Relational capital and marketing performance: The mediating role of SMEs networking in Indonesia

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ABSTRACT

The purpose of this research is to find a research gap solution between relational capital and marketing performance. This research uses small and medium enterprises (SMEs) networking as a mediating variable, and adds technology capability and new product development as an expansion of research. The research method uses Structural Equation Modeling to test hypotheses and uses WarpPLS 4.0 in data analysis. Simple random sampling is conducted to 170 respondents as owners or managers of SMEs in Indonesia. The findings of this study indicate that the SME networking is an appropriate mediating variable between relational capital and marketing performance since there is a significant effect of relational capital on SMEs networking directly and also a significant effect of SME networking to marketing performance, directly. However, there is no significant effects of technology capability to SME networking and also no significant influence from technology capability to new product development. Likewise, there is no significant influence of new product development to marketing performance. This research is very important for SMEs in Indonesia as a solution for facing problems in the future.

Keywords: Relational Capital, SME Networking, Technology Capability, New Product Development, Marketing Performance

1. Introduction

The changing and turbulent environments make small and medium enterprises (SMEs) more creative and innovative in running their business. Studies on relational capital is of increasing interest for both academics and practitioners. Some researchers believed that entrepreneurship is made by a networking approach, with focusing on the relational aspect (Welbourne & Pardo-del-Val, 2008; Raza, 2012; Abiola & Emmanuel, 2013). SMEs need to increase their relationship with many units, such as customers, business partners, suppliers, business association and government in order to support their networks. This is very important for SMEs to succeed in having the most in these networks, they have to be more collaborate and synergize to develop the networks. These networks cannot run effectively if are not supported by technology, since today technology is growing rapidly in supporting all business activities. Technology makes everything easier and faster in business processes, and also can increase business competitive advantages (Eggert & Serdaroglu, 2011; Li-Hua & Lu, 2013). Technological progress is developing very fast in every second, so it needs the ability to use technology in business activities. The ability to use technology will be very beneficial for everyone in the efficiency and effectiveness of work and time, so that more optimal business results can be obtained. Relational capital is a very important basis for SMEs in building relationships with parties outside SMEs, and this relationship will eventually form a very important network for SMEs in increasing competitive advantage. This competitive advantage will improve marketing performance and this must be maintained by the SMEs’ owners or managers. There are many studies regarding the relationship between relational capital and marketing performance. Some research results give positive or significant results, and some results give negative or insignificant research results. This has led to inconsistencies in research results that are of interest to future research, by finding appropriate mediating variables to bridge the relationship between relational capital and marketing performance. Research on relational capital is very interesting since there are many opportunities that we can develop into new research, and one of those
opportunities is to add networking as a mediating variable between relational capital and marketing performance. In addition to networking, there are many more theoretical contributions that can be included in research development, such as entrepreneurship, supplier performance, buyer performance, customer value, and innovation excellence. However, the network is the most suitable as a mediating variable between relational capital to marketing performance because in theoretical and logical connection, a good relationship with all parties outside SMEs will form a network that will increasingly grow since the core of a relationship is trust and mutual benefit between two parties.

This study aims to fill up research gap through building a conceptual model based on relational capital for leveraging marketing performance. Adopting the commitment-trust relationship theory of marketing (Morgan & Hunt 1994), a conceptual model is developed to explain the process of how relational capital is empowered through network and how technology energizes the process for enhancing new product development and marketing performance. This research is very important because Indonesia is a developing country, and most of the economic activities are controlled by SMEs. Although there are still many problems that must be faced by SME owners or managers, the scientific contribution through this research is expected to be able to prove and give instructions to SMEs’ owners or managers in running their businesses and provide readiness to face challenges in the future.

2. Literature review

2.1 Relational capital and SME networking

In recent years, many alternatives have been proposed to identify the elements from which intellectual capital is made up. However, one particular classification, based on three dimensions has become a certain consensus for all. It includes, human capital, structural capital, and relational capital (Sveiby, 1997; Bontis, 1998). The relational capital is a determinant of business success, since it consists of informal and formal relationships, temporary and permanent relationships, which can help to build the business (Westlund, 2003; Hormiga et al., 2010; Hormiga et al., 2011). Relational capital refers to the essential condition for the establishment of social interaction that can support people to have a quality communication during their interaction (Nahapiet, & Ghoshal, 1998). The other researchers found that relational capital was a great extension system and dependent on relationship with many people in their environment (Hormiga et al. 2010). This relational capital is built by internal and external relationships with many people such as employees, customers, suppliers, shareholders, and stakeholders. Relational capital is also a part of loyalty, commitment, and trust between company and those people that company must increase to achieve the competitive advantage (Van Laere & Heene, 2001; Shruthi & Devaraja, 2012; Wang 2014). Relational capital is a power to develop and maintain the relationships with many people such as shareholders or stakeholders in creating network, in order to share the information, access, support and reciprocity advantage (Kearney & Abdul-Nour, 2004; Širec & Bradač, 2009; Roy, 2012; Gurrieri 2013). Based on the aforementioned discussion, it is proposed that:

**H1**: Relational capital positively influences SME networking.

2.2 SME networking and marketing performance

Many studies of business networks conclude that a great advantage from membership of a network is the accessing and utilizing external resources that can be used to enhance the firms performance and also can provide value to members by allowing them access to the social resources embedded within a network (Havnes & Senneseth, 2001; Florin et al., 2003). Networking is an important managerial skill for businesses that are operated in informal settings, such as those of small and medium firms, need to concentrate on building strong relationships with the role players in their networks. By being part of the network, the value of situation, organization or group increases as more and more people bring more expertise and other valuable characteristics to the network (Eddleston et al. 2004). The importance of developing and managing entrepreneurial networks within the small and medium firm is clearly important. However, establishing and growing such networks often demands access to complex and diverse resources, both tangible and intangible, that can only be acquired by interacting with a wide range of individuals and organizations (Pena, 2002). Numerous studies have contended that the marketing performance of SME may be enhanced if such firms make proactive use of business networks in which they are embedded (Gilmore et al., 2000; Blankson & Stokes, 2002; Blankson, 2005; Gilmore et al., 2006). It has been long described that marketing performance is very important to overall firm performance, especially among SME (Langerak, 2003; Kara et al., 2005). Accordingly, the following hypothesis is proposed:

**H2**: SME networking positively influences marketing performance.

2.3 Technology capability and SME networking

There are literally several studies on technology capability and both theoretical and empirical studies extended the research on the subject (Lall, 1992; Panda & Ramanathan, 1996; Kim, 1999). They started to address the relationship between technological capability and the firm’ success (Hall & Bagchi-Sen, 2002; García-Muiña & E. Navas-López, 2007); to conduct sector studies (Archibugi & Pianta, 1996; Jin & von Zedtwitz, 2008). In Resource-Based View (RBV), technological
capabilities describe the root of a firm’s sustainable competitive advantage, differences in technological investment allocations and in technological capabilities which construct the heterogeneous technology resources firm develop and explain variation’s in performance (Weill & Aral, 2007). Skill, knowledge and experience are needed to execute existing systems and to build technical change from technological capability. Firms require to collect resources and competences and to have a more developed technological capabilities than their competitors, which means, technological capability relates to absorption and transformation of a technology as a way of reaching higher levels of technical-economic efficiency (Zawislak et al., 2012). Calantone et al. (2002) indicate that learning leads a firm to innovate, which affects its performance. Accordingly, they argue that firms need to focus on learning process to obtain competitive advantage in the market. Thus technological capability has been considered as a critical elements that improve firm’s performance (Zhou et al. 2005). Furthermore, the great pressure from competitors and rapidly changing technology in today’s business environment made collaboration with other market participants a crucial condition for enhancing market success (Davis & Love 2011). Thus the quest to outperform competitors is the main reason nowadays that organization engaged in collective activity and inter organization relations in the form of strategic network (Gathungu et al. 2014). Therefore, the following hypothesis is proposed:

\[ H_3 \]: Technology capability positively influences SME networking.

2.4 Technology capability and new product development

The resource-based view (RBV) describes technological capability a vital resource than company should have to achieve great performance (Barney, 1991). Technological capability plays a key role in bringing new products to market and to maintain a competitive advantage in volatile economies. The literature suggests that technology-oriented firms are usually characterized by a high R & D investment, which strengthens firms technological based (Kim, 2000; Schoenecker & Swanson, 2002), and that firms need to excel not only at generating new innovations but also at commercializing these innovations (Dutta et al., 1999). Thus, technological capability may play different roles for different strategic orientations in pursuing new product performance. However, this issue has not yet been investigated within the new product development context. Technology orientation has received significant attention in new product development studies. A technology-oriented firm is the one that seeks a substantial technological background and uses it in the development of new products (Gatignon & Xuereb, 1997; Gao et al., 2007). Gatignon and Xuereb (1997) have suggested that several important features define a firm’s technology orientation such as the use of sophisticated technologies in new product development, the rapidity of integration of new technologies, and the proactive development of new technologies and product ideas. Therefore, it is proposed that:

\[ H_4 \]: Technology capability positively influences new product development.

2.5 New product development and marketing performance

New product development as the combination of a series of information processing, through which to transform market opportunities and demands into production knowledge (Utterback et al., 1976); as the key in businesses success to enhance operating performance (Liu et al., 2014). Meanwhile, another study regarded new product development as a difficult process but it has been identified as an important precursor to performance (Bendoly et al., 2012). As highlighted by Im and Rai (2008), organizations have come to realize the important of new product development for a company to survive in this competitive environment. In addition to that, past studies have posited that new product development is a complex or higher-order capability that involves multiple organizational performance (Mishra & Shah, 2009). Having a good relationship with customers is a crucial criterion in improving the business performance of an organization. Maintaining good customer relationships help enhance customer satisfaction and this in turn results in better company performance (Lo, 2012). In the process of new product development, a business does not simply promote new product, but has to satisfy customer demands and cope with competitor’s threats. It is therefore important for businesses correctly analyzing the consumer market to draw the new product development strategies mostly suitable for the business. Therefore, the following hypothesis is proposed:

\[ H_5 \]: New product development positively influences marketing performance.

3. Methodology

3.1 Sample and data collection

The population of this study is the owner or manager of fish crackers in Indonesia who agree to participate in the study and come from three large islands in Indonesia, such as Kalimantan, Java and Sumatra. The sample is obtained by using the calculation of five times the indicator of each variable in this study plus five times the parameter estimation, which is about 170 respondents. Sampling uses probability sampling with a simple random sampling method based on the consideration that SMEs have been operating for at least two years. Primary data were collected by using questionnaires and interviews with the field officers who are residing on each island in this study, and after completion of the collection, results will be sent to researchers. This study investigates relational capital, SMEs networking, technology capability, new product development and marketing performance.
3.2 Measures and testing of validity and reliability

Measures used in this study are adapted from existing studies. Relational capital measures are based upon (Abiola, 2013). This measure consists of customer capital, supplier capital and employee network. Networking is adapted from (Kale et al., 2002). This measure consists of coordination, relational skills, partner knowledge and internal communication. Measures of technology capability is based on the concept of Guifu and Hongjia (2009). This measure consists of technology acquiring capability, technology operating capability and technology upgrading capability. Moreover, measures of new product development are adapted from (Atuahene–Gima & Li, 2000). This measure consists of conceptualizing ideas, designing, developing and introducing a new product or service in the market. Marketing performance is measured using common indicators, such as sales volume (Flaherty & Pappas, 2012; Guenzi et al., 2014; Mariadoss et al. 2014), sales growth (Spillecke & Brettel, 2013; Chakrabarty et al., 2014), and market share (Kaynak & Kara, 2004). The owner or manager of fish crackers is asked to rate all indicators from 1 to 5. The final data from 170 respondents are then analyzed using confirmatory factor analysis of structural equation modeling software WarpPLS 4.0.

Table 1
Evaluation of measurement models (validity test) Outer Loading

<table>
<thead>
<tr>
<th>Variable</th>
<th>RC</th>
<th>NET</th>
<th>TC</th>
<th>NPD</th>
<th>MP</th>
</tr>
</thead>
<tbody>
<tr>
<td>RC1</td>
<td>1.000</td>
<td>-0.087</td>
<td>0.190</td>
<td>0.041</td>
<td>-0.023</td>
</tr>
<tr>
<td>RC2</td>
<td>1.000</td>
<td>-0.087</td>
<td>0.190</td>
<td>0.041</td>
<td>-0.023</td>
</tr>
<tr>
<td>RC3</td>
<td>1.000</td>
<td>-0.087</td>
<td>0.190</td>
<td>0.041</td>
<td>-0.023</td>
</tr>
<tr>
<td>NET1</td>
<td>-0.087</td>
<td>1.000</td>
<td>0.085</td>
<td>-0.235</td>
<td>-0.071</td>
</tr>
<tr>
<td>NET2</td>
<td>-0.087</td>
<td>1.000</td>
<td>0.085</td>
<td>-0.235</td>
<td>-0.071</td>
</tr>
<tr>
<td>NET3</td>
<td>-0.087</td>
<td>1.000</td>
<td>0.085</td>
<td>-0.235</td>
<td>-0.071</td>
</tr>
<tr>
<td>NET4</td>
<td>-0.087</td>
<td>1.000</td>
<td>0.085</td>
<td>-0.235</td>
<td>-0.071</td>
</tr>
<tr>
<td>TC1</td>
<td>0.190</td>
<td>0.085</td>
<td>1.000</td>
<td>-0.030</td>
<td>0.154</td>
</tr>
<tr>
<td>TC2</td>
<td>0.190</td>
<td>0.085</td>
<td>1.000</td>
<td>-0.030</td>
<td>0.154</td>
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<tr>
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<td>0.190</td>
<td>0.085</td>
<td>1.000</td>
<td>-0.030</td>
<td>0.154</td>
</tr>
<tr>
<td>NPD1</td>
<td>0.041</td>
<td>-0.235</td>
<td>-0.030</td>
<td>1.000</td>
<td>-0.150</td>
</tr>
<tr>
<td>NPD2</td>
<td>0.041</td>
<td>-0.235</td>
<td>-0.030</td>
<td>1.000</td>
<td>-0.150</td>
</tr>
<tr>
<td>NPD3</td>
<td>0.041</td>
<td>-0.235</td>
<td>-0.030</td>
<td>1.000</td>
<td>-0.150</td>
</tr>
<tr>
<td>NPD4</td>
<td>0.041</td>
<td>-0.235</td>
<td>-0.030</td>
<td>1.000</td>
<td>-0.150</td>
</tr>
<tr>
<td>MP1</td>
<td>-0.023</td>
<td>-0.071</td>
<td>0.154</td>
<td>-0.150</td>
<td>1.000</td>
</tr>
<tr>
<td>MP2</td>
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<td>-0.071</td>
<td>0.154</td>
<td>-0.150</td>
<td>1.000</td>
</tr>
<tr>
<td>MP3</td>
<td>-0.023</td>
<td>-0.071</td>
<td>0.154</td>
<td>-0.150</td>
<td>1.000</td>
</tr>
</tbody>
</table>

The measurement model has high validity if the outer loading value is > 0.5. Based on the calculation results obtained by the outer loading values of all indicators of this study 1.0 > 0.5, it was concluded that the evaluation of the measurement model has a very high internal validity.

Table 2
Internal Consistency Analysis (Reliability) Composite reliability coefficients, Cronbach's alpha coefficients, and Average variances extracted

<table>
<thead>
<tr>
<th>RC</th>
<th>NET</th>
<th>TC</th>
<th>NPD</th>
<th>MP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Evaluation of the research measurement model has internal consistency (reliability) if the output value composite reliability, cronbach alpha, and AVE > 0.7. Based on the results of the WarpPLS output, it is known that the output value of composite reliability, cronbach alpha, and average variances extract (AVE) is 1.0 > 0.7, so it can be concluded that the evaluation of the measurement model of this study is very reliable or has a very high internal consistency.

Table 3
Full collinearity VIFs

<table>
<thead>
<tr>
<th>RC</th>
<th>NET</th>
<th>TC</th>
<th>NPD</th>
<th>MP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.053</td>
<td>1.094</td>
<td>1.080</td>
<td>1.091</td>
<td>1.067</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>AVIF</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.077</td>
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</tbody>
</table>

There is no multicollinearity problem if the Average Inflation Factor (AVIF) < 5. WarpPLS output shows an AVIF value of 1.077 < 5, then it is concluded that there is no multicollinearity problem between exogenous variables.
4. Results and discussion

The results of data processing by using WarpPLS software tools obtain the model structure of the loading factor construct that would explain the correlation of the construct of relational capital, SMEs networking, technology capability, new product development, and marketing performance. To determine whether hypothesis is accepted or not is determined by comparing (t count) with (t table), on the condition that if (t count) > (t table), then the hypothesis is accepted.

### Table 4
The results of path coefficient

<table>
<thead>
<tr>
<th>Variable</th>
<th>RC</th>
<th>NET</th>
<th>TC</th>
<th>NPD</th>
<th>MP</th>
</tr>
</thead>
<tbody>
<tr>
<td>RC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NET</td>
<td>-0.107</td>
<td></td>
<td>0.105</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NPD</td>
<td>-0.112</td>
<td></td>
<td>-0.030</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MP</td>
<td></td>
<td></td>
<td></td>
<td>-0.176</td>
<td></td>
</tr>
</tbody>
</table>

### Table 5
The results of P-values

<table>
<thead>
<tr>
<th>Variable</th>
<th>RC</th>
<th>NET</th>
<th>TC</th>
<th>NPD</th>
<th>MP</th>
</tr>
</thead>
<tbody>
<tr>
<td>RC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NET</td>
<td>0.007</td>
<td></td>
<td>0.105</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NPD</td>
<td></td>
<td>0.385</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MP</td>
<td></td>
<td>0.043</td>
<td>0.132</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The results based on the output of path coefficient and the p-value show that relational capital (RC) had a significant influence on SME networking (NET) with the resulting p-value 0.007 < 0.05 and the path coefficient -0.107. Furthermore, it can be seen that network (NET) had a significant effect on marketing performance (MP) with the p-value obtained 0.043 < 0.05 and the path coefficient value -0.112. Thus, hypothesis 1 and hypothesis 2 are accepted. The results of testing the third hypothesis, whether there is any influence of technology capability (TC) on SME networking (NET) shows the probability value (p-value) 0.105 > 0.05 and the path coefficient value is 0.105. It is concluded that technology capability (TC) had no effect on the SME networking (NET). Thus, the third hypothesis is rejected. The results of testing the fifth hypothesis, whether any influence of new product development (NPD) on marketing performance (MP) shows the probability value (p-value) 0.132 > 0.05 and the path coefficient value -0.176. It is concluded that new product development (NPD) has no effect on marketing performance (MP). Thus, the fifth hypothesis is rejected.

The results of data analysis show that relational capital significantly influences SME networking and SME networking also significantly influences marketing performance. When there is a higher relational capital possessed by the firms with customer capital, supplier capital and employee network will tend to encourage SME networking with coordination, relational skills, partner knowledge and internal communication. Better SME networking will also drive marketing performance with sales volume, sales growth, and market share. This findings of the study are supported in the literature (e.g. Kearney & Abdul-Nour, 2004; Širec & Bradač, 2009; Roy, 2012; Gurrieri, 2013) on the correlation of SME networking and firm growth. In this matter, SME networking has important role to increase competitive advantage and important contribution to the firm’s performance.

Technology capability does not significantly affect the SME networking. This research does not have the same result with the previous research, which explains the correlation of changing technology toward market participants for enhancing market success (Davis & Love 2011). There are possibilities that cause technology capability has no significance influence to SMEs...
Technology capability does not significantly affect the new product development. This research found, that it is very difficult for SMEs to improve their new product development through technology capability since only companies with technology orientation can do it, so this research supports the research conducted in the literature (Gatignon & Xuereb, 1997; Gao et al., 2007). In addition of that, the SMEs in this research produce their products in a traditional way by using simple equipment, so that technology capability does not play a big role in these SME. New product development should be able to improve the performance of a company (Im & Rai, 2008; Mishra & Shah, 2009; Bendoly et al., 2012). However, this study found different results. There are some possibilities that support this: (1) SME owners do not have the technology capability, so they do not have the ability to innovate products. (2) All SMEs have the same product, so they do not have a competitive advantage. (3) The advantage that can be done by SME owners is by providing satisfactory services at competitive prices, so that products can be sold.

5. Conclusion

In this study, there are some objectives to be achieved. The first objective to this study was to test the effect of relational capital that consists of customer capital, supplier capital and employee network on marketing performance, both directly and indirectly (SMEs networking as intervening variable). The results of this study have indicated that SME networking is a mediating variable of relational capital on marketing performance. Relational capital has not indicated any direct influence on marketing performance. This indicates that customer capital, supplier capital and employee network indirectly improve marketing performance. The indicators were proven to increase SMEs networking before they affect marketing performance. The second objective to this study was to test the effect of technology capability on SMEs networking directly. Results of this study have indicated that technology capability did not have any direct influence on SME networking. The third objective to this study was to test the effect of technology capability on new product development directly. Results of this study have indicated that technology capability did not have any direct influence on new product development. Last objective was to test the effect of new product development on marketing performance directly. The results of this study have indicated that new product development had no significant effect on marketing performance.

The findings of this study is important for SMEs’ owner or manager. The most important factor in achieving marketing performance is SMEs networking. In this study, SMEs networking is a mediating variable of relational capital on marketing performance. From a practical perspective, this study has provided meaningful implications for the owner or manager. First, technology capability was not a major consideration in improving marketing performance. The SME owners or managers do not need to consider it. What should be given importance is how to focus on product innovation, especially in new product development. The success of product innovation can improve marketing performance. Second, the SME owner or manager must be able to operate new technology as a part of process innovation in order to produce quality products that can improve marketing performance. This innovation product must be acceptable to the market, so that the success of product innovation can improve marketing performance.

The result of this study is limited to the effect of relational capital toward marketing performance with SME networking as a mediating variable and by adding technology capability and new product development as an expansion of research, and still need further research by using a larger population, and other factors that effect marketing performance. Further researches are suggested to incorporate other variables such as market orientation, market sensing, product innovation, and other factors that effect marketing performance.

References

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