

The Important Role of Future Adaptation to Improve Marketing Performance and Technological Accessibility (Investigation in Batik Solo MSMEs)

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This study aims to determine the vital role of adaptation to future changes in improving marketing performance and technological accessibility. In this model, there are antecedent variables from the adaptation to future changes, namely the ability of product innovation and product exploration power to improve adaptation to future changes. In this study, the sample used was 200 UMKM Batik Solo MSMEs throughout Solo Raya. The sampling technique uses purposive sampling. The data analysis was tested using PLS (Partial Least Square) with WarpPLS 5.0 software. The findings in this study are that product innovation has a positive and significant effect on adaptation to future changes. Product exploration power has a positive and significant impact on adaptation to future changes. Adaptation to future changes has a positive and significant effect on marketing performance. Adaptation to future changes has a positive and significant impact on technological accessibility. The limitation of this study is the list of Batik MSMEs in Surakarta City obtained from the Department of Cooperatives was not as expected and several small businesses do not exist or are closed. Therefore they must look for other small and medium batik businesses as samples/respondents.

Key words: *Product Innovation Capability, Product Exploration Power, Adaptation to Future Changes, Technology Accessibility, and Marketing Performance.*

Introduction

Research on the adaptation to future changes to the relationship with the ability of product innovation and marketing performance is still a long debate for many researchers. The ability to adapt to changes is key to a company's future. In this rapid change, it is not reliable that a large company that will be able to survive, but is important that a company can adapt to change. Marketing performance is a measure of achievement obtained from the overall marketing process activities of a company or organisation. Marketing performance can also be seen as a concept used to measure the extent to which a product produced by the company has achieved market performance (Ferdinand, 2002).

Companies that can adapt to future changes will ensure the company can improve their marketing performance. A study by Boeker & Goodstein, (2017), which examined 290 California hospitals over seven years, showed that hospitals that can adapt to changes in the environment could improve hospital performance. According to Bharadwaj et al. (2012), a focus on customers will increase loyalty and allow for superior performance that shapes shopping patterns for the future.

In managing business relationships, both interactions between individuals and interactions between networks with direct involvement with customers, requires an understanding of the adaptations made by two companies, and it is essential for competitive success (Brennan & Turnbull, 1999; Turnbull et al., 1996). Brennan & Turnbull's research (1999) is based on case studies that collected 13 buyer-supplier relationships in the automotive and telecommunications sectors, examining the motivations and decision-making processes that underlie adaptation behaviour in buyer-supplier relations. The opinion of Schmidt et al., (2007) say that adaptation is essential for competitive success in business markets and relationships between companies. Adjustment is a critical component, which defines the relationship between the buyer and seller in the long run.

Ross's research (2020) states that the ability of product innovation and product exploration power influences the adaptation to future changes. Ross (2020) examines men's and women's clothing brands that use innovative concepts and processes to create premium products for consumer segments that are younger and influences product adaptation for different body types, cultural and religious style codes, select colours, textile preferences, patterns technologically, operationally, and economically for premium prices in the international fashion market.

The batik industry is one of the creative industries that has many micor, small and medium businesses (MSMEs). Batik MSMEs have an essential role in economic growth in Surakarta. Surakarta is one of the centres of batik in Indonesia, and even Surakarta is better known as the

city of Batik. It can be said that making batik is a source of livelihood for the people of Surakarta. With the phenomenon that exists of globalisation and free trade today, the production of batik products from Malaysia, China, and Singapore entered Indonesia. These conditions mean that Indonesian batik products face substantial competition. Chinese batik is expected to dominate the market share with low prices and attractive motives. Chinese batik is printed batik, not written batik. Therefore, batik entrepreneurs in Indonesia must be able to increase their creativity and maintain traditional motifs and be able to meet market demands to grow healthy and mutually beneficial competition.

Based on this description, this study aims to determine the critical role of adaptation to future changes in improving marketing performance and technological accessibility that focuses on empirical studies as an effort to improve marketing performance produced by Batik micro, small and medium enterprises (MSMEs) in Surakarta.

Formulation of the problem based on the background outlined above, and based on the results of previous studies and business phenomena that exist in Batik micro, small and medium enterprises (MSMEs), the main problem in this study can be formulated as "What is the role of adaptation to future changes in improving marketing performance and technology accessibility?"

Literature Review

Product Innovation Capability

The ability of product innovation is the ability to make changes in production, to reduce production and operational costs, increase the amount of output, and improve product quality. Making the production run as efficiently and effectively as possible. Product innovation is a process that seeks to provide solutions to existing problems. The problem that often occurs in business is a good but expensive product or a cheap but low quality product. Weiss (2004) said that companies must be able to create innovation in very diverse market conditions. One of the company's efforts to win the competition is through product innovation. Verhees (2005) states that product innovation in small companies is under the control of their owners, and small companies usually do product innovation by modifying the product as a novelty. Product innovation in Verhees's research uses experimental indicators with something new and accepts challenges to the product as a form of originality. To find out the uniqueness of the company, it must be able to adapt to changes in the future. The perceived ease of use and subjective norm are relative significantly predictors of marketing performance (Santoso, Erdawati, Ratnasari, Palupiningtyas, and Balaka, 2020). Another factor that affects the marketing for a service are convenience, communication, care and completion (Donkwa, Donkwa, Noo-udom, & Poosud, 2020).

Companies that can create new products or new markets can be said to be companies that can innovate and will be able to adapt to future changes. Likewise, with the UMKM batik, if the UMKM batik can create products with new model designs and new motif designs, the batik UMKM will be able to adapt to future changes, so that it can adjust to the desires of current consumers and not seem old-fashioned. And making batik MSMEs will always be in demand by all consumers in all circles. MSMEs promotion strategy and sales applied advertisement, brochure, and business location for marketing strategy (Umar, Sugiharto, & Hartanto, 2020). There are also some intentions influencing companies to make some innovations such as; character, education, economic and digital literacy (Suparno, Suwanto, Wibowo, & Narmaditya, 2020).

Based on these thoughts, the hypothesis is determined as follows:

H1: The ability of product innovation has a positive effect on adaptation to future changes.

Product Exploration Power

Product exploration power is an ability in the field of investigation activities to extract information and experiments on a product that is carried out with the aim of innovation of products based on knowledge. According to Atuahene-gima (2016), exploration competence has a positive effect on the performance of incremental and radical changes.

Companies that can continue to explore, find, do variations and take risks, as well as experimentation and innovation of products, will be more able to adapt to future changes. Voss & Voss (2013) in their research on SME products, define exploration products as developers of new products, new technologies and product capabilities.

Indonesian batik has never run out of traction, especially in the fashion business. In addition to being one of Indonesia's original internationally recognised products, batik can also be a means of introducing the philosophy and identity of a region. Noting this, batik products began to be explored into the basic motifs of local batik, there are 100 local batik motifs. Examples include the Pekalongan batik motif, which is well-known as the seven-way batik motif. This seven-figure batik motif is very thick with natural nuances. In general, Pekalongan batik displays a form of animal or plant pictorial motifs. Sogan Batik Motifs (Solo) have existed since the time of Javanese ancestors several centuries ago. This batik dominated by the colour of light brown has distinctive motifs such as flowers with dot points or curved lines. Formerly, batik was used by kings in Java, especially the sultanate palace Solo. The Keraton Batik Motif (Yogyakarta) comes from Javanese culture, which is thick with the castle and empire system. This palace batik symbolises wisdom and also the charisma of Javanese kings. Characteristics of Keraton batik motifs are symmetrical floral motifs, or me birds, known as saw lar motifs.

Previously, batik from Solo and Yogya could only be used by the citizens of the palace, but now it is commonly used by anyone.

Based on these thoughts, the hypothesis is determined as follows:

H2: Product exploration power has a positive effect on adaptation to future changes.

Marketing Performance

Marketing performance is a measure of the results achieved by a company from marketing activities or company operations (Ferdinand, 2002), in the form of market measures, and the perception of customer value and the benefits derived from these marketing activities. Ferdinand also explained that achieving sustainable marketing performance (durable marketing performance) can be generated from the competitive advantage obtained by marketing activities. He further stated that the marketing target of marketing performance could be seen from various dimensions, namely the achievement of sales volume, market share and profitability, both short and long term.

Companies that can adapt will be able to improve their marketing performance. Marketing performance, according to Voss & Voss (2000), is an effort to measure the company's success rate, which includes sales turnover, number of customers, profitability and seller growth.

Adaptation to changes in the future can be made in several ways, one of which is to be able to adjust to changes, in this case, the existence of a regulation from the local government that on Thursday all employees of government and private agencies in Surakarta must wear batik. In this case, MSMEs must respond quickly to these changes. This is an opportunity for batik entrepreneurs to introduce broader products in the future; batik entrepreneurs must produce batik cloth in large quantities with the same pattern. So that it can improve marketing performance. In addition to increasing the adaptation to future changes, companies must be able to predict something in the future, for example, the existence of batik using the theme of the ball during the world cup season, which can raise the name of batik at that time and can improve marketing performance.

Based on these thoughts, the hypothesis is determined as follows:

H3: Adaptation to future changes has a positive effect on marketing performance

Technology Accessibility

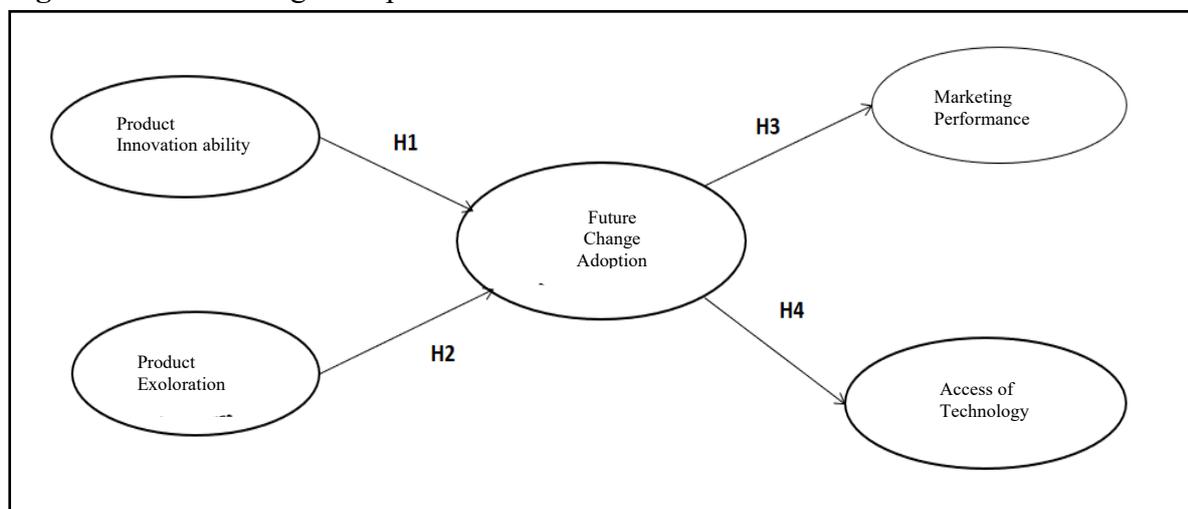
Accessibility is a broad and flexible concept. Kevin Lynch said accessibility is a matter of time

and also depends on the attractiveness and identity of the travel route (Aslam et al., 2017). According to Yulianto (2017), technology accessibility is a measure of comfort or ease in getting new technology and its relationship with each other, easy or challenging the location is achieved through transportation. Technology accessibility in the form of freely accessible information sources will be related to the introduction of new products, processes, and market innovations that are positively associated with company growth, but the type of change (product/process/market/organisation) (Varis & Littunen, 2010). Batik companies that can adapt will be able to increase technological accessibility. In this case batik UMKM with the ability to adapt to changes in the electronic environment with online sales, the UMKM batik must also be able to sell batik through social media (WhatsApp, Instagram, Facebook, Twitter, and others). It will then increase technological accessibility, which has the ability to increase batik sales. Coupled with the existence of shop or online facilities, this makes it easier to pass transactions.

Based on these thoughts, the hypothesis is determined as follows:

H4: Adaptation to future changes has a positive effect on technological accessibility.

Figure 1. Future changes adaptation



Methodology

Sample

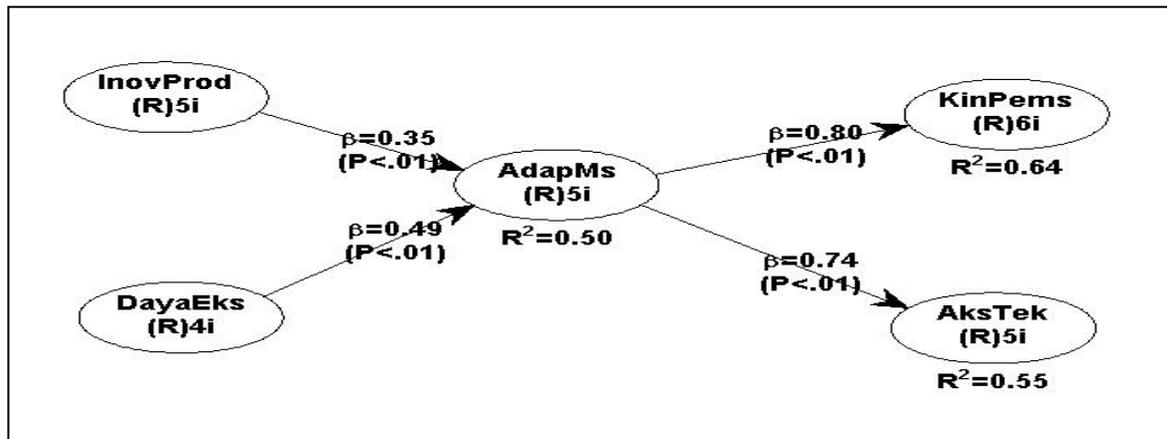
In this study, the sample used was 200 UMKM Batik MSMEs throughout Solo Raya. The sampling technique uses purposive sampling, namely sampling using the specified criteria, in this case, MSMEs that have been established for more than two years.

Data Analysis Method

This research uses the Partial Least Square (PLS) technique with WarpPLS 5.0 software. The study tested the validity and reliability of the research instruments and confirmed the accuracy of the model while testing the effect of a variable on other variables.

Data Analysis

Figure 2. Data Analysis Model



Outer Model

In testing the external model using two parameters, namely testing the construct validity (convergent and determinant validity) and checking the internal consistency of the construct (reliability), the construct validity test of 25 indicators has been fulfilled.

Validity Test

Test Validity

Table 1: Average Variance Extract (Ave)

Subject	InovPro	DayaEks	AksTek	AdapMs	KinPems
AVE	0.572	0.604	0.589	0.642	0.688

Source: (Main Data Processed, 2019)

Tabel 2: Loading Factor

	InovPro	DayaEks	AksTek	AdapMs	KinPems
IP1	0.793	-0.178	0.023	0.136	0.045
IP2	0.826	-0.059	-0.171	0.263	-0.073
IP3	0.798	0.144	-0.168	0.339	-0.275
IP4	0.703	-0.003	0.140	-0.383	0.079
IP5	0.647	0.120	0.245	-0.504	0.291
DE1	-0.238	0.722	-0.012	-0.289	0.296
DE2	0.005	0.809	-0.315	-0.008	-0.016
DE3	0.061	0.795	0.188	0.197	-0.277
DE4	0.152	0.781	0.146	0.075	0.025
AT1	-0.155	0.135	0.789	0.270	-0.407
AT2	0.104	-0.003	0.714	-0.423	0.302
AT3	-0.119	0.096	0.803	-0.128	0.071
AT4	0.088	-0.265	0.750	0.113	-0.150
AT5	0.099	0.022	0.780	0.137	0.207
AMS1	0.202	0.190	-0.248	0.694	-0.146
AMS2	0.129	0.023	-0.204	0.863	-0.139
AMS3	0.037	-0.043	-0.182	0.815	0.173
AMS4	-0.170	-0.059	0.323	0.830	-0.076
AMS5	-0.177	-0.085	0.289	0.792	0.181
KP1	0.199	0.148	-0.309	0.003	0.810
KP2	0.190	0.049	-0.231	0.124	0.844
KP3	0.005	-0.012	-0.147	-0.033	0.881
KP4	-0.135	-0.059	0.118	0.194	0.816
KP5	-0.104	-0.127	0.287	-0.347	0.787
KP6	-0.161	-0.003	0.303	0.045	0.835

Source: (Main Data Processed, 2019)

Table 3: Determinant Validity

	InovPro	DayaEks	AksTek	AdapMs	KinPems
InovPro	0.756	0.478	0.617	0.521	0.548
DayaEks	0.478	0.777	0.722	0.618	0.568
AksTek	0.617	0.722	0.768	0.743	0.720
AdapMs	0.521	0.618	0.743	0.801	0.803
KinPems	0.548	0.568	0.720	0.803	0.829

The table above shows that there is a great and significant positive relationship between one

variable and another, as seen from the determinant validity test matrix. And the average variance extract (AVE) value, the loading factor and the determinant validity are > 0.50 .

Reliability Test Table

Reliability Test

Subject	InovPro	DayaEks	AksTek	AdapMs	KinPems
<i>Composite reliability</i>	0.869	0.859	0.878	0.899	0.930
<i>Cronbach's alpha</i>	0.810	0.780	0.825	0.859	0.909

Source: (Main Data Processed, 2019)

The reliability test results above indicate that the composite reliability and Cronbach's alpha values > 0.70 , where the cost meets the rule of thumb is 0.60. These results can be interpreted that the respondents are consistent in answering questionnaire questions.

Structural Model Assessment (Inner Model)

Table 4: Path Coefficients

Variable		Path Coefficients	P-Values	Note	
InovPro	→	AdapMs	0.345	<0.001	Positively Significant
DayaEks	→	AdapMs	0.493	<0.001	Positively Significant
AdapMs	→	KinPems	0.803	<0.001	Positively Significant
AdapMs	→	AksTek	0.743	<0.001	Positively Significant

Source: (Main Data Processed, 2019)

Based on Table 4 above, it shows that the ability of product innovation to adapt to future changes has a path coefficient of 0.345 and a p-value of <0.001 (significance <0.05). This means that the ability of product innovation has a positive and significant effect on the adaptation to future changes. The power of product exploration towards adaptation to future changes has a path coefficient of 0.493 and a p-value of <0.001 (significance <0.05). This means that the power of product exploration has a positive and significant effect on the adaptation to future changes.

Adaptation to future changes to marketing performance has a path coefficient of 0.803 and a p-value of <0.001 (significance <0.05). This means that adaptation to future changes has a positive and significant effect on marketing performance. Adaptation to future changes to technological accessibility has a path coefficient of 0.743 and a p-value of <0.001 (significance

<0.05). This means that adaptation to future changes has a positive and significant effect on technological accessibility.

Results and Discussions

Hypothesis Testing 1: The Ability of Product Innovation has a Positive impact on Adaptation to Future Changes.

Statistical test results show that the ability of product innovation to adapt to future changes has a value of the path coefficient of 0.345 and p-value of <0.001 (significance <0.05), so it can be concluded that if the ability of product innovation increases, then adaptation to future changes will also increase (H1 accepted). In other words, the strength of product innovation has a positive and significant effect on the adaptation to future changes. The results of this study are following Verhees (2005), who states that product innovation in small companies is under the control of their owners, and small companies usually innovate products by modifying products as their novelty. Product innovation in Verhees's research uses experimental indicators with something new and accepts challenges to the product as a form of originality. To find out the novelty, the company must be able to adapt to changes in the future.

Hypothesis Testing 2: Product Exploration Power has a Positive Effect on Adaptation to Future Changes

Statistical test results show that the exploration power of the product towards adaptation to future changes has a path coefficient of 0.493 and a p-value of <0.001 (significance <0.05), so it can be concluded that if the exploration power of the product increases, adaptation to future changes will also increase (H2 accepted). In other words, product exploration power has a positive and significant effect on the adaptation to future changes. The results of this study are in line with Voss & Voss, (2013) whose research conducted on SME products defines exploration products as developers of new products, new technologies and product capabilities, and are useful for increasing adaptation to future changes.

Testing Hypothesis 3: Adaptation to Future Changes has a Significant Positive Effect on Marketing Performance

Statistical test results show that the adaptation to future changes to marketing performance has a path coefficient of 0.803 and a p-value of <0.001 (significance <0.05), so it can be concluded that if adaptation to future changes increases, then the performance marketing will also increase (H3 received). In other words, adaptation to future changes has a positive and significant effect on marketing performance. The results of this study are in line with Boeker & Goodstein (2017), who state that hospitals that can adapt to changes in the environment can

improve hospital performance. Testing Hypothesis 4: Adaptation to future changes has a significant positive effect on technological accessibility. The statistical test results show that the adaptation to future changes to technical availability has a path coefficient of 0.743 and a p-value of <0.001 (significance <0.05), so it can be concluded that if adaptation to future changes increases, then accessibility technology will also improve (H4 received). In other words, adaptation to future changes has a positive and significant effect on technological accessibility. The results of this study are in line with Eng & Okten, (2011) who state that adaptation to future changes, which is marked by highly uncertain environmental changes due to intense competition and rapid market changes, requires technical knowledge and industry information that can be accessed through a partnership with external parties.

Conclusion

All hypotheses in this study are supported empirically, and the assumption that product innovation has a positive and significant influence on the adaptation to future changes; the power of product exploration has a positive and significant effect on adaptation to future changes; adaptation to future changes has a positive and significant impact on marketing performance, and; adaptation to future changes has a positive and significant influence on technological accessibility.

Managerial Implications and Future Research

Based on the discussion and conclusion above, there are managerial implications for Batik MSMEs to improve adaptation to future changes by increasing the ability of product innovation and product exploration power. Increased adaptation to future changes is characterised by the strength of MSMEs to respond quickly (answers, responses, and replies), adjust to changes, understand consumer behaviour, and the ability to predict things in the future. By increasing the adaptation to future changes, marketing performance and accessibility of new technologies can be improved. This study suggests future research based on its limitations. Future research should add indicators and research variables to pass the normality test. While the restriction in this study is the abnormality of the data of this study, data being analysed using Partial Least Square (PLS). Therefore, the author's suggestion for future research is to test the normality of research data by considering the indicators used in the study.

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