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The Impact of Supply Chain Management Practices on Competitive Advantage and Organizational Performance

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ABSTRACT

This study aims to examine the effect of supply chain management (SCM) on competitive advantage and company performance in the MSME culinary industry in Bandung. The subject of this research is the culinary industry MSMEs in the city of Bandung. This type of research is quantitative research using a questionnaire distributed directly to the culinary industry, with as many as 40 questionnaires. Data analysis used multiple linear regression and path analysis. The results show that supply chain management influences competitive advantage, supply chain management is not proven to affect company performance, competitive advantage affects company performance, and supply chain management affects company performance through competitive advantage but tends to have an influence—direct effect on company performance.

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Introduction

As competition in the 1990s intensified and markets became global, so did the challenges associated with getting a product and service to the right place at the right time at the lowest cost; business is booming in the world, including in Indonesia, so the competition in the business world is very tight. Due to intense competition, all business people are competing to create product innovations with good quality and competitive prices to stay afloat. All

companies are vying to meet market demands to maintain maximum profit. It requires companies to maintain consistency of service quality and improve product innovation. Under these circumstances, there is a need for a competitive advantage to support business. Competition in business competition and conditions of uncertainty requires companies to create a competitive advantage (competitive advantage) to win the match in the global industry. The company obtains a competitive advantage through the level of product quality, service, and prices that meet the tastes and demands of consumers, where the company is able to maintain its superiority over increasing competitors [1]. Competitive advantage is an ability to produce products that are superior to competitors [2].

In addition to organizations having competitive advantages that aim to win the competition in the business environment, organizations also use competitive advantage to achieve the desired organizational performance goals (Sarwono, 2010). The company or organization's performance must continue to improve so that the company can compete. Company performance is the actual result or output produced by a company which is then measured and compared with the results or work produced [3].

In Supply chain management, any manager must be able to plan, implement, and control the supply chain management process. The supply chain has a dynamic nature but involves three constant flows, namely the flow of information, products, and money. The main goal of any supply chain is to meet consumer needs and generate profits [4]. The supply chain places more emphasis on all activities in meeting consumer needs in which there is a flow and transformation of goods from raw materials to final consumers and is accompanied by the flow of information and money [5].

The increasing business today gives customers many choices with all kinds of product advantages. Micro, Small, and Medium Enterprises are businesses that support the Indonesian economy. This is evidenced by the increase in the number of MSMEs in Indonesia. The growth of the Micro, Small, and Medium Enterprises (MSME) industry is a reasonably practical effort to increase the economic development of the Indonesian nation. It is necessary to have a good supply chain to increase the productivity of MSMEs. A well-integrated and maximally integrated supply chain can meet consumer demand and become a competitive advantage for the company; the lower prices and quality offered to increase its competitive advantage compared to its competitors.

The city of Bandung has a lot of people, especially immigrants, who continue to arrive in tourism and culinary hunting. In 2018, the city of Bandung had been designated as national culinary tourism. With this opportunity, the community and business people can also establish

MSMEs in the culinary field with a total market share, such as students and the wider community, to have great opportunities.

This research is a proof of theory conducted to determine how supply chain management practices and competitive advantage influence company performance by using multiple linear regression analysis and path analysis methods. The unit of analysis used in this study is culinary SMEs in Bandung, namely restaurants, restaurants, or coffee shops that fall into the category of SMEs in Bandung.

Methods

Based on the literature review carried out by the researcher, the variables and variables used in the research can be seen in Table 1.

Table 1. Research Variables and Indicators

Variable	Indicator	Notation
Supply Chain Management	Strategic Supplier Partnership	SC1
	Customer Relationship	SC2
	Information Sharing	SC2
Competitive Advantage	Price	KB1
	Quality	KB2
	Delivery Dependability	KB3
	Product Innovation	KB4
	Time to Market	KB5
Organizational Performance	Financial performance	KP1
	Market Performance	KP2

A validity test is the accuracy or accuracy of an instrument in measurement. In testing the data collection instrument, the validity is divided into factor validity and item validity. Factor validity is measured when the items are compiled using more than one factor (there are similarities between one element and another. The validity of this factor is calculated by correlating the factor score (the sum of items in one aspect) with the total factor score (total of all elements).

A reliability test is used to determine the consistency of the measuring instrument, whether the measuring device used is reliable and remains consistent if the measurement is repeated. The method used in this research is Cronbach's Alpha method. Reliability means that the instrument can give the right results.

The normality test tests whether the residual value standardized in the regression model is normally distributed. How to do a normality test can be done with a normal probability plot graph analysis approach. In this approach, the residual value is normally distributed if the lines (dots) that describe the actual data will follow or move closer to the diagonal line.

The heteroscedasticity test is used to determine whether or not there is a deviation from the classical assumptions. Heteroscedasticity is the existence of variance inequality from the residuals for all observations in the regression model. The prerequisite that must be met in the regression model is the absence of heteroscedasticity symptoms.

Multiple linear regression hypothesis tests explains the relationship between one dependent variable/response (Y) and two or more independent variables/ predictors (X1, X2, …, Xn). The purpose of the multiple linear regression test is to predict the value of the dependent variable (Y) if the values of the independent variable (X1, X2, …, Xn) are known. Besides that, it is also to be able to determine the direction of the relationship between the dependent and independent variables [6]. The multiple linear regression equation is mathematically expressed by:

$$y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \ldots + \beta_i X_i \ldots\ldots \quad (1)$$

Where:
y = value of dependent variable
β_0 =intercept
β_i = regression weight (coefficient) for independent variable to –i
X_i = i-th independent variable

Path analysis is a technique for analyzing causal relationships that occur in multiple regression if the independent variables affect the dependent variable directly and indirectly [7].

Result

A. Demographic Respondents

Respondents in this study are owners, managers and employees who understand business processes in Culinary SMEs in Bandung. The data analysis used includes validity analysis, reliability analysis, normality analysis, descriptive analysis of multiple linear analysis and path analysis. A total of 40 questionnaires have been answered. For the gender of the respondents, the number of male respondents was 26 people or 65.3% of the total respondents, and the number of female respondents was 14 people or 35% of the total respondents. From these data, the majority of respondents are male.

The number of respondents aged 15 to 25 years was 21 people or 52.5% of the total respondents, aged 26 to 35 years were six people or 25% of the total respondents, aged 36 to 45 years were as many as six people or 15% of the total respondents, and those aged 45 to 55 years were two people or 5% of the total respondents. These data show that most of the

respondents are aged 17 to 25. Some of the respondents are young people who are learning to start a business.

The respondent's position from the questionnaire results showed that the number of respondents whose position was the owner was 25 or 62% of the total respondents. Five people have manager positions, or 13% of the total respondents. Employees were ten people, or 25 % of the total respondents. They have understood business processes because they have worked for over two years in the MSME business. This finding is from the results of interviews with respondents conducted during sampling. The duration of business was 37 (0-5 years) businesses or 92.5%, 2 (6-10 years) or 5% and 1 (more than ten years) or 2.5% of the total respondents.

B. Data Test Results

All questions on each variable, both dependent and independent, are valid and reliable based on the criteria. Before testing the hypothesis, the normality test was first carried out. All data of the variable were normal (Sig.=0.236, higher than 0.05). For the multicollinearity test, VIF for Supply Chain Management and Competitive Advantage was equal to 1.152 and Tolerance like 0.868. Therefore, there was no multicollinearity. The heteroscedasticity test was carried out using a residual plot. The results of the heteroscedasticity test are shown in Fig. 1.

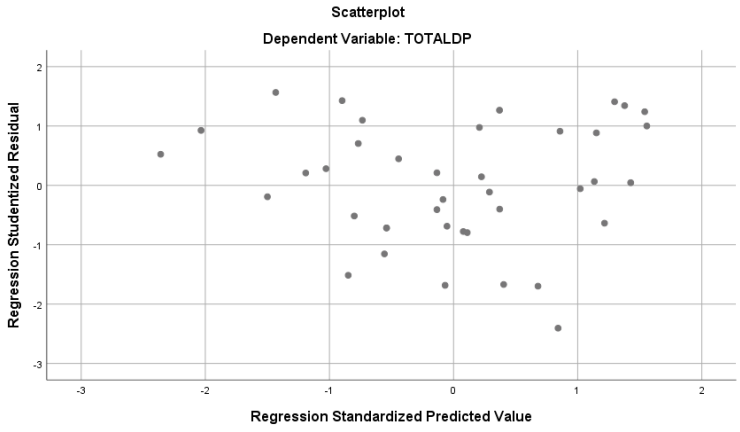


Fig. 1. Heteroscedasticity test

There is no symptom of heteroscedasticity because there is no clear pattern such as wavy, widening and then narrowing. The regression proposed by this study does not occur in heteroscedasticity symptoms. The first model determines the relationship between supply chain management and competitive advantage. See Table 2 and Table 3.

Table 2. Multiple linear regression test model 1

Coefficients				
Model		United. Coefficients	Standardized Coefficients	Sig.
		B	Beta	
1	(Constant)	29.555		0.000
	TOTALSC	0.322	0.363	0.021

From Table 2, the significance value of TOTALS is 0.021, less than 0.05. It means that supply chain management significantly affects the competitive advantage variable.

Table 3. Multiple linear regression test model 2

Coefficients				
Model		**United. Coefficients**	**Standardized Coefficients**	**Sig.**
		B	Beta	
1	(Constant)	9.021		0.236
	TOTALS	0.182	0.164	0.247
	TO TALK	0.666	0.533	0.001

Referring to Table 3 Multiple Linear Test model 2, the significance value of TOTALKB is 0.001 less than 0.05. Supply chain management has a significant effect on the competitive advantage variable.

The path analysis test will show the indirect effect of supply chain management on company performance through competitive advantage. See Fig. 2.

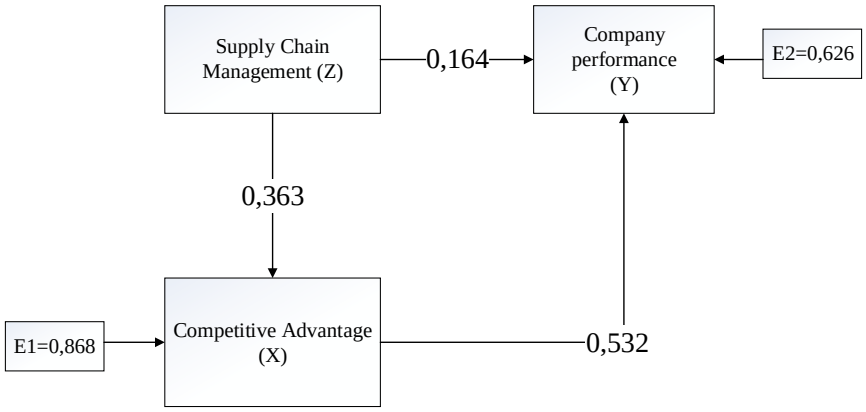


Fig. 2. Path analysis

Using the multivariate statistical technique [8], then the total influence given by supply chain management on the company's performance is a direct effect plus an indirect effect:

SCM→KB→KP = 0.363 x 0.532 = 0.193 (indirect)

SCM →KP = 0.164 (direct)

So the total is 0.164+0.193= 0.357

Regression Test Model 1 shows that the significance value of competitive advantage supply chain management is 0.021 < 0.05. The hypothesis is accepted with the calculated T obtained, which is 2.403 > 2.026. That is supply chain management influences competitive advantage. Regression Test Model 2 shows that the significance value of competitive advantage supply chain management is 0.247 > 0.05. The hypothesis is accepted with the calculated T obtained, namely 1.175 < 2.026. It means that supply chain management does not significantly affect company performance. Model Regression Test shows that the significance value of competitive advantage supply chain management is 0.001 less than 0.05. With the calculated T obtained, which is 3.814 higher than 2.026, then the hypothesis is accepted. That is competitive advantage influences company performance.

Discussion

In the data analysis, we use a multivariate study based on theory [6], [8]. When conducting a validity test related to the questionnaire, one question from the supply chain management variable is not valid, question item 3. The question from item number 3 is "Business has a continuous program involving suppliers". Invalid item number 3 statement occurs due to several factors, such as statement items that are not understood by the respondent, the statement items that the researcher has compiled are not under objective conditions, and the respondents themselves answer carelessly. The answer obtained from question 3 is very volatile, resulting invalid question and needing to be removed.

All questions from the independent variable (supply chain management and competitive advantage) and the dependent variable (company performance) are reliable and indicate the measurement is trusted. Based on the classical assumption test, there is no multicollinearity and no symptoms of heteroscedasticity. However, the variables are generally not distributed due to discriminated data and the limited number of different values - this can be overcome by using a more accurate measurement system or by collecting more data. Based on the practical experience of several statisticians, the data with more than 30 numbers (n > 30), can be assumed as normally distributed.

This research uses the multiple linear regression method because there is a causal relationship between the independent and dependent variables [9]. In addition, multiple linear regression shows how much effect each independent variable has on the dependent variable. The advantages of the multiple linear regression method include generalizing and extracting specific data patterns, acquiring knowledge even though there is no certainty, and performing calculations in parallel so that the process is shorter and can be done with not much data.

This research uses the path analysis method to see supply chain management's direct and indirect relationship to company performance [[10]. This study compares whether or not

the effect exerted by supply chain management will be more significant through competitive advantage. Based on the results of multiple linear regression with IBM SPSS Statistic 25, the supply chain management variable directly affects competing variables. Proved by the results, the significance of the supply chain management variable is 0.000, where 0.021 <0.05. Based on the R Square value in the summary model, competitive advantage has a 13.2% effect on competitive advantage. This relationship means that strategic supplier partnership, customer relationship and information sharing will affect price, quality, delivery dependability, product innovation and time to market for culinary MSMEs in Bandung City.

Based on the results of multiple linear regression with IBM SPSS Statistic 25, supply chain management variables and competitive advantage significantly affect competitive performance by 37.4%. Supply chain management has no significant direct effect on company performance, but supply chain management indirectly impacts company performance through competitive advantage. Based on the path analysis test results, the total effect given by supply chain management on the company's performance is a direct effect plus an indirect effect of 35.7%. The supply chain management strategy does not significantly affect the company's performance if it is not through competitive advantage. For example, when carrying out a supplier partnership strategy, it is necessary to pay attention so the strategy can improve the quality and price of the product, besides making a long-term strategy.

The T-test (Partial) showed that competitive advantage directly affects company performance, as evidenced by the significant result of 0.001. Price, quality, delivery dependability, product innovation and time to market will directly affect the financial and operational performance of the culinary MSMEs in Bandung. It can occur because more customers will improve financial performance when prices are lower than others. Likewise, the better the quality and delivery dependability will increase the sales and loyal customers. Therefore, the economic and operational performance of MSMEs in Bandung city will improve. When the time to market for MSMEs in Bandung City is the fastest, it will make the product unique, and many people will be curious to buy it. It will affect the financial performance of MSMEs in Bandung City. This result can be compared to the other research finding [5], [11], [12].

Based on the T-test (Partial), it is shown that supply chain management does not directly affect the company's performance, as exhibited in the significant result of 0.274. Based on an interview with several culinary MSME owners in Bandung, this is due to many factors, such lot of suppliers in the culinary field. The selection of raw materials is not specific, causing MSMEs to have quite a variety of supplier choices and many actors in the chain. It can occur due to several factors, such as the respondent's lack of experience because most respondents

are young people aged 17-25. The respondents lack business experience, respondents who do not understand the questionnaire. Besides, the method used is inappropriate, or the questions on the questionnaire are irrelevant.

Based on the F test, the significance value of supply chain management and competitive advantage on the company's performance (0.000). It proved the effect of supply chain management and competitive edge on the company's performance. There are some differences compared to previous research. Chain management has a significant effect on company performance [5]. It can occur because of the different units of analysis used in the research. Most of the studies use manufacturing as the research unit. Another factor, due to differences in the scale of the research unit and differences in the respondents used. In another study, divisions of large companies have established supply chain management strategies, but the unit of analysis in this study is MSMEs. In MSMEs, especially culinary, supply chain management is not a very supportive factor, but for the manufacturing industry, supply chain management is essential for company performance.

Based on the research results, supply chain management variables and competitive advantage affect the performance of culinary MSMEs in Bandung city. With the increase in supply chain management and competitive advantage of a business, the performance of culinary SMEs in Bandung City will increase both in financial and operational performance. Culinary SMEs in Bandung city have a significant role in providing opinions to the community and have great potential for further development. Based on the research analysis results, several things can be done by Culinary MSMEs in Bandung to improve company performance. Supply chain management variables directly affect the performance of culinary MSME companies in Bandung. It can occur due to ignorance of understanding among respondents, lack of experience in respondents because most businesses are 1-5 years old and 17-25 years old, sampling errors by researchers or wrong method of analysis. However, in this study, it was found that supply chain management significantly affects company performance through competitive advantage. Able to carry out a strategy to build relationships with customers by making regular feedback to each customer and providing promos to loyal customers so that customers will feel satisfied and make repeat purchases.

Strategies can be made to provide supplier selection to get quality suppliers, minimize costs, and create long-term plans for one supplier that can improve quality and reduce costs for raw materials [4]. In accordance with the theory, the Competitive Advantage of Culinary MSMEs positively affects company performance. Given the significant effect of competitive advantage, several strategies that can be proposed are improving the quality of raw material suppliers by planning a long-term strategy. It will make the incoming raw materials better [5]. Also, by performing long term cooperation with the suppliers the raw food price can be made

cheaper by long term supply contract with suppliers. This can be enhanced by asking for opinions from customers about products that need to be improved and customer expectations regarding quality and price to make improvements and innovations.

Conclusion

Based on the research objectives and the results of the analysis that has been carried out, supply chain management has a significant positive effect on the competitive advantage of culinary MSMEs in Bandung. Supply chain management has no significant direct impact on the company's performance, but through competitive advantage, supply chain management affects the company's performance on Culinary MSMEs in Bandung. Competitive advantage significantly affects the performance of culinary SMEs in Bandung. Therefore, there is a need for good supply chain management and superior competitive advantage to improve the performance of Culinary MSMEs in Bandung. Strategies to improve the company's performance are providing supplier selection to get quality suppliers and minimal costs. It is also to make long-term strategies for one supplier that can improve quality and agreements to minimize costs for raw materials, build relationships with customers by making regular feedback to each customer and provide promos to loyal customers. The following strategy is to ask for customers' opinions about products that need to be improved and customer expectations regarding quality and price to make improvements and innovations. The last strategy is to keep updated to find out what the market desire.

Conflict of Interest

The authors declare that there is no conflict of interest.

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