Distinctive Capability with Innovation Process Mediation Affect On Mses Business Performace: Case of Smoked Skipjack Processing Industries in North Sulawesi, Indonesia

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ABSTRACT

The purpose of this study is aimed at examining the effect of distinctive capability mediated by process innovation on MSES’ business performance of Smoked Skipjack (cakalang) processing in North Sulawesi Province. This research is conducted by censusing and interviewing of 81 MSES Smoked Skipjack producers. Data are analysed using Quantitative method while SEM-PLS method is used to examine correlation and the influence of distinctive capability to business performance. The results show that the distinctive capabilities have a positive and significant effect on business performance when it is mediated partially by process innovation. This finding implies that MSES Smoked Skipjack producers needs to optimise various process innovations through the use of its resources in order to improve business performance.

Keywords: distinctive capability, process innovation, business performances, SMEs

Introduction

Various studies show that the SMEs sector plays an important role in job creation, tax payment, state revenues, human resource development in innovation and entrepreneurship creation, poverty reduction, income gap reduction and others. The business range is mostly found in agriculture, fishery, people mining, restaurant, food processing and other services. (Agyapong, 2010; Aremu & Adeyemi, 2011; Waari & Mwangi, 2015). In Indonesia, Micro Small Medium Enterprises (MSEs) sector is one of the few sectors affected by the global economic crisis (As'ari, 2016) and plays much greater roles than in some the ASEAN region and Asia countries (Wilantara & Susilawati : 2016). In north Sulawesi, for instance, data from provincial cooperative and MSEs office (2016) inform that MSEs contributes 52.58 percent of total workforce absorptions.
Form numbers of MSEs in North Sulawesi Province, 736 MSEs relate to the processing industry of fishery products involving processing and marketing. They process and market various types of fish whether for consumption purposes or non-consumption processing industries. Among those for consumption purposes, processing industries of smoked skipjack are industries that many entered by household in North Sulawesi.

Smoked Skipjack, local known as Cakalang Asap, is categorised into small micro-enterprises (home industry). This classification is based on Law No. 20 Year 2008. Based on this law, micro business is a business having net worth of Rp 50 million not including land and building or having annual turnover of Rp 300 million (Kemeneg Koperasi and UMKM RI, 2008). In addition, Sujatmiko (2014) mentions that home industry is an industry that employs less than four labour, mostly from family members, with very limited capital. These industries are usually owned by households heads or members of their families. These industries are also categorised into home-based business characterising by the informal sector unorganized, unregulated, and mostly legal but unregistered (Widodo 2005). Furthermore, these industries are organizationally and operationally under the guidance of the Ministry of Marine Affairs and Fisheries, State Ministry of Cooperatives and SMEs and Local Government. In North Sulawesi, smoked skipjack processing industries employ between two to seven workers who come from family members or neighbors, not organized, legal but generally not registered with the owner and head of business is the head of the family.

The development of smoked skipjack in North Sulawesi is in line with the abundance of catch fish production in North Sulawesi. Data published by Provincial Government of North Sulawesi (2018) informs that captured fisheries production of North Sulawesi Province reaches 818,192.32 tons/year. Efforts to develop the skipjack industry in addition to efforts to optimize the potential of catch fish, are also intended to increase the added value of fish catches that are dominated by 3 types of fish, namely are skipjack (Cakalang), yellowfin tuna (Madidihiang), and shortfin scad (Layang). However, there is no official data published regarding the exact number of MSEs smoked skipjack industries in North Sulawesi. Based on the survey, the number of smoked skipjack industries is 84 units, as shown in Table 1.

<table>
<thead>
<tr>
<th>No</th>
<th>District/City</th>
<th>Unit of MSEs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Kota Manado</td>
<td>2</td>
</tr>
<tr>
<td>2.</td>
<td>Kota Bitung</td>
<td>27</td>
</tr>
<tr>
<td>3.</td>
<td>Kota Tomohon</td>
<td>17</td>
</tr>
<tr>
<td>4.</td>
<td>Minahasa Utara</td>
<td>12</td>
</tr>
<tr>
<td>5.</td>
<td>Tondano</td>
<td>3</td>
</tr>
<tr>
<td>6.</td>
<td>Minahasa Tenggara</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>84</strong></td>
</tr>
</tbody>
</table>

Source: Verification Field Survey, 2017

Table 1 shows that the number of SMEs of smoked skipjack in North Sulawesi is about 11 percent of the total MSEs in the fishery sector. These smoked skipjack industries are mostly located in coastal area and close to the raw material sources. Currently, these businesses are beginning to penetrate into areas that had not previously existed, and geographically located in the mountains. This indicates that the smoked skipjack consumers began to grow widely. Nevertheless, the preliminary survey also shows that some of these industries are no longer operating. Allegedly, this is caused by the lack of resources owned by the industry, lack of innovation that can follow the development of consumer preferences, as well as the high level of competition both with fellow industry and the emergence of competitive products.

The concept of Distinctive Capability and Innovation has been discussed by Pearce and Robinson (2011), Barney and Hesterly (2010), Wheelen, et.al (2015). However, all discussions focus more on applying these concepts to medium and large scale...
businesses or formal businesses. Even Hitt, et.al (2015) mentions that sources of traditional competitive advantages such as labor costs, capital, and raw materials are not effectively used in global competition. Companies must have the resources and special abilities other companies do not have as core competencies.

Study by Rosenbusch, et.al (2011) finds that innovation is not always significantly related to performance, depending on the context. Factors such as the age of the firm (the length of company operates), the type of innovation, and the cultural context affect the impact of innovation on performance in most companies. Similarly, Lin and Chen (2007) in his research on SMEs in Taiwan who applied technological and marketing innovations found that innovation has a weak relationship to the performance of SMEs. In fact, administrative innovation is the most important factor explaining performance rather than technological innovation.

In an informal industry with simple technology, tangible, intangible, and organizational capability is essential. This human resource capabilities will encourage the creation of process innovation even in a simple scope (Crossan and Apaydin, 2009).

Departing from above discussion, it is interested to examine and analyse how distinctive capabilities affect business performance through process innovation in SMEs of smoked skipjack in North Sulawesi Province.

Brief Literature Review

Distinctive Capabilities

Pearce and Robinson (2011: 154) state in the concept of Resource Based View that the company's resource factor involving tangible, intangible and organizational resources, is an important factor in determining the success or failure of the business. Therefore, these resources need to get consideration for business performance improvement and sustainability.

Hitt, et al (2015: 83-84), states that in order to compete in the global era, companies must have the resources and special abilities that other companies do not have as core competencies. Through core competencies and global competition standards, value will be reflected by low product costs, or by a combination of low cost and high quality compared to other competitors. Thus, the attractiveness of an industry depends on the nature of resources, capabilities, and core competencies.

Process Innovation

Pearce and Robinson (2011: 371-376) states that innovation is divided into two parts: incremental innovation and continuous improvement. Incremental innovation is a simple change or adjustment to existing production, service or process. While continuous improvements are an endless process of finding ways to improve and improve the company's products and processes through assembly, sales, and services. Generally, companies conduct activities that are incremental innovation involving 5 steps, i.e., define, measure, analyze, improve, and control (DMAIC). Nowadays, incremental innovation done on an ongoing basis is a new approach. This innovation is built through business operations; continuous improvement of products, services, and processes; and work relationships based on trust and teamwork.

Innovation is generally driven by the ability to see relationships, opportunities and take advantage of opportunities (Tidd and Bessant, 2013: 24). Innovation is not just about opening new markets, but it also can be new ways to serve the already established process. In addition, innovation is not merely limited to business in the form of goods, but it also involves service business. Innovation has always been the most important characteristic of success. Innovating companies generally achieve better or more successful growth than those who do not innovate. The company that gets its market share and its profitability increases is the company that innovates. Thus, innovation will always be related to change.
Business Performance

Performance serves as an instrument for formulating planning, knowing whether the company has the ability to sustain its life and the company's success. Company's performance can be measured using Market Share Profitability and Cost Reduction (Wheelen et al. 2015: 338), and the business portfolio indicated by sales growth and profitability Hubbard and Beamish (2011: 139). This measurement differs significantly to SMEs, in term of structure and philosophy (Hudson et al. 2001), and Chong. 2008). Therefore, assessing SMEs performance should be differentiated with large companies. The limited resources of SMEs show that quality and time dimensions are crucial to ensure that inefficiency levels remain low, and high levels of productivity performance are achieved. With a relatively small number of customers, SMEs should ensure customer satisfaction remains high and be flexible enough to respond to rapid market changes and remain competitive.

Two approaches are applied to measure the company's performance advantage (Hew and Loi, 2004). First approach is focussed on above-average performance dimensions, such as market share, financial performance, among others. Second approach puts attention on corporate longevity. Corporate life is used as company's performance. A long life company means that the company can survive in a long time and its performance is superior. Another business performance is suggested by Venkatraman and Ramanujam (1986). They used value based concept as performance measurement, i.e., using non-financial indicators as a complement to financial indicators. Some non-financial indicators used for performance indicators include market share, new product introductions, product quality, marketing effectiveness, industry value added, and technological efficiency. Similar indicators are also suggested by sentence Alasadi and Abdelrahim (2007). They recommended to apply satisfaction of the owners in term of profit, turnover, break even point and business development for measuring the performance of SMEs.

Previous Research

Studies explaining the effect of SMEs distinctive capabilities on their business performance are limited, mostly focus on small medium and large enterprise especially in Indonesia. From literature survey, most studies concludes that company’s capabilities have significant impact on business performances whether through innovation performance or not. Study by Sudrajat (2013) for instance. He concludes that dynamic capabilities have direct effect and indirectly on company performance through innovation performance. Similar result is also shown by study of Man and Wafa (2008) in Malaysia. Their study conclude that distinctive capabilities are significantly related to SMEs performance. In Indonesia case, Poernomo (2013) finds that (a) company resources (valuable and rare) have a significant positive effect on entrepreneurship orientation, competitive advantage, and business performance, (b) valuable, rare and inimitable corporate capability have a significant positive effect on competitive advantage, and business performance.

Other studies, such as study by Omsa, et al (2015); Awang, et al., (2010); and Erdil, et al., (2010), have similarly conclusion on the effect of company capabilities, eventhough they have dissimilarity measures of company capabilities. Omsa, et al (2015) are more concentrate on management capabilities, Awang, et al (2010) tend to focus on entrepreunership orientation and distinctive capability, while Erdil, et al (2010) use core employees and other distinctive resources as a measurement of company capabilities. As aforementioned, all these studies have rather similar conclusion about the impact of company capabilities on business performances. Omsa, et,al (2015) concludes that management capabilities have a positive and significant impact on competitive strategy and firm performance. Awang, et.al (2010) states that a) entrepreunership orientation and distinctive capability are able to explain performance significantly, b) innovation shows a positive relationship with performance, c) all dimensions of distinctive capability are positively related to performance. Finally, Erdil, et.al (2010) affirm that the ability and performance of the organization is higher in companies that use core employees (core employee) and other distinctive resources. Regarding to innovation, Dalota (2013) concludes that innovation requires the development of human resources and the provision of
supporting infrastructure. In the meantime, Laosirihongthong, et.al (2014) suggests internal resources have a positive effect on innovation performance.

Departed from above discussion, the proposed research hypothesis is

**H1: Distinctive Capability positively affects Business Performance through Process Innovation**

**RESEARCH METHODS**

This research uses a quantitative method. In this model, a total of 24 indicators are divided into 3 constructs, namely, Distinctive Capabilities (X1), Process Innovation (X2), and Performance (Y). Distinctive Capabilities (X1) consists of 14 indicators including: availability of supporting technology (X1.2), provision of production equipment (X1.3), availability of adequate raw materials (X1.4), supply of raw materials continuously (X1.5), financial availability (X1.6), provision of distribution facilities (X1.7), collaboration with other MSEs (X1.8), MSE's ability to innovate (X1.10), marketing ability (X1.11), ability to compete with similar MSEs (X1.12), ability to compete with the MSE product substitution (X1.13), ability to allocate resources (X1.16), and ability in business administration (X1.18). Construct process innovation (X2) involves 6 indicators including development of raw material management (X2.1), refinement of production process (X2.2), partnership development with supplier (X2.3), commitment in developing of service (X2.4), development commitment of UMK (X2.6), and motivation to increase knowledge (X2.7). Meanwhile, Performance Constructs comprises 4 performance indicators, namely, satisfaction in goal achievement (Y4), product quality (Y5), improvement of marketing effectiveness (Y6), and employee satisfaction in work (Y8).

This research is conducted in 6 districts / cities in North Sulawesi Province in 2017. Primary data (cross section) is collected using questionnaires with self administered methods. The unit of analysis is a Small Micro Business (SMEs) of skipjack Fish. Number of respondents are 81 SMEs of population 84 SMEs. Three MSEs are not made by respondents because they have only conducted product testing and until the research has not been conducted.

**RESULT AND DISCUSSION**

The first step in data analysis is to determine the appropriateness of the model by evaluation the outer and inner model as suggested by Abdillah and Jogiyanto (2015: 193-196). The test results of the model are discussed as follows:

*Measurement Model Test (Outer Model)*

The main parameters tested were construct validity (convergent and discriminant validity) and internal consistency test (reliability) constructs (Abdillah and Jogiyanto, 2015: 206). Rule of thumb used is AVE > 0.5, communality > 0.5, and cross loading factors greater than value on various variables for the same indicator. The results of convergence and reliability test are presented in Table 2.

<table>
<thead>
<tr>
<th>Table 2</th>
<th>Cross Loading Indicator and Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CAP (X1)</td>
</tr>
<tr>
<td>X1.2</td>
<td>0.811</td>
</tr>
<tr>
<td>X1.3</td>
<td>0.837</td>
</tr>
<tr>
<td>X1.4</td>
<td>0.770</td>
</tr>
<tr>
<td>X1.5</td>
<td>0.821</td>
</tr>
<tr>
<td>X1.6</td>
<td>0.754</td>
</tr>
<tr>
<td>X1.7</td>
<td>0.746</td>
</tr>
<tr>
<td>X1.8</td>
<td>0.657</td>
</tr>
<tr>
<td>X1.9</td>
<td>0.736</td>
</tr>
</tbody>
</table>

Table 2 shows that the value of cross loading for all the construct indicators are greater than that of the indicator in the other constructs. This means the model has enough discriminant validity. Furthermore, Table 3 presents test result of the convergence validity and model reliability.

<table>
<thead>
<tr>
<th>Variabel</th>
<th>AVE</th>
<th>Composite Reliability</th>
<th>R Square</th>
<th>Cronbachs Alpha</th>
<th>Communality</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAP (X1)</td>
<td>0.599</td>
<td>0.954</td>
<td>0.780</td>
<td>0.948</td>
<td>0.599</td>
</tr>
<tr>
<td>INOPRO (X2)</td>
<td>0.568</td>
<td>0.886</td>
<td>0.674</td>
<td>0.845</td>
<td>0.568</td>
</tr>
<tr>
<td>PERFORMNCE (Y)</td>
<td>0.622</td>
<td>0.868</td>
<td>0.796</td>
<td>0.622</td>
<td>0.622</td>
</tr>
</tbody>
</table>

Based on Table 3, the AVE and communality values for all variables are greater than 0.5. This means the probability of an indicator in a construct going to another variable is lower (<0.5). Thus, the probability of the indicator converging and entering the construction is greater as described by Abdillah and Jogiyanto (2015: 207). Meanwhile, reliability test uses Cronbach's alpha and composite reliability parameters. The rule of thumb used in this test is that the values should be greater than 0.6 and 0.7 respectively. Table 3 shows that the value of Cronbach's alpha is between 0.796 - 0.948, while the composite reliability is between 0.868 - 0.954. Thus, this test concludes that the model used is valid and reliable.

Test of Structural Model (Inner Model)

The parameters used in evaluating the inner model are $R^2$ for the dependent construct and the path or t-values value of each path for the significance test of antarkonstrusts in the structural model (Abdillah and Jogiyanto, 2015: 197). The results of this test are presented in Table 4.

The value of $R^2$ 0.677 informs that the variables of Business Performance (Y) can be explained by the variable of Distinctive Capability (X1) and Process Innovation (X2) simultaneously equal to 67.7%, while the remainder (32.3%) is explained by other factors not included in this model. In addition, the relationship of Distinctive Capability (X1) and Process Innovation (X2) has $R^2$ 0.708 indicates that variation of Process Innovation variable can be explained by variable of Distinctive Capability (X1) equal to 70.8% and the rest (29.2%) by other factor which is not included in this research model. The both $R^2$ values are in the strong category (> 0.67). Effect of each variable correlation is denoted by the Total Effect parameter, as shown in Table 4.
Total effects correlation among variables

| Original Sample (O) | Sample Mean (M) | Standard Deviation (STDEV) | Standard Error (STERR) | T Statistics (|O/STERR|) |
|---------------------|-----------------|---------------------------|------------------------|------------------------|
| CAPUNIK (X₁) → INOPRO (X₂) | 0.883           | 0.883                     | 0.022                  | 39.369                 |
| CAPUNIK (X₂) → PERFORM (Y)      | 0.812           | 0.813                     | 0.033                  | 24.577                 |
| INOPRO (X₃) → PERFORM (Y)       | 0.254           | 0.242                     | 0.129                  | 1.970                  |

* Significance at α = 0.05 (t_{table} = 1.969)

According to Abdillah and Jogiyanto (2015: 232), the mediation effect test of the signification test output is indicated by the Total effect. The main reason is that on the mediation effect, testing is done not only direct effects but also indirect effects. The criteria used are: a) If the main relationship (X₁ → Y) direct, and indirect relationship (X₁ → X₂ and X₂ → Y) are significant meaning that full mediation occurs; b) If the three relationships (X₁ → Y, X₁ → X₂ and X₂ → Y) are significant, meaning that partial mediation happens.

The analysis results show that the Original Sample (O) values are all positive. This means that if the independent variable increases it will give a positive influence on the dependent variable (see Table 4). Viewed from t-statistics is known that all correlation between variables have t-stats value > t_{table} (1.969). As a result, the hypothesis (H1) is accepted, meaning that distinctive capabilities affect business performance through process innovation.

A complete path diagram of the research model is presented in Figure 1.

**Research findings: Discussion**

By considering the result of hypothesis test using t-statistics of parameter on various independent variables, dependent and mediator, it hence can be concluded hypothesis (H₁) supported. That is, Distinctive Capabilities have a positive effect on Business

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Performance through Process Innovation. Process Innovation serves as a partial mediator. An explanation of these findings is that, according to Abdillah and Jogiyanto (2015: 232), the significant effect of output mediation is conducted by examining the Total Effect, not on path coefficient. Based on this rule, the research result shows that from the two influence relations, the Distinctive capability (X₁) has the greatest contribution to the performance of SMSEs. This is a direct (main) relationship between distinctive capability (X₁) to business performance (Y) with original sample (O) and t statistic is greater than mediation relationships.

Those findings have implications for MSME’s owners. Business performance of MSME’s smoked skipjack can be improved through two approaches. The first approach is to utilize and optimize the resources that have distinctive capabilities without having to improve a process innovation. Secondly, business performance can also be improved by utilizing process innovation owned by MSEs. The main reason is that the producers of smoked skipjack still use very simple technology or there is no introduction of adequate (modern) technology. In addition, the product characteristics have a simple feature and a short durability. For these reasons, increased business performance will be obtained if the production process of smoked skipjack in MSEs utilize process innovation. In other words, improving business performances required the capability of the resources owned. The survey also found that the resources owned by MSEs is more likely able to employ because technology used is very simple. This implies that innovation can be conducted from management process of raw material to product marketing. These arguments were also supported by many studies, among others are study by Nham Tuan, et.al (2016), Rosenbusch, et.al (2011), Lin and Chen (2007), and Uhluer, Lorraine M., et.al (2012). Nham Tuan, et.al (2016) concluded that in order to improve innovative performance and enterprise, companies in supporting industries must concentrate heavily on processes, marketing, and organizational innovation activities, rather than product innovation activities. Meanwhile, study by Rosenbusch, et.al (2011) found that innovation is not always significantly related to performance, depending on the context. In such terms such factors as the age of the firm (the length of company operates), the type of innovation, and the cultural context affect the impact of innovation on performance in most companies. Similarly, Lin and Chen (2007) in his research on SMEs in Taiwan who applied technological and marketing innovations found that innovation has a weak relationship to the performance of SMEs. In fact, administrative innovation is the most important factor explaining performance rather than technological innovation. Furthermore, Uhluer, Lorraine M., et.al (2012) mentions that employee involvement gives a positive effect on process innovation, but negatively affects sales growth. The effects of moderation are more visible on the smallest companies. This means that in small companies the resources should be equipped with capabilities.

CONCLUSION DAN IMPLICATION

All variables are positively correlated so that any changes to Distinctive Capabilities will have a positive effect on Process Innovation and Business Performance. Process Innovation serves as a partial mediator.

Based on the results of this study, it is recommended that owners of SMEs Cakalang Asap in North Sulawesi pay attention to their own distinctive capabilities (tangible, intangible and organizational capability) because this distinctive capability gives positive and significant influence to Business Performance and Process Innovation.

DAFTAR PUSTAKA

