Information Sharing, Informal Contracts, and Supply Chain Performance of SMEs in Gunung Kidul Regency, Indonesia

Yuli Liestyana¹, Hadi Oetomo², Tri Wahyuningsih³, Muhamad Kiki Ariyanto⁴ Faculty of Economics and Business, UPN Veteran Yogyakarta^{1,2,3,4} JI. SWK No.104, Ngropoh, Condongcatur, Kec. Depok, Kab.Sleman, DIY 55283 Correspondence Email: hadi.utomo@upnyk.ac.id ORCID ID: https://orcid.org/0000-0002-9450-6429

ARTICLE INFORMATION

ABSTRACT

Publication information Research article

HOW TO CITE

Liestyana, Y., Oetomo, H., Wahyuningsih, T., & Ariyanto, M. K. (2022). Information sharing, informal contracts, and supply chain performance of SMEs in Gunung Kidul Regency, Indonesia. *International Journal of Applied Business and International Management*, 7(1), pp.151-169

DOI: https://doi.org/10.32535/ijabim.v6i3.1447

Copyright@ 2022 owned by Author(s). Published by IJABIM



This is an open-access article. License: Attribution-Noncommercial-Share Alike (CC BY-NC-SA)

Received: 21,MARCH,2022 Accepted: 23,APRIL,2022 Published: 26,APRIL,2022 Supply chain performance refers to the activities to meet the end customer's requirements. This study aims to analyze the effect of information sharing and informal contracts on supply chain performance with trust as a mediating variable in silver-making SMEs in Pelemgede, Sodo, Paliyan, Gunung Kidul Regency, Special Region of Yogyakarta, Indonesia. Data were collected using a questionnaire. This study used PLS with SmartPLS 3.0 software to analyze the hypothesis. The findings indicate information sharing has a positive impact on trust. Also, trust positively impacts supply chain performance, trust mediates the impact of information sharing on supply chain performance, and the effects of informal contracts supply on chain performance. Advanced research can be done by applying the study in other SMEs fields

Keywords: , Informal Contracts,

Information Sharing, Small and Medium-Sized Enterprises (SMEs), Supply Chain (SC) Performance, Trust

JEL Classification: M10, M11, M19

INTRODUCTION

Various businesses form alliances with other companies or suppliers to improve their performance and productivity across multiple production periods. Access to knowledge is effortless to obtain in the current era of globalization. The need for information from various parties in supply chain management is essential for a company. The information accuracy is critical to business success in determining the productivity level.

Small and medium-sized enterprises (SMEs) play an essential role in the Indonesian economy. Their role is so prominent and a mainstay to save the national economy in the time of economic crisis (Putra, Kepramareni, & Suryandari, 2019). SMEs collaborate through verbal agreements that prioritize mutual trust among business partners and a sense of responsibility by each business actor, thereby encouraging SME supply chain productivity. The current challenge is determining how to manage the various yet interdependent supply chain members. They are interdependent on one another and must be coordinated by efficiently working their dependencies. The primary goal of supply chain management (SCM) is to provide the right product for customers, in the correct quantity and quality, at the right price, and at the right time (Chopra & Meindl, 2013). SCM aims to coordinate supply chain activities to create a competitive advantage and benefits for customers (Heizer & Render, 2014).

Trust is an intangible social capital, which can be built and managed, making it difficult to quantify. Several empirical studies (e.g., Abdallah, Abdullah, & Saleh, 2016) found that trust with suppliers directly and positively impacts SC performance. Because the information flow and various agreements with suppliers are essential antecedents of trust, they contribute positively to the quality of SCM performance.

Information is a valuable type of data. It can be used for decision-making and benefit companies that use it effectively. As it is the foundation of the supply chain process, it is required to exchange needs and build trust to improve SCM performance. The exchange of information among supply chain partners can gain a competitive advantage and enable members to make informed decisions (Simatupang & Sridharan, 2002). Sharing information in the supply chain is a critical action for improving the performance of SCM and companies (Lee & Whang, 2000).

Informal contracts are also known as parties' wishes. Certain legal authorities and powers do not carry out informal contracts. The formation of an informal contract is motivated by the parties' desire to establish and maintain a positive reputation for integrity, fairness, and building trust (Frankel, Whipple, & Frayer, 1996). The quality of activities related to the flow of goods, from raw materials to final consumers, including those related to information and funds, is defined as supply chain performance (Zelbst, Green, Sower, & Reyes, 2009). Sharing information and developing good cooperative relationships will promote good and mutually beneficial cooperation, allowing supply chain management activities to run smoothly and improve their performance.

Silver-making SMEs rely heavily on suppliers to ensure that raw materials are available as soon as possible when demand rises. In 2019, each silver-making SME reached three kg of raw materials and produced 150 to 200 units in one month. Jewelry in rings, necklaces, and various decorations and sizes are produced. Overall, silver-making SMEs in Pelemgede can achieve an average total production of 135 kilograms per month, with a total yield of more than 6,000 units monthly. However, they failed to implement good coordination and clear business contracts. Their performance is limited to how much output they can achieve and sell. They do not understand how vital

information transfer and the effect of developing a trusting relationship with their suppliers in supporting the supply chain management performance. Business performance consistency must be maintained and improved. In the face of various developments and changes, it is critical for all parties, including suppliers, distributors, and customers, to collaborate in acquiring raw materials for product distribution.

LITERATURE REVIEW

Information Sharing

One of the most important types of resources available to businesses is information. Like any other resource, information can be managed (McLeod, 1995). Some experts define information sharing in a variety of ways. Lee and Whang (2000) defined information sharing as the transfer of information about inventory levels and positions, sales data and forecasts, order status, production and delivery schedules and capacities, and performance metrics. Companies that share information benefit from improved visibility, production planning, inventory management, and distribution. The information shared between supply chain partners can be tactical (e.g., purchasing, operations scheduling, logistics) or strategic (e.g., long-term company objectives, marketing, and customer information).

The supply chain is a sequence of functions and activities involved in producing and delivering a product or service, starting from the supplier of raw materials to the final customer (William & Sum, 2014). Supply chain management is the strategic coordination of functions within a business organization and its supply chain to integrate supply management. Some of the requirements for a supply chain to carry out successful supply chain management require trust among business partners and effective communication (William & Sum, 2014).

Information sharing can foster long-term relationships between business actors and their suppliers, improving the operational and strategic capabilities of the involved business actors and assisting them in achieving long-term benefits. Coordinated schedules, integrated processes, shared information, shared technology, long-term contracts, strengthened quality improvement, overall supplier capability improvement, and shared risks and rewards are all examples of information sharing (Echtelt, Wynstra, Weele, & Duysters, 2008). Shared information can help retailers make better decisions about quantity in supplier orders and supplier inventory allocation (Lee & Whang, 2000).

According to Viitaharju and La'hdesma'ki (2012), information sharing is an essential antecedent to mutual trust among supply chain partners. Several categories that become antecedent factors of trust are divided into five categories:

- 1. Product-related features (e.g., the number of retailers and manufacturers who consider market potential and the correct price or price ratio of the quality of a product),
- 2. Business-related features (e.g., customer orientation or actively understanding buyer needs and requirements, size and resource constraints, and organizational competencies),
- 3. Features relate to a person (e.g., marketing passion, experience, and individual competence),
- 4. Relationship-related factors (e.g., distribution of obligations, communication, and closeness emotional), and
- 5. Factors related to third parties (e.g., reputation and references)

Informal Contracts

A contract is an agreement between two or more parties providing trust and a mutual understanding to do something in the future by one or more parties (Knapp, Crystal, &

Prince, 2003). An unwritten contract or wish between the parties is an informal contract. It has been recognized that one party has obligations to another (Schein in Frankel et al., 1996). Contracts used to establish cooperation serve as a foundation for future interactions and cooperation. Contracts can aid in developing trust (Malhotra & Murnighan, 2002). Supply chain partners frequently create contracts to define the term of collaboration (e.g., agreements to purchase minimum quantities of materials). Contracts are created to share risks and rewards with business partners (e.g., the supplier replaces damaged material with the new one, and the manufacturer agrees to repurchase).

Contract agreements create incentive structures to encourage supply chain members to use policies optimally for the entire supply chain (Heizer & Render, 2014). Informal contracts are the antecedent that affects trust (Malhotra & Murnighan, 2002). Two categories of contracts are written contracts and informal contracts (Salim, 2015). Written contracts are made by the parties on paper and are divided into two categories, contracts (so-called hand-based deeds) and notarial deeds. A hand-based act deed is a contract signed by the parties involved, while a notary does a notarial deed.

According to Kingshott and Pecotich (2007), informal contracts must be viewed through psychological relationships that foster trust in relationships. Psychological contracts are unwritten contracts the parties own. Psychological contracts can be formed by carrying out previously agreed-upon obligations of one party to another (Schein in Rousseau, 1989).

Trust is a two-way street between partners that entails high trust in each other's decency and promise fulfillment (Chang, Kuo, Hsu, & Cheng, 2014). According to other experts, trust is a psychological state that consists of a willingness to accept vulnerability based on positive expectations of the intentions or behavior of others. Partner characteristics that influence trust include decency, integrity, consistency, and credibility (Tejpal, Garg, & Sachdeva, 2013). The level of trust felt among stakeholders in a supply chain can be defined as trust in the supply chain (Mayer, Davis, & Schoorman, 1995).

Trust

Trust is a two-way relationship between partners that implies a high level of trust in each other's decency as well as promise fulfillment (Chang, Kuo, Hsu, & Cheng, 2014). Other experts stated trust is a psychological state consisting of an intention to accept vulnerability based on positive expectations of the choices or behavior of others. Trust in a supply chain can be defined as the level of trust felt among stakeholders (Mayer et al., 1995). The story of trust may depend on the ability and willingness of stakeholders to identify and accept the risks they will face.

Malhotra and Murnighan (2002) defined trust as a party's willingness to accept the risk of another party's actions expecting that the other party will take meaningful action. Thus, trust differs from contracts in that the underlying mechanism of trust is in the hands of the individuals involved. In contrast, contracts are an external control mechanism generating trust. A consistently followed contract can improve several aspects of trust, such as integrity, consistency, and credibility in developing trust and commitment in supply chain relationships.

Chen, Yen, Rajkumar, & Tomochko (2011) discovered a positive relationship between information sharing, information quality, and information availability. Wu, Weng, and Huang (2012) investigated the development of supply chain partnerships using a commitment-trust framework. They discovered that higher levels of trust resulted in better interactions and encouragement in enhancing the interests of both parties,

facilitating cooperation and communication, reducing uncertainty, and reducing the tendency of business partners to leave (Mandal & Sarathy, 2018).

Katinka and Rosalinde (2005) state that trust networks have an independent effect on organizational trust. Although these two factors (web of trust and organizational trust) are carried out by doing business with foreigners or not in the same environment with a different approach, a strong trust network means that economic actors can benefit from doing business with foreigners.

Supply Chain Management (SCM)

Supply chain management refers to the coordination of the entire supply chain, from raw materials to satisfied customers (Heizer & Render, 2014). To ensure an ongoing supply chain can support strategy, supply chain management must consider supply chain issues or processes. Appropriate costing strategies and rapid response have distinct elements. For example, suppliers are selected based on low costs, the ability to design products at low prices, minimize inventory, and reduce waiting time to prioritize suppliers with fast responses (Heizer & Render, 2014).

Supply Chain Management is a strategic function that helps businesses improve their performance and maintain competitive advantage (Li et al., 2005). Effective supply chain management is characterized by monitoring and continuity of the supply chain to achieve the best performance (Lockamy & McCormack, 2004). SCM is concerned with the production process related to raw material suppliers. The quality of activities related to the flow of goods movement, from raw materials to final consumers, including those related to information and funds, is defined as supply chain performance (Zelbst et al., 2009). To be successful in the new environment, SMEs have to apply supply chains evaluated continuously and developed to meet customers' needs (Chang, Tsai, & Hsu, 2013). Beamon (1999) defined supply chain performance as an assessment of supply chain management, considering resource, output, and flexibility factors. Abdallah et al. (2017) provide a concise description of the most important items used in supply chain performance measurement, classified into three categories: operational effectiveness, business effectiveness, and supply chain effectiveness.

Supply Chain Performance

Performance refers to the quality of goods movement flow, from raw materials to final consumers, including those related to information and funds (Zelbst et al., 2009). Supply chain performance deals with how high supply chain activities meet the end consumer needs. It can be measured by product availability, delivery time, and all inventory and capacity needed in the supply chain. In advance, supply chain performance creates a company's competitive advantage. To win in the new environment, the supply chain needs to be developed sustainably to adapt to the needs (Chang et al., 2013).

Beamon (1999) conceptualized supply chain performance as an evaluation of supply chain management, including resource, output, and flexibility factors. Chopra and Meindl (2013) described supply chain performance as "the result of how supply chains are managed and how well logistics drivers (facilities, inventory, transportation) and cross-functional drivers (information, sourcing and pricing) interact together to determine performance levels in terms of resources, responsiveness, and supply chain efficiency". Supply chain performance is defined in this study as a result of the performance of supply chain member companies' processes regarding measures related to reliability, cost, responsiveness, agility, and asset management.

Abdallah et al. (2017) briefly suggested the most important items in supply chain performance measurement: operational effectiveness, business effectiveness, and supply chain. They found a relationship between trust and supply chain performance as

measured by high process quality, short and efficient processes, cost efficiency, and flexibility. As an indicator measuring the effect of trust, using the indicators of cost reduction, inventory reduction, and waiting time reduction provides increased profit, better prices, better product development, and increased flexibility and agility to respond to customers.

Information Sharing and Trust

To determine information correctness, business actors engage in several deeper collaborations that involve each business actor's emotions. In their study, Susanty, Mustiana, and Bakhtiar (2018) discovered that information sharing has a significant positive relationship with trust. Accurate information sharing between businesses and suppliers has a significant impact on others and is thus essential for building trust. Appropriate information sharing activities reduce uncertainty and improve service in fulfilling customer orders, thereby improving the company's supply chain (Zelbst et al., 2010). Sharing information positively impacts trust-building because the information conveyed creates an emotional bond. As a result, the more precise and accurate the information shared, the more trust each party in supply chain activities will have. We hypothesized:

Hypothesis 1: Information sharing positively affects trust.

Informal Contracts and Trust

Susanty et al. (2018) discovered that SME actors agreed that an informal contract agreed in the form of a verbal promise from a supplier would increase SME actors' trust in their suppliers. This is because suppliers will act more professionally if raw materials are delivered immediately, with the quality, quantity, and cost promised. On a larger scale, such as in business relationships, companies typically use temporary contracts while building trust (Poppo & Zenger, 2002). According to Knapp et al. (2003), a contract also increases trust. On the ground of this, we proposed:

Hypothesis 2: Informal contracts positively affect trust.

Trust and Supply Chain Performance

Susanty et al. (2018) contended that trust has a significant positive relationship with supply chain performance. More specifically, SMEs actors believe that trust between companies and suppliers improves supply chain performance. Supply chain performance can be improved by reducing unnecessary activities, waiting time for raw materials to arrive, inventory, and increasing profits and customer satisfaction because their suppliers can be trusted. According to Yeung, Selen, Zhang, & Huo (2009), using trust as a relationship management mechanism helps firms achieve greater internal and supply chain integration. Abdallah et al. (2016) argued that trust built with suppliers directly affects SCMP performance. We hypothesized:

Hypothesis 3: Trust positively affect on supply chain performance.

Trust as a Mediating Variable in the Effect of Information Sharing on Supply Chain Performance

By establishing information sharing, it will meet the needs of SMEs for raw materials needed for the manufacturing process. However, it will also build close relationships, better cooperation, and trust among the interacting parties. Increasing trust relationships would bring a positive impact on supply chain performance. On this basis, we proposed: *Hypothesis 4: Trust mediates the effect of information sharing on supply chain performance*

Trust as a Mediating Variable in the Effect of Informal Contracts on Supply Chain Performance

The building of an informal contractual relationship between cooperating parties does more than fulfilling the agreement for the needs of the production process. The continued

occurrence of informal contracts demonstrates that suppliers and business actors have a sense of trust in one another. As informal contracts are frequently executed and agreed upon, it fosters trust, which improves supply chain performance. We proposed:

Hypothesis 5: Trust mediates the effect of informal contracts on supply chain performance

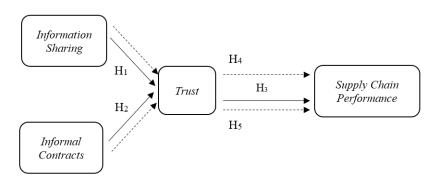


Figure 1. Conceptual Framework

The conceptual framework in Figure 1 has five paths in total. Previous research has shown how information sharing affects trust and trust affects supply chain performance, and informal contracts affect trust. This study has a difference by using five paths. The first path is for the direct effect of information sharing on trust. The second is for the direct effect of information sharing the third is for the direct effect of trust on supply chain management performance. The next two paths are the mediation path, which analyzes the role of trust in mediating the effect of information sharing and informal contracts on supply chain management performance.

RESEARCH METHOD

A quantitative approach is used in this study. Smart PLS 3.0 is the analysis tool used. The data used in this study is primary data; which is information obtained from the first source, such as questionnaire responses (Sekaran & Bougie, 2017). The primary data is in the form of responses to statements about the impact of Information sharing, informal contracts, and trust on supply chain performance. The sampling technique used is non-probability sampling, with saturated sampling (census). According to Ghozali and Latan (2015), the PLS-SEM analysis is divided into two sub-models: the measurement model, known as the outer model, and the structural model, also known as the inner model. The outer model is used to validate the instrument, while the inner model is used to validate the path analysis hypothesis proposed in the study.

RESULTS

The structural model known as the inner model shows the power of estimation between latent variables or constructs. The structural model shows the relationship between the independent and dependent latent variables (Ghozali & Latan, 2015). The analysis of this stage is seen from the value of the determinant coefficient R^2 , Q^2 , and goodness of fit (GoF).

 Table 1. Inner Model (Structural Model)

Result	Criteria
0.657	Moderate
0,627	
	0,657

$ \frac{Q^2 Predictive Relevance}{Q^2 = 1 - ((1-R1^2) (1-R2^2))} = 1 - ((1-0,657^2) (1-0,627^2)) = 1 - ((1-0.432146311)x(1-0.39285805)) = 1 - ((0.56785369) (0.60714195)) = 0.655232204 $		Good (the observed values have been correctly reconstructed and have a high predictive value)
$\frac{Goodness of Fit (GoF)}{GoF = \sqrt{AVE \times \overline{R^2}}}$ $= \sqrt{0.554 \times 0.642^2}$ $= \sqrt{0.554 \times 0.412}$ $= 0.478$	47,8 %	Large

In general, the explanatory research method is a PLS-based method approach. This is due to the hypothesis testing used in this method. The probability value can be used to test the hypothesis. The inner model is evaluated using parameter coefficient values and the p-value, which is calculated using the bootstrapping procedure. The estimated value for the path relationship in the structural model must be significant. The 0.05 p-value indicates the value of the inner model (significance 5%). When using PLS to perform a bootstrapping test, the p-value appears. The criteria for accepting or rejecting the hypothesis are met if the p-value is ≤ 0.05 . The significance value and the t-value are used to test hypotheses. The recommended value for t-value is ≥ 2.018 .

Figure 2 illustrates PLS algorithm.

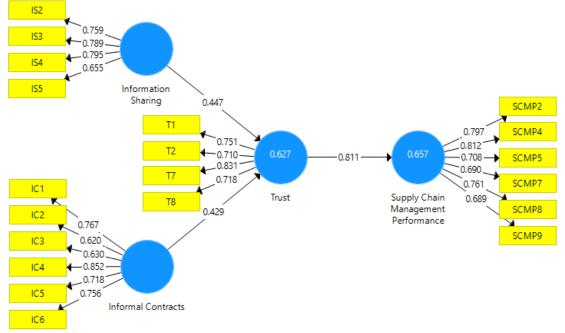


Figure 2. PLS-Algorithm Model

The results of the PLS-Algorithm test show that trust is influenced by information sharing and informal contracts. The results of R-Squares on trust of 0.657 or 65.7% indicate that the percentage of trust as a mediating variable can be explained through the variables of information sharing and informal contracts. Other test results show the R-Squares of Supply Chain Management Performance value of 0.627, indicating that the percentage of supply chain management performance can be explained through the three variables, namely information sharing, informal contracts, and supply chain management performance by 62.7%.

The value of Q2 represents how well the observed value is generated by the model and the estimation of its parameters (Ghozali & Latan, 2015). The value of Q2 greater than 0 indicates that the model has predictive relevance, while the value of Q2 lower than 0 indicates that the model lacks predictive relevance. Respectively, 0.02, 0.15, and 0.35 show weak, moderate, and strong effects Ghozali and Latan (2015). The result of the Q2 calculation is 0.65, which shows that the model has an outstanding predictive relevance value.

The Goodness of Fit (GoF) validates the overall structural model. The criteria for assessing GoF are 0.1 (small GoF), 0.25 (medium GoF), and 0.36 (large GoF) (Ghozali & Latan, 2015). The value of GoF in this study is 0.478, which is a large GoF value indicating that the exogenous variable is appropriate (good) as an explanatory variable capable of predicting endogenous variables.

Hypothesis testing is conducted by observing the t value and significance value. The recommended t-value is \geq 2.018 and the significance value or p-value is \leq 0.05. The results of hypothesis testing are presented in Table 2.

	Original Sample (O)	T Statistics (O/STDEV)	P Values	Information
Informal Contracts ->	0.348	2.649	0.007	Accepted
Supply chain performance				
Informal Contracts -> Trust	0.429	2.702	0.007	Accepted
Information Sharing -> Supply chain performance	0.362	2.766	0.006	Accepted
Information Sharing -> Trust	0.447	2.948	0.003	Accepted
Trust -> Supply chain performance	0.811	16.717	0.000	Accepted

 Table 2. Hyphotesis Results (Path Coefficients)

Hypothesis 1: The results of the path analysis show that information sharing has a positive and significant effect on trust because the original sample (O) value shows a positive value of 0.429. The results of T-statistic 2.702 > 2.018 and P-value of 0.007 <0.05 means that Information Sharing has a positive and significant effect on Trust.

Hypothesis 2: The results of the path analysis indicate that the informal contracts have a positive and significant effect on trust because the original sample (O) value shows a positive value of 0.447. The result of T-statistic is 2.948 > 2.018 and P-value is 0.003 < 0.05. Therefore, Informal Contracts have a positive and significant effect on Trust.

Hypothesis 3: The results of the path analysis confirm that trust has a positive effect on supply chain management performance because the original sample (O) value shows a positive value of 0.811. The results of the T-statistic 16.717 > 2.018 and the P-value of 0.000 > 0.05 mean that Trust has a significant positive effect on Supply Chain Management Performance.

Total indirect effects are used to test the hypothesis with mediating variables or the indirect effects of information sharing and informal contracts on supply chain management performance (see Table 3 and Table 4).

	Original Sample (O)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
--	---------------------------	----------------------------------	-----------------------------	----------

Table 3. Total Indirect Effects

Informal Contracts -> Supply Chain Management 0.348 0.129 2.694 0.007 Performance Informal Contracts -> Trust Information Sharing -> Supply Chain Management 0.362 0.131 2.766 0.006 Performance Information Sharing -> Trust Trust -> Supply Chain Management Performance

Table 4. Total Effects

	Original Sample (O)	T Statistics (0/STDEV)	P Values	Notes
Informal Contracts -> Supply Chain Management Performance	0.348	2.649	0.007	Accepted
Informal Contracts -> Trust	0.429	2.702	0.007	Accepted
Information Sharing -> Supply Chain Management Performance	0.362	2.766	0.006	Accepted
Information Sharing -> Trust	0.447	2.948	0.003	Accepted
Trust -> Supply Chain Management Performance	0.811	16.717	0.000	Accepted

Hypothesis 4: The information sharing path analysis results signify a positive effect on supply chain management performance because the original sample (O) value shows a positive value of 0.348. The result of T-statistic is 2.694 > 2.018 and P-value is 0.007 < 0.05. Therefore, indirectly Information Sharing has a positive and significant effect on Supply Chain Management Performance mediated by Trust.

Hypothesis 5: informal contracts positively affect supply chain management performance because the original sample (O) value shows a positive value of 0.362. The result of T-statistic is 2.766 < 2.018 and P-value is 0.006 < 0.05. Therefore, indirectly Information Sharing has a positive and significant effect on Supply Chain Management Performance mediated by Trust.

Table 5. Indirect Effects

	Specific Indirect	
	Effects	
Information Sharing -> Trust -> Supply Chain Management Performance	0.362	
Informal Contracts -> Trust -> Supply Chain Management Performance	0.348	

The results of the indirect effect test show that the effect of information sharing on supply chain management performance through trust is 0.362, which means that information sharing affects supply chain management performance by 36.2% through trust. The effect of informal contracts on supply chain management performance through trust is 0.348, which means that informal contracts affect supply chain management performance by 34.8% through trust.

Table 6. Path Coefficients

	Informal Contracts	Information Sharing	Supply Chain Management Performance	Trust
Informal Contracts				0.429
Information Sharing				0.447
Supply Chain Management Performance				
Trust			0.811	

The results of the path coefficient test show that the direct effect of information sharing on trust is 42.9%. The direct effect of informal contracts on trusts is 44.7%. Another direct effect, namely, between trust and supply chain management performance is 81.1%.

DISCUSSION

The test results of hypothesis 1 show that information sharing affects trust. This implies that information sharing is a significant factor in supporting the establishment of trust between suppliers and SMEs in Pelemgede Hamlet. Information sharing directly increases trust in their raw material suppliers. Information about changes in raw materials, availability of raw materials, and awareness of the importance of sharing helpful information between both parties in business processes significantly increase trust. This study corroborates Susanty et al. (2018), suggesting that sharing accurate information about the availability and changes in raw materials has a significant effect on business partners, which is the key to building trust. These results also support Li et al. (2004), underlining that information sharing creates long-term relationships between business actors and suppliers. Also, Viitaharju and La"hdesma"ki (2012) stated that sharing information is an essential factor for mutual trust between business partners in the supply chain process.

The test results of hypothesis 2 show that informal contracts have a significant positive effect on trust, which means that informal contracts are an essential factor or activity to support the establishment of trust between suppliers and silver SMEs in Pelemgede Hamlet. Informal contracts directly increase trust in their raw material suppliers. The agreement regarding consistency act professionally and optimally in the supply of raw materials. The suitability of the quality of the raw materials promised between SMEs and their suppliers increases trust for both parties. In a cooperative supply chain between SMEs and suppliers, informally, suppliers promise to provide the best raw materials and agree to become mutual business partners to SMEs. Verbal agreements regarding the suitability of the quality of raw materials and arrangements to solve problems increase mutual trust. There is a significant relationship between silver production SMEs in Pelemgede Hamlet and suppliers. This study confirms Malhotra and Murnighan (2002), stating that the use of contracts helps build trust. Frankel et al.(1996) also show that the formation of informal contracts is a desire that arises to create and maintain a positive reputation to build justice and trust. Knapp et al. (2003) argued that a contract increases trust. This study is in line with Susanty et al. (2018) that informal contracts have a significant positive effect on trust.

The test results of hypothesis 3 show that trust has a significant positive effect on supply chain management performance, which means that trust formed directly influences supply chain management performance. Silver-maker MSMEs must trust suppliers regarding raw materials, always fulfilling agreed promises, trusting suppliers who care about the success of SMEs, and believing that suppliers always provide the best service

increase service and production flexibility. Trust increases profits because they always run the production process without being constrained by the lack of raw materials and minimizing unnecessary activities in the production process. After all, silver-maker SMEs can trust suppliers to send good quality and the right supplies. Overall, trust improves supply chain management performance. This accords with Wu et al. (2012) that a high level of trust results in positive interaction on performance. This supports Susanty et al. (2018) and Abdallah et al. (2016), contending that trust is an interaction that helps companies improve performance, effectiveness, flexibility, and efficiency in the production process.

The test results of hypothesis 4 show that trust mediates the effect of information sharing on supply chain management performance of silver-maker MSMEs in Pelemgede Hamlet. Information sharing has a direct influence, which has been good for increasing trust in SMEs. Trust also has an excellent direct effect on supply chain management performance. Looking at trust as mediation makes information sharing influential and plays a role in improving supply chain management performance. Trust has a massive role in mediating the effect of information sharing on supply chain performance.

Trust establishes communication, the accuracy and the suitability of the information, which increases trust regarding all critical information to support the SME production process, which covers the supply chain process in SMEs. This study supports Chen, Gu, Cai, & Yang (2019) that sharing information in the supply chain directly impacts operating performance and company performance.

The test results of hypothesis 5 show that trust mediates the effect of informal contracts on supply chain management performance of silver-maker SMEs in Pelemgede Hamlet. Informal contracts have a direct influence on trust. Trust also has an excellent direct effect on supply chain management performance. By looking at trust as a mediation, informal contracts are influential and play a role in improving supply chain management performance. Where trust has multiple positions to mediate complementary informal contracts by entering into various agreements in an informal form. This means that if informal contracts are implemented accompanied by trust, it will better affect supply chain management performance.

CONCLUSION

This study used data from 45 respondents, all of whom are silver-making SMEs in Pelemgede, Yogyakarta. Our analysis concluded that information sharing has a positive and significant effect on trust in SMEs producing silver with silver raw material suppliers. Informal Contracts has a positive and significant effect on trust in SMEs producing silver with silver raw material suppliers, and trust has a positive and significant effect on supply chain management. Besides, trust mediates the effect of informal contracts on supply chain performance. Trust mediates the impact of informal contracts on supply chain performance. This study has limitations in that it only looks at silver-making SMEs in Pelemgede in which the variables used in this study are unlikely to apply to other industries.

The variables in this study can be applied to other industrial fields in further research. The findings suggest that trust has a significant impact on supply chain performance. This demonstrates that SMEs are reliant on their suppliers. Data from the suppliers may determine different effects for further research. Since this study does not look at the direct impact of information sharing and informal contracts on supply chain performance, more research is needed to investigate information sharing and information sharing and informal contracts have a direct impact without any mediating variables.

ACKNOWLEDGMENT

N/A

DECLARATION OF CONFLICTING INTERESTS

We declare no potential conflicts of interest concerning the study, authorship, and/or publication of this article.

REFERENCES

- Abdallah, A. B., Abdullah, M. I., & Saleh, F. I. M. (2016). The effect of trust with suppliers on hospital supply chain performance The mediating role of supplier integration, *Benchmarking: An International Journal, 23*(6), 1445-1471.
- Beamon, B. M. (1999). Measuring supply chain performance. *International Journal of Operations & Production Management, 19*, 275-292.
- Chang, H. H., Tsai, Y. C., & Hsu, C. H. (2013). E-procurement and supply chain performance. *Supply Chain Management, 18*(1), 34–51.
- Chang, K.-C., Kuo, N.-T., Hsu, C. L., & Cheng, Y.-S. (2014). The impact of website quality and perceived trust on customer purchase intention in the hotel sector: Website brand and perceived value as moderators. *International Journal of Innovation, Management and Technology, 5,* 255-260. doi:10.7763/IJIMT.2014.V5.523.
- Chen, C., Gu, T., Cai, Y., & Yang, Y. (2019). Impact of supply chain information sharing on performance of fashion enterprises An empirical study using SEM. *Journal of Enterprise Information Management*, *3*2(6), 913-935.
- Chen, J. V., Yen, D. C., Rajkumar, T. M., & Tomochko, N. A. (2011). The antecedent factors on trust and commitment in supply chain relationships. *Computer Standards and Interfaces*, *33*(3), 262–270.
- Chopra, S., & Meindl, P. (2013). *Supply chain management: Strategy, planning, and operation* (5th ed.). Edinburg: Pearson Education Limited.
- Echtelt, F., Wynstra, F., Weele, A., & Duysters, G. (2008). Managing supplier involvement in new product development: A multiple-case study. *The Journal of Product Innovation Management, 25*(2), 180-201.
- Frankel, R., Whipple, J. S., & Frayer, D. J. (1996). Formal versus informal contracts: Achieving alliance success. *International Journal of Physical Distribution & Logistics Management, 26*(3), 47-63.
- Ghozali., & Latan. (2015). Partial Least Square (konsep, tehnik, dan aplikasi) menggunakan program SmartPLS 3.0. Semarang: Universitas Diponegoro.
- Gulati, R., & Nickerson, J. A. (2008). Interorganizational trust, governance choice, and exchange performance. *Organization Science*, *19*(5), 688-708.
- Heizer, J., & Render, B. (2014). *Operations management, sustainability and supply chain management* (11th ed.). Jakarta: Salemba Empat.
- Katinka, B.-F., & Rosalinde, K. W. (2005). *Trust under pressure, empirical investigations of trust and trust building in uncertain circumstances.* USA: Edward Elgar Publishing. Inc.
- Kingshott, R. P. J., & Pecotich, A. (2007). The impact of psychological contracts on trust and commitment in supplier-distributor relationships. *European Journal of Marketing*, 41(9–10), 1053–1072.
- Knapp, C. L., Crystal, N. M., & Prince, H. G. (2003). *Problems in contract law and materials*. New York, NY: Aspen Publishers.
- Lee, H. L., & Whang, S. (2000), Information sharing in a supply chain. *International Journal of Manufacturing Technology and Management*, *1*(1), 79-89.
- Lockamy, A., & McCormack, K. (2004). Linking SCOR planning practices to supply chain performance: An exploratory study. *International Journal of Operations & Production Management, 24*(12), 1192–1218.

International Journal of Applied Business and International Management (IJABIM) Vol. 7 No. 1, pp.151-169 , April 2022 E-ISSN: 2621-2862/P-ISSN: 2614-7432

Https://www.ejournal.aibpm.org/index.php/IJABIM

- Malhotra, D., & Murnighan, J. K. (2002). The effects of contracts on interpersonal trust. *Administrative Science Quarterly, 47*(3), 534–559.
- Mandal, S., & Sarathy, R. (2018). The effect of supply chain relationships on resilience: Empirical evidence from India. *Global Business Review*, *19*(3_suppl), S196–S217. doi:10.1177/0972150918758094
- Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *The Academy of Management Review*, 20(3), 709–734. doi:10.2307/258792
- McLeod, R. Jr. (1995). *Management information systems* (7th ed,). Upper Saddle River, NJ: Prentice Hall, Inc.
- Poppo, L., & Zenger, T. (2002). Do formal contracts and relational governance function as substitutes or complements. *Strategic Management Journal*, 23(8), 707-725.
- Putra, I. G. C., Kepramareni, P., & Suryandari, N. N. A. (2019). Empowerment program, entrepreneurial competence and business growth SMEs in Denpasar. *Asia Pacific Journal of Management and Education*, 2(2), 1-10.
- Rousseau, D. M. (1989). Psychological and implied contracts in organizations. *Employee Responsibilities and Rights Journa*l, 2(2), 121-139.
- Salim, H. S. (2015). *Hukum kontrak teori dan teknik penyusunan kontrak*. Jakarta: Sinar Grafika.
- Sekaran, U., & Bougie, R. (2017). *Metode penelitian bisnis* (6th ed.). Jakarta: Salemba Empat
- Simatupang, T. M., & Sridharan, R. (2002). The collaborative supply chain. *The International Journal of Logistics Management*, *13*(1), 15-30.
- Susanty, A., Sirait, N., & Bakhtiar, A. (2018). The relationship between information sharing, informal contracts and trust on performance of supply chain management in the SMEs of batik. *Measuring Business Excellence, 22*(3), 292-314. doi:10.1108/MBE-05-2017-0019.
- Tejpal, G., Garg, R. K., & Sachdeva, A. (2013). Trust among supply chain partners: A review, *Measuring Business Excellence*, *17*(1), 51-71.
- Viitaharju, L., & La"hdesma"ki, M, (2012). Antecedents of trust in asymmetrical business relationships: Differing perceptions between food producers and retailers. *Marketing Intelligence & Planning*, *30*(5), 567-587.
- William, I. S., & Chuong, S. C. (2014). *Operations management: An Asian perspective* (9th ed.). Jakarta: McGraw Hill Education dan Salemba Empat.
- Wu, M.Y., Weng, Y.C., & Huang, I. C. (2012). A study of supply chain partnerships based on the commitment-trust theory. Asia Pacific Journal of Marketing and Logistics, 24(4), 690–707.
- Yeung, J. H. Y., Selen, W., Zhang, M., & Huo, B. (2009). The effects of trust and coercive power on supplier integration. *International Journal of Production Economics*, *120*(1), 66-78.
- Zelbst, P. J., Green, K. W. Jr, Sower, V. E., & Reyes, P. (2009). Impact of supply chain linkages on supply chain performance. *Journal of Industrial Management and Data Systems*, *109*(5), 665–682.
- Zenger, T. R., Lazzarini, S. G., & Poppo, L. (2002). Informal and formal organization in new institutional economics. In P.Ingram, & B. S. Silverman (Eds.), Advances in Strategic Management, 19, pp. 277–305. Greenwich, CT: JAI Press.