



## Linking innovativeness and business performance: A Study of Malaysian technology-based SMEs

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### Abstract

One of the most crucial sources of sustainable business in this increasingly changing environment is innovation. Innovation leads to improvement of product, services and process and at the same time it allows firms to survive, grows and gets more profits than non-innovators with continuous advancement. This study aims to determine the innovativeness of technology-based SMEs and to investigate the relationships between innovativeness and business performance. This study adopts a quantitative method where the respondents were the owners/ top managers of technology-based SMEs in Malaysia. Results from quantitative study indicate that technology-based SMEs in Malaysia are innovative and innovativeness has significant and positive impact towards business performance. This study adds to the body of knowledge by examining innovativeness in technology-based SMEs.

**Keywords:** *Innovativeness; Business Performance; Technology-based SMEs; Small and Medium Enterprises.*

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### Introduction

Innovation is the implementation of a new or significantly improved product, service, process, marketing method or organizational method. Innovations can appear in business practices, workplace organization or external relations (OECD, 2005). Gamal, Salah and Elrayyes (2011) defined innovation as the introduction of new products, services and processes, by way of business into a marketplace, either by utilization or by commercialization. Innovation opens up many opportunities for firms to benefit from new business ventures and gain higher yields, besides improving current business operations (Forsman & Temel, 2011). It is essential for firms which seek to accelerate business performance to innovate - to offer value to customers and to stand out from competitors (Yanadori & Cui, 2013). For firms to survive, to compete, to grow and to lead, it is apparent that creativity and innovation is essential especially for technology-based firms (Gumusluoglu & Ilsev, 2009). According to Lindelöf and Löfsten (2006), technology-based firms create plenty of opportunities for success. Parida, Westerberg and Frishammar (2012) suggested it is crucial for technology-based firms to be innovative to achieve and sustain competitive advantage. Innovation is the main condition for survival for all firms including technology-based firms (Fiates, Fiates, Serra & Ferreira, 2010; Hoveskog, 2011). SMEs in Malaysia make up 99.2% of total business establishments, create 59% of total employment and contribute 33% of gross domestic product (GDP) and 20% of total exports (Hashim, 2015). SMEs play an important role in developing Malaysia's economy (Abdullah, Hamali, Deen, Saban & Abg Abdurahman, 2009). Besides creating employment, SMEs play an important role in contributing to the prosperity of big and multinational corporations (MNCs) through their entrepreneurial creativity and innovation (Kayadibi, Polat & Fidan,

2013). SMEs contribution to the growth and development of the Malaysian economy cannot be denied and it has become an important aspect of economic growth in Malaysia (Chelliah, Sulaiman & Pandian, 2010). The Malaysian government's emphasis in promoting the development of SMEs including technology-based SMEs signifies the official recognition of the importance of SMEs as one of the main national agenda. As highlighted by Razak (2011), Malaysia's Vision 2020 of high income, high-productivity and high technology, all effectively contributes to national development. To achieve this, Malaysia needs to move to the innovation-driven stage to become an advanced nation. The issue of innovativeness of SMEs and how it influence business performance especially technology-based SMEs is yet to be exhaustively explored. Hence, this study aims to determine the innovativeness of technology-based SMEs and to investigate the relationships between innovativeness and business performance. This article consists of five sections, i.e. the first section provides relevant literature followed with research methodology, the findings are discussed next while recommendations and further research are finally discussed.

### Literature review

Innovativeness is an important aspect in entrepreneurship as it allows the differentiation between entrepreneurs and other business people. Hult, Hurley and Knight (2004) define innovativeness as "how well a firm is engaged with innovation; the ability to produce something new or make changes in products, services, processes and ideas" (p. 429). Lumpkin and Dess (1996) described innovativeness as something that reflects "the tendency to engage and support new ideas, novelty, experimentation and creative processes resulting in newness" (p. 142). The study of innovativeness is important for all firms as the



ability to innovate is one of a critical success factor in determining the growth and future performance of firms and seen as the only means by which companies can sustain competitive advantage (Muller, Valikangas & Merlyn, 2005; Carayannis & Provan, 2008). When a firm is innovative, this is reflected by the firm's tendency to depart from established practices and technologies by embracing and supporting creativity and experimentation, technological leadership, novelty and R&D in the development of products, services and processes (Grande, Madsen & Borch, 2011). Based on a report by European Commission (2015), Denmark, Finland, Germany and Sweden are known as Innovation leaders with innovation performance well above that of the EU average, while Austria, Belgium, France, Ireland, Luxembourg, Netherlands, Slovenia and the UK are known as Innovation followers with innovation performance above or close to that of the EU average. The European Union is one of the world's best-performers when it comes to producing high-quality science and innovative products (European Commission, 2013). Innovativeness further described by Pesämaa, Shoham, Wincant, and Ruvi (2013) is the process that leads to innovation. Baker and Sinkula (2009) claimed innovativeness shows a fundamental willingness to move forward from existing technologies or practices and venture beyond the current state of the art. It is important for firms to be innovative since products and business life cycles are shortening (Pérez-Luño, Wiklund & Cabrera, 2011). In fact, Ahuja (2011) explained organizations around the world are faced with stiff competition resulting from rapid technological developments which is forcing them to continue to innovate to ensure survival, growth and excellence.

According to Yusuf (2002), there is no standard practice to measure business performance. A wide array of different measures has been used by researchers usually without justification (Brush & Vanderwef, 1992; Murphy, Trailer & Hill, 1996). Lee (1987) claims that a commonly accepted overall criterion of business performance has yet to be developed since different businesses may have different organizational objectives, what more from the perspective of technology based start-ups and SMEs. For example, Fauzan, et al. (2017) highlighted the emergence of substitute product and poor marketing management as the most important factors that affects the performance of a bio-product based spin-off university company. For this study, a self-reported subjective measure is adopted where it is based on the perceptions of the owners/top managers of technology-based SMEs. In addition, majority of SMEs are privately held and have no legal obligations to disclose their financial information (Yang, 2008).

## Methodology

A quantitative method is used for data collection for this study. Survey questionnaire using a 5-point scale ranging from strongly disagrees to strongly agree is adopted to assess items that measure innovativeness. The items for innovativeness and business performance were adopted from study by Lumpkin, Cogliser and Schneider (2009), Gibson and Birkinshaw (2004) and Wolf and Pett (2006). However, some changes were made to modify the study settings. Information was gathered from the owners/top managers of technology-based SMEs in Malaysia. These respondents were selected because of their knowledge and expertise with regards to their own establishment, operation and their knowledge of the direction of the firm (Che Senik, 2010). Technology-based SMEs is define as SMEs that follow the general admission policies, comply with the clusters listed by the Ministry of Science, Technology and Innovation (MOSTI) and involved in commercialization of research and development (R&D) activities and acquisition of foreign technologies (Arshad, 2016). A total of 150 questionnaires were distributed using a simple random sampling and only 86 were found to be valid for the analysis. Data from the questionnaires was analyzed using SPSS statistical program using descriptive and inferential analysis.

## Results

In determining the innovativeness of technology-based SMEs, Table 1 presents descriptive analysis and reliability analysis of the construct, innovativeness. The result indicates the mean value for innovativeness is 4.241. This value is considered high as the value is above 4 as all the items in the questionnaire was anchored on a 5-point scale. To strengthen further, single mean t-test is conducted and the results shows a significant where the results were slightly higher than the population mean of 3. The reliability test shows the Cronbach's Alpha for innovativeness is at 0.881 and the items are reliable as it is greater than the acceptable level of 0.7 (Pallant, 2007). Prior assessment of normality of distribution indicated innovativeness is normally distributed. This is shown in Table 1 where kurtosis and skewness values were between +1 and -1, thus it fulfils the prerequisites to perform correlation analysis.

**Table 1: Descriptive, Inferential and Reliability**

Constructs	Test Value=3			Alpha	Kurt	Skew
	Mean	t	P-value			
Innovativeness	4.241	23.479	0.000*	0.881	-0.668	0.165

\* Significant at 0.05

Correlation analysis was conducted to investigate the relationship between innovativeness and business performance. Results of the study shown in Table 2 depicted significant and positive correlations observed between the two variables. Beta coefficient for innovativeness is  $\beta=0.473$ . Therefore, the results confirmed that innovativeness is a key determinant of firm performance.

**Table 2: Correlation Analysis**

Variables	Business performance	
Innovativeness	Pearson Correlation	0.473**
	Sig.	0.000

## Conclusion and discussion

The results indicate that Malaysian technology-based SMEs are innovative as evidenced by the high mean value of above 4. This describes that Malaysian technology-based SMEs comprehend that it is crucial for them to keep on innovating to keep up with the wants and needs of the customers. They must constantly innovate to avoid from being obsolete and outdated. For them to compete and survive in the competitive marketplace, they are required to innovate in every aspect of their business operations. Thornhill (2006) described that firms with a high degree of innovativeness have better performance. He further added that innovation is the key factor in entrepreneurial activities. Hassim, Nizam, Talib and Bakar (2011) further argued SMEs need to be innovative in order for them to be successful which lead them to have better chances of survival and growth. According to Drucker (1999), firms are given two options, either innovate or die. For firms to stay competitive and compete successfully, it is important for them to be innovative (Sáez-Martínez, Díaz-García and González-Moreno, 2014).

From the findings generated from this study, it is proven that innovativeness has a significant and positive relationship towards business performance. It indicates that innovativeness does have an impact on performance of Malaysian technology-based SMEs. Results of this study are consistent with previous studies which found a significant and positive relationship between innovativeness and firm performance (Arap Bor, 2018; Hajar, 2015; Kuswanto, 2012; Ambad & Wahab, 2013). Innovativeness is the most important factor which leads to an increased market share, new product introduction and success, and overall firm performance. Innovativeness in business is a useful strategy to achieve competitive advantage which leads to achievement of better performance. Hence, it is recommended that these technology-based SMEs should continuously innovate from time to time.

This study is not without limitations. Since the study only focussed on Malaysian technology-based SMEs, the researcher believes that it would be an added value to study technology-based SMEs from other developed and developing countries. It would also be good if future



researchers are able to study on large firms as different findings may be found as larger firms have more resources and are better structured. Bhide (1999) who studied innovation in large firm found that large firms are concentrating on projects with high-up front costs and low uncertainty leaving low costs and high uncertainty to small and medium firms. Given the study only focused on technology-based SMEs, a comparative study can be conducted to see whether non-technology-based SMEs demonstrate innovativeness in their business operations.

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