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# Implementation of Supply Chain Management to Improve the Performance of Cirebon Batik SMEs

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## Abstract

Small and Medium Enterprises (SMEs) are growing rapidly in Indonesia, ideas emerge thanks to an innovation that can be a strength for companies to strengthen their market position. Today's business world continues to compete to create a variety of consumer needs that are getting higher and smarter in choosing their needs. Every effort will make every effort to improve productivity, efficiency, fast, easy service, and continue to create new innovations to remain ahead and survive in the market. The purpose of this study was to examine the effect of information sharing, cooperation, long term relationship, Supply Chain Management and Business Performance. The data was processed using Structural Equation Modeling (SEM) with the help of the Analysis of Moment Structure (AMOS) version 18.0 program.

**Keywords:** Information sharing, Cooperation, Long term relationship, Supply chain management, Business performance

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## 1. Introduction

Today's business world continues to compete to create a variety of consumer needs that are getting higher and smarter in choosing their needs (Djou, Udin, Lukiasuti, & Filatrovi, 2020; Jatmiko, Udin, Raharti, Laras, & Ardi, 2021). Every attempt will make every effort to improve productivity, efficiency, fast, easy service, and continue to create new innovations to remain ahead and survive in the market. Pujawan and Mahendrawati (2010) explain that the importance of the role of all parties from suppliers, manufacturers, distributors, retailers, and customers in creating cheap, quality, and fast products is what gave birth to a new concept, namely Supply Chain Management.

According to Indrajit and Djokopranoto (2005) the term supply chain was first used by several logistics consultants around the 1980s, then by academics for further analysis in the 1990s, the concept of supply chain management was born. Supply chain management is the integration of the activities of procuring materials and services, converting them into semi-finished goods and final products, and delivering them to customers (Heizer and Render, 2008). The theory and practice of supply chain management has been widely applied to companies – company. According to Heyzer and Render (2005), the application of SCM (supply chain management) that following the correct SCM concept can have an impact on increasing competitive advantage to the product and to the supply chain system built by the company. More Heyzer and Render (2005) further stated that, Companies need to consider the problems supply chain to ensure that the supply chain supports the company's strategy. If Operations management supports the company's overall strategy, so the supply chain is designed to support operations management (Heyzer and Render, 2005). This is supported by the opinion of Chopra and Meindl (2007) that, Supply chain design, planning, and decision Operations play an important role in determining the success or failure of a company effort.

1. Is information sharing affect supply chain management practices?

2. Is cooperation affect the practice of supply chain management?
3. Is information sharing affect SME business performance?
4. Is long term relationship affect SME business performance?
5. Is cooperation affect SME business performance?
6. Does supply chain management practice affect SME business performance?

## **2. LITERATURE REVIEW**

### **2.1 Business Performance**

Beal (2000) states that there is no consensus on the most appropriate performance measures in a study and that the objective measures of performance that have been used in many studies are still lacking. In the research of Matsuno, Mentzer and Ozsomer (2002, p.24) self-reported business performance measures the relative business performance indicators, namely market share, percentage of new product sales to total sales and ROI.

### **2.2 Supply Chain Management**

SCM practices are defined as part of the activities undertaken by an organization to improve management effectiveness in the supply chain (Li et al., 2006). Li et al. (2006) also stated that the practice of SCM is a multidimensional concept that includes both the upstream and downstream sides of the supply chain

### **2.3 Information Sharing**

Information sharing is the intensity and capacity of the company in its interactions to share information with partners related to joint business strategies. Information sharing also allows supply chain members to obtain, maintain, and convey the information needed to ensure effective decision making, and is a factor that is able to strengthen the elements of collaboration as a whole, therefore industrial bottlenecks can be reduced by information sharing (Simatupang & Sridharan in Yaqoub, 2012).

### **2.4 Long term relationship**

Ganesan in Indriani (2006) defines long-term relationships as perceptions of the interdependence of buyers on good suppliers in the context of a product or relationship that is expected to bring benefits to the buyer in the long run. Kanter in Lesatri (2009) reveals that the company's relationship with suppliers is the strongest collaboration in the context of the value chain or supply chain.

### **2.5 Cooperation**

Indrajit and Djokopranoto (2002) say, Cooperation is one of the best alternatives in performing optimal supply chain management. The reason is because among organizations or companies that are on the supply chain management network, it is certain that an information system is accurate and smooth and requires trust between participants in the procurement of goods and services. All of that will not be achieved without good cooperation

## **3. RESEARCH METHODS**

### **3.1 Population and Sample**

Population is a group of people, events, or everything that has certain characteristics (Indriantoro and Supomo, 1999). For this study, the population used was 1200 food SME owners in Semarang City. Sampling in this study carried out certain considerations. Hair et al. 1995 (in Ferdinand, A T., 2002 p. 47) found that for the SEM model, the appropriate sample size is between 100-200. Samples were taken using a simple random sampling technique which was chosen randomly and used purposive sampling where the selection of

existing samples aims to meet certain requirements. This study used a sample of 120 food SME owners in Semarang City.

### 3.2 Data analysis method

The data analysis method used in this study is a quantitative analysis method where this quantitative data analysis method is an analytical method in the form of numbers and calculations using statistical methods. To simplify the analysis process, the AMOS SEM program will be used.

## 4. RESULTS AND DISCUSSION

**Table 1. Data Normality**

Variable	min	max	skew	cr	kurtosis	cr
x6	1,000	5,000	-,605	-2,705	,271	,607
x5	1,000	5,000	-,339	-1,515	-,121	-,271
x4	2,000	5,000	,085	,381	-,961	-2,149
x7	1,000	6,000	-,382	-1,710	-,341	-,763
x14	2,000	7,000	,353	1,578	-,477	-1.066
x17	2,000	7,000	,091	,406	-1.042	-2,331
x16	2,000	7,000	,205	,917	-1.015	-2,270
x15	1,000	7,000	,068	,302	-,984	-2.201
x13	1,000	6,000	-,085	-,378	-,752	-1,681
x12	1,000	5,000	-,377	-1,684	-,639	-1,429
x11	1,000	6,000	-,312	-1,395	-,351	-,786
x10	2,000	6,000	-,255	-1.142	-,617	-1,379
x8	2,000	6,000	-,374	-1,671	-,754	-1,685
x9	2,000	7,000	-,106	-,473	,429	,959
x3	1,000	5,000	0.053	,235	-,590	-1,320
x2	1,000	5,000	-,453	-2,024	-,082	-,182
x1	2,000	5,000	,139	,624	-,594	-1,329
Multivariate					6,888	1.484

Source: Processed research data, 2018

From the results of data processing shown in the table, it can be seen that there is no CR value for skewness which is outside the + 2.58 range. Thus, the research data used has met the data normality requirements, or it can be said that the research data has been normally distributed.

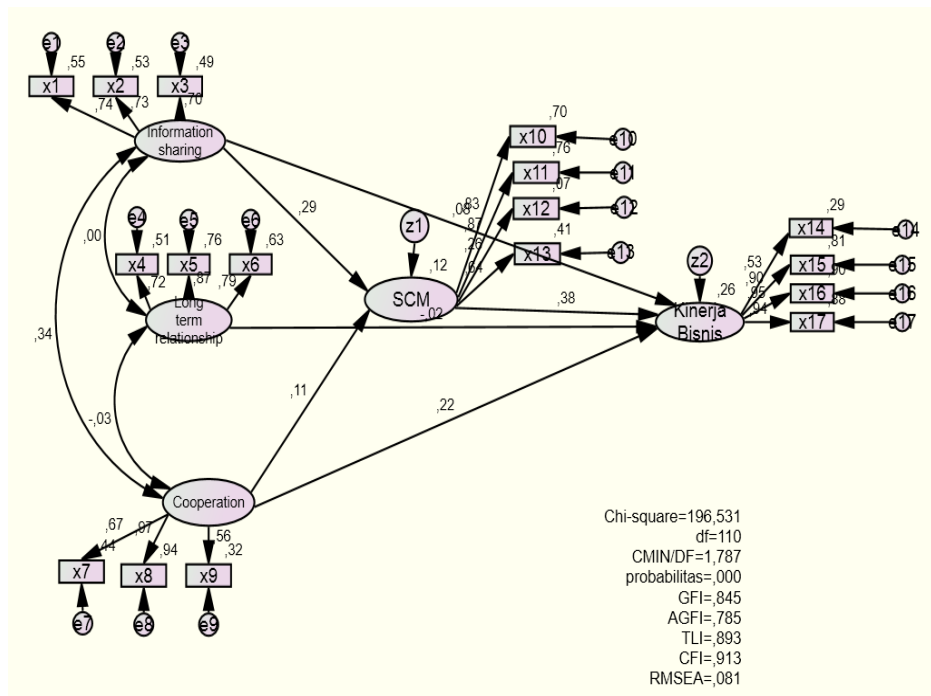


Figure 1. Model Feasibility Test Results

Table 2. SEM Analysis

Goodness of Fit Index	Cut-off Value	Analysis Results	Model Evaluation
Chi – Square	<161,580df 110	196.531	Marginal
Probability	≥ 0.05	0.001	Marginal
RMSEA	≤ 0.08	0.081	Good
GFI	≥ 0.90	0.845	Marginal
AGFI	≥ 0.90	0.785	Marginal
CMIN/df	2.00	1,787	Good
TLI	≥ 0.95	0.893	Good
CFI	≥ 0.95	0.913	Good

Source: Processed research data, 2018

For statistical tests on the relationship between variables which will be used as a basis for answering the research hypotheses that have been proposed. Statistical test of processing results with SEM is carried out by looking at the level of significance of the relationship between variables which is shown through the Probability (p) and Critical Ratio (CR) values of each relationship between variables.

Table3. Standardized Regression Weight

	Estimate	SE	CR	P
SCM <--- Information_sharing	,341	,142	2,390	0.017
SCM <--- Cooperation	,158	,161	,985	,325
Performance_Business <--- Competitive Advantage	,728	,193	3,776	***
Performance_Business <--- Information_sharing	,178	,243	,734	,463
Performance_Business <--- Cooperation	,623	,281	2,214	,027
Performance_Business <--- Long_term_relationship	-,035	,185	-,190	,849

Source: Processed research data, 2018

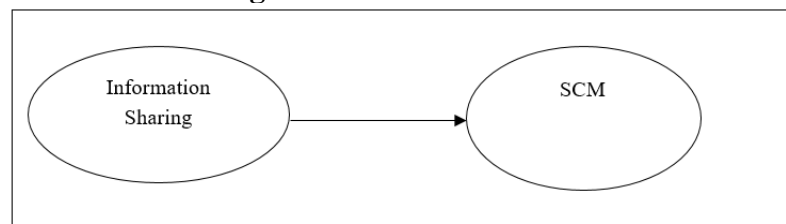
## 5. CONCLUSION

There are five hypotheses proposed in this study. The conclusions of the five hypotheses are as follows:

1. The results of testing the effect of information sharing on competitive advantage can be concluded that information sharing has an influence on SCM
2. The results of testing the effect of cooperation on competitive advantage can be concluded that cooperation has no effect on SCM
3. The results of testing the effect of information sharing on business performance can be concluded that information sharing does not have a positive effect on business performance
4. The results of testing the effect of cooperation on business performance can be concluded that cooperation has a positive influence on business performance
5. The results of testing the effect of long term relationship on business performance can be concluded that long term relationship has no effect on business performance.
6. The results of testing the effect of competitive advantage on business performance can be concluded that competitive advantage has an influence on business performance

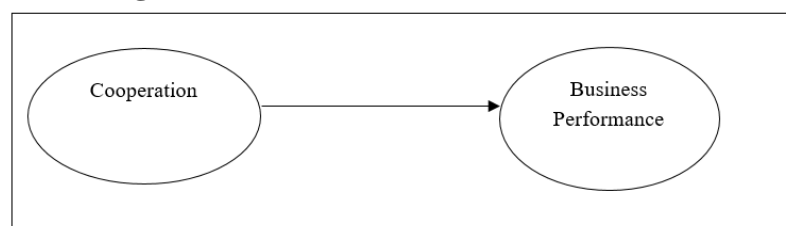
First, to get in influencing SCM is to see the magnitude of the use of information sharing. The SCM process is presented in Figure 2 as follows:

**Figure 2. SCM - Process 1**



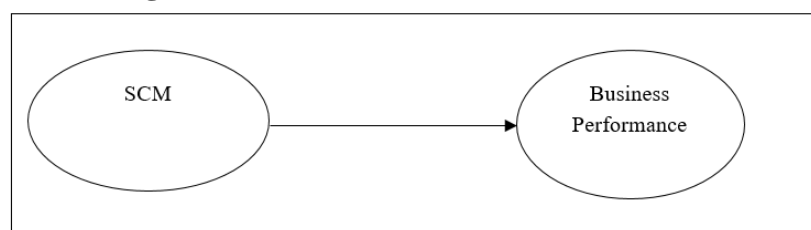
Second, to gain and influence business performance is to see the magnitude of cooperation. The business performance process is presented in Figure 3 as follows:

**Figure 3. Business Performance - Process 2**



Third, to get and influence business performance is to look at the magnitude of SCM. The business performance process is presented in Figure 4 as follows:

**Figure 4. Business Performance - Process 3**



### 5.1 Policy Implication

The policy implications of this research can be suggested through the following points:

1. Business owners must pay attention to SCM, namely by prioritizing information sharing.
2. Performance A business will be formed if the spring roll small food business owner is able to see the existing SCM and be able to compete competitively

### 5.2 Research Limitations

Some research limitations that can be drawn from this study are as follows:

1. The limitation of this research model is that it only looks at the SCM of small food business owners (spring rolls) in the city of Semarang, not necessarily in other cities.
2. The results of this study cannot be generalized to other cases outside the object of this study

### 5.3 Future Research Agenda

The results of the study can be a reference for future research by looking at some of the outputs generated from this research and adding endogenous variables to business performance.

## REFERENCES

- Anatan, Lina. 2008. "The Role of Information and Determinants of Information in Supply Chain Management in Manufacturing Companies in Indonesia". *Mode Journal*. Vol 20, No. 1.
- Bernard, F Simplus. 2011. "Analysis of the Effect of Relationship Quality Factors on Supply Chain Performance". Essay. Semarang: Undip. single. 2007. "Examination of Factors Affecting Trust and Commitment in Relationships Between Suppliers and Companies". *Optimal Journal*. Vol 1, No. 1.
- Cempakasari, Diah Arum and Yoestini. 2003. "Study on the Development of Long-Term Relationships between Companies and Retailers". *Indonesian Journal of Marketing Science*. Vol II, No. 1.
- Djou, L. G., Udin, U., Lukiastuti, F., and Filatrovi, E. W. 2020. "The Contingency Approach of Digitalization and Entrepreneurial Orientation on Smes Performance in Metal and Machinery Industry". *International Journal of Criminology and Sociology*, 9, 2235-2249.
- Hamidin, Dini and Kridanto Surendro. 2010. "Supply Chain Management Model in Technology Perspective". Seminar and Call For Paper at the Aptikom National Conference. Heizer, Jay and Barry Render. 2010. *Operations Management*. Edition 9. Jakarta: Salemba Empat.
- Indrajit, Richardus and Richardus Djokopranoto. 2002. *Supply Chain Management Concept*. Jakarta : PT Gramedia Widiasarana Indonesia.
- Indriani, Niken Kusuma. 2006. "Analysis of the Effect of Retail Outlet Trust on its Suppliers to Achieve Long-Term Relationships". Thesis. Semarang: Master of Postgraduate Study Program at Diponegoro University.
- Irmawati. 2007. "The Influence of Supply Chain Management on Performance in PTPN VIII Gunung Mas Bogor". Essay. Bogor: IPB Lestari, Purbasari Indah. 2009. "Study of Supply Chain Management: Analysis of Relationship Marketing Between Farm Recovery Farms and Suppliers and Customers". Essay. Bogor: IPB.

- Jatmiko, B., Udin, U., Raharti, R., Laras, T., and Ardi, K. F. 2021. "Strategies for MSMEs to Achieve Sustainable Competitive Advantage: The SWOT Analysis Method". *Journal of Asian Finance, Economics and Business*, 8(3), 505-515.
- Mayasari, Viona. 2008. "Analysis of the Competitive Strategy of Small Traditional Food Industries Typical of Pyakumbuh City". Essay. Bogor: IPB. Miguel, PLS, and Ledur Brito, LA 2011. "Supply Chain Management measurement and its influence on Operational Performance". *Journal of operations and supply chain management*. Vol 4, No.2.
- Mulyanto, Edy. 2011. "Analysis of the influence of service quality on customer satisfaction at the Ajsaka Motor Kudus Workshop". Essay. Semarang: Undip.
- Pujawan, I Nyoman and Mahendrawati ER. 2010. *Supply Chain Management*. Edition 2. Surabaya: Guna Widya.
- Rahadi, Dedi Rianto. 2012. "The Influence of Supply Chain Management on Company Operational Performance". *Proceeding of the X Production System Seminar*.
- Setiawan, Ahmad Ikhwan and Heri Santosa. 2006. "Supply Chain Integration in the Textile Industry: Survey of Retailers and Wholesalers in Central and East Java". *Empirical Journal*. Vol 19, No.1.
- Setiawan, Ahmad Ikhwan and Reza Rahardian. 2005. "The Influence of Supply Chain Management Integration Patterns on Company Performance in the Food Service Industry in Surakarta". *Journal of Business & Management*. Vol 05, No.1.
- Sugiyono. 2012. *Qualitative Research Methods And R&D*. Bandung: CV. Alfabet.
- Triajie, Muhammad Iqbal. 2006. "Sources of Growth in the Food Processing Industry in Indonesia (Total Factor Productivity Analysis)". Essay. Bogor: IPB. Triastyti, Rahayu. 2010. "Customer Relationship Management: Achieving Long-Term Profitability". *Journal of Economics and Entrepreneurship*. Vol 10, No.2.
- Yaqoub, M Amak. 2012. "The Mediation Effect of Trust On The Relationship Between Supply Chain Collaboration And Operational Performance". *Journal of Management & Entrepreneurship*. Vol. 14, No. 2