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The Interaction effect of Entrepreneurial Orientation on the Relationship Between Innovation and SME Performance

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Abstract: This study objectively plan to address the needs for research in the relationship between innovation activities, Entrepreneurial Orientation (EO) and Firm Performance of Malaysian SMEs. It has been argued that competitive firms may contribute to the progressive economic development and improve resilience to both the organizations and the nation. A theoretical model based on the Resource-Based View approach to business performance of SME was developed to answer the research questions, these are: (i) There is a significant relationship between Product, process, administrative and marketing Innovation and SME Performance. (ii) EO components interacted the relationship between innovation practices and SME performance. A quantitative survey method was employed in the study, and the questionnaires were used to obtain the data from the top management of the medium-sized manufacturing firms in Malaysia. A total of usable 169 usable questionnaires was obtained from the survey, giving a response rate of 32.03%. Data were analyzed using a PLS path modelling technique to test direct and interaction relationship. The finding indicates the supported relationship between product, administrative innovation and firm performance and the positive moderating effect of EO between product innovation, administrative innovation and firm performance. The findings offered several implications to the sector and other stakeholder in the quest to improve firm competitiveness and performance for SME sectors.

Keywords: Innovation, Entrepreneurial Orientation, SME, Firm Performance

1. INTRODUCTION

SMEs in Malaysia and other part of the world are facing performance lacklustre due to global plunge in major commodity price, devaluation in local currency and domestic political crisis (Ahmed, S, Jaaffar, A.R. & Ahmad, F, (2017); BNM, 2015). Somehow, Small and Medium-sized Enterprises (SMEs) have been described as vital contributor to the economic growth of nations and also in filtering the said impact to the nation (Hassen & Mccarthy, 2011; Uhlaner, Van Stel, Duplat & Zhou, 2013). Unfortunately, data has

shown that SMEs are still facing difficulties in achieving the same standards as larger corporations in Malaysia and SMEs in other developed countries (ACCCMI, 2012; Shaheen *et al.*, (2017); SME Corps, 2015). Therefore, this study attempts to further look into factors described in the literature which contribute to the improvement of SMEs' performance especially from the financial aspect (Mirza & Ali, 2011; Robinson, 2012). Literature and surveys suggest few distinct variables which contribute to the improvement of SMEs in other countries and other sectors namely innovation practices (product, process, administrative and marketing) and entrepreneurial orientation of a firm (Uhlener *et al.*, 2013). The Medium sized manufacturing sector has been identified as one of the most influential segment of the economic sector which consistently contributes to a nation's innovation sourced and is important in maintaining a nation competitive position as well as global standing (Bos-Brouwers, 2010; Soon & Zainol, 2011).

The important role of SMEs in most nations (whether developed or developing, including Malaysia), in terms of economic growth and providing employment is being increasingly acknowledged in recent years (Bos-Brouwer, 2010). Throughout the 1980's and 1990's, the Malaysian government has played an important role in encouraging and investing in large-scale firms and projects and this has paid-off in terms of domestic growth (Soon & Zainol, 2011). But over-dependence of many Asian countries (including Malaysia) on large corporations for project development and external market for growth, contributed somewhat to the Asian Financial Crisis in late 1997. Similarly in late 2009, the United States of America (USA) and Europe faced their own financial turmoil for practicing similar strategies.

The neglect of SMEs was seen to have negative effects on the global and domestic economies. Subsequently, in order to filter the external impact of possible economic crisis to domestic growth, many countries have already embarked on promoting domestic investment and productivity with specific focus on SMEs (Jaaffar, Sharif & Baharom, 2015; Soon & Zainol, 2011). In recent years, the Government of Malaysia has identified several initiatives through massive surveys and studies to promote the growth of existing and new business establishments. These include the implementation of various programmes, such as the SME Masterplan (2012-2020); the Tenth Malaysia Plan (10MP) (2011-2015); the Economic Transformation Program (ETP); and the Government Transformation Program (GTP). These plans and programs involve a budget of billions of ringgit yearly.

The surveys which were conducted by the relevant authorities indicate that the main causes of the lacklustre performance of Malaysian SMEs, amongst others, are lack of innovation activities, lack of human capital and also lack of various resources, such as finance, skills, human resource and many others (ACCCMI, 2012; Jaaffar *et al.*, 2015). This is in line with past literature which indicates that the performance of SMEs could be drastically improved through innovation; overcoming resource constraints by promoting entrepreneurial orientation in firms (Abdul Aziz, Mahmood, Abdullah & Tajudin, 2013; Alam, 2009). Firstly, when we look in terms of firm performance or the main issue for the current study, there are several definitions. Literature on SMEs has highlighted the definitions from the financial, market and overall growth aspects of a firm (Law, 2012; Santos & Brito, 2012). Secondly, the literature and surveys also suggest that the EO as a major factor contributing to improve financial performance of SMEs. This needs consistent research (Jaaffar *et al.*, 2015). Past studies have suggested that innovation activities are mostly practiced by SME sector (Bos-Brouwers, 2010; Radas & Bozic, 2009).

Thirdly, literature indicates that currently, there is still a lack of empirical studies that integrate entrepreneurial orientation or activities with innovation practices as suggested by Zimmerer, Wilson and

Scarborough (2009) and Jaaffar, Sharif & Baharom (2014). Such a study is crucial in order to counter the resource constraints faced by SMEs (Law, 2012; Soon & Zainol, 2011). Fourthly, past studies have argued that a study on the Entrepreneurial Orientation (EO) is crucial for strengthening the link between the innovation factors and firm performance. In terms of population and sampling for similar subjects and perspectives, there is still a lack of empirical research that focuses on medium-sized manufacturing firms in Malaysia (Abdul Aziz *et al.*, 2013).

To conclude, the above issues have indicated that past studies on the relationship between SME performance, innovation activities and EO are limited in scope as well as lacking in focus. These limitations suggest that there is a need to conduct more empirical research on the above perspectives. To be specific, the researcher attempts to investigate the impact of EO on the relationship between innovation activities and performance of SMEs.

This objective of this research used to answer the following questions:

1. Is there any significant relationship between Innovation activities (Product, process, administrative, market innovation and SME performance)?
2. Do EO (Entrepreneurial orientation) moderates the relationship between Innovation activities and SME performance?

The following section analyzes the prolonged issue of the lackluster in the performance of Malaysian SMEs, their relationship with Innovation activities and the interaction effect with EO. Then, the research hypotheses and the methodology followed are described, including the sample and the variables used. The fourth section presents the results of the empirical study, while the final two section offers the most important of the research limitations, recommendation and the conclusion of the research.

2. LITERATURE REVIEW

This paper focusing on three basic concepts: the performance of SMEs in Malaysia as endogenous variable, Innovation practices which comprise of product, process, administrative and market innovation as the components for the independent variable, and Entrepreneurial Orientation (EO) as the moderating variable to the relationship between Innovation activities and the performance of SMEs in Malaysia.

2.1. SME Performance

Past research and survey indicates that SMEs in Malaysia remain inferior in terms of performance compared to larger corporations and similar size firms from other developed and developing countries (Refer to Table 1 below).

Table 1
Table of Productivity level of SMEs and larger firms.

<i>Sector</i>	<i>Average Productivity Per worker 2014</i>	<i>Ratio</i>
SMEs in Malaysia	RM52,525	
Large Firms in Malaysia	RM151,345	3 times
SMEs in Singapore	RM243,200	4 times
SMEs in the USA	RM360,000	7 times

Source: SME Annual Report 2016.

From Table 1, it can be seen that the performance of Malaysian SMEs is lagging behind larger corporations, which is three times more. When compared to other countries' SMEs like Singapore and the USA, Malaysian SMEs are still far behind them. (Singapore is four times more and the USA is seven times more). In the first chapter, the researcher already stressed that Malaysian SMEs also suffer from low productivity when compared to other developing and developed nations' SMEs (Refer to Table 1.1). From the Table, SMEs of the countries listed contribute more than 50% to their GDP compared to Malaysia with just a mere 32.5% of its GDP. In 2014, there was a slightly increase to 33.1% (SME Annual Report, 2016). This is a serious issue faced by Malaysian SMEs regarding their performance, which justifies this research (ACCCMI, 2015; Hashim, 2006; Jaaffar *et al.*, 2015; Sarkawi, M.N. *et al.*, 2016). Literature indicates various issues in relation to SMEs' performance that have been mentioned earlier on. Firstly, the researcher defines firm performance as follows:

Within the context of this study, firm performance is defined as the degree to which the enterprise meets the owner-manager's expectations in terms of sales, profitability and overall performance (Abdul Aziz *et al.*, 2013). Since stakeholders have different requirements and results suggest that all dimensions of the financial model cannot be used successively because they represent different aspects of firm performance, they need to be individually managed or justified based on respective study requirement. (Santos & Brito, 2012).

2.2. Innovation Activities

There are four types of innovation being practiced by firms: product, process, administrative and marketing. Various researchers have referred to innovation as stated above with the technological aspects of innovation consist of product, service and process innovation; while administrative innovation refers to market and administrative innovation (Damanpour & Aravind, 2011; Kang, 2012); and marketing innovation (Hilmi & Ramayah, 2008). There is empirical evidence which shows innovation can improve a firm's performance (Damanpour & Aravind, 2011; Hilmi & Ramayah, 2008;). Although most studies have argued that innovation has a positive impact on firm performance, this relationship still needs continuous studies because of a persistent gap on the performance theory, profit among organizations and dynamic changes in the market environment (internal and external). The gap in performance is the variation between budgeted or expected performance with actual performance of the organization (Damanpour and Aravind, 2011; Subrahmanya, 2011).

2.3. Entrepreneurial Orientation (EO)

Entrepreneurial Orientation (EO) means at firm level, firms display risk-taking behavior illustrated by large resource commitment to high-risk and high-return business. While proactiveness means firm's approach to market opportunities and forward-looking perspective; innovativeness of a firm (Wiklund & Sheperd, 2003) is closely related to business expansion, technological process, wealth creation and having the predisposition to undertake risky ventures (Lumpkin & Dess, 1996). The fourth components of EO is competitive aggressiveness means how firms respond to competitive trends and demands (Lumpkin & Dess, 1996) and Autonomy suggests by Jaaffar *et al.*, (2015;2014); Abdul Rahim *et al.*, 2017) as organizational units with decentralized and densely connected social relations are able to act ambidextrously and pursue exploratory and exploitative innovation simultaneously. EO is normally related and refers to small and medium-sized firms (Runyan, Droge & Swinney, 2008).

This study suggests all dimensions (Lumpkin & Dess;1996; Jaaffar *et al.*, 2014) of EO as follows:

- Innovativeness
- Risk-taking
- Proactiveness
- Competitive aggressiveness
- Autonomy.

A few studies have positively correlated EO with firm performance. The alignment of EO is crucial for small businesses due to their limited resource base (Wiklund & Sheperd, 2003; Lumpkin & Dess, 1996). Runyan *et al.*, (2008) conducted a case study on three companies which experienced growth within five years of existence. The study reveals that entrepreneurship and growth are linked. The current study suggests that SMEs which experience growth promote an EO throughout the firm.

3. METHODOLOGY

In this section, before testing the hypotheses, we ran a data cleaning analysis, measurement model PLS Algorithm analysis and obtained three factors relating to the medium-sized manufacturing SMEs in Malaysia. In the sample firms (SME performance, Innovation practices and EO).The variables used to form the factors were obtained from Likert scale type questions in a questionnaire sent to the top management team (GMT) of the sample firms. From the factors identified, which define and evaluate the factors relating to the sample firms as outline in the earlier section, we ran a SEM (Structural Equation Modelling) analysis by using PLS(Partial-Leased Square) Path modelling.The present study employed PLS path modelling (Hair, Hult, Ringle & Sarstedt, 2013; Henseler & Fassot, 2014) using Smart PLS 3.2.4 M3 software to test the theoretical model. This study is exploratory in nature and with low sample size collected from the survey conducted, as a result the variance-based SEM is more suitable compared to CB-SEM (Hair *et al.*, 2013).

After the PLS path model was run, the interaction or moderating effect by using PLS-Structural Equation Modelling (SEM) analysis was conducted. Hence, following Hair *et al.*, (2016); as well as Henseler & Fassot (2013) approaches to the analysis of moderating effects in PLS path modelling, a two stage approach was used to test the moderating effect network on the relationship between EO and firm performance of medium-sized manufacturing firms.

4. FINDINGS AND DISCUSSION

For this study, to satisfy the basic requirement that is guiding discriminant validity, the average variance extracted AVE of any two constructs that is measured must be greater than the square of correlations that exist between these constructs (Formell Larcker, 1981). The formula for calculating the Variance Extracted (VE/AVE), (Kearns & Lederer, 2003) is $Variance\ Extracted\ (VE) = (R^2 + j)$ Where = R squared, = summation, j = standardized error Table 4.4 summarized the calculation of the variance extracted (VE/AVE) through the and standard error (S.E). 19 items had been deleted due to low loading during the measurement model analysis (items loading < 0.6) (Hair, 2013).

As indicated in Table 2, the values of the variance extracted show the amount of variances that each construct can explain in the research framework. In this current study, these values range from 0.512 to 0.712 as calculated through the and the standard error of variance (SE). The result in Table 2 shows that the average variance extracted for all the six (6) constructs were greater than 0.5, as suggested by Hair *et al.*, (2016). The values for and SE Discriminant validity was demonstrated, as the square root of AVE value is more than the squared correlations for each set of constructs, as shown in Table 3. Moreover, it can be observed that the square root of the AVE for a given construct is greater than the absolute values of the standardized correlation square of the given construct with any other construct in the analysis ($AVE > \text{correlation square}$). Thus, discriminant validity is supported and therefore all constructs used for this study support discriminant validity.

In table 2, the average variance extracted (AVE) refers to the proportion of variance explained by the measurement errors. Values range from 0 to 1, AVE should exceed 0.5 to suggest an adequate convergent validity (Fornell & Larcker, 1981).

An AVE value of at least 0.5 indicates sufficient convergent validity, meaning that a latent variable is able to explain more than half of the variance of its indicators on average (Holmes-Smith, 2007). In other words, AVE is computed as the total of all squared standardized factor loadings (square multiple correlation) divided by the number of items, meaning that it is the average squared completely standardized factor loading or average commonality. The table below is the average variance extracted (AVE).

Table 2
Summary of AVE, Composite Reliability and R²

	<i>AVE</i>	<i>Composite Reliability</i>	<i>R Square</i>
Administrative Innovation	0.523	0.813	
EO	0.513	0.880	
Firm Performance	0.712	0.945	0.603
Marketing Innovation	0.541	0.778	
Process Innovation	0.514	0.840	
Product Innovation	0.558	0.862	

Table 3
Table of the correlation matrix of latent variables

	<i>AI</i>	<i>EO</i>	<i>FP</i>	<i>MI</i>	<i>PCI</i>	<i>PDI</i>
Administrative Innov	1.000					
EO	0.613	1.000				
Firm Performance	0.639	0.699	1.000			
Marketing Innovation	0.682	0.583	0.644	1.000		
Process Innovation	0.727	0.688	0.634	0.550	1.000	
Product Innovation	0.715	0.642	0.618	0.591	0.678	1.000

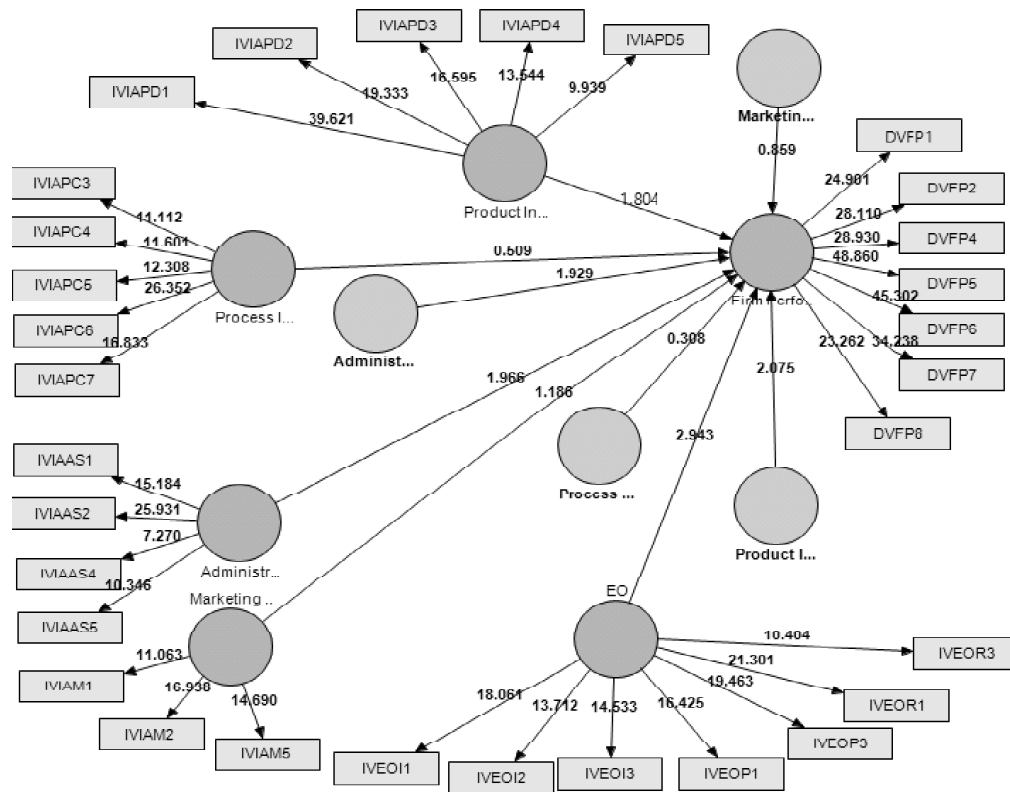


Figure 1: Structural Model with Moderator

Results of Hypotheses Testing

Table 4
Structural Model Assessment with Moderator

Hyp	Original Sample (O)	(Beta)	Std Error (SE)	T-Value	P-Value	Result
H1	Administrative Innovation -> Firm Performance	1.074	0.546	1.968	.003	Supported
H2	Administrative Innovation * EO -> Firm Performance	-1.689	0.875	1.979	.002	Supported
H3	EO -> Firm Performance	0.715	0.243	2.943	.000	Supported
H4	Marketing Innovation -> Firm Performance	0.680	0.574	1.186	.078	Not Supported
H5	Marketing Innovation * EO -> Firm Performance	-0.809	0.942	0.859	.134	Not Supported
H6	Process Innovation -> Firm Performance	0.227	0.445	0.509	.106	Not Supported
H7	Process Innovation * EO -> Firm Performance	-0.236	0.768	0.307	.343	Not Supported
H8	Product Innovation -> Firm Performance	.908	0.614	2.084	.002	Supported
H9	Product Innovation * EO -> Firm Performance	2.141	1.032	1.804	.004	Supported

T-Value > 1.96 or T-Value > 1.65 for two-tailed p>0.1.

Results of the hypothesis 1, 2, 3, 8 and 9 are positively and supported the prediction to SME performance. As shown in Table 4 and Figure 1, the result indicates a significantly positive relationship when all the T-Value are more than 1.6 with H1 = 1.966, H2 = 1.979, H3 = 2.943, H8=2.084 and H9=1.804).

In Contrary, results for the hypothesis 4,5,6 and 7 were unsupported due to the T-Value were less than threshold value of 1.96 or minimum of T-Value of 1.65 for two-tailed analysis and P-Value <0.1 still considered significant.

The structural model. and Beta PLS is used to estimate the structural equations with the aid of the SmartPLS software (Hair *et al.*, 2016; Henseler, 2013), which allows standardized Beta regression coefficients called “path coefficients” to be obtained. These coefficients test whether the proposed hypotheses are supported or not. R square values measure the amount of variance of the construct that is explained by the model. The R² of the latent variable to be explained, firm performance, is 0.603. The current study shows the standardized path coefficients (these are also on the lines connecting the constructs in Fig. 1) and the firms’ t values (obtained with a bootstrapping procedure with 5000 samples). Out of the 9 path coefficients of the model, five correspond to the hypotheses H1, H2, H3, H8 and H9 were already mentioned, while the other four hypotheses do not correspondence to firm performance. The results indicates that the contributing variable is sufficient in explaining the suggested framework for SMEs performance in Malaysia.

5. LIMITATION OF THE STUDY AND RECOMMENDATIONS

To summarize, this work suffers from a number of limitations and there are possible lines of development that should be considered in future research. They are follows:

Firstly, the sample is small, so the conclusions should be viewed with caution. Secondly, future research should include other variables not used in this study’s questionnaire and which conceivably affect the firm’s performance, such as: innovation activities; TMT leadership style; human resource strategies; and perceived need for more-sophisticated strategic management practices among all level of management. Additionally, given that companies are in a dynamic environment, studies are needed to collect the effects of new variables of strategic management and their evolution. Thirdly, since the researcher has adopted a cross-sectional study design, therefore, a longitudinal design in future needs to be considered to measure the theoretical constructs at different points in time to confirm the findings of the present study.

This study does lend theoretical and empirical support for the moderating role of EO and the findings should be taken in consideration of empirical findings which suggesting SME firms to emphasize on Innovation activities and absorbing EO within their organizations.

6. CONCLUSION

For this study. we have obtained valuations about different aspects of SMEs performance from the management sample of Malaysian firms. The PLS model shows the supported moderating effect that entrepreneurial orientation (EO) has on the relationship between product and administrative innovation activities and firm’s financial results. The mentioned innovation activities show a positive association with improved financial results, but the moderating effect of EO strategy is more important and significant.

Taken together, the present study has provided additional evidence to the growing body of knowledge concerning the moderating role of EO on the relationship between innovation activities and SMEs performances in Malaysia. Results from this study lend support to the key theoretical propositions. In particular, the current study has successfully answered both the research questions and objectives despite some of its limitations. While there have been many studies that have examined the underlying causes of

SMEs' performance, however, the present study has addressed the theoretical gap by incorporating EO as a moderating variable, thus suggesting medium-sized manufacturing firms to be more focused on their product and administrative activities and nurturing EO within their organizational structure.

Whilst concerning on SMEs performance, this study does lend theoretical and empirical support for the moderating role of EO and the findings should be taken in consideration of empirical findings which suggesting medium-sized manufacturing firms to emphasize on Innovation activities and absorbing EO within their organizations.

REFERENCES

Journal articles

- Abdul Aziz, R. Mahmood, R. Abdullah, M.H. & Tajudin, A. (2013). The Mediating effects on the Relationship between Leadership Styles and Performancw os SMEs in Malaysia. *The 2nd IBSM International Conference on Business and Management, 2013*.
- Abdul Rahim, N.F., Jaaffar, A.R., Shamsuddin, J. & Sarkawi, M.N. (2017). Internal Control System and Hazard Identification of Operational Risk in Malaysian Conventional Banking. *International Journal of Supply Chaim Management*. 6(2). 215-228.
- ACCCIM (2015). The Associated Chinese Chambers of Commerce & Industry of Malaysia. Report on SME Survey 2014.
- Ahmed, S., Jaaffar, A.R. & Ahmad, F., (2017). Influence of Employee Engagement on Employee Promotion Opportunity and Performance Relationship in Developing Context: Critical Evaluation with PLS-SEM Analysis Technique. *Transylvanian Review*, XXV(17), 4327-4340.
- Alam, M.M. (2009). *The combined effect of Market Orientation and Owner/ Manager Innovativeness on Innovation and Business Performance of Small and Medium Sized Manufacturing Firms in Pakistan*. Unpublished Doctoral Thesis. UUM. Sintok.
- Bank Negara Malaysia (2015). *BNM Annual Report, 2015*.
- Bos-Brouwers, H. E. J. (2010). Corporate Sustainability and Innovation in SMEs: Evidence of Themes and Activities in Practice. *Business Strategy and the Environment*, 19(7), 417–435.
- Damanpour, F. & Aravind, D. (2011). Managerial Innovation: Conceptions, Processes, and Antecedents. *Management and Organization Review*, 8(2), 423-454.
- Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with unobservable variables and measurement error. *Journal of Marketing Research* 18, 39-50.
- Hassen, M. & McCarthy, G. (2011). *Influential organisational capabilities for SMEs export performance: An exploratory study*. ASBES 2011 Annual Summit on Business and Entrepreneurial Studies (593-613) Sarawak Malaysia: Global Research Agency.
- Hair, J.F., Jr., Ringle, C.M., & Sarstedt, M. (2016). PLS Applications in Strategic management: Partial Least Squares Modeling in Strategy Research [special issue]. *Long Range Planning*, 46(1–2), 1–194.
- Henseler, J., Dijkstra, T., Sarstedt, M., Ringle, C., Diamantopoulos, A., Straub, D., Ketchen, D., Hair, J., Hult, T., & Calantone, R. (2014). Common beliefs and reality about PLS: comments on Rönkkö & Evermann . *Organizational Research Methods*, forthcoming.
- Hilmi, M. & Ramayah, T. (2008). Market Innovativeness of Malaysian SMEs: Preliminary Results From a First Wave Data Collection. *Asian Social Science*, 4(12), 42-49.
- Jaaffar, A.R. (2015). *Relationship between Innovation, Entrepreneurial Orientation, Network, Transformational Leadership Style and SMEs Performance*. Unpublished Doctoral Dissertation.
- Jaaffar, A.R., Shariff, M.Y. & Baharom, N. (2015). *The Trajectory of Malaysia SME: A PLS Path Modelling*. The 5th GBC Conference. Croatia. ISSN 1845-1872.

- Jaaffar, A. R. & Sharif, M. Y. (2014). *The Links between Entrepreneurial Orientation, Innovation, Networking and Organizational Performance: Developing a Conceptual Framework for SME Organizations*. 7th National Human Resource Conference (NHRM) 2014, UUM, Sintok.
- Kang, S.W. (2012). An Identification of Unsuccessful, Failure factors of technology Innovation and Development in SMEs: A case Study of Componets and Material Industry. *International Journal of Business and Management*; 7(2), 123-175.
- Kearns, G., & Lederer, A. (2003). A resource-based view of strategic IT alignment: How knowledge sharing creates competitive advantage. *Decision Sciences*, 34(1), 1-29.
- Law, W. K. (2012). *Firm Performance And Entrepreneurial Network: The Moderating Effect of Resources Factor In A Multiracial Country*. (Doctoral Dissertation). Retrieved from Uiversiti Utara Malaysia.
- Lumpkin, G. T. & Dess, G. G. (1996). Clarifying the Entrepreneurial Orientation Construct and Linking it to Performance. *Academy of Management Review*, 21(1), 135-172.
- Mirza, W. A. & Ali, B. (2011). The Dilemma of Knowledge Management, Innovation and Entrepreneurship in SMEs: An Empirical Study. *Interdisciplinary Journal of Contemporary Research in Business*, 3(2).
- Radas. S. & Bozic. L. (2009). The antecedents of SME innovativeness in an emerging transition economy. *ScienceDirect. Technovation*, 29(2009). 438-450.
- Runyan, R., Droge, C. & Swinney, J. (2008). Entrepreneurial Orientation versus Small Business Orientation: What Are Their Relationships to Firm Performance?. *Journal of small business management*, 46(4) 567-588.
- Santos, J. B. & Brito, L. A. L. (2012). Toward A Subjective Measurement Model for Firm Performance. *BAR, Braz. Adm. Rev. 9 no.spe Rio de Janeiro May 2012*.
- Sarkawi, M. N., Jaaffar, A.R., Shamsuddin, J. & Abdul Rahim, N.F. (2016). Moderating Effect of Growth Need Strength on the Relationship between Job Characteristics and Job Satisfaction. *International Review of Management and Marketing*. 6(8S) 1-8.
- SME Corps (2016) *SME Masterplan 2012-2020*. Retrieved from [http:// SME Corp.www.gov.my](http://SME Corp.www.gov.my)
- Soon, T. T. & Zainol, F.A. (2011). Knowledge Mnagement in Malaysian SMEs: An Empirical Examination on Information Technology(IT) Support and Strategy as Plan. *Australian Journal of Business Research*, 1(4), July, 24-39.
- Subrahmanya, M. H. B. (2011). Technological Innovations and firm performance of Manufacturing SMEs:Determinants and Outcomes. *ASCI Journal of Management*, 41(1), 109-122.
- Uhlaner, L., Stel, A. van, Duplat, V. & Zhou, H. (2013). Disentangling the effects of organization capabilities, innovation and firm size on SME sales growth. *Small Business Economics*, 41(3), 581-607.
- Wiklund, J. & Shepherd, D. (2003). Knowledge-based Resources, Entrepreneurial Orientation, And the Performance of Small and Medium-sized Business. *Strategic Management Journal*, 24, 1307-1314.

Books

- Hashim, M. K. (2007). *SMEs in Malaysia : A Brief Handbook*. Petaling Jaya : August Publishing.
- Holmes-Smith, P. (2001). *Introduction to structural equation modeling using LISREAL*. Perth: ACSPRI-Winter Training Program.
- Zimmerer, T. W., Wilson, D. L. & Scarborough, N. M. (2009). *Effective Small Business Management* (9th ed.). New Jersey: Prentice Hall.