
The individual competencies and organisational ambidextrous: Indonesian SMEs perspective

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Abstract: This study provides perspectives on ambidexterity practices within Indonesian SMEs for their internationalisation strategic development to respond to the present business environment. ‘Ambidexterity organisation capability’ as well as ‘dynamic capability’ of Indonesian SMEs were investigated. The improvement of Indonesian SMEs ‘ambidexterity organisation capability’ can lead to innovation opportunity to exercise for better new products, services, processes or new technologies to fulfil the market’ demands. The study used a quantitative methodology and SMART PLS to analyse data. This study contributes to the field of internationalisation of Indonesian SMEs with a two-dimensional change of individual and organisational competencies.

Keywords: ambidextrous capabilities; dynamic capabilities; innovations; internationalisation SMEs.

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1 Introduction

Indonesian SMEs has the capability to absorb outside information under its 'science-push', and 'demand-pull' components (Nasip and Pradipto, 2016; Sudarmaji and Nasip, 2017). It was found that there are nine variables of 'science-push' and demand-pull that significantly impact the innovativeness of Indonesian SMEs. Two absorptive capacity components of science-push and demand-pull play a vital role within the operation. It acts as an operator of change or important broker between the company and the markets (Murovec and Prodan, 2009). Unfortunately, Nasip and Sudarmaji (2017) and Nasip (2017) also found that those external knowledge-based variables of science-push, which is based on scientific information (e.g., universities, non-profit research institutes, commercial R&D enterprises) were not fully utilised for market expansion capabilities. On the other hand, the demand-pull, which are based on market information (e.g., customers, suppliers, competitors, professional conferences, fairs) were significantly better for new procedures only (e.g., fabrication, administration, and logistic innovation).

Due to the rapidly developing environment, Indonesian SMEs are forced to asses dynamic capabilities of 'regenerating capabilities' and 'renewing capabilities' as well as 'science-push', and 'demand-pull' of the absorptive capacity (Murovec and Prodan, 2009; Nasip, 2017; Sudarmaji and Nasip, 2017). Indonesian SMEs must have the 'knowledge-based framework' for both dynamic and absorptive capabilities on a consistent basis due to the present and future business environment scene (Davenport and Prusak, 2005). By keeping these both dynamic and absorptive capabilities, the innovation opportunity will be alive with better practice under the volatility situation. Hence, the Republic of Indonesia SMEs should upgrade their own specific innovation exercises,

either as the new product, new service, new method or new technology to satisfy their customers' demands. There is always a good connection between the absorptive capacity of the external knowledge, dynamic capability, innovation and sustainability competitive advantages (Eisenhardt and Martin, 2000). The external knowledge is an important key for SMEs innovations; it can improve the SME's capacity to assess the business' innovation performance. The SMEs depends on knowledgeable individuals to assess and evaluate the positives and negatives of the new knowledge. In Indonesian SMEs, it was through the experiences and associated tacit and explicit learning of specific individuals (Wong and Radcliffe, 2000). Eliminating and solving the barrier for moving from conventional economies to knowledge-based economies, has happened through organisation structure, by quick and short communication lines and top management involvement (Wong and Aspinwall, 2004).

It is critical that within SMEs, an Individual's and the organisation's competencies are recognised. The individual competencies are fundamental, however, inadequate to fulfil an organisation's capability. Campbell et al. (2012) stated that the combination of an individual and an organisation's capability can provide some firms with the ability to attract, retain and motivate human resources. This capability obliges the organisation's systems to encourage the transformation of individual or tacit knowledge, into explicit organisation knowledge. A knowledge-based 'dynamic capabilities' within SMEs, may cause a 'knowledge management' practice to promote better orientation and innovation. This method of reasoning is in accordance with the dynamic capabilities point of view, which stated that an organisation's capacities to recharge and to build up its SMEs' abilities are the basic necessity to build and sustain a competitive advantage (Eisenhardt and Martin, 2000; Kogut and Zander, 1993).

The purpose of the study is to find the basic building block that would help Indonesian SMEs to identify their critical skills to deploy dynamic capability, as well as to investigate the individual, and the organisational competencies. This study uses the ambidextrous and dynamic capabilities theory of the company, by creating future scenarios which focus on Indonesian SMEs as the case study. The dynamic capabilities theory is used as a tool to find the most important areas of dynamic capabilities and ambidexterity in the Indonesian SMEs. The method used in the study was quantitative research. Data collection was done from a structured questionnaire.

2 Literature review

The definition of 'dynamic capabilities' is similar to 'absorptive capacity' and 'open innovation'. However, the third definition shows the existence of a concept overlap. The three theories stress the importance of the integration of external, competition, information, and knowledge. Teece et al. (1997) proved how important the organisation's capability to integrate, grow, and manage internal and external capabilities to adapt to the fast-changing business environment. It is complicated to connect the definition of 'dynamic capabilities' with a single author, especially when 'dynamic capabilities' consist of the economy and organisational-based variances. The source of 'dynamic capabilities' refers to the organisation that can process information that are informal and are embedded in the organisation. 'dynamic capabilities' is the ability to use all the available resources to improvise innovation and expand the market. Hence, only companies that continuously innovate in their products and services will be able to

compete. This challenge is important for companies to manage their resources and adapt due to the increase in global complexity and volatility. Thus, 'dynamic capabilities' is still a relevant issue to explain the condition of Indonesian SMEs in the current changing environment.

Dynamic companies recompiled and reconfigured its capabilities according to the environment. These new capabilities are able to shift them to having objectives, position, and new resources that can increase their competitive advantage. It is important that 'dynamic capabilities' happen to an organisation due to the presence of a company's resources. However, it was also found that 'dynamic capabilities' is hard to practice. Teece (2012) confirms that the micro-foundation of the company's 'dynamic capabilities' is a continuous process. Meanwhile, O'Reilly and Tushman (2007) claimed that an ambidextrous company can be considered an organisation that has 'dynamic capabilities'. This ambidextrous capability is an important factor in continuous competitive advantage because it has the competency to show the organisation's capability (O'Reilly and Tushman, 2007). A huge number of empirical studies showed that 'dynamic capabilities' is the most valuable skill in an organisation, and also confirmed the presence of 'ambidexterity' as 'dynamic capabilities', (Masini, 2010; Raisch et al., 2009; Siggelkow and Rivkin, 2005).

However, Winter and Wiley (2003) found an ambiguity between 'dynamic capabilities' and basic competency, because ambidextrous organisations need competencies, structure, culture, and leadership to achieve 'dynamic capabilities', and also to create and nurture organisational ambidexterity. This is in line with taxonomy, 'sensing, seizing, and reconfiguring', (Teece, 2006). Basic competency is needed by the organisation to process ambidextrous capability in managing the business (exploration or exploitative). Hafkesbrink and Schroll (2014) investigated that the relationship between individual competency, ambidexterity, exploration and exploitation of resources, is hard to find in empirical research as of today. Ambidexterity is recognised as executive and employee decision and behaviour.

Hafkesbrink and Schroll (2014) found individual competencies s that is a part of exploration and exploitation capabilities as:

- 1 professional capabilities
- 2 methodical capabilities
- 3 social capabilities
- 4 individual capabilities.

Thus, 'individual exploration skill' is defined as a new add-on professional skill to the existing ones. The more professional information in an organisation, the more opportunities there are to integrate new and old knowledge. Meanwhile, 'individual exploitation skill' is described as evolving the existing data, especially in capabilities accumulation, which is to apply the present information to certain jobs. Meanwhile, the separation of exploitation unit (e.g., R&D) and exploitative unit (e.g., production and sales) are found under the ambidexterity model structure in other empirical studies. However, several ambidextrous organisations (Fang et al., 2010) are able to explore and exploit at the same time (Smith and Tushman, 2005). Gibson and Birkinshaw (2004) introduced contextual ambidexterity, where ambidextrous capabilities are able to balance exploitation and exploration. Organisations can develop contextual ambidexterity by

pushing individuals to spare time between coordinating and adapting [Gibson and Birkinshaw, (2004), p.211]. Guttel and Konlechner (2009) show that most contextual ambidextrous organisations allow their employees to exploit or explore their decisions.

In the case of Indonesian SMEs where they are forced to move from the conventional economy to a knowledge-based economy. It is important and basic to understand SMEs' individual and organisational competencies, because the former is important for SMEs' organisation's capacity. Achieving external knowledge and internal knowledge practice for SMEs is a part of their life. In their daily activities, Indonesian SMEs can easily change their capacity to renew and improve their capabilities (Lichtenthaler, 2008). There is no limit for SMEs to explore and take advantage of their exploration units (e.g., R&D) and exploitation unit (e.g., production and sales) as well as explore and exploit at the same time. SMEs' capabilities and distinction can be said to explore and exploit their innovative processes at the same time (Keupp and Gassmann, 2009; van de Vrande et al., 2009). Innovation becomes significant now and has been the main capability for SMEs; which is why we are able to claim that ambidexterity practices are advantageous in SMEs' capability development. SMEs can be managed directly in developing the practice of ambidexterity due to its size and nature. Tight competition and customer involvement are also new competencies for SMEs. Their changed customers and technologies have changed SME's business landscape dramatically. Therefore, these SMEs face new competition and only SMEs that are ready to continuously innovate in their products and services will be able to win the competition (Sánchez, 2012).

Indonesian SMEs have big problems and have to renew their business capabilities. Where their business model must also change as the future market change in order to win the competition and have sustainable growth (Rahman and Ramos, 2011; Sánchez, 2012). Under the ambidexterity practice, it is very possible for SMEs to integrate external and internal ideas, knowledge, and technologies, and use internal and external channels to market through collaboration with other local, national, and international companies and institutions (e.g., universities). The practice of ambidexterity, in general, provides greater opportunities for SMEs to advance and commercialise their technologies and, therefore, enhance their ability to innovate and compete internationally (Clausen et al., 2013).

This study tries to understand the practice of ambidexterity in SME organisations, which includes new ideas that could arise in the practice of ambidexterity. However, these new ideas are very difficult to quantify. Thus, this study is only limited to the practice of ambidexterity in Indonesian SMEs through exploration capabilities (e.g., R&D) and exploitation capabilities (e.g., production and sales). Exploration capabilities are used to achieve competitive advantage; how these SMEs explore individual competencies as the nature of the resources possessed by the organisation. Basic competencies are especially needed as a human-resource-based advantage. When there are changes in the way of doing business, individual competitive advantage can be a disadvantage if no effort is made by the organisation to invigorate and utilise these resources; including the ability to explore new resources acquired by the organisation. This exploration capability will eventually emerge as the output of new product and services, or the ability to expand to new brands.

3 Methodology/materials

This study uses case studies and quantitative analysis using primary data. Primary data are in the form of questionnaires, and in this study, research instruments are shared with researchers. This study also uses multi-layered data to see the development of SMEs from year to year. The rational decision for choosing case studies are based on the requirement to analytically replicate and obtain the theoretical confirmation or contrasting findings from certain cases in the existing empirical research. This study will analyse Indonesian SMEs' ambidexterity capability; exploration capabilities (e.g., R&D) and exploitation capabilities, using ambidexterity modelling strategy (Derbyshire, 2014) and operationalisation of ambidexterity taken from Archibugi et al. (2013). Archibugi et al. (2013) investigate the practice of ambidexterity, specifically the existence of 'exploration' and 'exploitation' variables that exist in Indonesian SMEs.

This study uses sales growth and productivity as the dependent variable that represents business performance. Indonesian SMEs that are working on the export market and pursuing foreign market niches are considered to represent this research. At the same time, SMEs that launch both new products and/or new services to target new customers are also considered. Meanwhile, the ambidexterity variable uses Archibugi et al. (2013) with nine goals representing 'exploitation' and five objectives that represent exploration. On independent variables, this study uses both individual competency variables and organisational competency models taken from Hafkesbrink and Schroll (2014).

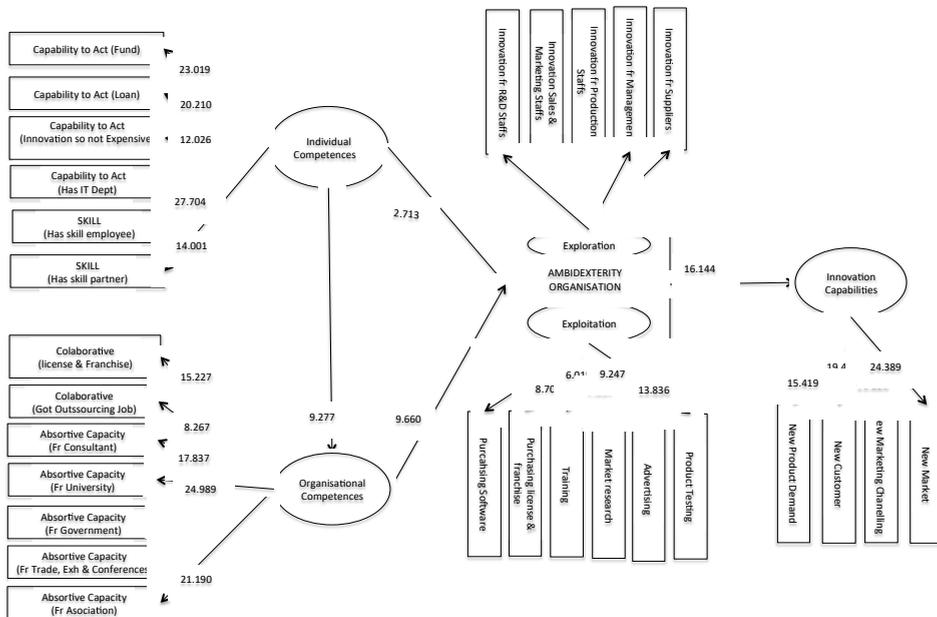
Research data was taken using surveys and questionnaires through closed and open questionnaires. Responded questionnaires came from 78 SMEs out of 124 SMEs, that were taken from several occasions. The first survey and questionnaire were taken from Indonesian SMEs that attended exhibitions in Kunming, Yunnan-RRC, and Nanning, Guangxi-RRC. The second survey was collected from Indonesian SMEs that attended business competition training and workshops in Bandung, Indonesia. And the last questionnaires were distributed through the internet using 'Google Form' to accommodate SMEs from several places in various provinces in Indonesia. Research on individual and organisational competency variables related to ambidexterity comes from Hafkesbrink and Schroll (2010); where the variables in this study are used to explore the practice of ambidextrous organisational strategy in Indonesian SMEs. The hypothesis model that represents the relationship between the dependent and independent variables can be drawn as follows:

- H1 The 'individual competencies' has an influence on 'organisational competencies'.
- H2 The 'individual competences' has an influence on 'organisational ambidextrous' SME organisation.
- H3 The 'organisational competencies' has an influence on 'organisational ambidextrous' SME organisation.
- H4 The SMEs' 'organisational ambidextrous' organisation has an influence on 'innovation capabilities'.

4 Results and findings

The total of 124 surveys was distributed and only 78 organisations response (respond rate 62.90%). The PLS path was used to analyse the hypothesised model. Our original measurement consists of 48 items used to measure four constructs, then we tested the relationship between the constructs and their respective measurement items. The loading factor analysis to eliminate the loading factors to less than 0.6 is used, hence we were able to eliminate 20 items in this model. In this study, we did 5,000 samples using bootstrap facility with a 95% confidence interval. Upon executing the command, we have the bootstrap output shown in Figure 1.

Figure 1 Research model



A series of validity and reliability checking were performed for both the structural modelling (inner model) and the measurement modelling (outer model). As shown in Table 1, the measurement modelling was checked using Convergent Validity, discriminant validity, composite reliability, average variance extracted (AVE), and Cronbach alpha. Based on Table 1, the first test performed was convergent validity, the outer value of loading is equal and above 0.70 or more than the minimum toleration score of 0.5. In addition, the construct reliability check was conjointly done by measuring two criteria: Cronbach’s alpha and composite reliability. These values reflect the reliability of all indicators used in this study.

We assumed that for the purpose of the research, reliabilities of alpha 0.70 will suffice.

The discriminant validity was performed in order to check the degree in which the remaining items that have loading factors of 0.6 or more can differentiate or measure different constructs. Based on Table 2, the model in this study has sufficient

discriminatory validity since the AVE Root for each construct is greater than the correlation between the other constructs.

Table 1 Construct reliability and validity

Construct reliability and validity		Outer loading	Cronbachs alpha	rho A	Composite reliability	AVE
Ambidextrous organisation	Exploitation		0.925	0.937	0.935	0.566
	Purchasing software	0.681				
	Purchasing license and franchise	0.710				
	Training	0.681				
	Market research	0.736				
	Advertising	0.765				
	Product testing	0.821				
	Exploration					
	Innovation fr R&D staffs	0.787				
	Innovation sales and marketing staffs	0.785				
	Innovation fr production staffs	0.742				
	Innovation fr management	0.818				
	Innovation fr suppliers	0.736				
Innovation capabilities	New product demand	0.801	0.833	0.842	0.888	0.645
	New customer	0.843				
	New marketing channelling	0.795				
	New market (competition)	0.821				
Organisation competences	Collaborative (license and franchise)	0.777	0.905	0.909	0.927	0.679
	Collaborative (got outsourcing job)	0.676				
	Absorptive capacity (fr consultant)	0.805				
	Absorptive capacity (fr university)	0.834				
	Absorptive capacity (fr government)	0.819				
	Absorptive capacity (fr trade, exh and conferences)	0.841				
	Absorptive capacity (fr association)	0.823				
Individual competences	Capability to act (fund)	0.845	0.904	0.907	0.924	0.637
	Capability to act (loan)	0.810				
	Capability to act (innovation so not ex	0.771				
	Capability to act (has IT department)	0.835				
	Skill (has skill employee)	0.868				
	Skill (has skill partner)	0.813				

The testing structure model consisted of the evaluation of the size, sign, and significance of the standardised path coefficients. Based on Table 3, the summary result of model indices, the coefficient of determination (R²) consists of 65.20% of the variance in ‘ambidex organisation’, 55.30% for ‘innovation capabilities’ and 40.70% of the variance in ‘organisation competences’ is accounted for by the model. Sanchez and Heene (2010)

considered the coefficient of determination (R²) values of > .60 as high, between 0.30 and 0.60 as moderate, and below 0.30 as low. Hence, based on Table 3 the R² values of the structure model, are ‘high’ and ‘moderate’. On the other hand, the percentages of the coefficient of determination (R²) explained by the model are greater than 10%, which implies satisfactory and significance.

Table 2 Discriminant validity

<i>Discriminant validity</i>	<i>Ambidextrous organisation</i>	<i>Business performance</i>	<i>Organisation competences</i>	<i>Individual competences</i>
Ambidextrous organisation	0.752	NA	NA	NA
Business performance	0.747	0.815	NA	NA
Organisation competences	0.642	0.775	0.824	NA
Individual competences	0.745	0.676	0.644	0.798

Table 3 Summary of structural model indices

	<i>R-square</i>	<i>R-square adjusted</i>
Ambidex organisation	0.661	0.652
Innovation capabilities	0.558	0.553
Organisation competences	0.414	0.407

Table 4 shows the loading (estimate) of ‘ambidex organisation’, ‘innovation capabilities’, ‘individual competencies’, and ‘organisational competencies’ respectively are presented. As Table 4 shows the regression weights for the effect of ‘ambidex organisation’, ‘individual competencies’ and ‘organisational competencies’ on ‘innovation capabilities’, ‘ambidex organisation’, and ‘organisational competencies’ are statistically significant at 1% respectively.

Table 4 Structural model path coefficients

<i>Total effects</i>	<i>Mean</i>	<i>Standard deviation</i>	<i>T-statistics</i>	<i>P-value</i>
Ambidex organisation → innovation capabilities	0.756	0.046	16.144	* 0.000
Individual competences → ambidex organisation	0.650	0.075	8.570	* 0.000
Individual competences → innovation capabilities	0.494	0.077	6.233	* 0.000
Individual competences → organisation competency	0.651	0.069	9.277	* 0.000
Organisation competences → ambidex organisation	0.655	0.068	9.660	* 0.000
Organisation competences → innovation capability	0.495	0.054	8.967	* 0.000

Note: *Significant at 0.01

In our hypothesised model, we suggested that the ‘individual competencies’ has an influence on ‘organisational competencies’ (H1). These hypotheses were supported by the data. It was hypothesised that ‘individual competencies’ is positively related to the ‘organisational competencies’ (H1). Hafkesbrink et al. (2013) and Hafkesbrink and

Schroll (2010) and stated that there is a relationship between individual and organisational competencies, because every organisational setting relies on a combination of different individual competencies. We found individual competencies are significant to ambidexterity organisation, but the data showed that the outer weight is a little bit less compared to organisation competencies related to 'organisational competencies'. It is understandable that most individual workers in Indonesian SMEs are relatively inferior compared to other colleagues from other countries. However, it is a quite general finding that the 'individual competencies' in Indonesian SMEs have supported their 'organisational competencies' reflecting a long tradition in our Indonesian culture, especially when an individual is able to perform very well due to the lack of barrier on the availability of 'funds' and it is easy for organisations to access loans from the outside. We found that individual competencies in Indonesia SMEs were higher when the cost of innovation is cheap. Interesting fact, our study found that individual competencies are also being determined by the availability of skilled employees and skilled partners of the organisation.

Both 'individual competencies' (H2) and 'organisational competencies' (H3) have an influence on 'ambidextrous organisation' SME organisation were our second and third hypothetical analysis. It was found that 'individual competencies' was significantly positively related to 'ambidextrous organisation' (H2) and the hypotheses were also supported by our statistical data. The same result found that 'organisational competencies' has a significantly positively relationship (H3). This result was in line with the empirical research (Hafkesbrink et al., 2013; Hafkesbrink and Schroll, 2010). Due to a strong relationship between individual and organisational competencies, and single individual competencies was applicable to the ability to cooperate for organisational collaborations, and the absorption capacity in knowledge-based dynamic capability.

Our last findings in our hypothesised model proved whether the SMEs' 'organisational ambidextrous' organisation has an influence on Innovation Capabilities (H4). Similar research done by Rodriguez and Hechanova (2014) found that Ambidextrous, both exploratively and exploitatively, become a good predictor of 'innovation capabilities', it is in line with the research results found by Hafkesbrink et al. (2013) and Hafkesbrink and Schroll (2010, 2014). This empirical research proved that when individuals are allowed to explore the outside external environment and brought that knowledge to the organisations within their own operations and were given a creativity room to encourage innovation as and support both financial and non-financial, it will increase the production capacity and competition (Kusumaastuti et al., 2015). These kinds of innovation which come from employee involvement, has been categorised as 'outside-in' in the SMEs innovation process, and will benefit the SMEs organisations (Derriawan et al., 2018; Sudarmaji, 2016; Sudarmaji and Nasip, 2017).

5 Conclusions

The biggest challenge that Indonesian SMEs will face in a very competitive environment depends on their ability to innovate, and to constantly adapt to the existing environment outside. 'Innovation Capability' is a powerful tool, particularly in the current business world. There are several 'Innovation Capabilities' advantages such as, a supply of revenue and to provide an effective competitive advantage for the SMEs in the future.

The results above show interesting findings. First, it confirmed that our initial argument that the 'individual competencies' has an influence on 'organisational competencies' (H1); as we predicted that there happened to be a relationship to most organisations, since every organisational setting relies on a combination of different individual competencies. Both 'individual competencies' and 'organisational competencies' have an influence on 'ambidextrous organisation' of SMEs organisations (H2 and H3). The strong relationship between both 'individual competencies' and 'organisational competencies' was applicable to the ability to cooperate under the 'organisational collaboration' and the 'absorption capacity' in knowledge-based dynamic capability within the organisation. The last empirical result found that SMEs' 'organisational ambidextrous' organisation as a strong influence on 'innovation capabilities' (H4) within the SME operations.

This paper assessed the 'ambidextrous organisation' for Indonesian SMEs. 'innovation capability framework' needs to be developed by SMEs in Indonesia, using aspects of 'individual competencies' and 'organisational competencies' on regular based, given the future business environment. By keeping this 'ambidextrous organisation' of SMEs on 'innovation capability framework' in mind, 'ambidextrous organisation' needs to be done under the current FTA era. There is a relationship between the FTA and 'ambidextrous organisation'. Thus, it is expected that this complex relationship can be explained easily. And the results are presumed to be a useful contribution to researchers, SMEs entrepreneurs, and policymakers.

This study investigates whether 'ambidexterity organisation capability' act as a dynamic capability. Hence, the assessment of the dynamic capabilities of 'regenerating capabilities', 'renewing capabilities', and 'absorptive capacity' on 'organisational competencies' of Indonesian SMEs was done. These constant 'knowledge-based' frameworks provide the Indonesian SMEs with 'ambidexterity organisational capability' and 'dynamic capability' in the present business world. By keeping both 'ambidexterity organisation capability' and 'dynamic capabilities' of SMEs on innovation as the top priority, the innovation opportunities will emerge and be better practiced under the FTA environments. In other words, Indonesian SMEs must upgrade their 'ambidexterity organisation capability' exercises for new better products, services, processes, or technology in order to fulfil the market's demands. However, it requires more resources that are irrelevant in the scale of economy in the domestic market.

6 Research limitation

The sampled companies were collected based on the author's current contact with the SMEs in the SMEs' association. These SMES may not be similar in many factors, especially on the leader's competencies and organisational structure factor. Hence, 'ambidexterity organisation capability' is not solely based on improving the potential 'individual competencies' and 'organisational competencies', but also on the quality of external knowledge that fits into the SMEs organisation. The unprecedented changes in an organisational structure need to be explored, since the innovation opportunities provide a strong foundation in the SMEs system. Meanwhile, the utilisation of ICT is becoming the fastest growing trend in the coming years and needed to be explored deeply in order to transform the 'ambidexterity organisation capability' within the Indonesian SMEs. The competencies of the leaders, their own orientation, and motivation can

distinguish Indonesian SMEs from others. It could be because the stakeholders have a different educational, cultural, and social background. The study realises that it is a very complicated concept to quantify the qualitative of ‘ambidexterity organisation capability’ and ‘innovation capability’. Therefore, the study believes that there are many possible variables that cannot be traced in the study, and it cannot be counted or described statistically or quantitatively.

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