

Implementation of Supply Chain Management on MSME Business Performance in Madura

Vidi, Hadyarti^{1*}, Indonesia, Aprilina, Susandini², Indonesia

ABSTRACT

Micro, Small and Medium Enterprises (MSMEs) have experienced very significant growth over time with various types of businesses. The increasingly rapid existence of MSMEs is in line with increasingly fierce competition, so business continuity in Madura needs to be maintained by improving the performance of MSME businesses. Increasing business performance is one indicator that MSMEs can maintain the sustainability of their business. The success of improving MSME business performance can be reflected in increased growth, increased income, increased business assets owned and increased production capacity which correlates with increased customer demand. So evaluation of the improvement in MSME business performance needs to be carried out every time period. There are several strategies that can be implemented to improve the performance of MSME businesses, one of which is by applying the SCM concept to MSMEs.

With the Supply Chain Management (SCM) concept, MSMEs can provide strategies such as being able to improve customer service so they can provide products at the right time and in the right location, so they can increase sales and increase income. Effective application of the SCM concept can also provide cheap and high quality products, and the products offered are varied. Therefore, the existence of SCM can translate the resource capabilities possessed by MSME actors. In order for the success of the SCM concept to be realized, integration between customers, information sharing, building trust and internal integration are needed. It is very important to implement this so that it can increase profitability in all aspects involved in the SCM concept.

The aim of this research is to determine and analyze the application of the Supply Chain Management concept with several indicator variables used in the MSME sector in Madura, which is one of the factors in improving business performance in the MSME sector in Madura. Keywords: Digital Marketing, Marketing Strategy, MSMEs.

Introduction

In large countries and developing countries, MSMEs make a significant contribution. MSMEs play an important role in increasing income, reducing unemployment and alleviating poverty, and increasing entrepreneurship. The increasingly rapid growth of MSMEs will have an impact on very competitive competition between MSME business actors. Improving performance and increasing capacity, namely financial capacity, management capacity and professional capacity, are very necessary for MSME players to ensure business continuity.

Business performance is the ability of a business to achieve predetermined goals by utilizing its resources efficiently and effectively (Purbianita, 2018). This level of achievement is used as an indicator of the extent to which the company is able to create the standards desired by customers while still considering costs, quality improvements and time limits (Rachbini, 2016). Performance results can be obtained from each specific period, so that they can be used as a benchmark for whether the strategy implemented by MSMEs is being implemented well and successfully or if improvements are needed for the next period. There are many strategies that MSMEs can implement to survive and compete in the global market.

Implementing Supply Chain Management (SCM) is a strategy that can be applied to businesses that are being run to achieve company goals. Supply Chain Management is a network of companies that work together to create and deliver a product to the end user. These companies usually include suppliers, factories, distributors, shops and retailers (Pujawan & Mahendrawathi, 2017).

The SCM network consists of all parties involved directly or indirectly including producers, suppliers, retailers, customers and so on, in producing and delivering products or services to end customers both upstream and downstream through physical distribution, information and financial flows. (Chin, Hamid, Rasli, & Baharun, 2012). SCM focuses on management relationships for all parties in the supply chain management chain to create optimal results and profits for business actors. The SCM concept can be used as a strategy to improve MSME business performance, therefore researchers are interested in studying the Implementation of Supply Chain Management on MSME Business Performance in Madura.

Research Method

The research method used in this research is a quantitative approach because the researcher wants to identify the relationships and influences caused by the five variables, namely customer relationships (X1), information sharing (X2), trust (X3), internal integration (X4) and business performance (Y). Primary data is the type of data used in this research and the analysis method applied uses multiple linear regression.

The population of this research is MSMEs operating in Sumenep Regency, Madura Island. The research results obtained were 58 MSMEs using purposive sampling as the sample determination method. The research respondents used as samples were MSMEs that sell processed or self-produced products, have labor and distribution in their business.

Data collection techniques are carried out in several ways, namely direct observation, interviews, and finally questionnaires. The instrument or tool used to measure variables is the Likert scale listed on the research questionnaire. The data was analyzed using several tests, first the data was tested for validity and reliability. Then it is analyzed through the classical assumption testing stage which includes three tests, namely normality, multicollinearity and heteroscedasticity tests. In the final stage, the data will be tested for hypotheses using partial tests (T statistical test) and simultaneous tests (F statistical test). The tool used for the analysis uses IBM SPSS Statistics 26 software

Results and Discussion

STATISTIC ANALYSIS

1. Validity Test

This validity test is carried out to measure whether the data obtained after the research is valid data or not, using the measuring instrument used (questionnaire). This validity test was carried out with 58 respondents who were MSME owners around Slopeng Beach. In this validity test, the researcher used factor analysis with the help of the SPSS version 26 program. The validity test is declared valid if it meets the following criteria, namely if $r_{count} > r_{table}$ then the statement is declared valid. If $r_{count} < r_{table}$ then the statement is declared invalid. The calculated r value can be seen in the corrected item total correlation column. The r_{table} value is known to be 0.2586 with the formula $r_{table} = \sqrt{\frac{N-2}{N}}$ (Junaidi 2010).

Table 1.
Validity Test Result

Varibel	Item Pernyataan	Nilai Kritis	Rtabel (N-2)=58-2=56	Keterangan
Hubungan dengan pelanggan (X1)	X.1	0,804	0,2586	Rhitung > Rtabel= valid
	X.2	0,808	0,2586	Rhitung > Rtabel= valid
	X.3	0,760	0,2586	Rhitung > Rtabel= valid
Berbagi Informasi (X2)	X.1	0,722	0,2586	Rhitung > Rtabel= valid
	X.2.	0,770	0,2586	Rhitung > Rtabel= valid
	X.3	0,791	0,2586	Rhitung > Rtabel= valid
	X.4	0,708	0,2586	Rhitung > Rtabel= valid
Kepercayaan (X3)	X.1	0,797	0,2586	Rhitung > Rtabel= valid
	X.2.	0,778	0,2586	Rhitung > Rtabel= valid
	X.3	0,773	0,2586	Rhitung > Rtabel= valid
Integrasi Internal (X4)	X.1	0,771	0,2586	Rhitung > Rtabel= valid
	X.2.	0,821	0,2586	Rhitung > Rtabel= valid
	X.3	0,852	0,2586	Rhitung > Rtabel= valid
	X.4	0,725	0,2586	Rhitung > Rtabel= valid
Kinerja Usaha (Y)	Y.1	0,674	0,2586	Rhitung > Rtabel= valid
	Y.2.	0,690	0,2586	Rhitung > Rtabel= valid
	Y.3	0,754	0,2586	Rhitung > Rtabel= valid
	Y.4	0,725	0,2586	Rhitung > Rtabel= valid

2. Validity Test

The aim of the reliability test is to determine whether the statement items proposed by researchers to respondents are reliable or not. Reliability measurements used SPSS version 26 with a total of 50 respondents. A variable is said to be reliable if it meets the following conditions, namely. If the Cronbach's Alpha value is > 0.6 then it is reliable, while the Cronbach's Alpha value is < 0.6 then it is not reliable.

Table 2.
Reliability Test Result

Variabel	Nilai Cronbach's Alpha	Keputusan
Hubungan Dengan Pelanggan	0,697	Reliabel
Berbagi Informasi	0,726	Reliabel
Kepercayaan	0,682	Reliabel
Integrasi Internal	0,745	Reliabel
Kinerja Usaha	0,673	Reliabel

The aim of the reliability test is to determine whether the statement items proposed by researchers to respondents are reliable or not. Reliability measurements used SPSS version 26 with a total of 50 respondents. A variable is said to be reliable if it meets the following conditions, namely. If the Cronbach's Alpha value is > 0.6 then it is reliable, while the Cronbach's Alpha value is < 0.6 then it is not reliable.

Based on the table above, the Cronbach's Alpha value for the Customer Relationship variable is 0.697, information sharing is 0.726, trust is 0.682, internal integration is 0.745 and the business performance variable is 0.673, so it can be concluded that all items for each variable are declared reliable because the Cronbach's Alpha value is greater than the standardized value of reliability. namely 0.6

ANALYSIS PREREQUISITES

1. Normality Test

Table 3.
Normality Test Result

One-Sample Kolmogorov-Smirnov Test		Unstandardized Residual
N		58
Normal Parameters ^{a,b}	Mean	,0000000
	Std. Deviation	1,64776126
	Absolute	,083
Most Extreme Differences	Positive	,044
	Negative	-,083
Test Statistic		,083
Asymp. Sig. (2-tailed)		,200 ^{c,d}

The normality test is said to be normal if the significance value (Sig.) is > 0.05 . Based on the results of the normality test using the Kolmogorov-Smirnov test, the Asymp. Sig. (2-tailed) of $0.200 > 0.05$. So it can be concluded that the data is normally distributed.

2. Heteroskedisitas Result

The heteroscedasticity test is carried out to test whether there is an inequality of residual variance between observations in the regression model. If the residual variance remains constant from one observation to another, then this condition is called homoscedasticity, whereas if there are different variances, then this condition is called heteroscedasticity.

Based on the results of heteroscedasticity testing using the Glejser method in the table above, it was found that all independent variables showed a relevant level of significance or a significance value of > 0.05 . The relationship variable with customers has a significant value of $0.551 > 0.05$, the information sharing variable has a significant value of $0.388 > 0.05$, the trust variable has a significant value of 0.560 and the internal integration variable has a significant value of $0.075 > 0.05$, in this case it means that the data obtained is not heteroscedasticity occurs. So it can be stated that the regression model has a match between these three variables.

3. Multikolinearitas Result

The multicollinearity test is used to test whether the regression model shows a high or near perfect correlation between the independent

variables. If a high correlation is found between independent variables, this situation is called multicollinearity in regression analysis. A test is said to pass multicollinearity, if there is no correlation or is free of multicollinearity.

In the table above, the results of the multicollinearity test have been obtained, the relationship variable between customers has a tolerance value of 0.763 with a VIF of 1.311, the information sharing variable has a tolerance value of 0.739 with a VIF of 1.353, the trust and distribution variable has a tolerance value of 0.814 with a VIF of 1.229 and the internal integration variable The tolerance value is 0.855 with a VIF of 1.270, v. So it can be concluded that all independent variables have a tolerance value of > 0.1 , and a VIF value of < 10 . This means that the data obtained is free from symptoms of multicollinearity or has fulfilled the multicollinearity requirements in the regression model. tolerance 0.763 with VIF. So it can be concluded that all variables do not have multicollinearity.

4. Multiple Regression Analysis

To analyze the influence of several independent variables on the dependent variable, an analysis method called the multiple linear regression test is used, where there are three independent variables. The results obtained by the regression equation look like the following:

$$Y = 9.120 + (-0.016)X_1 + (-0.168)X_2 + 0.404X_3 + 0.344X_4$$

Based on the equation presented above, it can be explained that a constant value is obtained 9,120, which means that if relationships with customers (X_1), information sharing (X_2), trust (X_3) and internal integration (X_4) are 0, then revenue is 9,120. Furthermore, the regression coefficient value for the customer relationship variable (X_1) is -0.016, this means that every 1 unit increase in customer relationships (X_1) will increase business performance (Y) by -0.016. The coefficient for the information sharing variable (X_2) is -0.168, this means that every 1 unit increase in information sharing (X_2) will increase business performance (Y) by -0.168. The coefficient for the trust variable (X_3) is 0.404, this means that every 1 unit increase in trustworthiness (X_3) will increase business performance (Y) by 0.404. Likewise with the

internal integration variable (X4), if there is an increase of 1 unit in distribution (X3) it will increase business performance (Y) by 0.344.

5. Hypothesis Testing

a. Coefficient of Determination

Based on the results of the coefficient of determination test in the table above, an adjusted-square value of 0.255 (25.5%) was obtained. This means that the ability of all independent/free variables in this research simultaneously has an influence of 25.5% on the dependent/dependent variable. Meanwhile, the remaining 74.5% (1-0.255) was influenced by other variables not examined in this research.

b. F Test

Based on the results of the calculation data in table 6 above, the results of the F calculation test were obtained which aims to determine simultaneously the relationship between independent variables which include Relationship with customers (X1), information sharing (X2), Trust (X3) and Internal Integration (X4) with the dependent variable is Business Performance (Y). It is known that the value for the percentage distribution of f_{table} in this study is 2.543. The results of the ANOVA output prove that the f_{count} value is $5.869 > f_{table}$ 2.543 and the sig. equal to $0.001 < 0.05$. Thus, customer relationship variables, information sharing variables, The trust variable and internal integration variable together or simultaneously influence MSME business performance.

c. T Test (Partial)

The results of the t count have been obtained to find out how big the relationship is between the independent variable and the dependent variable. It is known that the value for the t_{table} distribution percentage in this study is 2.006. Following are the results of the test:

a. T test variable Relationship with customers

It is known that the calculated t value of the relationship variable with customers is $-0.116 < 2.006$ t table and the significance is $0.908 > 0.05$. This means that H_0 is accepted, so it can be concluded that the relationship variable with

customers has no effect on business performance of MSMEs in the Madura coastal region.

b. Information sharing variable t test

It is known that the calculated t value of the information sharing variable is $-1.723 < 2.006$ t table and the significance is $0.091 > 0.05$. This means that H_0 is accepted, so it can be concluded that the information sharing variable has no effect on business performance of MSMEs in the Madura coastal region.

c. Trust variable t test

It is known that the calculated t value of the trust variable is $2.802 > 2.006$ t table and the significance is $0.007 < 0.05$. This means that H_0 is rejected, so it can be concluded that the trust variable influences business performance in MSMEs in the Madura coastal region.

d. Internal integration variable t test

It is known that the calculated t value of the internal integration variable is $2.136 > 2.006$ t table and the significance is $0.003 < 0.05$. This means that H_0 is rejected, so it can be concluded that the internal integration variable influences business performance in MSMEs in the Madura coastal region.

CONCLUSION

Based on the results of research on MSMEs in the coastal region of Madura that has been carried out, it can be concluded that the application of supply chain management or Supply Chain Management (SCM) to MSMEs in the coastal region of Madura for the variable of good customer relationships has been implemented, especially critical evaluation activities, suggestions and complaints submitted by customers, but MSMEs have not been able to manage them well. Implementation of good and sustainable information sharing with suppliers has also been carried out, especially timely exchange of information so that tempoh chips MSMEs in Sanan can plan well. The application of supply chain management for the trust variable has been implemented well, especially when selecting suppliers, MSME players choose suppliers who can provide information according to real conditions. Internal integration as the fourth supply chain management variable has been carried out, especially in coordination activities between sales and production to determine the number of products that must be provided to meet customer demand.

Reference

- Anwar Sanusi. (2011). *Metode Penelitian Bisnis*, Salemba Empat, Jakarta.
- Babu, G. C. (2012). The Impact of Customer Relationship Management on Small and Medium Enterprises Performance. *International Research Journal of Commerce Arts and Science*, 3(2), 627-637.
- Murwatiningsih, M. (2016). Pengaruh Kemampuan Manajemen dan Karakteristik Usaha terhadap Kinerja Usaha UKM Olahan Produk Salak di Kabupaten Banjarnegara. *Management Analysis Journal*, 5(2).
- Nurjanah, D., Mukhsin, M., & Satyanegara, D. (2023). Pengaruh Kepercayaan, Berbagi Informasi, Dan Kolaborasi Yang Terintegrasi Terhadap Kinerja Rantai Pasok Pada Industri Kayu. *Tirtayasa Ekonomika*, 18(1), 160-177.
- Chin, T. A., Hamid, A. B. A., Rasli, A., & Baharun, R. (2012). Adoption of Supply Chain Management in SMEs. *Procedia - Social and Behavioral Sciences*, 65(ICIBSoS), 614-619. <https://doi.org/10.1016/j.sbspro.2012.11>.
- Christopher, M. (2011). *Logistics and Supply Chain Management: Fourth edition*. Swiss. Pearson Prentice Hall.
- Fazizadeh, A., Mostafa M.T., dan Kazeem M. 2011. Customer Relationship Management in Small Medium Enterprise: The Case of Science and Technology Parks of Iran. *African Journal of Business Management* 5(15): 6160-6168
- Rachbini, W. 2016. Supply Chain Management dan Kinerja Perusahaan. *Jurnal Riset Manajemen dan Bisnis* 1(1): 23- 30
- Sugiyono. (2017). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Bandung: Alfabeta, CV.
- Pujawan, NI & Mahendrawati. (2017). *Supply Chain Management. Edisi 3*. Yogyakarta.
- Purbianita, Tiara. (2018). *Analisis Pengaruh Supply Chain Management Terhadap Kinerja Usaha* UMKM Brem Padat di Kabupaten Madiun. Skripsi. Universitas Brawijaya.
- Huda, M., Aminuddin, A., & Wusko, A. U. (2018). Pengaruh information sharing, long term relationship, cooperation, integration dalam supply chain management terhadap kinerja perusahaan (survei pada IKM pengolahan makanan di Kabupaten Pasuruan). *MALIA: Jurnal Ekonomi Islam*, 10(1), 147-162.
- Juzer & Darma, Gede Sri. (2019). *Strategic Supply Chain Management in the Era of Industry Revolution 4.0 : A Study of Textile Industry in Bali*. *Jurnal Manajemen Bisnis* ISSN : 1829-8486 (print) | ISSN : 2528-1216 (online) Volume 16, No. 3, Juli 2019.
- Undang-Undang UMKM Nomor 20 Tahun 2008 tentang Usaha Mikro, Kecil, dan Menengah.
- Widyarto. (2012). Peran supply chain management dalam sistem produksi dan operasi perusahaan. *Benefit Jurnal Manajemen dan Bisnis*. 16(2), 91-98
- Wulandari., Sari, Nelly Ria., & L, Al Azhar. (2016). Pengaruh *Supply Chain Management* Terhadap Kinerja Perusahaan Melalui Keunggulan Bersaing. *Jurnal Ekonomi/XXI*, No. 03, November 2016: 462-479.
- Ziaullah, M., Yi F., dan Shumaila N. A. 2017. How a Supply Chain Process Matters in Firms' Performance – An Empirical Evidence of Pakistan. *Journal of Competitiveness* 9(4): 66-80