

## Business networking and sustainability of small rural business: Mediating effects of entrepreneurial orientation

Mohd. Amin Mohamad<sup>a\*</sup> and Othman Chin<sup>b</sup>

<sup>a</sup>Universiti Teknikal Malaysia Melaka, Malaysia

<sup>b</sup>Universiti Tenaga Nasional, Malaysia

### CHRONICLE

#### Article history:

Received: October 19, 2018  
Received in revised format: November 18, 2018  
Accepted: January 8, 2019  
Available online:  
January 8, 2019

#### Keywords:

Business Networking  
Entrepreneurial Orientation  
Business Sustainability  
Small Rural Business (SRB)  
Structural Equation Modelling (SEM)

### ABSTRACT

This study aims to examine the entrepreneurial orientation (EO) of the Small Rural Business (SRB) entrepreneurs in Malaysia by taking Business Networking (BN) as the antecedent. BN is used to explain the influence of EO as a mediator and its' consequences towards SRB Business Sustainability (BS). The survey method was employed in this study and the data was analyzed using Structural Equation Modelling (SEM) multivariate data analysis. Based on the SEM analysis, it can be concluded that in this study, the relationship between BN and BS was not mediated by EO. However, BN has direct effect towards BS. Moreover, EO and BN were significant as predictors towards BS. Size, age and technology of SRB were used as control variables in this study.

© 2019 by the authors; licensee Growing Science, Canada

## 1. Introduction

Small and micro enterprises technology-based businesses will gain many benefits through business networking. They will gain new knowledge and information related to the products and services that they provide through business networking with their customers and suppliers (Zane & Decolis, 2016; Su et al., 2013). The acquisition for resources are more critical to small technology-based firms because the resources that they need might be more specialized and scarce. Therefore, a close relationship with their networks such as the suppliers and financial providers will help them acquire financial, manpower and raw materials much easier (Lee & Donna, 2016). However, whether entrepreneurial orientation (EO) of the firm plays an important role in the relationships between business networking and business sustainability is the question to be answered in this study. Networking can be an important source of information for a firm to gain competitive advantage (Gronum et al., 2012; Naudé et al., 2014; Schoonjans et al., 2013). Recently, a comprehensive empirical research has arisen which focused on the possible effects of networking on firm's performance (Iskoujina et al., 2017; Naudé et al., 2014;

\* Corresponding author.

E-mail address: [amin@utem.edu.my](mailto:amin@utem.edu.my) (M. A. Mohamad)

Sharafizad & Coetzer, 2016). Moreover, business networking benefits small businesses through resource acquisition which are needed for their sustainability (Grandy, 2015).

Over the past few years, many studies on small business have addressed issues of networking and business performance (Adel & Habib, 2018; Su et al., 2015; Lin et al., 2012). However, there are a relatively limited number of studies on the mediating role of entrepreneurial orientation in the relationship between business networking and business sustainability in Malaysia. Furthermore, there exists a need to investigate further, particularly in this fragile segment. For that reason, this study seeks to remedy the gap in research on the mediating effects of entrepreneurial orientation in the relationship between business networking and business sustainability in Malaysia.

## 2. Literature review

Previous studies which reported the relationships among the related constructs in this study will be briefly discussed in this section.

### 2.1 *The effect of business networking on entrepreneurial orientation*

According to Su et al. (2015), business networking is one type of managerial networking. They also categorized political networking and financial networking as the types of managerial networking. The results of their study show that only business networking has a positive moderating effect in the relationship between entrepreneurial orientation and business performance in China. In contrast, political networking impacted negatively, while financial networking moderated the relationship in an inverse U-shaped effect. Therefore, strengthening business networking will enhance the entrepreneurial level of the business and thus increase business performance. However, enhancing political and financial networking do not directly increase entrepreneurial orientation and performance. The studies by Zhang and Zhang (2012), Boso et al. (2013) and Ajayi (2016) also reported the significant relationships between business networking and entrepreneurial orientation. Martins (2016), on the other hand, analyzed the moderating role of business networking in the relationships between entrepreneurial orientation and business performance. He concluded that business networking has a positive moderating role in the relationship between business networking and business performance. Hence, the first hypothesis is proposed:

H<sub>1</sub>: Business networking has significant effect on Entrepreneurial Orientation.

### 2.2 *The effect of Entrepreneurial Orientation on Business Sustainability*

Business sustainability is a dependent construct in this study. This refers to the economic sustainability, survival and continuity of the business to the next generation. Very few studies have utilized business sustainability as the dependent construct in their studies (e.g. Kohar, 2013; Mungule et al., 2016; Gawel, 2011). Most of the studies on entrepreneurial orientation utilized business performance, business growth, business success, business survival and profitability as the dependent construct (Kasim & Altinay, 2016; Naudé et al., 2014; Eggers et al., 2013; Soininen et al., 2012). However, business sustainability can also be used interchangeably with the other dependent constructs which have the same meaning. Recently, there are also discussions which combined the term entrepreneurial orientation with sustainability, namely sustainable entrepreneurial orientation (Hern & Rung-Hoch, 2017; Kraus, Burtscher et al., 2018). Therefore, there is a need to look further into the relationship between entrepreneurial orientation and business sustainability, especially in the rural small business context.

Divito and Bohnsack (2017) stated that the level of entrepreneurial orientation of a firm will determine the business sustainability decision making of the business. Results of the studies by Soininen et al.

(2012); Arief et al. (2013) and Etim et al. (2017) support the findings that entrepreneurial orientation has significant effects on business sustainability. Hence, the second hypothesis is proposed:

H<sub>2</sub>: Entrepreneurial Orientation has significant effect on Business Sustainability.

### *2.3 The effect of Business networking on Business sustainability*

A related recent study which focused on the relationship between business networking and business sustainability was done by Setya et al. (2017). The context of the study was the Malangan Mask Industry in Indonesia. They examined on how the business networking plan of the Malangan Mask industry in sustaining the business. Their study revealed that the Malangan Mask industry is using the strength and opportunities strategy in building business networking because they found out that this strategy will result in business sustainability of the industry. In another study, Jones et al. (2017) proposed that small businesses to have a good networking with the relevant stakeholders such as the universities. Their study shows that through the networking with universities, the businesses can improve their performance through innovation and thus enhancing the sustainability of the businesses. Other similar studies that reported the significance of the relationships between business networking and business sustainability are Karvonen et al. (2015), Taneja & Toombs (2014) and Klewitz (2017). Hence, the third hypothesis is proposed:

H<sub>3</sub>: Business networking has significant effect on Business Sustainability.

### *2.4 The Mediating role of Entrepreneurial Orientation in Business Networking and Business Sustainability relationship*

In developing countries, when the level of Entrepreneurial Orientation is high, the performance of small businesses will increase. The relationship is moderated by business network (Boso et al., 2013). This study shows the evidence of business networking as a moderator in the relationships between EO and business performance. This finding is different from the study by Rauch et al. (2009) which stated that EO is directly related with business performance. Therefore, in order to gain sustainability, small businesses in the developing countries need to have high EO and strong business networking with governmental bodies and other businesses and stakeholders. Results from the study by Gronum et al. (2012) showed that one element of EO which is innovation, plays the role of mediator in the relationships between business networking and performance. However, the relationship between networking and performance was not significant. In this case, small business should utilize business networking to enhance their innovative capabilities and consequently will improve business performance. This study proposes that EO and BN improve business sustainability, performance and growth in small businesses. The role of EO will be analyzed whether it plays the role of mediator in the relationships between business networking (BN) and business sustainability (BS). Hence, the fourth hypothesis is proposed:

H<sub>4</sub>: Entrepreneurial Orientation mediates the relationship between Business networking and Business Sustainability.

### *2.5 The Effects of control variables*

Control variable is the variable which is not the main focus of the study. However, the control variable is “monitored” or held “constant” so that its effects seems to be minimal or likely to be not present when the researcher is testing the relationship between Independent Variable and Dependent Variable. In this study, the relationship between business networking, the independent variable and business sustainability, the dependent variable, will be controlled by the firm’s age, size and technology of the firm.

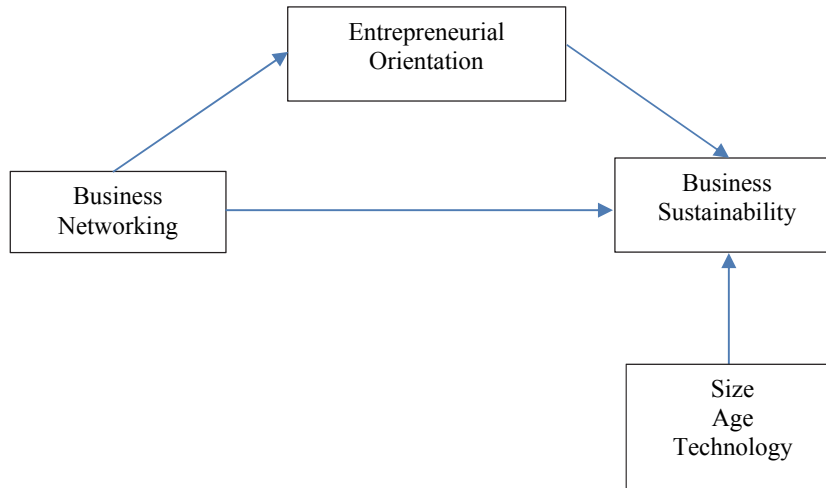
Firm's age and size have long been studied as important factors that affect business performance (Kang & Park, 2012; Su et al., 2015; Arend, 2014). Technology types of the small business will have a significant effects to the business performance and sustainability (Deligianni et al., 2015; Brouthers et al., 2015; Sobanke et al., 2014). Hence, the three variables are used as the control variable in this study.

Since all the relationships among the constructs are validated in SEM model, in the next phase of the analysis, the control variables are included in the model to test whether the relationships among the constructs in the model are still valid when controlled for size of company, technology and age of the company. The hypotheses to be tested are as follows:

H<sub>5</sub>: There exist a significant effect of BN towards BS regardless of size, technology and age of the business.

H<sub>6</sub>: There exist a significant effect of EO towards BS regardless of size, technology and age of the business.

The proposed conceptual framework for this study is as follows:



**Fig. 1.** Conceptual Framework of the study

### 3. Methodology

#### 3.1. The Pre-Testing, pilot study and Exploratory Factor Analysis (EFA) Procedure

This study is a quantitative study using survey methods. The measuring instruments were adapted from literature and customized to suit this study. The pre-testing procedure was conducted after the customization process has been completed. The measurement scale used in the questionnaire was also verified by an expert in research methods. After the pre-testing procedure, the researcher rewrote and rearranged the items in the questionnaire, according to the expert advice. The questionnaire was then ready for pilot testing and Exploratory Factor Analysis (EFA). The revised questionnaires were sent to selected SRB entrepreneurs in 12 different locations in Melaka to collect the data for pilot study. 110 questionnaires were collected out of 150 sent to the SRB entrepreneurs. The data from the pilot study were used to analyze the Exploratory Factor Analysis (EFA). EFA procedure was used to determine the dimensionality of item in the questionnaire. The EFA procedure need to be done because the dimensionality of items used in this research study might have changed from the previous research due to different industry, geography and sociocultural factors.

The Exploratory Factor Analysis using extraction method of Principal Component with Varimax (Variation Maximization) Rotation was performed on the 11 items measuring Business Sustainability (BS) construct, 6 items measuring Entrepreneurial Orientation (EO) construct and 11 items measuring Business Networking (BN) construct. The results indicated that the Bartlett's Test of Sphericity was significant (P-Value < 0.05) for all constructs. Furthermore, the measure of sampling adequacy by Kaiser-Meyer-Olkin (KMO) was excellent where all exceeded the required value of 0.6 (Awang, 2010, 2014). The Bartlett's Test is significant and KMO > 0.6, indicate that the data is adequate to proceed further with the data reduction procedure (Awang, 2010, 2014). The results also showed that only one component or dimension emerged from EFA procedure based on the computed Eigenvalue greater than 1.0 for BS and EO while two components emerged for BN. All of the components and their respective items were excellent in measuring the BS, EO and BN construct since their total variance explained exceeded 60% (Awang, 2010, 2014). The factor loading for every item in BS and EO are greater than 0.6. Thus, no item should be deleted since they achieved the minimum requirement for factor loading of 0.6 (Awang, 2010, 2014, 2016). In other words, all items are useful to measure the latent construct. However one item needs to be deleted from BN construct which is BN5 because the item was cross loading in first and second component of BN. All of the items in all three components have achieved the required Internal Reliability since the Cronbach's value which is greater than 0.7 (Awang, 2010, 2014).

3.2. The confirmatory factor analysis (CFA) for the study

Field data was collected using questionnaires from 42 locations randomly selected from the Rural Transformation Centres throughout peninsular Malaysia. 318 usable questionnaires were collected and analyzed for CFA and SEM.

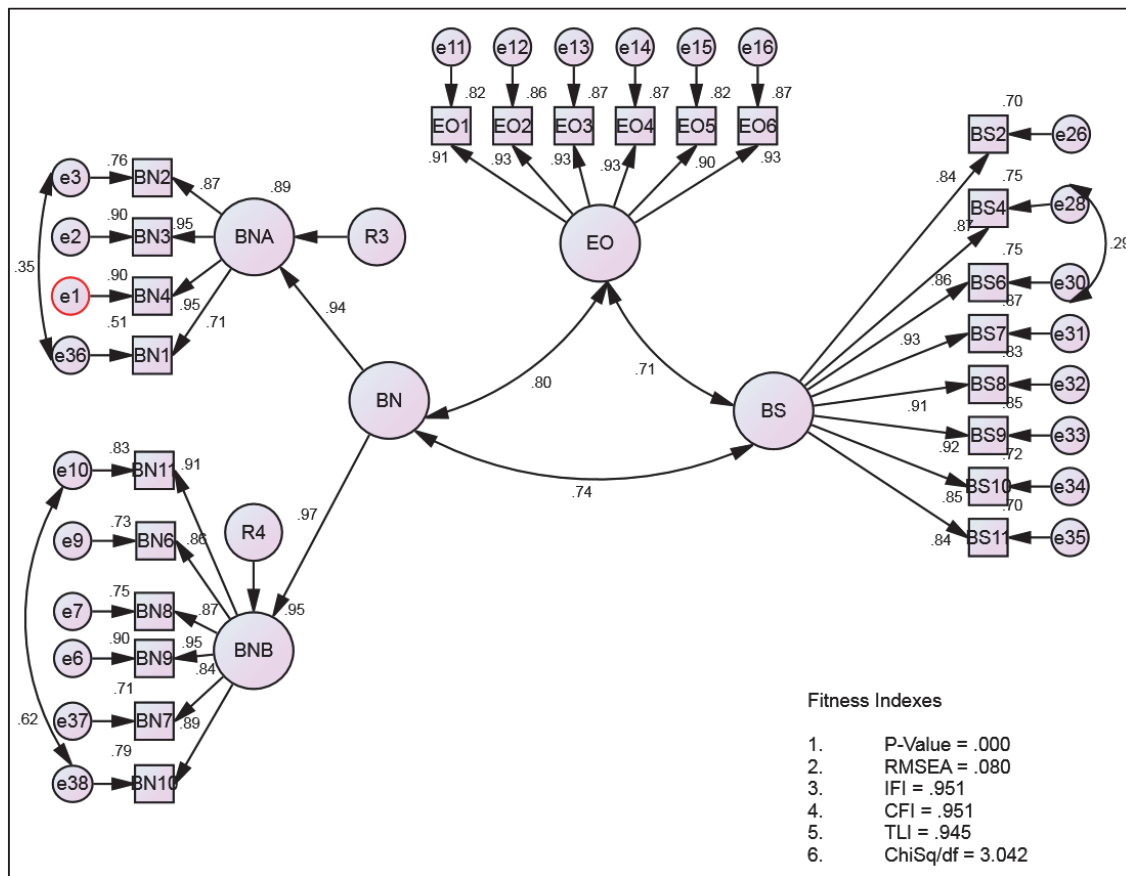


Fig. 2. CFA Diagram for the study

With reference to the Average Variance Extracted (AVE) and Composite Reliability (CR) values, the study found all AVE and CR exceed their respective threshold values of 0.5 and 0.6, respectively (Awang, 2011, 2012, 2014, 2015). Thus, the study can conclude that the Convergent Validity and Composite Reliability for all of the constructs in the study have been achieved. The construct validity for the measurement model has also been achieved because all Fitness Indexes meet the required level as follows; the absolute fit calculation for RMSEA is .080, the incremental fit for CFI is .951 and parsimonious fit for Chisq/df is 3.042. The discriminant validity index for the model is as follows:

**Table 1**

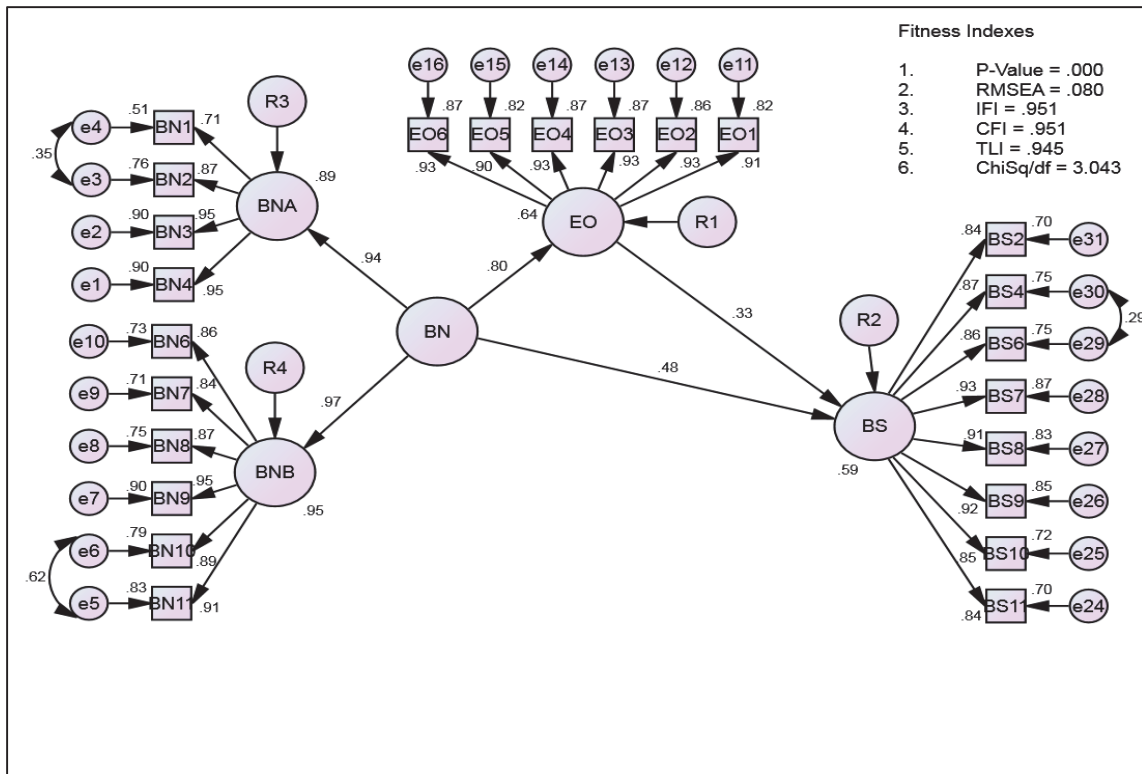
Discriminant Validity Index for the study

Construct	BS	BN	EO
BS	<b>.98</b>		
BN	.74	<b>.98</b>	
EO	.71	.80	<b>.99</b>

From Table 1, the values in bold are the square root of AVE of the constructs while the other values are the direct relation between BS, BN and EO constructs. The discriminant validity for all constructs have been achieved when the values in bold are higher than the values in its row and column. It is assumed from Table 1 that the discriminant validity for all three constructs has been achieved. The assessment of normality distribution of the data for this study shows that the data is normally distributed because the absolute value of skewness of 1.0 or lower.

**4. Findings**

The result from SEM analysis is as follows:



**Fig. 3.** SEM diagram for the study

**Table 2**

The results of hypotheses testing for the study

Construct	Path	Construct	Standardized Estimate	Unstandardized Estimate	P-value	Result
Entrepreneurial Orientation	←	Business Networking	.80	.74	0.001	significant
Business Sustainability	←	Entrepreneurial Orientation	.33	.22	0.001	significant
Business Sustainability	←	Business Networking	.48	.30	0.001	significant

Based on the results of SEM analysis showed in Fig. 3 and Table 2, the effects of business networking on entrepreneurial orientation and business sustainability are positive and significant. Similarly, the effect of entrepreneurial orientation on business sustainability is also positive and significant. This study is supported the findings by Awang et al.(2011), Su et al. (2013) and Gathungu et al. (2014), which have reported the significant effects of business networking on entrepreneurial orientation. The results show that the elements of entrepreneurial orientation which are innovativeness, proactiveness and risk taking capability of the small business will be enhanced through business networking with the related stakeholders. Likewise, the results showed that entrepreneurial orientation had a positive and significant effect on business sustainability. The results are similar to those reported by Divito and Bohnsack (2017) and Etim et al. (2017) which reported that entrepreneurial orientation had significant effects on business sustainability and survival of small business. In the same way, this study concluded that business networking effects business sustainability positively. The findings are similar to the results of the studies by Klewitz (2017), Setya et al. (2017) and Bucktowar et al. (2015) which have mentioned the positive effects of business networking on business sustainability of small business.

#### 4.1 Testing Mediation Effect

The hypothesis statement to test for mediator is as follows:

H<sub>4</sub>: Entrepreneurial Orientation mediates the relationship between Business Networking and Business Sustainability. Based on the above findings, all of the indirect and direct effects are significant.

The procedure to test mediation based of the above table is as follows:

The indirect effect =  $0.80 \times 0.33 = 0.264$ .

The direct effect = 0.48

Since the indirect effect is less than the direct effect, mediation does not occur.

Based on the mediation test procedure, the results indicated that Entrepreneurial Orientation did not mediate the relationship between Business networking and Business Sustainability. Therefore, in this situation, the relationships between Business networking and Business Sustainability does not strengthen through Entrepreneurial Orientation. Hence, H<sub>4</sub> is not accepted. The result of this study is in contrast with the result of the study by Adel and Habib (2018), which stated that entrepreneurial orientation of the small businesses in their study mediated the relationship between networking and competitive advantage of the businesses.

#### 4.2 Effects of Control Variables

Basically, including control variable is to make sure that the effect of antecedents to the dependent variable is not over or under estimated. In this case, the researchers include the control variable to ensure the validity of the relationship between BN and EO towards BS regardless of the existence of

the control variables such as size, technology and age of the firm. Fig. 4 below shows the SEM analysis of this study with the control variables included.

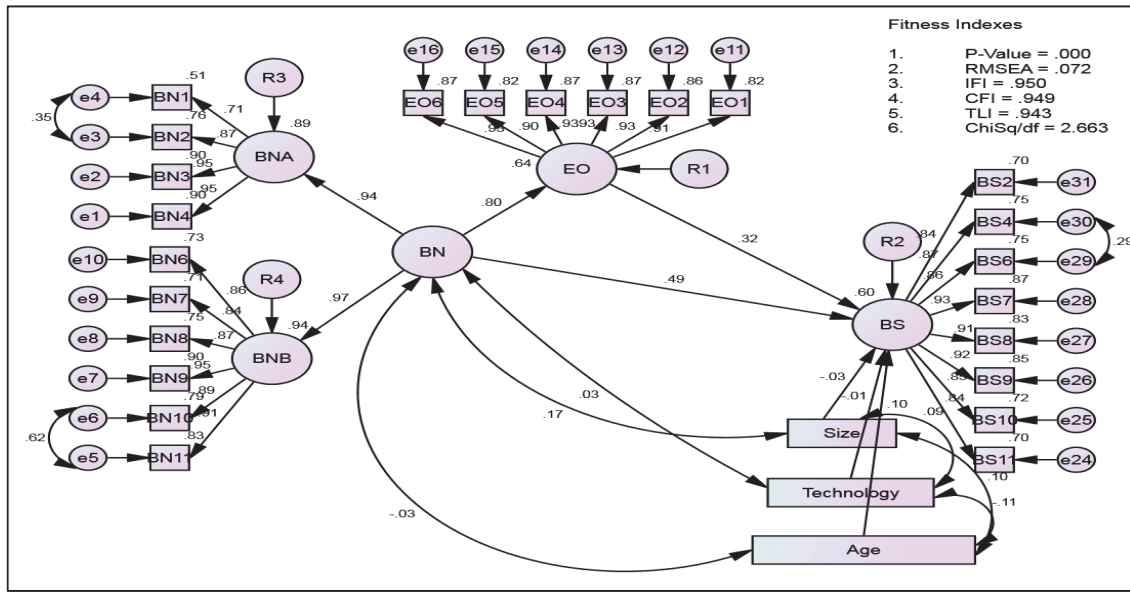


Fig. 4. SEM analysis with control included

Table 3

The Regression Path Coefficients and its significance based on p-value < 0.05 with control included

			Estimate	S.E.	C.R.	P
EO	←	BN	.738	.041	17.857	***
BS	←	EO	.220	.048	4.566	***
BS	←	BN	.308	.046	6.671	***
BS	←	Size	-.052	.064	-.813	.416
BS	←	Technology	-.010	.026	-.377	.706
BS	←	Age	.028	.011	2.533	.011

Table 4

Comparing Beta and p-value for the path coefficient without control variables and with control variables included

Path coefficient	Without control variables			With control			Conclusion
	Beta	p-value	result	Beta	p-value	result	
BN to BS	.30	.001	The effect is significant	.31	.001	The effect is significant	The hypothesis H5 is supported and validated because the result of the effects of the relationships between BN and BS still significant even though the size, technology and age are included in the model.
EO to BS	.22	.001	The effect is significant	.22	.001	The effect is significant	The hypothesis H6 is supported and validated because the result of the effects of the relationships between EO and BS still significant even though the size, technology and age are included in the model.

Based on Fig. 4, Table 3 and Table 4, the results for hypothesis 5 and hypothesis 6 can be explained as below:



H<sub>5</sub>: BN positively influences BS regardless of size, technology and age of the business. This hypothesis is supported. Therefore, the role of size, technology and age of the business as control variables for this relationship is validated.

H<sub>6</sub>: EO positively influences BS regardless of size, technology and age of the business. This hypothesis is supported. Therefore, the role of size, technology and age of the business as control variables for this relationship is validated.

## 5. Conclusion

This study has tested the constructs involved in understanding the sustainability of SRB in Malaysia and contributes towards the development of the theory of small business management, specifically small rural business. As suggested by Pratono and Mahmood (2016), the EO and performance relationship can also involve the constructs such as moderators, mediators and other exogenous and endogenous constructs in order to explain the complex relationships. In this study, EO has been tested and it plays the role of mediator in the relationship between Business networking and Business Sustainability.

Based on the path analysis in SEM, Business networking has significant effect on Entrepreneurial Orientation. This result is consistent with the findings from Martins (2016) and Gathungu et al. (2014). Therefore, it can be assumed that rural small business which has good networking with the stakeholders will have a positive effect on the entrepreneurial behavior of the entrepreneurs. It also can be concluded from this study that EO had a significant effect on Business Sustainability. This finding is in parallel with the previous studies by Bucktowar et al. (2015), Arief et al. (2013) and Soinen et al. (2012) which found that there were significant positive effects of Entrepreneurial Orientation on business performance. Based on the finding, we have also learnt that Business networking had significant effect on Business Sustainability. This finding is parallel with previous studies by Setya et al. (2017), Karvonen et al. (2015) and Klewitz (2017) which stated Business networking had positive effect on performance. However, this study does not support the hypothesis that entrepreneurial orientation plays the role of mediator in the relationship between business networking and business sustainability. The finding is in contrast with the results from the study by Adel and Habib (2018) which stated that entrepreneurial orientation acts as a mediating construct between networking and competitive advantage. However, there are a few differences between this study and the study by Adel and Habib (2018). In their study, the dependent construct was competitive advantage and the context was Tunisian contractors. Therefore, this current provides a new information related to the mediating role of entrepreneurial orientation in the relationship between business networking and business sustainability, especially in the rural small business context. As has been mentioned by Gupta and Gupta (2015), Beliaeva (2014) and Lindsay et al. (2014), mediating role of entrepreneurial orientation has not been well studied, so, the findings will add to the entrepreneurial orientation literature related to small business. The limitation of this study is that the samples are drawn from SRB entrepreneurs in peninsular Malaysia. Therefore, future studies should include samples from SRB entrepreneurs throughout east Malaysia and other developing countries. Future researchers related to SRB should include more exogenous constructs and include other alternative mediators and moderators to develop and confirm the sustainability model for SRB in Malaysia.

## References

- Abdul Kohar, U., McMurray, A., & Peszynski, K. (2010). Factors influencing the sustainability of Malaysian Bumiputera new technology-based small firms. In *7th AGSE International Entrepreneurship Research Exchange* (pp. 789-803). AGSE.
- Adel, G., & Habib, A. (2018). Mediating role of entrepreneurial orientation on the relationship between relational network and competitive advantages of Tunisian contractors. *Journal of the Knowledge*

- Economy*, 9(2), 665–679.
- Ajayi, B. (2016). Capabilities on the export performance of Nigerian agricultural SMEs. *Journal of Entrepreneurship and Innovation in Emerging Economies*, 2(2010), 133–149.
- Arend, R. J. (2014). Entrepreneurship and dynamic capabilities: How firm age and size affect the “capability enhancement-SME performance” relationship. *Small Business Economics*, 42(1), 33–57.
- Arief, M., Thoyib, A., Sudiro, A., & Rohman, F. (2013). The effect of entrepreneurial orientation on the firm performance through strategic flexibility: A study on the SMEs cluster in Malang. *Journal of Management Research*, 5(3), 44–62.
- Awang, A., Ahmad, Z. A., Rashid, A., Asghar, S., Subari, K. A., & Kassim, S. A. (2011). Firm entrepreneurial orientation and knowledge / networking of agro-based enterprises in Malaysia : The role of technology and strategy. *African Journal of Business Management*, 5(22), 9684–9704.
- Awang, Z. (2010). *Research Methodology for Business and Social Sciences*. Kelantan: Universiti Teknologi MARA.
- Awang, Z. (2014). *A handbook on SEM for academicians and practitioners: the step by step practical guides for the beginners*. Bandar Baru Bangi: MPWS Rich Resources.
- Awang, Z. (2016). *Structural equation modeling (SEM) made simple*. Bandar Baru Bangi: MPWS Rich Resources.
- Beliaeva, T. (2014). *Antecedents and Performance Outcomes of Entrepreneurial Orientation : a Comparative Cross-Country Study*. Saint-Petersburg State University / Lappeenranta University of Technology. Retrieved from [http://www.doria.fi/bitstream/handle/10024/97007/Tatiana\\_Beliaeva\\_Master\\_thesis.pdf?sequence=2](http://www.doria.fi/bitstream/handle/10024/97007/Tatiana_Beliaeva_Master_thesis.pdf?sequence=2)
- Boso, N., Story, V. M., Cadogan, J. W., Micevski, M., Kadic-Maglajlic, S., & Kadić-Maglajlić, S. (2013). Firm innovativeness and export performance: Environmental, networking, and structural contingencies. *Journal of Marketing Research*, 21(4), 62–87.
- Brouthers, K. D., Nakos, G., & Dimitratos, P. (2015). SME entrepreneurial orientation, international performance, and the moderating role of strategic alliances. *Entrepreneurship: Theory and Practice*, 39(5), 1161–1187.
- Bucktowar, R., Kocak, A., & Padachi, K. (2015). Entrepreneurial orientation, market orientation and networking: impact on innovation and firm performance. *Journal of Developmental Entrepreneurship*, 20(4), 22.
- Deligianni, I., Voudouris, I., & Lioukas, S. (2015). Growth paths of small technology firms : The effects of different knowledge types over time. *Journal of World Business*, 50(3), 491–504.
- DiVito, L., & Bohnsack, R. (2017). Entrepreneurial orientation and its effect on sustainability decision tradeoffs: The case of sustainable fashion firms. *Journal of Business Venturing*, 32(5), 569–587.
- Eggers, F., Kraus, S., Hughes, M., Laraway, S., & Snyckerski, S. (2013). Management decision implications of customer and entrepreneurial orientations for SME growth. *Management Decision*, 51(3), 524–546.
- Etim, J. J., Adabu, M. U., & Ogar, C. A. (2017). Influence of entrepreneurial orientation as survival strategy for small and medium enterprises : the nigeria experience. *International Journal of Economics, Commerce and Management*, 5(8), 502–518.
- Gathungu, J. M., Aiko, D. M., Candidate, E., & Machuki, V. N. (2014). Entrepreneurial Orientation, Networking, External Environment, and Firm Performance: a Critical Literature Review. *European Scientific Journal*, 10(7), 1857–7881.
- Gawel, A. (2011). *Entrepreneurship and sustainability : do they have anything in common*.
- Grandy, D. (2015). *Small Business Strategies for Company Profitability and Sustainability*. Walden University. Retrieved from UMI 3700959 Published
- Gronum, S., Verreyne, M.-L., & Kstelle, T. (2012). The Role of Networks in Small and Medium-Sized Enterprise Innovation and Firm Performance. *Journal of Small Business Management*, 50(2), 257–282.
- Gupta, V., & Gupta, A. (2015). The concept of entrepreneurial orientation. *Foundations and Trends® in Entrepreneurship*, 11(2), 55–137.
- Hern, F., & Rung-Hoch, N. (2017). Sustainable entrepreneurial orientation in family firms.

- sustainability*, 9(1212), 1–16.
- Iskoujina, Z., Ciesielska, M., Roberts, J., & Li, F. (2017). Grasping the business value of online communities Article information : *Journal of Organizational Change Management*, 30(3), 19.
- Jones, J., Corral, G., & Zubielqui, D. (2017). Technological forecasting & social change doing well by doing good : A study of university-industry interactions , innovationess and fi rm performance in sustainability-oriented Australian SMEs. *Technological Forecasting & Social Change*, 123(Oktober), 262–270.
- Kang, K. N., & Park, H. (2012). Influence of government R&D support and inter-firm collaborations on innovation in Korean biotechnology SMEs. *Technovation*, 32(1), 68–78.
- Karvonen, I., Jansson, K., Tonteri, H., Vatanen, S., & Uoti, M. (2015). Enhancing remanufacturing – studying networks and sustainability to support Finnish industry. *Journal of Remanufacturing*, 5(5), 16.
- Kasim, A., & Altinay, L. (2016). International review of management and marketing how does firm strategy affect the relationship between entrepreneurial strategic orientation and firm growth? A preliminary analysis on small and medium size hotels in peninsular Malaysia. *International Review of Management and Marketing International Soft Science Conference*, 6(S7), 116–120.
- Klewitz, J. (2017). Grazing , exploring and networking for sustainability-oriented innovations in learning- action networks : an SME perspective. *Innovation: The European Journal of Social Science Research*, 30(4), 1–28.
- Kohar, U. H. A. (2013). *The Factors that Influence the Sustainability of Malaysian Bumiputera ( Indigenous ) New Technology-Based Small Firms*. RMIT University. Retrieved from [https://researchbank.rmit.edu.au/eserv/rmit:160793/Abdul\\_kohar.pdf](https://researchbank.rmit.edu.au/eserv/rmit:160793/Abdul_kohar.pdf)
- Kraus, S., Burtscher, J., Vallaster, C., & Angerer, M. (2018). Sustainable entrepreneurship orientation : A reflection on status-quo research on factors facilitating responsible managerial practices. *Sustainability*, 10(444), 1–21.
- Lee, J. Z., & Decolis, D. M. (2016). Social networks and the acquisition of resources by technology-based new ventures new ventures. *Journal of Small Business & Entrepreneurship*, (April), 20.
- Lin, D., Wood, L. C., & Lu, Q. (2012). Improving business incubator service performance in China: The role of networking resources and capabilities. *The Service Industries Journal*, 32(13), 2091–2114.
- Lindsay, V., Ashill, N., Roxas, B., & Victorio, A. (2014). Entrepreneurial orientation and performance of microenterprises in an emerging economy. *Journal of Strategic Marketing*, 22(7), 631–656.
- Martins, I. (2016). Network usage, entrepreneurial orientation and their effectiveness on SMEs growth. *The Journal of Entrepreneurship*, 25(1), 18–41.
- Mungule, C. M., Vuuren, J. J. Van, & Sciences, M. (2016). Validating a measurement scale for entrepreneurial actions for sustainable corporate entrepreneurship using confirmatory factor analysis. *Acta Commercii*, 16(1), 1–16.
- Naudé, P., Zaefarian, G., Najafi Tavani, Z., Neghabi, S., & Zaefarian, R. (2014). The influence of network effects on SME performance. *Industrial Marketing Management*, 43(4), 630–641.
- Pratono, A. H., & Mahmood, R. (2016). Entrepreneurial orientation and firm performance: How can micro, small and medium-sized enterprises survive environmental turbulence? *Pacific Science Review B: Humanities and Social Sciences*, 1(2), 1–7.
- Rauch, A., Wiklund, J., & Frese, M. (2009). Entrepreneurial orientation and business performance : An assessment of past research and the future. *Entrepreneurship Theory and Practice*, (May), 761–787.
- Schoonjans, B., Van Cauwenberge, P., & Vander Bauwhede, H. (2013). Formal business networking and SME growth. *Small Business Economics*, 41(1), 169–181.
- Setya, P. A., Djatmika, E. T., & Suharto. (2017). Networking factor of topeng Malangan ( Malangan Mask ) industry for the business sustainability ( Case Study on Gunung Sari Craft Malang ). *International Journal of Academic Research in Business and Social Sciences*, 7(5), 306–321.
- Sharafizad, J., & Coetzer, A. (2016). Women business owners’ start-up motivations and network content. *Journal of Small Business and Enterprise Development*, 23(2), 590–610.
- Sobanke, V., Adegbite, S., Ilori, M., & Egbetokun, A. (2014). Determinants of technological capability

- of firms in a developing country. *Procedia Engineering*, 69, 991–1000.
- Soininen, J., Martikainen, M., Puumalainen, K., & Kyl, K. (2012). Entrepreneurial orientation : Growth and profitability of Finnish. *International Journal of Production Economics*, 140, 614–621.
- Soininen, J., Martikainen, M., Puumalainen, K., & Kyläheiko, K. (2012). Entrepreneurial orientation: Growth and profitability of finnish small- and medium-sized enterprises. *International Journal of Production Economics*, 140(2), 614–621.
- Su, Z., Xie, E., & Wang, D. (2013). Entrepreneurial Orientation, Managerial Networking, and New Venture Performance in China. *Journal of Small Business Management*, (22), 1–21.
- Su, Z., Xie, E., & Wang, D. (2015). Entrepreneurial orientation, managerial networking, and new venture performance in China. *Journal of Small Business Management*, 53(1), 228–248.
- Taneja, S., & Toombs, L. (2014). Putting a face on small businesses: Visibility, viability, and sustainability the impact of social media on small business marketing. *Academy of Marketing Studies Journal*, 18(1), 249–261.
- Zhang, Y., & Zhang, X. E. (2012). The effect of entrepreneurial orientation on business performance: A role of network capabilities in China. *Journal of Chinese Entrepreneurship*, 4(2), 132-142



© 2019 by the authors; licensee Growing Science, Canada. This is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC-BY) license (<http://creativecommons.org/licenses/by/4.0/>).