

# Mediating Impact of Information Sharing on Information Quality and SCM Performance in SMEs

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## Mediating Impact of Information Sharing on Information Quality and SCM Performance in SMEs

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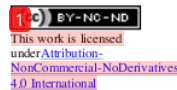
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### ABSTRACT

This research aims to examine and analyze the influence of information quality on Supply Chain Management (SCM) performance among Small and Medium-sized Enterprises (SMEs) in Pekanbaru City, utilizing information sharing as a mediator. The study employed institutional theory to elucidate the interactions between the variables, explaining how external factors such as social and cultural norms influence information-sharing practices among business actors and the role of legitimacy in promoting these practices. Focusing on SMEs that have implemented systems in their business management, the research utilized the Krejcie and Morgan table for sampling, engaging 177 SMEs willing to participate. Data analysis was conducted using the Partial Least Square (PLS) method through SEM-PLS software. The findings indicated that information quality significantly influenced SCM performance directly and influenced information-sharing practices. Importantly, the study revealed that Information Quality indirectly affected SCM performance through information sharing, which acts as a mediating variable. This research offers practical benefits to SME owners in Pekanbaru by enhancing SCM performance through improved information quality. It contributes academically as a reference to the impact of information quality on SCM with information sharing as a mediator.



**Keywords:** Information Quality; Supply Chain Management Performance; Information Sharing; Mediating Factor

## INTRODUCTION

Micro, small, and medium-sized enterprises (MSMEs) are pivotal in propelling the Indonesian economy forward. Not merely constituting the economic backbone, these entities also play a significant role in generating employment opportunities across the nation. Statistics from the Ministry of Cooperatives and SMEs in 2022 showed that small and medium-sized enterprises (SMEs) are responsible for about 61 percent of the national Gross Domestic Product (GDP) and provide employment for 97 percent of the entire workforce (Limanseto, 2022). Currently, MSMEs are recognized as a sector with the potential to stimulate job creation, encourage innovation, reduce social inequalities, and propel inclusive economic development. As their impact has risen to become a matter of global importance, MSMEs are universally acknowledged as key drivers of economic growth in both developed and emerging markets (Naala et al., 2017). Performance has emerged as a top priority across nations worldwide, leading to a global perspective that recognizes MSMEs as engines of economic growth in both developed and developing countries (Naala et al., 2017). Fundamental to the practice of supply chain management (SCM) is the commitment to providing consumers with the specific product they require, ensuring that it is accessible in the desired quality and quantity, achieved at the optimal cost, and delivered within the

stipulated time frame (Chopra & Peter, 2016). The objective of supply chain management is centered on orchestrating activities across the supply chain to create a competitive advantage and generate value for the customers who are part of that supply chain (Bowersox et al., 2009).

Rao et al. (2017) proposed that the advent of digital transformation and the employment of big data in supply chain management (SCM) have contributed to an expanded assortment of products, which in turn has enabled more tailored service offerings, quicker delivery processes, better visibility into scheduling, international expansion, and intensified cost competitiveness in both fulfillment and service enhancements. These developments serve to enhance the competitive position of micro, small, and medium-sized enterprises (MSMEs), seize opportunities, and navigate challenges. MSMEs can revamp their business strategies (Chang et al., 2019). Collaborating with supply chain members to achieve collective benefits rather than pursuing limited individual gains is advocated (Chang et al., 2019). The competitive isolation that once characterized relationships among Micro, Small, and Medium Enterprises (MSMEs) is increasingly being replaced by more collaborative and close-knit connections. Bowersox et al. (2009) highlighted that the objective of Supply Chain Management (SCM) is to synchronize the efforts of suppliers, manufacturers, distributors, and customers to maximize benefits while minimizing costs.

Additionally, SCM aims to boost customer satisfaction by ensuring the timely delivery of quality products. Chopra and Peter (2016) maintained that the principal aim of SCM is to enhance the total value created to fulfill customer needs and preferences, with an emphasis on reducing the overall costs associated with ordering, inventory, and transportation. Hence, SCM facilitates companies in improving the efficiency and effectiveness of their supply chain management, leading to increased customer satisfaction through the delivery of high-quality and timely products. Nonetheless, the effectiveness of supply chain management is not yet fully optimized. According to Eko Sastra, the Vice Chairman of the Indonesian Chamber of Commerce and Industry (Kadin) for Organization, in 2023, only about 18% of MSMEs are integrated into the supply chain industry, as reported by Mardika (2022), highlighting the scope for improvement in supply chain integration among MSMEs.

As it is recognized that supply chain performance can assist and propel micro, small, and medium-sized enterprises (MSMEs) to advance, develop, and compete at a higher level, MSMEs must be involved in the supply chain process. According to the World Bank's latest report on the Logistics Performance Index (LPI) 2019, Indonesia ranked 46th with a score of 3.15, facing challenges such as relatively high logistics costs, limited tracking and visibility processes, difficulties in selecting services from available providers, and the process of verifying reliable service providers. Iskandar (2021) noted that another issue emerged during the COVID-19 pandemic, where restrictions on activities caused disruptions in the supply chain, leading to uncertainty in the availability of goods and price spikes due to the scarcity of certain items (Iskandar, 2021). Adnyana (2020) remarked that although SCM may seem straightforward, it often fails to meet the needs of both local and export markets due to supply chain uncertainties caused by various factors. An example of a failed SCM implementation is the transportation of cattle from NTB to Jakarta, which costs 40 percent more than transporting cattle from Australia.

Moreover, the cost of shipping fresh meat is up to four times more expensive, indicating the inefficiency of SCM implementation in terms of high transportation costs. As another example, the shipping cost from Jakarta to Pekanbaru is 1.35% higher compared to the cost from Pekanbaru to Jakarta. Additionally, shipping services from Pekanbaru to Jakarta are not widely available, leaving SMEs with no other alternatives in choosing shipping services. The high cost of shipping from Jakarta to other cities outside of Java Island was also highlighted by Hanna Keraf in a publication on Gading (2023), who stated that expensive logistics costs disrupt the performance of SMEs in Indonesia.

Based on the author's observation of micro, small, and medium-sized enterprises (MSMEs) in Pekanbaru, it was found that the issues in implementing supply chain management (SCM) include a lack of information among MSMEs about alternative suppliers in cases where the primary supplier encounters problems. Thus, information on the existence of backup suppliers remains in the search phase. There is no uniformity in pricing among MSMEs due to the use of different suppliers, resulting in non-competitive prices that lead to market loss and eventual unsold products. MSMEs have not fully utilized information technology, and the uncertain supply chain of raw materials can cause price increases due to the difficulty in obtaining raw materials. In reality, the supply chain has not been well implemented at present. One example of poor supply chain performance occurs in Indonesia, where only 18% of MSMEs have been able to implement a supply chain. Another example is the transportation of cattle from NTB to Jakarta, which costs 40 percent more than transporting cattle from Australia. Moreover, the cost of shipping fresh meat is up to four times more expensive.

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The performance of supply chains is affected by a multitude of factors, with the quality of information playing a pivotal role in determining the success of supply chain management (SCM) operations. The foundation for making sound business decisions is largely dependent on the quality of the information at hand (Baltzan, 2019). Chengalur-Smith et al. (1999) have illustrated that the significance of information quality extends beyond its value to suppliers, also markedly improving the efficiency and effectiveness of SCM performance. According to Baltzan (2019), information serves as a crucial resource for organizations to evaluate the success of their operational strategies and to aid in anticipation and strategic planning for future endeavors. Kankam et al. (2023) have shown that the quality of information has a profound impact on the performance of supply chains.

Additionally, strategic quality information sharing among suppliers not only strengthens relational ties but also enhances communication, thereby boosting SCM performance. The efficiency of interactions between buyers and suppliers is significantly influenced by the exchange of information, which stands as a critical component of organizational performance. Bao et al. (2023) confirmed that information sharing affects the performance of supply chains, suggesting that improved information exchange facilitates more effective decision-making and problem-solving. The enhanced capability for information sharing supports better planning, problem-solving, and decision-making processes within organizations. Exchanging information among firms is expected to escalate as the integration and sharing of new information become increasingly necessary among partners (Chang et al., 2019). Kankam et al. (2023) have identified a significant impact of information sharing on SCM performance. Similarly, Li et al. (2006) also recognized the



effect of information sharing on SCM performance. These findings emphasized the essential role that strategic and high-quality information sharing plays in elevating the efficiency, effectiveness, and overall performance of supply chains.

The quality of information and its exchange dynamics between buyers and suppliers are critical determinants of decision-making within supply chains, as indicated by Zhu et al. (2021). Kankam et al. (2023) emphasized the significant role of information quality in enhancing the sharing of information between these entities. Das & Hassan (2022) argued that information sharing cultivates a deeper mutual understanding and shared interests among suppliers and buyers, enriching their commercial interactions. Hult et al. (2004) stressed the essential role of information quality in advancing information sharing, highlighting that the specificity, timeliness, accuracy, and relevance of the exchanged information are key to assessing the effectiveness of communication between buyers and suppliers. Kankam et al. (2023) confirmed that the quality of information significantly affects the process of sharing information. The efficiency and success of supply chain operations are underpinned by the need for accurate and prompt information exchange, leading organizations to share critical information with their partners to enhance their competitive edge. Within an organizational context, the act of sharing information requires careful consideration to protect sensitive financial and strategic information from current or potential competitors. Organizations thus proceed with caution regarding the information shared, the volume of information, and the selection of recipients. Elias et al. (2019) found that stronger partnerships between collaborating parties improve quality and performance. This study, aimed at Micro, Small, and Medium Enterprises (MSMEs), investigates supply chain management practices guided by the Regulation of the Minister of Cooperatives and Small and Medium Enterprises of the Republic of Indonesia Number 6 of 2022. This regulation emphasizes the necessity for MSMEs to secure raw material supplies, enhance production quality and quantity, standardize products, simplify access to financing, ease licensing procedures, and boost production efficiency to increase MSMEs' engagement in the supply chain.

## LITERATURE REVIEW

### Institutional Theory

This research is anchored in institutional theory, which posits that an organization's interaction with external factors, such as cultural variances, societal norms, legal limitations, and the diverse demands of stakeholders is pivotal to its success (Meyer et al., 1989; Tatoglu et al., 2016). Although extensive evidence supports this framework (Osman et al., 2018), it further suggests that the economic characteristics of an organization are intricately intertwined with a cultural and societal normative environment. Within the realm of institutional theory, legitimacy is defined as the extent to which an organization's actions are aligned with the values, beliefs, and norms of its institutional milieu (Suchman, 1995). Osman et al. (2015) highlighted that different forms of legitimacy concentrate on aligning with customer interests and the organizational capability to meet consumer expectations. The theory suggests that the dynamics of buyer-supplier relationships in the industrial context are influenced by socio-cultural norms that underpin the exchange of information. Sindhav (2013) posited that for firms to achieve sustained success, they must endeavor to

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secure both social and pragmatic legitimacy. From the perspective of institutional theory, it is argued that legitimacy is essential for enhancing and deepening the understanding of the role of information quality in buyer-supplier relations. Moreover, legitimacy, with its various facets, is fundamental in fostering, preserving, and strengthening these essential commercial interactions, thereby underlining the importance of understanding and improving the effect of information quality on these relationships.

### Supply Chain Management (SCM) Performance

Performance can be defined as the level of success an individual or group has achieved in reaching pre-set goals or targets (Robbins & Judge, 2013). Similarly, Kyriakidou (2010) describes performance as the outcomes achieved by an individual or team in carrying out their tasks or responsibilities. According to Nothacker et al. (2021), performance is a critical strategic decision as it determines the structure of incentives that influence the behavior of managers and employees at all levels within an organization. A supply chain is characterized as an intricate network comprising various entities and activities that partake in the creation and delivery of products or services, extending from suppliers to the final customers (Chopra & Peter, 2016). Baltzan (2019) presents supply chain management as the administration of information flows within the supply chain to boost overall organizational efficiency and profitability.

Tatoglu et al. (2016) further elaborated by defining it as the management of the flow of information, goods, and services through a network comprising customers, companies, and suppliers. The measurement of supply chain performance is predicated on the efficiency of processes involved in moving goods from suppliers to the final consumers, including managing information and financial exchanges (Nothacker et al., 2021). Siqueira and Alcantara (2015) articulated that supply chain performance emerges from proficient supply chain management and the integration of logistical aspects (including facilities, inventory, and transportation) with cross-functional elements (such as information, sourcing, and pricing). These components collectively influence the agility and operational efficiency of the supply chain. Ross (2015) views the performance of supply chain management as the strategic allocation and management of resources within the supply chain to effectively meet business requirements.

### 10 Information Quality

Information quality is the capability of information to meet the needs of its users in a manner that is accurate, relevant, complete, consistent, easy to read and understand, and timely presented (Baltzan, 2019). Information quality is a subjective measure of the needs, objectivity, and integrity of the collected information (Turban et al., 2015). O'Brien and Marakas (2007) reinforced this notion by defining information quality as the degree to which information holds certain attributes, content, form, and timing tailored for specific uses within operational systems aimed at bolstering decision-making processes. This perspective underscores the importance of designing and delivering information that is precisely aligned with the needs of its users, ensuring that it effectively facilitates operational and strategic decisions. Hani (2022) demonstrated that organizations with good supply chain information quality will provide good service to customers. Chengalur-Smith et al. (1999) emphasized

the critical importance of information quality not just for suppliers but also for the enhancement of supply chain performance in terms of effectiveness and efficiency. Quality information is pivotal for organizations, facilitating improved and more timely decision-making and enabling better coordination across different functions and business units within the supply chain. Kankam et al. (2023) stated, through a study of manufacturing companies listed on the Ghana Stock Exchange, that information quality significantly influences SCM performance. Marinagi et al. (2015) concluded in their investigation within manufacturing firms in Greece, underscoring the impact of information quality on SCM performance. Hult et al. (2010) argued that information quality is integral to the process of information sharing. Khalil et al. (2019) demonstrated that organizations that maintain high-quality supply chain information are better positioned to deliver superior customer service.

Thus, the contribution of information quality to supply chain performance is markedly significant. Choi and Kim (2022) underscored the mediating role of information sharing between buyers and suppliers as a significant determinant of collaborative success in the commercial realm. The interplay of information quality and the dissemination of information among stakeholders within the supply chain positively affects the operational performance of buyer-supplier relationships, as highlighted by Chang et al. (2019). Institutional theory provides a pertinent framework for analyzing information quality within micro, small, and medium enterprises (MSMEs). Institutional theory posits that legitimacy—defined as the alignment of an organization's practices with the norms, values, and expectations of its institutional environment—is essential for enhancing the understanding and effect of information quality on buyer-supplier dynamics. The integration of industry-recognized practices can significantly elevate the quality of information conveyed to consumers or buyers. For instance, MSMEs might improve information management related to their products or services by embracing modern information technologies, obtaining quality certifications, or bolstering human resource capabilities.

### **Information Sharing**

Information sharing is a process where individuals or organizations share information with other individuals or organizations with the goal of enhancing efficiency, effectiveness, or business value (Turban et al., 2015). Similarly, Baltzan (2019) described information sharing as the process of exchanging data, knowledge, or perspectives between individuals or organizations to achieve a common objective. Kochat et al. (2021) highlighted the critical role of information sharing in the development of systems, noting its potential to mitigate the bullwhip effect and enhance organizational performance. Within the realm of Supply Chain Management (SCM), information sharing entails the dissemination of data among all partners in the supply chain ecosystem, including suppliers, manufacturers, distributors, and consumers. This exchange of information is directly correlated with improved supply chain performance, as affirmed by Bao et al. (2023). Effective information sharing can significantly contribute to more efficient planning, problem-solving, and decision-making processes. The importance of information sharing in supply chains is thus underscored, suggesting that companies should extend beyond merely making demand forecasts and decisions about inventory replenishments and orders to suppliers; they should also communicate anticipated demand requirements to their suppliers (Chang et al., 2019). The

research findings are supported by Kankam et al. (2023) on manufacturing firms listed in the Ghana Stock Exchange database, revealed a positive impact of information sharing on SCM performance. This conclusion was paralleled by findings from Chang et al. (2019) in Taiwanese companies with implemented supply chain systems, further evidencing the significant influence of information sharing on SCM efficiency. Additionally, a study by Susanty et al. (2017) within small and medium-sized batik enterprises corroborated the substantial effect of information sharing on the performance of supply chains.

Thus, this research outlines the following hypotheses after drawing on institutional theory and the insights from previous studies.

*H1a: Information quality has an impact on Supply chain management performance*

*H1b: Information quality influences Information Sharing*

*H1c: Information quality affects Supply chain management performance through Information Sharing*

*H2: Information Sharing has an impact on Supply chain management performance*

Figure 1 inform the conceptual framework of this research.

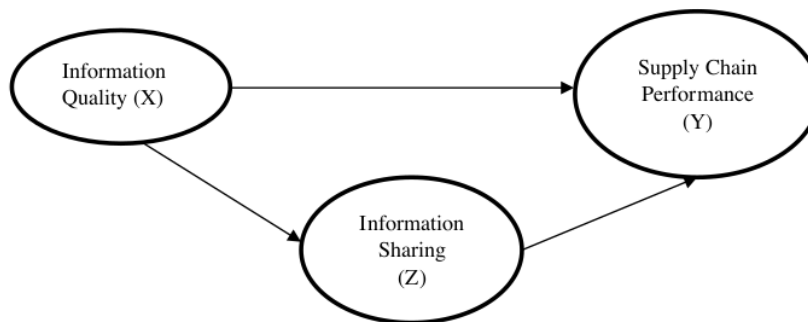


Figure 1. Conceptual Framework

## RESEARCH METHOD

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This quantitative study evaluated the impact of Information Quality on Supply Chain performance within Micro, Small, and Medium Enterprises (MSMEs) located in Pekanbaru. The research specifically targeted MSMEs that have integrated a management system into their operational structure. The study encompassed a target population of MSMEs distributed throughout Pekanbaru. Utilizing the sampling method proposed by Krejcie and Morgan (1970), a sample size of 177 MSMEs meeting the established criteria was selected for the analysis. The Partial Least Square (PLS) method is employed for data analysis facilitated through the SEM-PLS software application. This method was chosen for its suitability in this research as it offers flexibility in developing path models and measuring causal relationships between constructs. Moreover, the sample size is considered adequate to yield reliable results in SEM-PLS analysis.

### Measurement

The performance of supply chain management is measured using five main dimensions: Reliability, responsiveness, agility, cost, and assets. For example, an indicator of reliability is the extent to which our business has provided information to suppliers



regarding changes in basic business needs. Furthermore, information quality is measured using the approach according to Baltzan (2019), which includes five main indicators: Accuracy, completeness, consistency, and uniqueness. For example, for the accuracy indicator, one of the statements inquired about how our business possesses good information in addressing problems or disturbances in basic business needs. Information sharing is measured using the approach based on the theory by Lee and Whang (2000) utilizing six primary indicators: Information on price changes, variations in the types of goods, adjustments in the availability of raw materials, insights into business planning, transformations impacting the business, and the dissemination of vital information for sustaining relationships. An illustrative example of the indicator concerning Information on price changes includes probing into how a business communicates with its suppliers about alterations in fundamental business necessities. This approach underscores the multifaceted aspects of information sharing, emphasizing the critical nature of transparent and proactive communication in aligning the operations and strategies of businesses with their suppliers and partners.

## RESULTS AND DISCUSSION

### Demographic Profile

Supply chain management (SCM) in SMEs involves planning, implementation, and operational control of the supply chain from inception to completion. Its objective is to fulfill customer requirements most efficiently and cost-effectively. SCM in SMEs encompasses all activities related to the flow of products and information, from raw material procurement to the delivery of finished products to consumers (Chin et al., 2012). In SMEs, supply chain management can help reduce operational costs, enhance resource utilization efficiency, and provide better customer service, thereby overall improving business competitiveness (Chopra & Peter, 2016)

Table 1. Characteristics of Respondents Based on Demographics

Characteristics of Respondents	Number	Percentage (%)	Characteristics of Respondents	Number	Percentage (%)
<b>Gender</b>			<b>Type of Business (Continued)</b>		
Male	109	61.58	Baby Shop	1	0.56
Female	68	38.42	Mobile Phone Store	1	0.56
<b>Age</b>			Computer Store	1	0.56
17-25 Years Old	18	10.17	Building Supply Store	1	0.56
26-30 Years Old	31	17.51	Start-Up	1	0.56
31-40 Years Old	57	32.20	<b>Business Capital</b>		
> 40 Years Old	71	40.11	< IDR1.000.000.000	100	56.50
<b>Type of Business</b>			IDR1.000.000.000- IDR5.000.000.000	50	28.25
Culinary	38	21.47	IDR5.000.000.000- IDR10.000.000.000	27	15.25
Handicrafts	4	2.26	<b>Annual Income</b>		
Fashion/Apparel	19	10.73	< IDR2.000.000.000	101	57.06
Automotive Business	1	0.56	IDR2.000.000.000- IDR15.000.000.000	63	35.59
Printing	31	17.51	IDR15.000.000.000- IDR50.000.000.000	13	7.34
Tailoring	6	3.39			
Tour & Travel Business	0	0.00			
Retail	18	10.17			
Café or Restaurant	38	21.47			
Coffee Shop	16	9.04			

In this study, the respondents were predominantly male, totaling 109 respondents (61.58%). Table 1 inform that in terms of age, respondents over the age of 40 were the most numerous, with 71 respondents (40.11%). Furthermore, regarding the type of business, the

culinary sector was the dominant sample, with 38 respondents (21.47%). Businesses with capital less than IDR.1,000,000,000 amounted to 100 (56.50%)—businesses with annual revenues less than IDR. 2,000,000,000 totaled 101 (57.06%), representing the majority of all respondents.

### Reliability and Validity Analysis

Validity measurement involves testing how well a developed instrument's values measure the research instrument. Latan and Ghozali (2017) asserted that the higher the value of an instrument, the more accurately it reflects the measurement indicators of that particular research instrument. It is critical to evaluate discriminant validity and the Average Variance Extracted (AVE) to validate the relationships between variables, aiming for an AVE value greater than 0.5, as suggested by Henseler et al. (2016). The composite reliability metric is utilized to assess the reliability of a construct with reflective indicators. The benchmark for ascertainable construct reliability posits that composite reliability should exceed 0.7 for confirmatory studies, whereas a range of 0.6 to 0.7 is acceptable in exploratory studies, according to Latan and Ghozali (2017). Data presented in Table 2 reveal that the AVE value for each latent variable is greater than 0.5, and the Cronbach's alpha value is above 0.7, indicating that all variables meet the established criteria for reliability (Sekaran & Bougie, 2016). Furthermore, with a Cronbach's alpha value exceeding 0.8, this study's measurement tools are demonstrated to be highly effective in consistently measuring the same construct, thereby affirming their reliability.

**Table 2. Result of Construct Reliability and Validity**

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
IQL	0.948	0.950	0.955	0.681
ISH	0.958	0.958	0.963	0.665
SCMP	0.927	0.929	0.943	0.734

Note:

IQL stands for Information Quality

ISh stands for Information Sharing

SCMP stands for Supply Chain Management Performance

The quality of the measurement model was subsequently tested using the Variance Inflation Factor (VIF) as outlined in Table 3. The evaluation of discriminant validity was further conducted through the analysis of the Heterotrait-Monotrait (HTMT) ratio of correlations. The HTMT method serves as an estimator for the true correlation between two constructs under the assumption of perfect reliability for both (i.e., assuming that each is measured with perfect reliability). This genuine correlation is often termed a disattenuated correlation. When the disattenuated correlation between two constructs nears 1, it signals a potential issue with discriminant validity, as it suggests the constructs may not be distinct from one another (Henseler et al., 2016). The analysis of the data depicted in Table 4 reveals that the HTMT values for each latent variable fall below 0.85. This outcome suggests that the constructs within this study sufficiently meet the established criteria for discriminant validity, indicating clear differentiation between them. The assessment of the research measurement for model prediction was evaluated using the R Square value. In this study, the

R Square value is 0.616 for Information Sharing and 0.510 for Supply Chain Management Performance.

**Table 3. Results of Confirmatory Factor Analysis**

Construct and Item	Loading Factor	VIF	Construct and Item	Loading Factor	VIF
<b>Information Quality (IQL)</b>			<b>Information Sharing (ISH) (Continued)</b>		
IQ1.1	0.827	3.146	IS1.6	0.850	3.946
IQ1.2	0.843	3.411	IS1.7	0.849	4.375
IQ1.3	0.793	2.798	IS1.8	0.800	3.827
IQ1.4	0.802	2.469	IS1.9	0.832	3.108
IQ1.5	0.800	2.928	IS1.10	0.749	2.462
IQ1.6	0.830	3.253	IS1.11	0.816	3.281
IQ1.7	0.847	3.179	IS1.12	0.830	4.187
IQ1.8	0.867	3.884	IS1.13	0.820	3.948
IQ1.9	0.795	2.609	<b>Supply Chain Management Performance (SCMP)</b>		
IQ1.10	0.844	3.009	SCMP1.1	0.816	2.312
<b>Information Sharing (ISH)</b>			SCMP1.2	0.850	3.279
IS1.1	0.791	2.876	SCMP1.3	0.855	3.744
IS1.2	0.797	3.241	SCMP1.4	0.920	4.564
IS1.3	0.793	3.154	SCMP1.5	0.841	2.694
IS1.4	0.817	3.327	SCMP1.6	0.853	2.735
IS1.5	0.849	4.157			

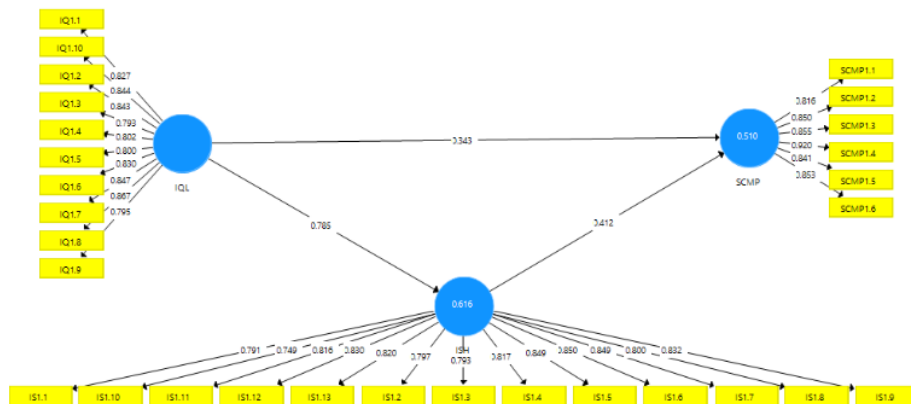
**Table 4. Results of Discriminant Validity**

	Fornell-Larcker Criterion			Heterotrait-Monotrait Ratio (HTMT)			
	IQL	ISH	SCMP	IQL	IQL	ISH	SCMP
<b>IQL</b>	0.825			<b>IQL</b>			
<b>ISH</b>	0.785	0.815		<b>ISH</b>	0.818		
<b>SCMP</b>	0.667	0.681	0.856	<b>SCMP</b>	0.701	0.717	

### Hypothesis Testing

#### Direct Effect

In this study, four hypotheses were tested, of which three are direct effects, and one is an indirect effect, using the bootstrapping method that presenting in Figure 2 and Table 5. The findings include the t-statistic to assess the level of significance against a t-table value of 1.973, with a p-value threshold of less than 0.05. If the calculated t-value is greater than 1.973, then the hypothesis is accepted; conversely, if it is less, then the hypothesis is rejected.



**Figure 2. Path Coefficient Model**

**Table 5. Results of Direct Effect Test (Path Coefficient)**

Path Coefficient	Hypothesis	Direction	Amount of Influence	T Statistics (IO/STDEV)	t-table	P Values	Description
IQL -> SCMP	H1b	+	0.343	2.734	1.973	0.006	Significant
IQL -> ISH	H1b	+	0.785	25.840	1.973	0.000	Significant
ISH -> SCMP	H2	+	0.412	4.117	1.973	0.000	Significant

The results indicating a direct influence of Information Quality on Supply Chain Management Performance, evidenced by a t-statistic of 2.734 and a p-value of 0.006, robustly affirm the critical impact of Information Quality on the efficacy of supply chain management. This finding aligns with the conceptual frameworks proposed by Du et al. (2016) and Chengalur-Smith et al. (1999), which emphasize the crucial importance of information quality in supply chains. The findings reinforced the idea that entities equipped with high-quality information are better positioned to provide outstanding services to their customers. Additionally, the relevance of information quality extends beyond merely aiding suppliers, playing a significant role in enhancing the overall efficiency and effectiveness of supply chain performance.

The object of this study, which focuses on MSMEs in Pekanbaru, predominantly within the culinary business, requires raw material supplies from suppliers and necessitates the speed and accuracy of information for the needed raw materials. Suppose the information provided by the business owners to the suppliers is precise and of high quality. In that case, the suppliers can quickly respond to the needs of the business owners, thus avoiding significant obstacles in the process of delivering raw materials with the ultimate goal of meeting customer or buyer needs. Roe et al. (2015) asserted that Information Quality has a significant bearing on Supply Chain Management Performance. Kankam et al. (2023) conducted a selection of manufacturing firms listed on the Ghana Stock Exchange, which demonstrated a substantial impact of information quality on SCM performance. Analogous outcomes were observed in the research by Marinagi et al. (2015) within manufacturing companies in Greece, highlighting that information quality indeed plays a crucial role in influencing the performance of supply chain management.

The analysis revealed that the direct impact of information quality on information sharing is statistically significant, as evidenced by a t-statistic value of 25.880 and a p-value of 0.000. This finding demonstrates that Information Quality markedly affects Information Sharing. Such results are in line with the theoretical frameworks proposed by Kankam et al. (2023) and Hult et al. (2004), which asserted the pivotal role of information quality in facilitating the sharing of information. Specifically, the aspects of timeliness, accuracy, and relevance of the information shared serve as metrics to gauge the effectiveness of information exchange between buyers and suppliers. This underscores the critical nature of high-quality information in enhancing the efficiency and effectiveness of communication within supply chain networks. High-quality information can enhance trust and reliability between business partners, thereby encouraging more extensive information sharing. This research aligns with studies by Hsu et al. (2009), Jermisittiparsert and Rungtornsupavan (2019), Lai et al. (2015), and Susanty et al. (2018) finding that information quality impacts information sharing. The findings of this study can be elucidated by the fact that its sample is dominated by culinary businesses that require numerous raw material suppliers. By



sharing high-quality, timely, and accurate information, businesses in need of raw materials can find alternative sources if one supplier is unavailable, thus ensuring alternative supplier information is readily accessible.

The analysis revealed that Information Sharing has a significant effect on Supply Chain Management Performance, as indicated by a t-statistic of 4.117 and a p-value of less than 0.001. It underscores the positive influence of Information Sharing on the operational efficiency and effectiveness of supply chain activities. Such results are in line with the perspective offered by The Center for Quality and Productivity Improvement (CQPI) (2010), who emphasized the vital importance of information sharing in enhancing the functionality of supply chains. Information Sharing encompasses the open and prompt dissemination of essential information, including demand forecasts, production plans, and inventory status, among all entities within the supply chain network. This study highlights how adopting robust information-sharing practices enhances transparency, bolsters cooperation among participants in the supply chain, and mitigates uncertainty. Such practices allow organizations to adapt more quickly to fluctuations in market demand, reduce operational costs, and increase customer satisfaction.

Moreover, Information Sharing streamlines resource allocation and improves the planning and coordination of supply chain activities. Specifically, this research focuses on MSMEs in the culinary sector in Pekanbaru, and information sharing is crucial for the efficient procurement of raw materials. By disseminating precise and high-quality information to suppliers, entrepreneurs can secure raw materials promptly, thus avoiding inventory shortages and fulfilling customer demands effectively. This aspect is particularly vital in the culinary industry, where the promptness and accuracy of information exchange directly influence product quality and customer contentment. Prajogo and Olhager (2012) demonstrated the positive influence of Information Sharing on supply chain performance within the Australian manufacturing sector.

#### Indirect Effect

2  
Table 6 reveals that the impact of information quality on supply chain management performance is significant, as demonstrated by a t-statistic of 3.853 and a p-value of 0.000, with information sharing acting as a mediator. This finding indicates a notable effect of Information Quality on Supply Chain Management Performance through the mediation effect of Information Sharing.

**Table 6. Indirect Test Results (Indirect Effects)**

Indirect	Hypothesis	Direction	Amount of Influence	T Statistics (IO/STDEV)	T-table	P-Values	Description
IQL -> ISH -> SCMP	H1c	+	0.333	3.853	1.973	0.000	Significant

The study's outcomes suggest that enhancing the quality of information within an organization leads to an improved capability for sharing relevant, timely, accurate, and comprehensive information with supply chain partners. Such advancements in information quality and sharing culminate in bolstered Supply Chain Management Performance, characterized by improved coordination, more effective decision-making, and swifter adaptation to market shifts or consumer needs. These findings are consistent with prior research that underscores the critical role of information sharing in increasing supply chain

transparency, reducing uncertainty, and boosting operational agility (Li et al., 2006; Simatupang et al., 2002). It underscores the integral role of high-quality information and its sharing in achieving superior supply chain management outcomes.

## CONCLUSION

This research was conducted to examine the impact of Information Quality on Supply Chain Management Performance among MSMEs in Pekanbaru, with Information Sharing serving as a mediator. Information Sharing as a mediator illustrated that the better the quality of information provided by MSMEs in meeting the performance of the supply chain in conducting their business, the easier it will be for MSME owners to find available suppliers or alternative raw material suppliers that can meet their needs. From the supplier's perspective, the quality of information provided by the MSME owners facilitates suppliers in offering relevant options for MSME owners in Pekanbaru to meet their customer's needs. The results contribute to the work of MSME operators, researchers, and academics. For MSME owners in Pekanbaru, solving supply chain management's performance issues, where most MSMEs generally face challenges in meeting raw material needs; if one supplier faces difficulties, then finding a replacement supplier can be very challenging. With the improvement in the quality of information provided by MSMEs, the ability to share relevant, timely, accurate, and complete information among partners in the supply chain also increases, ultimately strengthening supply chain management performance by facilitating better coordination, more efficient decision-making, and quicker responses to market changes or customer demand. This research provides academic benefits as a resource on Information Quality's impact on supply chain management with Information Sharing as a mediator.

This study has limitations in that its results cannot be used as a basis to generalize Supply Chain Management Performance across all MSMEs specifically. Instead, this research can serve as a reference source for understanding supply chain performance among MSMEs in the city of Pekanbaru in a general context. Future researchers interested in exploring the same variables and objects should conduct the study in a more specific field. This approach aims to provide a reference for MSMEs within a particular sector seeking to understand their Supply Chain Management performance in detail. By focusing on a specific industry, the research can offer more tailored insights and practical recommendations that are directly applicable to the unique challenges and opportunities faced by MSMEs in that sector.

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