

Strengthening the Competitive Advantages of the Batik Creative Industry During Pandemic

Hiras Pasaribu¹, Karyono², H. KRT. Nur Suhascaryo³, Alp. Yuwidianoro⁴

^{1,2,3,4} UPN "Veteran" Yogyakarta, Indonesia

Abstract

The obstacle for the creative batik industry during the Covid-19 pandemic is that it is not easy to reach the market. Because before the pandemic, the agents, buyers, and consumers could come to the place where the product was made. To get out of these difficulties, business actors must adapt to innovate, including by using business digitization technology, so that market coverage will be wider and building innovations so that product quality can compete. In order for SMEs to quickly adapt during the COVID-19 pandemic, they must join forces to form a community portal that drives the batik industry. This study aims to determine the effect of corporate governance, product innovation, digitalization-based information technology, and the effectiveness of management control on the competitive advantage of SMEs in the creative industry of batik craftsmen in districts and cities in Yogyakarta. The research method used is a survey method to 55 managers of 127 Creative Industry SMEs batik craftsmen in all districts and cities in Yogyakarta. Primary data collection using a questionnaire with the Likert Scale. In accordance with the consideration of data values and hypotheses, this study uses an appropriate statistical analysis, namely the Partial Least Square (PLS) method. The results show that corporate governance has no significant effect on the competitive advantage of SMEs, while product innovation, utilization of information technology based on business digitization, and the effectiveness of management controls have a positive effect on competitive advantage.

Keywords: *Governance, Innovation, Digitalization, Control, Competitiveness*



This is an open access article under the CC-BY-NC license

INTRODUCTION

Small and Medium Enterprises (SMEs) are industries whose business processes are carried out traditionally, so it is very important to build a SME corporate governance system that can provide accurate information. This is very important considering that companies engaged in these industries are very fragile or easily bankrupt. Improving SMEs businesses during this pandemic requires various ways or strategies so that SMEs' business spirit can recover.

However, since the Covid-19 pandemic, economic growth in Indonesia is currently getting worse. In a conference held on Thursday, July 16, 2020, with the theme Asian Insight Conference 2020, Navigating a Brave New World, Piter Abdullah Redjalam, as Director of CORE Research or Center of Reform on Economics, stated that the threshold of the recession was approaching the economy in Indonesia. Going forward, this Covid-19 pandemic should become a new normal because almost all countries have been affected by the Covid-19 pandemic (Soleha, 2020).

Empowerment of SMEs Corporate Governance and Innovation is a determinant of Competitive Advantage. Product innovation is one of the impacts of rapid technological change, and high product diversity will determine competitive advantage (Hurley & Hult, 1998). Rapid progress, such as the use of business digitization to market products and a high level of competitiveness, requires every company to continue to innovate products, which in turn will increase the competitive advantage of SMEs.

Judging from the results of previous research conducted, Kurniawati et al. 2018, regarding governance in SMEs, concluded that corporate governance of SMEs has a positive effect on competitive advantage. The results of research conducted by Hurley & Hult, 2002; Haryono and Sabar (2017), Alwi and Esti (2018) concluded that product innovation has a positive effect on competitive advantage, while the results of Pasaribu's research (2020) at the end of 2020 on creative industry SMEs during the pandemic concluded that product innovation had a negative effect on competitive advantage. From the results of this study, it

turns out that the innovation variable still has differences in findings before the pandemic and the pandemic in SMEs.

Setiawan (2013) concluded that the use of information technology has no effect on customer loyalty. Likewise, the findings of Cámara et al. (2014) conclude that the use of information technology has no effect on competitive advantage. This means that the use of information technology does not guarantee to affect competitive advantage. On the other hand, Noor et al., 2013 found that the use of information technology has a positive effect on service quality. The findings of previous studies still have differences.

The results of research conducted by Pasaribu et al., 2019 concluded that the effectiveness of management control has a positive but very low effect; this is not significant for competitive advantage. This shows that before the pandemic, the implementation of management control systems in SMEs was still very low. However, the results of research related to SMEs governance variables, innovation, and information technology and management control systems and their influence on competitive advantage in creative industry SMEs since the 2020 to 2021 pandemic, which we know has never been done. Thus, to confirm this research with previous research, it is necessary to re-examine whether the results of the research to be carried out support or not support previous research.

In addition, the fact is that after the pandemic, many SMEs' turnovers have decreased drastically, especially at the batik centers in the Pandak and Imogiri areas, Yogyakarta Special Region Province, Indonesia, which are known as batik centers. The income of the craftsmen fell drastically near 100%. This is a research gap during the pandemic and before the pandemic. In addition, in 2019, the number of SMEs in Indonesia was 64.7 million. After 2020, the number of SMEs in Indonesia will be 34 million (Sembiring, 2021). Therefore, it is necessary to research the causes of the decline in the competitive advantage of SMEs.

Competitive advantage is a fundamental key to survival in the era of globalization. Innovation is one of the factors that determine competitive advantage. Product innovation is one of the impacts of rapid technological change, and high product diversity will determine competitive advantage (Hurley & Hult, 1998:83). It should be added that competitive advantage is very important that every company has, in order to dominate the competition, and be able to overcome the stagnation of the SMEs business during the pandemic. When SMEs can make new breakthroughs that competing companies cannot, then this can provide more advantages for SMEs compared to competing companies. New breakthroughs must be carried out on an ongoing basis so as to improve the performance of SMEs.

Based on the background that has been described previously, it becomes the basis for researchers to conduct research on "The Role of SMEs corporate governance, Product innovation, Use of digital-based information technology, Management control systems and its effect on the competitive advantage of SMEs in the Creative batik industry in Yogyakarta, with the title " Strengthening the Competitive Advantage of the Batik Creative Industry".

This study aims to determine the effect of SME corporate governance, product innovation, use of digital-based information technology, and the effectiveness of management control on the competitive advantage of SMEs in the Regency and City Batik Creative Industry in Yogyakarta, Indonesia.

LITERATURE REVIEW

SMEs Competitive Advantages

Small and Middle Enterprises (SMEs) are productive economic business that stands by themselves, that is run by one individual or corporations that are not subsidiaries or one company branch that are owned, controlled, or parts of either directly or indirectly small or big/large business with the number of net assets or annual sales result as stated in this Law (SMEs Law number 20, the year of 2008). The criteria of Middle Business is it has net assets more than Rp. 500,000,000,- (five hundred million rupiahs) up to most Rp. 10,000,000,000,- (ten billion rupiahs) not included land and building of the place of business; or having annual sales more than Rp. 2,500,000,000,- (two billion five hundred million rupiahs) up to most Rp. 500,000,000,- (fifty billion rupiahs).

Competitive Advantage Theory.

Porter (1985) describes competitive advantage as stated below:

"Competitive advantage is the heart of corporate performance in a competitive market... Competitive advantage is about how a Company really places generic strategies in practice."

Competitive advantage is a condition in which products and services produced by a company are felt better if seen from the price and quality of the product as well as easy to be found compared to the product produced by competitors (Supriyono 2009 and Dash 2013). Competition in the era of industry 4.0 compels business actors to be always innovative, creative, and communicative. Products that add benefits and give satisfaction will create loyalty for *customers*. Loyalty will trigger a *customer* to remain using products or services "whatever" the price of selling in markets.

Indicators of Competitive Advantage (Y)

Sachitra (2016), in general, has the opinion that competitive advantage most generally focuses on indicators such as profitability, productivity, and market share. Competitive advantage is considered as part of the foundation for a high-performance level. The ability of the company to increase its product quality, reduce the cost of the product, or enlarge market share or profit is known as a competitive advantage. Further, Hayes and Schmenner (1978) identify that there are five indicators of priority to compete: (1) Price; (2) Quality; (3) Dependability; (4) Product Flexibility; (5) Volume Flexibility.

Hypotheses Development: The Effect of Governance Role, Product Innovation, The use of digitalization-based Information Technology and Effectiveness of Management Control towards Competitive Advantages.

The Role of SMEs Corporate Governance (X₁) and its effect on Competitive Advantage (Y)

Corporate governance is a set of rules that regulates the relationship between stockholders, administrators, creditors, government, employees, and all other internal and external stakeholders that deal with their rights and obligations; or in other words, a system that directs and controls company (Forum Corporate Governance – FCGI 2006).

Shamsudin and Noor (2012) state that Corporate is a synonym for business environment and how corporate governance can have relevance to track. It means that these market opportunities must be able to be governed well. Therefore, as has been stated before, applying corporate governance itself is not enough, such as equality, transparency, accountability, Responsibility, and Independence, but it is important to make some efforts of the development strategy of creative SMEs corporate governance to reach market opportunities by (1) developing infrastructure; (2) forming business groups; (3) developing business network, marketing, and partnership; (4) developing human resources; and (5) promotion. Therefore, the development of SMEs' corporate governance certainly can not be done by business actors themselves. They must embrace various related sides, and it is quite recommended to jack up the success of the above strategy and then immediately do (Sadino, Bob. 2016). In that way, the five indicators of market opportunities and the aspect of corporate governance become the supporting process of the development of Corporate Governance on SMEs. The Aspects of Corporate Governance that will be examined are five aspects in the Indonesian Code of Good Corporate Governance 2006, namely transparency, accountability, responsibility, independence, and justice.

The result of Nurdin's research, 2015 concluded that there was a significant effect of corporate governance towards competitive advantages. Besides that, Josephin (2000) concluded in her research that corporate governance has influences towards corporate value through corporate performance measurement. The result of the research conducted by Palupijati and friends (2013) on small and middle scale companies revealed that getting more concentrated on business ownership and structure, the more decreasing the levels of transparency, accountability, independence, and justice in the company. But with the level of concentration of business ownership and structure, which is more spread, the application of the four aspects of corporate governance on SMEs will be increasing. By that way:

H₁: The Role of SMEs' corporate governance effects positively towards Competitive Advantages.

Product Innovation in time of Covid-19 pandemic (X₂) and its effect towards Competitive Advantages.

Product innovation is to create new products that can fulfill the needs and wants of consumers so that it comes up the interest to buy those products, that is expected to be able to realize through buying (purchasing) decision (Setiadi; 2003). The success of innovation implemented must be continuous and not implemented incidentally (Anantan and Lena, 2009). In that way, product innovation is creating new products that have not been owned by competitive companies that aim to adapt to the consumer's taste and can increase selling/sales and profits.

According to Lai et al. (2014), the indicators of innovation performance measurement are measured by the parameters of product performance and market performance. It means that innovation plays a role as a mediator between market orientation and corporate performance (Hurley & Hult, 1998). In that way, the indicators of product innovation used in this research are 7 (seven) criteria (Rahayu et al. 2015), namely **quality, price, production time, demand, customer satisfaction, market share, and profit rate.**

Previous research had been conducted by Suhaeni (2018) on Craftsman Industry SMEs in Bandung. The result of the research showed the existing positive and strong relationships between variables of innovation strategy with competitive advantages. Seen from the great influence of innovation strategy towards competitive advantages on SMEs of handicrafts in Bandung, it is significant.

The same is true in the research of Alwi and Esti Handayani (2018); they found that product innovation variable influenced positively towards competitive advantages. Alwi and Esti state further that the increase of competitive advantages can be done through the focus on strategy oriented to the market and product innovation. Although all previous researches found that product innovation was always influential towards competitive advantages, the fact showed that there were many creative industry businesses not able to compete in the local market on in the global market (globally). Therefore the hypothesis proposed:

H₂: is the product innovation variable influential toward Competitive advantage.

Innovation in the Use of Information Technology based on business digitization and its Impact on Competitive Advantage.

Prof. Klaus Martin Schwab in Ghufon (2018), in his book *The Fourth Industrial Revolution* (2017), states that we are currently at the beginning of a revolution that is fundamentally changing the way we live, work and relate to one another. The change was dramatic and happened at an exponential rate. This is indeed a drastic change compared to the previous industrial revolution era. The digital revolution and the era of technological disruption are other terms of industry 4.0. Called the digital revolution because of the proliferation of computers and the automation of records in all fields. Industry 4.0 is said to be the era of technological disruption because automation and connectivity in a field will make the movement of the industrial world and work competition non-linear. One of the unique characteristics of industry 4.0 is the application of artificial intelligence. One form of application is the use of robots to replace human labor so that it is cheaper, more effective, and efficient (Tjandrawinata, 2016).

The results of research conducted by Mahbubah and Sofie (2018) found that digitalization has a positive effect on business opportunities. Raza et al. (2020), in a study conducted on the digitalization of the logistics process, stated that digitalization in the supply chain allows companies to meet customer desires, overcome supply-side challenges, and improve supply chain efficiency. Digitalization will bring Supply Chain 4.0 to be faster, more flexible, smaller, more accurate, and more efficient delivery. Thus the proposed hypothesis is:

H₃: The use of digitalization-based information technology has a positive effect on competitive advantage.

Effectiveness of SMEs management control (X₄) and its influence on competitive advantage.

In *Kamus Besar Bahasa Indonesia*, the word effective has the meaning of being able to bring results, consequences, or effects. Anthony and Govindarajan (2004) stated that the management control system is a process by which managers influence other members of the organization to implement organizational strategies. The management control process is carried out through strategic planning activities, budget preparation, implementation, and performance evaluation. This means that the effectiveness of management control is a process that affects everyone in the organization that aims to obtain results by implementing the company's strategies.

Simons (2002) concludes from the results of a 2-year field study, using a new model to show how management control systems can interact, focusing an organization's attention on strategic uncertainty. This process is examined in two competing firms to illustrate how top managers use formal systems to guide the emergence of new strategies and ensure a sustainable competitive advantage. From the statement of Simons (2002), it can be concluded that the management control system has an effect on competitive advantage.

On the other hand, Sachitra (2016) generally argues that the most common competitive advantage is a focus on indicators such as profitability, productivity, and market share. Competitive advantage is considered part of the foundation for a high level of performance. The company's ability to improve the quality of its products, reduce the costs of its products, or increase market share or profits is known as a competitive advantage. Thus the proposed hypothesis is:

H₄: Effectiveness of SMEs management control has an effect on competitive advantage

RESEARCH METHODOLOGY

The design of this study is a causal study which is an explanatory study of all selected samples that have been surveyed to represent the population. Based on the hypothesis, the technical analysis of the data in this study uses the Partial Least Square (PLS) model. PLS is a structural equation modeling equation (SEM) with an approach based on variance or component-based structural equation modeling. PLS is used to explain whether there is a relationship between latent variables (prediction). The purpose of PLS-SEM is for predictive orientation in developing theory or developing theory. Ghozali and Latan (2015) argue that PLS is a powerful analytical model because it does not assume current data with a certain scale measurement on small sample size. This study has a complex model and a limited number of samples, thus data analysis using smartPLS software. Thus, because SmartPLS uses random multiplication, the assumption of normality is not necessary. Several previous studies were conducted by Pasaribu 2011 and Pasaribu et al., 2019). has used Partial Least Square in its research method.

The population of this research is 127 creative batik industries in D.I. Yogyakarta. It is planned to take a sample of 65 batik industries in regencies and cities in Yogyakarta, but in reality, some are not operating due to the COVID-19 pandemic from 2020-2021. Thus, the samples willing to be taken at random are only 55 batik creative industries.

Variables and Variable Operationalization.

Competitive Advantage (Y)

The operational definition of competitive advantage can be expressed as a specific way of using available resources and other appropriate activities to separate the company from its competitors as well as to maintain sustainability and development (Sachitra V, Chong SC, 2016). Furthermore, Hayes and Schmenner (1978) identified that there are five competitive priority indicators: (1) Price; (2) Quality; (3) Dependability; (4) Product Flexibility; (5) Volume Flexibility. The measuring instrument used is a questionnaire with a Likert scale to obtain ordinal data.

Governance of SMEs (X₁)

The SMEs Governance indicators used in this research are from the aspect of managed market opportunities and the governance aspect of SMEs (Shamsudin and Noor, 2012) and Sadino, Bob, 2016). Indicators of aspects of managed market opportunities are carried out by means, namely (1) infrastructure development; (2) establishment of business groups; (3) business network development, Marketing, and partnerships; (4) human resource development; and (5) promotion. For indicators of corporate governance that will be analyzed, there are five aspects in the Indonesian Code of Good

Corporate Governance, 2006, namely transparency, accountability, responsibility, independence, and fairness. For each indicator, the measuring instrument used is a questionnaire with an ordinal scale.

Product Innovation (X₂)

Thus the product innovation indicators used in this research are 7 (seven) criteria (Rahayu et al. (2015), namely *quality, price, production time, demand, customer satisfaction, market share, profit rate*.

Innovation of the Use of Information Technology Based on Business Digitalization (X₃).

Business digitalization, carried out by utilizing the internet for various business activities, is called *E-Commerce*. Bryan A. Garner quoted by Halim (2005). There are various existing applications developed from 3 (three) basic application categories, namely: (1) Discovery, which is an application for information access (browsing and information retrieval/searching); (2) Communication, that is e-mail, chat, newsgroups; and (3) Collaboration, that is an application for collaboration between individuals/groups, such as workflow systems, screen sharing, visual teleconferencing, group decision support systems (GDSS).

Effectiveness of management control (X₄)

Effectiveness is something related to determining whether the company's goals have been achieved (Tunggal, 2003:12). In the planning function, namely, the budget related to budget determining whether the company's goals set in the budget have been achieved.

Data sources.

Obtaining this research data is using a questionnaire to 55 SMEs managers of the creative batik industries who are willing to be interviewed in the Regency and City in Yogyakarta.

Data Analysis Tools X₁, X₂, X₃, X₄, Against Y: Partial Least Square (PLS) Analysis

Hypothesis testing uses the statistical tool of Partial Least Square (PLS). The first step is to describe the data. Further, testing using the PLS method consists of testing the outer model (measurement model, namely the relationship between indicators and their constructs) and inner (structural) models. To state that the hypothesis is accepted or rejected, the t_{table} value can be compared with the $t_{\text{statistics}}$ or t_{count} . If $t_{\text{count}} > t_{\text{table}}$, then the hypothesis is accepted. This means that the independent variable affects the dependent variable. On the other hand, if $t_{\text{count}} < t_{\text{table}}$, then the hypothesis is rejected.

FINDING AND DISCUSSION

As an overview, the data collected are primary data, namely data derived from respondents' answers which were collected using distributed questionnaires. The population of this study amounted to 127 SMEs in Regencies and City in Yogyakarta. The sampling technique used random sampling of 55 SMEs managers who were willing to do research.

Characteristics of Respondents

Based on the collected questionnaires, the characteristics of the respondents of SMEs in creative batik industries in Regencies and City in Yogyakarta are obtained. Data on the characteristics of respondents are more women than men, with the education of the most respondents being a high school with 26 consisting of 2 men and 24 women. At least 1 respondent comes from elementary education level and 1 person from D2 and D3 education, and 1 person from doctoral degree.

Descriptive Statistics

Descriptive statistical analysis is used to see the state of the data for each research object. Table 4.1 presents descriptive statistics regarding the minimum, maximum, average, and standard deviation values for each research variable. The variables in this research are Corporate Governance (X₁), Product Innovation (X₂), Innovation in the Use of Information Technology based on business digitization (X₃), and Effectiveness of Management Control (X₄), and Competitive Advantage (Y).

Tabel 4.1

Statistik Deskriptif

Variabel	N	Minimum	Maximum	Mean	Std. Deviation
X1	55	1,60	5	3,5891	0,72205
X2	55	1,86	5	3,8689	0,60866
X3	55	1,33	5	3,6662	0,77834
X4	55	1,33	5	3,7638	0,72454
Y	55	1,71	5	3,8151	0,64861
Valid N (listwise)	55				

Source: Data processed 2021

Data Table 4.1 shows that Corporate Governance has an average score of 3,5891. If the average score of respondents' answers is greater than 3,5891, then the respondent has high MSME governance. On the other hand, if the respondent's average score is less than 3,5891, then the respondent has low SME governance. The value of respondents' answers about governance ranges from 1.60 to 5. Thus the descriptive statistics of the independent variables are further.

Competitive advantage has an average score of 3.8151. If the average score of respondents' answers is greater than 3.8151, then the competitive advantage is high. On the other hand, if the average score of respondents' answers is less than 3.8151, then the competitive advantage is low. The value of respondents' answers about the effectiveness of SMEs management control ranges from 1.71 to 5.

Partial Least Square (PLS) Analysis

This research uses Partial Least Square analysis to test the variable constructs of Corporate Governance (X₁), Product innovation (X₂), The use of IT-Digitalization (X₃), Effectiveness of management control (X₄) on the competitive advantage of SMEs (Y). The stages of analysis carried out include validity and reliability tests, inner or outer model tests, outer model tests, and analysis of results using the *Structural Equation Model -PLS*.

Validity Test and Reliability Test

The results of the validity test are shown in Table 4.2, showing that all AVE root values for each construct are greater than the loading factor value of 0.05. This means that each construct of each variable has good discriminant validity.

Table 4.2
 The result of the Validity Test of Items of
 Partial Least Square (PLS) Assumption Variables

Variable	AVE	Communalit y	Nilai Kritis	Keterangan
SMEs Governance (X ₁)	0,559449	0,926055	0,5	Valid
Product Innovation (X ₂)	0,591304	0,952435	0,5	Valid
IT-Use of Digitization (X ₃)	0,684986	0,866800	0,5	Valid
Management Control Effectiveness (X ₄)	0,630570	0,835563	0,5	Valid
Competitive Advantage (Y)	0,532459	0,887529	0,5	Valid

Source: PLS Data Processing Result, 2019.

Furthermore, the results of the reliability test are shown in Table 4.3, showing that the Cronbach's Alpha coefficient value for each variable is equal to or greater than 0.60, so that all question items on SMEs Governance (X_1), Product Innovation (X_2), Use of IT-business digitization (X_3), and Effectiveness of management control (X_4), and Competitive advantage (Y) is reliable.

Table 4.3
 The result of the Assumption Reliability Test of Partial Least Square (PLS)

Variabel	<i>Cronbach Alpha</i>	<i>Composite Reliability</i>	Nilai Kritis	Keterangan
SMEs Governance (X_1)	0,910957	0,926055	0,60	Reliabel
Product Innovation (X_2)	0,945510	0,952435	0,60	Reliabel
IT-Use of Digitization (X_3)	0,768553	0,866800	0,60	Reliabel
Management Control Effectiveness (X_4)	0,706397	0,835563	0,60	Reliabel
Competitive Advantage (Y)	0,851927	0,887529	0,60	Reliabel

Source: PLS Data Processing Result, 2021

Inner Model or Structural Model Testing

The structural model was evaluated using *R-Square* for the dependent construct, *Stone-Geisser Q-Square* test for *predictive relevance* and t-test, as well as the significance of the coefficients of structural path parameters (Ghozali, 2016). In addition, by looking at the R-Square value, the PLS model is also evaluated by looking at the Q-Square Predictive Relevance, which can measure how well the observed values are generated by the model and also the estimated parameters.

The value of *Q-Square Predictive Relevance* that is greater than 0 indicates that the model has *predictive relevance*, while a *Q-Square Predictive Relevance* value less than 0 indicates that the model lacks predictive relevance.

$$Q^2 = 1 - (1 - (R \text{ square})^2)$$

$$Q^2 = 1 - (1 - (0.8622)^2) = 0.257$$

Based on the results of the calculation of the *Q-square* value, it can be seen that the *Q-square* value is 0.257, which means that this number is greater than 0 (zero). This shows that the variables of Governance (X_1), Product Innovation (X_2), the Use of IT-Digitization (X_3), Effectiveness of management control (X_4) have a good predictive level of Competitive Advantage (Y).

Outer Model

Between indicators in this study are assumed to be uncorrelated, so a measure of internal consistency reliability (Cronbach Alpha) is not needed to test formative construct reliability (Ghozali, 2016). This is different from reflective indicators, which use three criteria to assess the outer model, namely convergent validity, composite reliability, and discriminant validity. Ghozali (2016) also states that formative constructs are basically a regression relationship from indicators to constructs, so the way to assess it is to look at the value of the regression coefficient. The recommended weight value is 0.500. The results of the outer model analysis are shown in Table 4.4.

Tabel 4.4
 The result of the Outer Loading Assumption of
 Partial Least Square (PLS)

	X1	X2	X3	X4	Y
X1,1	0,844602				
X1,10	0,611093				
X1,2	0,764650				
X1,3	0,763602				
X1,4	0,849123				
X1,5	0,692205				
X1,6	0,581193				
X1,7	0,756012				
X1,8	0,834126				
X1,9	0,731206				
X2,1		0,700403			
X2,10		0,838941			
X2,11		0,818171			
X2,12		0,779368			
X2,13		0,746133			
X2,14		0,506291			
X2,2		0,813810			
X2,3		0,783812			
X2,4		0,821028			
X2,5		0,799545			
X2,6		0,768382			
X2,7		0,759611			
X2,8		0,842397			
X2,9		0,725903			
X3,1			0,770703		
X3,2			0,867066		
X3,3			0,842122		
X4,1				0,701897	
X4,2				0,799682	
X4,3				0,871527	
Y1,1					0,658654
Y1,2					0,745051
Y1,3					0,721828
Y1,4					0,777807
Y1,5					0,794582
Y1,6					0,714814
Y1,7					0,769207

Source: PLS Data Processing Result,2021

Based on the results of the outer model analysis in Table 4.4, the outer loading value of all variables is greater than 0.500; this means that the research model is good, so there is no need to modify the model.

Results of Hypothesis Testing Analysis with *Partial Least Square*.

The analysis in this research is the *Partial Least Square (PLS)* analysis. This analysis is used to determine the influence between the variables of SMEs Governance (X_1), Product Innovation (X_2), The Use of IT-Digitization (X_3), Effectiveness of Management Control (X_4), and Competitive Advantage of Batik Industry SMEs (Y).

The following are the results of *Partial Least Square (PLS)* shown in Figure 4.1. PLS analysis image shows the construct of the influence of SMEs governance, Product innovation, The use of information technology based on business digitization, and the Effectiveness of management control has an effect on Competitive advantage. This analysis is reinforced by the results of the equation in Table 4.5.

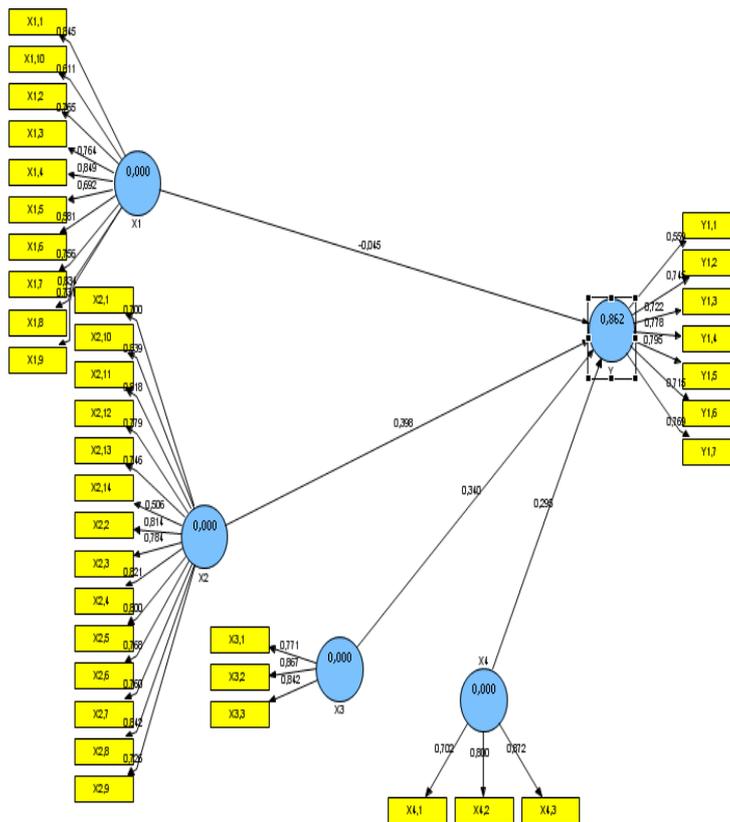


Figure 4.1. SMEs *Partial Least Square (PLS)* Analysis

Tabel 4.5
The result of SEM Partial Least Square (PLS)

Variables	Koefisien		
	Regresi	t-hitung	t-tabel
Corporate governance (X ₁) -> Competitive advantage (Y)	-0,0450	0,6942	1,980
Product innovation (X ₂) -> Competitive advantage (Y)	0,3960	4,0546	1,980
The use of IT-Digitalization (X ₃) -> Competitive advantage (Y)	0,3400	2,5584	1,980
Management control effectiveness (X ₄) -> Competitive advantage (Y)	0,2960	2,2259	1,980

N: 55

Source: Data processed 2021, *Partial Least Square (PLS)*, 2021.

In Table 4.5 here is the result of the SEM *Partial Least Square (PLS)*, which shows the influence of governance (X₁), product innovation (X₂), and the use of digitalization-based Information Technology (X₃), and the effectiveness of management control (X₄) on the competitive advantage of SMEs (Y).

Testing the Effect of Corporate Governance on the Competitive Advantage of SMEs.

According to the result of SEM *Partial Least Square (PLS)* calculation, the t-count value (0.6942) < t-table (1.980), it can be concluded that the governance variable (X₁) has no significant effect on competitive advantage (Y). According to the result of the research test in Table 4.5, it shows that there is no influence of governance on competitive advantage. These results prove that good or bad governance in SMEs cannot describe the good or bad competitive advantage. This can be caused due to the results of competitive advantage are determined by the successful implementation of the SME governance.

Testing the Effect of Product Innovation on Competitive Advantage.

Based on the results of SEM *Partial Least Square (PLS)* data processing, the t-count value (4.0546) > t-table (1.980), it is concluded that the product innovation variable (X₂) has a significant effect on competitive advantage (Y).

This means that product innovation has a significant effect on competitive advantage. The data show that product innovation has a positive contribution to competitive advantage. This indicates that the better the product innovation provided by an organization, the better the competitive advantage of SMEs. The shift in the era of product innovation in organizations will increase the competitive advantage of SMEs.

Testing the Effect of Using Digitalization-Based Information Technology on Competitive Advantage.

Based on the results of SEM *Partial Least Square (PLS)* data processing, it is obtained that the t-count value (2.5584) > t-table (1.980), it can be concluded that the use of digitization-based Information Technology (X₃) has a significant effect on Competitive Advantage (Y).

These results indicate that the higher the level of the use of Information Technology, the higher the competitive advantage. These results prove that there is a positive influence on the use of digitization-based Information Technology on Competitive Advantage. These data indicate that the use of digitization-based Information Technology has a positive contribution to competitive advantage. This shows that the better use of digitization-based information technology will be followed by increasing the competitive advantage of SMEs.

The testing of the Effect of Management Control Effectiveness on Competitive Advantage.

Based on the results of SEM *Partial Least Square (PLS)* data processing, the t-count value (2.2259) > t-table (1.980), it is concluded that the variable of Management Control Effectiveness (X₄) has a significant effect on competitive advantage (Y). This means that product innovation is significantly influential on competitive advantage. These data indicate that the Effectiveness of Management Controls is a positive contribution to competitive advantage. This shows that the better the Effectiveness of Management Control provided by an organization, the better the efficiency and cost-effectiveness will also be and will encourage the competitive advantage of SMEs in the credit industry in Yogyakarta.

CONCLUSIONS AND FURTHER RESEARCH

Conclusions

Based on the results of this research data analysis, it can be concluded that:

1. SMEs Governance has no significant effect on the competitive advantage of SMEs. This research supports the statement of Palupijati et al. (2013) conducted on small and medium-scale businesses. Further, it does not support the findings of Nurdin (2015) and Josephin (2000).
2. Product innovation, the Use of digitalization-based Information Technology, and the Effectiveness of management control have a positive effect on Competitive advantage. The dominant variable is product innovation, while the lowest variable in which its effect on Competitive advantage is the Effectiveness of management control.

Recommendations

Based on the conclusions, here are some recommendations that can be considered:

SMEs governance has not contributed much to competitive advantage. Likewise, the effectiveness of management control is still low in its influence on competitive advantage. This finding shows that if management governance is getting better, it will be followed by an increase in the effectiveness of management control which will, directly and indirectly, increase competitive advantage. To achieve good governance results, it is necessary to develop business management processes to achieve competitive advantages

Limitations and Contributions.

This research is still considered to have limitations because it only examines the role of corporate governance, SMEs, product innovation, the use of information technology based on business digitalization, and the effectiveness of management control on their influences on competitive advantage. The findings of this research are that MSMEs governance has not contributed well to competitive advantage. Likewise, the effectiveness of management control is still low. Therefore, other factors that have not been investigated in this research need to be conducted in another research or service to SMEs in the form of "entrepreneurship competency training" education to support corporate governance and management control in time of the pandemic.

References

- Alwi, Taufik dan Esti Handayani. 2018. Keunggulan Bersaing Ukm Yang Dipengaruhi Oleh Orientasi Pasar Dan Inovasi Produk. *Jurnal Pengembangan Pariwisata*. Vol 20 (1). 2018.
- Anatan, Lina dan Lena Ellitan. 2009. *Manajemen Inovasi (Transformasi Menuju Organisasi Kelas Dunia)*. Penerbit, CV. Alfabeta Bandung.
- Anthony, Robert N.; Vijay Govindarajan. 2004. Edisi 11. *Management Control System*, New York: The McGraw-Hill Companies, Inc.
- Dash, Aswini Kumar 2013. Competitive Advantage: Its Importance And Impact On Design. *International Journal of Application or Innovation in Engineering & Management (IJAIEM)*. Web Site: www.ijaiem.org. Vol. 2, Issue 12, December 2013. ISSN 2319 – 4847. P.7-10.
- Ghozali, Imam. 2016. *Aplikasi Analisis Multivariate Dengan Program SPSS 23*. Semarang: BP Universitas Diponegoro.
- Ghufron, M.A 2018. Revolusi Industri 4.0: Tantangan, Peluang dan Solusi Bagi Dunia Pendidikan. *Seminar Nasional dan Diskusi Panel Multidisiplin Hasil Penelitian & Pengabdian kepada Masyarakat*, Jakarta, 2 Agustus 2018. Universitas Indraprasta PGRI
- Hurley, R. F., & Hult, G. T. 1998. Innovation, Market Orientation, and Organizational Learning: An Integration and Empirical Examination. *Journal of Marketing*. Vol. 62. Pp. 42-54.
- Hayes, R.H. dan Schmenner, R.W. 1978. How Should you Organize Manufacturing ?. *Harvard Business Review*, Vol.56 No.1.

- Josephin, Kezia dan Estralita Trisnawati dan Herlin Tunjung Setijaningsih. (2019). Pengaruh Modal Intelektual dan Tata Kelola Perusahaan Terhadap Nilai Perusahaan Melalui Kinerja Keuangan (Studi Empiris Pada Perusahaan LQ45).
- Lai Y. L., Hsu, M.S., Lin, F.J., Chen, Y.M., & Lin, Y. H. 2014. The Effect of industri cluster Knowledge Management on innovation performance, *Journal of business research*, Vol 5 (67), p.734-739., <http://doi.org/10.1016/j.jbusres.2013.11.036>.
- Mahbubah, Istiyana dan Soffie Yuninda Putri. 2018. Dampak Digitalisasi pada Peluang Bisnis E-Commerce di Kabupaten Sumenep. *Seminar Nasional dan Call for Papers (SENIMA 3), Jurusan Manajemen-Fakultas Ekonomi Universitas Negeri Surabaya*.
- Noer Bahry Noor, Burhanuddin Bahar, Guntur R Fara (2013). IMPLEMENTASI STRATEGI DIFERENSIASI, DAN KUALITAS LAYANAN DALAM MENCAPAI KEUNGGULAN BERSAING PADA RUMAH SAKIT HAJI MAKASSAR. *JURNAL MKMI*, September 2013, hal 184-189. http://eprints.undip.ac.id/49162/1/JURNAL_TESIS-Kaisar.pdf
- Nurdin. 2015. Analisis Pengaruh Tata Kelola Perusahaan yang Baik Terhadap Keunggulan Bersaing Pada Bank Perkreditan Rakyat. *Jurnal Manajemen Dan Bisnis*, XII (1), 122-135.
- Palupijati, Sulistyning dan Nurul Indarti dan Sivilokonon. 2013. Perbandingan Penerapan Pada Bisnis Keluarga dengan Bisnis Non-Keluarga. [Repository.ugm.ac.id/id/eprint](http://repository.ugm.ac.id/id/eprint).
- Pasaribu, hiras & Nur Suhascaryo & Yuwidianoro. 2020. *PENATAKELOLAAN UKM INDUSTRI KREATIF: (Konsep dan Implementasi Sistem Informasi Akuntansi Manajemen dan Keunggulan Bersaing untuk merespon Kepatuhan Wajib Pajak UKM)*. Penerbit DEPUBLISH. Group Penerbitan CV. Budi Utama), Yogyakarta; ISBN: 978623-2-1802-6. Hak Cipta No: 000225161.
- Porter, Michael E. 1985. *Competitive Advantage: Creating and Sustaining Superior Performance*. Macmillan. New York.
- Rahayu, J.S., Syairuddin, B., Pertiwi, S.G. 2015. Perancangan Strategi Untuk meningkatkan Kinerja Inovasi pada Kluster Kreatif Batik Laweyan, *Prosiding Seminar Nasional Manajemen Teknologi XXII*, Surabaya, 24 Januari 2015.
- Raza, Erwin; La Ode Sabaruddin, Aziza Leila Komala. 2020. Manfaat dan Dampak Digitalisasi Logistik di Era Industri 4.0. *Jurnal Logistik Indonesia*, Vol 4, No.1, April 2020, p.49-63. E-ISSN 2621-6442.
- Sadino, Bob. 2016. HYPERLINK "<https://dodimawardi.wordpress.com/2017/07/19/terbit-buku-belajar-goblok-dari-bob-sadino-edisi-baru/>" Terbit Buku Belajar Goblok dari Bob Sadino edisi baru . Penerbit : Gramedia.
- Sachitra, Vilani and Siong-Choy Chong 2016. *Firm-Level Competitive Advantage in the Agricultural Sector: A Research Agenda*. *British Journal of Economics, Management & Trade*, 12 no 3: 1-12, 2016, Article no.BJEMT.24152. ISSN: 2278-098X. ISSN: 2278-098X.
- Setiadi, J. Nugroho 2003. *Perilaku Konsumen: Konsep dan Implikasi untuk Strategi dan Penelitian Pemasaran*. Jakarta: Prenada Media.
- Setiawan, Eko Budi. (2015). Analisis Pengaruh Nilai Teknologi Informasi Terhadap Keunggulan Bersaing Perusahaan, *Jurnal Sains, Teknologi dan Industri*, Vol. 12, No. 2, Juni 2015, pp.204 - 211, ISSN 1693-2390 print/ISSN 2407-0939 online.
- Shamsudin, S., & Noor, R. 2012. Tata Kelola Perusahaan dan Kepatuhan Pajak: Studi pada Usaha Kecil Menengah (UKM) di Malaysia. *Makalah Konferensi*, 1-5.
- Soleha, Arin Ramadhiani. 2020. Kondisi Umkm Masa Pandemi Covid-19 Pada Pertumbuhan Ekonomi Krisis Serta Program Pemulihan Ekonomi Nasional. *JURNAL EKOMBIS*. Vol 6 No.2.
- Simons, R., Davila, A., and Kaplan. R.S. 2000 & 2002. "Performance measurement & control systems for implementing strategy: text and cases", Upper Saddle River, NJ: Prentice-Hall.
- Suhaeni, Tintin. 2018. Pengaruh Strategi inovasi terhadap keunggulan bersaing di Industri Kreatif di Kota Bandung. *Jurnal Riset Bisnis dan Investasi*, ISSN 2460-8211: Vol 4 (1) April 2018: hal 57-74
- Tjandrawina, R.R. 2016. Industri 4.0: Revolusi industry abad ini dan pengaruhnya pada bidang kesehatan dan bioteknologi. *Jurnal Medicinus*, Vol 29, No. 1, Edisi April.
- Tunggal, Amin Widjaja. 2003. *Audit Manajemen Kontemporer*. Edisi Revisi. Harvarindo. Jakarta.