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Impact of Innovation on SMEs performance in F&B Manufacturing and Service Industry in Brunei

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Abstract

Global Innovation Index (GII) in Brunei is ranked at 67th with a score of 32.8. This reflects the innovation in SMEs as well as in Food and beverage (F& B) in Brunei is still low and needs improvement. Therefore, its crucial for SMEs in food and beverage manufacturing and service industries to involve in innovation as it could help in increasing SMEs productivity level. Hence, the objective of this paper is first to study the effect of types innovation (four types of innovation: product innovation, process innovation, marketing innovation and organisation) on performance to F& B Industry. A total number of 565 samples will be collected from SMEs in food and beverage manufacturing and service sector (including restaurants, catering services, food and drink stalls), in Brunei Darussalam through questionnaire. Data will be analyzed using hierarchical regression analysis and content analysis. The result of this study is expected SMEs should be implementing innovation strategies within their organization to improve its productivity level. Increase collaboration with university, government and industry would increase the productivity.

Keywords: SMEs performance, Innovation and productivity in Brunei.

1 Introduction

Small and medium enterprises (SMEs) plays an important role in every country's economic development (Neagu,2016), including Brunei Darussalam. SMEs acts as the driver of Brunei's for GDP, economic growth (Anwar, 2006) and for employment (Observer, 2000). About 12.6% of SMEs in Brunei involve in manufacturing sector in 2010(SME Asean policy index,2018) which means that the percentage should be increasing in 2019. Although, SMEs in Brunei needs to maintain its competitiveness to enhance its growth, it has been proven that, most of the MSMEs in other Asian countries contribute more towards boarder economy compare to Brunei (SME policy index,2018). A total of 66 SMEs in Brunei has operated in F&B manufacturing and 499 operated in-service industries, in 2015(JPKE,2016). Food and beverage manufacturing and service sectors usually involves in activities like production, packaging and processing, storage, transportation and many more (Unnevehr,2017). The food and beverage industry play a crucial role in achieving economic opportunities (Pfitzer and Krishnaswamy, 2007) so in order to sustain its growth, its need to be innovate. Innovation is one of the tools enable F&B industries to create values that meets its customer demand (Unnevehr, 2017).

However, Brunei food and beverage industries has been facing with difficulties of having low productivity, where there has been a fall in the production of food and beverage products due to decrease in customer spending. It reported that Brunei has imported 80% of their F&B(Polsaram et al,2011). It is high time that F& B industry in Brunei to increase local production and to maintain the sustainability through innovation. In addition to that, it has been proven that Brunei is one of the countries that are lacking in innovation activities. According to global innovation index, Brunei is ranked at 67th with a score of 32.84 which is consider low compare to other countries (global innovation Index, 2018). Without innovation it will be difficult for SME in Brunei to enhance its business performance and improve the overall country`s economy.

So, in order for the SMEs in Brunei to improve its productivity level and sustaining its growth, it needs to innovate. Innovation is really an important part of SMEs as it given lots of advantages and benefits to it to its performance and growth (OECD,1998). Innovation could define as doing things differently or making changes in order to create value (Tidd and Bessant,2014). Innovation is all about creating new ideas, coming out with new invention or coming out with new products, service or process in the market (Thornhill`s ,2006) one of the advantages is that innovation helps in increasing firm`s competitive advantages. Any firms that involves in innovation would likely to experience growth in its market share and improved its profitability. Innovation also help SMEs to shorten its production time and achieving better product development than its competitors (Lee et al,2006). The types of innovation usually define is product, process, marketing and organizational innovation. Each of the different innovation types has its own roles and benefits toward firm`s productivity and performance. Product innovation could able to enhance firm`s productivity by generating a new source of demand (Hall,2011). Same as process innovation could also give tremendous effect toward productivity as it has more ability to reduce costs (Mohen and Hall,2013). Marketing innovation could able help firms to satisfy its customer needs. Marketing innovation help firm to create a good relationship with their customer by adopting new marketing techniques. Increase in the number of customer loyalty means that there more customer willing to pay for goods and thus this increase the firm`s productivity level (Llic et al,2014) lastly is organizational innovation that closely related to worker`s productivity. Organizational innovation mostly involves in boosting up worker`s productivity and increasing workplace satisfactions. when there's a good level of worker`s productivity, it increases the efficiency of number of goods produce.so that's why organizational innovation is also important for firm's productivity in general (Steiber,2012)

2 Literature review

2.1 Micro, small and medium enterprise (SMEs)

SMEs stands for micro, small medium enterprises. SMEs has been perceived as the driver of economic growth, but different countries place different meaning for SMEs. SMEs in the worldwide world has contributed hugely to provision of goods and service of the society, SMEs were identified by the number of employee or number of capitals employed or sales turnover. SMEs plays an important role towards the employment creation and economic growth (Katua and thomas,2014). SMEs able to provide advantages to economic efficiency, innovation and also accumulated productivities has an important role in enhancing the economic growth, GPD growth, entrepreneurship and also boosting up new job creation (Muller et al, 2014; Chowdury, 2011). In United states small business are categorize by its number of employee and sales volume and it is determined according to each major industry (Meti, 2013). However in Turkey,

SMEs are categorized according to number of workers and annual revenue (Yurttadur and Kaya, 2012). Currently there is no official definition created to describe SMEs in Brunei. For now, the size of the firm was based on the number of employees that classify by micro, small and medium sized enterprise. Micro are based on 1-4 numbers of employees, small; 6-19 and medium; 20-99. The number of employees in medium enterprise are consider quite small compare to other countries that has around 200 employees in medium enterprise (SME policy index 2018).

2.2 Firm performance

Achrol and Eztel(2003) describe firm performance as the final results of firm to meet its goals. Dobbs and Hamilton (2006) stated that there are other terms to describe performance like survival, success, growth, competitiveness Chittithaworn (2011), argued that firm performance is all about how firms able to express its capabilities to come out with the right action. Mohamad et al (2013) found that firm performance can be determine by firm`s strategies. Firm performance can be measure using financial and non-financial indicator. Firm financial performance can be measure according to its total asset or total employment, sales growth rate and total asset (Sirelli, 2001). Firm non-financial performance can be measure using customer retention, customer satisfaction or customer perspective, innovation (Mulbacher et al,2016). Customer satisfaction is one of the most important metrics to indicate success of a firm Customer satisfaction are measure according to number of satisfied customer and return back to the firm in future time (Agarwal et al,2013).

2.3 Product innovation and performance.

Dwyer and Mellor (1993) stated that, coming out with new product could able to result an increased in the company`s growth, sales and profit. According to Copper (1984) and Crawford (1980), the success of coming out with a new product will be depending on how well the firm collect information to create new product, the quality of the product and what level of technology used and how production process is managed. Nuryakin (2018) found that in the case of Indonesia's SMEs Product innovation has a huge positive impact on firm`s competitive advantage. Osei et al (2016) Evaluate that product innovation including development and introduction of new products has a positive impact on SMEs performance in Ghana. One of the types of product is radical innovation where it involves in development of totally new product like implementing totally new design element the product (Crul MRM,2006)

Hypothesis 1: product innovation has a significant impact on firm performance

2.4 Process innovation

Cuming (1998), define process innovation as the action of making some improvement internally within the firm`s business operations. Parida et al (2016) define process innovation as the application of new concept and methods that will be implemented in manufacturing companies. Lager (2000), argue that it's better for firm to have just a regular formal working method. According to Oslo Manual (2005) stated that process innovation is about changing the way of producing the product, that involves in having new raw materials, new production process methods and technology. Karim et al (2017) found that product and process innovation are two different types of innovation, because process innovation involves more in the use of new technology than product innovation. However, both the process and product innovation always have some kind of relations for instance like process innovation will not be successful without the support of product innovation. Similar to Reichstein and salter (2006), have found that process innovation could able to enhance the firm`s product. Karlsson and Tavsoli (2015), also agrees that process innovation has nothing to do with product innovations. This leads to second hypotheses:

Hypothesis 2: process innovation has a significant impact on SMEs performance

2.5 Organizational innovation.

Research conducted by Gunday et al (2011), found out that organizational innovation could significantly impacted product innovation and process innovation. It means that organizational innovation act as a driver for product and process and marketing innovation. OECD (2007), defines organizational innovation as changes that happen internally within the organization for instance changes the ways business is practice and changes in work place organization that involves in using new organization methods. Organizational innovation has the most positive impact on firm`s sales (Lin and Chen, 2007). Karabulut (2015), stated that the adaption of new business practice, organization methods, implementing new system is part of organizational innovation. According to Gu and Surendra (2004), organizational innovation involves in making new changes in the firm`s hierarchy, functional line, work process and production like changes in the work flow and how job are design. So, it's mainly changes in the way employee work within the organization. Hypotheses three is developed as below:

Hypothesis 3: organizational innovation has a significant impact on SMEs performance

2.5 Marketing innovation

According to Gunday et al (2011), product innovation could increase when there's an increase in marketing innovation, because through marketing innovation it helps to increase customer needs of the firm`s new product. Marketing innovation able to give advantages to firm`s sales growth (Sandvik, 2003) marketing innovation could help in increasing the number of demands for product and by this it means there will also be an increase in firm`s sales growth. According to Johne and Davies (2000), it would mostly be benefited for innovative firms, because by adopting marketing innovation they could able to earn extra profit from it. Varis and Littunen (2010), found that firm`s marketing activity has a significant relationship with firm performance and there is a significant positive effect between marketing innovation and firm performance Rosli and Sidek (2013). This leads to:

Hypothesis 4: Product innovation has a significant impact on SMEs performance

From the literatures, or analysis of all four types of innovation including product innovation, process innovation, marketing innovation and organizational innovation. It shows that product innovation has most significant effect towards firm business performance mostly in terms of increase sales growth or sales revenue, while process, marketing and organizational acts as an enhancement or pushes the product innovation to be successful and enhance firm business performance although, all four types of innovation is really important part to increase the firm`s business performance.

3 Methodology/Materials

3.1 research design

This study involves in quantitative data collection method. Quantitative data were collected with the help of survey questionnaire. Survey questionnaire could easily be analyzed (Mathers and Hunn,2007) and its more accurate (Tourangeau, 2007). The types of questionnaire used is semi-structured questionnaire. Semi-structure types of questionnaire that involves in the used of both structured and unstructured questions Before the actual questionnaire will be distributed, pilot study will be carried out by sending predetermined questionnaire to 15 non sample key informants which is the owner/manager of SMEs that classified in food and beverage manufacturing industries to analyze the reliability and validity of the instruments.

Cronbach`s alpha is used to check reliability test and principle component factor analysis used to check validity.

3.1 Sampling techniques

The target population of this study is SMEs that categorized in the F&B manufacturing and service sector. The total number of sampling chosen for this study is 565 F&B operating in manufacturing and service sectors. Questionnaire will be sent through emails and followed by telephone calls. Official statistics of F & B operating in manufacturing sector in Brunei is 66 and the other 499 operated in-service sectors (JPKE,2016).

Data were analyzed using descriptive statistics and regression analysis to identify the relationship between the dependent and independent variable of the study with the help of SPSS software.

4 Results/Findings

The results are expected there are positive relationship between types of innovation and F& B industries performance. The understanding of detail innovations process will be used to develop best practices of innovation among F & B industries in Brunei.

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