

THE MEDIATING ROLE OF INNOVATION CAPABILITY ON ICT SUPPORT, ENTREPRENEURIAL ORIENTATION SUPPORT AND SMES' PERFORMANCES: A CONCEPTUAL APPROACH

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Abstract: *This study is intended to investigate the impact of internal support, such as Information and communication technology (ICT) support, and entrepreneurial orientation support (EOS) that affects small and medium enterprises' (SMEs) performances in Malaysia which are mediated by the innovation capability. This paper has revealed the literature review of the determinant dimensions, which include ICT support and entrepreneurial orientation support towards innovation capability as a mediating role, which influence SMEs' performances. The contribution of this paper is in merging those constructs into a comprehensive conceptual framework model to enable a better understanding and clarity about how the efforts should be made to boost SMEs' growth and development. Next, the hypotheses will be developed from the proposed conceptual framework model. Lastly, implications and suggestions for future studies will be presented.*

Keywords: *ICT Support, Entrepreneurial Orientation Support, Innovation Capability, SMEs' performances*

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I. Introduction

SMEs are extensively known as important mechanisms of national development in modern technologically and unindustrialised economies (Aigboduwa & Oisamoje, 2013; Lai & Arifin, 2011; and Osalor, 2012). Most of the developed and developing countries have focused more on the contribution of SMEs (Khan & Khalique, 2014). According to Beck and Cull (2014), micro, small or medium-sized enterprises now have become the primary area of business activities around the world. Heslina, Payangan, Taba, and Pabo (2016) stated that more than 95% of the business entities in the world today can be classified as SMEs.

SMEs seem to be considered as catalysts to the Malaysian economy due to SMEs being important generators of the nation's economy. The future of Malaysia's development depends widely on the growth of SMEs, and Malaysia hopes to become a fully advanced modernised, and industrialised-based country (Khan & Khalique, 2014). Due to the high contribution of SMEs in the Malaysian economy, the performances of SMEs are critical in ensuring that Malaysia achieves its target of a high income country in the future. However, the performances of SMEs in Malaysia are still failing and just small fractions of SMEs are successful in achieving good performances. Nazlina, Nor, and Rushami (2016) also noted that the Malaysian SMEs still have not performed up to their fullest potential. Moreover, SMEs have not performed creditably well and, hence, have not met their expected crucial and vibrant roles in the economic growth and development (Taiwo, Falohun, & Agwu, 2016).

Besides that, there is a tremendous pressure to sustain competitiveness in the domestic, as well as, global market. SMEs have to face global competition, technological advances, changing needs of customers, and also competitive paradigms (Singh, Garg, & Deshmukh 2008). The continual survival of SMEs is being threatened with the effect of globalisation that has attracted big players to operate their businesses in Malaysia over the years (Jauriyah, 2014). This open door policy has led to a more competitive and dynamic business environment for the SMEs, since they will become highly vulnerable due to their inability to compete effectively and, thus, are affected by the operation of multi-national companies (MNC) in their localities (Jauriyah, 2014).

This has forced firms to compete simultaneously along different dimensions, such as design and development of the product, manufacturing, distribution, communicating, and marketing (Singh, et al., 2008). Therefore, without proper planning or action, SMEs may struggle to perform well in the industry. Field observations and previous studies recommend that the ICT support and entrepreneurial orientation support can potentially assist in enhancing the performance of the SMEs. The utilisation of ICTs have transformed and revolutionised the way that a business is conducted, and E-commerce provides firms tremendous opportunities to improve their business performances (Duan, Mullins, Hamblin, Stanek, Sroka, Machado, & Araujo, 2002). Drucker (1985) pointed out that new technologies enable the increase of the efficiency of the SMEs, improve production and reduce costs. Literature on entrepreneurship indicates that entrepreneurial orientation is a primary factor in achieving firm success in performance (Lumpkin & Dess, 1996; Wang, 2008).

II. The proposed conceptual framework model

The proposed conceptual framework model has been developed based on a previous study and literature review to evaluate the determinants which are significant in

describing firm performance. The critical determinants are able to affect the business performance which has a mediating effect from innovation capability which has been reformed to match this study through the previous research study. The conceptual framework model in this study mentioned that the ICT support and entrepreneurial orientation support are independent variables, as shown in Figure 1, towards Innovation Capability as the mediating role, and which will affect business performance.

Therefore, SMEs performance is the dependent variable in this study and it is also the main concern of this paper. In addition, innovation capability in this study will be used in the mediating role. Furthermore, this proposed framework will address that the antecedent factors as ICT support and entrepreneurial orientation support have significant relationships with performance, and that innovation capability will in the mediator role will also have a significant influence on ICT support, entrepreneurial orientation support, and performance. To highlight, the study will attempt to bridge the gap by providing a basis for a complete and in-depth investigation on the relationships amongst ICT support, entrepreneurial orientation support, innovation capability, and SMEs performance.

Table 1.1: The elements of the constructs

Nomenclature	
ICTS	Information & Communication Technology Support
EOS	Entrepreneurial Orientation Support
IC	Innovation Capability
BP	Business Performance

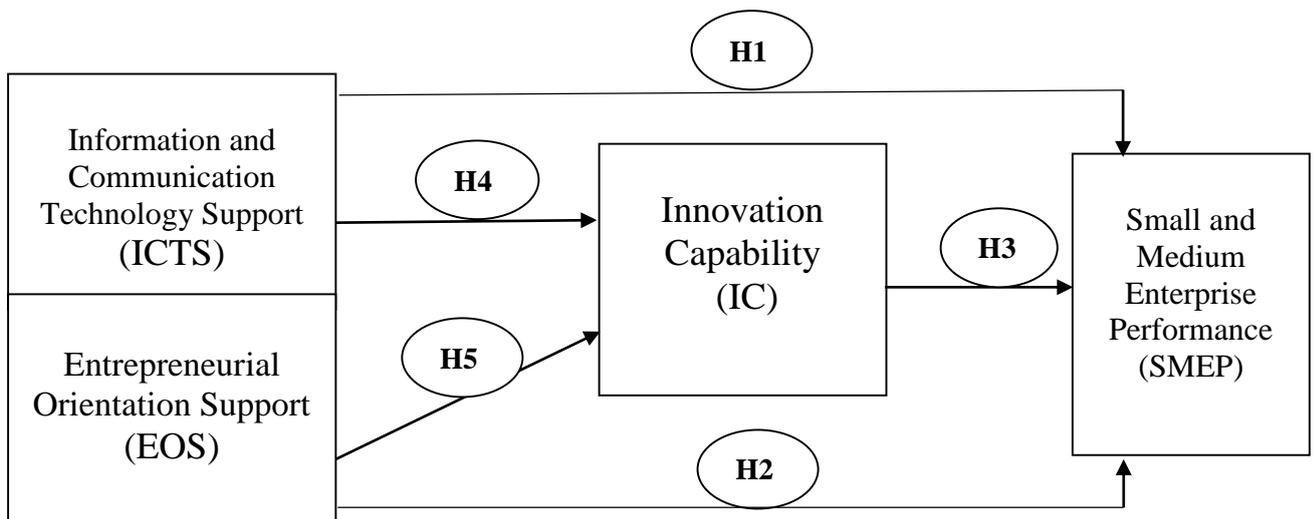


Figure 1: Proposed conceptual framework of the relationships amongst the study variables

III. Literature review

3.1 Small and Medium Enterprises' Performance (SMEP)

Chittithaworn, Islam, Keawchana, and Yusuf (2011) stated that SMEs' performances refer to the firm's success in the marketplace, which may deliver different effects and outcomes. In the commerce perspective, an organisation's performance refers to the organisation being able to deliver value to their customers and other stakeholders (Moullin, 2003). The growth and performances of the SMEs, whether in the formal or informal sectors, has been increasing over the last decade and their importance cannot be underestimated (Meshack, 2014; Terry 2006). Organisational performance can also be defined as the ability to achieve firm objectives, which include good financial results, high profitability, substantial market share, long-term survival, and high quality products (Ho, 2008). In addition, SMEs are the catalysts for the economic growth of developed and developing nations, thus performance is preponderant to their success and survival (Beck & Demirguc-Kunt, 2006). Furthermore, performance is the heart of organisations, no decision can be made without it (Mosalakae, 2007). In addition, performance can be qualified as the firm's ability to create acceptable results and outputs (Pfeffer, & Salancik, 1978). This has been the subject of extensive and increasing empirical and conceptual investigations in the business literature (Jarvis, Curran, Kitching, & Lightfoot, 2000; Rodsutti & Swierczek, 2002; and Watson, Newby, & Woodliff, 2000). Lusthaus, Adrien, Anderson, Carden, and Montalvin. (2002) defined organisational performance as an important measurement in ensuring organisational success, but there are no common valid sets of measures for evaluating organisational performance as a result of the complexity of the constructs. Although, the literature on organisational research shows that it is widely used as a dependent variable and that some studies have focused on identifying areas that affect the changes in the performance results (March & Sutton 1997; Richard, Yip, & Johnson, 2008; and Rogers & Wright 1998). It is generally acknowledged by the industry that business performance is a multidimensional structure (Venkatraman & Ramanujam, 1987). However, performance seems to be conceptualised, operationalised, and measured in several ways. Therefore, this study will measure the performance of SMEs by looking for financial performance and non-financial performance instruments, such as profitability, return on sales, sales revenue, return on assets, labour productivity, market share, customer satisfaction and loyalty, and machines (Brah, Tee, & Rao, 2002; Feng, Prajogo, Tan, & Sohal, 2006; and Rosli, Kuswanto, & Omar, 2012).

3.2 Information and Communication Technology (ICT) Support

According to Morse, Fowler, and Lawrence (2007), ICT support enables SMEs to benefit from ICTs in many ways, such as enhancing the efficiency of SMEs through ICTs, reducing costs and expanding local and global market shares. According to Lee (2001), a small business with a higher technical skill and advanced technology level may grow more rapidly than other similar businesses. According to Ollo-Lopez and Aramendia-Muneta (2012), numerous studies have concentrated on analysing how adoption of ICT influences companies which differentiate between two types of studies: (1) Related to productivity and (2) Related to the environment, which involves the reduction of greenhouse gases and improves the efficiency of energy (Hall, Lotti, & Mairesse, 2013). It is recognised that the adoption and employment of ICT represent the basic principles of competitiveness and economic growth for companies, organisations, and even nations that are capable of working with ICT. SMEs who utilise suitable and proper ICT may enable them to exploit and sustain their efficiency, enhance performance, and assure that their competitive advantage is obtained. Thus,

Malaysia has convinced and encouraged firms to utilise ICT as a new operational process in order to operate their business activities efficiently (SME Corporation Malaysia, 2012). According to Irani (2002), the companies rely heavily on ICT which enables them by assisting them in their business operations, increases the organisational effectiveness and efficiency and makes an effort to keep them updated in the business world (Abbasi, Chandio, Soomro, & Shah 2011). This study will concentrate on ICT support dimensions which were developed by Setiowati, Hartoyo, Daryanto, and Arifin (2015).

3.3 Entrepreneurial Orientation Support

The Entrepreneurial Orientation (EO) trait refers to the decision-making style for entrepreneurship related activities (Lumpkin & Dess, 1996). The trait of EO is closely tied with entrepreneurial activities. Studies found that EO was positively related to firm performance (Covin & Slevin, 1989; Lumpkin & Dess, 2001) and other outcomes, such as networking activities (Ramachandran & Ramnarayan, 1993). EO is also defined as “the CEO’s strategic orientation reflecting a willingness of a firm to engage in entrepreneurial behaviours”, Wiklund and Shepherd (2004) held that entrepreneurial orientation is an element of organisational level entrepreneurship. In addition, Helm, Mauroner, and Dowling (2010) addressed that the EO is the fundamental factor for an entrepreneur to play a critical role of character in an entrepreneurial activity, such as internal entrepreneur, creative generator, business activity leader, ICT porter, and project inventor. Furthermore, the entrepreneurial orientation influences strategic decisions (Frese, Brantjes, & Hoorn, 2002). Covin and Slevin (1991) emphasised that entrepreneurial orientation requires a posture that encourages aggressiveness, innovation, and risk-taking. Entrepreneurial orientation stresses the entrepreneurial process and the role of top management philosophies regarding entrepreneurship. The concept of entrepreneurial orientation has been used as a quasi-psychological concept to understand the emergence and success of businesses; furthermore, it influences strategic decisions (Frese, Brantjes, & Hoorn, 2002). Rauch, Wiklund, Lumpkin, and Frese (2009) argued that EO is an enterprise-level development process that is utilised to accomplish the company's objectives and vision even to sustain competitive advantage. This study will consider the multi-dimensional construct of EO which consists of three dimensions of EO, such as pro-activeness, innovativeness, and risk-taking dimensions. Thus, the proposed conceptual model of EO has suggested the adoption from Avlonitis & Salavou, (2007); Boso, Cadogan, & Story (2012); and Miller & Friesen (1982).

3.4 Innovation Capability

The theoretical framework in this study is connected to innovation capability and its determinants and implications, and it is generated from the Resource Base View (RBV). The RBV shows that a firm is made up of various resources to sustain its competitive advantage (Lawson and Samson, 2001). Resources are described as the firm's competencies, assets, organisational processes, capabilities, skills, knowledge, and information (Hertog, Aa, & Jong 2010). Therefore, companies need to capture valuable and scarce resources that other companies find difficult to imitate and replace in order to achieve success in business (Balan and Lindsay, 2009). Innovation capability is the bond that transforms firm resources into new products and new ideas. However, the resources themselves are not enough to gain a competitive advantage. Thus, firms must acquire the capabilities to convert their resources and make them fit into the market trends and conditions in order to improve performance (Hertog, et al., 2010; Sachdeva

and Agarwal, 2011; and Tavitiyaman, Qu, & Zhang, 2011). Innovation could foster SMEs to flourish importantly in this competitive environment. Today, SMEs which do not approach innovation may finally become late innovation adopters. Hurley and Hult (1998) proved firms that have the ability to search for and invent new resources and develop better quality products and services than their competitors are seen as having innovative capabilities. In order to obtain the innovation capability, the participation of the SMEs to conduct and carry out business to the market capacity plays a censorious role to make the firms successful in business. Market information and knowledge acquired by an individual is nothing at all, unless it is able to be shared and transferred between and within companies, hence it will boost the innovation capability (Camelo-Ordaz, Garca-Cruz, Sousa-Ginel, & Valle-Cabrera, 2011). Innovation capability is an attractive area of study for those researchers who will try to interpret, classify, and examine its performance effects, illustrating a scale of assets, competencies, skills, capabilities, abilities, and resources.

IV. Hypotheses Development

4.1 Information and Communication Technology (ICT) Support and SMEs' Performances

Theoretical and empirical studies have shown the necessity to acquire and exploit the positive outcomes (efficiency, productivity, effectiveness, business expansion, and competitiveness) of ICT adoption in business organisations (Tarute & Gatautis, 2014). Thus, the objective of this study is to examine the literature on the potential collateral effects of ICT on SMEs' performances. Consoli (2012) identified that ICT has a positive impact on business organisations, such as performance, expansion, new product development, and growth. Previous studies concluded that there were positive impacts of ICT adoption for the operation, business structure, and strategy of the organisation (Burhalis, 2003). The ICT adoption not only enables the firm to achieve cost savings and efficiency enhancement, but it also improves the quality of customer service (Ashrafi & Murtaza, 2008). Thus, the hypothesis is:

H1- There is a Significant Relationship between ICT Support and SMEs' Performances.

4.2 Entrepreneurial Orientation Support and SMEs' performances

Extant literature mentioned that entrepreneurial orientation plays an important role in improving organisational performance (Covin & Slevin, 1989; Wiklund, 1999; and Wiklund & Shepherd, 2005). In addition, the manager equipped with a stronger entrepreneurial orientation support will assist towards obtaining a superior firm performance (Covin & Slevin, 1991; Davis, Bell, Payne, and Kreiser, 2010; Kreiser & Davis, 2010; and Lumpkin & Dess, 1996). Furthermore, Madsen (2007) addressed that companies generating higher EO values seem to have more outstanding performance than competitors with the same EO or lower EO values. Moreover, previous studies also discovered that there were positive impacts of Entrepreneurial Orientation support on SME performance (Covin & Slevin, 1989; Moreno & Casillas, 2008; Wiklund, 1999; and Wiklund & Shepherd, 2005). However, some previous studies also concluded that EO had negative relationships with firm performance (Dimitratos, Lioukas, & Carter 2004; Tang & Koveos, 2004; William & Sinkula, 2009; and George, Wood, & Khan 2001). Therefore, there were different results and findings in the previous studies of EO, which may be due to how the EO measure instrument was conducted, either as a one-dimensional or multi-dimensional construct. Besides that, the multi-dimensional construct of the EO instrument enables the study to investigate the EO influence on performance (Davis et al., 2010; Kreiser & Davis, 2010; Miller & Friesen, 1982; and

Perez-Luno, Wiklund, & Cabrera, 2011). Hence, the Hypothesis has been developed as below:

H2- There is a Significant Relationship between Entrepreneurial Orientation support and SMEs' Performances.

4.3 Innovation Capability and SMEs' Performance

Innovation capability plays a critical role in generating value and encouraging a competitive advantage position. Çakar and Ertürk (2010) stated that innovation capability will enable a firm to lead new things or new and improved products into the market in order to achieve success. Innovation capability is not only important for large or high-tech companies, but it is also significant for the SMEs (Çakar & Ertürk, 2010; O'Cass & Sok, 2014). Fahim and Baharun (2017) addressed that, if the small business wants to achieve success in the market, it must adopt the innovation capability. Saunila (2016) pointed out that companies which apply and adopt their organisational resources and innovation capabilities have the opportunities to improve their performances. Zhang and Duan (2010) addressed that SMEs constructed with innovation capabilities will bring about new and creative outputs, which may lead to business growth. The company must be involved in more innovation activities and foster innovation, with which they can sustain competitive advantages (Weerawardena, 2003). Previous studies have proved that innovation capability has a significant relationship with SMEs' performance (Çakar & Ertürk, 2010; Nasution, Mavondo, Matanda, & Ndubisi, 2011; and Dadfar, Dahlgaard, Brege, & Alamirhoor, 2013). Thus, the hypothesis is:

H3- There is a Significant Relationship between Innovation capability and SMEs' Performances.

4.4 Innovation Capability as the Mediator

This study will address that innovation capability is a mediator amongst ICT Support, Entrepreneurial Orientation Support, and SMEs' performances. Singhry Rahman and Ng (2016) concluded that firms need ICT in order to develop cooperation and process innovation capabilities towards business performance. Hortinha, Lages, and Filipe Lages (2011) argued that innovation capabilities can modulate the positive correlation between information technology and companies' performances. In addition, Singhry, et al. (2016) stated that there were significant relationships amongst technology adoption, innovation activeness, and business performance. Liu and Wu (2011) mentioned that when innovation is differentiated as the mediator, it has an impact on the structural information technologies and performance. Seo, Dinwoodie, and Kwak (2014) proposed a mediating role of supply chain integration systems and technologies on the relationship between innovation and supply chain performance. Chang, Chen, and Huang (2015) found that joint dynamic capabilities mediated between information technology investments and co-created or collaborative value. A number of studies examined the links amongst entrepreneurial orientation, innovation capability, and SMEs' performance. Baker and Sinkula (2009) identified that there were four framework models, namely, the market learning orientation, entrepreneurial orientation, innovation capability, and firm profitability. The results of the study revealed that the integration of market learning orientation and entrepreneurial orientation was profitable, which was mediated by innovation capability. Pérez-Luño, Wiklund, and Cabrera (2011) applied pro-activeness and risk-taking in developing innovation abilities and the finding showed that these two determinants had positive impacts on performance. Madhoushi, Sadati, Delavari, Mehdivand, and Mihandost (2011) found that companies with greater innovation abilities will flourish in reacting to dynamic environments and

constructing capabilities to accomplish better performance. Angkanurakbun and Wanarat (2016) addressed that entrepreneurship orientation and attributes will promote innovativeness and then achieve company performance. Fahim and Baharun (2017) mentioned that EO had a positive impact on innovation capability and farm performance. Therefore, the hypotheses are:

H4- There is a Significant Relationship between ICT support and SMEs' Performances which is mediated by Innovation Capability.

H5- There is a Significant Relationship between Entrepreneurial Orientation Support and SMEs' Performances which is mediated by Innovation Capability.

V. Conclusion

This study presented a fundamental conceptual framework model that can be helpful to boosting performance by providing the antecedents that influence the development of SMEs. In terms of theoretical or academic purposes, the study will focus more on business performance in the context of SMEs. Besides that, the study aims to fulfil the research gap in the business literature which concerns the effect of ICT support, EO support, and innovation capability on SMEs' performances. Furthermore, this study will emphasise the importance of innovation capability as a mediating role on the relationships amongst ICT support, EO support, and SMEs' performance. However, previous research carried out on the innovation capability topic just touched on manufacturing firms, high-tech companies, and large companies (Branzei, & Vertinsky, 2006; Terziyovsk, 2010; and Yannopoulos, Auh, & Menguc, 2012). There are just limited numbers on the small or micro firms (Dadfar, Dahlgard, Brege, & Alamirhoor, 2013; O'Cass & Sok, 2014). In addition, the indecisive role of innovation capability with SMEs' performances has been argued in previous studies and literature, so it may be better interpreted based on the complexity of the mediating constructs involved between the relationship of innovation capability and SMEs' performance. As highlighted by Wales, Monsen, and Mckelvie (2011), it is essential for a company to continuously strive for developing knowledge bases for sustainability and competitiveness of the company. The importance of this research is regarded as a positive thing where participants of SMEs have increased enormously and have been contributing highly in the economic sector of a nation. Moreover, this study is also expected to be able to provide knowledge, information, and potency for SMEs in order for them to work and achieve their business successes. Information and knowledge needs to be shared amongst SMEs due to them having to face high competition in business nowadays. Besides that, if the findings and solutions derived from this study may provide some contribution and workable ideas about how SMEs take the best or most appropriate solutions to improve their performances. Hence, it is desired that this study will be able to be a platform and useful info for future researchers who are interested in studying SMEs which have been successful in this field

References

- Abbasi, M.S., Chandio, F.H., Soomro, A.F. & Shah, F. (2011). Social influence, voluntariness, experience and the internet acceptance: An extension of technology acceptance model within a south Asian country context. *Journal of Enterprise Information Management*, 24(1). 30-52.
- Aigbodua, J. E. & Oisamoje, M. D. (2013). Promoting Small and Medium-scale Enterprises in the Nigerian Oil and Gas Industry. *European Scientific Journal*, 9(1).
- Angkanurakbun, C. & Wanarat, S. (2016) The Mediating Effect of Product Innovation Capability on Entrepreneurial Pro-Activeness and Hotel Performance. *International Journal of Innovation Management*. 20(3). 1-21.
- Ashrafi, R., & Murtaza, M. (2008). Use and Impact of ICT on SMEs in Oman. *Electronic Journal Information Systems Evaluation*, 11(3), 125-138.
- Avlonitis, G. & Salavou, H. (2007). Entrepreneurial Orientation of SMEs, Product Innovativeness, and Performance. *Journal of Business Research*. 60. 566-575.
- Baker, W. E. & Sinkula, J. M., (2009). The complementary effects of market orientation and entrepreneurial orientation on profitability in small businesses. *Journal of Small Business Management*. 47(4). 443–464.
- Balan, P. & Lindsay, N. (2009). Innovation capability and entrepreneurial orientation dimensions for Australian hotels: An empirical study. *Cooperative Research Centre for Sustainable Tourism*.
- Beck, T. & Cull, R. (2014). Small-and Medium-Sized Enterprise Finance in Africa. *Africa Growth Initiative*, Working Paper 16.
- Beck, H. T. L., & Demirgüç-Kunt, A. (2006). Small and medium-size enterprises: Access to finance as a growth constraints. *Journal of Banking and Finance*, 30(11), 2931-2943.
- Boso, N., Cadogan, J. & Story, V. (2012). Complementary Effect of Entrepreneurial and Market Orientation on Export New Product Success under Differing Levels of Competitive Intensity and Financial Capital. *International Business Review*. 21(4). 667-681.
- Brah, S., Tee, S. & Rao, B. (2002), Relationship between TQM and performance of Singapore companies. *International Journal of Quality & Reliability Management*. 19(4). 356-79.
- Branzei, O. & Vertinsky, I. (2006). Strategic pathways to product innovation capabilities in SMEs. *Journal of Business Venturing*. 21(1). 75–105.
- Buhalis, D. (2003). E-Airlines: strategic and tactical use of ICTs in the airline industry. *Information and Management*, 41, 805–825.

- Çakar, N. D., & Ertürk, A. (2010) Comparing innovation capability of small and mediumsized enterprises: Examining the effects of organizational culture and empowerment. *Journal of Small Business Management*. 48(3). 325–359.
- Camelo-Ordaz, C., Garc á-Cruz, J., Sousa-Ginel, E., & Valle-Cabrera, R. (2011). The influence of human resource management on knowledge sharing and innovation in Spain: the mediating role of affective commitment. *The International Journal of Human Resource Management*. 22(7). 1441–1463.
- Chang, K., Chen Y. & Huang, H. (2015). Information technology and partnership dynamic capabilities in international subcontracting relationship. *International Business Review*. 24. 276-286.
- Chittithaworn, C., Islam, A., Keawchana, T., & Yusuf, D. H. M., (2011). Factors Affecting Business Success of Small & Medium Enterprises (SMEs) in Thailand. *Asian Social Science*, 7(5), 180-190.
- Consoli, D. (2012). Literature analysis on determinant factors and the impact of ICT in SMEs. *Procedia – Social and Behavioral Sciences*, 62, 93–97.
- Covin, J. G., & Slevin, D. P. (1991). A Conceptual Model of Entrepreneurship as Firm Behavior. *Entrepreneurship. Theory & Practice*. 16(1). 7-25.
- Covin, J.G. & Slevin, D.P. (1989). Strategic Management of Small Firms in Hostile and Benign Environments. *Strategic Management Journal*, 10 (1), 75–87.
- Dadfar, H., Dahlgaard, J. J., Brege, S., & Alamirhoor, A. (2013) Linkage between organisational innovation capability, product platform development and performance. *Total Quality Management & Business Excellence*. 24(9/8). 819–834.
- Davis, J. L., Bell, R.G., Payne, G.T., & Kreiser, P.M. (2010). Entrepreneurial orientation and firm performance: the moderating role of managerial power. *American Journal of Business*. 25(2), 41-54.
- Dimitratos , P., Lioukas , S., & Carter , S. (2004). The Relationship between Entrepreneurship and International Performance: The Importance of Domestic Environment. *International Business Review* 13(1). 19-41.
- Drucker, P. F. (1985), *Introduction, Innovation and Entrepreneurship*, Harper & Row Publishers, New York, 1–17.
- Duan, Y., Mullins, R., Hamblin, D., Stanek, S., Sroka, H., Machado, V & Araujo, J. (2002). Addressing ICTs skill challenges in SMEs: insights from three country investigations. *Journal of European Industrial Training*, 26(9), 430-441.
- Fahim & Baharun (2017). Analyzing the Mediating Effect of Innovation Capability on Strategic Orientations in Agricultural Malaysia. *Wseas Transactions on Business and Economics*. 14. 253-262.

- Feng, J., Prajogo, D., Tan, K. & Sohal, A. (2006). The impact of TQM practices on performance: a comparative study between Australian and Singaporean organizations. *European Journal of Innovation Management*. 9(3). 69-78.
- Frese, M., Brantjes, A., & Hoorn, R. (2002). Psychological success factors of small scale businesses in Namibia: The roles of strategy process, entrepreneurial orientation and the environment. *Journal of Developmental Entrepreneurship*. 7. 259-282.
- George, G., Wood, R.D. & Khan, R. (2001). Networking Strategy of Boards: Implications for Small and Medium-Sized Enterprises. *Entrepreneurship and Regional Development*. 13(3). 269-285.
- Hall, B. H., Lotti, F., & Mairesse, J. (2013). Evidence on the impact of R&D and ICT investments on innovation and productivity in Italian firms. *Economics of Innovation and New Technology*, 22(3), 300–328.
- Helm, R., Mauroner, O. & Dowling, M. (2010). Innovation as mediator between entrepreneurial orientation and spin-off venture performance. *Int. J. of Entrepreneurship and Small Business*. 11. 472-491.
- Hertog, Pd, Aa, Wvd & Jong, MWd. (2010). Capabilities for managing service innovation: Towards a conceptual framework. *Journal of Service Management*. 21(4). 490–514.
- Heslina, Payangan, O. R., Taba, M. I. & Pabo, M. I. (2016). Factors Affecting the Business Performance of the Micro, Small and Medium Enterprises in Creative Economic Sector in Makassar, Indonesia. *Scientific Research Journal*, 5(1), 41-49.
- Ho, L. A., (2008). What affects organizational performance?. The Linking of Learning and Knowledge Management. *Ind. Manage. Data Syst*, 108, 1234-1254.
- Hortinha, P., Lages, C. & Filipe Lages, L. (2011). The Trade-Off between Customer and Technology Orientations: Impact on Innovation Capabilities and Export Performance. *Journal of International Marketing*. 19(3). 36–58.
- Hurley, R. F., & Hult, G. T. M. (1998). Innovation, Market Orientation, and Organizational Learning: An Integration and Empirical Examination. *Journal of Marketing*. 62(3). 42–54.
- Irani, Z. (2002). Information systems evaluation: navigating through the problem domain. *Journal of Information & Management*, 40 (1), 11-24.
- Jarvis, R., Curran, J., Kitching, J., & Lightfoot, G. (2000). The use of quantitative and qualitative criteria in the measurement of performance in small firms. *Journal of Small Business and Enterprise Development*, 7(2), 123-134.
- Jauriyah, S. (2014). *Malaysian SME performance and the government business support services: The moderating effects of absorptive capacity*. DBA thesis, Universiti Utara Malaysia.

- Khan, M. W. & Khaliq, M., (2014). An Overview of Small and Medium Enterprises in Malaysia and Pakistan: Past, Present and Future Scenario. *Business and Management Horizons*, 2(2), 38-49.
- Kreiser, P. M., & Davis, J. (2010). Entrepreneurial Orientation and Firm Performance: The Unique Impact of Innovativeness, Proactiveness, and Risk-taking. *Journal of Small Business & Entrepreneurship*. 23(1). 39-51.
- Lai, M. L. & Arifin, M. Z. (2011). Small Business Enterprises and Taxation: A Case Study of Corporate Clients of a Tax Firm. *Academy of Accounting and Financial Services Journal*, 15(1), pg. 11.
- Lawson, B & Samson, D. (2001). Developing innovation capability in organizations: A dynamic capabilities approach. *International Journal of Innovation Management*. 5(3). 377–400.
- Lee, J. (2001). Education for technology readiness: Prospects for developing countries. *Journal of Human Development*, 2(1), 115–151
- Liu, Xuefeng & Wu, Xiaobo. (2011). Technology embeddedness, innovation differentiation strategies and firm performance: Evidence from Chinese manufacturing firms. *Innovation: Management, Policy & Practice*. 13. 20-35.
- Lumpkin, G. T. & Dess, G. G. (2001). Linking Two Dimensions of Entrepreneurial Orientation to Firm Performance: The Moderating Role of Environment and Industry Life Cycle. *Journal Of Business Venturing*. 429-451.
- Lusthaus, C., Adrien, M. H., Anderson, G., Carden, F. & Montalvn, G. P. (2002). *Organizational Assessment: A Framework for Improving Performance*, International Development Research Centre, Ottawa, Canada.
- Madhoushi, M., Sadati, A., Delavari, H., Mehdivand, M. & Mihandost, R (2011). Entrepreneurial orientation and innovation performance: The mediating role of knowledge management. *Asian Journal of Business Management*, 3(4), 310-316.
- Madsen, E. (2007). The Significance of Sustained Entrepreneurial Orientation on Performance of Firms—A Longitudinal Analysis. *Entrepreneurship and Regional Development*. 19. 185-204.
- March, J. G., & Sutton, R. I. (1997). Crossroads-organizational performance as a dependent variable. *Organization science*, 8(6), 698-706.
- Meshack, O. O. L. (2014). Effect of Entrepreneurship Skills on the Performance of Small and Medium Enterprises in Kahama, Tanzania: A Case of Pride Supported Entrepreneurs. Master Thesis, Open University of Tanzania.
- Miller, D. & Friesen, P. (1982). Innovation in Conservative and Entrepreneurial Firms: Two Models of Strategic Momentum. *Strategic Management Journal*, 3(1) 1-25.
- Moreno, Ana & Casillas, Jose (2008). Entrepreneurial Orientation and Growth of SMES: A Causal Model. *Entrepreneurship Theory and Practice*. 32.

- Morse, E.A., Fowler, S.W. & Lawrence, T.B. (2007). The impact of virtual embedness on new venture survival: Overcoming the liabilities of newness. *Entrepreneurship Theory and Practice*, 139-159.
- Mosalakae, I.G.B. (2007). *Financial performance measurement of South Africa's top companies: an exploratory investigation*. Doctor of Commerce thesis, University of South Africa, Pretoria.
- Moullin, M. (2003). Defining Performance Measurement. *Perspectives on Performance* 2(2):3.
- Nasution, H.N., Mavondo, F.T., Matanda, M.J. & Ndubisi, N.O. (2011). Entrepreneurship: Its relationship with market orientation and learning orientation and as antecedents to innovation and customer value. *Industrial Marketing Management*. 40(3). 336–345.
- Nazlina, Z, Nor A. C. A & Rushami Z. Y. (2016). Empirical Review on Innovation-performance Linkage in Malaysian Manufacturing Small and Medium Enterprises. *International Review of Management and Marketing*, 6(S7), 101-106.
- O’Cass, A., & Sok, P., (2014). The role of intellectual resources, product innovation capability, reputational resources and marketing capability combinations in firm growth, *International Small Business Journal*. 32(8). 996–1018.
- Ollo-Lopez, A., & Aramendia-Muneta, M. E. (2012). ICT impact on competitiveness, innovation and environment. *Telematics and Informatics*, 29, 204–210.
- Osolor, P. (2012). Contributions of SMEs to the Nigerian Economy. Electronic copy available at: http://www.successinyourbusiness.com/contribution_of_smes_to_the_nigerian_economy
- Pérez-Luño, A., Wiklund, J. & Cabrera, R.V. (2011). The dual nature of innovative activity: How entrepreneurial orientation influences innovation generation and adoption. *Journal of Business Venturing*, 26(5), 555–571.
- Pfeffer, J., & Salancik, G. R. (1978). *The External Control of Organizations: A Resource Dependence Perspective*. New York: Haper & Row.
- Ramachandran, K., & Ramnarayan, S. (1993). Entrepreneurial orientation and networking: Some Indian evidence. *Journal of Business Venturing*. 8(6). 513–524.
- Rauch, A., Wiklund, J., Lumpkin, G.T. & Frese, M. (2009). Entrepreneurial orientation and business performance: Cumulative empirical evidence. *Entrepreneurship Theory and Practice*. 33. 761-788.
- Richard, D. Yip & Johnson (2008). Measuring Organizational Performance as a Dependent Variable: Towards Methodological Best Practice. *Strategic Management Journal DOI*, 10.

- Rodsutti, M. C., & Swierczek, F. W. (2002). Leadership and organisational effectiveness in multinational enterprises in southeast Asia. *Leadership & Organisational Development Journal*, 23(5/6), 250-259.
- Rogers, E. W., & Wright, P. M. (1998). Measuring organizational performance in strategic human resource management: Problems, prospects and performance information markets. *Human resource management review*, 8(3), 311-331.
- Rosli, M. M., Kuswanto, F. & Omar, A. R. C. (2012). Competitive Strategies and Firm Performance: A Comparative Study of Malaysian and Indonesian Small and Medium Enterprises. *3rd International Conference of Business and Economic Research (3rd ICBER 2012) Proceeding*.
- Sachdeva, M. & Agarwal, R. (2011). *Innovation in services and its measurement at firm level: A literature review*. Paper presented at the The 9th ANZAM Operations, Supply Chain and Services Management Symp., Geelong: Deakin University, Deakin Management Centre.
- Saunila, M. (2016). Performance measurement approach for innovation capability in SMEs, *International Journal of Productivity and Performance Management*. 65(2). 162–176.
- Seo, Y.J., Dinwoodie, J. & Kwak, D.W. (2014). The impact of innovativeness on supply chain performance: Is supply chain integration on missing link?. *Supply Chain Manage International Journal*. 19. 733-746.
- Setiowati, R., Hartoyo, H., Daryanto, H. K. & Arifin, B. (2015). Understanding ICT Adoption Determinants among Indonesian SMEs in Fashion Subsector. *International Research Journal of Business Studies*, 8(1), 47-57.
- Singh, R., Garg, S.K. & Deshmukh, S.G. (2008). Strategy development by SMEs for competitiveness: A review. *Benchmarking: An International Journal*. 15. 525-547.
- Singhry, H., Rahman, A.A. & Ng, S.I. (2016). Information technology for supply chain performance: A mediated covariance modeling based on the dynamic capabilities theory. *International Business Management*. 10. 2379-2390.
- SME Corp Malaysia. (2012). SMEs Annual Report 2011/2012. *Electronic copy available at: <http://www.smecorp.gov.my/index.php/en/resources/2015-12-21-11-07-06/sme-annual-report>*
- Taiwo, J. N., Falohun, T. O. & Agwu, M. E. (2016). SMEs Financing and Its Effects on Nigerian Economic Growth. *European Journal of Business, Economics and Accountancy*, 4(4), 37-54.
- Tang, L. & Koveos, E. (2004). Venture Entrepreneurship, Innovation Entrepreneurship and Economic Growth. *Journal of Developmental Entrepreneurship*. 9(2). 161-171.
- Tarutè, A. & Gatautisa, R. (2014). ICT impact on SMEs performance. *Procedia-Social and Behavioral Sciences*, 110, 1218-1225.

- Terry, W. (2006). The Impact of Microfinance on Women Micro-entrepreneurs in Temeke district. *International Development Studies*. Dar es Salaam, Tanzania.
- Terziovsk, M. (2010) Innovation Practice and Its Performance Implications In Small And Medium Enterprises (SMEs) In the Manufacturing Sector: A Resource-Based View. *Strategic Management Journal*. 31. 892–902.
- Tavitiyaman, P., Qu, H. & Zhang, H.Q. (2011). The impact of industry force factors on resource competitive strategies and hotel performance. *International Journal of Hospitality Management*. 30(3). 648–657.
- Venkatraman, N., & Ramanujam, V. (1987). Measurement of business economic performance: An examination of method convergence. *Journal of Management*, 13, 109-122.
- Wales, W., Monsen, E., & Mckelvie, A. (2011). The Organizational Pervasiveness of Entrepreneurial Orientation. *Entrepreneurship Theory and Practice*, 35, 895-923.
- Wang, C. L. (2008). Entrepreneurial orientation, learning orientation, and firm performance. *Entrepreneurship Theory and Practice*. 32(4). 635-656.
- Watson, J., Newby, R., & Woodliff, D. (2000). Work and owner satisfaction for Performance measurement. *Electronic copy available at: www.usasbe.org/knowledge/proceedings/2000/watson.pdf*
- Weerawardena, J., (2003). Exploring the role of market learning capability in competitive strategy. *European Journal of Marketing*. 37(3/4). 407–429.
- Wiklund J. (1999). The sustainability of the entrepreneurial orientation–performance relationship. *Entrepreneurship Theory and Practice*. 24. 37-48.
- Wiklund, J. & Shepherd, D. (2005). Entrepreneurial Orientation and Small Business Performance: A Configurational Approach. *Journal of Business Venturing*, 20(1), 71–91.
- William, B. E. & Sinkula, M. J. (2009). The Complementary Effects of Market Orientation and Entrepreneurial Orientation on Profitability in Small Businesses. *Journal of Small Business Management*. 47(4). 443-464.
- Yannopoulos, P., Auh, S. & Menguc, B. (2012). Achieving fit between learning and market orientation: Implications for new product performance. *Journal of Product Innovation Management*. 29(4), 531–545.
- Zhang, J. & Duan, Y., (2010). The impact of different types of market orientation on product innovation performance. *Management Decision*. 48(6). 849–867.