

**Innovation and Firm's Performance in Malaysia
Seberang Perai region SME's food processing industry**

By:

YONG CHENG WAI

(Matric No: 120823)

Supervisor:

Associate Professor Datin Dr. Norizah Mohamad

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Engineering Campus

Universiti Sains Malaysia

Declaration

This work has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature for any degree.

Signed (YONG CHENG WAI)

Date

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This article is the result of my own investigations, except where otherwise stated. Other sources are acknowledged by giving explicit references.

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This thesis has been submitted as partial fulfillment of the requirements for the final year project to the respective academic supervisor.

Signed (DATIN DR. NORIZAH MOHAMAD)

Date

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List of Abbreviations

CEO	Chief Executive Officer
F&B	Food and Beverage
GLCs	Government-Linked Companies
GST	Goods and Services Tax
LLP	Limited Liability Partnership
MKDs	Menteri Kewangan Diperbadankan (Bahasa Malaysia)
MNCs	Multinational Corporations
PKS	Perusahaan Kecil dan Sederhana (Bahasa Malaysia)
R&D	Research and Development
ROBA	Registration of Businesses Act
ROI	Return on Investment
ROS	Return on Sales
SMEs	Small and Medium Enterprise
SMIDEC	Small and Medium Industries Development Corporation

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Abstrak

Industri makanan dan minuman daripada Perusahaan Kecil dan Sederhana (PKS) Malaysia adalah antara satu pemacu utama untuk kedua-dua output ekonomi dan pekerjaan. Inovasi telah diiktiraf sebagai sebahagian daripada pembangunan perniagaan bagi syarikat termasuk PKS. Terdapat pelbagai jenis inovasi iaitu pemasaran inovasi, inovasi produk dan inovasi proses. Setiap jenis mempunyai ciri-ciri yang berbeza dan sesuai untuk pelbagai jenis sasaran syarikat. Syarikat juga mempunyai banyak asas atau petunjuk yang berlainan untuk menilai prestasi firma mereka iaitu prestasi pengeluaran, prestasi pemasaran, prestasi inovasi dan prestasi kewangan. Kertas kerja ini membentangkan hasil tiga kajian kes dari industri makanan yang terletak di Perbandaran Seberang Perai, Pulau Pinang. Objektif kajian ini adalah untuk meneroka jenis amalan inovasi PKS dan prestasi yang digunakan oleh mereka untuk menilai prestasi firma. Kesan inovasi kepada prestasi firma juga dikenal pasti. Temu bual diatur dan borang soal selidik diedarkan kepada pengurus atau pemilik PKS yang dipilih. Daripada kajian kes, ketiga-tiga sampel firma mengguna produk, proses dan pemasaran inovasi. Firma mengguna pakai berbeza jenis inovasi untuk memenuhi keperluan syarikat mereka. Dua daripada firma tersebut cenderung untuk memberi tumpuan lebih kepada pemasaran inovasi daripada lain-lain jenis inovasi. Selain itu, ketiga-tiga firma dalam kajian kes ini juga mengamalkan prestasi pengeluaran, pemasaran, inovasi dan kewangan untuk menilai prestasi firma mereka. Begitu juga dengan jenis ukuran prestasi utama yang digunakan oleh syarikat-syarikat, ia adalah berbeza dengan keperluan syarikat mereka. Tambahan pula, didapati bahawa jangka tahun penubuhan memainkan peranan yang penting dalam jenis inovasi dan prestasi yang digunakan oleh firma. Selain itu, ia dilihat bahawa inovasi yang diamalkan oleh syarikat-syarikat tersebut mempunyai kesan positif ke atas jualan. Hasil kajian kes ini memberi kefahaman mengenai jenis-jenis inovasi yang digunakan oleh PKS dan kesannya terhadap prestasi. Hasilnya menunjukkan peranan penting inovasi dalam menggalakan pertumbuhan PKS. Ia dapat membantu kerajaan untuk mereka bentuk dan menawarkan jenis bantuan yang sesuai kepada PKS.

Kata kunci: Perusahaan Kecil dan Sederhana, jenis inovasi, prestasi, kajian kes, industri makanan dan minuman

Abstract

The food and beverage industry of the Small and Medium Enterprise (SMEs) in Malaysia is one of the main drivers for both economic output and employment. Innovation has been recognised as an integral part of business development for firms including the SMEs. There are various innovation types namely marketing innovation, product innovation and process innovation. Each type has different characteristic and fitting for different types of company target. Firms also have many different bases or indicators for evaluating their firm performances namely production performance, marketing performance, innovation performance and financial performance. This paper presents the findings of three case studies from the food industry that are located within the Seberang Perai Municipality, Penang. The objective of this study is to explore the types of innovation practices that SMEs pursue and the performance measures they used to evaluate their firm's performances. The impact of the innovation types chosen by the firms on the firm performance, namely sales is also identified. Face-to-face interviews are arranged and the survey questionnaires are distributed to managers or owner managers of the selected SMEs. From the case studies, all the three firm samples adopt product, process and marketing innovation. The firms adopt different types of innovation to suit their company needs. Two of the firms tend to focus more on marketing innovation than other types of innovation. On the other hand, all the three firms in this case study also adopt production, marketing, innovation and financial performances to evaluate their firm performances. Similarly, the type of main performance measures used by the companies are different to their company needs. Furthermore, it is found that years of establishment plays an important role in the type of innovation and the performance measures firms pursue. Moreover, it is seen that the innovation initiatives taken by the companies have positive impact on sales. The outcome of this case study provides an understanding of the types of innovation SMEs pursue and its impact on performances. The outcome shows the important role of innovation plays in fueling the growth of the SMEs. It is able to help government to design and offer the appropriate type of assistance to the SMEs.

Keyword: Small and Medium-sized Enterprises, innovation types, performance, case studies, food and beverage industry

Chapter 1

Introduction

1.1 Project Overview

Innovation is increasingly recognised as having an important contribution to organisational success, performance and survival. Damanpour (2009) asserts that innovation is usually driven by pressure from the external environment, including factors like resource scarcity, competition, deregulation, and customer demand, and that it is associated with adaptive behaviour which changes the firm in order to maintain or enhance its performance.

Malaysia is dominated by a large proportion of small and medium enterprises (SMEs). The development and competitiveness of Malaysia SMEs must be sustained over time due to its large contribution to the economy. Innovation in the food and beverage sector (F&B sector) is of particular interest. F&B sector is one of the main drivers of the Malaysia economy, contributing to both employment and economic output. According to the “Market Watch 2010” by Malaysian-German Chamber of Commerce & Industry (2010), in the food processing segment, more than 80% of the total numbers of establishments are SMEs. The main sub sectors are the food processed industry including livestock products, fish products, fruits and vegetables, and cocoa-based products. The processed food products have become the choice of many Malaysians due to the increasing trend of their purchasing power and standard of living. The changes of Malaysian lifestyle lead to an increase in the demand for health food and convenience food which in turn gave rise to innovative new products in the food processed based SMEs in Malaysia.

De Silva and Takeda (2005) pointed out that the food industry is faced with a period of rapid change, driven by globalization, development of genetic, trade liberalization, intellectual property rights, processing and information technology, changes in family structure and health and food safety concerns. In this aspect, innovation is seen as the key element for successfully compete in increasing global competitive environment. Hence, innovation is the vital process to survival of global pressure for the food process industry. There is a need for the SMEs in the F&B industry to focus on innovation as it is a mean of competitive advantage.

1.2 Problem Statement

Malaysian SME's food processing industry has been a success at getting various supports from the government. Yet some of them are still not competitive to multinational corporations (MNCs) and not doing well enough. They are still facing many challenges in innovation. There are very few studies into type of innovation in food sector SMEs. Most of the studies solely focus on one or two types of innovation and do not provide a general overview of engagement with a range of innovation types within SMEs. Besides, according to Nor Ghani Mohd Nor, and Abu Bashar Bhuiyan, and Jamaliah Said, and Syed Shah Alam, (2016), previous studies and reports showed that only a small number of SMEs in Malaysia are aware of the benefits of innovation. Hence, there is a need for more focused and concerted efforts in increasing the awareness among SME's food processing industry on the impacts of the innovation types on firm performance, which is one of the focus of this project. It is essential for the firms to focus their effort on the appropriate types of innovation.

1.3 Project Objectives

The objectives of this study are:

- i. To explore the types of innovation conducted by SME's food processing industries in Seberang Perai region.
- ii. To investigate the performances measures used by the firms to evaluate their firm performances.
- iii. To identify the impact of the innovation types chosen by the firms on the firm performance, namely sales.

1.4 Research Questions

Answering Objective 1: To explore the types of innovation conducted by SME's food processing industries in Seberang Perai region.

- Which types of innovation is conducted by your firm?
- Prepare a list of innovation practices and ask “Which innovation practices are implemented by your firm? Tick for the innovation practices. Based on recent years, rank five of the most important ticked innovation practices to your firm, regardless of innovation categories in ascending order from 1 (Most important) to 5 (Least important).

Answering Objective 2: To investigate the performances measures used by the firms to evaluate their firm performances.

- What are the firm performances that used by your firm to evaluate your firm performances?
- Prepare a list of firm performances and ask “Which performance measures are used by your firm to evaluate firm performances? Tick for the performance measures. Based on recent years, rank five of the most important ticked performance measures to your firm, regardless of performance categories in ascending order from 1 (Most important) to 5 (Least important).

Answering Objective 3: To identify the impact of the innovation types chosen by the firms on the firm performance, namely sales.

- Obtain the sales data from the firms.
- Identify the reasons behind the innovation types chosen by the firms.
- Compare the salient features of the targeted firms.
- Study the impact of the innovation types chosen by the firms on the sales.

1.5 Project Scopes

This study focuses on:

- i. Three F&B industries within the Seberang Perai district due to time constraint.
- ii. Three types of innovation which are product innovation, process innovation, and marketing innovation.
- iii. Four types of performance measures which are production performance, marketing performance, innovation performance, and financial performance.

1.6 Thesis Outlines

The thesis has been organised in five chapters. A brief outline of the various chapters are as follows:

Chapter 1 is the introduction of the thesis. It gives foreword about the innovation in the food and beverage sector SMEs in Malaysia. The chapter gives an overview of the thesis including problem statement, project objectives and the scope of the study.

Chapter 2 presents thorough and extensive literature reviews of the study. The chapter provides important historical, theoretical and methodological understanding of related topics based on various researches.

Chapter 3 deals with methodology of the research. This chapter describes the methods used for the research.

Chapter 4 presents the results and the discussion of the study. The results were analysed and interpreted.

Chapter 5 is devoted to conclusions and recommendations. This chapter also discusses the recommendations for future research.

Chapter 2

Literature Review

This chapter gives a description on innovation and firm performance, SMEs and the F&B sector.

2.1 Introduction

The importance of innovation is described by Roberts and Amit (2003) as a means leading to a competitive advantage and superior profitability. As revealed in many studies, innovation and firm performance have a positive relationship.

According to Lumpkin and Dess (2001), the early concept of innovation in economic development and entrepreneurship was popularized by Joseph Schumpeter, a German economist. To him, innovation consists of the elements of creativity, research and development, new processes, new products or services and advance in technologies. Meanwhile, Thornhill (2006) describe innovation as a process of idea creation, a development of an invention and the introduction of a new process, product or service to the market. Beaver (2002) believes that innovation is an essential element for economic progress of a country and competitiveness of an industry. Anderson (2009) adds that innovation plays an important role not only for large firms, but also for SMEs.

A firm's ability is usually evaluated based on its performance. This implies why performance is like a mirror to a firm. Wolff and Pett (2006) assert that as a multidimensional construct, performance has several names including survival, success, growth and competitiveness. To Lin et al., (2008), the outcomes achieved in meeting internal and external goals of a firm is the firm performance. Depending on organizational goals, different methods are adopted by different firms to measure their performance.

2.2 Innovation Types

Innovation type categorisations are based on the outcome of the innovation process. The categorisation proposed by Francis and Bessant (2005) identify four types of innovation which are product, process, position and paradigm innovation. Meanwhile, Boachie and Acquah (2015) divided innovation types into organisational, process, product and marketing innovation. The following section is the elaboration of these innovation.

2.2.1 Product Innovation

According to Langley et al., (2005), product innovation can be defined as the creation of a new product from new materials (totally new product) or the alteration of existing products to meet customer satisfaction (improved version of existing products). To Wan et al., (2005), product innovation also refers to the introduction of new products or services in order to create new markets or customers, or satisfy current markets or customers. Meanwhile, Camison and Lopez (2010) believes that product innovation is one of the important sources of competitive advantage to the firm. Product quality can be enhanced with product innovation, which in turn it contributes to firm performance and ultimately to a firm's competitive advantage. According to Hult et al., (2004), product innovation offers a potential protection to a firm from market threats and competitors. Craig and Hart (1992) assert that product innovation provides a variety of choice for products. Myers and Marquis (1969) contend that product innovation can be made by exploiting new ideas.

2.2.2 Process Innovation

To Cumming (1998), process innovation is the process of reengineering and improving internal operation of business process. This process involves many aspects of a firm's functions, including manufacturing, management, technical design, research and development (R&D) and commercial activities. Meanwhile, Oke et al., (2007) describes that process innovation can be referred to new or improved techniques, tools, devices, and knowledge in making a product in a production activity. The author also adds that the innovation concerns with the creation of or enhancement in techniques and the development in system or process. For example, innovation in skill, techniques,

technology, system and procedure are used in the process of transforming input into output. Nemetz and Fry (1988) assert that process innovation should be emphasized by a firm as its primary distinctive competence for competitive advantage. More specifically, this innovation is positively associated with firm growth according to Morone and Testa (2008). Consistent with this argument, Varis and Littunen's (2010) study on SMEs in Finland found that process innovation is positively related with firm performance.

2.2.3 Market Innovation

According to Johne (1999), market innovation deals with the market mix and market selection in order to meet a customer's buying preference. Continual market innovation is necessary to be performed by a firm since state-of-the-art marketing tools especially via the Internet make it possible for other competitors to reach potential customers across the globe at a light speed. Meanwhile, Rodriguez-Cano et al., (2004) assert that this innovation plays a crucial role in responding to market opportunities and fulfilling market needs. Any market innovation needs to be directed at meeting customers' demand and satisfaction. To Johne and Davies (2000), market innovation would increase sales through the increasing demand for products, which in turn yields additional profit to the firms. Similarly, Otero-Neira et al., (2009) found strong evidence that market innovation positively influenced firm performance.

2.2.4 Organisational innovation

According to OECD (2005), organisational innovation is the implementation of a new organisational method in the firm's workplace organisation, business practices, or external relations. This include the implementation of new methods for organizing routines and procedures, improving worker retention or introducing management systems. Organisational innovation tends to improve firm performance through improving workplace satisfaction (and thus labor productivity) and reducing administrative and transaction costs, or costs of supplies. Besides, organisational innovation is able to promote teamwork, coordination, collaboration, information sharing, learning and innovativeness. It is stated by Ganter & Hacker (2013) that organisational innovation has the potential to increase the operational performance.

2.3 Performance Measures

According to Bakar and Ahmad (2010), this performance indicator can be measured in financial and non-financial terms. Meanwhile, there are total four types of performance dimensions employed by Yilmaz et al., (2005) to represent firm performance. They are production performance, market performance, innovative performance, and financial performance. The following section is the elaboration of these performance measures.

2.3.1 Innovative Performance

According to Hagedoorn and Cloudt (2003), innovative performance is the combination of overall organisational achievements as a result of renewal and improvement efforts done considering various aspects of firm innovativeness like products, processes, organizational structure, and so on. Hence, innovative performance is a composite construct based on various performance indicators pertaining, for example, to the new product announcements, new projects, new patents, new organizational arrangements and new processes.

2.3.2 Production Performance

Gonzalez-Benito (2005) asserts that production performance as a combination of organizational success in improving quality, flexibility, speed and cost efficiency in the daily operations would lead logically to the betterment of market position and financial returns. The author also pointed out the potential of the production and operations function as a source of competitive advantage for the firms.

2.3.3 Financial Performance

Yang, Hong, and Modi (2011) define financial performance as the degree to which an organization achieves profit-oriented outcomes like return on sales (ROS), return on investment (ROI), and so on. Sandberg et al., (2002) asserts that SME financial performance is most often defined into hard criteria like wider profit margins or increased turnover and the ability to contribute to job and wealth creation through business startup, survival and growth. According to Dobbins and Barnard (2000), financial performance can be measured using proxies like profitability, liquidity, solvency, return on asset, and sales growth.

2.3.4 Marketing Performance

Yang, Hong, and Modi (2011) define market performance as the degree to which an organization achieves its market valued outcomes like sales, market growth and so on. To Schoonhoven, Eisenhardt, and Lyman (1990), market performance is an ability of firm to generate financial resources. Meanwhile, Homburg and Pflesser (2000) define market performance as firm performance in terms of the development of the quantity of products or services sold, which in turn is captured by customer loyalty, the achievement of the aspired market share, the acquisition of new customers, and the achievement of the aspired growth rate.

2.4 The Small and Medium Enterprise (SME) and Innovation Activities

According to the Small and Medium Industries Development Corporation (SMIDEC), during the National SME Development Council Meeting in July 2013 in Malaysia, the new definition of SME was announced by the Prime Minister of Malaysia. The definition which has been implemented since January 2014, raised the qualifying threshold for sales turnover and employment of SMEs for all economic sectors. The redefinition was timely in order to take into account the changes that have taken place in the economy since a common definition was adopted in 2005. Businesses are considered as SMEs based on:

- For Manufacturing Sector: Sales turnover \leq RM50 million OR full-time employees \leq 200 workers
- Services & other sectors: Sales turnover \leq RM20 million OR full-time employees \leq 75 workers
- Locally incorporated under Companies Act 1965; or
- Registered under ROBA (1956) or (LLP) Act 2012; or
- Registered under respective authorities in Sabah & Sarawak; or
- Registered under respective statutory bodies for professional service providers.
- Not public-listed company in main board in Malaysia or other countries
- Not a subsidiary of public-listed company in main board in Malaysia or other countries
- Not a subsidiary of large firms, MNCs, GLCs, Syarikat Menteri Kewangan Diperbadankan (MKDs) and State-owned enterprises

2.5 Innovation in SMEs

The importance of SMEs firms to economic development has been widely recognised. Lin and Chen's (2007) study of Taiwanese SMEs within the service and manufacturing sectors revealed that one of the major types of innovation adopted within firms is marketing innovation. Oke et al.'s (2007) study revealed that SMEs are more engaged with product innovation than with process innovation. On the other hand, Laforet and Tann's (2006) study within the manufacturing sector identified that SMEs are more engaged in process innovation than in product innovation. Most of these studies solely focus on one or two types of innovation.

2.5.1 Innovation in the Food Sector SMEs

Although the F&B sector plays an important role within the Malaysian economy, there are very few studies on innovations within the SMEs in the F&B manufacturing. According to Lily Juliente and Hartini (2012), it is found that product innovation in the F&B industry is the second highest after the electrical and electronic industry. Capitanio et al.,'s (2010) study on product and process innovation within Italian food firms reveals that food firms develop more process innovations than product innovations. Besides, the majority of product innovations are incremental. Meanwhile, Avermaete (2002) also noted that small food firms are mainly engaged with incremental product and process innovations with a low rate of radical process innovations. According to Gellynck and Vermeire (2009), another innovation type other than product, process, and market innovation that has received attention from scholars is packaging innovation, which plays an essential role within the food sector coupled with product innovation.

2.6 Proposed Research Model

Figures 2.1, 2.2 and 2.3 give the summary of the research model of the journals which are more related to this proposed research. The research model shows the innovation types and performance measures that used for the research of the authors.

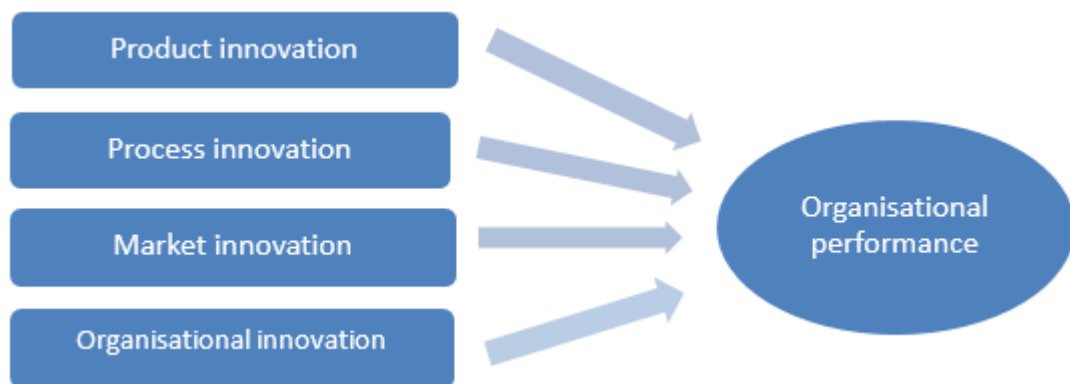


Figure 2.1: Research model by Mensah and Acquah (2015)

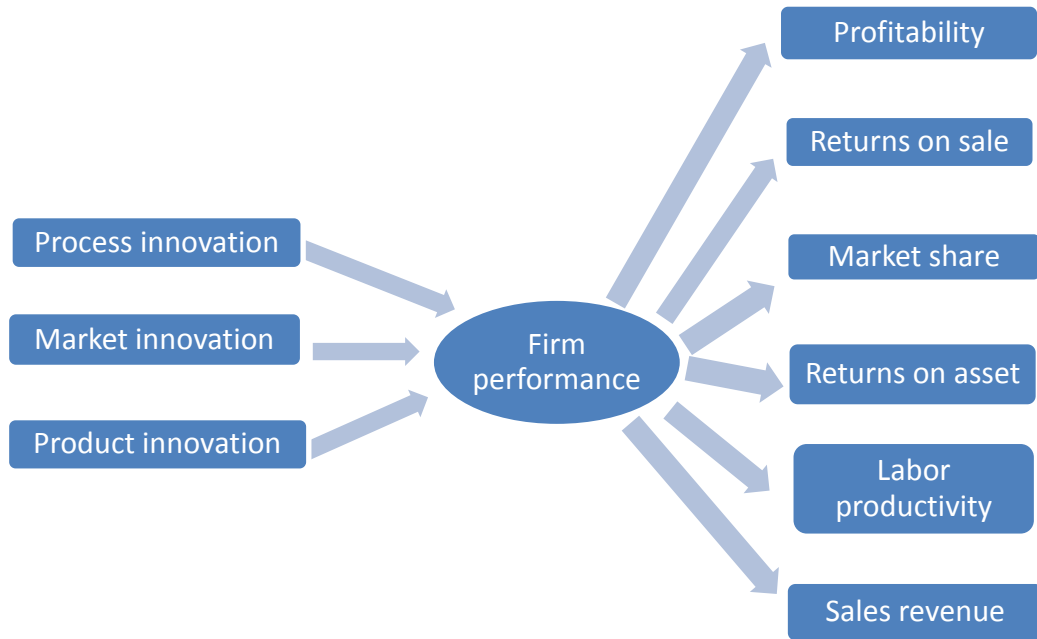


Figure 2.2: Research model by Mohd Rosli and Sidek (2013)

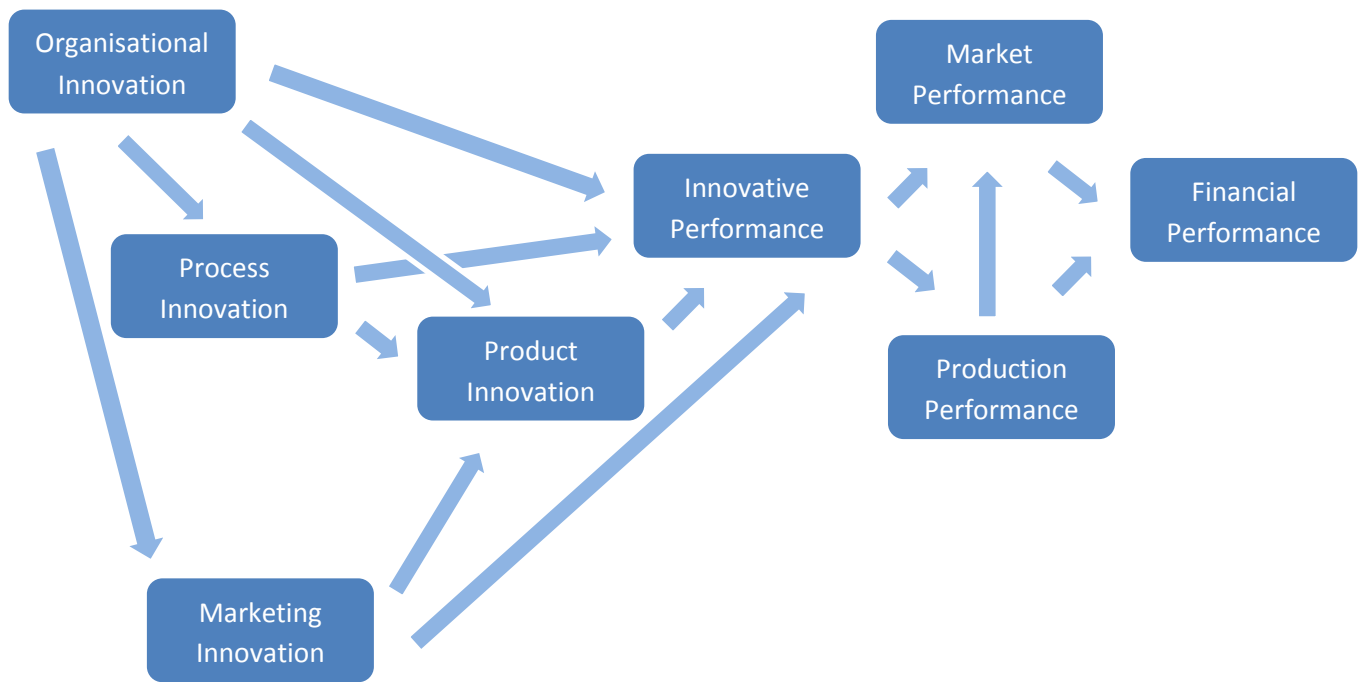


Figure 2.3: Research model by Gunday et al., (2011)

For all the three research models above except journal by Mohd Rosli and Sidek (2013), the authors used the same types of innovation which are organisational, process, product and marketing innovation. For journal by Mohd Rosli and Sidek (2013), organisational innovation was not used by the author due to the reason of majority SMEs Malaysia are family business. They are small and usually will not perform organisational innovation since they are not planning to get a good manager or chief executive officer (CEO) to manage their business. The targeted SMEs in this proposed research model is within Seberang Perai region. Thus, only process, product and marketing innovation that are predominant in the SMEs will be determined and studied. From the Figures 2.1, 2.2 and 2.3, it can be seen that all the three authors use different performances in their research. However, in this proposed research model, the performance used are innovative, market, financial and production performance. These four types of performance dimensions were employed by Gunday et al., (2011) to represent firm performance.

The study by Gunday et al., (2011) has examined the four types of innovation and the relationship with the performance measures. Figure 2.3 shows the relationship that was studied. The interaction is more complex as compared to the one proposed by Mensah and Acquah (2015), and Mohd Rosli and Sidek (2013). The methodology used was the survey type. However, for this proposed research, it is just a preliminary work due to limited number of companies. Hence, case study was done instead of survey and only the impacts of the innovation types on the firm performance, namely sales will be identified in this proposed research model. Figure 2.4 shows the proposed research model in this research.

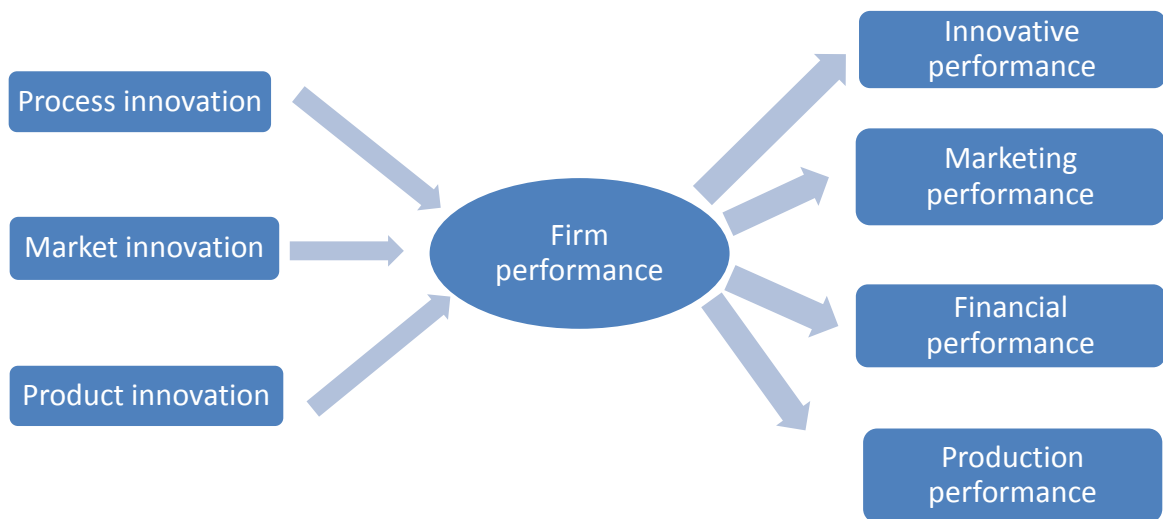


Figure 2.4: Proposed research model

Chapter 3

Research Methodology

3.1 Research Approach

According to Yates (2003), there are two main approaches to conducting research, namely quantitative research and qualitative research. The qualitative approach was adopted for this research. Multiple cases study was used because it gives better quality, convincing evidence with multiple cases rather than conducting a single case study according to Yin (1994). Besides, Roscoe (1975) pointed out that not only questionnaire and mathematical modelling are not suitable since it requires at least 30 to 500 copies of feedback to ensure it is enough for an analysis to be done and the mathematical modelling is time consuming. Thus, multiple case study is chosen as suggested by Bogdan and Biklen (1997). The case study represents an 'in-depth' approach and it is considered able to appraise the subjective and tangible activities of the companies.

3.2 Research Sample

In this study, the target population is the SME's Food processing industries in Malaysia Seberang Perai region. A list of companies was obtained from business unit of Mechanical Engineering USM. These are companies that have collaborated with USM in improving the product and process. They are located within the Seberang Perai district. General company background was investigated from the website. A represented sample of 3 was shortlisted and drawn for this case study. The three samples were shortlisted based on:

- Product providers
- Number of employees
- Years of operation
- Area served
- New products introduction

For the ease of comparison, these three firms shortlisted are all product providers and contain around the same number of employees. Besides, these firm were shortlisted based

on different years of operation which is categorised to short, medium, and long. This aims to observe the innovation practices implemented by firms with different years of operation. The area served is limited to Malaysia area only so that same characteristics among the firms can be compared. Different country area served may have different ways of management since cultures are different. Furthermore, the firms must have at least one new product introduction in the recent years as it is an indication of the company's innovativeness. At last, the shortlisted firms in this study were Company A, Company B and Company C.

3.3 Measurement of Variables

A study of Mohd Rosli and Sidek (2013) has investigated product, process and market innovation among SME's in Malaysia. Thus, this study also focuses on these three types of innovation. Organisational innovation is not included as the companies shortlisted are all family owned. On the other hand, the focused performance measures are innovative performance, market performance, financial performance, and production performance. These four types of performance dimensions were employed by Gunday et al., (2011) to represent firm performance. All these types of innovation and performances used in this research were developed after a careful review of existing literature by Mohd Rosli and Sidek (2013), Mensah and Acquah (2015), and Gunday et al., (2011). The questionnaire was then developed. A total of 15 determinants were used to determine and measure the four types of innovation shown in Table 3.1 whereas 19 determinants were used to determine and measure the four types of performances shown in Table 3.2. These items were adapted from the research approaches by Gunday et al., (2011). The survey questionnaire is shown in Appendices. The manager of the companies were asked to tick for the innovation practices implemented and the performance measures used by their firm to evaluate firm performances. After that, based on recent years, they were asked to rank five of the most important ticked innovation practices and performance measures to their firm, regardless of innovation and performance categories respectively in ascending order from 1 (Most important) to 5 (Least important).

Table 3.1: Determinants for the types of innovation

Types of innovation	Determinants
Product Innovation	Increasing manufacturing quality in components and materials of current products
	Decreasing manufacturing cost in components and materials of current products
	Developing newness for current products leading to improved ease of use for customers and to improved customer satisfaction
	Developing new products with technical specifications and functionalities totally differing from the current ones
	Developing new products with components and materials totally differing from the current ones
Process Innovation	Determining and eliminating non-value adding activities in production processes
	Decreasing variable cost components in manufacturing processes, techniques, machinery and software
	Increasing output quality in manufacturing processes, techniques, machinery and software
	Determining and eliminating non-value adding activities in delivery related processes
	Decreasing variable cost and/or increasing delivery speed in delivery related logistics processes
Marketing Innovation	Renewing the design of the current and/or new products through changes such as in appearance, packaging, shape and volume without changing their basic technical and functional features
	Renewing the distribution channels without changing the logistics processes related to the delivery of the product
	Renewing the product promotion techniques employed for the promotion of the current and/or new products
	Renewing the product pricing techniques employed for the pricing of the current and/or new products
	Renewing general marketing management activities

Table 3.2: Determinants for the performance measures

Performance measures	Determinants
Production performance	Conformance quality
	Production cost
	Production (volume) flexibility
	Production and delivery speed
Marketing performance	Customer satisfaction
	Total sales
	Market share
Innovation performance	Ability to introduce new products and services to the market before competitors
	Percentage of new products in the existing product portfolio
	Number of new product and service projects
	Innovations introduced for work processes and methods
	Quality of new products and services introduced
	Number of innovations under intellectual property protection
	Renewing the administrative system and the mind set in line with firm's environment
Financial performance	Return on sales (profit/total sales)
	Return on assets (profit/total assets)
	General profitability of the firm
	Cash flow excluding investments
	Return on Investments

3.4 Data Collection and Analysis Procedures

Primary data and secondary data collection methods has been used to gather the data in this research. Secondary data was gained through the effort of collecting information from SME-related journals, books, and internet. Primary data was obtained by execution of face-to-face interviews with the target firms. The questionnaires were distributed to managers or owner managers of the selected SMEs. This is because of the fact that the nature of information and data required can best be provided by the managers or owners-managers of the firms according to Martinez-Roman, Gamer and Tamayo (2011). The interview was conducted with three companies. Yin (1994) asserts that evidences obtained from multiple sources are required to get a good case study. The feedbacks were then analysed.

Chapter 4

Results and Discussion

4.1 Results

4.1.1 Company Profile

Table 4.1 shows the profile of the three companies as well as the respondent's profile, obtained during face to face interview. All the companies are family owned business and contain small number of employees, which is between 4 to 8 employees. Company A was established in 2003 and has been in operation for almost 14 years. The company produces chocolates and have introduced latest new products in the years of 2012, 2013 and 2015. Meanwhile, Company B producing beverage was established in the year of 1946 and has been in the business for 71 years. It has the longest history of leadership in the beverage industry compared to the others two company shortlisted. For this company, the latest new products were launched in the year of 2013, 2015 and 2016 respectively. Company C, which is the most recent beverage company start-up, was started in 2010 and had new products introduction in the years of 2011, 2012, 2014 and 2015.

Table 4.1: Profile of Companies and Respondents

Items	Company		
	A	B	C
Name of respondent	Aishah bt Baharom	Syarifah Murni	Mohamad Zamri Idris
Position of respondent	Manager	Manager	Manager
Year founded	2003	1946	2010
No of years of operation	14	71	7
Original product	- Chocolates	- Coffee	- Pure and dark chocolate
Types and launch year of latest new product	- Bread (2012) - Cookies (2013) - Cake (2015)	- Teh Tarik (2013) - White Coffee (2015) - Coffee Durian (2016)	- Vanilla creamy (2011) - White & black coffee (2012) - Cappucino (2014) - Mocha (2015)
Sizes/ No of employees	8	7	4
Competitors	- Izara Cookies - Khaliff Cookies	- Hang Tuah - Kopi Cap Daun	- Mosha - Kopi 434
Initialisation to expand business	Shop and factory expansion	Expand market to China	Expand market to Singapore

4.1.2 Types of Innovation

The manager of the companies were asked to tick for the innovation practices implemented by their firm. After that, based on recent years, they were asked to rank five of the most important ticked innovation practices to their firm, regardless of innovation categories in ascending order from 1 (Most important) to 5 (Least important). Tables 4.2, 4.3 and 4.4 show the innovation practices that conducted by Company A, B and C respectively. Meanwhile, Tables 4.5, 4.6 and 4.7 show the ranked innovation practices by Company A, B and C respectively.

Table 4.2: Ticked innovation practices by Company A

Types of innovation	Company A
	Ticked innovation practices
Product innovation	<ul style="list-style-type: none"> • Increasing manufacturing quality in components and materials of current products. • Developing newness for current products leading to improved ease of use for customers and to improved customer satisfaction. • Developing new products with components and materials totally differing from the current ones.
Process innovation	<ul style="list-style-type: none"> • Determining and eliminating non-value adding activities in production processes. • Increasing output quality in manufacturing processes, techniques, machinery and software. • Determining and eliminating non-value adding activities in delivery related processes. • Decreasing variable cost and/or increasing delivery speed in delivery related logistics processes.
Marketing innovation	<ul style="list-style-type: none"> • Renewing the design of the current and/or new products through changes such as in appearance, packaging, shape and volume without changing their basic technical and functional features. • Renewing the product promotion techniques employed for the promotion of the current and/or new products. • Renewing the product pricing techniques employed for the pricing of the current and/or new products.

Table 4.3: Ticked innovation practices by Company B

Types of innovation	Company B
	Ticked innovation practices
Product innovation	<ul style="list-style-type: none"> • Increasing manufacturing quality in components and materials of current products. • Decreasing manufacturing cost in components and materials of current products. • Developing newness for current products leading to improved ease of use for customers and to improved customer satisfaction. • Developing new products with components and materials totally differing from the current ones.
Process innovation	<ul style="list-style-type: none"> • Determining and eliminating non-value adding activities in production processes. • Decreasing variable cost components in manufacturing processes, techniques, machinery and software • Increasing output quality in manufacturing processes, techniques, machinery and software • Determining and eliminating non-value adding activities in delivery related processes • Decreasing variable cost and/or increasing delivery speed in delivery related logistics processes
Marketing innovation	<ul style="list-style-type: none"> • Renewing the design of the current and/or new products through changes such as in appearance, packaging, shape and volume without changing their basic technical and functional features • Renewing the product promotion techniques employed for the promotion of the current and/or new products • Renewing the product pricing techniques employed for the pricing of the current and/or new products