

# Role of Innovation in SMEs Performance: A Case of Malaysian SMEs

Kamariah Ismail, Wan Zaidi Wan Omar, Khairiah Soehod, Aslan A. Senin and Ch. Shoaib Akhtar

**Abstract**—Innovation has been termed as the most crucial of the elements in today’s globalized and competitive environment. Companies focusing on innovation achieve not only competitiveness but also are able to sustain them for a longer period of time. The present study is conducted in the context of Malaysian SMEs using a sample of 870 SMEs from both manufacturing and services sectors. These SMEs have been found engaged in variety of businesses and to some extent have also been involved in the process of innovation. The results indicate that the SMEs though are aware of the innovation and its relevance to organizational performance and growth yet are unable to focus on innovation processes as much as they should to gain competitive position.

**Keywords**— Innovation, Performance, Growth, SMEs, Malaysia.

## I. INTRODUCTION

Innovation is an important tool that provides opportunities to new inventions and building of new markets (Kuhn & Marisck, 2010). Moreover, there is a remarkable increasing interest trade and industry growth based on innovation and creation of competitive advantage (Birkinshaw, 2011; Clawson, 2009; Grant, 2010; Hamel, 2002; Kim & Mauborgne, 2005). Furthermore, due to mounting competition, the capability to control the innovation and manage the innovation processes has become extremely important to governments and organizations alike because of the impact, limited and inadequate resources will have on the future growth. Kanter (2006) terms innovation as a natural renewable source accessible to all restricted only by human effort.

Remaining competitive in today’s modern world require organizations to pursue innovation (Teece, 2007). Hence the million dollar question in this regard relates with ‘how to innovate’ which still draws researchers attention. Clausen, et

al (2013) recently focused on this challenge by attending to the question and used prior theory to identify four modes of innovation i.e. open exploration, closed exploration, open exploitation, and close exploitation. It has been suggested by researchers that SMEs have limited innovation as compared to larger enterprises. However, this misconception has been negated by Kaufmann and Todtling (2002) who highlight that SMEs are more innovative due to their heterogeneous character but are restricted in innovative capacity due to their financial and human resources. Similarly, Rosenbusch et al (2011) have identified several factors that affect the relationship between innovation and SME performance. They are of the view that new SMEs benefit more from innovation than the mature organizations mainly due to their flexibility to accept change in their environment or industry.

Keeping in view the importance of innovation in SMEs performance, the present study focuses on the Malaysian SMEs. Malaysia is one of the fastest growing economies of the world and is based largely on SMEs that contribute almost 33 percent to the national GDP. The importance of SMEs growth and their sustainability cannot be overemphasized for Malaysian economic growth and development especially in this competitive global environment. Despite the government focus on SMEs, researchers question the role of innovation in maintaining the growth of the Malaysian economy and the role of innovation in the overall performance of the SMEs. This concerns stems from the Hill et al (2012) who feared about country being victim of middle income trap evidenced from the visible downfall in the growth rate since late 1990s. Thus, the main focus of the present study is to evaluate the role of innovation towards SMEs performance and growth.

## II. REVIEW OF LITERATURE

### A. Innovation

Wood (2008) opines that creativity of an organization is mainly concerned with the establishment of valuable and useful new product, service or idea and the methods by which individuals work together in a complicated social system. Innovation is basically concerned and defined with the adoption of a product, service and methods that are new for organizations and adopted by them.

Crossan and Apaydin (2010) highlights that innovation is creation or acceptance, adaptation and utilization of a value-added novelty in trade and industry spheres, regeneration and expansion of product, services and markets, making of new ways of product development and establishing new

Kamariah Ismail is the Director of Technology Entrepreneurship Center, Universiti Teknologi Malaysia (UTMTEC), Johor Bahru, Johor, Malaysia (phone: +60197726991; e-mail: [m-maria@utm.my](mailto:m-maria@utm.my)).

W. Z. Wan Omar, is with the department of aeronautical engineering, Universiti Teknologi Malaysia, Johor Bahru, Johor, Malaysia (e-mail: [wanzaidi@fkm.utm.my](mailto:wanzaidi@fkm.utm.my)).

Khairiah Soehod is senior lecturer at the faculty of management, Universiti Teknologi Malaysia (UTM), Johor Bahru, Malaysia ([khairiah@fppsm.utm.my](mailto:khairiah@fppsm.utm.my)).

Aslan A. Senin is senior lecturer at the faculty of management, Universiti Teknologi Malaysia, Johor Bahru, Johor, Malaysia ([aslant@utm.my](mailto:aslant@utm.my)).

Ch. Shoaib Akhtar is PhD scholar at Department of Management, Faculty of Management, Universiti Teknologi Malaysia, Johor Bahru, Johor, Malaysia (e-mail: [sachaudhry2@live.utm.my](mailto:sachaudhry2@live.utm.my)).

management system. Similarly, Orlikowski (2010), Tsoukas et al. (2002) and Wierdsma (2004) stated that innovation is the process of development of new outcome by adopting new ways of working and product development. Moreover, this new method of working is concerned with the improvement and better performance of an organization that result in production of a new service, process and product. Innovation is generative renewal and competence of an organization to perform in correspondence to environment. Innovation is seen as a most important part of an organizational life that emerges in daily activities and interaction of the organizational members while they carry out their work and goals.

Innovation is considered as every day issue for members of organizations in defining their problems, responding to unforeseen events, creation of solutions and development of new ways and procedures to organize work, through the use of experience, skills, motivation and the knowledge accumulated is converted in to production of an innovative product or service (Tsoukas & Vladimirov, 2002; Wierdsma 2004, Kocher et al. 2011, Miettinen et al. 2009). Boer et al. (2005) explains that the organizational practices of the innovation are maintained, established and uses the standard set of actions or systems like designing of an idea or thought, evaluation and managerial efforts and practices for innovation like flexible roles, rotation, for time being projects teams, self organizing groups. Moreover, the formal practices help out and encourage the employees to participate not only in innovation and learning activities but also be a part of designing activities (Wilhelmsson & Döös, 2009, Kianto, 2008).

Tsoukas and Vladimirov, (2011), Jensen et al. (2007) stresses on dualistic nature of innovation between exploration and exploitation, individual and collective, STI (Science, Technology and Innovation) and DUI (Doing, Using and Interaction) mode of innovation and on organizational level between suppleness and competence. Eisenhardt et al. (2010) suggests that either the complementary processes, harmonization, meta level collective orientation or gather them in constant dialogic relationship in order to have control on both sides. Moreover, Foss et al. (2010) opines that it is not clear that how the activities of exploration/ exploitation and the process of knowledge usage, creation and integration occurs, it is not only concerned with the individual and team level, thus, we can get the complete picture of how the innovations are performed in an organizations.

Wierdsma, (2004) and Yuan and Woodman (2010) state that innovation is seen as rising trend in day to day work of organizational members and on individual level the exploration and generation of an idea is performed by the individual actions and via social interaction. If we talk about in terms of individual it means that capability to express skills and insight that is creation, encouragement and endorsement of new idea in to action. In order to improve the performance of an individual or group of an organization the thought or idea can be taken as a collective practice in order to get the best play of day by day increasing innovation and renewal

demands that is the main player between the individual and organizational knowledge.

### B. Growth

Researchers normally evaluate a company's ability based on its performance (Bonn, 2000; Rosli & Sidek, 2013) or growth (Dobbs & Hamilton, 2006). The concept of firm growth is associated with the law of proportionate effect, which states that the firm growth is proportional to the firm's current size. However, this law fails to hold in relation to the age of firm and show a negative relationship between growth and firm size and age (Hutchinson & Xavier, 2004). The empirical research indicates that there is positive relationship between innovation and growth of the firms if there is a constant supply of finances (Hyytinen & Toivanen, 2003). In the presence of innovation, the overall firm performance would enhance (Rosli & Sidek, 2013; Damanpour, 1991; Lin & Chen, 2007, Van Auken, et al. 2008; Li, et al. 2010; Salim & Sulaiman, 2011). This shows that innovation is critical for the growth of the organization in terms of its sales, market penetration, profitability and sustainability of organizations especially for small and medium enterprises.

## III. METHODOLOGY

For the present study, sample consisted of SMEs belonging to both manufacturing and services sectors. A total of 870 SMEs from across the country participated in the study that spanned over a period of twelve months. The criterion followed in selection of SMEs was based on number of employees not exceeding 150 full time employees. The instrument of the study was based on the innovation (process, product, administrative and marketing) and the growth of the company (sales turnover). A team of 20 specially trained enumerators was engaged to collect the data. The questionnaire was developed for the study and was based on the innovation survey. The reliability of the instrument was found to be 0.827. The scale of the study used five point likert rating. The demographic details of the respondent companies indicated that majority of these SMEs were operational since 2000 (75%) while rest of them were established during 1990s. Regarding the ownership of the companies, it was found that sole proprietorship accounted for 32% of the sampled SMEs, partnership accounted for 8% while the rest were private limited. The main activities of these sampled SMEs were found to be concentrated around travel & Tours (30%), scientific activities (12%), computer and electronics (16%) and the rest were distributed in the others miscellaneous activities. All of the sampled SMEs were involved in one of the innovation processes that is either they have been involved in product innovation, innovation related to processes, structural innovations or marketing innovations.

## IV. RESULTS AND DISCUSSION

First the significance of innovation to the company was assessed for both manufacturing and service sector SMEs. The

result is presented in Table 1.

Table 1 Significance of Innovation for Growth of Firm in opinion of Managers

To replace products		To improve product	To extend product range	To increase market share
Response	%	%	%	%
Not Relevant	44.1	25.1	26.7	25.8
Low	11.9	8.0	12.1	9.6
Medium	19.1	13.6	17.2	15.2
High	25.0	53.3	43.9	49.4

The results indicate that for the growth of the company, manager’s view replacing products as having no significance (44.1%), but they are of the view that to improve the product quality, increasing the market share and to extend existing the product lines, innovation is of utmost importance for the company.

To assess whether there exist any differences between manufacturing and service SMEs, t-test was applied (Table 2). The result indicates that there exist a significant difference of opinion between manufacturing companies and service oriented companies. The results indicate that manufacturing companies are aware and are acknowledge and apply the innovation in their processes.

Table 2 t-test for Manufacturing vs. Services SMEs

	Sector	Mean	Std. Dev.
To replace products	Manufacturing	1.5461	1.28777
	Services	1.0696	1.19622
To improve product quality	Manufacturing	2.3775	1.04685
	Services	1.6917	1.32562
To extend product range	Manufacturing	2.2247	1.11048
	Services	1.5143	1.26809
To open up new markets or increase market share	Manufacturing	2.2989	1.13428
	Services	1.6289	1.27987
N	870		

To assess whether the sampled SMEs were involved in any activities related to R&D, managers were asked about their response on a dichotomous scale. The result is shown in Table 3.

Table 3 R&D Activities of SMES

Response	In-house R&D	Outside Acquisition of R&D	External knowledge	Training
	%	%	%	%
No	59.4	88.4	84.9	49.7

Yes	40.6	11.6	15.1	50.3
N	870			

The managers of SMEs were asked to respond to whether they have been involved in in-house or outside the company R&D, acquisition of external knowledge for R&D activities or training their employees in this regard. The results indicate that on all accounts SMEs surveyed were less involved in R&D activities except for the training of employees.

V. CONCLUSION

The present study was conducted to find out the role of innovation in the development and growth of small and medium sized firms. The results indicate that the Malaysian SMEs management is aware of the role innovation plays in the growth of the firms. However, being resource starved these SMEs are not in a position to either enter R&D activities or acquire new and advanced technologies, although, these companies are engaged in developing the skills and capacities of their employees through various trainings. The results also suggest that the manufacturing companies are more involved in research and development activities than their counterparts in the services industry. The results of the study do indicate that the innovation is essential if companies want to grow and become more competitive in relation to their national and international competitors. This would not only help the SMEs to gain market share but would also help them sustain themselves in the longer run especially with the coming of the ASEAN Economic Community single market commencing in 2015. The survival of Malaysian SMEs will depend on their ability to innovate as they will face enormous challenge from other member countries SMEs. It is suggested that the future studies should take into account external factors like sources of government funding and incentives systems, external collaborative linkages between SMEs and research and academic institutions that could help build the capacities and capabilities of the SMEs to attain growth and competitive advantage.

ACKNOWLEDGMENT

The authors wish to acknowledge the Ministry of Science, Technology and Innovation (MOSTI) Malaysia for their support.

REFERENCES

[1] Woodman, R. W. (2008). Creativity and organizational change: Linking ideas and extending theory. In J. Zhou & C. Shalley (Eds.), *Handbook of organizational creativity* (pp. 283-300). New York, NY: Lawrence Erlbaum Associates.

[2] Crossan, M. M., & Apaydin, M. (2010). A multi-dimensional framework of organizational innovation: A systematic review of the literature. *Journal of Management Studies*, 47(6), 1154-1191.

- [3] Kanter, R. M. (2006). Innovation: The classic traps. *Harvard Business Review*, 84(11), 72-83.
- [4] Kim, W. C., & Mauborgne, R. (2005). *Blue ocean strategy: How to create uncontested market space and make competition irrelevant*. Boston, MA: Harvard Business School Press.
- [5] Hamel, G. (2002). *Leading the revolution: How to thrive in turbulent times by making innovation a way of life*. Boston, MA: Harvard Business School Press.
- [6] Grant, R. M. (2010). *Contemporary strategy analysis* (7th ed.). West Sussex, UK: John Wiley & Sons.
- [7] Clawson, J. G. (2009). *Level three leadership* (4th ed.). Upper Saddle River, NJ: Prentice Hall.
- [8] Birkinshaw, J., Bouquet, C., & Barsoux J.-L. (2011). The 5 myths of innovation. *MIT Sloan Management Review*, 52(2), 42-43.
- [9] Kuhn, J. S., & Marisck, V. J. (2010). Action learning for strategic innovation in mature organizations: Key cognitive, design and contextual considerations. *Action Learning: Research and Practice*, 2(1), 27-48.
- [10] Orlikowski, W. (2010) *Practice in research: phenomenon, perspective and philosophy*. In: Golsorkhi, D., Rouleau, L. Seidl, D. and Vaara, E. (eds). Strategy as Practice. Cambridge University Press. pp. 23 – 33.
- [11] Tsoukas, H. and Vladimirou, E. (2002). *What is organizational knowledge?* *Journal of Management Studies* 38:7. November, 2001. pp. 973-993.
- [12] Wierdsma, A. (2004) *Beyond Implementation. Co-creation in Change and Development*. In. Boonstra (ed). Dynamics of Organizational Change and Learning. John Wiley & Sons, Ltd. pp. 227-257.
- [13] Kocher, P.-Y., Kaudela-Baum, S and Wolf, P. (2011). *Enhancing Organizational Innovation Capability Through Systemic Action Research: A Case of a Swiss SME in the Food Industry*. Syst Pract Action Research 24, pp.17-44.
- [14] Miettinen, R., Samra-Frederics, D. and Yanow, D. (2009). *Re-turn to Practice: An Introductory Essay*. Organization Studies. Vol. 30, No 12. pp.1309-1329
- [15] Boer, H., Kuhn, J. and Gertsen, F. (2005). *Continuous innovation. Managing dualities through co-ordination*. Working paper presented at the 7. Fachtagung der Kommission Technologies and Innovations management in Verband der Hochschullehrer für Betriebswissenschaft e.V. Erfurt, 17-29 October 2005.
- [16] Wilhelmsson, L. & Döös, M. (2009). *Sustainable heritage in a rapidly changing environment*. In: Docherty, P., Kira, M. and Shani (Rami) A.B.S. Creating sustainable work systems. Developing social sustainability. Routledge. UK
- [17] Kianto, A. (2008). *Development and validation of a survey instrument for measuring organizational renewal capability*. International Journal of Technology Management, Vol. 42. Nos. 1/2, pp. 69 - 88.
- [18] Jensen, M. B., Johanson, B. Lorenz, E. and Lundvall, B. Å. (2007) *Forms of knowledge and modes of innovation*. Research Policy, Vol. 36. pp. 680-693.
- [19] Eisenhardt, K. M., Furr, N. R. and Bingham, C. B. (2010). *Microfoundations of Performance: Balancing Efficiency and Flexibility in Dynamic Environments*. Organization Science. Vol 21, No1 6. November-December. Pp. 1263-1273.
- [20] Foss, N. J., Husted, K. and Michailova, S. (2010). *Governing Knowledge Sharing in Organizations: Levels of Analysis, Governance Mechanisms, and Research Directions*. Journal of Management Studies. Vol. 47, No 3. pp. 455-482.
- [21] Wierdsma, A. (2004) *Beyond Implementation. Co-creation in Change and Development*. In. Boonstra (ed). Dynamics of Organizational Change and Learning. John Wiley & Sons, Ltd. pp. 227-257.
- [22] Yuan, F. and Woodman, R. W. (2010). *Innovative behavior in the workplace: The role of performance and image outcome expectations*. Academy of Management Journal. Vol 53, No.2. 323-342.
- [23] Rosli, M. M. & Sidek, S. (2013). Innovation and firm performance: evidence from Malaysian small and medium enterprises. Paper presented at the 20th International Business Information Management Conference (IBIMA). International Business Information Management Association, pp. 794-809.
- [24] Dobbs, M. and Hamilton, R.T. (2006). Small Business Growth: Recent Evidence and New Directions, *International Journal of Entrepreneurial Behaviour and Research*, 13 (5), 296-322.
- [25] Hutchinson, John; Xavier, Ana (2004) : Comparing the Impact of Credit Constraints on the Growth of SMEs in a Transition Country with an Established Market Economy, LICOS Discussion Paper, No. 150.
- [26] Hyytinen, Ari; Toivanen, Otto (2003) : Do financial constraints hold back innovation and growth? Evidence on the role of public policy, ETLA Discussion Papers, The Research Institute of the Finnish Economy (ETLA), No. 820
- [27] Salim, I. M., & Sulaiman, M. B. (2011). Impact of organizational innovation on firm performance: evidence from Malaysian-based ICT companies. *Business and Management Review*, 1(5).
- [28] Van Auken, H., Madrid-Guijarro, A., & Garcia-Perez-de-Lema, D. (2008). Innovation and performance in Spanish manufacturing SMEs. *International Journal of Entrepreneurship and Innovation Management*, 8(1), 36-56.
- [29] Lin, C. Y. Y., & Chen, M. Y. C. (2007). Does innovation lead to performance? An empirical study of SMEs in Taiwan. *Management Research News*, 30(2), 115-132.
- [30] Damanpour, F. (1991). Organizational innovation: A meta-analysis of effects of determinants and moderators. *Academy of management journal*, 34(3), 555-590.
- [31] Li, Y., Zhou, N., & Si, Y. (2010). Exploratory innovation, exploitative innovation, and performance: influence of business strategies and environment. *Nankai Business Review International*, 1(3), 297-316.

- [32] Clausen, T. H., Korneliussen, T., & Madsen, E. L. (2013). Modes of innovation, resources and their influence on product innovation: Empirical evidence from R&D active firms in Norway. *Technovation*, 33(6), 225-233.
- [33] Hill, H., Tham, S. Y., & Zin, R. H. M. (Eds.). (2012). *Malaysia's development challenges: Graduating from the middle*. Routledge.
- [34] Kaufmann, A., & Tödting, F. (2002). How effective is innovation support for SMEs? An analysis of the region of Upper Austria. *Technovation*, 22(3), 147-159.
- [35] Muhammad, M. Z., Char, A. K., bin Yaso, M. R., & Hassan, Z. (2009). Small and medium enterprises (SMEs) competing in the global business environment: A case of Malaysia. *International Business Research*, 3(1), P66.
- [36] Rosenbusch, N., Brinckmann, J., & Bausch, A. (2011). Is innovation always beneficial? A meta-analysis of the relationship between innovation and performance in SMEs. *Journal of Business Venturing*, 26(4), 441-457.
- [37] Teece, D. J. (2007). Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. *Strategic management journal*, 28(13), 1319-1350.