Innovativeness, Environment and Performance of Small and Medium-sized Enterprises (SMEs) in Manufacturing Sector in Malaysia

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Innovativeness, Environment and Performance of Small and Medium-sized Enterprises (SMEs) in Manufacturing Sector in Malaysia

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Declaration

The work described in this PhD Thesis, entitled “Innovativeness, Environment and Performance of Small and Medium-sized Enterprises (SMEs) in Manufacturing Sector in Malaysia” is to the best of the author’s knowledge that of the author except where due reference is made.

__________________________  __________________
(Date submitted)             (Student’s signature)

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Abstract

This study examines innovativeness and environmental factors that can influence the performance of SMEs (small and medium-sized enterprises) in the Malaysian manufacturing sector. The general objective is to examine the practice of innovation in SME that contribute to the SME performance. Specifically, the purpose of this study is to (a) to identify the innovativeness (in process) and their dimensions that influence SMEs performance; (b) to examine the relationship between the independent variables (innovativeness) and the impact on the SMEs financial and non-financial performance; (c) to investigate the moderating effect of the environment on the relationship between innovativeness and SMEs performance. A theoretical framework is developed based on innovativeness, environment and SMEs performance. Previous research had only focused mainly on technological innovation and other aspects were under explored. Hence, this study examines the innovativeness from four dimensions. The present quantitative study includes a new indicator in the measurement model, that is the role of the government. 380 survey questionnaires were collected from managers and/or owners of SMEs in Malaysia using systematic sampling technique. Total 380 usable sets of data proceeded for data analysis using SPSS and SmartPLS to assess the model. The first eight hypotheses out of ten revealed that innovativeness increases the SMEs performance. The other two hypotheses were tested for influences of environmental factors on the relationship between innovativeness and SMEs performance. The present study shows that the innovativeness has very significant impact on SMEs performance, whereas, the environment variable was found to have moderating effect on the relationship between the
innovativeness and SMEs performance. The results confirmed that both of the environmental uncertainty and intensity of competition factors influence SMEs performance. This study is useful for SMEs to help the management to understand more clearly the importance and implementation of innovativeness in their firms. Furthermore, the present study provides insights into the role of innovativeness and environmental factors in SMEs that will assist in future comparative analyses with both developing and developed economies.
Inovasi, Alam Sekeliling dan Prestasi Firma Kecil dan Sederhana dalam Sektor Pembuatan di Malaysia

Abstrak

Kajian ini mengkaji inovasi dan faktor-faktor alam sekeliling yang mempengaruhi prestasi firma kecil dan sederhana dalam sektor pembuatan di Malaysia. Objektif umum kajian ini adalah untuk mengkaji penggunaan inovasi dalam firma kecil dan sederhana yang menyumbangkan kepada prestasi firma-firma ini. Secara khususnya, tujuan kajian ini adalah untuk (a) mengenalpasti proses inovasi dan dimensinya yang mempengaruhi prestasi firma kecil dan sederhana; (b) memeriksa hubungan antara pembolehubah bebas (inovasi) dan kesan ke atas prestasi kewangan dan bukan kewangan firma kecil dan sederhana; (c) untuk memeriksa kesan sederhana faktor-faktor alam sekeliling ke atas hubungan inovasi dan prestasi firma kecil dan sederhana. Satu kerangka teori telah dibentuk berdasarkan inovasi, alam sekeliling dan firma kecil dan sederhana. Kajian yang lepas banyak tertumpu kepada inovasi teknologi, dan telah mengabaikan aspek-aspek lain. Oleh itu, kajian ini mengkaji inovasi dari empat dimensi. Kajian kuantitatif ini memasukkan satu indikator baru dalam model pengukuran, iaitu peranan kerajaan. 380 soal selidik telah dikumpulkan daripada pengurus-pengurus dan pemilik-pemilik firma kecil dan sederhana di Malaysia dengan menggunakan teknik persampelan sistematik. Jumlah 380 set data ini digunakan untuk pemprosesan data seterusnya dengan menggunakan perisian SPSS and SmartPLS untuk menilai model. Lapan hipotesis yang pertama daripada sepuluh hipotesis menunjukkan
CHAPTER 1
INTRODUCTION

1.1 Background of Study
Many studies have indicated that innovativeness in an organization can increase company productivity and efficiency (Burns & Stalker, 1961; Damanpour & Evan, 1984; Damanpour & Evan, 1992; Kemp et al., 2003; Kurscer, 2013; Inui, 2015; Jackson et al., 2016). However, previous research has mainly focused on technological innovation (Schumpeter, 1934; Gilfillan, 1935; Maclaurin, 1949; Bright, 1949; Damanpour, 1987; Abenathy & Clark, 1988; Gunn, 1987; Womack et al., 1990; Flynn et al., 1996; Stock & Reiferscheid, 2014; Nakano &Nishimura, 2015; Leenders & Dolfsma, 2016) without paying much attention to other aspects of innovation that contribute to firm performance. For example, innovativeness in existing (current) products or innovativeness in creating new product contributes more to firm performance than technological innovation per se. Other aspects like innovativeness in administration process and innovation culture are also remains relatively under-explored. Further, no known research in the past has been conducted into the relationship between innovativeness, environment and small and medium enterprises (SMEs’) performance, particularly in Malaysia, a developing country.
Drawing on the literature on innovativeness, the present study examines the fundamental nature of innovativeness: (i) innovativeness in existing products; ii) innovativeness in creating new products; iii) innovativeness in production; and iii) innovativeness in administrative processes.

The significance of such a study stems from the importance of innovation for SMEs (Acs & Audretsch, 1990), employment (Radas & Bozic, 2009), government-business co-ordination (Rasiah, 2002), income generation (Barlett et al., 2005) and product distribution (Aidis, 2003). SMEs are more fragile in turbulent environments than bigger firms due to resource constraints such as, difficulties in obtaining business loans, lack of access to high technology and various administrative challenges. Innovativeness, however, is an important factor in enhancing organizational performance of any firm, as well as SMEs (Creusen et al., 2006). In an uncertain environment, innovativeness is more necessary for firms to remain competitive (Burns & Stalker, 1961; Barney, 1986b; Prahalad & Hamel, 1990; Teece & Pisano, 1994; Hamel & Heene, 1994; Zajac et al., 1991; Lemon & Sahota, 2004; Minna et al., 2014). Research that focuses on identifying the factors that influence the environment can help SMEs to respond better to environmental change and thereby assist them in adapting to the environment through their production, marketing planning and relationship with the various stakeholders.

Schumpeter (1934) was the first scholar who identified innovativeness in the firm. He defined innovation as a new good or a new quality of a good; a new method of production; a new market; a new source of supply; or a new organizational structure. Innovation is also defined as a new product (Daft, 1982; Urabe, 1988), new
service (Hansen & Wakonen, 1997), new idea (Han et al., 1998; Hurley & Hult, 1998), new method (Luecke & Katz, 2003), new supply and distribution (EC, 1995), new process (Atuahenne-Gima, 2005) and commercialization of these new product, service and idea (OECD, 1981; Freeman, 1982), and innovativeness is both a process and outcome (Crossan & Apaydin, 2010; Ruvio et al., 2014).

Innovativeness can enhance the competitive advantage of SMEs to function effectively in a volatile environment. However, there are very few studies on SMEs in developing countries (Radas & Bozic, 2009; Dubihlela & Dhurup, 2014), and how innovativeness can help SMEs, particularly in developing countries to achieve better performance.

In Malaysia, SMEs are defined as encompassing small business, that is, those employing fewer than 75 workers, while medium Malaysian firms are defined as those employing between 75 and 200 staff (Lee & Lee, 2007; Siddiquee et al., 2007; World Bank, 2010; Bank Negara Malaysia, 2014) The Malaysian standard definition of SMEs will be deployed in this thesis.

Malaysia is a middle-income country (Rutten, 2001) with gross domestic product (GDP) worth 314 billion dollars in 2013 (World Bank, 2013). Malaysia is fairly well advanced in manufacturing sector relative to other Southeast Asia countries (Inland Revenue Board, 2015). Most SMEs in Malaysia are found in the manufacturing sector (85 percent) (Department of Statistics, Malaysia, 2015). Collectively, SMEs contribute substantially to the development of the Malaysian economy (Lee & Lee, 2007, Bank Negara Malaysia, 2015; MITI, 2015). In Malaysia, the impact of SMEs on the economy can be seen from their contribution to the gross
domestic product (GDP), with SMEs contributing around a third of the nation’s GDP, and employment enhancement (providing over 56 per cent of total employment in the country (Malaysia-Tenth Malaysia Plan Report, 2015). The Malaysian SMEs is targeted to contribute 41 percent to the nation’s GDP and 62 percent to the employment by 2015, and 25 percent to the country’s export by 2020 (MITI, 2014). (The further information of this is elaborated in Chapter 2).

While SMEs play an important role in economic development in Malaysia, the field is underdeveloped from a research perspective (Radas & Bozic, 2009). Sukato (2014) further noted that SME government policies in developing countries are generally based on research findings from studies of SMEs in developed countries. However, for a policy which is best for a developed country will also be applicable to a developing country. Very little scholarly attention has meant policy development has occurred in a vacuum, and companies attempting to develop in the Malaysian environment similarly have to do so in the absence of rigorous information (Sen & Haq, 2010).

In summary, very little research on the innovativeness of SMEs in developing countries suggests that this topic is fruitful for future investigation, and additionally has significant applied value.

Innovation is considered critical in corporate development (Grant, 1996; Desouza & Awazu, 2005; Emilia et al., 2014). Organizations that have adopted innovative product and process tend to display better organizational performance (Miles & Snow, 1978; Damanpour & Evan, 1984; Kemp et al., 2003; Kibbeling et al., 2013) although the evidence that innovation leads to profitability at a firm level is
mixed (Hoffman et al., 1998). The innovation involved in product planning and firm competence in the area of technology strategy and technology management is one of the factors that determine the success of innovative effort (Hoffman et al., 1998).

Innovations that result in process improvements can benefit firms by increased productivity and adaptability (Sankar, 1991; Burgelman et al., 1988), increased market share (Burns & Stalker, 1961), creating new opportunities for a firm and providing firms with competitive advantages (Abernathy & Clark, 1988), enhancing R&D and industrial innovation and achieving market competitiveness (Sun & Du, 2010; Chao et al., 2013).

No known research in the past has been found to investigate the relationship between innovativeness, environment and SMEs performance, particularly in Malaysia. Therefore, the present study examines these variables, innovativeness, environment and SMEs performance to discover the relationship between these variables. The present study explores the various elements of innovativeness and discovers which type of innovativeness (either innovativeness in existing product, innovativeness in creating new product, innovativeness in production or innovativeness in administration process) contributes the most to SMEs performance. This study also investigates the environment indicators and examines which indicator is most influential on the relationship between innovativeness and SMEs performance. Furthermore, this study also develops a new performance measure framework to identify the significant financial and non-financial indicators in measuring SMEs performance.