statistics value of 2.269 and p-value of 0.024 were used to establish the first theory that there is impact of supply chain organizations on supply chain operations performance. T statistic value = 2.269 > 1.96, and p-value = 0.024 < 0.05. However, O (Original Sample) has a negative value = - 0.075. As a result, it's safe to say that issues affecting supply chain organizations have a considerable impact on the overall effectiveness of supply chain operations. If the supply chain organization variable has a larger impact on supply chain operations performance, it also has an adverse effect.

**H<sub>2</sub>:** Hypothesis on supply chain organizations' channel effect and supply chain strategy is supported by T-Statistics value = 3.123, and p-value of 0.002. T-Statistics value = 3.123 > 1.96 and p-value = 0.002 < 0.05, which indicates a strong direct link between supply chain strategy and supply chain organization. An interesting correlation exists between supply chain strategy and the relationship between strategy and supply chain organization, which suggests a positive correlation between these two variables.

**H<sub>3</sub>:** A T-Statistics value = 6.015 and p-value = 0.000 is obtained for the third theory, which discusses the relationship between supply agility and supply chain strategy components. T-Statistics value = 6.015 > 1.96, and p-value = 0.000 < 0.05, which indicates that supply agility has a significant direct effect on supply chain strategy elements. There is a positive

correlation between the supply agility and supply chain strategy variables, so it is stated that when the agility variable increases, it also affects the increase in supply chain strategy

**H<sub>4</sub>:** T-Statistics values are 0.593 and p-values = 0.533 support the fifth hypothesis on the relationship between supply agility and supply chain operations performance. Supply agility's T-Statistics value = 0.593 < 1.96 is compared to supply chain operational performance = 0.533 > 0.05, which indicates that there is no direct link between supply agility characteristics and supply chain operational performance. Supply agility has a positive effect on supply chain performance, but the effect is not statistically significant, indicating that the supply agility variable does not affect supply chain performance.

**H<sub>5</sub>:** A T-Statistics value = 36.531 and p-value = 0.000 are used to get at the theory impact of supply chain strategy and supply chain operations performance. It appears that supply chain strategy has a significant impact on the efficiency of supply chain activities, as evidenced by T-Statistics value = 36.531 > 1.96 and p-value = 0.000 < 0.05. It can be concluded that supply chain operations can be linked to a more effective approach to the supply chain's overall management and execution.

### 5.3. Evaluation of Indirect Effect

SmartsPLS analysis's indirect effect results are summarized in effect output in Table 10.

**Table 10**  
Result of Indirect Effects

	Original Sample (O)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P Values	Remarks
SCO → SCS → SCOP	0.453	0.081	5.605	0.000	positive & significant
SA → SCS → SCOP	0.252	0.085	2.956	0.003	positive & significant

Source: Data Processing Results (2022)

According to Table 10, the evaluation's indirect effect is summarized as follows:

**H<sub>6</sub>:** An additional, T-Statistics result supports the hypothesis that supply chain organizations can influence supply chain operations performance indirectly or through the mediation of variables in the supply chain strategy. This hypothesis is the most likely to be correct. There was a good and significant impact on supply chain operations from indirect or through the mediation of supply chain strategy components between supply chain businesses, as evidenced by T-Statistics values = 5.605 > 1.96 and the significance level = 0.000 < 0.05, as shown by these data.

**H<sub>7</sub>:** There are seven hypotheses in this study, and the seventh is that supply agility has an indirect or mediating effect on the performance of supply chain operations through components in the supply chain strategy. We found that T-Statistics has a value of 2.956 > 1.96, which indicates that supply agility has an impact on supply chain operations performance and that they have a significant significance level = 0.003 or less.

### 5.4 Discussion Summary

1. The effect of supply chain organization on supply chain operational performance, the result is negative. What is the reason for the negative influence because the supply chain organization does not support supply chain operational performance, in other words just the opposite?

2. The results of the reasoning analysis in determining the H<sub>6</sub> and H<sub>7</sub> hypotheses, it is still difficult to find empirical research results that discuss the supply chain strategy variable as an intervening variable. The fact is that the results of the H<sub>7</sub> analysis are better, which shows the results that have a positive and significant effect on supply chain operational performance when compared to H<sub>4</sub> which shows a positive but not significant effect.

3. The effect of Supply Agility on supply chain operational performance, the results are not significant. Why is that, because supply agility has no effect so in other words supply agility is not needed.

4. The researcher's most basic limitations include: first, in data collection, the researcher could not come directly to all the places that were the target of the distribution of research instruments, because the locations of the frightening sites were relatively far apart, so the researchers used research assistants. Second, it took a long time to recapitulate the data, because they had to wait for data from various locations to be collected. Third, reports from research assistants, when they go to the outlet they cannot directly meet with the Supervisor, considering that sometimes the Supervisor has to go to work on the 2<sup>nd</sup> or 3<sup>rd</sup> shift.

## 6. Conclusions, Research Limitations, and Suggestions

### 6.1. Conclusions

Retail shops are the most important link in supply chain management because it is retail shops that will interact directly with end consumers. Given this role, it is the retailer's responsibility to analyze customer wants and needs and work with other members of the supply chain such as wholesalers, manufacturers, and transportation companies. Therefore, to improve the efficiency of an organization, then a series of supply chains within an organization that makes the organization more competitive. Thus, an understanding of supply chain management (SCM) has become an important prerequisite for organizations to remain competitive in a globalized world and to increase profits.

Supply chain concerns have risen to the top of the priority lists of company leaders because of globalization's impact on the corporate sector. Furthermore, it shall continue to make attempts to analyze in light of the following findings: a. To begin with, it is hypothesized that supply chain organizational characteristics have a substantial impact on direct influence on the performance of supply chain activities. In this study, the results of the supply chain organization process on supply chain operating performance were in a negative but statistically significant direction, indicating that if the supply chain organizational variable has a greater effect on supply chain operating performance, then it also has a negative effect. As demonstrated by the second premise, there is a significant direct relationship between supply chain strategy and supply chain organizational structure. According to a coincidental finding, the association between supply chain organization and supply chain strategy is positive, indicating that when the supply chain organization variable rises, the relationship between supply chain strategy and supply chain organization increases as well. As demonstrated by the third hypothesis, the factors of supply chain strategy are significantly affected by supply agility in a direct and significant way. The significant association between the supply chain agility variable and the supply chain strategy variable is positive, meaning that if the supply chain agility variable grows, the supply chain strategy would increase as well, as shown in Table 2. This hypothesis demonstrates that supply chain strategy has a significant direct impact on supply chain operational performance. The fourth hypothesis demonstrates that the influence between supply chain strategy and supply chain operating performance is significant. It is important to note that the relationship between supply chain strategy and supply chain operating performance is strong, which indicates that if the supply chain strategy variable grows, the supply chain operating performance will increase along with it. There is no substantial direct association between supply agility characteristics and supply chain operational performance, according to the fifth hypothesis, which examines the relationship between supply agility and operating performance in a supply chain. The real effect of supply agility on supply chain operating performance is positive but not statistically significant, indicating that the supply agility variable does not have an impact on supply chain operational performance. This hypothesis states that supply chain organizations can influence supply chain operating performance indirectly or through mediating supply chain strategy variables.

### 6.2. Research Limitations

There are some limitations experienced, of course, there are shortcomings that need to be improved.

1. The number of respondents, which is only 180 people, is of course still insufficient and is limited to only 5 cities.
2. Research instruments are a concern that there are still respondents' opinions that are not true, this happens because there may be different understanding respondents' opinions in filling out the research instrument.
3. Respondents refuse if asked for their data: email address; mobile phone number; etc., even though the researcher has stated that the results of filling out the research instrument are not publicly published and are confidential.
4. Data collection takes a relatively long time because the research assistant will meet the Supervisor of each retail shop because the average retail shop working hours are divided into 3<sup>rd</sup> shifts, and the Supervisor at certain times cannot be found during shift 1<sup>st</sup>.

### 6.3. Suggestions

There are several suggestions that are needed from the results of this study, among others:

1. For the next researcher
  - a. Conducting continuous research, this is to see and assess any changes in retail shops from time to time.
  - b. It is hoped that there will be adding other variables that may also affect many things in this study and or eliminate variables that are proven not to have a significant influence.
2. For companies or minimarkets
  - a. A It is expected that each retail shop will maintain the quality of products and services provided to potential customers, in addition, supply chain implementation is important and strongly supports the operations of each retail shop.
  - b. Trust is an important thing for consumers, it is hoped that there will be no stock of goods running out, and or the goods ordered by each retail shop, the goods still have not arrived.

c. Supervisors offer some tips for paying special attention to suppliers and consumers when carrying out the supply chain to obtain the best results. There is a significant and beneficial impact of supply chain organization on the performance of supply chain operations; second, the supply chain strategy has a significant and beneficial impact on the performance of supply chain operations; third, there is an indirect influence through the mediation of supply chain strategy factors, particularly supply chain organization and supply agility, both of which have profitable and substantial results; and fourth, there is an insignificant and detrimental impact on the performance of supply chain operations. Except for supply agility, it has a positive and minor impact on supply and operational performance, respectively. Following the conclusion of the study based on the results of the research model testing, it was discovered that supply chain organization has a significant and beneficial impact on the performance of retail store supply chain operations, whether it is done directly or indirectly.

d. Every retail establishment, according to the study, must expand its services to include online purchases and delivery of items to consumers if the COVID-19 epidemic has not been brought under control by March 2020. This is due to changes in consumer purchasing habits because during the COVID-19 pandemic era there was a tendency and resulted in changes in consumer behavior when buying goods as needed.

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## References

- Abbasi, M., Pishvae, M. S., & Mohseni, S. (2021). Third-generation biofuel supply chain: A comprehensive review and future research directions. *Journal of Cleaner Production*, 323, 129100. <https://doi.org/10.1016/j.jclepro.2021.129100>
- Abdallah, A. B., & Nabass, I. H. (2018). Supply chain antecedents of agile manufacturing in a developing country context: An empirical investigation. *Journal of Manufacturing Technology Management*, 29(6), 1042-1064. <https://doi.org/10.1108/JMTM-01-2018-0019>
- Abdissa, G., Ayalew, A., Illés, C. B., & Dunay, A. (2021). Effects of Corporate Entrepreneurship Dimensions on Organizational Performance: Case of Small and Medium Enterprises in Holeta Town, Ethiopia. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(4), 234. <https://doi.org/10.3390/joitmc7040234>
- Abdel-Basset, M., Mohamed, M., & Smarandache, F. (2018). An Extension of Neutrosophic AHP–SWOT Analysis for Strategic Planning and Decision-Making. *Symmetry*, 10(4), 116. <https://doi.org/10.3390/sym10040116>
- Aldakhil, A. M., Aamir, A., Nassani, A. A., & Askar, S. E. (2020). Exploring the Nexus Between the Market Orientation, Market Performance And Financial Performance Of Manufacturing Firms in KSA: Does The Supply Chain Strategy Matter?. *Revista Argentina de Clínica Psicológica*, 29(4), 652. <https://doi.org/10.24205/03276716.2020.871>
- Ali, F., Rasoolimanesh, S.M., Sarstedt, M., Ringle, C.M., & Ryu, K. (2018). An assessment of the use of partial least squares structural equation modeling (PLS-SEM) in hospitality research. *International Journal of Contemporary Hospitality Management*, 30(1), 514-538. <https://doi.org/10.1108/IJCHM-10-2016-0568>
- Arora, M., & Gigras, Y. (2018). Importance of supply chain management in healthcare of third world countries. *International Journal of Supply and Operations Management*, 5(1), 101-106. <https://doi.org/10.22034/2018.1.7>
- Asad, M. & Siddiqui, D. A. (2019). Determinants of mutual funds' performance in Pakistan. *International Journal of Social and Administrative Sciences*, 4(2), 85-107. <https://doi.org/10.18488/journal.136.2019.42.85.107>
- Avkiran, N. K., & Ringle, C. M. (2018). *Partial least squares structural equation modeling: Recent advances in banking and finance*. Springer
- Bag, S., Wood, L. C., Xu, L., Dhamija, P., & Kayikci, Y. (2020). Big data analytics as an operational excellence approach to enhance sustainable supply chain performance. *Resources, Conservation and Recycling*, 153, 104559. <https://doi.org/10.1016/j.resconrec.2019.104559>
- Bag, S., Gupta, S., & Telukdarie, A. (2018). Importance of Innovation and Flexibility in Configuring Supply Network Sustainability. *Benchmarking*, 25(9), 3951–3985. <https://doi.org/10.1108/BIJ-06-2017-0132>
- Bagher, A., N. (2018). The effect of supply chain capabilities on the performance of food companies. *Journal of Financial Marketing*, 2(4), 1-9. <https://doi.org/10.35841/finance-marketing.2.4.1-9>
- Barbosa, J. & Casais, B. (2022). The transformative and evolutionary approach of omnichannel in retail companies: Insights from multi-case studies in Portugal. *International Journal of Retail & Distribution Management*, 50(7), 799 - 815. <https://doi.org/10.1108/IJRDM-12-2020-0498>
- Battesini, M., ten Caten, C. S., & de Jesus Pacheco, D. A. (2021). Key factors for operational performance in manufacturing systems: Conceptual model, systematic literature review and implications. *Journal of Manufacturing Systems*, 60, 265-282. <https://doi.org/10.1016/j.jmsy.2021.06.005>
- Bidhandi, R., & Valmohammadi, C. (2017). Effects of supply chain agility on profitability. *Business Process Management Journal*, 23(4), 1064-1082. <https://doi.org/10.1108/BPMJ-05-2016-0089>
- Benzidia, S., & Makaoui, N. (2020, July). Improving SMEs performance through supply chain flexibility and market agility: IT orchestration perspective. In *Supply Chain Forum: An International Journal*, 21(3) 173-184). Taylor & Francis. <https://doi.org/10.1080/16258312.2020.1801108>

- Berman, B. R., Evans, J. R., & Chatterjee, P. M. (2017). *Retail Management: A Strategic Approach*. Pearson.
- Boutayeba, F. (2017). Estimating the returns to education in Algeria. *Asian Journal of Economic Modelling*, 5(2), 147-153. <https://doi.org/10.18488/journal.8/2017.5.2/8.2.147.153>
- Bruni, R. & Piccarozzi, M. (2022). Industry 4.0 enablers in retailing: a literature review. *International Journal of Retail & Distribution Management*, 50(7), 816 - 838. <https://doi.org/10.1108/IJRDM-07-2021-0314>
- Chan, M. P. S., Jones, C. R., Hall Jamieson, K., & Albarracín, D. (2017). Debunking: A meta-analysis of the psychological efficacy of messages countering misinformation. *Psychological science*, 28(11), 1531-1546. <https://journals.sagepub.com/doi/10.1177/0956797617714579>
- Chiang, C. Y., Kocabasoglu-Hillmer, C., & Suresh, N. (2012). An empirical investigation of the impact of strategic sourcing and flexibility on firm's supply chain agility. *International Journal of Operations & Production Management*, 32(1), 49–78. <https://doi.org/10.1108/01443571211195736>
- Cheng, Y., Chaudhuri, A., & Farooq, S. (2016). Interplant Coordination, Supply Chain Integration, and Operational Performance of a Plant in A Manufacturing Network: A Mediation Analysis. *Supply Chain Management*, 21(5), 550–568. <https://doi.org/10.1108/SCM-10-2015-0391>
- Coller, K.E. (2022). Choosing Kindness: Finding Kindness in Management and Organization Studies, Thomason, M. (Ed.) *Kindness in Management and Organizational Studies (Kindness at Work)*, Emerald Publishing Limited, Bingley, 13-27. <https://doi.org/10.1108/978-1-80262-157-020221002>
- Dey, P. K., Malesios, C., De, D., Chowdhury, S., & Abdelaziz, F. B. (2019). Could lean practices and process innovation enhance the supply chain sustainability of small and medium-sized enterprises?. *Business Strategy and the Environment*, 28(4), 582-598. <https://doi.org/10.1002/bse.2266>
- Doan, T.T.T. (2020). Supply chain management drivers and competitive advantage in the manufacturing industry. *Uncertain Supply Chain Management*, 8(3), 473–480, <https://doi.org/10.5267/j.uscm.2020.5.001>
- Dubey, R., Luo, Z., Gunasekaran, A., Akter, S., Hazen, B. T., & Douglas, M. A. (2018). Big data and predictive analytics in humanitarian supply chains: Enabling visibility and coordination in the presence of swift trust. *The International Journal of Logistics Management*, 29(2), 485-512. <https://doi.org/10.1108/IJLM-02-2017-0039>
- Fayezi, S., & Zomorodi, M. (2015). The Role of Relationship Integration in Supply Chain Agility and Flexibility Development: An Australian Perspective. *Journal of Manufacturing Technology Management*, 26(8), 1126–1157. <https://doi.org/10.1108/JMTM-11-2014-0123>
- Fernando, Y., Bee, P. S., Jabbour, C. J. C., & Thomé, A. M. T. (2018). Understanding the effects of energy management practices on renewable energy supply chains: Implications for energy policy in emerging economies. *Energy Policy*, 118, 418-428. <https://doi.org/10.1016/j.enpol.2018.03.043>
- Gamage, S. K. N., Ekanayake, E. M. S., Abeyrathne, G. A. K. N. J., Prasanna, R. P. I. R., Jayasundara, J. M. S. B., & Rajapakshe, P. S. K. (2020). A review of global challenges and survival strategies of small and medium enterprises (SMEs). *Economies*, 8(4), 1 – 24. <https://doi.org/10.3390/ECONOMIES8040079>
- Garson, G. D. (2016). *Partial least squares regression and structural equation models*. Asheboro: Statistical Associates
- Gil-Gomez, H., Guerola-Navarro, V., Oltra-Badenes, R., & Lozano-Quilis, J. A. (2020). Customer relationship management: digital transformation and sustainable business model innovation. *Economic Research-Ekonomika Istraživanja*, 33(1), 2733-2750. <https://doi.org/10.1080/1331677X.2019.1676283>
- Gligor, D., M., & Holcomb M., C. (2012) Understanding the role of logistics capabilities achieving supply chain agility: a systematic literature review. *Supply Chain Manag* 17(4), 438–453. <https://doi.org/10.1108/13598541211246594>
- Hair, J.F., Hult, G.T.M., Ringle, C.M., Sarstedt, M., & Thiele, K.O. (2017b). Mirror, mirror on the wall: a comparative evaluation of composite-based structural equation modeling methods. *Journal of the Academy of Marketing Science*, 45(5), 616-632. <https://doi.org/10.1007/s11747-017-0517-x>
- Hair, J. F., Hollingsworth, C. L., Randolph, A. B., & Chong, A. Y. L. (2017). An updated and expanded assessment of PLS-SEM in information systems research. *Industrial Management & Data Systems*, 117(3), 442–458 <https://doi.org/10.1108/IMDS-04-2016-0130>
- Hair, J.F., Sarstedt, M., & Ringle, C.M. (2019). Rethinking some of the rethinkings of partial least squares. *European Journal of Marketing*, 53(4), 566-584. <https://doi.org/10.1108/EJM-10-2018-0665>
- Hani, J.S.B. (2021). The moderating role of lean operations between supply chain integration and operational performance in Saudi manufacturing organizations. *Uncertain Supply Chain Management*, 9(1), 169–178, <https://doi.org/10.5267/j.uscm.2020.10.004>
- Henseler, J. (2017). Bridging design and behavioral research with variance-based structural equation modeling. *Journal of Advertising*, 46(1), 178-192. <https://doi.org/10.1080/00913367.2017.1281780>
- Hossain, S. M., Kabir, B. S. & Mahbub, N. (2019). Competitive strategies and organizational performance: determining the influential factor conquer over the Rivals in the Food Industry of Bangladesh. *International Review of Management and Marketing*, 9(3), 100-105
- Hong, J., Liao, Y., Zhang, Y., & Yu, Z. (2019). The effect of supply chain quality management practices and capabilities on operational and innovation performance: Evidence from Chinese manufacturers. *International Journal of Production Economics*, 212, 227-235, <https://doi.org/10.1016/j.ijpe.2019.01.036>
- Horská, E., Petrifák, M., Šedík, P., & Nagyová, E. (2020). Factors Influencing the Sale of Local Products through Short Supply Chains: A Case of Family Dairy Farms in Slovakia. *Sustainability*, 12(20), 8499. <https://doi.org/10.3390/su12208499>
- Huang, Y., Wu, J., & Long, C. (2018). Drugledger: A practical blockchain system for drug traceability and regulation. In the 2018 IEEE international conference on the internet of things (iThings) and IEEE green computing and communications (GreenCom) and IEEE cyber, physical and social computing (CPSCom) and IEEE smart data (SmartData), 1137-1144. IEEE.

- Hutahayan, B. (2021). The relationships between market orientation, learning orientation, and financial literacy, on the knowledge competence, innovation, and performance of small and medium textile industries in Java and Bali. *Asia Pacific Management Review*, 26(1), 39-46. <https://doi.org/10.1016/j.apmr.2020.07.001>
- Ivanaj, S., Ivanaj, V., McIntyre, J., Da Costa, N. G., & Lozano, R. (2015). Multinational Enterprises' strategic dynamics and climate change: drivers, barriers and impacts of necessary organisational change. *Journal of Cleaner Production*, 30, 1e4. <https://doi.org/10.1016/j.jclepro.2015.06.071>
- Jernsittiparsert, K., & Wajeetongratana, P. (2019). The role of organizational culture and its competency in determining the supply chain agility in small and medium-sized enterprises. *International Journal of Innovation, Creativity, and Change*, 5(2), 416-431.
- Jimenez-Jimenez, D., Martinez- Costa, M. Rodriguez, C.S. (2018). The mediating role of supply chain collaboration on the relationship between information technology and innovation. *Journal of Knowledge Management*, 23(3), 548 -567. <https://doi.org/10.1108/JKM-01-2018-0019>
- Kalaitzi, D., Motopoulos, A., Bourlakis, M. and Tate, W. (2018). Supply chain strategies in an era of natural resource scarcity. *International Journal of Operations and Production Management*, 38(3), 784-809. <https://doi.org/10.1108/IJOPM-05-2017-0309>
- Kiptoo, L., & Koech, P. (2019). Effect of strategic innovations on organizational performance. *The Strategic Journal of Business & Change Management*, 6 (2), 443 – 360.
- Kilay, A. L., Simamora, B. H., & Putra, D. P. (2022). The Influence of E-Payment and E-Commerce Services on Supply Chain Performance: Implications of Open Innovation and Solutions for the Digitalization of Micro, Small, and Medium Enterprises (MSMEs) in Indonesia. *Journal of Open Innovation: Technology, Market, and Complexity*, 8(3), 119. <https://doi.org/10.3390/joitmc8030119>
- Khoironi, T. A., Syah, H., & Dongoran, P. (2018). Product quality, brand image, and pricing to improve satisfaction impact customer loyalty. *International Review of Management and Marketing*, 8(3), 51-58
- Kock, N. (2018). Should bootstrap be used in PLS-SEM? Toward stable P-Value calculation methods. *Journal of Applied Structural Equation Modeling*, 1 (2), 1-12. [https://doi.org/10.47263/JASEM.2\(1\)02](https://doi.org/10.47263/JASEM.2(1)02)
- Kumar, S., & Bhatia, M. S. (2021). Environmental dynamism, industry 4.0 and performance: Mediating role of organizational and technological factors. *Industrial Marketing Management*, 95, 54-64. <https://doi.org/10.1016/j.indmarman.2021.03.010>
- Kumar, V., Jabarzadeh, Y., Jehiouni, P., & Garza-Reyes, J. A. (2020). Learning Orientation and Innovation Performance: The Mediating Role of Operations Strategy and Supply Chain Integration. *Supply Chain Management*, 25(4), 457–474. <https://doi.org/10.1108/SCM-05-2019-0209>
- Lee, R. (2021). The effect of supply chain management strategy on operational and financial performance. *Sustainability*, 13(9), 5138. <http://dx.doi.org/10.3390/su13095138>
- Lee, T. & Nam, H. (2016). An empirical study on the impact of individual and organizational supply chain orientation on supply chain management. *The Asian Journal of Shipping and Logistics*, 32(4),249-255. <https://doi.org/10.1016/j.ajsl.2016.12.009>
- Levy, M., Weitz, B., & Grewal, D. (2018). *Retailing Management* 10th Edition. McGraw-Hill Education
- Lovett, S., Rasheed, A. A., & Hou, W. (2022). Stock options, restricted stock, salary, or bonus? Managing CEO compensation to maximize organizational performance. *Business Horizons*, 65(2), 115-123. <https://doi.org/10.1016/j.bushor.2021.02.041>
- Lozano, R., & Haartman, R., 2018. Reinforcing the holistic perspective of sustainability: analysis of the importance of sustainability drivers in organizations. *Corp. Soc. Responsibility. Environ. Manag.* 25 (4), 508–522. <https://doi.org/10.1002/CSR.1475>.
- Marchiori, D. M., Rodrigues, R. G., Popadiuk, S., & Mainardes, E. W. (2022). The relationship between human capital, information technology capability, innovativeness, and organizational performance: An integrated approach. *Technological Forecasting and Social Change*, 177, 121526. <https://doi.org/10.1016/j.techfore.2022.121526>
- Masadeh, R; Al-Henzab, J., Tarhini, A., & Obeidat, B. Y. (2018). The associations among market orientation, technology orientation, entrepreneurial orientation, and organizational performance. *Benchmarking: An International Journal*, 25(8), 3117-3142. <https://doi.org/10.1108/BIJ-02-2017-002>
- Maulina, E & Malacosoma, K. (2020). Determinants of supply chain operational performance. *Uncertain Supply Chain Management*, 8(1), 117-130. <https://doi.org/10.5267/j.uscm.2019.8.001>
- Meng, J., & Berger, B. K. (2019). The impact of organizational culture and leadership performance on PR professionals' job satisfaction: Testing the joint mediating effects of engagement and trust. *Public Relations Review*, 45(1), 64-75. <https://doi.org/10.1016/j.pubrev.2018.11.002>
- Menne, F., Surya, B., Yusuf, M., Suriani, S., Ruslan, M., & Iskandar, I. (2022). Optimizing the Financial Performance of SMEs Based on Sharia Economy: Perspective of Economic Business Sustainability and Open Innovation. *Journal of Open Innovation: Technology, Market, and Complexity*, 8(1), 18. <https://doi.org/10.3390/joitmc8010018>
- Moradinasab, N., Amin-Naseri, M. R., Behbahani, T. J., & Jafarzadeh, H. (2018). Competition and cooperation between supply chains in multi-objective petroleum green supply chain: A game-theoretic approach. *Journal of Cleaner Production*, 170, 818-841. <https://doi.org/10.1016/j.jclepro.2017.08.114>
- Mosteanu, N. R., Faccia, A., Ansari, A., Shamout, M. D., & Capitanio, F. (2020). Sustainability integration in supply chain management through systematic literature review. *Calitatea*, 21(176), 117-123.
- Moktadir, M.A., Ali, S.M., Rajesh, R., & Paul, S.K. (2018). Modeling the interrelationships among barriers to sustainable supply chain management in the leather industry. *J. Clean. Prod.* 181, 631–651. <https://doi.org/10.1016/j.jclepro.2018.01.245>
- Mukhsin, M. & Suryanto. T. (2021). The effect of supply agility mediation through the relationship between trust and commitment on supply chain performance. *Uncertain Supply Chain Management*. 9, 555 – 562. <https://doi.org/10.5267/j.uscm.2021.6.006>
- Mukhsin. M.; Taufik. H.; Ridwan. A.; & Suryanto. H. (2022). The mediation role of supply chain agility on supply chain orientation-supply chain performance link. *Uncertain Supply Chain Management*. 10, 197 – 204. <https://doi.org/10.5267/j.uscm.2021.9.008>



- Munir, M., Jajja, M. S. S., Chatha, K. A., & Farooq, S. (2020). Supply chain risk management and operational performance: The enabling role of supply chain integration. *International Journal of Production Economics*, 227, 107667. <https://doi.org/10.1016/j.ijpe.2020.107667>
- Munteanu, A. I., Bibu, N., Nastase, M., Cristache, N., & Matis, C. (2020). Analysis of practices to increase the workforce agility and to develop a sustainable and competitive business. *Sustainability*, 12(9), 35- 45. <https://doi.org/10.3390/su12093545>
- Nguyet, T., Dung, N., Trang, T., Anh, T., & Duong, N. (2021). The effects of human resource management, customer satisfaction, and organizational performance on tourism supply chain management. *Uncertain Supply Chain Management*, 9(3), 563-568. <https://doi.org/10.5267/j.uscm.2021.6.005>
- Odoom, R., & Mensah, P. (2019). Brand orientation and brand performance in SMEs: The moderating effects of social media and innovation capabilities. *Management Research Review*, Vol. 42, No. 1, 155-171. <https://doi.org/10.1108/MRR-12-2017-0441>
- Ojha, D., Acharya, C., & Cooper, D. (2018). Transformational leadership and supply chain ambidexterity: Mediating role of supply chain organizational learning and moderating role of uncertainty. *International Journal of Production Economics*, 197(C), 215–231. <https://doi.org/10.1016/j.ijpe.2018.01.001>
- Orji, I. J., U-Dominic, C. M., & Okwara, U. K. (2022). Exploring the determinants in circular supply chain implementation in the Nigerian manufacturing industry. *Sustainable Production and Consumption*, 29, 761-776. <https://doi.org/10.1016/j.spc.2021.11.023>
- Omar, M.K., Bakar, A., & Rashid, A. M. (2012). Employability skill acquisition among Malaysian community college students. *Journal of the Social Sciences*, 8(3), 472-478. <https://doi.org/10.3844/jssp.2012.472.478>
- Patel, H., H. (2017). Behavioral aspects of supply chain management: Strategy, commitment, integration, and firm performance – A Conceptual framework. *International Journal of Supply Chain Management*, 4 (4), 370-375. <https://doi.org/10.22034/2017.4.07>
- Pinheiro, M. A. P., Jugend, D., Lopes de Sousa Jabbour, A. B., Chiappetta Jabbour, C. J., & Latan, H. (2022). Circular economy-based new products and company performance: The role of stakeholders and Industry 4.0 technologies. *Business Strategy and the Environment*, 31(1), 483-499. <https://doi.org/10.1002/bse.2905>
- Rahman, M., Kamal, M. M., Aydin, E., & Haque, A. U. (2022). Impact of Industry 4.0 drivers on the performance of the service sector: a comparative study of cargo logistic firms in developed and developing regions. *Production Planning & Control*, 33(2-3), 228-243.
- Rajaguru, R., & Matanda, M. J. (2019). Role of compatibility and supply chain process integration in facilitating supply chain capabilities and organizational performance. *Supply Chain Management: An International Journal*, 24(2), 301-316. <https://doi.org/10.1108/SCM-05-2017-0187>
- Rane, S.B., & Narvel, Y.A.M. (2021). " Re-designing the business organization using disruptive innovations based on blockchain-IoT integrated architecture for improving agility in future Industry 4.0", *Benchmarking: An International Journal*, 28(5), 1883-1908. <https://doi.org/10.1108/BIJ-12-2018-0445>
- Rekha, D. M. & Sowmya, A. V. Z.(2019). Implementation of supply chain management and its effectiveness on marketing of business organizations. *International Journal of Trend in Scientific Research and Development (IJTSRD)*, 3(4), 777-779. <https://doi.org/10.31142/ijtsrd23876>
- Rasoolimanesh, S.M. & Ali, F. (2018), "Guest editorial", *Journal of Hospitality and Tourism Technology*, 9(3), 238-248. <https://doi.org/10.1108/JHTT-10-2018-142>
- Ryu, K., Lee, H., & Gon Kim, W., (2012). The influence of the quality of the physical environment, food, and service on restaurant image, customer perceived value, customer satisfaction, and behavioral intentions. *International Journal of Contemporary Hospitality Management*, 24(2),200-223. <https://doi.org/10.1108/09596111211206141>
- Saavedra, M.R., Fontes, C.H.O., & Freires, F.G.M. (2018). Sustainable and renewable energy supply chain: a systems dynamics overview. *Renew. Sustainable Energy Review*, 82(1), 247–259. <https://doi.org/10.1016/j.rser.2017.09.033>
- Sangari, M. S & Razmi, J. (2015). Business intelligence competence, agile capabilities, and agile performance in supply chain an empirical study. *The International Journal of Logistics Management*, 26(2), 356 - 380. <https://doi.org/10.1108/IJLM-01-2013-0012>
- Samdantsoodol, A., Cang, S., Yu, H., Eardley, A., & Buyantsogt, A. (2017). Predicting the relationships between virtual enterprises and agility in supply chains. *Expert systems with applications*, 84, 58-73. <https://doi.org/10.1016/j.eswa.2017.04.037>
- Schniederjans, D. G., Ozpolat, K., & Chen, Y.-W. (2016). Humanitarian supply chain use of cloud computing. *Supply Chain Management: An International Journal*, 21(5) 569-588. <https://doi.org/10.1108/SCM-01-2016-0024>
- Seclen-Luna, J.P.; Moya-Fernández, P.; Pereira, A. (2021). Exploring the effects of innovation strategies and size on manufacturing firms' productivity and environmental impact. *Sustainability*, 13(3289), 1 – 18. <https://doi.org/10.3390/su13063289>
- Sekaran, U. & Bougie, R.J., (2016). *Research methods for business: A skill Building Approach*. 7<sup>th</sup> ed., John Wiley & Sons Inc. New York, US
- Shafiei, M., & Tarmost, P. (2014). The impact of supply chain management processes on the competitive advantage of organizational performance. *Quantitative Studies Management*, 5(2), 10-24.
- Shiau, W. L., Sarstedt, M., & Hair, J. F. (2019). Editorial: Internet research using partial least squares structural equation modeling (PLS-Sem). *Internet Research*, 29(3), 398–406. <https://doi.org/10.1108/IntR-10-2018-0447>
- Sheel, A., & Nath, V. (2019). Effect of blockchain technology adoption on supply chain adaptability, agility, alignment, and performance. *Management Research Review*, 42(12), 1353 – 1374. <https://doi.org/10.1108/MRR-12-2018-0490>
- Suifan, T., Saada, R., Alazab, M., Sweis, R., Abdallah, A., & Alhyari, S. (2020). Quality of information sharing, agility, and sustainability of humanitarian aid supply chains: an empirical investigation. *International Journal of Supply Chain Management*, 9(5), 1-13.
- Suresh, M., Ganesh, S., & Raman, R. (2019). Modeling the factors of agility of humanitarian operations. *International Journal of Agile Systems and Management*, 12(2), 108-123. <https://doi.org/10.1504/IJASM.2019.10022175>

- Surucu, L & Maslakci, A. (2020). Validity and reliability in quantitative research. *Business & Management Studies: An International Journal*, 8(3), 2694-2726. <https://doi.org/10.15295/bmij.v8i3.1540>
- Taherdoost, H. (2020). What is the best response scale for a survey and questionnaire design: Review of different lengths of rating scale/attitude scale/Likert scale? *International Journal of Academic Research in Management (IJARM)*, 8(1), 1-10
- Tan, FTC, Tan, B., Wang, W., & Sedera, D. (2017). IT-enabled operational agility: An interdependencies perspective. *Information and Management*, 54(3), 292–303. <https://doi.org/10.1016/j.im.2016.08.001>
- Tay, H. L. & Low, S. W. K. (2017). Digitalization of learning resources in an HEI–a lean management perspective. *International Journal of Productivity and Performance Management*, 66(5), 680-694. <https://doi.org/10.1108/IJPPM-09-2016-0193>
- Tarigan, Z., Mochtar, J., Basana, S & Siagian, H. (2021). The effect of competency management on organizational performance through supply chain integration and quality. *Uncertain Supply Chain Management*, 9(2), 283-294. <https://doi.org/10.5267/j.uscm.2021.3.004>
- Thatte, A. A., Rao, S. S., & Ragu-Nathan, T. S. (2013). Impact of SCM practices of a firm on supply chain responsiveness and competitive advantage of a firm. *Journal of Applied Business Research*, 29(2), 499–530. <https://doi.org/10.19030/jabr.v29i2.7653>
- Thyne, M., Robertson, K., Watkins, L.& Casey, O. (2019). Retailers targeting children with set collection promotions: The child’s perspective. *International Journal of Retail & Distribution Management*, 47(6) 643 - 658. <https://doi.org/10.1108/IJRDM-08-2017-0180>
- Tse, Y. K., Zhang, M., Akhtar, P., & MacBryde, J. (2016). Embracing supply chain agility: an investigation in the electronics industry. *Supply Chain Management: An International Journal*, 21(1), 140–156. <https://doi.org/10.1108/SCM-06-2015-0237>
- Um, Juneho. (2017). The impact of supply chain agility on business performance in a high-level customization environment. *Operations Management Research* 10(1), 10 -19. <https://doi.org/10.1007/s12063-016-0120-1>
- Uyara, E., Edler, J., Garcia-Estevéz, J., Georghiou, L., & Yeow, J. (2014). Barriers to innovation through public procurement: A supplier perspective. *Technovation*, 34(10), 631-645. <http://www.sciencedirect.com/science/article/PII/S0166497214000388>
- Wang, G. (2021). Integrated supply chain scheduling of procurement, production, and distribution under spillover effects. *Computers & Operations Research*, 126, 105105. <https://doi.org/10.1016/j.cor.2020.105105>
- Wong, W. P., Sinnandavar, C. M., & Soh, K. L. (2021). The relationship between supply environment, supply chain integration and operational performance: The role of business process in curbing opportunistic behavior. *International Journal of Production Economics*, 232, 107966. <https://doi.org/10.1016/j.ijpe.2020.107966>
- Yeow, A., Chan, C., Yen, T., & Pan, G. (2019). Agility in responding to disruptive digital innovation: A case study of an SME. *Information Systems Journal*, 29(2), 1- 20. <https://doi.org/10.1111/isj.12215>
- Younis, H., & Sundarakani, B. (2019). The impact of firm size, firm age, and environmental management certification on the relationship between green supply chain practices and corporate performance. *Benchmarking: An International Journal*, 27(1), 319-346. <https://doi.org/10.1108/BIJ-11-2018-0363>
- Yu, W., Jacobs, M. A., Chavez, R., & Yang, J. (2019). Dynamism, disruption orientation, and resilience in the supply chain and the impacts on financial performance: A dynamic capabilities perspective. *International Journal of Production Economics*, 218, 352-362. <https://doi.org/10.1016/j.ijpe.2019.07.013>
- Yu, Y., & Huo, B. (2018). Supply chain quality integration: relational antecedents and operational consequences. *Supply Chain Management: An International Journal*, 23(3), 188–206. <https://doi.org/10.1108/SCM-08-2017-0280>
- Zaid, S., Palilati, A., Madjid, R & Abadi, S. (2021). The effect of supply chain integration on customer loyalty: The mediating roles of operational performance and customer satisfaction. *Uncertain Supply Chain Management*, 9(4), 867-876. <https://doi.org/10.5267/j.uscm.2021.8.002>
- Zhao, L., Huo, B., Sun, L., & Zhao, X. (2013). The impact of supply chain risk on supply chain integration and company performance: a global investigation. *Supply Chain Management: An International Journal*, 18(2), 115-131. <https://doi.org/10.1108/13598541311318773>
- Zhu, Q & Geng Y. (2013). Drivers and barriers of extended supply chain practices for energy saving and emission reduction among Chinese manufacturers. *Journal of Cleaner Production*, 40, 6–12. <https://doi.org/10.1016/j.jclepro.2010.09.017>

