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# The mediating effect of knowledge exploitability and organizational agility on the relationship between marketing adaptation strategy and sustainable competitive advantage

*El efecto mediador de la explotación del conocimiento y la agilidad organizacional en la relación entre la estrategia de adaptación del marketing y la ventaja competitiva sostenible*

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## Abstract

This paper aims to investigate the mediating effect of knowledge exploitability (KE) and organizational agility (OA) on the relationship between new market exploration (NME), development of marketing programs (DMP), and product diversity (PD) with a sustainable competitive advantage (SCA). Data were collected from 189 Batik SMEs in Indonesia and were analyzed using Structural Equation Modeling (SEM). The result shows that new market exploration and development of marketing programs significantly affect knowledge exploitability, product diversity significantly affects organizational agility, knowledge exploitability, and organizational agility significantly affect sustainable competitive advantage. Furthermore, knowledge exploitability and organizational agility are proven to mediate the correlation between new market exploration, development of marketing programs, and product diversity with a sustainable competitive advantage.

*JEL Codes:* C30, L60, M31

*Keywords:* Knowledge exploitability; Organizational agility; Marketing adaptation strategy

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## Resumen

Este artículo tiene como objetivo investigar el efecto mediador de la explotación del conocimiento (KE) y la agilidad organizacional (OA) en la relación entre la exploración de nuevos mercados (NME), el desarrollo de programas de marketing (DMP) y la diversidad de productos (PD) con una ventaja competitiva sostenible. (SCA). Se recopilieron datos de 189 PYME de Batik en Indonesia y se analizaron mediante el modelo de ecuaciones estructurales (SEM). El resultado muestra que la exploración de nuevos mercados y el desarrollo de programas de marketing afectan significativamente la explotación del conocimiento, la diversidad de productos afecta significativamente la agilidad organizacional, la explotación del conocimiento y la agilidad organizacional afectan significativamente la ventaja competitiva sostenible. Además, se ha demostrado que la explotación del conocimiento y la agilidad organizativa median la correlación entre la exploración de nuevos mercados, el desarrollo de programas de marketing y la diversidad de productos con una ventaja competitiva sostenible.

*Código JEL:* C30, L60, M31

*Palabras clave:* Explotación del conocimiento; Agilidad organizacional; Estrategia de adaptación del marketing

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## Introduction

A very turbulent environment, with dynamism, complexity, and strong uncertainty facing the company today has led to a hypercompetitive market that involves a major threat to the survival of the company. Successful companies can detect changes in the environment, can adapt, and offer the right response by exploiting emerging opportunities and sources of new competitive advantage. The main problem regarding organizational survival and success requires the ability of companies to deal with changing environments and respond efficiently and effectively so that the concept of organizational agility emerges. Assuming dynamic capability theory as a reference frame Hassna & Lowry (2018), the previous literature identified organizational agility as a dynamic capability of organizations to obtain sustainable competitive advantage (Dalvi et al., 2013).

Indonesian country has many potential small and medium enterprises that can be developed to a maximum. The distinctive patterns and colors of batik products have made Indonesian batik craft more known. For batik lovers, Indonesian is a place to find batik and accessories, because there are batik markets, boutiques, and wholesale batik with a varying price. SME's Batik made a big contribution to the economic progress in Indonesian. Based on the data from the Department of Cooperatives and SMEs (2017), it can be seen that batik sales fluctuated.

In 2010 and 2011, batik sales in Indonesian decreased by 0.84% and 0.71%, in 2012 experienced an increase of 0.62% but decreased again in 2013 by 0.68%. If the realization of the value of sales is compared to the sales target, in the year 2012 - 2017, the sales realization is always below the sales target or in other words, could not reach the target.

An increase or decrease in sales can be caused by several factors, such as changes in competition and consumers, so companies need to adjust to ensure survival and success in business performance (Kwahk & Kim, 2017). Competitive advantage marketing strategies are increasingly important because of globalization and rapid change (Labrousche & Kechidi, 2016). To find new opportunities, companies must adapt and respond to change by developing and creating new ideas. Marketing adaptation is one way to improve performance (Nurcholis, 2018). Adaptation and new market responses need to be understood by top executives of the organization because they can have competitive advantages and get superior performance compared to competitors. Marketing adaptation strategies consist of three dimensions: the exploration of new markets, product diversity, and development of marketing programs (Jirawuttinunt & Imsuwan, 2014).

The research results from Hsu et al. (2007) showed that 80 % of the respondents stated that knowledge is a strategic asset, and 78% of business opportunities are failed because it cannot explore the knowledge in the organization. While the study by Santos-Vijande et al. (2012) explains that knowledge is the most important source of competitive advantage, but the relationship between knowledge management and competitive advantage is weak.

The specific purpose of this study is conducting empirical testing and analyzing the mediating effect of knowledge exploitability and organizational agility on the relationship between marketing adaptation strategies and that could improve sustainable competitive advantage. The novelty of this research is the addition of the concept of knowledge exploitability that mediates the relationship between marketing adaptation strategies with a sustainable competitive advantage.

## **Literature Review**

### *Organizational Agility*

In the last two decades, organizational theorists have also explicitly considered the role of agile performance in enabling firms to successfully adapt to fast-changing and unpredictably disruptive environments (Appelbaum et al., 2017). More recently, researchers have evoked agility to describe and explain organizational responses in contexts as diverse as information systems (Najrani, 2016), market orientation (Borshalina, 2015), and strategic alignment (Hassna & Lowry, 2018).

Agility is the ability of an organization to detect and respond to environmental opportunities and threats with ease, speed, and dexterity (Tallon & Pinsonneault, 2011). At its core, most studies view agility as an intentional change such that ad hoc and unsystematic sense-response actions are not indicative of agility regardless of how well they portray agility-like traits. Rather, a competitive advantage can be obtained by implementing a strategy that establishes agility as a continuous and systematic variation in the output structure, or an organizational process planned and identified (Tallon & Pinsonneault, 2011).

To build an intuition of common themes and identify gaps in the literature, we followed the procedures outlined by Shepherd & Sutcliffe (2011) to trace the meaning and conceptualization of agility. Specifically, we first conducted a broad search in the management literature (including information systems and marketing) to identify articles using agility or related terms. Our search covered scholarly and practitioner journals and yielded studies in the strategy, information systems, and marketing literature. From the literature review above, we found that agility consists of 3 main dimensions, namely, Responsiveness, Operational Flexibility, and Business Relationship. Summary of research results from 2003 - 2019 in Table 1 shows the development of the 3 main dimensions of agility.

### *Exploration of New Market*

Exploration is an experiment that uses new alternatives to have uncertain returns (Fink et al., 2017). Knowledge, skills, and entirely new processes are the objectives of resource involvement in exploration (Ritter & Walter, 2012).

Market exploration represents the ability of an organization to learn through questions and push the limits of knowledge. Exploration is an activity of concept testing, discovery, creative reconstruction, and research and development (J. Wang, 2016). These activities can develop knowledge sharing (Nejatian et al., 2018), current skills and abilities (Subramony et al., 2018), responsiveness, operational flexibility, and business relationships (Baškarada & Koronios (2018), Worren et al. (2014), Teoh & Cai (2015), Doz & Kosonen (2010), Sambamurthy et al. (2003), Joshi & Sharma (2004), Conboy (2009).

Competitive in uncertainty markets requires the ability to develop a new product quickly (Chen et al., 2010). The firm can respond to changing demand uncertainty with product diversity and gaining more customers in a competitive environment (Dan & Zondag, 2016).

Firms will drive flexible marketing activities when they are emphasized to explore the new market. Flexibility is one dimension of agility which means the ability to create or embrace change in time (Rihova et al., 2018). Companies can respond to changes in demand uncertainty by providing product diversity and increasing competitive flexibility to get more customers

**Table 1**  
**Summary of Agility Research**

Parenteses	(Sambamurthy et al., 2003)	(Joshi & Sharma, 2004)	(Conboy, 2009)
Responsiveness	Exploring opportunities for innovation and competitive performance by sensing opportunities, deploying requisite assets and knowledge, and leveraging a network of relationships	Learning from and being responsive to customer feedback is achieved by fast diffusion of feedback information to different units	Proactively or reactively embrace change and learn
Operational Flexibility	Operational agility (rapidly redesign business processes and create new processes to accomplish speed, accuracy, and cost economy)	Strategic flexibility fulfills one of the requirements of the customer knowledge development process	rapidly or inherently create change
Business Relationships	Partnering agility (build a network of strategic, extended, or virtual partnerships with suppliers, distributors, etc.)	Cross-functional new product development teams facilitate the learning and response required for strategic flexibility	Through its collective components and relationships
Parenteses	(Doz & Kosonen, 2010)	(Tallon & Pinsonneault, 2011)	(Teoh & Cai, 2015)
Responsiveness	Strategic sensitivity is defined as keen awareness and attention to the strategic development	Customer responsiveness: the ability to detect and respond to opportunities and threats in the environment with ease, speed, and dexterity	Sensibly respond to match customer needs and organizational resources
Operational Flexibility	capability to reconfigure capabilities and redeploy resources rapidly.	Operations	Interactive and flexible function provided by the system
Business Relationships	Measurability to renew and transform business models with time.	Business partnerships	Harmonizing Flexible in accommodating changes
Parenteses	(Nejatian et al., 2018)	(Zhou et al., 2018)	(Saha et al., 2019)
Responsiveness	Customer satisfaction Customer retention Product/Service Quality The flexibility of sale and service system	The capability to detect and respond to demands embedded in the customer online reviews	Sensing Agility Adaptability
Operational Flexibility	Optimizing human resources Performance-oriented culture Increasing efficiency R & D – innovation		Decision-making Speed Flexibility Capability
Business Relationships	Developing electronic forms of processing methods, knowledge sharing, and communication		

Source: a literature review (2003-2019)

when companies feel the need for product differentiation (Jirawuttinaunt & Ussahawanitchakit, 2011). Therefore, new market exploration can increase knowledge exploitability, organizational agility, and sustainable competitive advantage.

H1a, H1b, H1c: new market exploration significantly affects knowledge exploitability, organizational agility, and sustainable competitive advantage

### *Product Diversity*

The fulfillment of preferences and values of local consumers can be carried out by developing planned and consistent product diversity activities. Design, brand image, technology, features, specifications, and packaging are forms of differentiation (Grolleau et al., 2016). The creation of valuable variations for customers is as important as product features, such as packaging, distribution, warranty, and after-sales support (M. Wang & Li, 2017). Differences in products or brands that are relevant, have meaning, and have customer value is a form of product differentiation (Almeida & Garrod, 2018). Product diversity refers to the degree of linkage of different product segments by offering a unique, diverse product differential, unique product to market (Zou et al., 2016), the competing products and brands that are needed by the customer (J. S. C. Hsu et al., 2017), and to the planned corporate activity to make the value of local consumers with product differentiation (Jirawuttinaunt & Ussahawanitchakit, 2011). These activities can affect knowledge exploitability, agility, and sustainable competitive advantage (Joshi & Sharma (2004), Sambamurthy et al. (2003), Žitkienė & Deksnys (2018), Stock (2016), Nurcholis (2018), Gelhard & von Delft (2016), Staita (2014), L. Jiang et al. (2016), Kim et al. (2015). Increased product variation is also influenced by rapidly developing technology, global competition, and sophisticated customers so that to obtain a source of competitive advantage, it is necessary to manage a good variety of products (Stock, 2016). Therefore, product diversity can increase knowledge exploitability, organizational agility, and sustainable competitive advantage.

H2a, H2b, H2c: product diversity significantly affects knowledge exploitability, organizational agility, and sustainable competitive advantage

### *Development of Marketing Program*

The concept of marketing program development is the creation of core variations and expansion of marketing programs in the accommodation of environmental differences, consumer behavior, use of patterns, and conditions of a competition (Moscardo & Murphy, 2016). The marketing program developed is an adaptation of the marketing mix, for example, products, promotions, prices, and distribution (Lages et al., 2008). Sharing marketing programs with other business units to increase profit margins to achieve greater efficiency (Bahri-Ammari & Bilgihan, 2017). Marketing program development as the degree of variation of marketing development and expand marketing programs to accommodate differences in environmental and consumer behavior to accommodate the exploit opportunities and capacity to identify more quickly than rivals (Nurcholis, 2018). These programs can affect knowledge (Nejatian et al., 2018), current skills and abilities (Subramony et al., 2018), responsiveness, operational flexibility, and business relationships (Baškarada & Koronios (2018), Worren et al. (2014), Teoh & Cai (2015), Doz & Kosonen (2010), Sambamurthy et al. (2003), Joshi & Sharma (2004), Conboy (2009). Therefore, the development of a marketing program can increase knowledge exploitability, organizational agility, and sustainable competitive advantage. H3a, H3b, H3c: development of a marketing program significantly affects knowledge exploitability, organizational agility, and sustainable competitive advantage.

### *Knowledge Exploitability*

Training to develop knowledge is important in internal learning and for creating new ideas in the company (Stone & Deadrick, 2015), because the basic components of innovation and assimilation of new technologies are knowledge (Romero & Martínez-Román, 2012). Another important component in organizational innovation is the educational background of managers, business owners, and entrepreneurs (Machmud & Sidharta, 2016).

Knowledge and demand of the organization are greater because it can stimulate the process of innovation and technology improvement in organizations in the value chain (Romero & Martínez-Román, 2012). Therefore, an important route for the transmission of knowledge and experience in production networks is through business collaboration (Romero & Martínez-Román, 2012). The purpose of sharing resources and knowledge is the basis of organizational competitive advantage.

The creation and use of institutional knowledge in business processes is knowledge management (X. Jiang et al., 2016). The integration of knowledge management has 4 steps: knowledge creation, knowledge sharing, evaluation, and improvement of learning (Skačkauskienė et al.,



2018). To integrate this knowledge management, knowledge exploitability consists of the quality of communication, quality of management organization, quality of information, and communication technology to obtain maximum results (Widodo, 2018). Therefore, knowledge exploitability can increase sustainable competitive advantage.

H4: knowledge exploitability significantly affects sustainable competitive advantage.

### *Competitive Advantage*

It is useful to draw on the strategic literature and in particular, economic theory to understand the development of competitive advantage (Govindan et al., 2014). Companies must be able to take advantage of opportunities and develop strategies to deal with threats. Furthermore, companies must have a rare uniqueness that is difficult for other companies to imitate (Dirisu et al., 2013). The combination of the ultimate goal and instrument or company policy is a competitive strategy guideline, where each company must have a competitive strategy (Zaini et al., 2014).

Product uniqueness, product quality, and competitive price are indicators of measuring competitive advantage (Dirisu et al., 2013). The company's main competency is a set of unique competencies that are owned and developed by the company, such as product quality, customer service, innovation in team building, flexibility, and responsiveness to customers so that they can beat competitors, and will gain a sustainable competitive advantage in the long term because it can serve customers better than competitors (Srivastava et al., 2013).

The key to sustained competitive advantage is the ability to manage and reassemble, rapidly and decisively complex networks of resources and relationships (Kotter (2014), Purwani & Nurcholis (2015). Specific organizational practices and processes associated with the application of strategic agility can manage corporate sustainability with a paradoxical lens (Ivory & Brooks, 2018). Therefore, organizational agility can increase sustainable competitive advantage.

H5: organizational agility significantly affects sustainable competitive advantage.

## **Methodology**

### *Sample, Research Instruments, and Measurements*

The target population of research includes SMEs in 7 cities/regencies in Indonesian amounting to 1201 SMEs. The data collection technique used in this study is a type of purposive

sampling method. The object of this study consists of 189 SMEs. The research unit consists of managers or staff authorized by the board of directors. The questionnaire was applied to SMEs in 7 cities/regencies in Indonesian from June until October 2018. The measurements of this research variable were performed using multiple indicators that were treated as single variables. From the 189 questionnaires distributed, all questionnaires were returned. All questionnaires can be returned because our surveyor face-to-face interviews with SME managers or owners are also carried out to check the accuracy of the information, validate the results, and develop an understanding of the questionnaire. Each question item is measured using 10 measurement scales, where 1 indicates “strongly disagree” and 10 indicates “strongly agree”. All research variables and indicators can be seen in Table 2.

Table 2

Research Variables and Indicators

Variables	Indicators
Newmarket exploration	Meet unique needs, meet consumer values, and adjust different market opportunity levels of the market (Jirawuttinaunt & Ussahawanitchakit, 2011)
Marketing programs development	Make a variety of marketing developments, accommodate differences in the environment, and accommodate differences in consumer behavior (Nurcholis, 2018)
Product diversity	Differentiation design, features, and warranties (Frambach et al., 2016)
Knowledge Exploitability	Quality of communication, organizational management, and information (Widodo, 2018)
Organizational Agility	Speed recognizing market changes and the ability to identify new market trends/opportunities, the capability of a distributed team to speedily accomplish tasks, adapt and reconfigure itself to changing conditions in a rapid manner, and build a network of strategic, extended, or virtual partnerships with suppliers and distributors (Sambamurthy et al., 2003).
Sustainable Competitive Advantage	Have uniqueness product, the durability of the product, and strategic assets different from competitors (Barney, 1991)

Source: Results of Research development

## Results

Figure 1 and Table 3 show that the null hypothesis that there is no difference between the two covariance matrices described is unsuccessfully rejected.

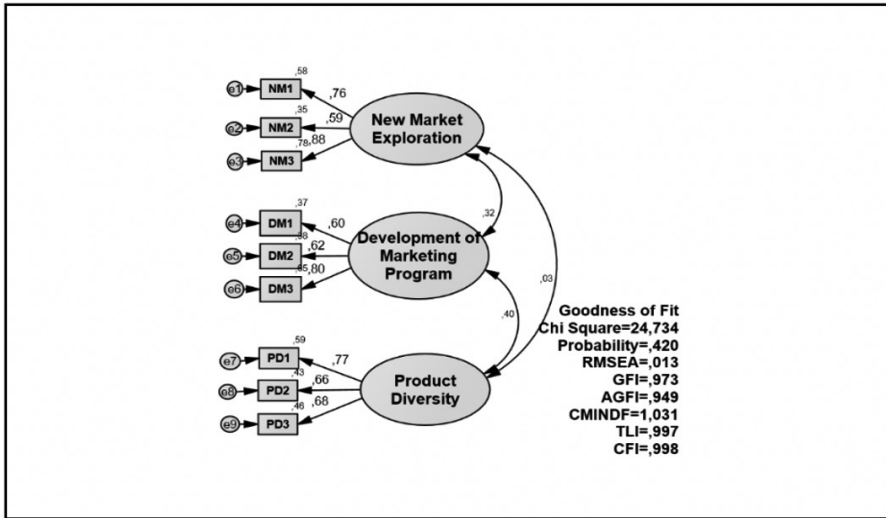


Figure 1. CFA of Exogenous Variables  
 Source: results of primary data processing

Table 3

CFA results of Exogenous Variable

Item	Result	Cut off value	Explanation
Convergent validity	.593	> 0.40	present unidimensional for latent variables.
Construct reliability	0.7; 0.8; 0.7	≥ 0.7	Internal consistency
AVE	0.5; 0.6; 0.5	≥ 0.5	Acceptable
Chi-Square (df=24)	24.734	< 45.559	Good
Probability	0.420	≥ 0.05	Good
RMSEA	0.013	≤ 0.08	Good
GFI	0.973	≥ 0.90	Good
AGFI	0.949	≥ 0.90	Good
CMIN/DF	1.031	≤ 2.00	Good
TLI	0.997	≥ 0.95	Good
CFI	0.998	≥ 0.95	Good

Source: results of primary data processing

Table 4 indicates that each indicator or dimension of each latent variable has a high significance. It can be concluded that the indicators forming latent variables are good indicators or dimensions to measure each of the latent variables.

Table 4

Regression Weights: (Exogenous)

			Estimate	S.E.	C.R.	P
NM2	<---	New Market Exploration	.612	.083	7.343	***
DM2	<---	Development of Marketing	.990	.161	6.138	***
PD2	<---	Product Diversity	.831	.122	6.825	***
PD1	<---	Product Diversity	1.000			
PD3	<---	Product Diversity	.888	.129	6.902	***
DM3	<---	Development of Marketing	1.353	.215	6.303	***
DM1	<---	Development of Marketing	1.000			
NM3	<---	New Market Exploration	1.000			
NM1	<---	New Market Exploration	.835	.098	8.521	***

Source: results of primary data processing

Figure 2 and Table 5 show that the null hypothesis that there is no difference between the two covariance matrices described is unsuccessfully rejected.

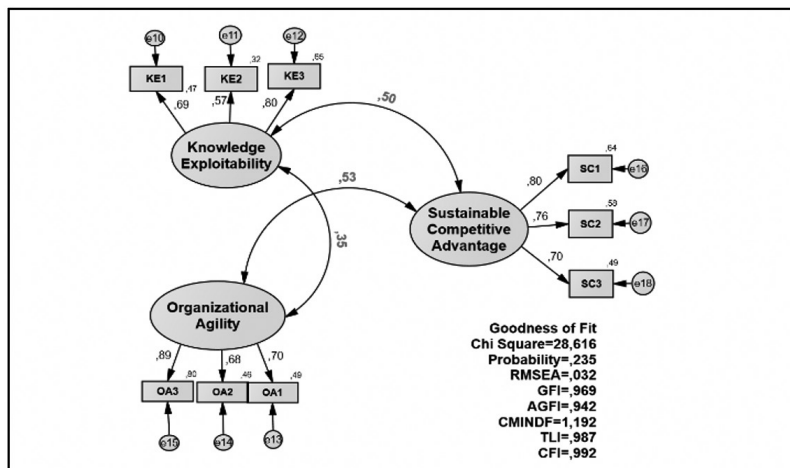


Figure 2. Confirmatory Factors Analysis of Endogenous Variables

Source: results of primary data processing

Table 5

CFA Result of Endogenous Variable

Item	Result	Cut off value	Explanation
Convergent Validity	.570	> 0.40	All indicators provide unidimensional for latent variables.
Construct reliability	0.8; 0.7; 0.8	$\geq 0.7$	Internal consistency
AVE	0.6; 0.5; 0.6	$\geq 0.5$	Acceptable
Chi-Square (df=24)	28.616	< 45.559	Good
Probability	0.235	$\geq 0.05$	Good
RMSEA	0.032	$\leq 0.08$	Good
GFI	0.969	$\geq 0.90$	Good
AGFI	0.942	$\geq 0.90$	Good
CMIN/DF	1.192	$\leq 2.00$	Good
TLI	0.987	$\geq 0.95$	Good
CFI	0.992	$\geq 0.95$	Good

Source: results of primary data processing

Table 6 indicates that each indicator or dimension of each latent variable has a high significance. It can be concluded that the indicators forming latent variables are good indicators or dimensions to measure each of the latent variables.

Table 6

Regression Weights (Endogenous)

			Estimate	S.E.	C.R.	P
OA1	<---	Organizational Agility	1.000			
OA2	<---	Organizational Agility	.819	.099	8.291	***
OA3	<---	Organizational Agility	1.228	.136	9.010	***
SC2	<---	Sustainable Competitive Advantage	.937	.100	9.410	***
KE2	<---	Knowledge Exploitability	.826	.130	6.347	***
KE1	<---	Knowledge Exploitability	1.000			
SC3	<---	Sustainable Competitive Advantage	.829	.094	8.865	***
SC1	<---	Sustainable Competitive Advantage	1.000			
KE3	<---	Knowledge Exploitability	1.152	.163	7.074	***

Source: results of primary data processing

Figure 3 and Table 7 show that the null hypothesis which states the prediction model following observational data is acceptable, which means the model is fit because it is not within the expected range value, so the model can be accepted and can be continued for hypothesis testing.

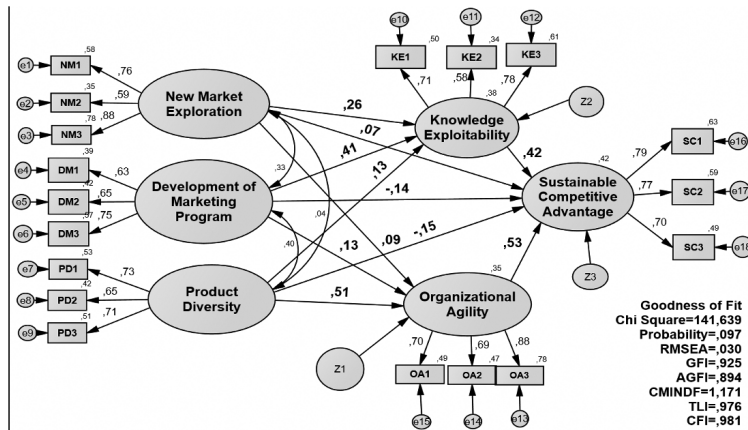


Figure 3. Full Model SEM Analysis

Source: results of primary data processing

Table 7

Result of Full Model Structural

Item	Result	Cut off value	Explanation
Chi-Square (df=121)	141.639	< 147.674	Good
Probability	0.097	≥ 0.05	Good
RMSEA	0.030	≤ 0.08	Good
GFI	0.925	≥ 0.90	Good
AGFI	0.894	≥ 0.90	Marginal
CMIN/DF	1.171	≤ 2.00	Good
TLI	0.976	≥ 0.95	Good
CFI	0.981	≥ 0.95	Good

Source: results of primary data processing

Table 8 shows that NME and DMP significantly affect KE, PD significantly affects OA. Furthermore, KE and OA significantly affect SCA.

Table 8

Regression Weights

			Estimate	S.E.	C.R.	P
KE	<---	NME	.196	.070	2.813	.005
KE	<---	DMP	.474	.140	3.384	***
KE	<---	PD	.117	.089	1.311	.190
OA	<---	PD	.565	.117	4.848	***
OA	<---	NME	.085	.079	1.079	.281
OA	<---	DMP	.192	.148	1.292	.196
SCA	<---	KE	.566	.166	3.410	***
SCA	<---	OA	.566	.124	4.567	***
SCA	<---	NME	.071	.091	.773	.440
SCA	<---	DMP	-.213	.188	-1.133	.257
SCA	<---	PD	-.181	.142	-1.269	.204

Source: results of primary data processing

*Direct and Indirect Effect*

Table 9 and Table 10 show that indirect effects have a larger value than the direct effect. KE and OA are proven to mediate the correlation between NME, DMP, and PD with SCA.

Table 9

Direct Effects

	DMP	PD	NME
SCA	-,139	-,151	,071

Source: results of primary data processing

Table 10

Indirect Effects

	DMP	PD	NME
SCA	,246	,324	,160

Source: results of primary data processing

## Discussion

Exploration of new markets significantly affects knowledge exploitability. This means information resulting from new market exploration can lead to knowledge exploitability. This is possible because Batik SMEs in Indonesia usually meet product uniqueness following the characteristics of each customer so that they meet the product uniqueness and customer value can improve the quality of information. The result of this study supports the previous research conducted by J. Wang (2016), which states that market exploration represents the ability of the organization to learn through questions, push the limits of knowledge, and engage proactively in risk-taking.

The development of marketing programs significantly affects knowledge exploitability. This means that making a variety of marketing development, accommodating differences in the environment, and consumer behavior can directly improve the quality of communication, organizational management, information, and communication technology. This is because knowledge exploitability depends on the quality of the company's human resources. Marketing programs can accommodate differences in environmental and consumer behavior to accommodate the exploit opportunities. The result of this study supports the previous research conducted by Nurcholis (2018).

Product diversity does not significantly affect knowledge exploitability. This means that the differentiation between design features and warranties cannot directly improve the quality of communication, the quality of organizational management, the quality of information, and communication technology. The results of this study do not in line with the previous research conducted by Frambach et al. (2016).

Product diversity significantly affects organizational agility. This means that differentiation design, features, and warranties can directly improve the speed of recognizing markets, changes and abilities to identify new market trends/opportunities, the capability of a distributed team to speedily accomplish tasks and to adapt and reconfigure itself to change conditions in a rapid manner, and build networks of strategic, extended or virtual partnerships with suppliers and distributors. The results of this study are in line with the previous research conducted by Frambach et al. (2016) and Gelhard & von Delft (2016), which states that the capability to respond effectively to rapidly changing markets by increasing the variety and rate of new product variations or introductions is strategic flexibility.

Exploration of new markets does not significantly affect organizational agility. This means that information about product uniqueness, customer value, and adjustments to different market opportunities cannot accelerate recognizing market changes and the ability to identify new market trends/opportunities. The result of this study does not support the previous research conducted by Jirawuttinaunt & Ussahawanitchakit (2011), which states that companies can



respond to changes in demand uncertainty by providing product diversity and increasing competitive flexibility to get more customers when companies feel the need for product differentiation. The result of this study also not supports the previous research conducted by Rihova et al. (2018) which states that firms will drive flexible marketing activity when they are emphasized to explore new markets.

The development of marketing programs does not significantly affect organizational agility. This means that making a variety of marketing development, accommodating differences in the environment, and accommodating differences in the consumer behavior can not directly affect speed recognizing markets changes and abilities to identify new market trends/opportunities, the capability of a distributed team to speedily accomplish tasks and to adapt and reconfigure itself to change conditions in a rapid manner, and build a network of strategic, extended or virtual partnerships with suppliers, distributors. The result of this study is not in line with previous research conducted by Nurcholis (2018), which states that marketing development programs as the degree of variation of marketing development and expand marketing programs to accommodate differences in environmental and consumer behavior to accommodate with the exploit opportunities and the capacity to identify more quickly than rivals.

Knowledge exploitability significantly affects the sustainable competitive advantage. This means that the quality of communication, organizational management, information, and communication technology can directly increase the sustainable competitive advantage (have unique products, durability, and have different strategic assets from competitors). The result of this study supports the previous research conducted by Ivory & Brooks (2018) which states that the specific organizational practices and processes associated with the application of strategic agility can manage corporate sustainability with a paradoxical lens. This finding also supports the assertion that agility will be able to improve market performance when decision-makers have market skills, experience, and learning orientation (Nemkova, 2017).

Organizational agility significantly affects sustainable competitive advantage. This means that speed recognizing markets changes and abilities to identify new market trends/opportunities, the capability of a distributed team to speedily accomplish tasks and to adapt and reconfigure itself to change conditions in a rapid manner and build a network of strategic, extended, or virtual partnerships with suppliers, distributors can directly increase the sustainable competitive advantage (have unique products, durability and have different strategic assets from competitors). The result of this study supports the previous research conducted by Kotter (2014), which states that the key to sustained competitive advantage is the ability to manage and re-assemble rapidly and decisively, complex networks of resources and relationships. The result of this study also supports the previous research conducted by Ivory & Brooks (2018), which states that the specific organizational practices and processes associated with the application of strategic agility can manage corporate sustainability with a paradoxical lens. This finding

also supports the assertion that agility will be able to improve market performance when decision-makers have market skills, experience, learning orientation (Nemkova, 2017), and organizational agility has a strong influence on company performance (Ravichandran, 2018).

Exploration of new markets does not significantly affect the sustainable competitive advantage. This means that information on product uniqueness, customer value, and adjustments to different market opportunities cannot directly influence to have product uniqueness, durability, and have different strategic assets from competitors. The exploration of a new market can increase competitive advantage if mediated by knowledge exploitability. Furthermore, new market exploration can increase competitive advantage if mediated by organizational agility. Product uniqueness, durability, and strategic assets that differ from competitors can be had if the company has the quality of communication, organizational management, information, and communication technology. These qualities can be had if the company has information on product uniqueness, customer value, and adjustments to different market opportunities. Furthermore, product uniqueness, durability, and strategic assets that differ from competitors can be had if the company accelerate recognizing markets changes and abilities to identify new market trends/opportunities, the capability of a distributed team to speedily accomplish tasks and to adapt and reconfigure itself to change conditions in a rapid manner, and build a network of strategic, extended or virtual partnerships with suppliers and distributors. These capabilities can be had if the company has information on product uniqueness, customer value, and adjustments to different market opportunities. The result of this study supports the previous research conducted by Rihova et al. (2018), which states that firms will drive flexible marketing activity when they are emphasized to explore new markets. The result of this study also supports the previous research conducted by Uhl-Bien & Arena (2017), which states that to compete in the speed of market change requires the speed of capability to develop and disseminate new offers.

The development of marketing programs does not significantly affect sustainable competitive advantage. This means that making a variety of marketing development, accommodating differences in the environment, and accommodating differences in the consumer behavior cannot directly affect SMEs having product uniqueness, durability, and having strategic assets different from competitors. The development of marketing programs can increase competitive advantage if mediated by knowledge exploitability. Furthermore, the development of marketing programs can increase competitive advantage if mediated by organizational agility. Product uniqueness, durability, and strategic assets that differ from competitors can be had if the company has the quality of communication, organizational management, information, and communication technology. These qualities can be had if companies make a variety of marketing development, accommodating differences in the environment, and accommodating differences in consumer behavior. Furthermore, product uniqueness, durability, and strate-

gic assets that differ from competitors can be had if the company accelerates recognizing markets changes and abilities to identify new market trends/opportunities, the capability of a distributed team to speedily accomplish tasks and to adapt and reconfigure itself to change conditions in a rapid manner, and build a network of strategic, extended or virtual partnerships with suppliers and distributors. These capabilities can be had if the company can make a variety of marketing development, accommodating differences in the environment, and accommodating differences in consumer behavior. The result of this study supports the previous research conducted by Bahri-Ammari & Bilgihan (2017) which states that sharing of customers, facilities, and marketing programs with other business units to increase profit margins to achieve greater efficiency.

Product diversity does not significantly affect the sustainable competitive advantage. This means that differentiation design, features, and warranties cannot directly affect SMEs having product uniqueness, durability, and strategic assets that differ from competitors. Product diversity can increase competitive advantage if mediated by knowledge exploitability. Also, product diversity can increase competitive advantage if mediated by organizational agility. Product uniqueness, durability, and strategic assets that differ from competitors can be had if the company has the quality of communication, organizational management, information, and communication technology. These qualities can be had if the company may have differentiation design, features, and warranties. Furthermore, product uniqueness, durability, and strategic assets that differ from competitors can be had if the company accelerate recognizing markets changes and abilities to identify new market trends/opportunities, the capability of a distributed team to speedily accomplish tasks and to adapt and reconfigure itself to change conditions in a rapid manner, and build a network of strategic, extended or virtual partnerships with suppliers and distributors. These capabilities can be had if the companies have differentiation design, features, and warranties. The result of this study supports the previous research conducted by Stock (2016), which states that increased product variation is also influenced by rapidly developing technology, global competition, and sophisticated customers so that to obtain a source of competitive advantage it is necessary to manage a good variety of products.

## **Conclusion**

The result shows the importance of knowledge exploitability and organizational agility to improve the sustainable competitive advantage of Batik SMEs in Indonesia. Organizational agility has the confidence and value that puts customers on every business decision. It encourages Batik SMEs to improve the sustainable competitive advantage based on the customers' expectations. Newmarket exploration, development of marketing programs, and product

diversity are essential to enhance knowledge exploitability and organizational agility to gain sustainable competitive advantage.

In managerial implication, the sustainable competitive advantage of the Batik SMEs can be improved through the marketing adaptation strategy. Marketing adaptation strategy in marketing policy can be done by the development of marketing programs, product diversity, and new market exploration. Knowledge exploitability and organizational agility are needed by Batik SMEs to improve sustainable competitive advantage according to new market exploration, development of marketing programs, and product diversity. Improving new market exploration, the development of marketing programs, and product diversity can gain the exploitability of knowledge and organizational agility. Improving knowledge exploitability and organizational agility can gain a sustainable competitive advantage.

The theoretical implication of this research is that the sustainable competitive advantage of Batik SMEs can be improved by developing marketing adaptation strategy, knowledge exploitability, and organizational agility simultaneously. The role of marketing adaptation strategy in improving sustainable competitive advantage will be more effective if it is done indirectly through knowledge exploitability and organizational.

## Limitations and Further Research

The finding of this study is expected to contribute to the development of science, especially management science. The limitation of this research focuses only on the Batik SMEs with relatively small sample sizes and does not separate the scale of micro, small and medium enterprises. Leaders or managers of Batik SMEs have different abilities in developing their business. They also have different views and behaviors towards the willingness to learn and understand market changes. The result of this study shows that 6 hypotheses were not accepted. This is an interesting area for other research with different respondents or variables. Future research also can be applied to the business sector with a larger scale and wider geographical area.

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