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# The Role of Knowledge Management as a Mediator between Entrepreneurial Orientation and SME Performance

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## Abstract

This study aims to determine the relationship between entrepreneurial orientation dimensions consist of innovativeness, pro-activeness, risk taking and SME performance. The study also seeks to determine whether knowledge management play a role as a mediator between entrepreneurial orientation and SME performance. The sample were 368 managers/owners of SMEs. Questionnaires adapted from previous research were used to measure the entrepreneurial orientation, knowledge management and SME performance. SEM-PLS 3.0 were employed in this study. The findings revealed innovativeness, pro-activeness, risk taking has significant influence on SME performance. Moreover the study also indicates that knowledge management play role as a mediator entrepreneurial orientation and SME performance.

**Keywords:** Entrepreneurial orientation, knowledge management, SME performance

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## 1. INTRODUCTION

Small Medium Enterprises (SMEs) play a key role in the evolution and development of a country. Since they are limitless in numbers, size and nature of operations, these enterprises promote economic growth by strengthening the infrastructure, generate employment for rural and urban labor force and provide desirable sustainability and innovation in both the developing as well as in developed countries (Love & Roper, 2013; Wong & Aspinwall, 2004; Wiklund & Shepherd, 2005). SMEs continue to be the backbone of industrial development in Malaysia and play a vital role in this country's economy (Saleh, Caputi & Harvie, 2006; Radam, Abu & Abdullah, 2008). However, Malaysian SMEs are still losing their competitive advantage in the global business environment due to their low productivity and poor performance (Tehseen, Sajilan, Ramayah, & Gadar, 2015). Furthermore, Malaysian SMEs are found to provide a lower contribution to the nation's GDP and exports as compared to SMEs of many neighboring nations such as Japan, South Korea, and Singapore (Halim, Ahmad, & Ramayah, 2013). Hence SMEs need to be more competitive and need a virtuous approaches in managing their business. Fatoki (2012) suggested that entrepreneurial orientation could be vitally important entrepreneurial approach for business success. Jabeen and Mahmmod (2014) revealed that firms who adopt entrepreneurial orientation can frequently innovate and are willing to take risks in their strategies that ultimately leads them to superior performance. Besides that, Knowledge management also a key factor in the competitive business market in order to warrant firms' sustainability and enhances firms' performance. Increasingly, knowledge is believed to be an essential weapon for accomplishing success for the firms (Lee & Choi, 2003). Knowledge is a valuable company's resource that contribute to competitive advantage and can increase growth performance (Abdul Rahman & Wang, 2010).

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Therefore it is interesting to study the relationship between entrepreneurial orientation and mediating effect of knowledge management and SME performance.

## **2. LITERATURE REVIEW**

### **2.1 Entrepreneurial Orientation and SME Performance**

The importance of entrepreneurial orientation towards business performance has been widely acknowledged in the previous study. Park and Lee (2010) define entrepreneurial orientation as an entrepreneurial attitude that fundamentally involves alertness to discoveries and seizing opportunities ability. According to Covin and Slevin (1991) entrepreneurial orientation is comprised of proactiveness, innovativeness and risk taking. The significance of entrepreneurial orientation to the persistence and performance of firms has been acknowledged in the entrepreneurship literature Huang, Wang, Tseng, & Wang. (2010). Past studies have revealed that positive relationship exists between entrepreneurial orientation and high performance. Pratono, Wee, Syahchari, Tyaz Nugraha, Nik Mat and Fitri (2013) who used samples of SMEs from Malaysia and Indonesia found positive correlation between entrepreneurial and firm performance. Fairoz, Hirobumi and Tanaka (2010) confirm positive relationships between proactiveness and entrepreneurial orientation with business performance. They also found that the dimensions of entrepreneurial orientation; pro-activeness, innovativeness, and risk taking are positively associated with market share growth. Jia, Wang, Zhao and Yu (2013) found entrepreneurial orientation improves performance and that the positive influence came mainly through dimensions which are innovation and antecedence. Entrepreneurial orientation, innovation capability and knowledge creation have a positive impact on firm performance (Omar, Aris & Nazri, 2016). In others study, Innovativeness and pro-activeness have significant correlation with customer performance, while competitive aggressiveness has significant relationship with both product and customer performance. Based on Wang & Yen, (2012) all the entrepreneurial orientation dimensions positively related to firm performance Taiwanese SMEs in China However, Idowu (2013) did not find any relationship between innovativeness and firms' performance in Nigeria. Ambad and Wahab (2013) also did not find any relationship between proactiveness and firms' performance, and concluded that proactiveness is not a significant predictor of firm performance among large firms in Malaysia. Moreover, Ambad and Wahab, (2013), Boohene et al., (2012) found a positive relationship between risk-taking and business performance. However, Nwugballa, Elom and Onyelyugbe, (2016) revealed risk-taking and autonomy had no significant correlation with any of the performance measures, suggesting they are not relevant to MSMEs in the Ebonyi State, Nigeria. Therefore with the mix finding regard to entrepreneurial orientation dimension, here leads to the following hypotheses:

H1: Innovativeness has a significant influence on SME performance.

H2: Pro-activeness has a significant influence on SME performance.

H3: Risk taking has a significant influence on SME performance

### **2.2 Knowledge Management as a Mediator**

Rasula, Vuksic and Stemberger (2012) defined knowledge management as a process that through creating, accumulating, organizing and utilizing knowledge helps to achieve objectives and enhance organizational performance. Many researchers agreed that there is a relationship between knowledge management and organizational performance (Darroch 2005; Gosh & Scott, 2007; Lee & Sukoco, 2007). According to Tidd and Bessant (2015), innovation involves managing knowledge flows and mobilizing multiple source of knowledge. Omar, Aris and Nazri (2016) found that innovation capability is positively related to knowledge creation, but entrepreneurial orientation does not have a significant impact on knowledge creation. Javed (2012), revealed KM as a mediator between organizational culture, organizational learning and employee satisfaction at IT Project Organization of Pakistan. Moreover, Pour (2015) found knowledge management is not enough strong that acts as mediator variable between Intellectual Capital and Social Capital at High School Female Teachers in Iran. Nonetheless there is still a rare of studies that examine the knowledge management as a mediator in SME performance, thus the following hypothesis

H4: Knowledge management mediates the relationship between innovativeness and SME performance.

H5: Knowledge management mediates the relationship between pro-activeness and SME performance

H6: Knowledge management mediates the relationship between risk taking and SME performance.

## **3. METHODOLOGY**

In order to examine the influence of entrepreneurial dimension (innovativeness, pro-activeness and risk taking) and SME performance, A total of 1920 owner/managers SMEs were randomly selected from the SME Corp Malaysia and sent with the questionnaires. Owner/managers were targeted because they are the key informants of

the business and usually they are involved in the overall running of the firms. 368 responses were returned and found useable for the final analysis using the structural equation model partial least square (SEM-PLS). The entrepreneurial orientation measure used in this study was comprised of the initial dimensions developed by Miller (1983) (innovativeness, pro-activeness and risk taking). The measurement of these dimensions was adapted from Covin & Slevin (1989) and Wang (2008). Meanwhile knowledge management was adapted from previous studies by Rasula et al., (2012) in term of SME performance, the questionnaire was adapted from Wiklund (1999) who suggested that performance measures should include growth and financial performance. All items for entrepreneurial orientation, knowledge management and SME performance were measured on five-point Likert scales ranged from 1=Strongly Disagree to 5=Strongly Agree.

#### 4. FINDINGS

Table 1. Construct validity and reliability

Constructs	Items	Loadings	AVE	CR
SME Performance	FP1	0.684	0.609	0.925
	FP2	0.723		
	FP3	0.793		
	FP4	0.768		
	FP5	0.805		
	FP6	0.797		
	FP7	0.808		
	FP8	0.850		
Knowledge Management	KM1	0.830	0.644	0.942
	KM2	0.818		
	KM3	0.775		
	KM4	0.773		
	KM5	0.785		
	KM6	0.770		
	KM7	0.784		
	KM8	0.842		
	KM9	0.840		
Innovativeness	inno1	0.758	0.630	0.836
	inno2	0.867		
	inno3	0.752		
Pro-activeness	proac1	0.834	0.715	0.883
	proc2	0.885		
	proc3	0.816		
Risk taking	risk1	0.898	0.830	0.936
	risk2	0.925		
	risk3	0.910		

AVE: Average Variance extracted; CR: Composite Reliability

Hair, Ringle and Sarstedt (2011) claimed the quality of the measurement model was assessed by examining convergent validity includes factor loading, average variance extracted (AVE) and composite reliability (CR). The above table shown that, results show that indicator loadings for all items exceeded the recommended value of 0.5 (Hair, Black, Babin & Anderson, 2009). AVE were in the range of 0.609 to 0.830, which is above the recommended value of 0.5, and CR ranged from 0.836 to 0.942 which exceeded recommended value of 0.7 (Hair et al., 2009).

Table 2. Discriminant validity

	SMEP	Inno	KM	Pro	Risk
SME Performance (SMEP)	0.780				
Innovativeness (Inno)	0.635	0.794			
Knowledge management(KM)	0.712	0.707	0.802		
Pro-activeness(Pro)	0.653	0.630	0.739	0.846	
Risk taking(risk)	0.695	0.658	0.769	0.678	0.911

The utmost common method of validating the discriminant validity as suggested by Hair et al. (2010) and Fornell and Larcker (1981) the square root of the average variance extracted (AVE) for each construct is greater than the correlation between the constructs. The above table indicate that there is adequate discriminant validity since the diagonal elements are significantly greater than the off-diagonal elements in the corresponding rows and columns.

Table 3. Heterotrait-monotrait ratio

	SMEP	Inno	KM	Pro	Risk
SME Performance (SMEP)					
Innovativeness (Inno)	0.792				
Knowledge management(KM)	0.766	0.870			
Pro-activeness(Pro)	0.764	0.833	0.856		
Risk taking(risk)	0.759	0.831	0.839	0.800	

However, Fornell and Larcker (1981) was recently criticized by Henseler et al. (2015), that in most cases the above methods fails to fully scrutinize and validate the issue of discriminant validity. They, however, suggested the multitrait-multimethod matrix, to assess discriminant validity, the heterotrait-monotrait (HTMT) ratio of correlations as a more rigorous method of achieving discriminant validity. HTMT as a criterion involves comparing it to a predefined threshold. Clark and Watson, (1995), Kline (2011), suggest a threshold of 0.85, whereas Gold, Malhotra and Segars, (2011) propose a value of 0.90 can be claimed that there is a lack of discriminant validity. Hence, the result show that discriminant validity is fulfilled the threshold (Table 3)

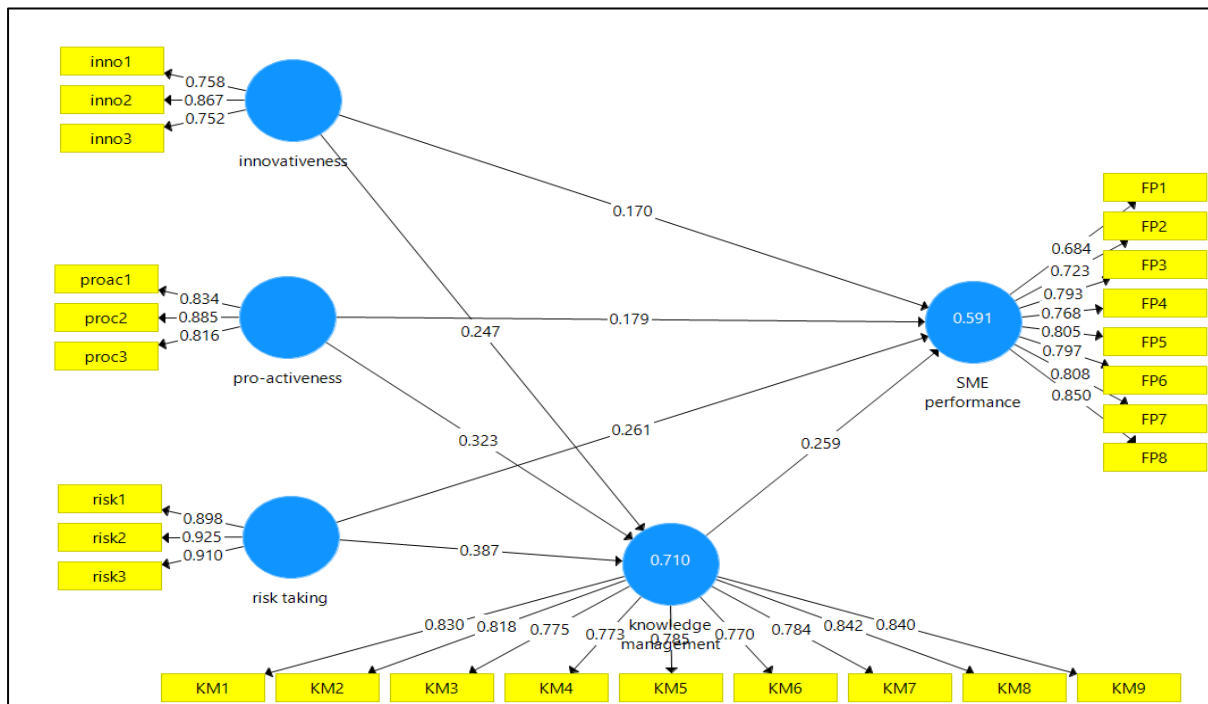


Figure 1: Structural Model

#### 4.1 Hypotheses

Path analysis was performed to evaluate the structural model. Based on Hair et al; (2011), the primary evaluation criteria for structural model are R<sup>2</sup> values and the level of significance of the path coefficients. Based on Cohen (1988) for a good model, the value of R<sup>2</sup> of endogenous latent variable should be more than 0.26. According to figure 1, the R<sup>2</sup> was found 0.591, indicating that entrepreneurial orientation dimension consists of innovativeness, pro-activeness and risk taking can account for 59.1% percent of the variance in SME performance, which represent a substantial range.

Table 4. Result of direct relationship

Hypothesis	beta	SE	t value	P values	Result
H1: Innovativeness –SME performance	0.170	0.051	3.397	0.001	Supported
H2: Pro-activeness - SME performance	0.179	0.052	3.288	0.001	Supported
H3: Risk taking- SME performance	0.261	0.050	5.087	0.000	Supported

For H1, H2 and H3 which stated entrepreneurial orientation (innovativeness, pro activeness and risk taking) has a significant influence on SME performance, the result indicates that innovativeness ( $\beta = 0.170$ ,  $t\text{-values}=3.397$ ), pro-activeness ( $\beta = 0.179$ ,  $t\text{-values}=3.288$ ) and risk taking ( $\beta = 0.261$ ,  $t\text{-values}=5.087$ ) has a significant relationship found between SME performance. Hence H1, H2 and H3 were supported (see table1)

Table 5. Results of mediating effects

Hypothesis	beta	t value	P values	LL	UL	Result
H4: Innovativeness –KM- SME performance	0.064	2.833	0.000	0.025	0.114	Supported
H5: Pro-activeness –KM- SME performance	0.084	3.060	0.000	0.030	0.130	Supported
H6: Risk taking – KM-SME performance	0.100	3.632	0.000	0.047	0.154	Supported

Furthermore, the above table shows result of an indirect effect between entrepreneurial orientation and SME performance. The result revealed knowledge management play role as a mediator between innovativeness ( $\beta = 0.064$ ,  $t$ -values=2.833), pro-activeness ( $\beta = 0.084$ ,  $t$ -values=3.060) and risk taking ( $\beta = 0.100$ ,  $t$ -values=0.154) Thus, the study can conclude that knowledge management mediate the relationship between entrepreneurial orientation (innovativeness, pro activeness and risk taking) and SME performance. Hence, H4, H5, H6 were supported. This result also supported with the values of Boot CI: [LL, UL ] straddle a 0 in between indicating that knowledge management is a mediator entrepreneurial orientation (innovativeness, pro activeness and risk taking) and SME performance.

## 5. CONCLUSION AND FUTURE RESEARCH

The findings of this study confirm that significant relationship exists between entrepreneurial orientation comprised of innovativeness, pro activeness and risk taking and SME performance. These findings also highlight the importance of increasing entrepreneurial orientation among the owner/managers of SMEs. Consequently SMEs need to be innovative, proactive and risk taking to enable them to survive and for the growth of the company as well as contribute to Malaysian economic growth. This study also indicates that knowledge management also can enhance SME performance. Particularly, focusing entrepreneurial orientation and knowledge management as a mediator in the SMEs is vital as it employs a significant influence on SME performance. As a result these finding indicate that it may be helpful for SMEs firms to place concern more on entrepreneurial orientation and knowledge management in achieving their above average performance.

However, this study has several limitations that need to be addressed by future research. It would also be interesting to study and compare the approaches made by these other regions and the results could be generalized to all SMEs in Malaysia. As a result, in order to gain further insights into the dynamic nature of SME performance, an interview technique with owners and employees can employ for next study.

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