Innovation and firm performance: Evidence from malaysian SMEs

[1]Daljeet Singh Gill, **[2]Norshafizah Hanafi**

[1]Acuity Business Solutions, Malaysia. dsgill19@gmail.com
[2]Universiti Utara Malaysia, Malaysia, norshafizah@uum.edu.my

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ABSTRAK

Kajian ini direka untuk mengkaji dan menganalisis kesan inovasi produk dan proses inovasi terhadap prestasi firma Perusahaan Kecil Sederhana (PKS) dalam industri perkhidmatan di Malaysia. Populasi responden adalah pengurus pemilik 150 firma PKS, yang membentuk kadar tindak balas 18%. Untuk menguji hubungan pemboleh ubah, Pemodelan Persamaan Struktur Secara Separa Separa (PLS-SEM) digunakan. Hasil analisa menunjukkan bahawa, inovasi produk dan proses mempunyai kesan positif sebanyak 43% terhadap prestasi keseluruhan firma. Syarikat PKS yang menekankan inovasi produk dan proses terbukti dapat meningkatkan prestasi. Kajian ini menekankan bahawa inovasi adalah aspek penting dalam semua aktiviti keusahawanan yang seterusnya memastikan peningkatan prestasi syarikat.

Kata kunci: innovasi produk, innovasi proses, penutupan syarikat, prestasi firm PKS, Malaysia.

Abstract

The study is designed to examine and analyze the effects of product innovation and process innovation on firm performance of Small Medium Enterprises (SMEs) within the service industry in Malaysia. The populations of the respondents are owner managers of 150 SME firms, constituting 18% response rate. To test the relationship of the variables, Partial Least Squares Structural Equation Modeling (PLS-SEM) is utilized. Results of the analysis indicate that, product and process innovation positively impact as much as, 43% on overall firm's performance. SME firms' that emphasizes product and process innovation are proven to improve the performance. The study highlights that innovation is important aspect in all entrepreneurial activities that further ensure improved firm performance.

Keywords: *product innovation, process innovation, mortality, SMEs performance, Malaysia.*

INTRODUCTION

SME firms are key players towards thriving economic and market development in Malaysia. 36.3% of the country's GDP (gross-domestic-product) is from contribution of Malaysian's SMEs and this sector employs 65.5% of total employment (SME Annual Report, 2015/16) and accounts for 17.8% of the nation's exports. Aside from generating income and employment, SMEs plays an important role in gender and youth empowerment, addressing urban and rural poor through promoting entrepreneurship, as a result, member states depend significantly on SMEs for development and economy growth. Due to the significance of SMEs in the growth of the nation's economy, the performance of SMEs are continuously at the center and attract interest among the academicians, investors, trade organization, researchers, universities, entrepreneurs, and government agencies. Gartner & Shane (1995) and Thornton (1999) discovered that, the entrepreneurship is an upward trend. Sathe (2003) further stated that, the economy of the new world is entrepreneur oriented with the creation and rise of new businesses, thus hailing entrepreneurs as the new supporter of economic development and competitive enterprises.

The Malaysian government recognizes that, key success factor for SMEs is innovativeness, since the emergence of newer technologies and products have influenced the way businesses are conducted (NSDC, 2007). Oke *et. al.,* (2003) asserts that, encouraging creativity and innovation in entrepreneurship is also the agenda of governments in the member countries of the 'Organization for Economic Co-operation and Development' (OECD) and transitional, emerging and developing economies, as entrepreneurs are the means of growth, pooling capital for funding investment, innovativeness, along with, necessary skill-sets. Ever since the 1990's, high importance of innovativeness for competitiveness and long-term survival has be reported by scores of researchers (Ancona & Caldwell, 1992; Kim & Mauborgne, 2007), which stress that, managers at all level has to be concerned and be anxious about promoting innovation. Numerous current researchers agreed that, managing innovation is fundamental for the survival of the firms and businesses.

Based on considerable contributions by the SMEs to the development of a country the world over including Malaysia, the government had put in place a variety of incentives, schemes, assistance, and programs to further encourage more people to get involved into entrepreneurship particularly in SME sectors and enterprises. The impact of these efforts had positively resulted, in an increase of establishment of enterprises (micro, small and medium). Despite growing number of enterprises, reality is that their failure rates are equally high. In his research, Van Praag (2003) stressed, whilst the number of establishments is high, the survival of these firms is questionable. These findings are similar to many past surveys done the world over and mortality of these firms' are high especially within the initial five (5) years of business operation (EIM, 2010 & US SBA, 2014). Research by Kampschroeder, *et al.,* (2008) highlights the undesirable wave of economic fallout of failed small businesses. Similarly, Liao *et. al.,* (2008) & US SBA (2009) relates that, small businesses experienced discontinuance due to growing challenges, strong competition from large firms and globalization, as statistics reveals that, only 76% of startups stay operational beyond two (2) years, 47% beyond four (4) years, and only 38% beyond six (6) years, respectively. Similarly, Tan *et al.* (2009) stated that, between 50% - 80% of small businesses fails within a short span of operation.

Performance of Malaysian SMEs is crucial for firm's survival and that, it is equally critical to the overall economy on the whole (SME Annual Report 2015/2016). Malaysian SME firms are faced by many challenges, particularly in the light of changing global markets, including the ability to compete globally and move up the value chain. Research by Avermaete *et.al* (2003), reveals that, being innovative and embarking on innovation is important for SMEs as they need to constantly introduce latest or newer products, and develop new processes in order to explore and expand wider markets. Despite large numbers of SMEs in various sectors and industries, mortality rate of these firms are alarmingly high. As shown in Table 1.1 below, the number for SME business closure are alarmingly high.

Table 1.1 Business Mortality

Year	Yr 2015	Yr 2014	Yr 2013
Companies wound-up & struck-off	33,006	30,924	26,700
Termination of Business	35,450	29,966	18,161

Source: SMECorp, annual report 2016

Further, based on findings of Noor Hazlina & Pi-Shen (2009), failure rates of Malaysian SMEs are about three (3) times as compared to other countries, such as Australia. Therefore, it is critical for Malaysian SMEs, to reduce vulnerability of global economic shocks and maneuver to enhance firm's performance in order to remain afloat and survive. These failure rates drastically and directly or indirectly affects the contribution towards Malaysian economy in terms of GDP, job employment opportunities, productivity and value-added offerings in the country.

The study specifically explore and focuses on, innovation of products and processes, and its' effects and relationship towards the performance of SMEs to minimized mortality rates, ensure survival and further enhance growth. The gaps observed from various studies are, the lack of investigations in Malaysia on innovativeness especially on product innovation and process innovation and its consequences on SMEs firm performance. This research equally adds to research statistics confirming the findings to further validate past observations.

LITERATURE REVIEW

Firm Performance

The word performance is not new, despite the frequency of usage yet, its meaning is relative. In many small business literatures, SMEs performance has be researched upon by a number of researchers and that most research investigating SMEs performance with a varied number of variables. Moullin (2007) states that, SMEs' performance is seen and viewed as, how firm delivers value to its stakeholders, as well as, their customers. Similarly, Neely *et. al.,* (1995) states that, firm performance is a concept often discussed in studies, yet has no single definition. Firm performance may be defined as 'the process of quantifying' activity and action of firm which leads to achievement of its goals and objectives, through satisfying its customers and stakeholders. These achievements are through an efficient and effective performance of business operation as compared to its competitors (Neely, 2005). Therefore, firm's performance can be defined as the measurement of how well its goals and objectives are achieved (Penrose, 1959). Some of the key financial indicators often used to measure and determine firm performance are such as; gross profit margin, return on asset, market share, net profits and the like. This study defines SMEs firm performance as the ability of firm to successfully meet this indicator through product and process innovation therefore, competently exploit available resources to ensure survival, yet fulfill customer satisfaction and contribute towards better firm performance. According to Alenka (2014) on 'Determinants of SMEs performance' at the 7th, international scientific conference, New York, argues that qualitative factor such as the attitude of owner-manager of firm is equally an important factor as well, and further goes to suggest that, entrepreneurs who are open to ideas and views, are individuals with positive mental strength that has three (3) dimensions;- i) engages in learning, ii) in search of and for novelty, and iii) constantly seeking feed-backs. Therefore, openness to change, openness to novelty, idea and opportunities, and openness to feedback (seeking opinions and suggestions) and learning are the key factors towards fostering firm performance. Being receptive towards learning something new, to seek for new business opportunities and to gather feedback to their ideas for improvement, is a positive influence towards firm performance.

Product Innovation

Innovation is the development of a new method, idea or product (Merriam-Webster, 2016). Innovation is the first successful commercial introduction of a new product, the first use of a new method, or the creation of a new form of business enterprise (Jusoh *et. al.,* 2015). The findings further stressed that, innovation can be in the form of product innovation or process innovation. Researchers (Gopalakrishnan & Damanpour, 1997; Langley *et. al.,* 2005) stated that, product innovation is described as, the making of a new product out of new resources or substances (entirely new invention) or the modification of current products (alteration to enhance existing version of current product) to fulfill customer satisfaction. Similarly, the definition equally refers to, the presentation of new services or product that will satisfy existing market or consumers or to create new markets (Wang & Ahmed, 2004; Wan *et al.,* 2005). Myers & Marquis (1969) stated that, exploitation of new ideas will result in innovation of new products. Similarly, Craig & Hart (1992) stressed that, product innovation offer and increases range of choices for products. Through innovation, product quality could be increased, which in effect leads to firms' success and eventually to firm's competitive advantage (Gravin, 1987; Forket *et. al.,* 1996). A broader perspective has been adopted by Camison & Lopez

(2010) who argues that, one of the many causes of an organization's competitive advantage is product innovation.

The only and main primary source of reference and guideline for defining and assessing innovation activities is obtained from OECD's 3rd Edition Oslo Manual (2005). Therefore, OECD (2005) definition specifies product innovation as, 'the introduction of a good or service that is new or significantly improved with respect to its characteristics or intended uses. This includes significant improvements in technical specifications, components and materials, incorporated software, user friendliness or other functional characteristics. Product innovations can utilize new knowledge or technologies, or can be based on new uses or combination of existing knowledge or technologies. Product innovations include both the introduction of new goods or services and significantly improvements in the functional or user characteristics of existing goods and services. New products are goods and services that differ significantly in their characteristics or intended uses from products previously produced by the firm. The first microprocessors and digital cameras were examples of new products using new technologies. The first portable MP3 players, which combined existing software standards with miniaturized hard-drive technology, was a new product combining existing technologies. The development of new use for a product with only minor or major changes to its technical specifications is a product innovation. An example is the introduction of a new detergent using an existing chemical composition that was previously used as an intermediary for coating production only. Product innovations in services can include significant improvements in how they are provided (efficiency and speed), the addition of new functions or characteristic to existing services or the introduction of entirely new services. Examples are significant improvements in Internet banking services, such as greatly improved speed and ease of use, or the addition of home pick-up and drop-off services that improve customer access for rental cars. Providing on-site rather than remote management contact points for outsourced services is an example of an improvement in service quality'.

Process Innovation

Generally, process innovations are the reengineering of, and enhancement of internal operation of business processes (Cumming, 1998). This process innovation consist various parts of a firm's operations, such as, management, manufacturing, technical design, research & development (R&D), and business activities (Freeman, 1982). Similarly, Oke *et al*. (2007) stated that, process innovation relates with the improvement in or creation of techniques and the development in process or system. Zhuang *et. al.,* (1999) agreed that, innovation in technology, skill, techniques, system and procedure, which is used in the process of converting or to transform inputs into outputs. In a production activity, process innovation can be referred to as, improved or new methods, devices, tools, and knowledge in creation of a product (Gopalakrishnan & Damanpour, 1997; Langley *et al.,* 2005; Wan *et al.,* 2005; Oke *et al.,* 2007). Equally findings suggest (Varis & Littunen, 2010) that , process innovation positively related to firm performance.

OECD (2005) define and specifies process innovation as, 'the implementation of a new or significant improved production or delivery method, which includes significant changes in techniques, equipment and or software. Process innovation can be intended to decrease unit costs of production or delivery, to increase quality, or to produce or deliver new or significantly improved products. It include new or significantly improved methods for creation and provision of services, which involve significant changes in equipment and software used in services-oriented firms or in the procedures or techniques that are employed to delivery services. An example is the introduction of GPS tracking devices for transportation services, the implementation of a new reservation system in a travel agency, and the development of new technique for managing projects in a consultancy firm. Process innovation also covers new or significantly improved technique, equipment and software in ancillary support activities, such as purchasing, accounting, computing and maintenance. The implementation of new or significantly improved information and communication technology (ICT) is a process innovation if it is intended to improve the efficiency and or quality of an ancillary support activity. Production methods involve the technique, equipment and software used to produce goods or services. An

example of new production methods are the implementation of new automation equipment on a production line or the implementation of computer-assisted design for product development. Delivery methods concern the logistics of the firm and encompass equipment, software and technique to source inputs, allocate supplies within the firm, or deliver final products. An example of a new delivery method is the introduction of a bar-coded or active RFID (radio frequency identification) goods-tracking system'.

Innovation is the realization of something new. It is a product, a process, a marketing method or even an organizational change to make a difference and improve the activities of the enterprise. It adds value for the customer. This improvement ultimately will have a positive economic impact within the organization. In view of all that has been mentioned so far, one may suppose that, innovation and innovativeness either directly or indirectly affects firm's performance positively and that, innovation comes in through varying approaches, and are subject to entrepreneurs and firm's strategic orientation.

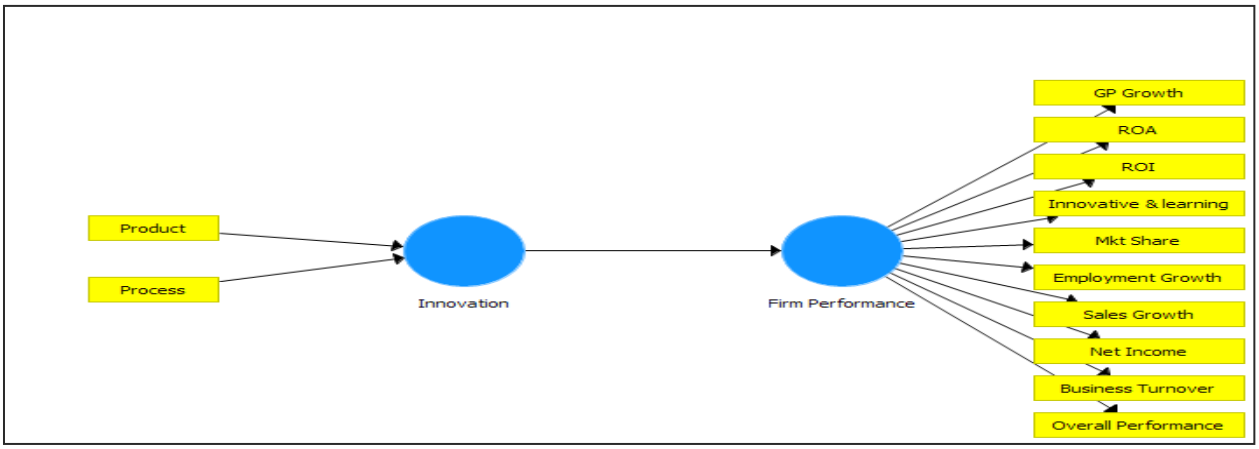
The literature presented above leads to the development of the following research question: -

RQ: Is there a relationship between Product Innovation and Process Innovation towards SME Firms' Performance?

RESEARCH METHODOLOGY

The approach adopted is cross-sectional and applies quantitative analysis and adopts a survey data collection method. Sample size were determined using G*power 3.0 software (Faul *et. al.,* 2007) as advised by (Hair Jr *et. al.,* 2016) to get the minimum required sample size and cluster sampling technique were used. Primary data were collected from 150 SME business owners-manager and the study focused on selected region and State of Selangor due to the fact that this region has the largest population of firms. Upon collection of the required data from the respondents, the researcher uses statistical software tool which is known as SPSSv22 and SmartPLSv3 (Statistical Package for the Social Sciences) to perform data analysis and interpretation. The independent and the dependent variables of the study were measured by a five-point Likert-type scale, ranging from 1 (strongly disagree) to 5 (strongly agree) and 1 (much lower) and 5 much higher) respectively. The items of these variables were adopted and adapted from previous studies and encompasses varied researchers and sources. To test the reliability of the results, a Cronbach's alpha test was performed for confirmation of satisfactory reliability index. The Cronbach alpha observed of the items is between 0.80 – 0.94, which is regard as good and excellent (George & Mallery, 2003). The principle technique used in this study is to look into the coefficient determination (R^2), effect size (f^2) and predictive relevance (Q^2) in order to test the strength of the relationship between variables and for prediction on the effect of exogenous variable on endogenous variable. The researcher investigated the effects and affects of, product and process innovation on SME's performance, as depicted on figure 1.1 below.

Figure 1.1 *Conceptual Model*



RESULTS AND DISCUSSION

Results from the analysis indicated that there is a positive relationship between product and process innovation and SMEs firm performance. As reflected in Table 1.2, RQ is supported with beta 0.395, T-value 3.439, P-value 0.001 and effect size 0.115. Therefore, it indicates that SMEs that are implementing innovation of product and processes significantly improves SMEs firm performance. With the value of R^2 for SMEs' performance of 0.439, and the results of predictive relevancy and precision indicated that the value of Q^2 for SMEs' performance is 0.279. Therefore, the findings and results have proven that the conceptual model is sound and a reliable source to measure for SMEs' performance through innovativeness.

Table 1.2 *Direct relationship results*

Path Coefficient Direct Relationship

Research Question	Construct Path	Std Beta	Std Error	T-Test	P-Values	R^2	f^2	Q^2	Decision
RQ	I-FP	0.395	0.093	3.439	0.001	0.439	0.115	0.279	Supported

Implementing strategies for innovation is not an easy task for SMEs, since they face restricted access to technology and to economic resources. Kalin (2014) stated that, for innovation to grow, it needs an 'intensive networking practices' which includes partnerships and joint research with laboratories and the universities. It entails a practice of developing an ever-expanding network of knowledge and technological capabilities and that, these small innovative firms are patent-intensive, which provided a competitive edge ensuring partnership and growth. Therefore, innovation is internally-oriented strategies (process improvement) and positively contributed towards firm's performance. Externally-oriented strategy (management experience with, possession of unique product and competitive advantage) is equally positively related to performance.

In general, SMEs are very diverse and that, policy-makers should steer clear of collective consideration and that R&D policy is not enough, thus be complemented along with other policies. It is argued that (US SBA, 2009), these policies ought to tackle a variety of objectives, such as, that it; (i) Must facilitate access to other innovative inputs, in addition to R&D, (ii) Support company-wide innovation, (iii) Encourage skill-enhancement and human resources practices, (iv) Promote innovative networking and rewarding supplier-user relationship, and (v) Generate and create the needed framework conditions to facilitate spillovers from bigger firms, universities and or, research centers for SMEs.

CONCLUSION

The result obtained indicates that innovation has a positive relationship with overall firm's performance. Results of the empirical study and other past research concludes' that innovation generally contributes positively to firm's performance. Therefore, it is important for SME entrepreneurs to acknowledges' the importance of innovation in enhancing firm performance. It is recommended that, in order to enhance firm's performance, SME owner-managers should be creative in managing various dimension of innovation within the firm. The empirically researched results obtained from this study matches with the findings of past studies which states that product innovation is a source for competitive advantage and firm performance (Camison & Lopez, 2010; Garvin, 1987; Forker *et al.* 1996) and that process innovation can be intended to decrease cost, enhance quality and firm performance (OECD, Oslo manual, 2005; Varies & Littunen, 2010).

In general sense, a positive business environment is one that supports SMEs to operate more effectively and efficiently hence generate better productivity. This, in turn it will enhance the abilities of the firms to be more innovative which increases productivity for sustainable development. On the other hand, a negative and poor business environment reduces opportunities for firms to conduct business activities and decreases a country's potential in terms of production, welfare and productivity. Smaller and larger firm reacts differently to such business environment, as large firm may exit from the market and or drop the product of service offerings, and this is not typically possible for SMEs. Response options of SMEs are limited to it's intangible and tangible resources and opportunities offered by the industry and environment.

Government and policy makers have to concur that every decisions in relations to SMEs has a direct and indirect effect on activities of the enterprises. Hence, it is imperative that government as well as, policy makers to reveal and publicize their actions and programmes to assist and improve the performance and sustainability of SMEs in Malaysia. Government should equally introduce a policy that would encourage SMEs to pursue innovative business activities by luring these firms through the payment of special incentives, granting grants, tax-exemption and or rebates. Perhaps, policies enacted by the government directed at SMEs must stand the test of time and truly ensure that administrative bottlenecks and bureaucratic constraints are minimized or best removed with simplified processes.

Lastly, result of the research emphasizes the importance of SMEs to possess innovative-mindset, to ensure and realized better firm's performance. In conclusion, the findings suggest that SMEs, in the context of Malaysia, has to put emphasis on innovation especially on product and processes in order to assist firm recognize more business opportunities, create newer market and opportunities, increase and expand market, and take business risk to attain improved performances.

REFERENCES

Alenka, S. (2014). Determinants of SME performance: The impact of entrepreneurial Openness and Goals. *Economic & Social development, 7th, International Scientific Conference*, New York City.

Ancona, D. G., & Caldwell, D. F. (1992). Demography and design: Predictors of new product team performance. *Organization Science, 3*(3), 321-341.

Avermaete, T., Viaene, J., Eleanor, J., Morgan, N. C. (2003). Determinants of innovation in small food firms. *European. Journal of Innovation Management, Vol. 6 Issue: 1,* pp.8-17, https://doi.org/10.1108/14601060310459163.

Camison, C. & Lopez, A. V. (2010). An Examination of the Relationship between Manufacturing Flexibility and Firm Performance: The Mediating Role of Innovation. *International Journal of Operations & Production Management*, *30*(8), 853-878.

Craig, A. & Hart, S. (1992). Where to Now in New Product Development Research. *European Journal of Marketing*, *26*(11), 1-49.

Cumming, B.S. (1998). Innovation overview and future challenges. *European Journal of Innovation Management, 1*(1), 21-9.

David. R. L., Ross. L. C., & Terry. R. S. (2007). Inter-relationship between innovation and market orientation in SMEs. *Management Research New,30*(12), 878-891.

Enkel, E., Gassmann, O., & Chesbrough, H. W. (2009). Open R&D and open innovation: Exploring the phenomenon. *Journal of Research & Development Management, 39*(4), 311–316.

EIM, (2010). *Annual Report on EU Small and Medium-sized Enterprises*. Retrieved from, http://www.ec.europa.eu

Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G* Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior research methods, 39*(2), 175-191.

Freeman, C. (1982). *The Economics of Industrial Innovation, (2nd ed*.), Frances Printer, London, UK.

Forker, L. B., Vickery, S. K. and Droge, C. L. (1996). The Contribution of Quality to Business Performance. *International Journal of Operations and Production Management*, *16*(8), 44-62.

Gartner, W. B., & Shane, S. A. (1995). Measuring entrepreneurship over time. *Journal of Small Business, 12(4),* 11-32.

Garvin, D. A. (1987). Competing on the eight dimensions of quality. *Harvard Business Review*, *65*(6), 101-109.

George, D., & Mallery, P. (2003). *SPSS for Windows step by step: A simple guide and reference* (4th, ed.) Boston: Allyn and Bacon.

Gopalakrishnan, S., & Damanpour, F. (1997). A Review Economics of Innovation Research in Sociology and Technology Management. *Omega*, *25*(1), 15-28.

Hair Jr, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2016). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Sage Publications.

Kalin, F. Z. (2014). Small innovative companies make a big difference. *European View, 13,* 161-7.

Kampschroeder, K. F., Ludwig, N., Murray, M. A., & Padmanabhan, P. (2008). The stitch house: A case of entrepreneurial failure. *Journal of the International Academy for Case Studies, 14*(3), 31-37.

Kim, W. C. Mauborgne, R. (2007). *Blue ocean strategy*. Leadership Excellence.

Jusoh, M. A, Halim, H. A., & Omar, B., (2015). The development technology based entrepreneur in Malaysia. *Management Research Journal, 5*(1), 27-37.

Langley, D.J., Pals, N. & Ort, J.R. (2005). Adoption of Behaviour: Predicting Success for Major Innovations. *European Journal of Innovation Management*, *8*(1), 56-78.

Liao, J., Welsch, H., & Moutray, C. (2008). Start-up resources and entrepreneurial discontinuance: The case of nascent entrepreneurs. *Journal of Small Business Strategy, 19*(2), 1-15.

Mayanyn, L. M., & Maria, T. O. F. (2016). Identification of Innovation Capabilities for Micro and Small Enterprise in Morelos, Mexico. *Review of Business & Finance Studies, 7*(1), 79-92.

Merriam-Webster (2016). "Innovation", in Merriam-Webster Dictionary. available at: www.merriamwebster.com/dictionary/innovation

Minna, S. (2014). Innovation capability for SME success: Perspective of financial and operational performance. *Journal of Advance in Management Research.*

Moullin, M. (2007). Performance measurement definitions: Linking performance measurement and organizational excellence. *International Journal of Health Care Quality Assurance, 20(3),* 181–183.

Myers, S. & Marquis, D.G. (1969). *Successful Industrial Innovations*. National Science Foundation, Washington, DC.

Neely, A., Gregory, M., & Platts, K. (1995). Performance measurement system design: A literature review and research agenda. *International Journal of Operations & Production Management, 15(4),* 80–116.

Neely, Andy. (2005). The Evolution of Performance Measurement Research – Developments in the Last Decade and a Research Agenda for the Next. *International Journal of Operations & Production Management, 25,* 1264-1277.

Noor Hazlina Ahmad & Pi-Shen Seet. (2009). Dissecting behaviours associated with business failure: A qualitative study of SMEs owners in Malaysia and Australia. *Asian Social Science, 5*(9).

NSDC (2007). *SME Annual Report 2007*: National SME Development Council.

OECD Oslo Manual (2005). *Guidelines for Collecting and Interpreting Innovation Data*, 3rd edition.

Oke, A., Burke, G., & Myers, A. (2003). *Innovation types and their impact on performance in UK SMEs.*

Penrose, E. T. (1959). *The Theory of the Growth of the Firm*. New York: John Wiley.

Sathe, V. (2003). *Corporate entrepreneurship: Top managers and new business Creation*. Cambridge: University Press.

Sekaran, U., & Bougie, R. (2010*). Research Methods for Business: A skill Building Approach (5th ed)*. John Wiley and Sons Inc.

SME Annual Report. (2015/2016). Retrieved from, http://www.smecorp.gov.my

Tan, K. S., Chong, S. C., Lin, B., & Eze, U. C. (2009). Internet-based ICT adoption: Evidence from Malaysian SMEs. *Industrial Management & Data Systems, 109*(2), 224 – 244.

Thorton, P. H. (1999). The sociology of entrepreneurship. *Annual Review of Sociology, 25,* 19-46.

US SBA. (2009). *Starts and closures of employer firms, 2004-2008.* Retrieved from, http://www.sba.gov
US SBA. (2014). Retrieved from, http://www.sba.gov
Varis, M., & Littunen, H. (2010). Types of innovation, sources of information and performance in entrepreneurial SMEs. *European Journal of Innovation Management, 13*(2), 128-154
Wan, D., Ong, C.H. & Lee, F. (2005). Determinants of Firm Innovation in Singapore. *Technovation*, *25*(3), 261-8.
Wang, C.L. & Ahmed, P.K. (2004). The Development and Validation of the Organizational Innovativeness Construct Using Confirmatory Factor Analysis. *European Journal of Innovation Management*, *7*(4), 303-13.
Zhuang, L., Williamson, D. & Carter, M. (1999). *Innovate or Liquidate – Are All Organisations Convinced: A Two-phased Study into the Innovation Process. Management Decision*. (Online), vol. 37, .0. 1, (n.p.), Available: http://www.emeraldlibrary.com/brev/00137ag1.htm