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The effect of market orientation as a mediating variable in the relationship between entrepreneurial orientation and SMEs performance

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The effect of market orientation as a mediating variable in the relationship between entrepreneurial orientation and SMEs performance

Effect of
market
orientation

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Abstract

Purpose – This study aims to examine the effect of market orientation (MO) as a mediating variable in the relationship between entrepreneurial orientation (EO) and small and medium enterprises (SMEs) performance.

Design/methodology/approach – A total of 500 SMEs in the manufacturing industry of food and beverages were involved in this study with a response rate of 117. Data collection was conducted in all states of Peninsular Malaysia including the northern, central, southern and eastern regions.

Findings – The findings show that EO has a significant relationship with MO, and MO has a significant relationship with SME performance. MO will mediate the relationship between EO and SMEs' performance.

Practical implications – The higher the EO implemented in a business, the more willing a company will be to implement MO. This analysis shows that highly entrepreneurial firms tend to be highly market orientated and this affects SMEs' performance.

Originality/value – The results of this study show that the characteristic of entrepreneurial and MO practiced by SMEs in Malaysia has been significantly affected the SMEs' performance. It indicates that EO offers a holistic and systematic model for supporting SMEs to build a well-maintained environment of MO and SMEs' performance.

Keywords Performance, SMEs, Entrepreneurial orientation, Market orientation

Paper type Research paper



1. Introduction

In Malaysia, small and medium enterprises (SMEs) consist of three sub-sectors: general business (services), manufacturing and agriculture (National SME Development Council, 2010). In this context, SMEs are defined based on three criteria: micro enterprise, small enterprise and SME. A micro enterprise is defined as a firm with annual sales turnover of RM 250,000, with less than five full-time employees. A small enterprise is defined as a company with annual sales turnover of RM 250,000 to less than RM 10 million with minimum 5 and maximum 50 full-time employees. Meanwhile, an SME is defined based on sales turnover between RM 10-RM 25 million, and between 51 and 150 full-time employees (National SME Development Council, 2010). Consequently, SMEs represent the backbone of the local economies in Malaysia, and SMEs are recognized as engines of economic growth behind Malaysia's industrial development. For example, SMEs accounted for 99.2 per cent of all business establishments, contributed 32 per cent of real gross domestic product (GDP) and 19 per cent of exports (Zuraidah and Gerry, 2010; National SME Development Council, 2010).

Even though SMEs are an important entity of economic growth in many countries, the contribution of SMEs to the Malaysian economy is relatively low compared to industrial countries and other developing nations. For example, SMEs in Singapore and Thailand contribute 49 and 38 per cent of the nations' GDP, respectively, compared to 31 per cent for Malaysian SMEs (National SME Development Council, 2010). To respond to the economic downturn in 2009, the Malaysian Government commenced several policies and initiatives to stimulate SME activities. At the end of July 2010, 65 per cent of RM 15.6 billion fund was allocated to SMEs through two stimulus packages introduced by the Government, which benefited about 79,000 SMEs (National SME Development Council, 2010). The Government, through the New Economic Model and Tenth Malaysia Plan, had given the priority to unleash the available potential of SMEs (National SME Development Council, 2010). As a result, SMEs are expected to increase in competitiveness and be resilient to the changing environment of business.

A case study research conducted by the Central Bank of Malaysia (2003) identified ten critical success factor and common issues of Malaysian SMEs. Among the critical success factors identified include entrepreneurial orientation and market orientation (MO). These factors were also recognized as crucial elements to generate global competitiveness among SMEs in Malaysia. The fundamental issue is how to be successful SMEs. In response to this question, significant research studies have identified the critical factors for SMEs' performance (El Makrini, 2015; Fernández-Mesa and Alegre, 2015; Ferreira *et al.*, 2015; Rodríguez-Gutiérrez *et al.*, 2015). For example, Rauch *et al.* (2009) explain that the relationship between EO and firm performance is significant, but MO also plays a significant role in enhancing SMEs' performance (Jia *et al.*, 2014; Li *et al.*, 2008; Real *et al.*, 2012; Wang, 2008; Zhang *et al.*, 2015). Previous research on MO and firm performance mostly has been validated in Europe and North America using MARKOR (Kohli and Jaworski, 1990) and MKTOR (Narver and Slater, 1990) measurement scales, and it is likely that the cultural difference of organizations will influence its applicability in the Malaysian context. As Lee and Peterson (2001) point out that EO is more compatible with certain cultures than others, and cultural values will congregate with a society's ability to develop a strong EO. Additionally, Chao and Spillan (2010) suggested that MO scales developed in one country may capture MO sentiments in another country. In this regard, the different EO constructs and firm

performance scales of different industries may also differ from one country to another (Ferreira *et al.*, 2015). To accomplish this gap, relevant items from EO, MO and SMEs' performance scales are adapted and incorporated. In addition, we address MO as a mediating variable in the relationship between EO and SMEs' performance. In this study, EO is related to the propensity of a company's top management to take risky action, be innovative and proactive (Ferreira *et al.*, 2015; Lumpkin and Dess, 1996; Morris and Paul, 1987; Morris *et al.*, 2002; Oparaocha, 2015). MO, on the other hand, could enhance firm performance by satisfying customer's needs and by facilitating sharing of competitor's information and interfunctional coordination (González-Benito *et al.*, 2009; Narver and Slater, 1990). This approach is more appropriate and emphasizes on small firms rather than big firms. As suggested by Chen *et al.* (2015), these MO dimensions are more focused on fundamental characteristics of a market-oriented firm than behavior perspective. This study is intended to examine the application of EO and MO in Malaysian SMEs. It is also expected to give exposure to the SME managers for implementation of EO and MO in their business. The study was guided by major research questions as follows:

RQ1. Do the EO dimensions of SMEs play a role in improving its MO?

RQ2. Does the MO play a role in improving SMEs' performance?

2. Literature review and hypotheses

2.1. Entrepreneurial orientation and market orientation

EO was first developed and defined by Miller (1983) and Miller and Friesen (1983) and, subsequently, many researchers have used and further developed these definitions across industries, countries and cultures. For example, Lumpkin and Dess (1996) defined EO as a process, practice and a decision-making activity that leads to a new entry. It emerges from a strategic-choice perspective that new entry opportunities will be successfully implemented by purposeful enactment (Van de Ven and Poole, 1995) and largely driven by unexploited market opportunities (Abebe, 2014). In contrast, a successful new entry may also be achieved when only some of these factors are operating (Lumpkin and Dess, 1996). In this definition, Miller (1983) suggests that EO has three dimensions, namely, innovativeness, risk-taking and proactiveness. However, there is no consensus in the literature concerning the dimensionality of EO (Martin and Javalgi, 2015). Researchers have claimed that EO is a one-dimensional construct (Covin and Slevin, 1989; Covin and Wales, 2012; Knight, 2000). Another argument described that EO is a multidimensional construct in which risk-taking, innovativeness, proactiveness, competitive aggressiveness and autonomy are treated as independent behavioral dimensions (Lumpkin and Dess, 1996). Other literature also suggested similar dimensions of EO as Miller (1983) included Covin and Miller (2014), Ferreira *et al.* (2015), Kreiser *et al.* (2013), 2010, Kropp *et al.* (2006), Lee and Lim (2009), Lumpkin and Dess (1996) and Obschonka *et al.* (2010).

Although, all EO dimensions are interconnected, the dimension of EO may vary independently (George and Marino, 2011; Larsen and Korneliussen, 2012; Wang, 2008), depending on the environmental, organizational and cultural contexts when a firm engages in a new entry (González-Benito *et al.*, 2009; Knight, 1997; Rauch *et al.*, 2009; Zhao *et al.*, 2011). For example, Kemelgor (2002) concludes that EO is characterized by cultural differences, and that there are significant differences in the intensity of EO

between firms in the USA and The Netherlands. For this reason, numerous scholars have consensus to measure EO based on innovativeness, risk-taking and proactiveness dimensions (Abebe, 2014; Amin, 2015; George and Marino, 2011; Kreiser *et al.*, 2013, 2010; Oly Ndubisi and Iftikhar, 2012; Semrau *et al.*, 2015). In line with these definitions, EO refers to the willingness of a firm to be innovative to rejuvenate market offerings, take risks to try out new and uncertain products, services and markets, and be more proactive than competitors toward new marketplace opportunities (Lumpkin and Dess, 1996; Wiklund and Shepherd, 2005; Zahra and Covin, 1995). In this context, innovativeness refers to the degree to which a firm engages in and embraces new ideas, novelty, experimentation and creativity that may lead to new products, markets, services or processes (Kjellberg *et al.*, 2015; Lily and Hartini, 2010; Lumpkin and Dess, 1996; Wang, 2008). In addition (Lumpkin and Dess (1996) found that firm proactiveness was related to market opportunities in the process of new entry, seizing of initiative and acting opportunistically to shape the environment (Gunawan *et al.*, 2015; Knight, 2000; Knight and Cavusgil, 2004). Risk-taking refers to bold moves into unknown business areas and/or the commitment of significant resources to business activities under conditions of uncertainty (Chang and Chen, 1998; Gunawan *et al.*, 2015; Lumpkin and Dess, 1996). Therefore, EO is classified as a critical organizational process that helps a firm to survive and improve its organizational performance (Khalili *et al.*, 2013; Miller, 1983; Tajeddini *et al.*, 2006).

Prominent entrepreneurship scholars argued that innovation, proactiveness and risk-taking are constitutive elements of entrepreneurship (Lumpkin and Dess, 1996). Some empirical studies have found that firms demonstrating more entrepreneurial strategic orientation will perform better (Chen and Hsu, 2013; Kraus *et al.*, 2012; Kreiser *et al.*, 2010; Matsuno *et al.*, 2002; Merlo and Auh, 2009; Naldi *et al.*, 2007; Nasution *et al.*, 2011; Ndubisi and Agarwal, 2014; Rauch *et al.*, 2009), and may even lead to poor performance under certain conditions (Slater and Narver, 2000). For example, Eggers *et al.* (2013) examine the effect of EO dimensions on SMEs' performance and they found that EO has significantly generated return to SMEs' performance. Additionally, Jalali *et al.* (2014) conducted a survey on SMEs' performance in Iran and found that EO has a significant effect in increasing SMEs' profitability. Interestingly, Amin (2015) found that EO dimensions (innovativeness, proactiveness and risk-taking) play a significant role in enhancing SMEs' performance in Malaysia. As a result, the innovative mindset of SMEs' managers will significantly increase an SME's propensity to participate and develop a networking to take advantage of new opportunities (Baron and Tang, 2011; Brettel and Rottenberger, 2013; Keh *et al.*, 2007; Khalili *et al.*, 2013; Nasution *et al.*, 2011; Sciascia *et al.*, 2014). In fact, SMEs need to have a high degree of proactiveness to enter a new market (Engelen *et al.*, 2014; Kraus *et al.*, 2012; Kreiser *et al.*, 2013; Rothaermel and Alexandre, 2009), and the willingness to engage in risky activities (Franco and Haase, 2013; Wales *et al.*, 2011, 2013) will enhance SMEs' performance.

Although, EO have a significant impact on firm performance (Hu and Zhang, 2012; Rauch *et al.*, 2009), however, this relationship requires a further analysis to identify others factors that affect this relationship. The effect of EO on firm performance is not only influenced by firm size and national culture (Rauch *et al.*, 2009), but MO may also play a significant role in enhancing firm performance (Baker and Sinkula, 2009; Li *et al.*, 2008; Matsuno *et al.*, 2002; Real *et al.*, 2012; Wang, 2008). In this situation, entrepreneurship and MO are complementary orientations; therefore, entrepreneurship

needs an MO to target its innovative actions effectively in the market, and MO needs entrepreneurship to achieve fast responses to market prospects (González-Benito *et al.*, 2009). In addition, Baker and Sinkula (2009) reports that there is strong relationship between EO and MO, and the relationship between EO and SMEs' performance mediated by MO. In this respect, Hult *et al.* (2005) concluded that MO occurs especially at the level of corporate culture, and this relationship will impact firm performance. Therefore, the potential effects of EO on marketing orientation could emphasize better SME performance. Thus, the following hypotheses are:

- H1. Entrepreneurship orientation has a significant relationship with market orientation.
- H2. Market orientation will mediate the relationship between entrepreneurial orientation and SMEs' performance.

2.2. Market orientation and small and medium enterprises' performance

Kohli and Jaworski (1990) defined MO as the set of activities, processes and behaviors derived from the implementation of the marketing concepts. In this definition, Kohli and Jaworski (1990) defined MO construct into three components: intelligence generation, intelligence dissemination and responsiveness, and called these as MARKOR dimensions. Market intelligence refers to the ability of firms in identifying and assessing customer wants and needs in the future. Intelligence dissemination refers to the process and level of market information distribution inside organizations formally and informally. Responsiveness is action taken in response to intelligence that is created and disseminated in assessing market situations (Filieri, 2015; Kohli and Jaworski, 1990; Kohli *et al.*, 1993). Although this approach emphasizes that concept of MO is focused on the actual behaviors of the organization (Roach *et al.*, 2014), but this concept did not address MO as a characteristic of organizational culture (Lam *et al.*, 2012).

On the other hand, Narver and Slater (1990) define MO as an organizational culture based on three components: customer orientation, competitor orientation and interfunctional coordination, and they names this instrument as MKTOR. Customer orientation refers to firms' ability in creating excellent value for customers and understanding the supply chain network (Deshpandé and Farley, 2004; Narver and Slater, 1990; Narver *et al.*, 2004; Tan *et al.*, 2014). Competitor orientation is defined as the ability of a firm in identifying strength, weaknesses, long-term capabilities and strategies to gain market competitiveness (Day and Wensley, 1988; Samat *et al.*, 2006). Interfunctional coordination refers to firms' capabilities in creating greater value for target customers (Jiménez-Zarco *et al.*, 2011; Narver *et al.*, 2004). These three dimensions emphasize proactive and responsive MO to customers (González-Benito *et al.*, 2009; Narver *et al.*, 2004), and will initiate efforts within organization, reflect in strategies, organization behavior and performance (Roach *et al.*, 2014). Although MARKOR and MKTOR dimensions are distinct constructs, however, these concepts have provided a comprehensive conceptualization of MO instruments to assess MO for a variety of industries. Both these concepts (MARKOR and MKTOR) are related to the same logic that customers remain the significant element of the MO philosophy (Demirbag *et al.*, 2006; Eggers *et al.*, 2013; Gaur *et al.*, 2011; Jiménez-Zarco *et al.*, 2011). For example, Deshpande and Farley (1999) and Samat *et al.* (2006) highlight that MO is identical to customer orientation and similar to the marketing concept where customers have been

considered as the main focus of MO (Chao and Spillan, 2010; Payne, 1988). In this study, MO dimension from Narver and Slater (1990) is used which has received the greatest attention of academics in the past few decades.

Previous studies have identified the effect of MO on business performance (Baker and Sinkula, 1999; Boso *et al.*, 2013; Chen *et al.*, 2015; Cheng and Krumwiede, 2012; Jaworski and Kohli, 1993; Lam *et al.*, 2012; Matsuno *et al.*, 2002; Merlo and Auh, 2009; Morgan *et al.*, 2009; Narver and Slater, 1990; Samat *et al.*, 2006). For example, Gaur *et al.* (2011) conducted a survey on SMEs' performance in India and found that three dimensions of MO (Narver and Slater, 1990) have a significant relationship with SMEs' performance. For this reason, Baker and Sinkula (2009) explain that firms with solid MOs should be able to generate higher profit margins than firms with weaker MOs. In addition, Li *et al.* (2008) highlight that MO has a significant relationship with SMEs' performance and shows that such orientation of the small firms can drive them to serve customer needs and achieve higher performance. Additionally, Zhang *et al.* (2015) studied MO on SMEs and large manufacturing exporters in China, and found that there was no significant difference in the effect of MO for both firms. In addition, Lin *et al.* (2008) suggest that market-oriented firms, which aim at sustaining their competitive advantages, enhance organizational learning and execute innovation strategies to significantly improve firm performance. Although the implication of MO has been established in market-based economies in which majority of theories are developed and tested, empirical evidence in SMEs are limited to draw definitive conclusions. Therefore, the following preposition is presented:

H3. Market orientation has a significant relationship with SMEs' performance

3. Research methodology

3.1 Data collection method

The survey of this study was conducted based on a listed questionnaire adopted from previous studies done in the field of EO and MO. Questionnaires were sent by post and addressed to the SMEs listed on the SME Business Directory. The envelope contained a set of questionnaire and a return envelope was attached. The return envelope had the address of a researcher with affixed postage stamps to facilitate the respondents to return the filled-up questionnaires. It was also mentioned on the questionnaire that was supposed to be answered by the managerial level or higher rank of the SMEs as a control measure, because they are generally believed to provide accurate information regarding the business of SMEs. To make sure that the questionnaires was filled out by them, a company stamp and signature was requested on the questionnaire form.

3.2 Sampling technique

A judgmental sampling technique was used in this study. Judgment sampling comprises the selection of subjects who are most favorably placed or in the best position to provide the required information (Sekaran, 2006). To use judgmental sampling, a list of SMEs in Malaysia was gathered from Malaysia SME Business Directory (Malaysia SME, 2010). From the total estimated number of 19,110 SMEs in the directory, the selection was made for the foods and beverages industry with an estimated total number of 1,761 companies. Out of the total listing for foods and beverages industry from the SME business directory, SMEs were shortlisted to finalize the total sampling of 500 companies. Shortlisting of judgmental sampling was based on prior discussions and

advice from personnel in charge of SME development in various organizations, namely, SME Corporation, Malaysia SME and Federal Agriculture and Marketing Agency.

3.3 Target respondents and sample size

The population or sampling unit in this study was the managerial level or higher rank of SMEs in the manufacturing industry of food and beverages. This group of respondent was expected to meet the requirements of the study by providing a valid and accurate view of their company. For the purpose of this research, data collection was conducted in all the states of Peninsular Malaysia including the northern, central, southern and eastern regions. Sabah and Sarawak were excluded in the survey, as it would increase the delivery cost of questionnaire and will take more time for data collection.

All categories under definition of SMEs including micro company, small company and medium company in manufacturing industry are included for the purpose of this research. The total number SMEs in the sub-sector of food and beverages industry as listed in the SME Business Directory is estimated at 1,761 companies. A total of 500 questionnaires were distributed to SMEs.

3.4 Questionnaire development

The questionnaire consists of two parts. The first part consists of 25 items of EO, MO and SMEs' business performance. The second part of the questionnaires includes the demographic section related to respondents' background of company consisting of seven items.

A seven-point Likert scale was used to measure the three categories of structures, namely, EO, MO and SMEs' business performance. For EO and MO, the scales ranged from "1" strongly disagree to "7" strongly agree. Meanwhile, for SMEs' performance, the scales ranged from "1" much worse to "7" much better. The seven-point Likert scale is a valid and appropriate measurement, as many previous researches have used the seven scales to measure the EO, MO and SMEs' performance (Lin *et al.*, 2008; Matsuno *et al.*, 2002; Merlo and Auh, 2009). In this study, the EO dimension (innovativeness, proactiveness and risk-taking) was measured by adapting indicators suggested by Knight (1997), Lumpkin and Dess (1996), and Merlo and Auh (2009). MO dimensions (customer orientation, competitor orientation and interfunctional coordination) were adapted from Narver and Slater (1990). Meanwhile, SMEs' performance indicators were adapted from Knight (1997), Lin *et al.* (2008) Merlo and Auh (2009) and Wiklund and Shepherd (2005).

3.5 Respondent profile

Respondents in this study consist of middle- to upper-managerial executives in SMEs. Total questionnaires distributed were 500, and 117 were valid to be used, which is a 21.3 per cent response rate. All respondent represented the food and beverages industry. Table I shows the company profile of the respondents.

3.6 Descriptive statistics

Descriptive statistic was used to provide an overview of the respondents' company background. The average scores for EO, MO and SME performance are 4.877, 5.189 and 3.658, respectively.

NBRI 7,1			Frequency	(%)
	Industry	Food and beverage	117	100
46	Number of staff	1 to 4	3	2.6
		5 to 49	108	92.3
		50 to 199	6	5.1
	Marketing manager report directly to CEO (or equivalent position)	Yes	107	91.5
		No	10	8.5
	Formal background of CEO (or equivalent position)	Finance/accounting	23	19.7
		Marketing	56	47.9
		Sales	17	14.5
		Operations	8	6.8
		Production/manufacturing	12	10.3
		Human resources	1	0.9
		Highest level with background in marketing	Frontline level	1
	Middle management level		22	18.8
	Senior management level		70	59.8
Board level	23		19.7	
Demographic profile of respondents	None	1	0.9	
	Total		117	100

Table I.
Demographic profile of respondents

4. Data analysis

To test the model developed, we used the partial least squares (PLS) approach. PLS is a second-generation multivariate technique (Hair *et al.*, 2012) which can simultaneously evaluate the measurement model (the relationships between constructs and their corresponding indicators) and the structural model with the aim of minimizing the error variance (Hair *et al.*, 2013). Smart PLS M2 Version 2.0 (Ringle *et al.*, 2005) was used to analyze the data. Also following the suggestions of Hair *et al.* (2013), we used the bootstrapping method (500 resamples) to determine the significance levels for loadings, weights and path coefficients.

Common method variance needs to be examined when data are collected via self-reported questionnaires, and, in particular, both the predictor and criterion variables are obtained from the same person (Podsakoff *et al.*, 2003). Podsakoff and Todor (1985, p. 65) also noted that: "Invariably, when self-reported measures obtained from the same sample are utilized in research, concerns over same-source bias or general method variance arise". There are several remedies to this issue suggested in the literature. One of the common methods used to detect this issue is the Harman's single factor test. This is done by entering all the principal constructs into a principal component factor analysis (Podsakoff and Organ, 1986). Evidence method bias exists when a single factor emerges from the factor analysis, or one general factor accounts for the majority of the covariance among the measures (Podsakoff *et al.*, 2003). In our analysis, the results returned a six-factor solution, with a total variance explained of 79.962 per cent and the first factor only explained 38.46 per cent which confirms that common method bias is not a serious problem in this research.

4.1 Measurement model

Convergent validity is the degree to which multiple items to measure the same concept are in agreement. As suggested by Hair *et al.* (2010, 2013) we used the factor loadings,

composite reliability (CR) and average variance extracted (AVE) to assess convergent validity. The recommended values for loadings are set at > 0.5 , the AVE should be > 0.5 and the CR should be > 0.7 . From Figure 1, it can be seen that we have conceptualized EO and MO as second-order constructs. Thus, we followed the method suggested in the literature in PLS which is the repeated indicator approach to model the second-order factors in the PLS analysis. Table II shows that the results of the measurement model exceeded the recommended values, thus indicating sufficient convergence validity (Figure 2).

After confirming the convergent validity, we proceeded to assess the discriminant validity using the Fornell and Larcker (1981) method. Discriminant validity is the degree to which items differentiate among constructs or measure distinct concepts. The criterion used to assess this is by comparing the AVE with the squared correlations or the square root of the AVE with correlations. As shown in Table III, we have used the second method which is to compare the square root of the AVE with the correlations. The criteria is that if the square root of the AVE, shown in the diagonals, is greater than the values in the row and columns on that particular construct, then we can conclude that the measures are discriminant. From Table III, it can be seen that the values in the diagonals are greater than the values in their respective row and column, thus indicating that the measures used in this study are distinct, demonstrating adequate discriminant validity.

4.2 Structural equation modeling – partial least squares

To evaluate the structural models' predictive power, we calculated the R^2 . R^2 indicates the amount of variance explained by the exogenous variables (Barclay et al., 1995). All three variables together explained 69.3 per cent of the variance. Using a bootstrapping technique with a re-sampling of 500, the path estimates and t -statistics were calculated for the hypothesized relationships.

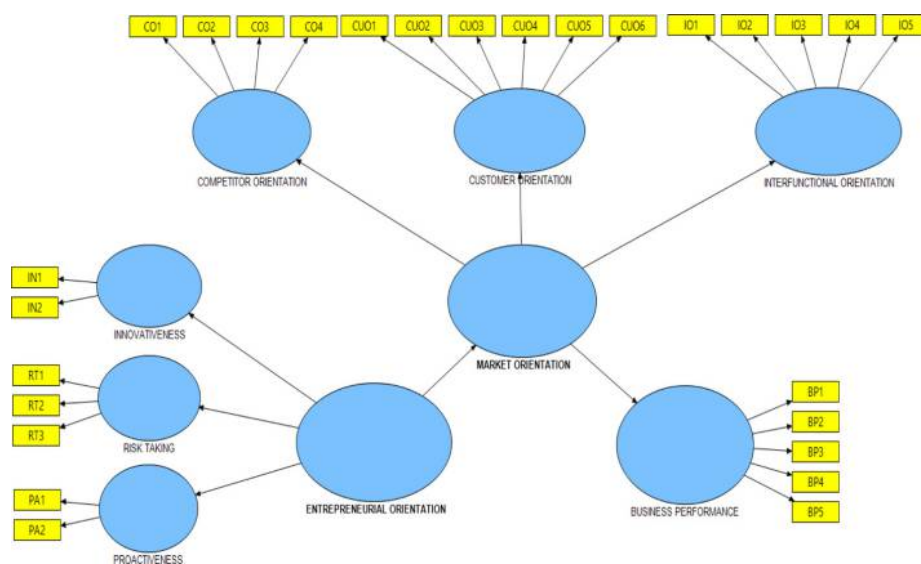


Figure 1.
The research model

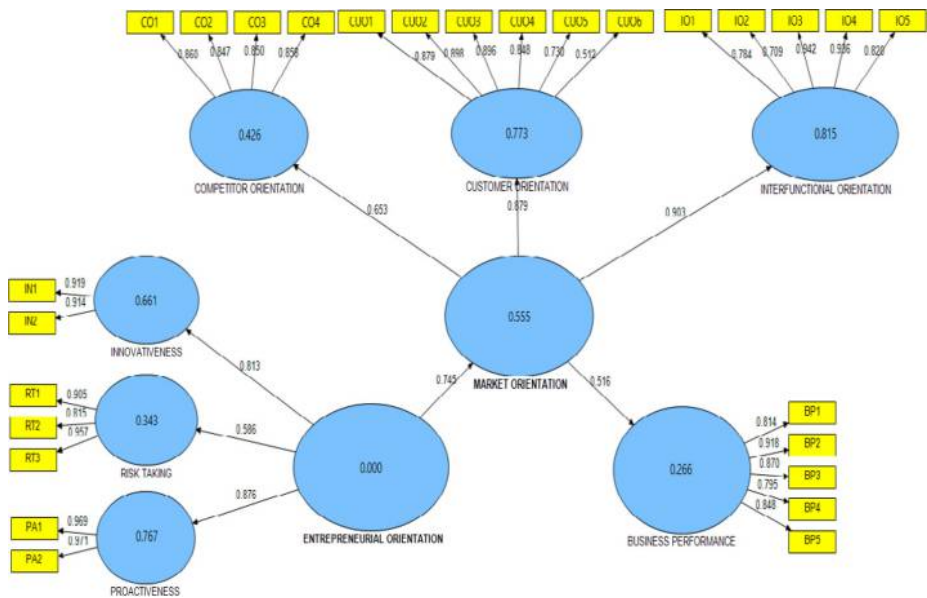


Figure 2.
The PLS algorithm
results

Table IV shows the structural model analysis. From the analysis, it was found that EO ($\beta = 0.745, p < 0.01$) was positively related to MO. MO ($\beta = 0.516, p < 0.01$) was positively related to SMEs' performance. Next, we tested the mediating effect of MO in the EO-to-MO relationship. We used the bootstrapping procedure which has been suggested in the literature to test the indirect effect, and the results show that the indirect effect ($\beta = 0.384, p < 0.01$) was significant, indicating that there was a mediating effect. As suggested by Hair *et al.* (2013), we calculated the variance accounted for (VAF). The VAF determines the size of the indirect effect in relation to the total effect (i.e. direct effect + indirect effect): $VAF = \text{indirect effect} / \text{total effect}$. We calculated the VAF for this study, and it was 0.71, which is classified as partial mediation (Hair *et al.*, 2013).

5. Conclusions and managerial implication

The objective of this study is to examine the effect of MO as a mediating variable in the relationship between EO and SMEs' performance. The results of this study found that EO has a significant relationship with MO; thus, *H1* was supported. The significant relationship between EO and MO shows that SMEs in Malaysia are using the characteristics of EO as proactiveness, risk-taking and innovativeness in meeting the purposes of MO. This finding is consistent with the market knowledge standpoint that organizations with more collaboration and EOs have greater market information and indications to explore new market opportunities will perform better (Atuahene-Gima, 2005; Chen *et al.*, 2012; Fernández-Mesa and Alegre, 2015). For this reason, SMEs need to enhance the EO at various levels of human resource. For example, proactive SMEs will achieve their targets in premium segments, move faster to maintain advantage, capitalize a market opportunity for higher returns and be a leader in performance

First-order constructs	Second-order construct	Item	Loadings	AVE	CR	Effect of market orientation
Innovativeness		IN1	0.919	0.839	0.913	49
		IN2	0.914			
Proactiveness		PA1	0.969	0.941	0.970	
		PA2	0.971			
Risk-taking		RT1	0.905	0.800	0.923	
		RT2	0.815			
		RT3	0.957			
	<i>Entrepreneurial orientation</i>	Innovativeness	0.813	0.591	0.808	
		Pro-activeness	0.586			
		Risk-taking	0.876			
Competitor orientation		CO1	0.860	0.729	0.915	
		CO2	0.847			
		CO3	0.850			
		CO4	0.858			
Customer orientation		CUO1	0.879	0.650	0.915	
		CUO2	0.898			
		CUO3	0.896			
		CUO4	0.848			
		CUO5	0.730			
		CUO6	0.512			
Inter-functional orientation		IO1	0.784	0.711	0.924	
		IO2	0.709			
		IO3	0.942			
		IO4	0.936			
		IO5	0.820			
	<i>Market orientation</i>	Competitor orientation	0.653	0.671	0.857	
		Customer orientation	0.879			
		Inter-functional orientation	0.903			
SMEs' Performance		BP1	0.814	0.722	0.928	
		BP2	0.918			
		BP3	0.870			
		BP4	0.795			
		BP5	0.848			

Notes: AVE = average variance extracted; CR = composite reliability

Table II.
Measurement model

Constructs	1	2	3
1. SMEs performance	0.850		
2. EO	0.303	0.769	
3. MO	0.516	0.745	0.819

Note: Diagonals represent the square root of the AVE, while the off-diagonals represent the correlations

Table III.
Discriminant validity

(Brettel and Rottenberger, 2013; Cardoza and Fornes, 2011; Chen *et al.*, 2012; Gaur *et al.*, 2011). Consequently, Morgan *et al.* (2009) posit that proactive SMEs achieve better performance because they have a greater understanding of customer needs and wants, and a broader market environment than their competitors (Hult *et al.*, 2004; Jaworski and Kohli, 1993; Khalili *et al.*, 2013; Knight and Cavusgil, 2004; Kraus *et al.*, 2012; Kreiser *et al.*, 2013; Lin *et al.*, 2008). However, SMEs have to be intelligent in assessing the potential risks taken. For example, Franco and Haase (2013) describe risk-taking as an important dimension of EO. It embraces risk acceptance in terms of investment and strategic decisions, even if the outcomes of these actions are uncertain (Das and Joshi, 2007). Additionally, Aragón-Sánchez and Sánchez-Marin (2005) suggest that if small firms invest heavily in high-risk projects, they may not be able to sustain these risky projects long enough to see the fruition of their investment, and their performance may drop (Li *et al.*, 2008; Wiklund and Shepherd, 2005). SMEs are, therefore, advised to calculate risk, and, if possible, delay the high-risk projects and services to gain better business performance (Amin, 2015; Kraus *et al.*, 2011; Kraus *et al.*, 2012). In addition, Rhee *et al.* (2010) found that innovativeness plays an important role in enhancing firm performance, and the innovative mindset of managers significantly impacts SMEs' performance. In this context, the success of innovative SMEs has been related with different characteristics of performance, such as cash flows and profitability, and increasing the likelihood of existence (Amin, 2015; Boso *et al.*, 2013; Engelen *et al.*, 2014; Lumpkin and Dess, 1996). Characteristics of EO will be able to trigger MO effectively. For example, Keh *et al.* (2007) conducted a survey on SMEs in Singapore and found that, ultimately, actively innovative SMEs with a tendency to take advantage of new opportunities will improve their performance. Similarly, Avlonitis and Salavou (2007) highlight that more innovative SMEs in Greece have a significantly better performance. Consequently, Chen *et al.* (2012) and Franco and Haase (2013) indicate that firms with innovative capacity and collective capability are likely to promote collaborative entrepreneurship and better performance. For this reason, top managers of SMEs are advised to focus more on improvements in innovativeness, with specific emphasis on MO practice to increase SMEs' performance.

The relationship between MO and SMEs' performance was significant, and H2 was supported. This finding is consistent with the previous studies which found that MO has enhanced business performance (Baker and Sinkula, 1999; Boso *et al.*, 2013; Chen *et al.*, 2015; Cheng and Krumwiede, 2012; González-Benito *et al.*, 2009; Jaworski and Kohli, 1993; Lam *et al.*, 2012; Matsuno *et al.*, 2002; Merlo and Auh, 2009;

Hypothesis	Beta	SE	t-value	Decision
<i>H1</i> EO -> MO	0.745	0.047	15.817**	Supported
<i>H2</i> MO -> SMEs performance	0.516	0.065	7.972**	Supported
<i>H3</i> EO -> MO-> SMEs performance	0.384	0.055	7.043**	Supported

Table IV.
Hypothesis testing

Notes: ** $p < 0.01$; * $p < 0.05$

Morgan *et al.*, 2009; Narver and Slater, 1990; Samat *et al.*, 2006). For example, Morgan *et al.* (2009) explained that MO is a complimentary asset that contributes to superior firm performance. Additionally, Chen and Hsu (2013) indicate that an EO is likely to increase firm performance when the level of MO is high; therefore, market intelligence plays an important role for firms to enter an international market. In this situation, SMEs need to understand the concept of MO that can provide performance benefits to the SMEs. SMEs need to put priority on the strategic planning. External environmental assessment in the strategic planning can help SMEs in identifying the competitor orientation of the respective industry. Thus, it would be easier for the SMEs to utilize existing capabilities and opportunities to respond to the threat of competing companies. As suggested by Kohli and Jaworski (1990) that MO will significantly increase superior customer value and helps SMEs to develop better products and services rather competitors. To better meet the market needs, encouragement should be given to all functions in a company to assist other departments. Information-sharing session on a competitor's strategy should be considered as an agenda in management meetings of respective departments to better identify on how each department could take suitable action to respond. SMEs have the potential to implement interfunctional orientation in a better way because the number of the employees is relatively small and the firm is less bureaucratic than the larger firms. For this purpose, the management must have the initiative to provide on-going training, learning by doing, mentoring and awareness across the company.

Meanwhile, MO will mediate the relationship between EO and SMEs' performance, and *H3* was supported. This study shows the indirect effect of EO on SMEs' performance partially mediated by MO and emphasizes the significance of EO in the achievement of the SMEs' performance. The finding of this study is consistent with Baker and Sinkula (2009), Gaur *et al.* (2011), Jaworski and Kohli (1993), Merlo and Auh (2009), Narver and Slater (1990) and Narver *et al.* (2004), and explained that MO plays a mediating role in the relationship between EO and SMEs' performance. For example, Matsuno *et al.* (2002) reveal that MO wholly mediates the relationship between entrepreneurship orientation and business performance, and, for firms that already retain a high EO, it is highly advisable to promote an MO while sustaining their level of entrepreneurial proclivity. For this reason, Baker and Sinkula (2009) suggest that strong EO and MO are essentials for SMEs' performance to aggressively pursue new market opportunities regardless of the behavior of competing firms. As a result, the higher is the EO implemented in a business, the more willing a company is to implement MO. This analysis shows that highly entrepreneurial firms tend to be highly market orientated and affects SMEs' performance. On the other hand, the results of this study show that the characteristic of entrepreneurial and MO practiced by SMEs in Malaysia has significantly affected the SMEs' performance. It indicates that EO offers a holistic and systematic model for supporting SMEs to build a well-maintained environment of MO and SMEs performance. As a result, MO characteristics include interfunctional orientation of departments within a company in meeting the market needs and also the ability to understand competitor orientation in an atmosphere of commercial competition, which is essential for SMEs to enhance SMEs' performance.

6. Limitation and future research

Although the empirical findings of this study contribute to the existing literature, the result of the study cannot be generalized. Future studies should adopt the proposed research model among different type of SMEs to generalize the findings. Finally, the managerial level of SMEs should be considered as a control variable to develop the findings more precisely with the mediating role of learning orientation and company size as the moderating variable.

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