

Adaptive Capability: Capability to Create Innovation and Competitive Advantages of SME'S in the Industry 4.0 Era

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The main contribution of this research is to explore the adaptive capability of Small and Medium-sized Enterprises (SMEs) as a company's capability that will increase the competitive advantages through innovation; especially with the occurrence of environmental changes. The analysis of structural equation modelling on 220 samples with the response rate of 56%, was used. The research results show that the adaptive capability has had a positive influence on innovation and competitive advantages. Innovation has become the mediation variable between adaptive capability and competitive advantages. The research finding supports the Dynamic Capability View (DVC) stating that the competitive advantages do not always come from the asset, but also from the capability to keep changing and adapting for environmental changes, through the improvement of innovation.

Key words: *Adaptive capability, Innovation, Competitive Advantages.*

Introduction

Globalisation has come to the new era of the Industrial Revolution 4.0 (Shwab, 2016). The presence of this era is inevitable (Satya, 2018), for it has not only an extraordinary potential in remodelling industry but also changing many aspects of human lives (Kemenperindag, 2018). The era of Revolution of Industry 4.0 is commenced by artificial intelligence, the supercomputer, genetic engineering, nanotechnology, automatic cars, and innovation (Satya, 2018), where all indicators tend to address more on massive technology-based industries. Meanwhile, SME's in the era of revolution of the industry have become challenging,

especially dealing with the creation of innovation and the development of competitive advantages, especially in addressing the change of an era.

In this paper, our focus is to explore the capability of SME's which are able to contribute to the innovative strategy of small enterprises. We break down the related capability by finding, creating, and exploiting new opportunities in the environment especially the changing environment. According to Bititci, Maguire, and Gregory, (2010), in facing the changes, SME's need a capability to quickly identify and respond to possible opportunities and threats that might arise. The capability to respond quickly is one of the specialties of an adaptive capability (Eshima & Anderson, 2016).

In order to survive within the industry, SME's must encourage the adaptive capability it belongs to, to find the market and new technology continuously; process new information, maintain and reconfigure its organisational structure and management quickly; explore as well exploit new knowledge at the same time where all is important for company innovation (Oktemgil & Greenley, 1997; D. Teece et al., 1997; Staber & Sydow, 2002). Such capability helps SME's in improving their knowledge integration for their internal operation and directly affects innovation performance (Akgün, Keskin, & Byrne, 2012).

The adaptive capability is an organisational process which is intentionally designed to change the basis of company resources (constitutes resources that may enable the company to reach its objectives) to achieve a sustainable competitive advantage within the rapidly changing condition of the environment (Helfat, 1997). In order to maintain its competitive advantage, the company needs to renew the availability of its valuable resources as the consequences of external environmental change. The adaptive capability enables the company to make the change in progress (Ambrosini & Bowman, 2009). Dynamic Capability View (DCV) (Leonard-Barton, 1992 and Teece, Pisano, & Shuen 1997) stated that the competitive advantage of the changing environment does not always come from an asset (whether tangible, or intangible) or the organisational process, but from the ability of the company to keep creating a new capability (adaptive capability). For SMEs which usually have limited tangible assets (Jardon & Martos, 2012), the utilisation of the capability is needed in improving its competitive advantage (Akgün et al., 2012; Eshima & Anderson, 2016).

Various studies have been carried out to test the influence of adaptive capability towards innovation (Akgün et al., 2012; Borch & Madsen, 2007), performance (Biedenbach & Müller, 2012; Jantunen, 2005; Wei & Lau, 2010; Yuan, Zhou, Bruton, & Li, 2010) and entrepreneurial orientation (Eshima & Anderson, 2016). However, the lane testing the influence towards the competitive advantage is still very rare, even though the perspective of Dynamic Capability (DVC) states that the adaptive capability is a capability in adapting to the changing and sometimes turbulent changing external environment (Eisendhardt and

Martin, 2000; Grant, 1996; Pisano, 1994), and to facilitate the creation of new advantages; which is difficult to imitate (Borch & Madsen, 2007).

The focus of this study is to explain the adaptive capability of SME's as company capability which will improve the competitive advantage through innovation, especially with the presence of environmental changes. In this research along with Chakravarthy (1982), and Oktemgil & Greenley (1997), that the adaptive capability is not a single construction or size, but it is a dynamic transaction process between the capability in solving the problems and the quick response, which constitute the construction of the adaptive capability related to a certain scope market. Furthermore, this construct is iterative since each factor contributes to the development of each other, and mutual interaction among the construction liven up the concept of the capability of organisation adaptation capability.

Theoretical Framework and Hypotheses

Theoretical Framework

Theoretically, the Dynamic Capability View (DVC) is related to the mechanism and the process of the organisation, where the company adapts to the external changing environment and sometimes it causes reciprocity (Eisenhardt dan Martin, 2000; Grant, 1996; Pisano, 1994). The orientation is on the question of the 'why and where' of the company (Priem and Butler, 2001). The focus of the DVC is to prepare the company to exploit the new opportunity in the future market, through latent rules and mechanism facilitating the creation of new advantages and it is difficult to maintain (Borch & Madsen, 2007). The adaptive capability is understood as the capability related to problem-solving and quick response towards customers (Hakansson, 1982). Adaptive capability represents the company's internal capacity which emphasises the response (Ansoff et al, 1976). Quick response and reaction are the main features of adaptive capability. As one of the dynamic capabilities, the adaptive capability is closely related to the company's quick response towards market potential, identifying a business opportunity, and effective problem-solving competence (Wei & Lau, 2010).

According to Oktemgil & Greenley (1997), adaptive capability is the capability of an organisation to adapt with a certain product of market scope, consisting of the company's response towards a product market opportunity (Chakravarthy, 1982; Hambrick, 1982; McKee, 1989; Miles and Snow, 1978), marketing activities to respond to opportunities (McKee et al., 1989; Walker and Ruekert, 1987; Walker et al., 1992), and the response speed in chasing the opportunity (Chakravarthy, 1982). The adaptive capability is seen as a dynamic process of sustainable learning, and such capability enables the improvement of the company's innovation (Akgün et al., 2012), and it constitutes the source of sustainable competitive advantage (Powell, 1993). The success and the sustainability of the company's

life highly depends on their capability to create value and their capability to innovate (Wang and Ahmed, 2004). A company with high capability to innovate would outlive their competitors, therefore, it might increase their competitive advantage (Volberda et al., 2009).

The potential of SMEs to reach a competitive advantage has become the main attention for managers and researchers (Rivard et al., 2006). SMEs needs more than just ordinary capability to compete in a dynamic environment; SMEs need a strong capability to innovate and to adapt with the changing environment (Kotelnikov, 2007; Lindbolm et al., 2008). It is very important for SMEs to develop adaptive capability in order to encourage innovation to reach a competitive advantage in the rapidly changing business conditions (Lindbolm et al., 2008).

Hypotheses

The Influence of Adaptive Capability towards Innovation and Competitive Advantage

The concept of organisational adaptation is based on the contingency theory and it emerges in structural literature in the early '60s, discussing the interaction of organisation-environment and reaching its sustainability (Burns and Stalker, 1961). It is along with the conventional approach on organisational adaptation, where the organisation is looking for a signal from the environment by scanning their customers, competitors, and general condition which then would be filtered, and the decision would be made to overcome the changing environment (Weick, 1979). Therefore, the adaptive capability is needed to overcome the changing environment (Staber and Sydow, 2002; Teece et al., 1997; Zhou and Li, 2010).

The study carried out by Akgun et al., (2012) on SMEs, shows that adaptive capability is needed since it provides the strong sensory capability for the organisation to improve innovation. Through adaptive capability, SMEs are able to (1) identify technical and market opportunities in their environment and are able to determine to explore such opportunity; (2) identify the need of new customers and implement diversification in a new market; and (3) keep assessing and diagnosing the competitor's product to exploit their weaknesses to develop a new product in order to fulfill customers' needs (Gibson and Birkinshaw, 2004; Oktemgil and Greenley, 1997). Therefore, the hypothesis would be:

Hypothesis 1a: SMEs with the capability to respond to the external market would encourage the creation of the company's innovation.

Hypothesis 1b: Marketing activities of SMEs are able to encourage the creation of the company's innovation.

Hypothesis 1c: The capability to respond quickly to changes would encourage the creation of the company's innovation.

The adaptive capability is a set of capabilities which enable the company to respond quickly to new opportunities and related to how to rejuvenate and integrate the company's resources (Zhou & Li, 2010). Therefore, adaptive capability involves a repetition process which influences a company's resources' basis with the characteristics of valuable, rare, inimitable and non-substitutable resources (Ambrosini & Bowman, 2009; Helfat, 1997). Furthermore, when SMEs have the capability to adapt, the company has more competitive advantages to reach its strategic objectives (Wei & Lau, 2010). It shows that adaptive capability is needed by SMEs to remain and survive in its industry, and it is expected to be better compared to its competitors (Gibson & Birkinshaw, 2004; Sapienza, 2004; Zhou & Li, 2010). Therefore, the hypothesis would be:

Hypothesis 2a: SMEs with the capability to respond external market have a better competitive advantage compared to its competitors.

Hypothesis 2b: Marketing activities of SMEs are able to increase their competitive advantage in facing market changes.

Hypothesis 2c: The capability to respond quickly to changes is a competitive advantage of SMEs.

Adaptive capability encourages the improvement of a company's innovation (Adeniran & Johnston, 2012). Innovation is a source of significant competitive advantage within the changing and dynamic business environment, and basically is a new way in performing something: "new item or the quality of new item; new production method; new market; new supply source; or new structure of organisation "(Dess dan Picken, 2000; Crossan and Apaydin, 2009). It is very important for SMEs to develop innovation, especially by utilising knowledge from external sources to develop innovation capability (Borch dan Madsen, 2007; Volberda et al., 2009). Innovation comes from the combination of the newly gained knowledge, the renewal of strategy of the organisation and the process to reach a competitive advantage (Augier dan Teece, 2008). Competitive advantage depends on the company's capability to effectively develop internal knowledge and exploit external knowledge to increase the company's innovative capability (Fabrizio, 2009). Based on the above explanation, the hypothesis would be:

Hypothesis 3a: Innovation mediates the capability to respond to external market towards competitive advantage.

Hypothesis 3b: Innovation mediates the marketing activities of SMEs towards the improvement of competitive advantage.

Hypothesis 3c: Innovation mediates the capability to respond quickly to changes towards the competitive advantage.

Method

This research is quantitative research with survey characteristics, by using questionnaires delivered to respondents. Such research was carried out for three months using a cross-sectional population.

Population and Sample

The research was carried out in five cities which has become the biggest batik industry centre in Central Java, Indonesia (the City of Pekalongan, Regency of Pekalongan, City of Semarang, City of Surakarta and Rembang) with 391 SMEs (Department of Cooperatives and SMEs, Central Java, 2018). The selection of the batik industry was chosen using a multi-stage sampling technique. The first stage was SMEs with annual sales of IDR 500.000.000 - 2.500.000.000 (USD \$35,721.25 – \$178,606.25). In the second stage, the batik industry had been running for 5 (five) years (Yual et al., 2010). The data collection was taken, by visiting respondents after having the time to meet. The utilisation of the batik community was implemented in order to obtain a high-level response (Yuan et al., 2010). Three-hundred questionnaires were delivered. From many efforts, including formal and informal contact, we received 220 completed questionnaires throughout the selected region representing the level of response at 56%. We found that this was a suitable sample structure with the population with the goodness of fit test (Newbold et al., 2002).

Measures

Adaptive Capability. The measures of adaptive capability used a 5-point Likert-scale, of three dimensions from Chakravarthy research (1982); Oktemgil & Greenley (1997) and Zhou & Li (2010), i.e. a response of market-product 4 items (Oktemgil & Greenley, 1997), marketing activity with 5 items (Zeithaml & Zeithaml, 198; McKee, Varadarajan, & Pride, 1989). The speed of response with 5 items (Oktemgil & Greenley 1997).

Innovation. Adopting two-dimensional researches of Kalkal et al. (2014), they are product innovation and marketing using a five-point Likert scale.

Competitive Advantage. On the variable of competitive advantage, the dimension used to adopt the study of Porter (1980) in emphasising the importance of creating customer value

(Ma, 2006), i.e. cost leadership, differentiation, and focus. The scale started from 1 (insignificant as a competitive advantage) to 5 (very important as a competitive advantage).

Variable control. The firm size and the age of the company were used as a variable control, since such characteristics may also be directed to its success (Wiklund & Shepherd, 2005). The firm's age is measured based on the number of years since the company was established (Gulati dan Higgins, 2003; Dost, Badir, Ali, & Tariq, 2016)

Data Analysis

The data collected from the questionnaire were analysed using the Statistical Package for Social Science (SPSS) for analytical analysis. Factor analysis was performed to 14 items of adaptive capability variables using principal component analysis and varimax rotation (Saunders, 1994). Pearson's correlation was used to establish the relationship between variables and hierarchical regression analysis to test the influence of the independent variable towards the dependent variable, as well as to test the influence of the innovation moderation variable on the relationship between adaptive capability and competitive advantage.

Results

The descriptive statistic shows that the majority of respondents were men (60.6%), at the age ranged between 40-50 years old (52.9%) and only 3% of respondents were under 30 years old. Most of the Batik industry had been running for 4 - 13 years (66.7%), and most of the respondents' education was at middle school of 50.5%. In the Batik industry, the number of employees used usually was in the range of 11 - 20 craftsmen (45%). The number of employees in the Batik industry constituted the combination of the permanent workers and contracted ones, with the composition of 40% - 60% or 50% - 50%.

Factor analysis was used to test 15 factors constituting adaptive capability. The solution of the three factors was obtained by extracting factors with the eigenvalue more than 1, which explained 58.5 percent variants (statistic Kaiser-Meyer-Olkin 0.852; Bartlett test of specificity 685.986; significance of 0.000). The loading factor was shown in Table I. The loading factor in each factor exceeded 0.50.

Table 1: Results of Factor Analysis of Adaptive Capability Variables

	Factor 1	Factor 2	Factor 3
Speed of Response - Modification of Selling Program	.86		
Speed of Response-Changes of Distribution	.85		
Speed of Response-Changes of Advertisement	.81		
Speed of Response-Changes of Price	.70		
Marketing Activities-Monitoring Competitors	.56		
Speed of Response-Modification of Product/Services	.52		
Marketing Activities-Adoption of New Marketing Technique		.92	
Marketing Activities-Allocation of Resources Resources for Marketing		.92	
Marketing Activities-Market Monitoring		.70	
Marketing Activities-After Sales Service		.52	
Product Market Response-Issuing New Product/Service			.89
Product Market Response-Competitive Competition			.89
Product Market Response-Production Complexity			.67
Product Market Response-Entering New Market			.67
Eigenvalue	8.67	1.25	1.01
Per cent of variance	61.91	8.96	7.35

The analysis result of factors towards adaptive capability was in line with the research conducted by Oktemgil & Greenley (199) consisting of three factors:

- Factor 1 represented market strategy since it consisted of speed in communication and sold the product/service in the market, and the activities of marketing in order to monitor competitor's activities.
- Factor 2 was marketing activities.

- Factor 3 was the response's speed for the product/service decision.

Pearson Correlation was used to test the relation among the variables. Table 2 shows the matrix of Pearson correlation in terms of the firm size, firm age, adaptive capability, innovation, and competitive advantage.

Table 2: Correlation matrix

Variables	M	SD	1	2	3	4	5	6	7	8
1 Firm Age	1.82	.970	1							
2 Firm Size	1.96	1.11	.166*	1						
3 Prod./Market Resp	3.65	.651	-.076	.101	1					
4 Marketing_Act	3.80	.553	.060	.138*	.703*	1				
5 Speed_of_Resp	3.57	.638	-.028	.215*	.726**	.740**	1			
6 Product_innov	3.44	.543	-.019	.038	.229**	.238**	.229**	1		
7 Marketing_innov	3.37	.528	.002	-.086	.222**	.192**	.158**	.638**	1	
8 Competitive_Adv	3.09	.650	-.076	.003	.206**	.202**	.137*	.341**	.171*	1

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Table 2 showed that all constructs had values above average (average > 3). This showed that respondents generally agreed on the statement measured by the construct. The finding clearly showed that the response was not distributed normally, however, the value of standard deviation (Std. Dev) showed that respondents were distributed around an average value. On the Pearson correlation, it shows that most of the constructs were significant on $p < 0.01$ with sufficiently strong moderate correlation coefficient to correlation coefficient ($r = .171 - r = .740, p = .000$).

In this study, three models were developed using three stages of Baron and Kenny (1986), in order to check the effect of innovation mediation, using hierarchical regression analysis. On model 1 and 2, there were two stages conducted. In the first stage, the firm age and size were entered as the control variable. In the second stage, three dimensions of adaptive capability (product-market response, marketing activities and speed of response) were entered to test the influence towards innovation (product and marketing) and the competitive advantage. The third model was developed to check the effect of innovation mediation from the adaptive

capability and the competitive advantage. Table 3 showed the hierarchical regression analysis.

Table 3: Results of Hierarchical Regression Analyses

<i>Independent Variables</i>	Model 1	Model 2		Model 3
	Competitive Advantage	Product Innovation	Marketing Innovation	Competitive Advantage
<i>Step 1. Control</i>				
Age of Firm	-.079	-.026	.021	-.079
Size of Firm	.015	.042	.097	.001
R^2	.006	.002	.007	.006
ΔP^2	.006	.002	.007	.006
F	.518	.794	.443	.518
<i>Step 2. Adaptive Capability</i>				
Response product-market	.202**	.227**	.134**	.202**
Marketing activities	.208**	.239**	.121**	.208**
Response's speed	.138**	.231**	.242**	.138**
R^2	.059	.067	.059	.059
ΔP^2	.053	.064	.053	.053
F	.023	.011	.002	.023
<i>Step 3. Innovation</i>				
Product innovation				.339**
Marketing innovation				.173**
R^2				.150
ΔP^2				.092
F				.000

^a All standardized regression coefficients are from the final step in the analyses. n = 172.

*p < .001; ** p < .05

The result on table 3 showed that the value of ρ of χ^2 either response product-market ($\rho=0.001$), marketing activities ($\rho=0.000$) and the response's speed ($\rho=0.001$) was under the value of expected significance level (0.05) towards innovation (product and marketing innovation), therefore it supported H.1a, H.1b, and H.1c. On the path of influence between adaptive capability towards competitive advantage, the analysis result showed either response of product-market ($\rho=0.003$), marketing activities ($\rho=0.002$) and the response's speed ($\rho=0.047$) influenced significantly towards competitive advantage. This finding proved the support of H.1d, H.1e, and H.1f. The finding of the analysis result showed that SMEs which

had the capability to quickly respond to changes, would encourage the emergence of innovation and eventually increase the competitive advantage.

The testing of mediation effect on hypothesis 3a, 3b, and 3c, used analysis of traditional mediation from Baron and Kenny (1986). The analysis result showed that innovation (both innovation of products and marketing) was a partial mediation on the influence between product-market response, marketing activities and response's speed towards competitive advantage. The analysis result that on the first model, the influence of adaptive capability towards competitive advantage showed the level of significance ($\rho = .023$, $\rho < .05$); likewise on the second model of analysis results showed a significant positive ($\rho = .011$, $\rho = .002$, $\rho < .00$). On the third model, the result showed that adaptive capability significantly effected competitive advantage ($\rho = .023$, $\rho < .05$). However, innovation (product and marketing) significantly influenced the competitive advantage ($\rho = .001$, $\rho = .003$, $\rho < .05$). Such findings proved that the support of H.3a, H.3b and H.3c. The analysis on table 3 showed that either the age or the size of the firm did not significantly affect competitive advantage or innovation.

Discussion

The main contribution of this research is to prove that adaptive capability of SMEs as the company's capability that will increase the competitive advantage through innovation especially with the environmental changes. The analysis results showed that adaptive capability (response of products-market, marketing activities and response's speed) positively influenced significantly product innovation and marketing, where this finding proved support H.1a, H.1b, and H.1c. The Response of product-market, marketing activities and response's speed also positively influenced competitive advantage, therefore, H.2a, H.2b, and H.2c were accepted. The hierarchical regressions analysis found some support that proves H.3a, H.3b, and H.3c, which showed that innovation became the mediation variable for the relationship of adaptive capability and competitive advantage.

This finding extended the concept of dynamic capability view (DCV) (Leonard-Barton, 1992; Teece, Pisano, & Shuen, 1997), which explained that the capability of an organisation in coordinating and reconfiguring the existing resources to respond to changes in increasing the creation of innovation (Leonard-Barton, 1992; Teece, Pisano & Shuen, 1997). Meta-analysis Grinstein (2008) identified the market orientation as the key factor of adaptive capability with a strong positive effect on the consequence of innovation within the very competitive environment. Innovation is a significant source from the competitive advantage in changing a dynamic business environment, and basically was a new way in carrying out something: "better new product or quality; new method in production; new market; new supply source; or new structure of organisation" (Adeniran & Johnston, 2012): The finding revealed that



adaptive capability significantly influenced innovation, and confirmed the research from Borch & Madsen (2007); Wei & Lau (2010); Akgün, Keskin, & Byrne (2012).

According to Vargo (2011), SMEs are very vulnerable in a critical era, and their relative power is measured in terms of adaptive capability, defense capability, and innovation. Extreme competition and technology development made it difficult to show a specific external source that facilitated innovation for the current market or the developing one (Teece et al., 1997). Therefore, the company needed scanning capability to find out a valuable source to obtain a competitive advantage and knowledge needed for creativity. Therefore, to reach and stimulate innovation, the company needed observation and sustainable monitoring (Ali, 2017), and to respond the changes quickly (Adeniran & Johnston, 2012; Biedenbach & Müller, 2012). Observation and sustainable external environmental monitoring (Vargo, 2011 dan Ali, 2017), and to respond quickly to changes will encourage new knowledge, that would stimulate organisational innovation (Adeniran & Johnston, 2012; Biedenbach & Müller, 2012).

According to Helfat (1997), on the quickly changing environment, the adaptive capability is needed to change the basis of a resource in order to reach a competitive advantage. The finding of this research is the original contribution and novelty in the context of SMEs. This finding is one of the important contributions, since in facing environmental change, the company needs to coordinate and to reconfigure the existing sources to respond to the changes that would cause a competitive advantage. The emphasis is on the development of adaptive capability in order to support business strategy to reach a competitive advantage in the quickly changing business condition. This finding confirms and extends resources based view/RBV, which states that the company has heterogeneous accumulated resources and commonly focuses on how the company reaches competitive advantage (Penrose, 1959; Barney, 1991; Grant, 1991; and Peteraf, 1993). Heterogeneous resources are described as the combination of assets and the capability possessed by the organisation. Danneels (2002) states that it is very important for RBV to have a dynamic perspective so that it could understand how the company evolves over time, through the distribution and the gaining of their resources, and since the company must keep renewing and reconfiguring themselves should they want to survive. According to Lockett, Wiklund, Davidsson, & Girma (2009), environmental change is the key to adaptive capability, and this capability is needed in order to make the company survive within its industry; it is even expected to go one step beyond their competitor (Gibson & Birkinshaw, 2004, Sapienza, 2004; Zhou & Li, 2010).

In SMEs, the adaptive capability runs well, among them is through the strategy of launching new products in facing market changes. Different design with the same colour or the opposite, the same design with a different colour is one of the simple forms of product innovation. Marketing innovation is carried out through model changing from offline to

online, many SMEs then use the selling model in order to enter the new market and expand the existing market place as well as in facing the Industrial Revolution 4.0.

In facing the environmental changes, SMEs are required to develop adaptive capability through activities coordinating and reconfiguring the existing resources through various strategies, such as by launching a new product or entering a new market, monitoring customers and its competitors, as well as the speed in responding to the external environment so that they could still survive and is be better compared to its competitors. In order to have a competitive advantage, the Batik industry must always to adapt to its environment. Helfat et al. (2007) explained that the company must adapt and exploit the changes within their business environment and it is even considered necessary to provoke changes. This finding is that knowledge of how customers and competitors become the factor must be considered in developing the adaptive capability. It is in line with Ambrosini & Bowman (2009), who stated that the lack of understanding from their customers and the lack of reaction towards significant challenges from a number of their competitors, are the characteristics of the weakening adaptive capability. The adaptive capability is very situational, when the company is in an unwell situation, then the presence of adaptive capability is highly needed to respond and to configure the resources possessed to respond to changes that would make a competitive advantage.

The result of mediation analysis showed that innovation is the mediation variable influencing adaptive capability towards competitive advantage. The capability to respond to changes, through monitoring activities and sustainable observation as well as a quick response, would increase knowledge related to the customers and competitors (Adeniran & Johnston, 2012; Biedenbach & Müller, 2012; Vargo, 2011 and Ali, 2017). Knowledge about customers and competitors encourage the appearance of “new things”, in which everything is related to innovation (Ambrosini & Bowman, 2009). The presence of an innovation for a company is very important (Supriyadi, 2014), for it could differentiate one company from another, and as a way to open competitive advantage (Hitt *et al.*,1997; Tidd, 2001, Akgun *et al.*, 2009; Supriyadi, 2014 and Kalkan *et al.*,2014).

Conclusion

The finding of this research supports the dynamic capability view stating that competitive advantage does not always come from an asset, but from the capability to always change and adapt because of the existence of environmental change. The capability to adapt through quick response would encourage the organisation to innovate. Innovation provides SMEs with huge opportunities in order to obtain a competitive advantage. Based on the research result, three managerial implications are proposed. First, the owner of SMEs is more responsive to learn new things and to improve the experience through training in order to

gain new knowledge, so that it improves innovation which eventually would increase competitive advantage. Secondly, it needs to create a creative culture for the members of the organisation, since from many empirical studies, creativity would encourage the need to always produce different and unique products to be compared to the competitors. Thirdly, the leader must have an orientation of the need to change, that could be shaped from managerial awareness and understanding about the external environment, and from other internal stimuli, including the perception of performance and personal motivation to produce change.

The limitations could not be separated from research. First, research is carried out cross-sectionally, so that it could not explain the development of adaptive capability comprehensively, especially in increasing the ability to innovate in the Batik industry. Second, the focus of the research is only on the Batik industry. Therefore, model generalisations could not apply.

Hence to reduce the limitations, there are two recommendations for further research. First, to extend the findings, future studies might use longitudinal methodologies designed more carefully. It could be carried out with three-stage design, by inventorying the adaptive capability of SMEs in order to have a clear picture and then the innovation of data in a certain period. This would be possible to capture the dynamic development of organisational capability evolution, as well as the causal effect in the innovation. Second, the agenda of future research is that they need to expand the scope of the research especially for SMEs in Indonesia so that the results could be generalised.

Conflict of Interest

The authors confirm that there is no conflict of interest to declare for this publication.

Acknowledgements

The publication of this study/article was supported by the Ministry of Research, Technology, and Higher Education of the Republic of Indonesia through Research Program of Source of Doctoral Dissertation Fund of Directorate of Research and Community Service, Directorate General of Research and Development. Budget Year of 2018. Grant Project No. 102-15/UN7.P4.3/PP/2018.

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