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Network capability, relational capability and Indonesian manufacturing SME performance: an empirical analysis of the mediating role of product innovation

Naili Farida Nuryakin

ABSTRACT
The relational capability can create networks and build relationships to be an essential part of a company to improve business performance. This study aims to empirically prove the influence of knowledge sharing on product innovation, the effect of network capability on product innovation and business performance, the effect of relational ability on product innovation and business performance, and the effect of product innovation on business performance. The sample of this research was created from owners of batik manufacturing SMEs in Lasem, Rembang, Central Java. The study used SEM-PLS for analysis. The results found that (1) knowledge sharing had a positive and significant effect on product innovation; (2) network capability had a positive and significant impact on product innovation and business performance; (3) relational ability had a positive and significant effect on product innovation and business performance; (4) greater effect of product innovation affects business performance. The role of product innovation is to mediate between knowledge sharing and marketing performance. SMEs can improve business performance.

KEY WORDS
knowledge sharing, network capability, relational capability, product innovation, business performance

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Nuryakin

Universitas Muhammadiyah Yogyakarta, Indonesia
ORCID 0000-0002-4998-9601

Corresponding author:
nuryakin@umy.ac.id

Naili Farida

Business Administration Diponegoro University, Indonesia
ORCID 0000-0001-8532-4984

Introduction

Knowledge is the key to the success of an organisation (Kim & Lee, 2013) and is one source of competitive advantage in dealing with an uncertain environment (Zhang & Jiang, 2015). One part of knowledge management is knowledge sharing. The pace of innovation cannot be confronted with the traditional approach of resource allocation; therefore, companies have to seek new business models to favour advances of embedding upgraded technology

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for their products and services. In this respect, knowledge sharing and open innovation become crucial in confronting uncertainty with competition reaction and growing client expectations. The study by Yeşil, Koska, and Buyukbese (2013) explained the importance of the knowledge sharing process in achieving innovation capability. Therefore, knowledge sharing and innovation are two important and interrelated subjects that need to be further explored to understand their dynamics and implications for an organisation.

Knowledge sharing activities are among the competitive advantages that companies must possess (Abdul-Jalal, Toulson & Tweed, 2013; Cabrera, Collins & Salgado, 2006; Nonaka, 1991; Spender & Grant, 1996; Nwaiwu et al., 2020; Usman, Hartani & Sroka, 2020). Sharing information will help employees of different divisions understand various definitions. Information can also be shared between companies and even competitors. Information sharing impacts business innovation and performance (Rao, Guo & Chen, 2015).

The ability to create networks and build relationships becomes an essential part of an organisation. The role and importance of inter-organisational relationships in competitive advantage and company performance have received increasing attention over the last two decades (Ngugi & Johnsen, 2010). The ability of companies to build networks affects their ability to access scarce resources needed to pursue opportunities (Aldrich & Carter, 2004). This capability enables them to exploit and mobilise complementary network resources from their interaction partners (i.e., resources that they do not have) and create value despite resource constraints (Mu, 2013). This makes the company more innovative (Wang & Wang, 2012) and ensures high performance (Ranjay Gulati, 1999; Hoffman, 2007).

According to Eshlaghy and Maatofi (2011), innovation is crucial for enhancing performance. Eris and Ozmen (2012) found that innovation affects performance. However, other studies explain that innovation does not support marketing performance (Mavondo, Chimhanzi & Stewart, 2005). Salavou and Avlonitis (2008) found that product innovation activities, innovation and concept innovation did not have a significant impact on company performance. Based on the two differences in the results of the study, a research gap remains in examining the importance of the role of innovation in improving company performance, which requires further research.

This research was conducted on a sample of batik SMEs in Lasem, Rembang, Central Java. The empirical investigation targeted the relationship between knowledge sharing on product innovation, network capability on product innovation and business performance, relational ability on product innovation and business performance, and product innovation on business performance.

This study aimed to empirically prove and test the effect of knowledge sharing on product innovation, test the impact of network capability on product innovation and business performance, examine the impact of relational capacity on product innovation and business performance, and test the impact of product innovation on business performance. The study also contributed to closing the research gap and discussed the effect of innovation on performance.

1. Literature review

1.1. Knowledge sharing

The basic principle established in the field of knowledge management is the fact that knowledge can be shared (Nonaka & Takeuchi, 1995). Knowledge sharing refers to providing information and knowledge to help others. In the context of collaboration, knowledge sharing is useful for solving problems, developing new ideas, or implementing policies or procedures (Cummings, 2004).

Van den Hooff and De Ridder (2004) defined knowledge sharing as the process by which individuals exchange knowledge and create new knowledge together. Ardichvili, Page and Wentling (2003) explained that in knowledge sharing, one party must share knowledge, and another must receive it. Within an organisation, one way to share knowledge is to share work experience, expertise, knowledge, and contextual information between employees (Lin, 2007).

Knowledge-sharing activities can impact other business processes. Information and knowledge significantly affect the quality of managerial decision making (Raghunathan, 1999). Companies that engage in knowledge-sharing activities impact innovation (Lin, 2007; Marina du, 2007) and business performance (Matin, Alvani, Jandaghi & Pashazadeh, 2010; Rao et al., 2015; Saraf, Langdon & Gosain, 2007; Surijah, 2015).

1.2. Network capability

There are various definitions of network capability. It is perceived as the company's ability to initiate,

develop, and utilise internal organisational and external organisational relationships (Zacca, Mumin & Ahrens, 2015). The basic concept is that companies can build, manage, and exploit relationships (Ritter & Gemunden, 2003). Lambe, Spekman, and Hunt (2002) and networking capabilities, such as the ability to find, build and manage relationships. Companies must develop close relationships with external parties (Mascarenhas, Bajeva & Jamil, 1998). Thornton, Henneberg, and Naude (2014) proposed the concept of organisational networking as corporate behaviour, namely activities/routines/practices, which enable an organisation to understand and utilise its network of business relationships, both direct and indirect.

Companies that can create high-quality relationship will achieve performance (Nuryakin & Retnawati, 2016). Network capability can help discover other skills within the organisation (Vesalainen & Hakala, 2014). High-quality business networks enable companies to identify opportunities, access the wealth of information, and undertake effective and efficient knowledge transfers and resource mobilisation (Achrol & Kotler, 1999; Uzzi, 1996). Companies that have secure business networks also have a better understanding of their environment (Henneberg, Naude & Mouzas, 2010). Network capability is also a source of competitive advantage for companies (Mitrega et al., 2012). Acquaah (2012) showed how companies with secure networks influenced business performance.

1.3. Relational capability

The key to a company's success lies not only in internal but also in external resources. External resources originate outside the company and arise from the fabric of relationships established between the company and external parties. Market-based relational resources are among the essential capabilities that a company must have to increase competitive advantage and performance (Nuryakin & Ardyan, 2018a). Relationships developed with external parties, such as customers and strategic partners, have also proven to be essential sources of knowledge and abilities (Kale, Singh & Perlmutter, 2000) and have the potential to increase innovation. As a result, companies depend on the quality and quantity of their relationship (Powell, 1996). Smirnova, Naude, Henneberg, Mouzas, and Kouchtch (2011) argued that the definition of relational capability has two approaches, namely, (1) relational capacity is the acceleration of access to knowledge, support, innovation, and the creation of competitive advantage; and (2) the company's ability to communicate, coordinate, and regulate business interactions.

1.4. Product innovation

Company leaders must prioritise innovation (Leavy, 2005), e.g., by focusing on research and development. R&D is the driver for a variety of products or services. The focus on innovation positively impacts competitive advantage (Nuryakin, 2018). Innovation also affects company success (Christian, 1963) and performance (Ardyan, 2016).

New products have different levels of innovation. Boer and During (2001) defined innovation as the process of creating new products, new markets, new technologies, new organisations, or a combination of these. Innovation activities must result in something new to the target audience to attract customers (Husein & Nuryakin, 2018). Various studies on the innovation levels explain multiple types, such as radical, incremental and moderate innovation or genuinely new products (Garcia & Calantone, 2002; Herrmann, Gassmann & Eisert, 2007; Janssen, Stoopendaal & Putters, 2015; Souto, 2015; Un, 2010; Utterback & Abernathy, 1975). Radical innovations tend to occur on a large scale and incremental on a small scale. Moderate innovations are linked to the existing scale of innovation. New products mean novelty in terms of the outcome and processes used for production.

1.5. Business performance

Performance is one indicator that explains how a business is doing. The measurement of business performance is somewhat diverse. Jaworski dan Kohli (1993) described indicators of business performance as market share, organisational commitment, esprit de corps, and overall performance. Slater and Narver (1994) considered ROA, sales growth, new product success as business performance. Matear, Osborn, Garrett, and Gray (2002) divided business performance into two types, namely, market and financial performance. Wang, Hult, Ketchen, and Ahmed (2009) looked at business performance as subjective and objective performance.

According to Sin, Tse, Chan, Heung, and Yim (2006), performance can be achieved by comparing a business to its main competitors based on seven aspects, comprising (1) sales growth; (2) customer retention; (3) return on investment (ROI); (4) stocks on the market; (5) trust; (6) consumer satisfaction;

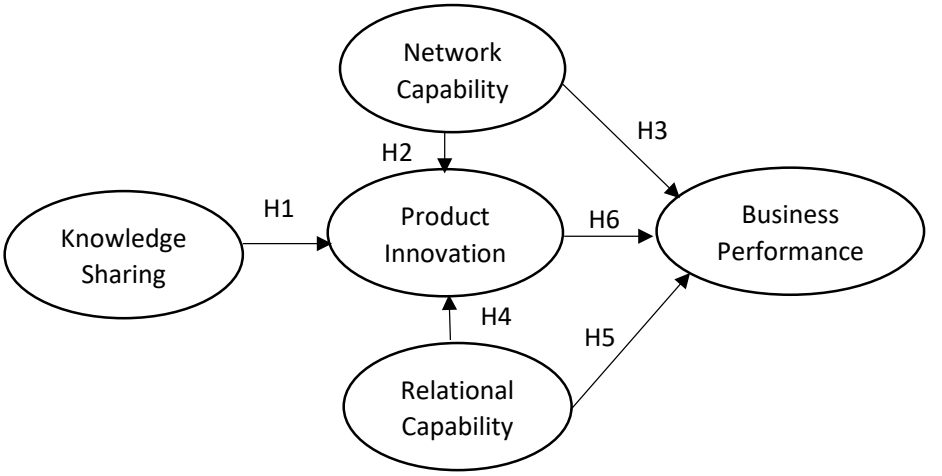

Fig. 1. Empirical research model

and (7) return on sales (ROS). Meanwhile, Sharabati, Jawad, and Bontis (2010) measured business performance using dimensions of productivity, profitability, and market valuation. Najib and Kiminami (2011) measured the dimensions of marketing performance with three indicators: sales volume, profitability, and market share. Nuryakin and Ardyan (2018b) focused on evaluating marketing performance in international markets, looking at sales growth, increasing product offering, product value, and market coverage.

Based on the literature review, the empirical research model was developed for this study (Fig. 1).

2. Hypothesis Development

2.1. Impact of knowledge sharing on product innovation

Alawi, Kayworth, and Leidner (2005) argue that knowledge can spread, be implemented, and developed through knowledge sharing. Knowledge sharing can motivate individuals to think more critically and more creatively so that they can eventually produce new knowledge. Companies can profit from such knowledge in various ways. Jantunen (2005) argued that an organisation that shared and gathered knowledge could enjoy superior innovation capabilities. Lin (2007) explained that gathering and donating knowledge are two strictly necessary concepts that influence a company's innovation capability. The study by Yeşil et al. (2013) confirmed a hypothesis that the knowledge sharing process influenced the innovation capability of firms.

Based on theoretical and other previous studies, the following hypothesis was developed:

H1: Knowledge sharing has a positive and significant effect on product innovation.

2.2. Impact of network Capability on Product innovation

Companies try to build relationships with other companies in a network to get access to the needed assets (Kogut & Zander, 1992; Pfeffer & Salancik, 1978). The assets can be in the form of tools, capabilities, resources etc. Merging these assets is likely to affect the creativity of the company. Creativity can influence the improvement of innovation within the company. Building a network means having better access to information and, thus, being in a stronger position to influence and benefit from network activities (Chiu, 2009), where one of the benefits is generating creative ideas. Building links or networks with surrounding partners allows companies to get more information from the environment, which is an essential element for the success of innovation (Astley & Sachdeva, 1984; Ritter & Gemunden, 2003). Based on theoretical and other previous studies, the following hypothesis was developed:

H2: Network capability has a positive and significant effect on product innovation.

2.3. Impact of network capability on business performance

Companies must make connections through networks in an attempt to access resources and capabilities (Ranjay Gulati, Nohria & Zaheer, 2000). The accessed resources and capabilities can affect company performance (Ranjay Gulati, 1999; Hoffman, 2007). Companies that have extensive networks find it easier to market their products. It is expected that

a more extensive network can increase the company's market share and sales.

Based on theoretical studies and other previous studies, the following hypothesis was developed:
H3: Network capability has a positive and significant effect on business performance.

2.4. Impact of relational capability on product innovation

Swan et al. (2007) discussed the importance to integrate relational skills related to innovation in the health sector. Based on the analysis of this study, relational capabilities are essential in developing innovation. A study conducted by Ngugi and Johnsen (2010) concluded that relational skills were crucial for a company faced with changing relationship needs and responding to market challenges. Innovation possibilities can be increased by supplier collaboration with customers. The advantage of this collaboration manifests through co-creation value that boosts innovation. Other studies conducted by Oshri, Kotlarsky, and Gerbasi (2015) showed that the relationship established between producers and suppliers had a significant impact on improving strategic innovation.

Based on theoretical and other previous studies, the following hypothesis was developed:
H4: Relational capability has a positive and significant effect on product innovation.

2.5. Impact of relational capability on business performance

Sin, Tse, Yau, Chow, and Lee (2005) showed that the impact of relationship marketing orientation in each country is different. The impact of relationship marketing orientation in a capitalist country (Hongkong) is less effective than in countries whose economies are centrally managed by the government (mainland China). Therefore, managers (companies that expand to various countries) must pay attention to ethnocentrism to understand the different market environments. A company must pay attention to the level of uncertainty (in terms of environment, technologies, legislation, commitment, price, and local culture) to determine whether to use relationship or transactional marketing. This decision will affect the company's performance (Abramson & Ai, 1998). Based on a study conducted by Luo, Griffith, Liu, and Shi (2004), the influence of customer relations on financial performance is greater than the social capital of business partners and government social capital.

Based on theoretical and other previous studies, the following hypothesis was developed:
H5: Relational capability has a positive and significant effect on business performance.

2.6. Impact of innovation on business performance

Innovation is one of the competitive advantages of a company, and can be a significant enabler in the creation of value and maintenance of competitive advantage in an increasingly complex and rapidly changing environment (Subramaniam, 2005). In general, innovation can fully use the existing resources, increase efficiency and potential value as well as bring new intangible assets to the organisation. Companies with more significant innovation efforts will be more successful in responding to customer needs and developing new capabilities that enable them to achieve better performance or superior profitability (Calantone, Cavusgil & Zahao, 2002). Successful innovation activities undoubtedly have a positive impact on performance (Ardyan, 2016).

Based on theoretical and other previous studies, the following hypothesis was developed:
H6: Product innovation has a positive and significant effect on business performance.

3. Empirical testing model and methodology

3.1. Research samples

This research focused on batik manufacturing SMEs in Lasem, Central Java, Indonesia. The study used purposive sampling as the sampling technique. The sample of batik manufacturing SMEs in Lasem had to correspond to the following criteria: the study respondents had to be owners of a batik manufacturing SME in Lasem; and the number of employees working at batik manufacturing SMEs in Lasem had to be at least five people. To obtain data, the researchers distributed questionnaires to 150 batik manufacturing SMEs in Lasem, Indonesia. One hundred questionnaires fully completed and eligible for analysis. So, the research sample amounted to 100 owners of batik manufacturing SMEs in Lasem.

In the research sample, 33% of respondents were male, and 67% were female, 60% were more than 40 years old, and the remaining 40% were 30–40. Most respondents graduated from a high school (47%),

followed by junior high school (42%) and elementary school (47%). Almost all respondents (99%) were married, and one was single. The highest income earned by respondents was between Rp. 6–7 million (38%). Other characteristics were the company age and the number of employees. Most companies were 4–5 years of age (38%), and the highest number of employees was between 10–50 (64%). Respondent characteristics are detailed in Table 1.

4. Analysis

The researchers used SEM-PLS to analyse the study data and WarlpPLS version 5.0 to process it. SEM-PLS was chosen because (1) the sample was relatively small, i.e., 100 batik SME owners/managers; and (2) it does not consider data normality.

Tab. 1. Respondent characteristics

Respondent characteristics	Frequency	Percentage
Sex		
Male	33	33%
Female	67	67%
Age		
<30 years old	0	0%
30–40 years old	40	40%
>40 years old	60	60%
Education		
Elementary school	11	11%
Junior high school	42	42%
Senior high school	47	47%
Marital status		
Married	99	99%
Unmarried	1	1%
Company age		
< 1 year	0	0%
2–3 years	1	1%
4–5 years	43	43%
More than 5 years	39	39%
Income		
<Rp. 5 million	4	4%
Rp. 6–10 million	38	38%
Rp. 11–15 million	21	21%
Rp. 15 million	37	37%
Number of		
employees	31	31%
<10	64	64%
10– 50	5	5%
>50		

5. Measurement

The instruments used in this study were based on a 5-point Likert scale, where 1 meant "strongly disagree" and 5 — "strongly agree". The following indicators were used for each research variable:

- Knowledge sharing. SME owners can develop knowledge from customers and assimilate information about customers. SME owners can disseminate information to customers and align their knowledge with customer value.
- Network capability. SME owners can coordinate discussions with customers and partners. They have skills in dealing personally with customers and partners and have partners sharing knowledge with customers and partners. They also have internal communication with customers and partners (Zacca et al., 2015)
- Relational capability. SME owners are able and skilled at interacting with profitable customers, capable and competent at obtaining valuable customers, competent and qualified at retaining useful customers. They have customer trust and committed relationships with clients.
- Product innovation. SME owners carry out activities related to the development of new products using different raw materials. They improve product quality and attributes and use different models to develop products.
- Business performance. SME owners can obtain increased revenue, achieve sales targets, and gain increased profits.

6. Result

6.1. Reliability and validity

The reliability test used composite reliability and Cronbach's alpha. To confirm the reliability, the composite reliability and Cronbach's alpha values had to be greater than 0.60. The composite reliability and Cronbach's alpha values are given in Table 1. In this study, composite values of variables were 0.874 (knowledge sharing), 0.878 (network capability), 0.911 (relational capability), 0.899 (product innovation), and 0.922 (business performance). The Cronbach's Alpha values were 0.806 (knowledge sharing), 0.814 (network capability), 0.876 (relational capability), 0.858 (product innovation), and 0.873 (business performance). Therefore, the instruments developed in this study were considered as reliable as the value

of composite reliability, and Cronbach's alpha was greater than 0.60.

The validity test used convergent validity (loading factor and Average Variance Extracted (AVE)) and discriminant validity (comparing AVE roots with correlations between variables). The loading and AVE factor values had to be above 0.5 (Ghozali, 2013). Table 2 shows that all loading factor values and AVE values were above 0.5. Discriminant validity was compared between the square root of AVE and the correlation between variables. Table 3 shows the square root AVE> relationship between variables, so both loading factors, AVE and discriminant validity indicated that the instruments developed in this study were valid.

Tab. 2. Reliability and validity test results

	Factor loading	AVE	Cronbach's Alpha	Composite reliability
Knowledge sharing		0.636	0.806	0.874
KS1	0.790			
KS2	0.812			
KS3	0.803			
KS4	0.873			
KS5	0.729			
Network capability		0.644	0.814	0.878
NC1	0.734			
NC2	0.763			
NC3	0.855			
NC4	0.852			
Relational capability		0.672	0.876	0.911
RC1	0.881			
RC2	0.875			
RC3	0.839			
RC4	0.791			
RC5	0.701			
Product innovation		0.640	0.858	0.899
INN1	0.777			
INN2	0.812			
INN3	0.803			
INN4	0.873			
INN5	0.729			
Business performance		0.797	0.873	0.922
BP1	0.909			
BP2	0.865			
BP3	0.904			

6.2. Goodness of fit

Model fit explains whether data support the proposed model. All goodness of fit indicators demonstrated that the built model fit with the research data. The following indicators were used in this study:

- Average path coefficient (APC)=0.279, P<0.001
- Average R-squared (ARS)=0.569, P<0.001
- Average adjusted R-squared (AARS)=0.555, P<0.001
- Average block VIF (AVIF)=2.160, acceptable if < 5, ideally < 3.3
- Average full collinearity VIF (AFVIF)=2.396, acceptable if < 5, ideally < 3.3
- Tenenhaus GoF (GoF)=0.621, small > 0.1, medium > 0.25, large > 0.36
- Simpson's paradox ratio (SPR)=1.000, acceptable if > 0.7, ideally = 1
- R-squared contribution ratio (RSCR)=1.000, acceptable if > 0.9, ideally = 1
- Statistical suppression ratio (SSR)=1.000, acceptable if >0.7
- Nonlinear bivariate causality direction ratio (NLBCDR)=1.000, acceptable if > 0.7

7. Hypothesis test

Hypothesis 1 states that knowledge sharing has a positive and significant effect on product innovation. The results of this study indicated that knowledge sharing has a positive and significant effect on product innovation ($\beta = 0.247$; $p = 0.005$). So, H1 is accepted.

Tab. 3. Discriminant validity

	Relational capability	Knowledge sharing	Product innovation	Network capability	Business performance
Relational capability	**(0.820)**	0.681	0.734	0.644	0.695
Knowledge sharing	0.681	**(0.798)**	0.652	0.577	0.515
Product innovation	0.734	0.652	**(0.800)**	0.601	0.563
Network capability	0.644	0.577	0.601	**(0.803)**	0.578
Business performance	0.695	0.515	0.563	0.578	**(0.893)**

Tab. 4. Hypothesis test results

Hypothesis	Result*	Explanation
H1: Knowledge sharing → Product Innovation	β= 0.247; p= 0.005	Hypothesis accepted
H2: Network capability → Product Innovation	β= 0.202; p= 0.018	Hypothesis accepted
H3: Network capability → Business Performance	β= 0.232; p= 0.008	Hypothesis accepted
H4: Relational capability → Product Innovation	β= 0.433; p< 0.001	Hypothesis accepted
H5: Relational capability → Business Performance	β= 0.520; p< 0.001	Hypothesis accepted
H6: Product innovation → Business Performance	β= 0.040; p= 0.342	Hypothesis rejected

*α< 0.05

Hypothesis 2 maintains that network capability has a positive and significant effect on product innovation. The results of this study indicated that network capability has a positive and significant effect on product innovation (β = 0.202; p = 0.018). So, H2 is accepted.

Hypothesis 3 says that network capability has a positive and significant effect on business performance. The results of this study indicated that network capability has a positive and significant effect on business performance (β = 0.232; p = 0.008). So, H3 is accepted.

Hypothesis 4 states that relational capability has a positive and significant effect on product innovation. The results of this study indicated that relational capability has a positive and significant effect on product innovation (β = 0.433; p <0.001). So, H4 is accepted.

Hypothesis 5 says that relational capability has a positive and significant effect on business performance. The results of this study indicated that relational capability has a positive and significant effect on business performance. So, H5 is accepted.

Hypothesis 6 maintains that product innovation has a positive and significant effect on business performance. The results of this study indicated that product innovation has no significant impact on business performance. So, H6 is rejected.

8. Discussion

8.1. Relationship between knowledge sharing and product innovation

The results of this study indicate that product innovation will affect business performance more. Besides, knowledge sharing has a positive and significant effect on product innovation.

These research results support previous studies stating that knowledge sharing activities can increase innovation (Jantunen, 2005; Lin, 2007). A company's ability to transform and exploit knowledge can determine the level of innovation (Wang & Wang, 2012), such as new problem-solving methods and new products for rapid reaction to market demand (Marina du, 2007; Tidd, Bessant & Pavitt, 2005). Jantunen (2005) argued that contributing and gathering knowledge in organisations can lead to superior company innovation capabilities.

The results of this study indicate that network capability can improve product innovation and business performance. These results are in line with previous studies stating that network capability can promote product innovation (Astley & Sachdeva, 1984; Chiu, 2009; Ritter & Gemunden, 2003) and business performance (Ranjay Gulati, 1999; Hoffman, 2007). Network partners are critical in helping companies realise their strategic goals and are recognised for their role in helping innovation activities and company growth (Ahuja, 2000). Previous research showed that most technology-based companies depended on their networks to succeed and would find it challenging to innovate, or even survive, outside the network (Powell, Koput & Smith-Doerr, 1996; Tang, Mu & Maclachlan, 2008; Yaprak, Cavusgil & Kandemir, 2006). In the batik industry in Lasem, networking capabilities enable companies to improve product innovation and business performance.

The study results indicate that relational capability can improve product innovation and business performance. These results are in line with previous studies, maintaining that relational capability can improve product innovation (Ngugi & Johnsen, 2010; Oshri et al., 2015) and business performance (Abramson & Ai, 1998; Luo, Griffin, Liu & Shi, 2004). In relationships between parties, trust is required (Morgan & Hunt, 1994). Trust in suppliers, co-workers, clients, governments, and other business units contributes to innovation (Tsai & Ghoshal, 1998). The company's ability to establish relationships makes each party willing to share information. Customers are eager to share information and technology know-how with their suppliers. Suppliers can understand

customer needs and problems better, which is the basis for increasing customer satisfaction (Narver & Slater, 1990). Customer satisfaction can increase their loyalty to continue buying products (Boonlertvanich, 2011; Chang & Tu, 2005). Satisfaction and loyalty become part of business performance.

The study results indicated that product innovation could not significantly improve business performance. This result differed from previous research, which stated that innovation had a positive and significant effect on business performance (Ardyan, 2016; Calantone et al., 2002). There are reasons why product innovation cannot significantly improve business performance. The batik industry, especially in the Lasem area, has a form and pattern of motifs that are difficult to change radically. The focus of innovation for batik SMEs in Lasem is likely to tend to incremental innovation. The lack of the focus of research variables on incremental innovation is the cause of the insignificant influence of innovation and business performance.

The results of this study indicate that the product innovation carried out by batik SMEs in Lasem does not increase sales performance. The basis of product innovation carried out at batik SMEs in Lasem is product orders from customers, who generally have their own motives or designs in ordering products.

Conclusions

The conclusions in this study are as follow: first, to improve product innovation, a company must do three essential things, namely, (1) conduct knowledge transfer activities, (2) have network capabilities, and (3) build relational capabilities. Second, business performance improvement requires the ability to build networks and establish relationships. Third, product innovation does not improve business performance.

This study indicated and contributed to the closing of the research gap. Also, it debated the mediating role of innovation in business performance. Based on the study, empirical research also explained that product innovation does not significantly improve business performance. This study supports previous research that explained the failure of innovation to support performance (Mavondo et al., 2005). This research also supports the results of the study by Salavou and Avlonitis (2008), who claimed that product innovation had no significant impact on company performance.

The managerial implication in this research is that companies must improve to create secure networks and relationships with stakeholders. Building a strong network and having good relationships with business partners will make companies share knowledge, skills, technologies, and resources. Consequently, companies will develop product innovation more easily and will have a positive impact on business performance.

There are several limitations to this study: (1) the sample used is small, (2) it does consider cultural aspects in the batik industry, and (3) it does not consider data normality. Therefore, future research should (1) enlarge the sample, (2) consider cultural aspects in their effects on business performance, and (3) use covariate-based SEM to find the assumption of data normality.

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