

**LAI WAN HOOI**

The University of Nottingham Malaysia Campus , Malaysia

## **HRM INTENSITY, CORPORATE ENTREPRENEURSHIP AND ORGANISATIONAL LEARNING CAPABILITY IN SMES: WHAT IS THE RELATIONSHIP?**

### **Abstract:**

The general purpose of this proposed study is to analyse the effect of HRM practices on corporate entrepreneurship (CE) and organisational learning capability (OLC) in the SMEs in Malaysia. HRM practices in this study will encompass training and development, performance appraisal, incentive and compensation, teamworking, and recruitment and selection. With the exception of teamworking, all the other domains match the four HRM functions proposed by Fombrun et al. (1984) and four of the six HRM domains proposed by Way (2002). Specifically, the main aim of the study will be to examine the effect of each component of HRM on the three dimensions of CE (innovation, corporate venturing, and strategic renewal) as well as the effect on four dimensions of OLC (managerial commitment, systems perspective, openness and experimentation, and knowledge transfer). By setting out to validate the effect of HRM practices on CE and OLC in SMEs, this study will make a significant contribution to HRM literature by empirically examining the significance of each HRM component on each dimension of CE and OLC. This is in response to call for studies to relate selected HRM practices to individual CE dimensions (Schmelter et al., 2010). Furthermore, I seek to contribute to the literature by identifying the significance of each HRM component on each dimension of OLC.

### **Keywords:**

HRM Intensity, Corporate Entrepreneurship, Organisational Learning Capability, SMEs, Malaysia

**JEL Classification:** L26

## Introduction

As the Government aims to transition the country to a high income nation that is inclusive and sustainable by 2020, small and medium sized enterprises (SMEs) are expected to play a critical role, not only as enabler of growth, but also as a driver of economic growth. SMEs are important for two reasons. First, they are numerically significant; therefore, they are a key source of innovation and economic growth (Williamson, Cable, & Aldrich, 2002). SMEs have dominated the economic landscape of most countries around the world. In Malaysia, SMEs represent 99.2 percent of total business establishments in the country. Under the SME Master Plan 2012-2020, SMEs are targeted to contribute 41 percent of the country's GDP by 2020 (Wong, 2012). The SMEs currently contribute 32 percent of GDP, 59 percent of employment and 19 percent of exports. In essence, SMEs have played a central role in enhancing growth, employment and income in Malaysia. Second, they are of analytical interest; to date SMEs have been largely ignored (Hayton, 2005).

To anchor SMEs as the driving force to generate the endogenous source of growth, it is important to understand the forces that drive SME performance. There is, therefore, an increasing need to revitalise research on SMEs. With the implementation of the SME Masterplan 2012-2020, which aims to unleash the growth potential of SMEs and to create an enabling ecosystem to accelerate the growth of SMEs, understanding drivers of SME performance is imperative. In SMEs, survival factors include among others effective HRM (Marlow & Patton, 1993) and HR managerial competence (Dun & Bradstreet, 2001). Moreover, there is increasing consensus linking HRM intensity to organisational outcomes (Storey et al., 2010). Axiomatically, it has attracted increasing interest among researchers to explore empirically the link between HRM intensity and organisational performance in SMEs (e.g., de Kok, 2003).

The key for organisational success is improving flexibility, competitiveness, and reactivity as well as nurturing entrepreneurship (Sathe, 2003). Fostering entrepreneurial attitudes among employees and establishing HRM practices that support entrepreneurial initiatives are key mechanisms. Corporate entrepreneurship (CE) is considerably important in driving SMEs to be innovative, to explore opportunities and to adopt renewal strategies to remain competitive. Castrogiovanni et al. (2011) assert that creating an entrepreneurial culture and stimulating innovativeness within businesses are essential. This could be attained by gaining access to high performing workforce that produces superior employee output.

To ensure a more meaningful contribution of SMEs to the economy, a quantum leap in growth and transformation to higher value-added activities that are knowledge-intensive is imperative. It is hypothesised that organisational learning capability (OLC) will navigate the new development path for SMEs. A strong OLC augments the development and exploitation of knowledge for pursuing specific competitive strategies that lead to achievement of desired organisational goals. Improving OLC will spearhead frontier technology and enhance innovation. Moreover, as OLC enhances organisational performance (Goh et al., 2012), it is imperative for SMEs to use HRM to develop OLC as a key strategy for sustaining competitive advantage.

Extant studies revealed that SMEs often encounter HR related problems as HRM practices tend to be fairly ad hoc and informal (Storey et al., 2010). Most SMEs lack HR experts and are constrained by time and financial resources to implement formal

practices (de Kok & Uhlener, 2001). Yet, effective HRM is so important, as human assets are imperative to an organisation's success. There is nothing technology-wise, that competitors could not acquire. However, little is known about the impact of HRM intensity on organisational outcomes in the SMEs. The existing literature still lacks comprehensive empirical analyses and consensus (Hayton & Zahra, 2005) on this in SMEs. This paper presents a conceptual framework explaining how HRM intensity affects CE and OLC in the SMEs in Malaysia.

The general purpose of this proposed study is to analyse the effect of HRM practices on CE and OLC in the SMEs in Malaysia. HRM practices in this study will encompass training and development, performance appraisal, incentive and compensation, teamworking, and recruitment and selection. With the exception of teamworking, all the other domains match the four HRM functions proposed by Fombrun et al. (1984) and four of the six HRM domains proposed by Way (2002). Specifically, the main aim of the study will be to examine the effect of each component of HRM on the three dimensions of CE (innovation, corporate venturing, and strategic renewal) as well as the effect on four dimensions of OLC (managerial commitment, systems perspective, openness and experimentation, and knowledge transfer). By setting out to validate the effect of HRM practices on CE and OLC in SMEs, this study will make a significant contribution to HRM literature by empirically examining the significance of each HRM component on each dimension of CE and OLC. This is in response to call for studies to relate selected HRM practices to individual CE dimensions (Schmelter et al., 2010). Furthermore, I seek to contribute to the literature by identifying the significance of each HRM component on each dimension of OLC.

The findings of this study will allow organisations to prioritise HRM practices depending on management's focus with regard to CE and OLC facets. It provides advancing empirical evidence on the use of HRM practices to develop CE and OLC as key strategies for the sustainability and competitiveness of SMEs. In addition, I seek to generate debate on notions of "distinct HR practices" and "bundles of HR practices" intensity on organisational outcomes in SMEs. Moreover, existing conceptualisation of HRM practices are mainly based on large corporations in developed economies while the limited empirical findings on HRM practices in SMEs have been inconsistent. Furthermore, the proposed study responds to calls for more consensus on HRM research in SMEs (e.g., Gong et al., 2009; Takeuchi et al., 2007). The findings from the study will likely fill the gaps in present knowledge and help resolve some of the inconsistencies in previous research.

This study is timely as it is critical that SMEs manage their human assets well to enhance sustainability. Furthermore, limited research has studied the impact of individual HRM practices on the dimensions of CE and OLC. Hence, this study is judicious considering its theoretical contributions and practical implications. Building upon the ongoing stream of research, I intend to shed light on conceptual debates over research on HRM intensity on CE and OLC in SMEs. Based on a theoretical foundation regarding HRM, CE and OLC, this study seeks to understand the relationships between HRM practices and CE, HRM practices and OLC, OLC and CE, and the mediating role of OLC in SMEs. I focus on the relevant concepts in the literature and tests the hypotheses of the study. This paper aims at getting a better understanding of the relationships between HRM practices, CE and OLC and contributes towards theory building in HRM research in the small business context.

## ***HRM Practices and Corporate Entrepreneurship***

CE is a set of firm-wide formal and informal activities that centres on innovations and market developments (Zahra, 1991). This includes developing new ideas and products, discovering and pursuing new opportunities through innovation, introducing new business models (Schmelter et al., 2010), creating new business (Wang & Zhang, 2009), renewing companies (Wang & Zhang, 2009), creating new competencies and capabilities (Hoskisson, et al. 2011) and adapting to changes in internal processes (Schmelter et al., 2010). Miller (1983) defines it as organisational activities that enhance product-innovation, risk-taking, and proactive response to environmental forces. Guth and Ginsberg (1990) describe it as internal innovation or venturing – starting new business within existing organisations. Burgelman (1984) describes CE as a process of “extending the firm’s domain of competence and corresponding opportunity set through internally generated new resource combinations”. It involves not only the exploration of new knowledge, but also a recombination of available knowledge in a new and more valuable way (Zahra et al., 1999).

CE is extremely essential for SMEs to remain competitive albeit the difficulty in identifying the relevant SME management practices to stimulate CE (Schmelter et al., 2010). To compete successfully, Sathe (2003) opines that it is imperative that established enterprises leverage on CE to deal with external and internal challenges of rapid change. CE seems to be the answer for established enterprises to enhance their competitive advantage in the long-term (Schmelter et al., 2010). In a similar vein, Hayton and Kelley (2006) contend that CE stimulates growth, create new employment opportunities and generate wealth. Hence, there has been increasing interest among entrepreneurship scholars examining the strategic orientation of organisations (Lumpkin & Dess, 1996). In line with the resource-based view, HRM as a strategic resource has dynamic capability (Schmelter et al., 2010) to be a key driver of CE (Kaya, 2006) – fostering an innovative, creative, and initiative-taking culture as well as developing entrepreneurial attitudes that are valuable, inimitable, and non-substitutable (Bratnicki, 2005). Castrogiovanni et al. (2011) assert that HRM-driven CE is crucial for SMEs. Capitalising on collaboration, creativity and individual commitment (Kaya, 2006), innovative SMEs potentially can seize technological and market opportunities creatively to expand production frontiers. Therefore, HR managers should leverage on effective HRM practices to augment innovation and entrepreneurial activity to improve organisational performance of SMEs. Schmelter et al. (2010) argue that managing human capital systematically can enhance CE. In contrast to Morris and Kuratko (2002) who contend that corporate entrepreneurs are born, Schmelter et al. (2010) insist on making corporate entrepreneurs in SMEs.

There are two basic approaches to CE – the strategic philosophy approach and the activity approach. Companies adopting the strategic philosophy approach focus on acting entrepreneurially (Lumpkin & Dess, 1996; Miles & Arnold, 1991) while the activity approach deals with examining entrepreneurial activities and actions (Antoncic & Hisrich, 2003). In this proposed study, the activity-based CE concept will be adopted as HRM practices are likely linked to SME performance directly. Extant literature reveals five main independent dimensions of CE – innovativeness, risk propensity, proactiveness (Miller, 1983), corporate venturing, and self renewal (Antoncic & Hisrich, 2001) or autonomy and competitive aggressiveness (Lumpkin & Dess, 1996) that can be encouraged within established companies. Wang and Zhang (2009) reveal four key dimensions of CE in China, namely new business venturing, innovativeness, self

renewal and proactiveness. Similarly, various researchers (e.g., Antoncic & Hisrich, 2001) argue that CE has the same four dimensions. Nonetheless, CE has been generally categorised into three dimensions – corporate venturing, innovativeness, and strategic renewal (Zahra, 1995). Luo et al. (2005) also regard CE as a three dimensional construct and includes proactiveness, risk taking and innovativeness.

This study will focus on innovation, corporate venturing, and strategic renewal through five specific aspects of HRM – training and development, performance appraisal, incentive and compensation, teamworking, and recruitment and selection. Innovation refers to organisation's support for novelty, creativity and experimentation that may lead to new products, services, technological processes, or organisational changes (Dess & Lumpkin, 2005; Hayton, 2005). Corporate venturing involves creating new business units, acquiring a new business and corporate spin-offs (Hayton, 2005) and undertaking product, process, technological, and administrative innovations (Zahra, 1993a) through entrepreneurial activities. Strategic renewal concerns strategic repositioning of a company (Zahra, 1991) – redefining business concepts, organisation, and introducing system-wide changes for innovation (Zahra, 1993b). Based on the human resource approach, it is assumed that CE can be achieved by establishing HRM practices as the key factors that influence CE (Morris & Jones 1993). Prior studies focus either on the whole construct or one component of CE (Hayton, 2005).

Existing literature reveals that several HRM practices have an effect on organisation-level entrepreneurship (e.g., Hayton & Kelley, 2006; Kaya, 2006). For example, to induce CE, a well-designed compensation and performance appraisal system is essential (Schmelter et al., 2010); otherwise, it may constrain entrepreneurial behaviour in established companies (Balkin & Logan, 1988). Prior studies affirm the significant effects of reward and compensation, in particular, promotion, on innovative and entrepreneurial initiatives (e.g., Castrogiovanni et al., 2011) and CE (e.g., Chandler et al., 2000). Besides, it potentially increases employees' risk propensity and innovativeness (Huselid, 1995). Therefore, rewarding employees based on performance appraisal that incorporates measures on innovativeness, risk propensity, results, and ideas and methods to achieve those results (Kuratko et al., 1990) would likely improve entrepreneurial activities. Schmelter et al. (2010) confirm the positive effect of both extrinsic and intrinsic rewards on CE while Sykes (1992) asserts that intrinsic rewards outweigh the need for extrinsic rewards. Nonetheless, financial rewards must be flexible and appreciable to retain entrepreneurial employees.

Similarly, recruitment and selection (Hayton, 2005; Schmelter et al., 2010), training and development (Khandwalla, 2006; Schmelter et al., 2010; Schuler, 1986), and rewards (Schuler, 1986) affect CE. Selective hiring potentially influences CE as selected new hires with expert knowledge, entrepreneurial abilities, teamworking and problem solving skills can respond effectively to unexpected opportunities and changes (Kaya, 2006). Thus, generally, the selection criteria should align with all dimensions of CE. Staff selection criteria may include creativity (Schuler, 1986), novelty (Sathe, 1989), teamworking skills and ambitions (Schmelter et al., 2010). Teamworking enhances CE intensity (e.g., Kaya, 2006). Additionally, training and development is essential for CE as it enhances employees' ability to respond and adapt to new challenges. Moreover, it encourages employee participation and is applicable to a range of job situations (Schuler, 1986). Specifically, it is imperative that companies consider developing expert knowledge, social competence (e.g.,

interpersonal skills, teamworking skills), creativity, and methodical expertise (Khandwalla, 2006) to boost CE. Training that encourages creativity increases innovativeness and potentially strengthens strategic renewal and corporate venturing. This sums up Macmillan (1987) assertion that HRM intervention is imperative for CE. Accordingly,

*Hypothesis 1: HRM practices positively influence corporate entrepreneurship in SMEs. Specifically, training and development, performance appraisal, incentive and compensation, teamworking, and recruitment and selection positively influence innovation, corporate venturing, and strategic renewal.*

### **HRM Practices and Organisational Learning Capability**

HRM plays a key role in developing OLC. Implementing distinctive HRM practices to support learning at the individual, group and organisation levels enhances commitment to learning. Investment in training and development, for example, enhances the quality of human assets (Way, 2002) and individuals' absorptive capacity (Jerez-Gomez et al., 2004). Objective performance appraisal and constructive feedback encourage knowledge acquisition and knowledge donation, which improves OLC. Appropriate compensation and incentives for the development of new skills and knowledge motivate employees to experiment with new ideas, leading to the development of new knowledge (Jerez-Gomez et al., 2005). The use of teams and cross-functional collaborations promote knowledge sharing among individuals (Lepak et al., 2007) and support the integration of knowledge at the group and organisational levels (Goh & Ryan, 2002). These practices in concert with those which promote clear communication and broader work experience within the organisation will foster cohesion and shared perspective among organisational members. Formal selection criteria ascertains that new recruits possess superior skills and behaviour scripts (Way, 2002) that is imperative for further knowledge development.

HRM practices will exert a stronger impact on OLC when they are applied as a system of mutually reinforcing practices (Minbaeva, 2005). Selection of HRM practices should be based on the extent that one practice would complement or reinforce the effect of another. Referring to Milgrom and Roberts's (1995) theory of complementarities, a HRM practice complements another when its application increases the benefits gained from the other. The systemic effect of the complementarities among the HRM practices would result in significant improvement in OLC, when compared with the effects from adopting standalone practices (Ichniowski et al., 1997). The study will advance the domain in understanding how individual HRM practices may relate to the different dimensions of OLC. It will provide an empirical test of the effect of standalone HRM practices, namely training and development, performance appraisal, incentive and compensation, teamworking, and recruitment and selection on the dimensions of OLC which comprise of managerial commitment, systems perspective, openness and experimentation, and knowledge transfer. Hence,

*Hypothesis 2: HRM practices have a positive effect on organisational learning capability in SMEs. Specifically, training and development, performance appraisal, incentive and compensation, teamworking, and recruitment and selection positively influence managerial commitment, systems perspective, openness and experimentation, and knowledge transfer.*

## ***Organisational Learning Capability and Corporate Entrepreneurship***

The association between OLC and CE has received considerable attention in the literature on SMEs. Van Wijk et al. (2003) opines that based on the knowledge-based view of the firm theory, which describes knowledge as the basic building block of innovation, OLC strengthens CE. It is argued that organisations with a strong knowledge creation, knowledge sharing, and knowledge exploitation achieve higher levels of CE (Kogut, 2000). However, SMEs faced numerous challenges pertaining to OLC, which then affects CE. These include limited ability to handle information (Chaston, Badger, & Sadler-Smith, 1999), limited opportunities for skill development (Matlay, 1998), and limited access to critical information and knowledge. Consequently, it is argued that OLC in these contexts is constrained (Matlay, 2000). Therefore, it is suggested that other interventions such as HRM intensity may be necessary to boost high-levels of learning (Garavan, Gunnigle, & Morley, 2000; Lopez, Peon, & Ordas, 2006; Smith, 2004). Nonetheless, organisations have to justify the costs of formal interventions to strengthen OLC to stimulate CE.

Chaminade and Roberts (2003) emphasise that robust OLC is imperative for the survival of entrepreneurial SMEs that lack physical resources and scale economies. To enhance sustainability, these organisations need to develop and exploit knowledge-based resources. Entrepreneurial organisations proactively engage in higher-level organisational learning – thinking ‘outside the box’ as they continuously query existing paradigms and seek competitive approaches (Spicer & Sadler-Smith, 2003). Nonaka (1994) further asserts that innovative organisations are critically dependent on how OLC is managed. Simsek and Heavey (2011) argue that effective learning mechanisms enhance SMEs’ skills in managing CE initiatives. Therefore, managerial commitment that stimulates and fosters effective learning processes (Shaw & Perkins, 1991) is essential for the development of OLC (Goh & Ryan, 2002). Management needs to make available resources, implement organisational systems and provide leadership in support of effective learning. Moreover, Lei, Hitt, and Bettis (1996) maintain that OLC is the main driver of all other competencies and capabilities of the firm.

Jerez-Gomez et al. (2005)’s four-dimensional model of OLC – managerial commitment, systems perspective, openness and experimentation, and knowledge transfer, clearly reflects the impact of OLC on CE. Managerial commitment in supporting individual and group learning would encourage exploration and exploitation, and this enhances CE (Hayton & Kelly, 2006). Moreover, it promotes openness and willingness to experiment, thus, stimulating further innovation and corporate venturing. Besides, it helps steer organisations towards shared visions and goals. Striving towards a common goal fosters productive cooperation, knowledge renewal, and knowledge sharing, and ultimately, institutionalise knowledge transfer. Entrepreneurial organisations leverage on these components of OLC to advance CE. A strong OLC, is therefore, a prerequisite for the success of entrepreneurial initiatives, as it fosters the acquisition and application of knowledge that an organisation requires. Based on these arguments,

*Hypothesis 3: Organisational learning capability has a positive effect on corporate entrepreneurship in SMEs. Specifically, managerial commitment, systems perspective, openness and experimentation, and knowledge transfer positively influence innovation, corporate venturing, and strategic renewal.*

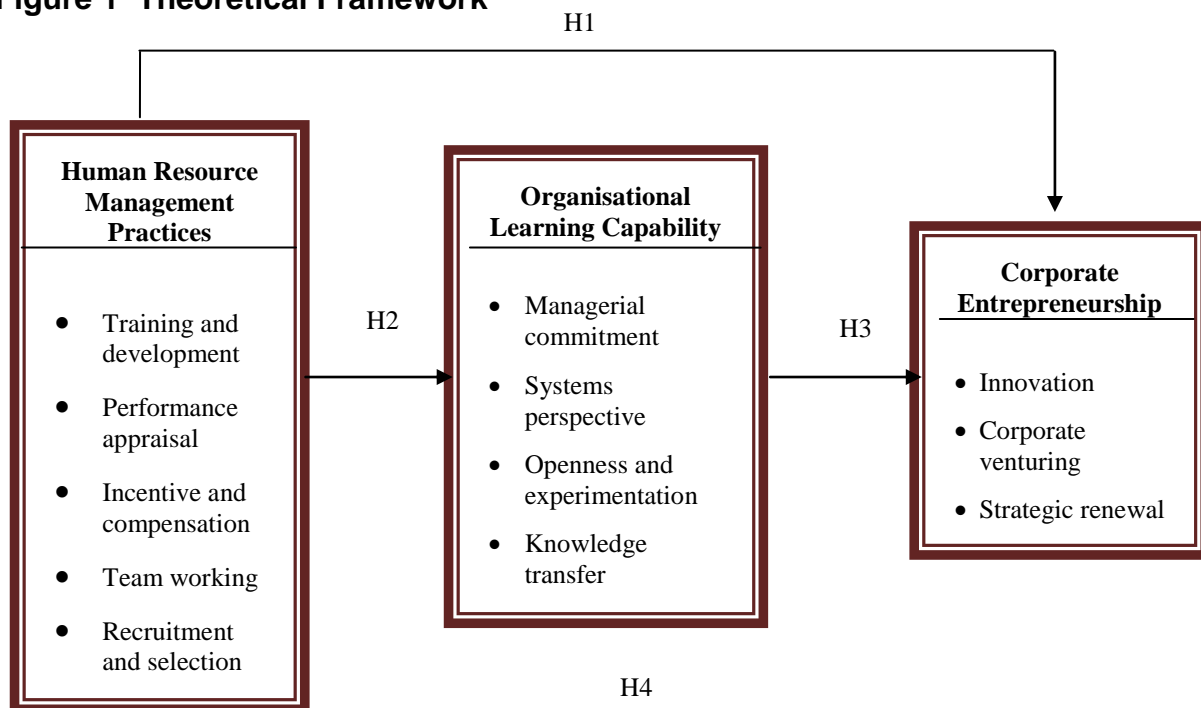
## ***HRM Practices, Organisational Learning Capability and Corporate Entrepreneurship***

It can be reasoned that HRM does not affect CE directly, but indirectly, through its impact on other mediating variables. The black box in-between has received limited attention, but the identification of such mediating variables is important in order to establish the strategic value of HRM. While many studies have offered empirical support for a positive relationship between effective HRM and CE, the exact nature of the relationship remains ambiguous. The general consensus is that the link between HRM and CE does not take on a direct cause-effect path. In the present study, I seek to assess OLC as a mediating variable in the relationship between HRM and CE. The rationale for selecting OLC is threefold. First, it is through individuals that the organisation can mobilise its resources to learn, and hence, OLC (Hughes, 2000; Kim, 1993). Second, as HRM directly affects the ability and motivation of individuals to learn, distinctive HR practices can facilitate the different processes and levels of learning. Third, a strong OLC contributes to sustained competitive advantage through the development of valuable, rare, inimitable, and non-substitutable knowledge-based resources (Becker and Huselid, 1998). Therefore, the following hypothesis is proposed:

*Hypothesis 4: Organisational learning capability mediates the relationship between HRM practices and corporate entrepreneurship in SMEs.*

The hypothesised model for the study is as shown in Figure 1.

**Figure 1 Theoretical Framework**



## **Methodology**



## ***Sample***

Data for the study was collected from a sample of retail companies listed in the Malaysian Retailers-Chain Association (MRCA). There were 234 companies registered with MRCA as at 30 June 2013, and of these 100 companies were selected for the study using proportionate stratified random sampling. Stratification of the retail SME population was based on the economic sector in which they operate to provide enough variation for analysis. For the purpose of this study, 10 management staff from each of the 100 companies were randomly selected to participate in the questionnaire survey. Retail SMEs represent the unit of analysis while individual managerial-level executives of retail SMEs were the key respondents. Datasets from 214 respondents were gathered over a two-week period.

## ***Procedure***

Ten questionnaires, accompanied by a covering letter was sent to each of the 100 retail SMEs. Before sending out the questionnaires, the first step was to obtain permission to carry out the research from the Chief Executive Officer of the companies. After approval from the CEO, the HR Department was contacted to randomly select respondents to complete the questionnaire. Respondents were given two weeks to return the questionnaire voluntarily. A self-addressed reply prepaid envelope was enclosed to ensure confidentiality and to encourage respondents to return the completed questionnaires. Before finalising the survey questionnaires, a pilot survey was conducted to check for relevancy and comprehensibility of the items, as well as to determine the time necessary to complete the questionnaire.

## ***Measures***

The scales and items of the three theoretical variables were measured perceptually on a seven-point Likert scale. HRM practices measuring training and development (4 questions), performance appraisal (3 questions), incentive and compensation (4 questions), teamworking (4 questions) and recruitment and selection (3 questions) were adapted and modified from Becker and Huselid (1998), Youndt et al. (1996) and Ichniowski et al. (1997). The items measuring OLC were adapted from Gomez et al. (2005). It consisted of 15 items, measuring managerial commitment (4 questions), systems perspective (3 questions), openness and experimentation (4 questions) and knowledge transfer (4 questions). CE was assessed using 12 items adopted from Simsek and Heavey (2011). These items measured the extent SMEs pursued innovation, corporate venturing and strategic renewal initiatives in the last three years. Single direct questions were used to tap the background of the company and respondents such as location, type of industry, year of establishment, number of employees, annual sales volume, age, sex, marital status, race, highest education level, educational background, years of working experience, position, and length of service with the organisation.

## ***Analysis***

The collected datasets were first screened for missing values, incorrect entry, outliers, normality, linearity and homoscedasticity, and multicollinearity. Then, structural equation modeling (SEM) was used to test the hypothesised relationships. Based on

Anderson and Gerbing's (1988) two-stage SEM approach, the measurement model was assessed first, followed by the structural model. Next, the mediation analysis was performed to confirm the significance of the relationships.

## Results

### *Measurement model analysis*

A 18-item scale was used to measure SMEs' HRM intensity. To evaluate the psychometric properties of the HRM practices, the goodness-of-fit of alternative HRM measurement models were analysed. Specifically, five models, namely, a null, one-factor, two-factor, three-factor and four-factor models were constructed and tested. As shown in Table 1, the null model achieved the best fit with the sampled SME population.

**Table 1 Goodness-of-fit statistics of alternative HRM measurement models**

Model	CMIN/DF	P	RMR	GFI	AGFI	NFI	IFI	TLI	CFI	RMSEA
Benchmark	1 to 3	>.00	<.05	>.90	>.80	>.90	>.90	>.90	>.90	<.08
Null model	2.631	.000	.104	.861	.809	.854	.904	.881	.903	.088
One-factor model	4.206	.000	.132	.766	.704	.749	.796	.767	.794	.123
Two-factor model	3.873	.000	.127	.781	.721	.770	.819	.791	.817	.116
Three-factor model	3.373	.000	.120	.811	.756	.803	.853	.828	.851	.106
Four-factor model	3.167	.000	.111	.823	.765	.819	.869	.843	.867	.101

To assess the the adequacy of the scales measuring HRM practices, all five factors were subjected to confirmatory factor analysis. A first-order confirmatory model was evaluated with the aim of validating the theoretical dimensions of the construct. The first-order confirmatory factor model was first assessed for their goodness-of-fit, using multiple adjunct fit indices. Initial results from SEM indicated that the measurement model had a moderate fit as some of the index values were below the desirable goodness-of-fit levels. As a result, the modification indices were referred to, and the model respecified. Doing so greatly improved the subsequent goodness-of-fit indices, as they either achieved or approached the desired goodness-of-fit levels. The standardised regression weights (SRW) and measurement errors of indicator variables were then assessed as a measure of construct validity. Validity was established when each variable achieved a SRW of at least 0.50 ( $p < 0.05$ ) and a measurement error below 0.80 (Hair et al., 2012). Results of the reliability tests showed that reliability values for all five dimensions of HRM practices were higher than the threshold value of 0.70 recommended by Nunnally (1978) and De Vellis (2003). The standardised loadings, measurement errors and reliability values of the dimensions, as well as the goodness-of-fit indices are summarised in Table 2.

**Table 2 Psychometric properties of first-order confirmatory factor model of HRM**

Dimension	Item	Standardised Factor Loadings	Measurement Error	Reliability						
<b>Human Resource Management</b>										
Training and development	TD1	0.699	0.105 0.111 0.121	0.817						
	TD2	0.837								
	TD3	0.709								
	TD4	0.682								
Performance appraisal	PA1	0.739	0.102 0.097	0.814						
	PA2	0.765								
	PA3	0.792								
Incentive and compensation	IC1	0.642	0.138 0.135 0.135	0.754						
	IC2	0.716								
	IC3	0.596								
	IC4	0.612								
Teamworking	TW1	0.782	0.081 0.067 0.095	0.836						
	TW2	0.797								
	TW3	0.800								
	TW4	0.662								
Recruitment and selection	RS1	0.796	0.067 0.073	0.865						
	RS2	0.860								
	RS3	0.840								
<b>Goodness of Fit Statistic Indices for First Order Model</b>										
Index	CMIN/DF	P	RMR	GFI	AGFI	NFI	IFI	TLI	CFI	RMSEA
<b>Benchmark</b>	1 to 3	>.000	<.05	>.90	>.80	>.90	>.90	>.90	>.90	<.08
	2.293	.804	.101	.879	.832	.875	.926	.906	.924	.078

Consistent with Jerez-Gomez et al. (2005), OLC was modelled as a latent, multi-dimensional construct. A two-step procedure was applied to assess the adequacy of the scales measuring the construct. In the first step, a first-order confirmatory model was evaluated with the aim of validating the theoretical dimensions of the construct. In the second step, a second-order confirmatory model was tested in order to validate the hypothesis that the theoretical dimensions do indeed underlie a single common latent construct, thereby confirming OLC's multi-dimensional structure. The first-order confirmatory factor model was first assessed for their goodness-of-fit, using multiple adjunct fit indices. Initial results from SEM indicated that the measurement model had poor fit as majority of the index values were below the desirable goodness-of-fit levels. As a result, the modification indices were referred to, and the model respecified. As a result, the subsequent goodness-of-fit indices either achieved or approached the desired goodness-of-fit levels. Construct validity was established when each variable achieved a SRW of at least 0.50 ( $p < 0.05$ ) and a measurement error below 0.80 (Hair et al., 1998). Results of the reliability test showed that reliability values for all the four dimensions of OLC were above the threshold value of 0.70. The standardised loadings, measurement errors and reliability values of the dimensions, as well as the goodness-of-fit indices are summarised in Table 3.

**Table 3 Psychometric properties of first-order confirmatory factor model of OLC**

Dimension	Item	Standardised Factor Loadings	Measurement Error	Reliability						
<b>Organisational Learning Capability</b>										
Managerial commitment	MC1	0.832		0.871						
	MC2	0.865	0.068							
	MC3	0.788	0.075							
	MC4	0.658	0.085							
Systems perspective	SP1	0.789		0.831						
	SP2	0.824	0.087							
	SP3	0.761	0.088							
Openness and experimentation	OE1	0.729		0.852						
	OE2	0.715	0.086							
	OE3	0.657	0.106							
	OE4	0.779	0.100							
Knowledge transfer	KT1	0.825		0.851						
	KT2	0.792	0.076							
	KT3	0.781	0.077							
	KT4	0.667	0.081							
<b>Goodness of Fit Statistic Indices for First Order Model</b>										
Index	CMIN/DF	P	RMR	GFI	AGFI	NFI	IFI	TLI	CFI	RMSEA
<b>Benchmark</b>	1 to 3	>.000	<.05	>.90	>.80	>.90	>.90	>.90	>.90	<.08
	2.284	.000	.086	.897	.848	.911	.948	.932	.947	.078

To validate the multi-dimensional nature of OLC, a second-order confirmatory model was specified and analysed. The standardised second-order factor loadings range from 0.654 to 0.864 and all were significant at the  $p=0.05$  level. The model also achieved acceptable goodness-of-fit levels. The standardised loadings, reliability values and goodness-of-fit indices of the model are summarised in Table 4.

**Table 4 Psychometric properties of the second-order confirmatory model of OLC**

Construct	Dimensions	Standardised Factor Loadings	Reliability							
Organisational Learning Capability	Managerial commitment	0.917	0.934							
	Systems perspective	0.779								
	Openness and experimentation	0.934								
	Knowledge transfer	0.868								
<b>Goodness of Fit Statistic Indices for Second Order Model</b>										
Index	CMIN/DF	P	RMR	GFI	AGFI	NFI	IFI	TLI	CFI	RMSEA
<b>Benchmark</b>	1 to 3	>.000	<.05	>.90	>.80	>.90	>.90	>.90	>.90	<.08
	2.338	.000	.090	.889	.840	.907	.944	.929	.944	.079

The discriminant validity of the four dimensions of OLC was verified by computing the average variance extracted of each construct and comparing these with the squared variances of the construct with other constructs (Hair et al., 2012). Discriminant validity was established as the average variance extracted was larger than the squared variances. These are reported in Table 5.

**Table 5 Average variance extracted and squared variances of the constructs**

	<b>AVE</b>	<b>MC</b>	<b>SP</b>	<b>OE</b>	<b>KT</b>
Managerial commitment	<b>0.860</b>	1.00	0.510	0.776	0.590
Systems perspective	<b>0.640</b>	0.510	1.00	0.440	0.540
Openness and experimentation	<b>0.875</b>	0.776	0.440	1.00	0.658
Knowledge transfer	<b>0.796</b>	0.590	0.540	0.658	1.00

A 12-item scale was used to measure SMEs' CE. As CE was modelled as a latent, three-dimensional construct, a two-step procedure was applied to assess the adequacy of the scales measuring CE. In the first step, a first-order confirmatory model was evaluated with the aim of validating the theoretical dimensions of CE. Initial results from SEM indicated that the measurement model had moderate fit. To further improve the goodness-of-fit, one item with standardised factor loading less than 0.50 was dropped and the modification indices were referred to, and the model respecified. The exercise improved the model's goodness-of-fit considerably as the final 11-item scale meets the benchmarked value for most of the fit indices. In the second step, a second-order confirmatory model was tested in order to validate CE's multi-dimensional structure. The items were internally consistent in measuring CE as Cronbach's alpha for all three factors were above the recommended level of 0.7 (Nunnally, 1978). The standardised loadings, measurement errors and reliability values of the dimensions, as well as the goodness-of-fit indices are summarised in Table 6.

**Table 6 Psychometric properties of first-order confirmatory factor model of CE**

Dimension	Item	Standardised Factor Loadings	Measurement Error	Reliability						
<b>Corporate Entrepreneurship</b>										
Innovation	OI1	0.666		0.855						
	OI2	0.688	0.112							
	OI3	0.854	0.145							
	OI4	0.822	0.139							
Corporate venturing	OV1	0.960		0.873						
	OV2	0.828	0.085							
	OV3	0.825	0.087							
	OV4	0.888	0.079							
Strategic renewal	SR2	0.860		0.924						
	SR3	0.908	0.054							
	SR4	0.925	0.053							
<b>Goodness of Fit Statistic Indices for First Order Model</b>										
Index	CMIN/DF	P	RMR	GFI	AGFI	NFI	IFI	TLI	CFI	RMSEA
<b>Benchmark</b>	1 to 3	>.000	<.05	>.90	>.80	>.90	>.90	>.90	>.90	<.08
	2.015	.000	.063	.942	.897	.957	.978	.967	.978	.069

To validate the multi-dimensional nature of CE, a second-order confirmatory model was specified and analysed. The results in Table 7 revealed an acceptable fitting model. The standardised second-order factor loadings range from 0.666 to 0.960 and all were significantly loaded into their intended factors, indicating convergent validity. The items were internally consistent in measuring CE, as Cronbach's alpha was above the recommended level of 0.7 (Nunnally, 1978).

**Table 7 Psychometric properties of the second-order confirmatory model of CE**

Construct		Dimensions		Standardised Factor Loadings		Reliability				
Corporate Entrepreneurship		Innovation		0.919		0.929				
		Corporate venturing		0.735						
		Strategic renewal		0.906						
Goodness of Fit Statistic Indices for Second Order Model										
Index	CMIN/DF	P	RMR	GFI	AGFI	NFI	IFI	TLI	CFI	RMSEA
Benchmark	1 to 3	>.000	<.05	>.90	>.80	>.90	>.90	>.90	>.90	<.08
	2.015	.000	.063	.942	.897	.957	.978	.967	.978	.069

The discriminant validity of the three dimensions of CE was verified by computing the average variance extracted of each construct and comparing these with the squared variances of the construct with other constructs (Hair et al., 2012). Discriminant validity was established as the average variance extracted was larger than the squared variances. These are reported in Table 8.

**Table 8 Average variance extracted and squared variances of the constructs**

	AVE	OI	OV	SR
Innovation	0.795	1.00	0.456	0.692
Corporate venturing	0.472	0.456	1.00	0.444
Strategic renewal	0.777	0.692	0.444	1.00

An overall measurement model analysis was then undertaken, with the individual measurement models correlated with one another, within a single overall measurement model. As shown in Table 9, the results of the goodness-of-fit indices indicated a well-fitting model. There was no empirical or theoretical justification to modify or respecify any of the existing relationships in the hypothesised model. The confirmatory factor analysis results confirmed that the theoretical measurement model was valid.

**Table 9 Psychometric properties of overall measurement model**

Dimension	Item	Standardised Factor Loadings	Measurement Error	Reliability
Human Resource Management	Training and development	0.736		0.890
	Performance appraisal	0.794	0.094	
	Incentive and compensation	0.781	0.095	
		0.817	0.102	
	Teamworking	0.805	0.102	

	Recruitment and selection									
Organisational Learning Capability	Managerial commitment	0.892		0.873						
	Systems perspective	0.713								
	Openness and experimentation	0.789	0.060							
	Knowledge transfer	0.780	0.058							
Corporate Entrepreneurship	Innovation	0.835		0.859						
	Corporate venturing	0.756	0.075							
	Strategic renewal	0.868	0.075							
<b>Goodness of Fit Statistic Indices for First Order Model</b>										
<b>Index</b>	<b>CMIN/DF</b>	<b>P</b>	<b>RMR</b>	<b>GFI</b>	<b>AGFI</b>	<b>NFI</b>	<b>IFI</b>	<b>TLI</b>	<b>CFI</b>	<b>RMSEA</b>
<b>Benchmark</b>	1 to 3	>.000	<.05	>.90	>.80	>.90	>.90	>.90	>.90	<.08
	1.659	.002	.044	.938	.905	.953	.981	.975	.981	.056

### Structural Model Analysis

#### Human Resource Management – Corporate Entrepreneurship Relationship

As summarised in Table 10, the main hypothesis relating HRM to the dimensions of CE was partially supported. The results revealed that incentive and compensation positively influenced CE whilst recruitment and selection had a significant positive effect on strategic renewal. Comparatively, incentive and compensation had a more significant effect on innovation than on strategic renewal or venturing.

**Table 10 Human Resource Management – Corporate Entrepreneurship**

Factors/Items	Std. Loading	S.E.	C.R.	P	Rank
Innovation ← Training and development	0.114	0.094	1.228	0.219	
Venturing ← Training and development	0.108	0.112	1.127	0.260	
Strategic renewal ← Training and development	0.162	0.117	1.842	0.065	
Innovation ← Performance appraisal	-0.155	0.101	-1.464	0.143	
Corporate venturing ← Performance appraisal	-0.194	0.119	-1.782	0.075	
Strategic renewal ← Performance appraisal	-0.192	0.127	-1.883	0.060	
Innovation ← Incentive and compensation	0.841	0.175	5.958	***	1
Corporate venturing ← Incentive and compensation	0.728	0.191	5.403	***	3
Strategic renewal ← Incentive and compensation	0.800	0.216	6.029	***	2
Innovation ← Teamworking	-0.121	0.095	-1.109	0.267	
Corporate venturing ← Teamworking	-0.015	0.113	-0.135	0.893	
Strategic renewal ← Teamworking	-0.151	0.117	-1.470	0.142	
Innovation ← Recruitment and selection	0.192	0.082	1.961	0.050	
Corporate venturing ← Recruitment and selection	0.200	0.100	1.926	0.054	
Strategic renewal ← Recruitment and selection	0.217	0.103	2.312	<b>0.021</b>	4

#### Human Resource Management – Organisational Learning Capability Relationship

As evidenced in Table 11, HRM partially influenced OLC. Recruitment and selection positively influenced all dimensions of OLC whilst performance appraisal and teamworking had an effect on three of the four dimensions. Training and development

had an impact on managerial commitment and openness and experimentation. Incentive and compensation influenced only systems perspective. As shown Table 11, the effect of performance appraisal on systems perspective was most significant among all the constructs.

**Table 11 Human Resource Management – Organisational Learning Capability**

Factors/Items	Std. Loading	S.E.	C.R.	P	R
Managerial commitment ← Training and development	0.361	0.077	3.889	***	8
Systems perspective ← Training and development	0.002	0.086	0.022	0.983	
Openness and experimentation ← Training and development	0.420	0.097	3.908	***	6
Knowledge transfer ← Training and development	0.185	0.096	1.777	0.076	
Managerial commitment ← Performance appraisal	0.415	0.076	4.187	***	7
Systems perspective ← Performance appraisal	0.588	0.095	4.974	***	1
Openness and experimentation ← Performance appraisal	0.114	0.090	1.053	0.292	
Knowledge transfer ← Performance appraisal	0.474	0.099	4.038	***	3
Managerial commitment ← Incentive and compensation	-0.093	0.071	-0.922	0.356	
Systems perspective ← Incentive and compensation	0.257	0.087	2.190	<b>0.029</b>	1 1
Openness and experimentation ← Incentive and compensation	0.016	0.087	.140	.889	
Knowledge transfer ← Incentive and compensation	0.185	0.095	1.529	0.126	
Managerial commitment ← Teamworking	0.449	0.078	4.160	***	4
Systems perspective ← Teamworking	0.145	0.088	1.259	0.208	
Openness and experimentation ← Teamworking	0.288	0.092	2.456	<b>0.014</b>	9
Knowledge transfer ← Teamworking	0.268	0.097	2.218	<b>0.027</b>	1 0
Managerial commitment ← Recruitment and selection	0.475	0.066	4.985	***	2
Systems perspective ← Recruitment and selection	0.252	0.078	2.351	<b>0.019</b>	1 2
Openness and experimentation ← Recruitment and selection	0.427	0.082	3.888	***	5
Knowledge transfer ← Recruitment and selection	0.240	0.084	2.181	<b>0.029</b>	1 3

### *Organisational Learning Capability – Corporate Entrepreneurship Relationship*

Table 12 showed the results for the hypotheses related to the OLC-CE relationship. As indicated in Table 12, except for the effect of openness and experimentation on strategic renewal, all the other relationships are significant with managerial commitment having the greatest impact on strategic renewal. While systems



perspective had a negative effect on CE, the other dimensions of OLC had a positive effect.

**Table 12 Organisational Learning Capability – Corporate Entrepreneurship**

Factors/Items	Std. Loading	S.E.	C.R.	P	Rank
Innovation ← Managerial commitment	0.528	0.115	4.146	***	2
Corporate venturing ← Managerial commitment	0.495	0.130	3.855	***	3
Strategic renewal ← Managerial commitment	0.639	0.142	5.275	***	1
Innovation ← Systems perspective	-0.269	0.094	-2.720	<b>0.007</b>	8
Corporate venturing ← Systems perspective	-0.246	0.107	-2.460	<b>0.014</b>	9
Strategic renewal ← Systems perspective	-0.272	0.110	-3.048	<b>0.002</b>	7
Innovation ← Openness and experimentation	0.200	0.104	2.055	<b>0.040</b>	11
Corporate venturing ← Openness and experimentation	0.222	0.119	2.234	<b>0.026</b>	10
Strategic renewal ← Openness and experimentation	0.122	0.122	1.385	0.166	
Innovation ← Knowledge transfer	0.418	0.106	3.752	***	4
Corporate venturing ← Knowledge transfer	0.317	0.118	2.884	<b>0.004</b>	6
Strategic renewal ← Knowledge transfer	0.324	0.121	3.292	***	5

*Human Resource Management – Organisational Learning Capability – Corporate Entrepreneurship Relationship*

The possibility that the relationship between HRM practices and CE was mediated by OLC was analysed using a two-step process. At Step 1, the significant relationships between the constructs were established. As shown in Table 13, HRM practices was significantly related to CE (0.700), ensuring that the direct, unmediated relationship was significant. HRM practices were also significantly related to OLC (0.969), establishing relationship with the potential mediator. Finally, CE was significantly related to OLC (0.792), thus, supporting relationship between the mediator and the outcome variable.

**Table 13 Construct Correlation Matrix (Standardised)**

	HRM	OLC	CE
HRM	1.000	0.939	0.049
OLC	0.969***	1.000	0.627
CE	0.700***	0.792***	1.000

Significance Level: \* = 0.05, \*\* = 0.01, \*\*\* = 0.001

Note: Values below the diagonal are correlation estimates among constructs, diagonal elements are construct variances, and values above the diagonal are squared correlations.

Step 2 was to estimate the mediated model and assessed the level of mediation. First, was to estimate the original model, which did not estimate the direct effect from HRM practices to CE. Then, a revised model, with the added direct path between HRM practices to CE was estimated. This was to assess if adding the direct effect would substantially change the model fit. The results in Table 14 showed that the revised model with the direct relationship had a slight decrease in Chi square ( $\Delta\chi^2 = 4.781$ ,  $df=1$ ,  $p=0.002$ ) and an insignificant path estimate for the HRM-CE relationship. As

HRM→OLC→CE contained paths that were all significant, and the HRM→CE path estimate was not significant, the model supported full mediation.

**Table 14 Mediation in Human Resource Management-Corporate Entrepreneurship**

Model Element	Original Model	Revised Model
Model Fit		
Chi square ( $\chi^2$ )	89.389	84.608
Degrees of freedom	52	51
Probability	0.001	0.002
CMINDF	1.719	1.659
RMSEA	0.058	0.056
CFI	0.978	0.981
Standardised parameter estimates		
HRM → OLC	0.959***	0.969***
OLC → CE	0.768***	1.880*
HRM → CE	0.000	-1.122

The magnitude of the mediating effects was demonstrated by breaking down the total effects into direct and indirect effects. A breakdown of the effects of HRM→CE in both the original model (no direct effects from HRM→CE) and the revised model (direct effect added for HRM→CE) is shown in Table 15. In the original model, substantial indirect effects were present, thus supporting the presence of mediating effects of OLC. In the revised model, the indirect effects increased and the insignificant direct effect made this a full mediation situation.

**Table 15 Assessing Direct and Indirect Effects in a Mediated Model**

Effects of HRM → CE	Original Model (Only Indirect Effects)	Revised Model (Indirect and Direct Effects)
Total effects	0.737	0.700
Direct effects	0.000	-1.122
Indirect effects	0.737	1.822

## Discussion

The aim of this study was to explore the effects of HRM practices on CE taking into consideration OLC as the mediator. From the results of the analyses, the present study contributes the following to the existing literature on HRM, OLC and CE. First, as the assessments of convergent and discriminant validity reveal, the sample of Malaysian SMEs adopted standalone HRM practices rather than a bundle of HRM practices. This contradicts the “configurational” perspective (Delery & Doty, 1996) which asserts that some multiple interdependent HR practices should be administered together (Ashton & Felstead, 1998; Combs et al., 2006; Delery, 1998; Jiang et al., 2012). Additionally, the results of the study confirm OLC and CE as a latent multi-dimensional construct. Consistent with Jerez-Gomez et al. (2005), four dimensions of OLC are identified; these being managerial commitment, systems perspective, openness and experimentation, and knowledge transfer. Similarly, in line with Simsek and Heavey (2011), the results shows that CE is indeed a latent, three-dimensional construct comprising of innovation, corporate venturing, and strategic renewal. The assessments of convergent and discriminant validity for the two latent construct

reveals that although the dimensions are interrelated, they are distinct from one another.

Second, there is indeed a positive relationship between HRM and CE, albeit partially. This is parallel to the findings of prior studies on the relationship (e.g. Castrogiovanni et al., 2011; Hayton & Kelley, 2006; Kaya, 2006; Morris & Jones 1993; Schmelter et al., 2010). The findings establish the strong influence of incentive and compensation, in particular, on CE in the SMEs in Malaysia. The influence is most significant on innovation (Huselid, 1995; Kuratko et al., 1990), followed by strategic renewal and corporate venturing. This confirms the findings of Schuler (1986), Sykes (1992), Schmelter et al. (2010), and Castrogiovanni et al. (2011) that a well-designed compensation system is essential. Axiomatically, SMEs in Malaysia may have to provide better remuneration packages to augment CE. Additionally, the findings reflect that perhaps remuneration packages in the SMEs in Malaysia are in dire need of a revision considering the escalating cost of living. Organisations have to create a situation whereby employees feel it is worthy to invest their efforts in advancing CE.

The only other HRM practice that seems to have an effect on CE is recruitment and selection. However, recruitment and selection only has a significant effect on strategic renewal. To a certain extent, this finding is comparable to those studies that contend on the association between recruitment and selection and CE (e.g. Hayton, 2005; Kaya, 2006; Schmelter et al., 2010). Nonetheless, the current findings contradict prior studies that training and development (Khandwalla, 2006; Schmelter et al., 2010; Schuler, 1986), performance appraisal (Schmelter et al., 2010), and teamworking (Kaya, 2006) have a significant effect on CE. Therefore, if organisations wish to leverage on strategic renewal to enhance CE, the focus is on recruitment and selection besides incentive and compensation. Comparatively, incentive and compensation is a more significant factor in encouraging strategic renewal. It would benefit organisations to consider these two factors in tandem to justify giving a higher remuneration package to new hires or promotional positions. Ultimately, if these initiatives improve the bottom-line, the whole organisation progresses.

Third, the current study ascertains that all the dimensions of HRM have a significant impact on OLC. Specifically, recruitment and selection significantly affect all dimensions of OLC. Except for incentive and compensation, all the other dimensions of HRM affect managerial commitment. Hiring criteria that emphasise on job applicants' ability to work in teams and to learn, as well as appropriate feedback, probably improve employee performance, which in turn enhances managerial commitment to learning. Three dimensions of HRM have a significant influence on systems perspective, namely, performance appraisal, incentive and compensation, and recruitment and selection. Hence, objectivity and fairness, comparable compensation, and hiring right engage employees towards a shared vision. Likewise, three dimensions of HRM affect openness and experimentation as well as knowledge transfer. HRM practices that affect openness and experimentation include recruitment and selection, training and development, and teamworking. However, this contradicts the affirmation that incentive and compensation enhances openness and experimentation (Jerez-Gomez et al., 2005). Knowledge transfer is significantly influence by performance appraisal, teamworking, and recruitment and selection.

Further analysis on each dimension shows that performance appraisal has the most significant impact on OLC, specifically on systems perspective and knowledge transfer

(Jerez-Gomez et al., 2005). Therefore, it is imperative that organisations ensure impartiality and provide sufficient feedback. Recruitment and selection is the next most influential HRM practice that affects OLC, in particular, its impact on managerial commitment. To a certain extent, this is in concert with Way's (2002) contention that formal selection is imperative for further knowledge development. To complement what was mentioned earlier, the quality of human capital is the foundation of all initiatives. Organisations need the right people to achieve goals and to steer ahead of others. Likewise, teamworking has a stronger effect on managerial commitment compared to its effect on openness and experimentation or knowledge transfer. This concurs with findings that teamworking promotes knowledge sharing (Lepak et al, 2007) and integration of knowledge (Goh & Ryan, 2002). Such cohesion inspires organisations to further invest in its people to boost performance.

Fourth, this study establishes the importance of OLC on CE. Indeed, the four dimensions of OLC are the primary agents of CE, thus, developing their OLC would directly enhance CE. Except for the influence of openness and experimentation on strategic renewal, all the other relationships are significant. This affirms the assertion that knowledge (Van Wijk et al., 2003) and the way organisations search, acquire and utilise new information (Nonaka, 1994) is the basic building block of innovation. Among the dimensions of OLC, managerial commitment seems to have the most significant impact on CE, specifically on strategic renewal, followed by its effect on innovation and corporate venturing. The next most important factor is knowledge transfer, which significant influences innovation, strategic renewal and corporate venturing. Systems perspective affects strategic renewal, innovation and corporate venturing. The effect of openness and experimentation is stronger on corporate venturing than on innovation. In a nutshell, as studies (e.g. Guth & Ginsberg, 1990; Ireland, Covin & Kuratko, 2009; Morris, Kuratko & Covin, 2008; Covin, Slevin & Heeley, 2000; Covin & Miles, 1999; Vozikis, Bruton, Prasad, & Merikas, 1999; Zahra, 1996; Schollhammer, 1982) show that CE explains performance differences across firms (Dess, Ireland, Zahra, Floyd, Janney and Lane, 2003), it is suggested that concerted efforts should be made to develop OLC. Besides, CE increases the performance of SMEs by shaping and renewing a firm's knowledge-based capital (Simsek & Heavey, 2011).

Fifth, it is obvious that HRM can enhance CE through its role in strengthening OLC. Thus, this study contributes to the gap in knowledge concerning the path through which HRM affects CE. Full mediating effect of OLC in the HRM-CE relationship demonstrates that OLC is indeed an important predictor. This implies that practitioners should aim to improve CE through improved OLC. Commitment in OLC would probably increase investment on product development and new technologies. Additionally, organisations would be encouraged to introduce new business concepts and practices as well as the number of products in the market. Furthermore, organisations would be inclined to enter new markets, acquire companies in different industries, establish new business ventures, and find niches in existing markets. Improved OLC would potentially encourage organisations to change its competitive strategies and redefine the industries in which it competes. Efforts would be made to reorganise operations and divest or exit from unprofitable business units.

## Conclusion

This study presented an integrated analysis of the HRM-CE relationship in the SMEs in Malaysia by including OLC as a mediator to provide a wholesome perspective of the associations between HRM and CE. Although the intention of the study is to enrich understanding of the mediating role of OLC in the HRM-CE relationship, it provides guidelines for CE. Overall, the results of the study show support for many of the hypotheses in the model with HRM practices differentially influencing OLC, and the dimensions of CE in the SMEs in Malaysia. HRM is very crucial in influencing CE in that it significantly affects OLC, which then influence the dimensions of CE. As the findings reveal that OLC is a more important predictor of CE than HRM when these factors are taken together, practitioners may have to focus on OLC to enhance CE. Increased OLC together with effective training to improve managerial competence in decision making will lead to increased CE which ultimately results in better performance. Among HRM practices, incentive and compensation is important in influencing CE while recruitment and selection affects only strategic renewal. All HRM practices affect the dimensions of OLC, which in turn influences CE significantly. In essence, the findings of this study give credence to the importance of OLC in the HRM-CE relationship. A critical examination is necessary to advance knowledge on the influence of OLC in the HRM-CE relationship, as empirical evidence is still ambiguous. Concisely, OLC must be sustained at reasonably high levels in the SMEs in Malaysia in order to facilitate positive HRM climate that would lead to increased OLC, and finally, increased CE.

## References

- Anderson, J.C., & Gerbing, D.W. (1988). Structural modeling in practice: a review and recommended two-step approach. *Psychological Bulletin*, 103(3), 411-423.
- Antoncic, B., & Hisrich, R.D. (2001). Intrapreneurship: Construct refinement and cross-cultural validation. *Journal of Business Venturing*, 16(5), 495-527.
- Antoncic, B., & Hisrich, R.D. (2003). Clarifying the intrapreneurship concept. *Journal of Small Business and Enterprise Development*, 10(1), 7-24.
- Ashton, D., & Felstead, A. (1998). Organizational characteristics and skill formation in Britain: Is there a link? Working paper, No. 22, Centre for Labour Market Studies, University of Leicester.
- Balkin, D.B., & Logan, J.W. (1988). Reward policies that support entrepreneurship. *Compensation and Benefits Review*, 20(1), 18-25.
- Becker, B.E., & Huselid, M.A. (1998). High performance work systems and firm performance: A synthesis of research and managerial implications. In Ferris, G.R. (Ed.), *Research in Personnel and Human Resource Management*, JAI Press, Greenwich, CT, pp. 53-101.
- Bratnicki, M. (2005). Organisational entrepreneurship: Theoretical background, some empirical tests, and directions for future research. *Human Factors and Ergonomics in Manufacturing*, 15(1), 15-33.
- Burgelman, R.A. (1983). Corporate entrepreneurship and strategic management: insights from a process study. *Management Science*, 29(12), 1349-1364.
- Castrogiovanni, G.J., Urbano, D., & Loras, J. (2011). Linking corporate entrepreneurship and human resource management in SMEs. *International Journal of Manpower*, 32(1), 34-47.
- Chaminade, C., & Roberts, H. (2003). What it means and what it does: a comparative analysis of implementing intellectual capital in Norway and Spain. *European Accounting Review*, 12(4), 733-751.
- Chandler, G.N., Keller, C., & Lyon, D.W. (2000). Unraveling the determinants and consequences

- of an innovation supportive organisational culture. *Entrepreneurship Theory and Practice*, 25(1), 51-76.
- Chaston, I., Badger, B., & Sadler-Smith, E. (1999). The organisational learning system within small UK manufacturing firms. *International Journal of Training and Development*, 3, 269-277.
- Combs, J., Liu, Y., Hall, A., & Ketchen, D. (2006). How much do high-performance work practices matter? A meta-analysis of their effects on organizational performance. *Personnel Psychology*, 59, 501-528.
- Covin, J.G., & Miles, M.P. (1999). Corporate entrepreneurship and the pursuit of competitive advantage. *Entrepreneurship Theory and Practice*, 23(3), 47-65.
- Covin, J.G., Slevin, D.P., & Heeley, M.B. (2000). Pioneers and followers: Competitive tactics, environment, and firm growth. *Journal of Business Venturing*, 15(2), 175-210.
- de Kok, J.M.P. (2003). *Human resource management within small and medium-sized enterprises*. Unpublished doctoral dissertation. Rotterdam: Erasmus University.
- de Kok, J.M.P., & Uhlener, L.M. (2001). *Organisation context and human resource management in the small firm*. Amsterdam, Rotterdam: Tinbergen Institute.
- DeVellis, R.F. (2003). *Scale development: theory and applications* (2nd Edition). Thousand Oaks: Sage Publications.
- Delery, J.E. (1998). Issues of fit in strategic human resource management: implications for research. *Human Resource Management Review*, 8, 289-310.
- Delery, J.E., & Doty, D.H. (1996). Modes of theorizing in strategic human resource management: tests of universalistic, contingency, and configurational perspectives. *Academy of Management Journal*, 39, 802-805.
- Dess, G.G., & Lumpkin, G.T. (2005). The role of entrepreneurial orientation in stimulating effective corporate entrepreneurship. *Academy of Management Executive*, 19(1), 147-156.
- Dess G.G., Ireland R.D., Zahra S.A., Floyd S.W., Janney J.J., & Lane P.J. (2003). Emerging issues in corporate entrepreneurship, *Journal of Management*. 29(3), 351-378.
- Dun & Bradstreet Corporation (2001). *The business failure record*, New York: Dun & Brandstreet Corporation.
- Fombrun, C.J., Tichy, N.M., & Devanna, M.A. (1984). *Strategic human resource management*, New York: John Wiley and Sons.
- Garavan, T.N., Gunnigle, P., & Morley, M. (2000). Contemporary HRD research: a triarchy of theoretical perspectives and their prescriptions for HRD. *Journal of European Industrial Training*, 24(2/3/4), 65-93.
- Goh, S. C., Elliott, C., & Quon, T. K. (2012). The relationship between learning capability and organisational performance: a meta-analytic examination. *The Learning Organisation*, 19(2), 92-108.
- Goh, S.C., & Ryan, P.J. (2002). A learning capability, organisation factors and firm performance. Paper presented at the Third European Conference on Organisational Knowledge, Learning and Capabilities, Athens, Greece.
- Jerez-Gomez, P., Cespedes-Lorente, J., & Valle-Cabrera, R. (2005). Organizational learning capability: a proposal of measurement. *Journal of Business Research*, 58, 715-725.
- Gong, Y., Law, K.S., Chang, S., & Xin, K.R. (2009). Human resource management and firm performance: the differential role of managerial affective and continuance commitment. *Journal of Applied Psychology*, 94, 263-275.
- Guth, W.D., & Ginsberg, A. (1990). Guest editors' introduction: Corporate entrepreneurship. *Strategic Management Journal*, 11(4), 5-15.
- Hair Jr., J.F., Anderson, R.E., Tatham, R.L., & Black, W.C. (2012). *Multivariate data analysis* (7th Ed.), Prentice Hall, Sydney, Australia.
- Hair Jr., J.F., Anderson, R.E., Tatham, R.L., & Black, W.C. (1998). *Multivariate data analysis* (5th Ed.), Prentice Hall, Sydney, Australia.

- Hayton, J.C. (2005). Promoting corporate entrepreneurship through human resource management practices: A review of empirical research. *Human Resource Management Review*, 15(1), 21-41.
- Hayton, J.C., & Kelley, D.J. (2006). A competency-based framework for promoting corporate entrepreneurship. *Human Resource Management*, 45(3), 407-427.
- Hayton, J.C., & Zarah, S.A. (2005). Venture team human capital and absorptive capacity in high technology new ventures. *International Journal of Technology Management*, 31(3), 256-277.
- Hoskisson, R.E., Covin, J., Volberda, H.W., & Johnson, R.A. (2011). Revitalising entrepreneurship: The search for new research opportunities. *Journal of Management Studies*, 48(6), 1141-1168.
- Hughes, J. (2000). The learning organization part 1. The learning organization: what is it? Does it constitute a useful set of ideas for the human resource development practitioner? Working paper, No. 29, Centre of Labour Market Studies, University of Leicester.
- Huselid, M.A. (1995). The impact of human resource management practices on turnover, productivity, and corporate financial performance. *Academy of Management Journal*, 38, 635-672.
- Ichniowski, C., Shaw, K., & Prennushi, G. (1997). The effects of human resource management practices on productivity: A study of steel finishing lines. *The American Economic Review*, 87(3), 291-313.
- Ireland, R.D., Covin, J.G., & Kuratko, D.F. (2009). Conceptualizing corporate entrepreneurship strategy. *Entrepreneurship, Theory & Practice*, 33(1), 19-46.
- Jerez-Gomez, P., Cespedes-Lorente, J., & Valle-Cabrera, R. (2004). Training practices and organisational learning capability, relationship and implications. *Journal of European Industrial Training*, 28(2/3/4), 234-256.
- Jerez-Gómez, P., Céspedes-Lorente, J., & Valle-Cabrera, R. (2005). Organisational learning and compensation strategies: Evidence from the Spanish chemical industry. *Human Resource Management*, 44(3), 279-299.
- Jiang, K., Lepak, D.P., Han, K., Hong, Y., Kim, A., & Winkler, A. (2012). Clarifying the construct of human resource systems: Relating human resource management to employee performance. *Human Resource Management Review*, 22, 73-85.
- Kaya, N. (2006). The impact of human resource management practices and corporate entrepreneurship on firm performance: Evidence from Turkish firms. *International Journal of Human Resource Management*, 17(12), 2074-2090.
- Khandwalla, P.N. (2006). Tools for enhancing innovativeness in enterprises. *The Journal for Decision Makers*, 31(1), 1-16.
- Kim, D.H. (1993). The link between individual and organizational learning. *Sloan Management Review*, 35(1), 37-50.
- Kogut, B. (2000). The network as knowledge: Generative rules and the emergence of structure. *Strategic Management Journal*, 21(3), 405-425.
- Kuratko, D.F., Montagno, R.V., & Hornsby, J.S. (1990). Developing an intrapreneurial assessment instrument for an effective entrepreneurial environment. *Strategic Management Journal*, 11(5), 49-59.
- Lei, D., Hitt, M. A., & Bettis, R. (1996). Dynamic core competences through meta-learning and strategic context. *Journal of Management*, 22: 549-69.
- Lepak, D.P., Taylor, M.S., Tekleab, A., Marrone, J.A., & Cohen, D.J. (2007). An examination of the use of high investment human resource systems for core and support employees. *Human Resource Management*, 46(2), 223-246.
- Lopez, S.P., Peon, J.M.M., & Ordas, C.J.V. (2006). Human resource management as a determining factor in organisational learning. *Management Learning*, 37(2), 215-239.
- Lumpkin, G.T., & Dess, G.G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review*, 21(1), 135-172.
- Luo, X., Zhou, L., & Liu, S.S. (2005). Entrepreneurial firms in the context of China's transition economy: An integrative framework and empirical examination. *Journal of Business Research*, 58, 277-84.

- Marlow, S., & Patton, D. (1993). Managing the employment relationship in the smaller firm: Possibilities for human resource management. *International Small Business Journal*, 11(4), 57-64.
- Marlow, S., Taylor, S., & Thompson, A. (2010). Informality and formality in medium-sized companies: Contestation and synchronisation. *British Journal of Management*, 21, 954-966.
- Matlay, H. (1998). The learning small business: Myth or reality? 21st ISBA Conference, Durham University Business School, Durham.
- Matlay, H. (2000). Organisational learning in small learning organisations: An empirical overview. *Education + Training*, 42(4/5), 202-211.
- Miles, M.P., & Arnold, D.R. (1991). The relationship between marketing orientation and entrepreneurial orientation. *Entrepreneurship Theory & Practice*, 15(4), 49-65.
- Milgrom, P., & Roberts, J. (1995). Complementarities and fit strategy, structure, and organisational change in manufacturing. *Journal of Accounting and Economics*, 19(2-3), 179-208.
- Miller, D. (1983). The correlates of entrepreneurship in three types of firms. *Management Science*, 29(7), 770-791.
- Minbaeva, D.B. (2005). HRM practices and MNC knowledge transfer. *Personnel Review*, 34(1), 125-144.
- Morris, M.H., Kuratko, D.F., & Covin, J.G. (2008). Corporate entrepreneurship and innovation, entrepreneurial development within organizations (2<sup>nd</sup> Edition), Thomson South-Western.
- Morris, M.H., & Jones, F.F. (1993). Human resource management practices and corporate entrepreneurship: An empirical assessment from the USA. *International Journal of Human Resource Management*, 4(4), 873-896.
- Morris, M.H., & Kuratko, D.F. (2002). Corporate entrepreneurship. Orlando, FL: Harcourt College.
- Nadin, S. & Cassell, C. (2007). New deal for old. Exploring the psychological contract in a small firm environment. *International Small Business Journal*, 25(4), 409-432.
- Nonaka, I. (1994). A dynamic theory of organizational knowledge creation. *Organization Science*, 5(1), 14-37.
- Nunnally, J. C. (1978). Psychometric theory (2nd Edition). New York: McGraw-Hill.
- Sathe, V. (1989). Fostering entrepreneurship in the large, diversified firm. *Organisational Dynamics*, 18(1), 20-32.
- Sathe, V. (2003). Corporate entrepreneurship. Cambridge: Cambridge University Press.
- Schmelter, R., Mauer, R., Börsch, C., & Brettel, M. (2010). Boosting corporate entrepreneurship through HRM practices: Evidence from German SMEs. *Human Resource Management*, 49(4), 715-741.
- Schollhammer, H. (1982). Internal corporate entrepreneurship. In C. Kent, D. Sexton & K. Vesper (eds.), *Encyclopaedia of Entrepreneurship*, Englewood Clipp, NJ: Prentice Hall.
- Schuler, R.S. (1986). Fostering and facilitating entrepreneurship in organisations: Implications for organisation structure and human resource management practices. *Human Resource Management*, 25(4), 607-629.
- Shaw, R.B. & Perkins, D.N. (1991). Teaching organizations to learn. *Organization Development Journal*, 9(4), 1-12.
- Simsek, Z., & Heavey, C. (2011). The mediating role of knowledge-based capital for corporate entrepreneurship effects on performance: A study of small- to medium-sized firms. *Strategic Entrepreneurship Journal*, 5(1), 81-100.
- Smith, I.W. (2004). Continuing professional development and workplace learning: HRD and organizational learning. *Library Management*, 25(1/2), 64-66.
- Spicer & Sadler-Smith, 2003
- Storey, D.J., Saridakis, G., Sen-Gupta, S., Edwards, P.K., & Blackburn, R.A. (2010). Linking HR formality with employee job quality: The role of firm and workplace size. *Human Resource Management*, 49(2), 305-329.



- Sykes, H.B. (1992). Incentive compensation for corporate venture personnel. *Journal of Business Venturing*, 7(4), 253-265.
- Takeuchi, R., Lepak, D.P., Wang, H., & Takeuchi, K. (2007). An empirical examination of the mechanisms mediating between high-performance work systems and the performance of Japanese organisations. *Journal of Applied Psychology*, 92, 1069-1083.
- Wijk, R.A.J.L. van, Van Den Bosch, F.A.J. & Volberda, H.W. (2003). Knowledge and networks. In M. Easterby-Smith & M.A. Lyles (Eds.), *Handbook of Organizational Learning and Knowledge Management* (pp. 428-453). Oxford: Blackwell.
- Vozikis, G., Bruton, G.D., Prasad, D., & Merikas, A. (1999). Linking corporate entrepreneurship to financial theory through additional value creation. *Entrepreneurship Theory & Practice*. 24(2), 33-41.
- Wang, Y., & Zhang, X. (2009). Operationalisation of corporate entrepreneurship and its performance implications in China: An empirical study. *Journal of Chinese Entrepreneurship*, 1(1), 8-20.
- Way, S.A. (2002). High performance work systems and intermediate indicators of firm performance within the US small business sector. *Journal of Management*, 28(6), 765-785.
- Williamson, I.O., Cable, D.M., & Aldrich, H.E. (2002). Smaller but not necessarily weaker: How small businesses can overcome barriers to recruitment. In J.A. Katz & T.M. Welbourne (Eds.). *Managing people in entrepreneurial organisations: Learning from the merger of entrepreneurship and human resource management*, 83-106. Greenwich, CT: JAI Press.
- Wong, A. (2012). SMEs to account for 41% of GDP by 2020. The Edge Financial Daily Today 2012, 05 July 2012.
- Youndt, M.A., Snell, S.A., Dean, J.W., & Lepak, D.P. (1996). Human resource management, manufacturing strategy and firm performance. *Academy of Management Journal*, 39(4), 836-866.
- Zahra, S.A. (1996). Governance, ownership, and corporate entrepreneurship: The moderating impact of industry technological opportunities. *Academy Management Journal*, 39(6), 1713-1735.
- Zahra, S.A. (1991). Predictors and financial outcomes of corporate entrepreneurship: An exploratory study. *Journal of Business Venturing*, 6(4), 259-285.
- Zahra, S.A. (1993a). A conceptual model of entrepreneurship as firm behaviour: A critique and extension. *Entrepreneurship Theory & Practice*, 17(4), 5-21.
- Zahra, S.A. (1993b). Environment, corporate entrepreneurship, and financial performance: A taxonomic approach. *Journal of Business Venturing*, 8(4), 319-340.
- Zahra, S.A. (1995). Corporate entrepreneurship and company performance: The case of management leveraged buyouts. *Journal of Business Venturing*, 10(3), 225-247.
- Zahra, S.A., Nielsen, A.P., & Bogner, W.C. (1999). Corporate entrepreneurship, knowledge, and competence development. *Entrepreneurship Theory and Practice*, 23(3), 169-189.