

The Effect of E-Commerce Adoption on Business Strategy with Competitive Advantage as a Moderating Variable

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Abstract

This study aims to analyze the effect of e-commerce adoption on business strategy which is moderated by competitive advantage. This research was conducted at SMEs Leather Industry Center in Manding, Bantul. Methods of data processing and data analysis in this study using descriptive and quantitative analysis. The population in this study amounted to 53 UKM and the sampling technique used a census technique. The data analysis technique in this study uses Partial Least Square (PLS). Collecting data in this study using a questionnaire. The results of the analysis in this study indicate that 1) There is a negative and significant influence of e-commerce adoption on differentiation strategy, 2) There is a positive and significant influence of e-commerce adoption on cost leadership strategies, 3) Competitive advantage weakens the effect of e-commerce adoption on strategy differentiation, 4) Competitive advantage strengthens the effect of e-commerce adoption on cost leadership strategies.

Keywords : *E-commerce adopts, Differentiation strategy, Cost leadership strategy and Competitive advantage.*

Introduction

Small and Medium Enterprises (SMEs) are a form of business that makes a significant contribution to spurring economic growth in Indonesia. One of the craft centers owned by Bantul is leather crafts in Manding Hamlet, Sabdodadi Village, Bantul District, Bantul Regency. This leather craft business started in 1947 and was successful in the 1970-1980s. The development of SMEs in Bantul Regency is inseparable from various kinds of problems that exist. One of the main problems faced by small and medium enterprises in Bantul Regency, especially the leather industry in Manding, Bantul, is the lack of a basis for selecting strategies to increase sales of leather goods amid the Covid-19 pandemic by utilizing digital technology such as through e-commerce. This condition is the biggest challenge for SMEs because SMEs are one of the cornerstones of the economy throughout the world. SMEs are expected to survive during the Covid-19 pandemic.

Based on an interview with the Head of the Tourism Awareness Group at the Manding Leather Industry Center, the use of e-commerce there is not maximized. With the existence of e-commerce services, it can facilitate the process of buying and selling goods or services that customers can easily access via their mobile devices. According to the Head of the Tourism Awareness Group at the Manding Leather Industry Center,

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e-commerce can be used to increase sales amid the Covid-19 pandemic. That way the owner needs to consider and change his business strategy by adopting e-commerce. Technology has a significant role in determining cost position or differentiation because it is embodied in every value activity and plays a role in realizing the linkages between various activities, so technology can have a major influence on cost and differentiation (Porter, 1985).

This research will be aimed at SMEs in the Manding Leather Industry Center, Sabdodadi Village, Bantul Regency, Special Region of Yogyakarta Province. The location was chosen because in the Manding area, Bantul has quite a lot of UKM-based craftsmen. In addition, there is a lot of potential, especially in leather craft products that can be developed again, so that SMEs in the Manding Leather Industry Center must be able to rise from this condition by managing their business strategy through optimizing the use of digital technology (e-commerce) in their sales. Then this research further wanted to know and analyze the effect of e-commerce adoption on business strategy with competitive advantage as a moderating variable at the Manding Leather Industry Center, Bantul.

Thus, the formulation of the problem in this research is 1) What is the influence of e-commerce adoption on the differentiation strategy at the Leather Industry Center in Manding, Bantul? 2) What is the influence of e-commerce adoption on the cost leadership strategy at the Leather Industry Center in Manding, Bantul? 3) What is the influence of e-commerce adoption on the differentiation strategy moderated by competitive advantage at the Leather Industry Center in Manding, Bantul? and 4) What is the effect of e-commerce adoption on the cost leadership strategy moderated by competitive advantage at the Leather Industry Center in Manding, Bantul?

The purpose of this research is 1) To analyze the influence of e-commerce adoption on the differentiation strategy at the Leather Industry Center in Manding, Bantul. 2) To analyze the influence of e-commerce adoption on the cost leadership strategy at the Leather Industry Center in Manding, Bantul. 3) To analyze the influence of e-commerce adoption on the differentiation strategy moderated by competitive advantage at the Leather Industry Center in Manding, Bantul. 4) To analyze the influence of e-commerce adoption on the cost leadership strategy moderated by competitive advantage at the Leather Industry Center in Manding, Bantul.

Literature Review

Business Strategy

Strategy is important for the continuation of a company's business to achieve company goals or objectives. Companies are required to be able to face any obstacles that come both from within the company and from outside the company. Business strategy is an offensive and defensive action taken to fight competition and get an increase in the company's return on investment (Porter, 1980). Competitive advantage can be created by the choice of strategy by the company to seize market opportunities. According to Porter, there are three generic strategies that can be used to measure a company's strategy by using a Cost Leadership, differentiation and focus strategy.

Cost Leadership

A strategy that emphasizes creating a standardized product with the lowest per unit cost usually aimed at consumers who are sensitive to price changes. Companies that

are able to survive price competition can even become market leaders in determining prices and ensuring market profits through an efficient and cost-effective way when using this strategy (Porter, 1980).

In the commodity market, this strategy not only makes the company able to survive the price competition that occurs but also can become a market leader (market leader) in setting prices and ensuring high above average and stable market profit levels through aggressive means of efficiency and cost effectiveness. To be able to carry out a low cost strategy, a company must be able to meet the requirements in two areas, namely resources and organization.

Differentiation

The differentiation strategy encourages companies to be able to find their own uniqueness in their target market. The uniqueness of products (goods and services) that are prioritized allows a company to attract the interest of its potential consumers (Porter, 1985).

In general, there are two areas of requirements that must be met when a company decides to use this strategy, namely the field of resources (In terms of company resources, high strength is needed in terms of product marketing, creativity and talent, product engineering (product engineering), market research, company reputation, distribution, and job skills) and the field of organization (companies must be strong and able to coordinate between related management functions, recruit highly skilled workforce, and measure subjective as well as objective incentives (Umar, 1999)).

Focus Strategy

The focus strategy is used to build competitive advantage in a narrower market segment. This strategy is used to serve the needs of consumers who are relatively small in number and whose purchasing decisions are not influenced by price (Porter, 1985). This strategy is usually used by suppliers “niche market” to meet the needs of a specific product, goods and services. The requirement for implementing this strategy is the existence of a sufficient market size (market size), there is good growth potential, and is not too concerned by competitors in order to achieve success (competitors are not interested in moving in that niche). This strategy will be more effective if consumers need certain characteristics that are not demanded by competing companies.

Adoption E-Commerce

E-commerce is the buying and selling of goods and services on the internet and provides the ability to carry out transactions between two or more parties using electronic devices (Simpson and Dochery, 2004). E-commerce is a business activity that uses electronic data transmission technology from the internet and World Wide Web to implement or improve business processes (Schneider, 2004).

With a e-commerce small companies can provide flexibility in product sales, enable faster service to customers, send and receive offers quickly and economically, and support paperless fast transactions. E-commerce can be classified into 2 types in general, viz Business to Business (B2B) and Business to Consumer (B2C) (Purbo and Wahyudi, 2001).

Competitive Advantage

The success of a company cannot be separated from the strategy implemented by the company (Porter, 2006). Competitive advantage discusses how the company puts its strategy into practice. Interpreted as the ability obtained through the resources owned by the company to get a higher performance than other companies in the same market (Porter, 1985). Competitive advantage is an advantage over competitors that is obtained by offering lower value or by providing greater benefits because the price is higher (Philip Kotler and Gary Armstrong, 2003).

Hypothesis

- H1.** Adoption E-commerce significant positive effect to Differentiation Strategy.
- H2.** Adoption E-commerce significant positive effect on the Cost Leadership Strategy.
- H3.** Competitive Advantage strengthens the influence between Adoptions E-commerce towards Differentiation Strategy.
- H4.** Competitive Advantage strengthens the influence between Adoptions E-commerce to the Cost Leadership Strategy.

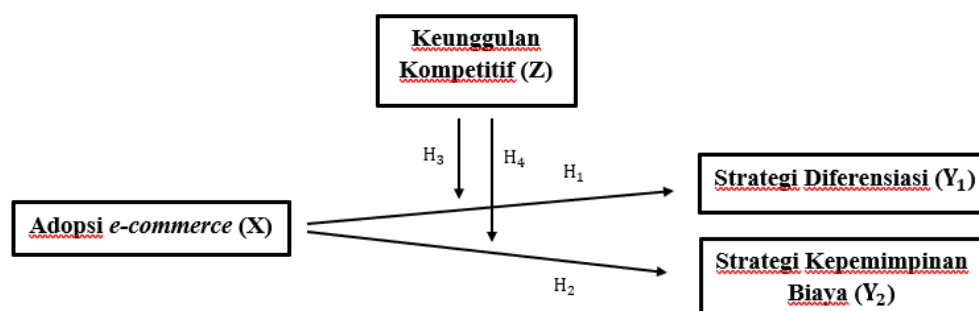


Figure 1 Research Model

Methods

Sampling and Procedures

This research was conducted at Manding Leather Industry Center SMEs, Sabdodadi Village, Bantul. The data obtained in this study were taken using interviews and questionnaires distributed to SMEs who joined the Manding Leather Industry Sentar, Bantul, totaling 53 SMEs. Respondents were asked to fill out statements that had been made with a Likert scale of 1 (very low) to 5 (very high). In this research, the analysis technique used is Structural Equation Model (SEM) with Partial Least Square (PLS), SmartPLS 3.0 software.

Measures

Business Strategy is measured using a questionnaire developed and distributed to smes and using a Likert scale of 1-5 points with 12 items.

Adoption E-Commerce is measured using a questionnaire developed and distributed to smes and using a Likert scale of 1-5 points with 6 items.

Competitive Advantage is measured using a questionnaire developed and distributed to smes and using a Likert scale of 1-5 points with 10 items.

Data Analysis

Data analysis will be carried out using a structural equation model with the help of SMART PLS 3.2.7 software. The hypothesis in this study was tested using path coefficients.

Result and Discussion

Result

Based on Table 1, the overall length of establishment of SMEs that have joined the Manding Leather Industry Sentar, Bantul is dominated by SMEs that have been established for 5-10 years with as many as 27 respondents. Most of the SMEs are dominated by the male sex as many as 37 respondents and as many as 50 people who become owners of these SMEs.

Table 1. Characteristics of SMEs

Characteristics	Category	Frequency	Percentage (%)
Long Standing	> 10 Years	25	47,2%
	< 5 years	1	1,9%
	5-10 Years	27	50,9%
	Total	53	100%
Gender	Man	37	69,8%
	Woman	16	30,2%
	Total	53	100%
Department	Manager	3	5,7%
	Owner	50	94,3%
	Total	53	100%

Source: Primary data, Processed 2021

Table 2. Validity Test and Reliability Test

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
BUT	0.892	0.898	0.918	0.651
KK	0.959	0.962	0.964	0.732
Moderating Effect 1	1.000	1.000	1.000	1.000
Moderating Effect 2	1.000	1.000	1.000	1.000
SD	0.935	0.938	0.949	0.756
SKB	0.939	0.943	0.952	0.767

Source: Primary data, Processed 2021

Then, based on table 2, to determine the construct validity and reliability test of the value of the construct AVE must be >0.50 , cronbach's alpha and composite reliability >0.70 (Ghozali & Latan, 2015). Based on table 2, the construct can be declared valid and reliable because it meets the requirements.

Then Test Inner Model, Inner model or model structural describe the relationship between latent variables based on the theory. Design model structural the relationship between latent variables is based on the formulation of the problem or research hypothesis. The structural model is evaluated using R-square. Based on Table 3 regarding R-Square, the model of the influence of e-commerce adoption and competitive advantage on differentiation strategy which is moderated by excellence produces an R-Square value of 0.819, which means that e-commerce adoption and competitive advantage have an effect of 81.9% on differentiation strategy, while the remaining 18.1% is influenced by other variables outside this study, which means that the model is strong. While the R-Square value of the model of the influence of e-commerce adoption and competitive advantage on cost leadership strategies produces an R-Square value of 0.818, which means that e-commerce adoption and competitive advantage have an effect of 81.8% on cost leadership strategies, while the remaining is 18.2% is influenced by other variables outside of this study, which means that the model is strong.

Table 3. *R-Square*

	R-Square	R-Square Adjusted
Differentiation Strategy	0.819	0.808
Cost Leadership Strategy	0.818	0.807

Source: Appendix No. 4

Table 4. *P-Value*

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T-Statistics (O/STDEV)	P-Values
Adoption <i>E-commerce</i> > Differentiation Strategy	-0.459	-0.452	0.125	3.684	0.000
Adoption <i>E-commerce</i> > Cost Leadership Strategy	0.430	0.430	0.130	3.308	0.001
Adoption <i>E-commerce</i> *Competitive Advantage > Differentiation Strategy	-0.153	-0.129	0.081	1.879	0.030
Adoption <i>E-commerce</i> *Competitive Advantage > Cost Leadership Strategy	0.146	0.120	0.086	1.693	0.046

Source: Primary data, Processed 2021

Based on Table 4, processing results P-Value by using SmartPLS, showing that the influence of adoption e-commerce towards differentiation strategy with p-value of 0.000, influence e-commerce towards the cost leadership strategy with a p-value of 0.001, competitive advantage strengthens the influence between adoption e-commerce towards differentiation strategy with p-value of 0.030, competitive advantage strengthens the influence between adoption e-commerce towards a cost leadership strategy with p-value 0.046.

Furthermore, based on table 5, the results of hypothesis testing can be concluded that the analysis of each hypothesis is as follows:

H1: There is a significant positive effect of E-Commerce Adoption on the Differentiation Strategy

Based on the test results, it can be seen that the original sample value was -0.459. The negative original sample value can be interpreted as a direction of negative relationship or negative effect. Then, the t-table is 1,675 which is smaller than the t-count for the e-commerce adoption variable which is equal to 3,684 and the P-Values or probability value is 0.000 which is smaller than 0.05 or a significance level of 5% and indicates that there is a negative influence and the significant adoption of e-commerce towards differentiation strategies in SMEs in the Manding Leather Industry Center, Bantul. Based on this, it can be stated that e-commerce adoption has a negative and significant effect on the differentiation strategy of SMEs in the Manding Leather Industry Center, Bantul. Based on this, it can be stated that hypothesis 1 is rejected.

H2: There is a significant positive effect of E-commerce Adoption on the Cost Leadership Strategy

Based on the test results, it can be seen that the original sample value was 0.430. The positive original sample value can be interpreted as the direction of a positive relationship or a positive effect. Then, the t-table is 1,675 which is smaller than the t-count for the e-commerce adoption variable which is equal to 3,308 and the P-Values or probability value is 0.001 which is less than 0.05 or a significance level of 5% and indicates that the adoption variable e-commerce has a significant positive effect on cost leadership strategies for SMEs in the Manding Leather Industry Center, Bantul. Based on this, it can be stated that hypothesis 2 is supported or accepted.

H3: Competitive Advantage strengthens the influence between E-commerce Adoption on Differentiation Strategy

Based on the test results, it can be seen that the original sample value was -0.153. The negative original sample value can be interpreted as a direction of negative relationship or negative effect. Then, the t-table is 1.675 which is smaller than the t-count for the competitive advantage variable which is equal to 1.879 and the P-Values or probability value is 0.030 which is smaller than 0.05 or a significance level of 5% and indicates that the competitive advantage variable has a negative effect thus weakening the influence of e-commerce adoption on differentiation strategy. SMEs in the Manding Leather Industry Center, Bantul. Based on this, it can be stated that hypothesis 3 is rejected.

H4: Competitive Advantage strengthens the influence of E-commerce Adoption on Cost Leadership Strategy

Based on the test results, it can be seen that the original sample value was 0.146. The positive original sample value can be interpreted as the direction of a positive relationship or a positive effect. Then, the t-table is 1.675 which is smaller than the t-count for the competitive advantage variable which is equal to 1.693 and the P-Values or probability value is 0.046 which is smaller than 0.05 or a significance level of 5% and indicates that the competitive advantage variable has a positive effect thereby strengthening the influence of e-commerce adoption on cost leadership strategies for SMEs in the Manding Leather Industry Center, Bantul. Based on this, it can be stated that hypothesis 4 is supported or accepted.

Discussion

The Effect of Adoption E-Commerce to Differentiation Strategy.

Based on the results of hypothesis testing that has been done using the method Partial Least Square (PLS) obtained the original sample value of -0.459 with a value of P-Values 0.000 which means there is a negative and significant effect of adoption e-commerce towards the SME differentiation strategy in the Manding Leather Industry Center, Bantul. That is, the higher the benefits that can be obtained from adoption e-commerce for SMEs in the Manding Leather Industry Center, Bantul, the lower the tendency to use differentiation strategies.

The results of this study do not support or differ from research that was previously conducted by Al zahrani (2019) that stated adoption ecommerce positive and significant effect on business strategy, which means that the higher the adoption e-commerce, the higher the tendency in the selection of business strategy. Thus the first hypothesis which state that Adoption E-commerce significant positive effect to Differentiation Strategy is rejected.

The Influence of Adoption E-Commerce to a Cost Leadership Strategy.

Based on the results of hypothesis testing that has been done using the method Partial Least Square (PLS) obtained the original sample value of 0.430 with a value of P-Values 0.001 which means there is a positive and significant influence of adoption

Table 5 Hypothesis Test Results

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T-Statistics (O/STDEV)	P-Values
AdoptionEcommerce > Differentiation Strategy	-0.459	-0.452	0.125	3.684	0.000
AdoptionEcommerce > Cost Leadership Strategy	0.430	0.430	0.130	3.308	0.001
AdoptionEcommerce*Competitive Advantage > Differentiation Strategy	-0.153	-0.129	0.081	1.879	0.030
AdoptionEcommerce*Competitive Advantage > Cost Leadership Strategy	0.146	0.120	0.086	1.693	0.046

Source: Primary data, Processed 2021

e-commerce on the cost leadership strategy of SMEs in the Manding Leather Industry Center, Bantul. That is, the higher the benefits derived from adoption e-commerce in SMEs in the Manding Leather Industry Sentra, Bantul, there is an increasing tendency to use cost leadership strategies. The results of this study support research conducted previously by Al zahrani (2019) that adoption ecommerce positive and significant effect on business strategy, which means that the higher the adoption e-commerce, the higher the tendency in the selection of business strategy.

Where the use of this cost leadership strategy means that there are more and more adoptions e-commerce which is more directed to the implementation of a cost leadership strategy and emphasizes creating standardized products at the lowest per unit cost. Thus the second hypothesis which states that Adoption E-commerce significant positive effect on the Cost Leadership Strategy is accepted.

Competitive Advantage strengthens the influence between Adoptions E-commerce towards Differentiation Strategy

Based on the results of hypothesis testing that has been done using the method Partial Least Square (PLS) obtained the original sample value of -0.153 with a value of P-Values 0.030 which means that there is a negative influence and a significant competitive advantage weakens adoption e-commerce on the differentiation strategy for SMEs in the Manding Leather Industry Center, Bantul. That is, the higher the benefits derived from adoption e-commerce in SMEs in the Manding Leather Industry Center, Bantul, there is an increasing tendency to use differentiation strategies that are weakened by competitive advantages such as the price offered according to the quality of the product produced, offering competitive prices compared to competitors, offering quality products compared to competitors, able to compete on the basis of quality, etc.

The results of this study differ or do not support previous research conducted by Al zahrani (2019) who stated in his research that the benefits of adopting e-commerce can be achieved by considering the strategy used by SMEs, but must pay attention to the moderating factor of competitive advantage which is significant to the influence of adoption e-commerce to business strategy. Thus SMEs will benefit and succeed by changing or shifting their strategic approach. Thus the third hypothesis which states that competitive advantage strengthens the influence between adoptions e-commerce towards differentiation strategy is rejected.

Competitive Advantage strengthens the influence between Adoptions E-commerce to the Cost Leadership Strategy

Based on the results of hypothesis testing that has been done using the method Partial Least Square (PLS) obtained the original sample value of 0.146 with a value P-Values 0.046 which means that there is a positive and significant influence of competitive advantage strengthening adoption e-commerce on the cost leadership strategy for SMEs in the Manding Leather Industry Center, Bantul. That is, the higher the benefits derived from adoption e-commerce in SMEs in the Manding Leather Industry Center, Bantul, there is an increasing tendency to use cost leadership strategies that are strengthened by competitive advantages, such as the prices offered are in accordance with the quality of the products produced, offering competitive prices compared to competitors, offering quality products compared to with competitors, etc.

The results of this study support previous research by Al zahrani (2019) who stated in his research that the benefits of adoption e-commerce can be achieved by considering the strategy used by SMEs, but must pay attention to the moderating factor of competitive advantage which is significant to the influence of adoption e-commerce to business strategy. Thus the fourth hypothesis which states that competitive advantage strengthens the influence between adoptions e-commerce to the cost leadership strategy is accepted.

Conclusion

1. There is a negative and significant influence of adoption e-commerce to the differentiation strategy (H1 is rejected).
2. There is a positive and significant influence of adoption e-commerce to a cost leadership strategy (H2 is accepted).
3. Competitive advantage weakens the influence of adoption e-commerce to the differentiation strategy (H3 is rejected).
4. Competitive advantage strengthens the influence of adoption e-commerce to a cost leadership strategy (H4 is accepted).

Implication

Based on the research results, this study has several limitations, so researchers can provide some suggestions that are expected to be useful for further researchers. Suggestions that can be given are:

- 1) From the results of research that has been done, in the Independent variable, namely Adoption E-commerce, item X statement³ which states that "Satisfying customer needs" gets the lowest average value than the other statement items. Which means that Adoption E-commerce in UKM Manding Leather Industry Center still should improve the Adoption strategy E-commerce to better satisfy customer needs, because customer satisfaction is an important aspect in the development of SMEs in Indonesia so that they are able to continue to compete with other products, especially SMEs in the Manding Leather Industry Center.
- 2) SMEs in the Manding Leather Industry Center, Bantul must maximize the use of digital technology (ecommerce) because this can help SMEs to rise from the downturn due to the Covid-19 pandemic, which can be used to increase sales of leather crafts.

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