MEDIATING ROLE OF STRATEGIC INNOVATIVENESS ON ENTERPRISES IN AN EMERGING MARKET

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ABSTRACT

Enterprises that exhibit strategic innovativeness have a potential competitive advantage over their competitors. Therefore, it is important to understand the role of strategic innovativeness on enterprises. This study investigated the interplay of human capital, strategic innovativeness and performance. Based on responses of 115 micro, small and medium enterprises (MSMEs) in Malaysia, this study examined the mediating role of strategic innovativeness on the relationship between human capital and performance of Malaysian MSMEs. Confirmatory factor analysis was conducted using partial least squares (PLS) approach. Subsequently, the mediating analysis was conducted using the PROCESS macro. Empirical evidence analyzed in this study suggests that strategic innovativeness mediates the relationship between human capital and performance of MSMEs in Malaysia. This study provides new evidence in the important area of innovativeness of Malaysian micro, small and medium enterprises.

Keywords: *Innovation; performance; strategic innovativeness; human capital; emerging market*

1. INTRODUCTION

Globally, innovations and micro, small and medium enterprises (MSMEs) have been the catalyst for economic prosperity. There has been a growing recognition amongst Malaysian policy-makers of the importance of innovation to the competitiveness of national economies. Malaysian MSMEs are the main support for growth especially in realizing the dream of achieving the developed nation status by the year 2020 (Hilmi, Ramayah, & Mustapha 2011).

Innovation is vital for businesses (Mohd Bukhari & Hilmi, 2012) as innovative businesses outdo less innovative businesses on almost all key business indices (Abdullah & Chik, 2002). Generally, innovativeness is defined as "new products, new services, opening new markets, new sources of supply,

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and new ways of management practice" (Mohd Bukhari & Hilmi, 2012) or firm's overall innovative ability of bringing new product to the market, or setting up new markets, linking strategic orientation, innovative behavior and innovative process (Wang & Ahmed, 2004).

Specifically, strategic innovativeness is "... the development of new competitive strategies that create value for the firm..." (Mohd Bukhari & Hilmi, 2011, p. 275). Strategic innovativeness serves as value creation for the organization through the development of novel competitive strategies. MSMEs provide important contribution to economic growth and employment opportunity (Hilmi, 2012). Enterprises realizes the need to appropriately utilize its resource in achieving its business objective and superior performance. However, not many of them are successful in achieving superior performance. Ability to effectively manage innovation is one of the main competencies of MSMEs functioning in today's competitive economy (Bigliardi, Colacino, & Dormio, 2011; Sawang & Unsworth, 2006). But MSMEs are not successful in incorporating innovation as part of their strategies (Hilmi & Ramayah, 2008).

The objective of this study is to investigate the interplay of human capital, strategic innovativeness and performance. Specifically, the objective is to examine the mediating role of strategic innovativeness on the relationship between human capital and performance of Malaysian MSMEs.

2. HYPOTHESES DEVELOPMENT

Innovative firm are more efficient in developing new capabilities and in responding to varying environment. Definitely, MSMEs are capable to achieve superior performance by acquiring innovative capabilities. Most of the previous studies that dealt with innovativeness in MSMEs failed to link the antecedents and effects of innovation activities. Furthermore, broader definition of innovation should include not only improvements in technology but also better approaches or methods of doings things (Lumiste, Lumiste, & Kilvits, 2004). Even though the significance of innovative MSMEs is clearly understood, its role as mediator is still vague. The objective of this study is to investigate the interplay of human capital, strategic innovativeness and performance. Specifically, this study examined the mediating role of strategic innovativeness on the relationship between human capital and performance of Malaysian small and medium enterprises.

MSMEs utilize its resources in developing distinctive competencies and competitive advantages that lead to performance and growth. However, only resources that allow MSMEs to adapt and implement strategies that improves its effectiveness and efficiency can be a foundation of competitive advantage

(Barney, 1991). Therefore, MSMEs need to explore how to transform resources into competencies and competitive advantages. In pursuing the process of exploration and transformation of resources into competencies and competitive advantages, MSMEs face diverse challenges and problems. Thus, the major stimulus is to study the innovativeness of MSMEs in Malaysia.

Innovativeness is an important strategy in today's dynamic business environment. Businesses must continuously improve on their innovativeness capabilities (Degato & Carlos, 2017; Zawislak & Marins, 2007). Innovation has been proven to positively influence performance (Bartels & Reinders, 2011). In particular, strategic innovativeness is a key component of organizational innovation and should not be treated as secondary organizational indicator (Mohd Bukhari & Hilmi, 2011). Previous studies reported that strategic innovativeness positively influences performance (Hilmi, Ramayah, Mustapha, Pawanchik, & Ayub, 2010). Therefore this study extend the role of strategic innovativeness as mediator. Furthermore, SMEs exhibiting high strategic innovativeness are capable of competing with multinational enterprises (Boesso, Favotto, Menini, & Kumar, 2009).

Innovative firms display elements related to human capital such as the ability to create new knowledge and the capacity to maintain initiatives and suggestions applied within the firms. Reflecting on human capital as primary catalyst to organizations and the importance of innovativeness to an organization, this study postulates the following hypotheses:

H1 Strategic Innovativeness mediates the relationship between Employee Behaviour and Performance.
H2 Strategic Innovativeness mediates the relationship between Employee Development and Retention and Performance.
H3 Strategic Innovativeness mediates the relationship between Employee Capabilities and Performance.

3. METHODOLOGY

Procedures and Sample

The population frame of this study was based on both The Official Business Directory of SMI Association of Malaysia 2007 and SME Business Directory. This study employed both postal survey and online survey. For postal survey, 776 questionnaires were mailed to the randomly selected MSMEs, but only 32 were returned. Furthermore, 10 were unusable due to the number of employees exceeds 150 people or incomplete responses. For the online survey, the link to

the web survey site was sent out to 4702 email addresses of Malaysian MSMEs. Online survey managed to obtained 150 responded but only 93 responses were usable. The final sample size was 115.

Measures

Human capital is operationalized as three variables namely (1) employee capabilities, (2) employee development and retention, and (3) employee behaviour (Huang, Luther, & Tayles, 2007). Based on the scale ranging from "1" to "7" ("1" represents "none" and "7" represents "comprehensive"), respondent specified the degree of availability of human capital information within their companies. Innovativeness is operationalized as two variables; strategic innovativeness and behavioral innovativeness adopted from Wang and Ahmed (2004).

In this study, strategic innovativeness measures organization's capability to manage organizational objectives. The questionnaire uses a seven-point Likert scale, from "1" to "7" ("1" represents "strongly disagree" and "7" represents "strongly agree"). Performance measures (productivity, sales growth, financial performance, return on investment, employee satisfaction, customer satisfaction, number of complaints) are similar to measurement used by Ramayah, Samat, and Lo (2011).

Respondents were asked to rate their organization's performance within their market segment over the past three years based on the scale ranging from 1 representing "greatly decreased" to 5 representing "greatly increased".

Structural Equation Modeling and Mediation Analysis

Structural Equation Modelling was used to analyse the data using SmartPLS version 2.0 (Ringle, Wende, & Will, 2005). A two-stage process was followed in the analysis. The first stage involved evaluation of the measurement model in terms of reliability, convergent validity and discriminant validity. To test the prediction that strategic innovativeness mediates the relationship between employee capabilities, employee development and retention, employee behaviour and performance, hierarchical regression analyses of total effect, direct effect, and bootstrapped bias-corrected 95% confidence intervals of the indirect effect were computed using the PROCESS macro in SPSS (Hayes, 2013).

4. RESULTS AND DISCUSSION

Population Sample Description

Based on 115 MSMEs responded to the survey, 58.3% are considered small enterprises employing between five to 50 employees, 21.7% medium enterprises and 20% micro enterprises. Almost half (52.3%) of the respondent has been in business for less than ten years. As for type of industry, 18 (15.7%) MSMEs are from the food and beverage industry, 15 (13%) MSMEs are in machinery and equipment segment of the industry, and the rest of the SMEs are from various type of industry such as medical, precision and optical instruments, electronics/electrical, plastic & rubber products and others.

Measurement Model

Table 1 summarizes the result of convergent validity and internal reliability. Factor loading, composite reliability, and variance extracted were used to assess convergent validity (Fornell & Larcker, 1981). In this study, the factor loading for all items exceeded the recommended level of 0.6 (Chin, Gopal, & Salisbury, 1997) and the composite reliability ranged from 0.74 to 0.938 exceeding the recommended level of 0.7 (Gefen, Straub, & Boudreau, 2000). The average variance extracted (AVE) were in the range of 0.504 to 0.883, exceeding the recommended level of 0.5 (Hair, Black, Babin, & Anderson, 2010). Composite reliability ranged from 0.744 to 0.938 are well above acceptable level of 0.7 (Fornell & Larcker, 1981).

Table 1. Result of measurement model

Construct	Measurement Item	Loading	AVE	CR	Standardized Estimate	T-value
Strategic Innovativeness	STRI2	0.935	0.883	0.938	0.935	62.601304
	STRI3	0.944			0.944	59.33557
Emp Capabilities	EC1	0.857	0.727	0.914	0.857	9.76072
	EC2	0.885			0.885	8.380166
	EC3	0.796			0.796	6.772644
	EC4	0.868			0.868	10.095396
Emp Dev & Retention	EDR1	0.782	0.513	0.861	0.782	10.159505
	EDR3	0.656			0.656	5.981598
	EDR4	0.800			0.800	9.592152
	EDR5	0.820			0.820	9.457478
	EDR6	0.614			0.614	5.214936
	EDR7	0.589			0.589	5.588457

(continued)

(continued)

Emp Behavior	EB1	0.831	0.645	0.9	0.831	22.243847
	EB2	0.878			0.878	45.13669
	EB3	0.852			0.852	24.668816
	EB4	0.751			0.751	11.352516
	EB5	0.686			0.686	9.148469
Performance	P2	0.746	0.555	0.882	0.746	9.89071
	P3	0.811			0.811	8.704296
	P4	0.656			0.656	6.888326
	P5	0.750			0.750	9.077411
	P6	0.726			0.726	7.063538
	P7	0.773			0.773	11.520214

Next, discriminant validity was examined by comparing the correlation between constructs and square root of the variance extracted for a construct (Fornell & Larcker, 1981). Table 2 summarizes the results showing that the correlations for each construct was less than square root of the AVE by the indicators measuring that construct indicating that the measure had adequate discriminant validity. Table 3 summarizes items loadings and Cronbach's alpha coefficient values. All alpha value are above 0.6 (Nunnally & Bernstein, 1994).

Table 2. Discriminant validity of construct

Constructs	1	2	3	4	5
1. Emp Behavior	0.803				
2. Emp Capabilities	0.628	0.852			
3. Emp Dev & Retention	0.822	0.670	0.716		
4. Performance	0.420	0.367	0.423	0.745	
5. Strategic Innovativeness	0.410	0.259	0.385	0.317	0.940

Note: (Diagonal (in Bold) represent square root of average variance extracted (AVE), other values are correlations.)

Table 3. Result of reliability test

Construct	Measurement Item	Cronbach's α	Loading range	Number of itemsa
Emp Capabilities	EC1, EC 2, EC3, EC4	0.875	0.796-0.885	4 (4)
Emp Dev & Retention	EDR1, EDR3, EDR4, EDR5, EDR6, EDR7	0.810	0.589-0.820	6 (7)
Emp Behavior	EB1, EB2, EB3, EB4, EB5	0.860	0.686-0.878	5 (5)
Performance	P2, P3, P4, P5, P6, P7	0.842	0.656-0.811	6 (7)
Strategic Innovativeness	STRI2, STRI3	0.868	0.935-0.944	2 (4)

Note. aFinal Items Numbers (Initial Items Numbers)

4.1. Mediation analysis

There was a significant indirect effect of Employee Behavior on Performance through Strategic Innovativeness (figure 1), b = 0.04, 95% CI [0.0029, 0.0876]. This represents a relatively small effect, κ2 = 0.07, 95% BCa CI [.0087, .1571]. Therefore, hypothesis H1 is supported.

There was a significant indirect effect of Employee Development & Retention on Performance through Strategic Innovativeness (figure 2), b = 0.03, 95% CI [0.0022, 0.0796]. This represents a relatively small effect, κ2 = 0.06, 95% BCa CI [.0086, .1433]. Therefore, hypothesis H2 is supported.

There was a significant indirect effect of Employee Capabilities on Performance through Strategic Innovativeness (figure 3), b = 0.03, 95% CI [0.0059, 0.0754]. This represents a relatively medium effect, κ2 = 0.06, 95% BCa CI [.0142, .1417]. Therefore, hypothesis H3 is supported.

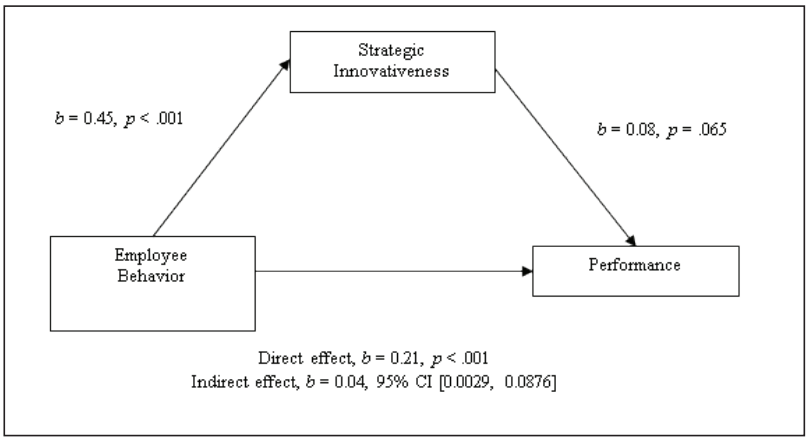

Fig. 1. Model of employee behavior as predictor of performance, mediated by strategic innovativeness

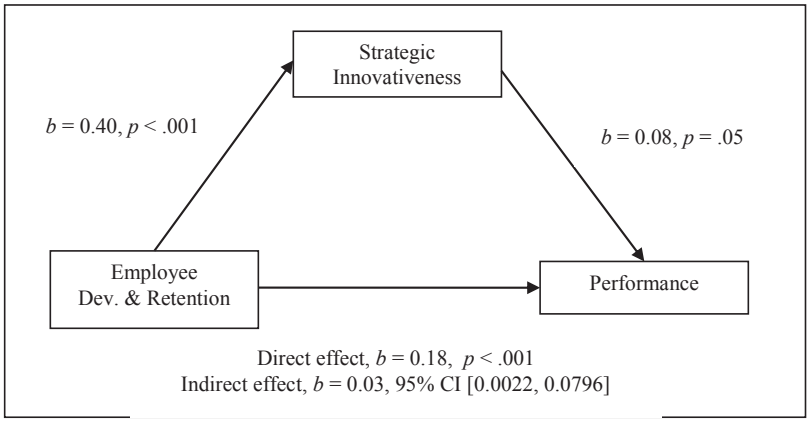

Fig. 2. Model of employee development and retention as predictor of performance, mediated by strategic innovativeness

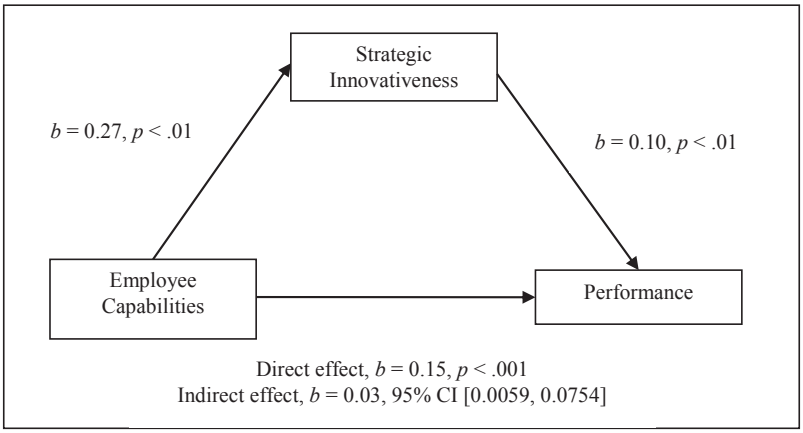

Fig. 3. Model of employee capabilities as predictor of performance, mediated by strategic innovativeness

5. DISCUSSION

This study investigated the mediating role of strategic innovativeness on the relationship between three sub-elements of human capital and performance. The result of this study indicates that three sub-elements of human capital influences performance through strategic innovativeness. Specifically, the relationship between employee behavior to performance, employee development and retention to performance and employee capabilities to performance were all mediated by strategic innovativeness. Therefore all three hypotheses are supported. Results of the hypotheses are summarized in table 4.

Employee capabilities and employee behaviour significantly influences strategic innovativeness reflected that human capital is important source of innovation. (Bontis, 1999; Farr & Tran, 2008). It is not surprising that employee behaviour influence performance through strategic innovation as employee behavioural control was found to be an effective management strategies (Stewart, Courtright, & Manz, 2010). Employee capabilities referred to "employees' level of education/vocational qualification", "work-related competencies and knowledge", "know-how, expertise and creativity" (Huang et al., 2007).

Damanpour (1991) found that 40 percent of the variance in innovation is due to professionalism of management. MSMEs could improve its strategic innovativeness by focusing on activities that enhance its employee's capabilities. Education level, another dimension of employee capabilities, support in the interpretation and understanding of various information and knowledge that influences innovation. Findings of this study therefore concur with previous research which found that education level provided a significance positive relationship with organizational innovativeness (Vincent, Bharadwaj, & Challagalla, 2004).

Table 4. Result of hypothesis testing

Hypothesis	Relationship	Result
H1	Emp Behavior → Strategic Innovativeness → Performance	Supported
H2	Emp Dev. & Retention → Strategic Innovativeness → Performance	Supported
H3	Emp Capabilities → Strategic Innovativeness → Performance	Supported

Employee development and retention consisted of leadership qualities of managers and recruitment cost, motivation, loyalty, incentives programs/ compensation scheme, job satisfaction, revenue per employee, training, and previous job experiences. These elements motivates employees to perform better (i.e. more innovative). This finding might be due to the fact that performance of an employee is influenced by his satisfaction with his salary and benefit will usually performed better.

Although human capital has been shown to significantly enhance performance through strategic innovativeness, it may disappear as employees leave the office. Even though human capital may disappear as employees leave the office, organization must still develop its human resources and nurture knowledge to be innovative. Developing human capital will ensure continuous availability of innovative employees.

6. CONCLUSION

One of the greatest challenges for MSMEs today is utilizing its resources in achieving sustainable competitive advantages. Hopefully, the implications provided in this section will be able to help Malaysian MSMEs in reaching superior performance. Since strategic innovativeness mediates the relationship between three variables of human capital, it is recommended that Malaysian MSMEs focused on (1) developing and enhancing employee capabilities, employee development & retention, and employee behavior and (2) strengthening strategic innovativeness capabilities because these factors have been empirically proven to significantly enhance performance.

This study highlights the importance of examining mediating role of strategic innovativeness on the influence of employee behavior, employee development & retention and employee capabilities on performance. In doing so, this study reveals that dimensions of human capital may relate to overall firm performance through different paths. The results suggest that both human capital and strategic innovativeness are important factors influencing performance and businesses should pay attention on developing and strengthening both factors.

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