

ANALYSIS OF THE EFFECT OF TECHNOLOGY ADAPTATION, MARKET ORIENTATION, AND NETWORKING ON COMPETITIVE ADVANTAGES AND BUSINESS PERFORMANCE OF BATIK UMKM IN LAWEYAN, SOLO, CENTRAL JAVA

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ABSTRACT

The phenomenon that will be analyzed in this research is that the current development raises the urgency that there is a need for more effective and efficient performance that can increase productivity, increase profits and reduce costs. Batik MSMEs in Laweyan, Solo, Central Java, which currently mostly use manual and semi-manual methods, need to develop themselves in order to be able to compete with batik invaders from abroad such as Malaysia, China and Vietnam. The purpose of this study was to analyze the effect of technology adaptation, market orientation and networking on the competitive advantage and business performance of batik MSMEs in Laweyan, Solo, Central Java. The population chosen in this study were all of the Batik Laweyan UMKM as many as 156 UMKM Batik. The number of respondents used in this study was 156 Laweyan Batik UMKM. The sampling technique in this research is the census method. The data collection method is by using a questionnaire. The data analysis method used is Structural Equation Modeling. Based on research, market orientation has a positive effect on competitive advantage, adaptation of modern technology and networking has no effect on competitive advantage. Adaptation of modern technology, market orientation, networking and competitive advantage have a positive effect on business performance. In terms of testing the fit model, it states that the model has a good fit. So from this it can be concluded that the model has a good enough fit to predict business performance.

Keywords: *technology adaptation, market orientation, networking, competitive advantage, business performance.*

INTRODUCTION

Central Java UMKM experienced an increase in the number of UMKM from 2013 to 2017, UMKM also absorbed more workers from the following years, besides that there was an increase in UMKM turnover in Central Java during the 2013-2017 period. This shows an increase in the performance of UMKM in Central Java, which makes UMKM one of the pillars in supporting the rotation of the economy in Central Java. One of the leading UMKM in Central Java is the batik UMKM. Batik is one of the traditional arts that characterizes the province of Central Java, which is the center of Indonesian batik. This is evident from the existence of national batik centers in Central Java such as Laweyan, Solo, Pekalongan, Lasem, and Semarang. Batik is an original Indonesian cultural heritage that has high artistic value and is able to penetrate the export market.

The problem currently faced by batik UMKM business actors is the demands of today's developments that require an effective and efficient work system to make batik UMKM begin to need to leave old ways to be able to compete with other batik industries, from Indonesia and the incoming batik, including Vietnam, Malaysia and China. Batik from abroad that enters Indonesia has the advantage of low prices and the quality of fabrics that are of medium standard. Based on data from the Central Java Province Industry and Trade Office (2018), the competitive advantage of foreign batik producers in eroding the batik market in Indonesia is that the batik industry abroad is able to apply effective and efficient ways of working and apply technology and utilize the network. to meet market needs. This has resulted in the overseas batik industry being able to cut costs and produce in large quantities so that it has a competitive advantage and improves business performance compared to local batik UMKM.

Batik UMKM in Central Java, especially in Solo, which is the city of Batik, are currently trying to follow the 4.0 industrial revolution while still trying to maintain local wisdom and culture. Currently there are Batik UMKM that use manual labor such as making hand-drawn batik, but in Laweyan, almost all batik UMKM have used a stamp or print to speed up the production process, create a more stable pattern and also increase their business turnover so it is expected that their performance will increase. Based on the results of the interview, there needs to be a competitive advantage in Laweyan Batik UMKM because currently competition is getting tighter, to achieve the expected performance, there needs to be an increase in competitive advantage that distinguishes Laweyan Batik UMKM.

The phenomena that will be analyzed in this research is that the current development raises the urgency that there is a need for more effective and efficient performance that can increase productivity, increase profits and reduce costs. Batik UMKM in Laweyan, Solo, Central Java, which currently mostly use manual and semi-manual methods, need to develop themselves so that they are able to compete with batik invaders from abroad such as Malaysia, China and Vietnam. This is thought to be because batik UMKM in Laweyan, Solo, Central Java need a strong competitive

advantage so that they are able to withstand the onslaught of batik from abroad. Based on the gap research, it is suspected that there are effects of technological adaptation, market orientation and networking that are still not maximally used by batik UMKM in Laweyan, Solo, Central Java which affect competitive advantage and business performance.

LITERATURE REVIEW

The creation of competitive advantage can be done by accepting companies to adopt or adapt to modern technology. With technological adaptation, companies will be able to produce products that previously could not be made by companies due to lack of technology for product creation (Ghadikolaei et al, 2013). By adapting technology, it is possible for companies to make products that are different from those of previous companies and competitors so that their competitive advantage increases (Hana, 2013).

H1: Technology adaptation has a positive effect on competitive advantage.

The company's ability to recognize market needs is an asset that a company needs to have (Zainul, 2016). With the company's ability to recognize market needs more quickly than competitors, the company will have a competitive advantage because it is able to anticipate making strategies according to market needs, so as to be able to take existing opportunities faster than competitors (Aprizal et al, 2016).

H2: Market orientation has a positive effect on competitive advantage.

In today's digital era, business has transcended the boundaries of cities, countries and continents. Currently, the need for a strong business network is needed by every company (Duschek, 2004). A strong business network, especially a network of buyers and importers, will make companies, especially UMKM, have a stronger competitive advantage compared to their competitors because the company will find it easier to get business or make business transactions easier because they already know the company personally compared to other competitors. still have to do exploration (Balakhrisnan and Khan, 2018). So that the more developed the network of business actors, the greater the company's business advantages.

H3: Networking has a positive effect on competitive advantage.

The existence of technological advances has led to new ways to carry out production so as to reduce costs so that companies can work more effectively and efficiently (Bujor and Avsilcai, 2016). On the other, the adaptability of technology to reduce costs will make company profits increase so that its business performance will be better (Pfano, 2016).

H4: Technology adaptation has a positive effect on business performance.

Companies that have a high market orientation will provide products in accordance with market needs. This will make it easier for companies to sell the products they offer because the market really needs these products (Sutapa et al, 2017). The existence of a

strong market orientation will form a system for companies that strengthens companies in selling products and increases their profits (Ladipo et al, 2016).

H5: Market orientation has a positive effect on business performance.

A strong business network such as a network of customers in one community or a forum that constantly purchases products from product providers will make the company have good business performance (Perin et al., 2016). This business performance can increase because a strong business network will make it easier for customers to make purchases or companies are able to get products from the right suppliers, so that their business performance will increase (Stoian et al., 2017).

H6: Networking has a positive effect on business performance.

The business performance of an UMKM will be greatly influenced by the creation of its competitive advantage (Aprizal et al, 2016). The competitive advantage in this case is the creation of new values that can lift the company's position in the eyes of consumers which makes it different from competitors. With the competitive advantage the company has, the company will have a good bargaining position in the eyes of consumers, besides that by making a different position from competitors, consumers will feel that the company has different specialties so that they want to purchase products from the company (Kaleka and Morgan, 2017).

H7: Competitive advantage has a positive effect on business performance

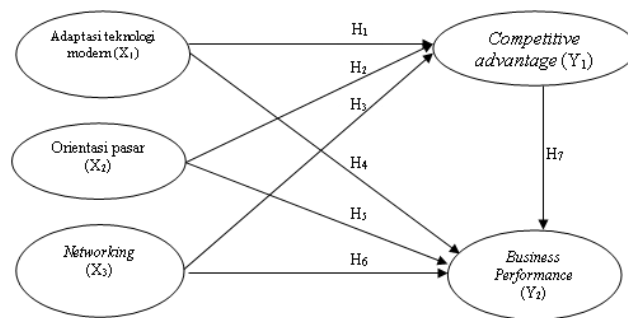


Figure 1. Research Model

RESEARCH METHOD

This study uses research that is causal (cause-effect). The causal research design is used to prove the cause and effect relationship of several variables. Causal research uses a research model that uses independent variables that will affect the dependent variable in a planned situation (Sugiyono, 2013). The data collection method used in this study is a questionnaire method. The population of this research is all of the Batik Laweyan UMKM as many as 156 UMKM Batik. By using the census technique, the sample to be used in this study amounted to 156 Laweyan Batik UMKM.

RESULT AND DISCUSSION

Table 1. Result of Data Analysis

	Estimate
CA <--- AT	,147
CA <--- NWR	,263
CA <--- OP	,061
BP <--- OP	,423
BP <--- AT	,344
BP <--- CA	,222
BP <--- NWR	,827

The adaptation of modern technology has no effect on competitive advantage. The creation of competitive advantage can be done by accepting companies to adopt or adapt to modern technology. With the adaptation of technology, the company will be able to produce the products that previously could not be made by the company due to lack of technology for product creation. The problem that makes the adaptation of modern technology has no effect on the competitive advantage of Laweyan Batik UMKM because in its business, not all Laweyan Batik UMKM adopt new technology. Based on the results of observations by researchers at Laweyan Batik UMKM, around 50% of respondents still use conventional technology, especially owners who are over 50 years old and employees who are also of the same age. The owners of Laweyan Batik UMKM who are older feel that the use of modern technology actually hinders them from producing because not all employees are able to use new technology and are lazy to learn more to run high-tech machines so they prefer to keep using conventional production processes with traditional machines as well. Whereas some other owners who are younger have tried to apply modern technology, but the obstacles that arise are because human resources cannot follow and there is a view from the family that the batik process is better if it is manual so that the adaptation of modern technology is still not running smoothly as it is. From these results it shows that the use of modern technology in Laweyan Batik UMKM is still unable to increase the competitive advantage of Laweyan Batik UMKM because the use of modern technology at Laweyan Batik UMKM is on average still not effective.

Market orientation has a positive effect on competitive advantage. The company is ability to recognize market needs is an asset that a company needs to have. The company ability to recognize market needs more quickly than competitors, the company will have a competitive advantage because it is able to anticipate making strategies according to market needs, so as to be able to take existing opportunities faster than competitors. The owner of Laweyan Batik UMKM always observes ongoing market trends by recognizing the needs of their customers, for example what happened in the field was

the Solo Government regulation for civil servants in the use of traditional clothes every Thursday and the Central Java Government regulation for the use of Javanese traditional clothes every On Thursday every week, UMKM Batik Laweyan makes Javanese traditional clothes with a material that is soft that it is comfortable to be used by civil servants for long periods of time while working. With the introduction of market needs and attention to customers and their ability to coordinate their resources to innovate, Laweyan Batik UMKM are able to create superior quality batik products, produced and distributed effectively and at competitive prices too.

Networking has no effect on competitive advantage. A strong business network, especially a network of buyers and importers, will make companies, especially UMKM, have a stronger competitive advantage compared to their competitors because the company will find it easier to get business or make business transactions easier because they already know the company personally compared to competitors. Currently, networking has not had a significant effect on the competitive advantage of Laweyan Batik UMKM because based on the observations of researchers, it was found that most of the Laweyan Batik UMKM still do business in almost the same way as the previous generation, namely still waiting for customers to come to the store to make purchases. Whereas in a growing market like this, networking is needed to find business relationships more broadly and quickly. However, the problem experienced by Laweyan Batik UMKM business players is the limited ability to network, such as with Laweyan Batik UMKM business players, they do not share customers and tend to try to compete with each other in terms of price. Also when getting new information about the market, what Laweyan Batik UMKM business players do is not sharing information, for example, one of the Laweyan Batik UMKM owners received an order for 10 containers of batik to be sent to Malaysia in 2 months, but the owner felt that he was not able to fulfill orders alone so as to reject them. Supposedly if the owner uses the Laweyan Batik UMKM network for order fulfillment, the order can be fulfilled with collaboration between Laweyan Batik UMKM entrepreneurs, but the owner prefers if the owner cannot fulfill the order it is better to reject it. The networking conditions among Batik Laweyan UMKM business owners who are still individual, the lack of ability to do online marketing that is faster and especially the individualism and egocentric factors of the entrepreneurs are what make networking has no effect on competitive advantage.

The adaptation of modern technology has a positive effect on business performance. The existence of technological advancements has led to new ways of doing production so as to reduce costs that companies can work more effectively and efficiently. On the other, the adaptability of technology to reduce costs will increase the company's profits so that its business performance will get better. The ability of Laweyan Batik UMKM to start accepting even though there is a little modern technology, such as the use of spinning machines to help complete production faster, dyeing machines and knitting machines make Laweyan Batik UMKM able to complete orders more quickly. However,

in this case, if Laweyan Batik UMKM can use technology more effectively for its production processes, such as the business processes and production processes of Laweyan Batik UMKM which are actually suitable for using modern technology because it is based on mass production and less work, it will improve performance. This can happen because Laweyan Batik UMKM has experienced a growth in market share over the last few years where many consumers are interested in the products produced by Laweyan Batik UMKM besides that the benefits obtained by Laweyan Batik UMKM continue to grow despite experiencing a slowdown in the last few years.

Market orientation has a positive effect on business performance. Companies that have a high market orientation will provide products in accordance with market needs. This will make it easier for the company to sell the products it offers because the market really needs these products. The existence of a strong market orientation will form a system for companies that strengthens the company in selling products and increases its profits. The attention given by Laweyan Batik UMKM to its customers by fulfilling their needs such as the demand for batik that is not too hot but still elegant, couple batik and sarimbit patterns make Laweyan Batik UMKM able to meet the needs of its customers which is also evident from the growth of the Laweyan Batik UMKM market share which increased in recent years, increased turnover and growth in assets of Laweyan Batik UMKM. This condition of increasing share, turnover, profit and assets shows that the orientation of Laweyan Batik UMKM to the market can make Laweyan Batik UMKM improve its business performance.

Networking has a positive effect on business performance. A strong business network such as a network of customers in one community or a forum that constantly purchases products from product providers will make the company have a good business performance. This business performance can increase because the existence of a strong business network will make it easier for customers to make purchases or the company is able to get products from the right suppliers, so that its business performance will increase. Based on observations from researchers, it is known that not all owners of Laweyan Batik UMKM are willing to use their networking effectively in carrying out their work. However, there are also several young Batik Laweyan UMKM entrepreneurs who have formed a community based on the Laweyan Batik UMKM business network under the name Laweyan Digital UMKM Village, where these young Batik Laweyan UMKM entrepreneurs are jointly looking for information about markets, business opportunities, exploring partnerships with outside partners, collective order fulfillment as well as market research. With this networking, it is able to improve the performance of the owner of the UMKM Batik Laweyan, the initiator of the Digital UKM Village. This proves that when networking can be improved, the performance of the UMKM Batik Laweyan entrepreneurs can also increase.

Competitive advantage has a positive effect on business performance. The business performance of an UMKM will be greatly influenced by the creation of its competitive

advantage. The competitive advantage in this case is the creation of new value that is able to lift the company's position in the eyes of consumers which makes it different from competitors. With the competitive advantage that the company has, the company will have a good bargaining position in the eyes of consumers, besides that by making a different position with competitors, consumers will feel that the company has different specialties so that they want to purchase products from the company. This will improve the company's business performance. The business advantages possessed by Laweyan Batik UMKM such as competitive prices and batik products that are superior to other batik based on observations from researchers, make Laweyan Batik UMKM have a superior selling position compared to its competitors, which makes Laweyan Batik UMKM able to increase share growth. The market of Batik Laweyan UMKM products are considered superior to Pekalongan batik and Cirebon batik as its competitors because it has a smoother fabric texture and pattern making it able to increase turnover over the last few years. Although with the increase in electricity, water and UMR tariffs which reduce their net profit, Laweyan Batik UMKM are also able to grow slightly in terms of profits, the biggest increase is in terms of the increasing turnover of Laweyan Batik UMKM such as warehouse purchases and expansion of production sites. Based on these results, it can be seen that the competitive advantage possessed by Laweyan Batik UMKM will improve the business performance of Laweyan Batik UMKM.

Based on the results, it can be seen that there is an indirect effect of adaptation of modern technology, market orientation and networking on business performance because of the value of the indirect effect of adapting modern technology and networking on business performance. This shows that competitive advantage is able to function as an intervening variable. Based on these results, it can be seen that competitive advantage will be able to strengthen the influence of modern technology adaptation, market orientation and networking on business performance. When UMKM have a stronger competitive advantage than their competitors, UMKM will have leverage in doing business compared to their competitors. This will also make these UMKM one step ahead of their competitors in order to convince consumers that they are a better company by adapting to newer technology, then also with an orientation in meeting consumer needs and better networking, making the company have components that are better to improve business performance. The independent variable that shows the greatest influence on business performance is the networking variable. These results indicate that with the ability of UMKM to have better business networks, UMKM will have a competitive advantage, namely having more business opportunities compared to their competitors in the market. An extensive business network also makes the name of UMKM often heard so that they can be seen as a reputable company and can be trusted by consumers.

CONCLUSIONS AND IMPLICATIONS

Conclusions

Based on the results of the research that has been done, the following conclusions can be obtained:

1. Adaptation of modern technology has no effect on competitive advantage.
2. Market orientation has a positive effect on competitive advantage.
3. Networking has no effect on competitive advantage.
4. Adaptation of modern technology has a positive effect on business performance.
5. Market orientation has a positive effect on business performance.
6. Networking has a positive effect on business performance.
7. Competitive advantage has a positive effect on business performance.

Implications

The adaptation variable for modern technology has an indicator with the largest loading factor of 0.97, namely product technology. UMKM need to try to adapt more modern machines for their business. The market orientation variable has an indicator with the largest loading factor of 0.92, namely customer orientation. UMKM need to be able to pay attention to trends and customer needs in the future so that they can precede market demand. The adaptation variable for modern technology has an indicator with the largest loading factor of 0.89, namely competitor orientation. UMKM need to carry out business intelligence and regular monitoring of their competitors so that they are not left behind.

The networking variable has an indicator with the largest loading factor of 0.77, namely mutualism. UMKM need networks owned by Laweyan Batik UMKM to mutually benefit their members. The competitive advantage variable has the indicator with the largest loading factor is 0.77, namely the distribution advantage. UMKM need to improve their ability to make products that have high selling value and are different from products made by other companies. The business performance variable has an indicator with the largest loading factor of 0.97, namely the profit growth obtained. MSMEs need to increase the profit growth of MSMEs in order to increase their business scale.

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