

**THE EFFECT OF HUMAN CAPITAL
CAPABILITIES ON ENTREPRENUERIAL
CAPABILITIES AND THE PERFORMANCE
OF THAILAND'S SMALL AND MEDIUM ENTERPRISES**

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Abstract

The main purpose of this study is to investigate the effect between human capital capabilities and SMEs performance via entrepreneurial capabilities as positive mediating effect on the relationship. The model is tested by collecting data from 302 small and medium enterprises in Thailand and using a mail survey questionnaire as instrument. The multiple regression analysis is statistic for testing the hypothesized relationships. The results revealed that three dimensions of human capital capabilities (professional knowledge and skills, learning and development, and social competence and network) have positive impact on entrepreneurial capabilities and SMEs performance. All of dimensions can explain the predication of entrepreneurial capability at 48.80% and SMEs performance at 52.90 %. In addition, two independent variables such as learning and development, and social competence and network are fully support hypotheses. Overall, this study contributes to manager by exploring human capital capabilities and entrepreneurial capabilities can be achieved by SMEs performance.

Keywords: Human capital capabilities; entrepreneurial capabilities; small and medium enterprises

Introduction

Due to increasing of competitive dynamism, entrepreneurship is the key to the growth and survival of firms in this volatile environment of the global crisis (Savoiu, 2016). By its very nature, the SMEs industry plays a very important role in the economics of Thailand. In 2015, the Office of Small and Medium Enterprises Promotion reports that the total number of small and medium enterprises (SMEs) of Thailand is 2,765,986 businesses or 99.53% of the total number of enterprises. The Gross Domestic Product (GDP) value of SMEs in 2015 was 5,559,534 million baht or 41.1% of the country and employed 10,749,735 peoples or 80.44% of overall employment (Office of Small and Medium Enterprises Promotion, 2016). These reports show that entrepreneurship in SMEs is the main economic and social development of Thailand. For the high speed of technology, entrepreneur of SMEs seems to face with high business competition and has to develop their capabilities to react to the moving environment and the needs of customer. The study of Tripopsakul (2016) concludes that human capital and social capital significantly influence an entrepreneurial opportunity seeking of Thai people. Human resource academics generally state that human capital is the core resource and competence to obtain sustainable competitive advantage in the era of increasing globalization (Auw, 2009). Depending on the knowledge and technical skills, their creativity and hard work, human capital capability can enhance their firm growth. Accordingly, human capital capabilities become a part of an overall effort to achieve business goals and strategies by intentions of expansions or improvement through creativity and innovation (Marimuthu, Arokiasamy, and Ismail, 2009). Therefore, this research focuses on SMEs in Thailand as a target group. The main purpose of the research is to investigate the effect between human capital capabilities in three dimensions (professional knowledge and skills, learning and development, and social competence and network) on SMEs performance via entrepreneurial capabilities (innovation creation, risk intelligence, and proactiveness). The results of the research can be used to encourage small and medium business owners and managers to engage in human capital capabilities for entrepreneurial activities, and advice the best methods to improve SMEs performance. The sequence of the research is: first, literature survey, second, details of research methods, third, the results are examined. Accordingly, contribution, and conclusion are mentioned.

Literature Review

In the line of knowledge based of firm (KBF), its assumption argues that knowledge-based resources are usually difficult to imitate, socially complex, heterogeneous knowledge bases, and capabilities among firms are the major elements of sustained competitive advantage and superior performance (Kogut and Zander, 1992). KBF is employed in this research in order to demonstrate how human capital capabilities such as professional knowledge and skills, learning and development, and social competence and network can determine superior corporate performance. Human capital capabilities as independent variable are described in three dimensions (professional knowledge and skills, learning and development, and social competence and network). Firstly, professional job roles and technical skills and responsibilities by understanding the technical difficulty and complexity of work can achieve the expected outputs. Secondly, entrepreneur who focuses on learning and development tend to improve efficient and effective performance. Finally, social competence and network contribute to the process of entrepreneurial capabilities and firm performance. In addition, entrepreneur needs to play active capabilities such as innovation creation, risk intelligence and proactiveness in an organization in order to add value to firm performance. With the intention of clearly investigate the relationships, this research proposed a conceptual framework as shown in Figure 1.

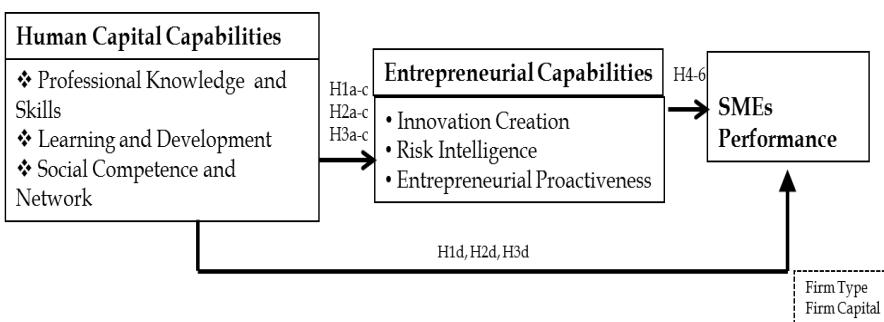


Figure 1: Conceptual Framework of Human Capital Capabilities and the Outcomes

Human Capital Capabilities and Entrepreneurial Capabilities

Several researchers have explained human capital capabilities in various meanings and dimensions. Roos et al. (2001) proposed that human capital should be viewed as the competence, skills, experience and intellectual agility of individual employees whereas Carmeli (2004) proposed that human capital capabilities comprising of four dimensions: (1) educational level (2) job experience (3) competence of organizational members and (4) the value, uniqueness and inimitability of organizational workforce. Likewise, Sharabati, Jawad and Bontis (2010) state that human capital capabilities are (1) learning and education (2) experience and expertise (3) innovation and creation. In exploring the different aspects of human capital capabilities, this research will emphasize on three dimensions namely: professional knowledge and skills, learning and development and social competence and network. Accordingly, entrepreneurial capabilities are defined as managerial attitude to make intelligence, choice, and opportunities, and synchronize their strategic moves and resources in entrepreneurial strategic movement. The concept of entrepreneurial capabilities was adapted from Covin and Slevin (1989) based on the three dimensions of entrepreneurial orientation such as innovation creation, risk intelligence and entrepreneurial proactiveness. Tehseen and Ramayah (2015) proposed that entrepreneur competencies such as managerial and technical skills are the most important factors for the performance and success or failure of small and medium sized enterprises. Likewise, Santos Rodrigues (2010) proposed a positive and significant relationship between human capital and innovative performance. Moreover, Sun and Zeng (2014) reported that human capital capability was effective in shaping work environment and make proactivity on career success. In addition, Quaye and Acheampong (2013) stated that the role of risk-taking can also be established from human capital behaviour. Furthermore, the study of Tripopsakul (2016) concludes that human capital and social capital significantly influence an entrepreneurial opportunity seeking of Thai people. Accordingly, these three attributes were chosen as they represent some aspects of human capital capabilities from SMEs Thai perspective for which only limited empirical studies are presented. To be able to distinctly analyse the relationships, this research proposes human capital capabilities in three attributes as follows:

Professional knowledge and skills is defined as the specialist and professional job role and responsibilities in order to achieve the expected outputs by understanding the technical difficulty and complexity of work, performing tasks specific to area of competently and accurately, completion own work group and other business units in complex situation. Tehseen and Ramayah (2015) proposed that entrepreneur competencies such as managerial and technical skills are the most important factors for the performance and success or failure of small and medium sized enterprises. According to Chang and Lee (2008), capability to obtain knowledge positively and significantly affects knowledge administrative and technical innovation. Likewise, Wang et al., (2008) asserted that professional knowledge and skills are significantly influenced the ability to solve problem and evaluate direction of future. In addition, the research of Hayton (2015) also shows that leadership and management skills are directly and indirectly related to SMEs performance. Thus, it leads to the hypothesis proposed as below:

Hypothesis 1: Professional knowledge and skills are positively associated with (a) innovation creation (b) risk intelligence (c) entrepreneurial proactiveness, and (d) SMEs performance.

Learning and development is defined as the variations of process or activity such as training, education and other professional initiatives in order to increase the levels of abilities, competencies, productivity and social assets that someone gets from doing something over a period of time. Singh (2012) proposed that learning and development is essential determinant to meet the requirements of the changing environment of SMEs sector. Likewise, Haslinda and Hiok (2009) showed that training and development in manufacturing firms in Malaysia are strongly associated with firm performance. Moreover, learning and development also cultivates developed diversity in individuals' experiences that can increase their problem-solving and creative performance (Taylor and Greve, 2006). In particular, Zheng (2009) found that various skill training and development programs are seen to be significantly associated with firm growth. Thus, it leads to the hypothesis proposed as below:

Hypothesis 2: Learning and development are positively associated with (a) innovation creation (b) risk intelligence (c) entrepreneurial proactiveness, and (d) SMEs performance.

Social competence and network is defined as ability of person to negotiate and create social relationships on the basis of the expansion of relational proficiency and social interaction to build a business network. With complex competition in dynamic market, an entrepreneur has to improve more capabilities such as social competence which is a pattern of relational behaviour to promote existing corporations. With a small customer base, customer relationships are one of the critical success factors of SMEs business success (Meehan and Muir, 2008). Similarly, Ritter and Gemunden (2002) confirmed that network competence is positively related to innovation success. Based on paper of Badriyah and Noermijati (2015), social relation and networking is necessary to be able to socialize for better business success because entrepreneur is expected to have good relationship with others in the long run. In addition, the study of Badriyah and Noermijati (2015) shows that social competence and network has positive effect on business performance. Thus, it leads to the hypothesis proposed as below:

Hypothesis 3: Social competence and network are positively associated with (a) innovation creation (b) risk intelligence (c) entrepreneurial proactiveness, and (d) SMEs performance.

The Effect of Entrepreneurial Capabilities on SMEs performance

Entrepreneurship is meaningfully important to the survival, profitability and growth of a firm. Based on Miller (1983), entrepreneurship consists of three dimensions: innovativeness, proactiveness, and risk taking. According to Lumpkin and Dess (2001), entrepreneurial orientation dimensions are five aspects: innovativeness, risk taking, proactiveness, competitive aggressiveness and autonomy. For Thailand context, this paper applies three entrepreneurial capabilities consisting of innovation creation, risk intelligence and proactiveness for the relationships between entrepreneur capability and SMEs performance by reviewing some of the previous literatures as below.

Innovation creation is defined as new idea, product, process, marketing method and intellectual agility significantly improved to an individual, a group of people, or firms, an industrial sectors or a society as whole (Santos-Rodrigues, 2010). Eniola and Entebang (2015) stated that innovativeness increases financial performance of SMEs. Likewise, Rosli and Sidek (2013) confirmed that product innovation and process innovation significantly influenced firm performance. As described above, the hypothesis is proposed as follows:

Hypothesis 4: Innovation creation is positively associated with SMEs performance.

Risk Intelligence refers to the special ability to engage in thinking completely about business risk and uncertainty, by effectively using forward-looking in making better decisions, taking advantage of opportunities, and creating long-term values. In today's rapidly changing and highly uncertain markets, firms that adopt a modest level of risk taking are high performers when compared to those firms that assume very high or very low levels of risk taking (Otieno, Bwisa and Kihoro, 2012). Likewise, Rauch et al. (2009) found that the risk-taking is positively related to performance. Similarly, the studies of Chenuos and Maru (2015) found that SMEs that take risk perform better in terms of profitability than those who do not. In addition, Tilman (2013) argued that risk intelligence is essential to survival, success, and relevance of companies and investors in the post-crisis world. Similarly, Ramzan and Zafar (2014) also confirmed that risk-taking has positive and significant relationship with financial performance. Wambugu, Gichira, Wanjau, and Mungatu (2015) claimed that risk taking has a significant positive effect on firm performance of agro processing SMEs in terms of growth and profitability. As described above, the hypothesis is proposed as follows

Hypothesis 5: Risk intelligence is positively associated with SMEs performance.

Entrepreneurial proactiveness is viewed as a state of mind and the motivation to sustain a vision, to fulfill a mission, to attain a challenging goal of entrepreneurship (Osaze, 2003). Proactiveness is supposed when different firms have insights into the value of resources that other firms do not have. According to Arowomole (2003), the results showed that the enterprise on

high entrepreneurial proactiveness responded positively to performance measures. Likewise, Chenous et al. (2015) showed that entrepreneurial proactiveness has positive impact on SMEs performance. Moreover, the findings of Wambugu et al. (2015) revealed that proactiveness has a positive impact on firm performance of agro processing SMEs in Kenya. As described above, the hypothesis is proposed as follows:

Hypothesis 6: Entrepreneurial proactiveness is positively associated with SMEs performance.

Research Methodology

Sample Selection and Data Collection Procedure

The population of this research is SMEs in Thailand totally 2,765,986 businesses or 99.72% of the total number of enterprises from database of Office of Small and Medium Enterprises Promotion (OSMEP, 2016). These can be categorized into 2,753,058 small enterprises and 12,928 medium enterprises chosen from Office of Small and Medium Enterprises Promotion Annual Report 2015. By using Taro Yamane formulating, the sample size is 400 SMEs. The data collections are proportion in each region and simple random sampling as shown in Table 1. Questionnaires were sent to SMEs managers by mail survey and the received of 302 questionnaires were usable. According to Aaker et al., (2007), the response rate for a mail survey, without an appropriate follow-up procedure if greater than 20%, is considered acceptable. Non-response was tested for two independent samples by comparison of early and late response data is recommended by (Armstrong and Overton, 1977). T-tests comparing the first 151 surveys received with the last 151 responses found no differences between the two groups. Therefore, there is no apparent non-response bias posing a relevant problem within this research.

Table 1: The proportion of population, sample and response questionnaire

Region	Population (SMEs)	Sample (SMEs)	Response Questionnaire (SMEs)
Bangkok	502,186	73	50
Central Region	574,298	83	63

Table 1: (Continued)

Region	Population (SMEs)	Sample (SMEs)	Response Questionnaire (SMEs)
Northern East Region	656,676	95	77
East Region	162,509	23	16
South Region	377,701	55	45
North Region	492,616	71	51
Total	2,765,986	400	302

Variables

For the conceptual model, all of the variables, except control variables, were measured on a five point Likert scale, ranging from '1 = strongly disagree' to '5 = strongly agree'. The variances of the dependent, independent, and control variables are described. *SMEs performance* provides the dependent variable in this research. It is calculated by sales growth, profitability, market share, having outstanding service beyond a competitor, having a reputation and customer acceptance from Wu (2009) and Eniola and Entebang (2015). *Professional knowledge and skills* is adapted from Wang et al. (2008). *Learning and development* is developed from Sharabati (2013). *Social competence and network* is adapted from Markman and Baron (2003) Innovation creation is adapted from Chenuos and Maru (2015). *Risk intelligence and entrepreneurial proactiveness* are adapted from Naldi et al. (2007). In addition, some literatures focus that firm type and firm capital may affect strategic decision and firm competitiveness (Thipsri and Ussahawanitchakit, 2008). Thus, firm type and firm capital are also used as the control variables.

Validity and Reliability

Confirmatory factor analysis has a great potential to inflate the component loadings. According to Nunnally and Berstein (1994), all factor loadings that are greater than the 0.40 cut-off are statistically significant. Furthermore, regarding scale reliability, the cronbach alpha coefficients are greater than 0.80, as recommended by Hair et al. (2010). Table 1 indicates the results for both factor loadings, being between 0.758-0.913 thus indicating that

there is construct validity. Cronbach alpha coefficients, for all variables, between 0.847-0.905 are considered acceptable.

Table 2: Results of measure validation

Items	Factor Loadings	Cronbach Alpha	Number of Items
SMEs Performance (PER)	0.805-0.846	0.880	5
Professional Knowledge and Skills (KSK)	0.802-0.911	0.887	4
Learning and Development (LDE)	0.809-0.886	0.905	5
Social Competence and Network (SOC)	0.811-0.880	0.858	4
Innovation Creation(INE)	0.758-0.891	0.888	5
Risk Intelligence (RII)	0.770-0.870	0.847	4
Entrepreneurial Proactiveness (PRO)	0.847-0.913	0.887	4

Statistic Test

Ordinary Least Square (OLS) is employed as a measure of all hypotheses in this research. This is possible due to both dependent and independent variables being neither nominal data nor categorical data; therefore OLS is a fitting method of examining the hypotheses (Hair et al., 2010). Conclusively, relationships mentioned above are shown below.

$$Equation\ 1: INE = \beta_{01} + \beta_1 KSK + \beta_2 LDE + \beta_3 SOC + \beta_4 FC + \beta_5 FT + \varepsilon$$

$$Equation\ 2: RII = \beta_{02} + \beta_6 KSK + \beta_7 LDE + \beta_8 SOC + \beta_9 FC + \beta_{10} FT + \varepsilon$$

$$Equation\ 3: PRO = \beta_{03} + \beta_{11} KSK + \beta_{12} LDE + \beta_{13} SOC + \beta_{14} FC + \beta_{15} FT + \varepsilon$$

$$Equation\ 4: PER = \beta_{04} + \beta_{16} KSK + \beta_{17} LDE + \beta_{18} SOC + \beta_{19} FC + \beta_{20} FT + \varepsilon$$

$$Equation\ 5: PER = \beta_{05} + \beta_{21} INE + \beta_{22} RII + \beta_{23} PRO + \beta_{24} FC + \beta_{25} FT + \varepsilon$$

Where Control variables are FC = Firm Capital and FT = Firm Type

Results

Result of Descriptive Statistics

The demographic characteristics of the 302 participants, about 73.18 percent respondents are male. The age is approximately between 35-45 years old (34.77 percent) and married (50.66 percent). The education levels are bachelor's degrees or lower (60.26 percent). For working experiences, 47.68 percent have been working with the firms for more than 5-10 years. Moreover, most of respondents received the revenues 50,000 – 100,000 baht per month (37.75 percent). The current position of respondents 60.93 percent is executive manager. Most of business types are limited company (66.23 percent). For Firm types, most of them are trade sector (39.67 percent). Registered capital is less than 20,000,000 baht (55.96 percent). The period of time in operation, are mostly between 5-10 years (47.68 percent). The average sales revenues per year are less than 30,000,000 baht (62.58 percent). For region, 28.25% is in Bangkok and the central part and 19.25% is in the Northeast of Thailand.

Table 3: The correlation matrix of all variables in the regression analysis.

Variables	KS K	LDE	SOC	INE	RII	PRO	PER
MEAN	3.621	3.623	3.458	3.624	3.658	3.531	3.505
S.D	0.877	0.778	0.792	0.686	0.719	0.754	0.723
KS K							
LDE		.711**					
SOC		.658**	.500**				
INE		.469**	.614*	.570**			
RII		.565**	.633**	.641**	.776**		
PRO		.512**	.590**	.597**	.685**	.703**	
PER		.554**	.667**	.544**	.716**	.750**	.730**

**. p <0.01, * p <0.05

Table 3 shows the descriptive statistics and correlation matrix of the variables. By employing Pearson's correlation coefficient, we can quantify the level of

linear association between all pairs of variables, as in Table 2. Regarding potential problems of multicollinearity, all the correlation coefficients of independent variables are measured at less than 0.8, therefore there is no significant problem of multicollinearity of the independent variables in this model (Hair et al., 2010). Moreover, within the value of 10 as recommended by Hair et al. (2010), the VIF result was $2.692 - 4.028$, indicating no correlation of the independent variables with each other. Conclusively, this means that there are no substantial multicollinearity problems indicated within this study.

Hypotheses Testing and Discussion

Table 4 exhibits the OLS regression analysis of human capital capabilities (professional knowledge and skills, learning and development, and social competence and network) on entrepreneurial capabilities and SMEs performance. The finding shows that professional knowledge and skills is positively significant related to innovation creation ($b_1 = 0.199$, $p < 0.05$). This result according to prior study suggests that more highly-educated and more highly-skilled workers have been found to be a direct source of innovation (Nahapiet and Ghoshal, 1998). In addition, Chang and Lee (2008) indicate that the capability to obtain knowledge can positively and significantly affect knowledge administrative and technical innovation. However, the finding shows no significant effect of professional knowledge and skills on risk intelligence ($b_6 = -0.071$, $p > 0.05$), entrepreneurial proactiveness ($b_{11} = -0.082$, $p > 0.05$) and SMEs performance ($b_{16} = -0.025$, $p > 0.05$). The unaccepted result of professional knowledge and skills on SMEs performance linkages can explain by the research of Sharabati (2013) that the technical knowledge and skills has no direct effect with business performance because with high technical knowledge and skills, entrepreneur may create over self-confidence in decision making. In addition, entrepreneur with higher experience and expertise will be specialized in tradition management without focusing on proactiveness in new situation (Ucbasaran, Westhead, and Wright, 2008). These results can imply that professional knowledge and skills has an indirect effect on SMEs performance via organizational innovation. Thus ***Hypothesis 1a is supported but Hypothesis 1b, 1c, and 1d are not supported.*** Consequently, Hypothesis 1 is partial supported.

Secondly, the results in Table 4 indicate that learning and development has significant positive effects on innovation creation ($b_2 = 0.516$, $p < 0.01$), risk intelligence ($b_7 = 0.408$, $p < 0.01$), entrepreneurial proactiveness ($b_{12} = 0.407$, $p < 0.01$) and SMEs performance ($b_{17} = 0.494$, $p < 0.01$). In this sense, the results are consistent with prior research in literature reviews (Okumagba and Okinono, 2016; Sharabati, 2013; Sharabati et al., 2010). In addition, the study of Tripopsakul (2016) revealed that Thai people who possessed higher level of human capital and social capital tend to have higher entrepreneurial opportunity seeking than those who do not. Thus, ***Hypothesis 2a, 2b, 2c, and 2d are supported.*** All in all, hypothesis 2 is fully supported.

Thirdly, the results show that social competence and network has significant positive effects on innovation creation ($b_3 = 0.390$, $p < 0.01$), risk intelligence ($b_8 = 0.432$, $p < 0.01$), entrepreneurial proactiveness ($b_{13} = 0.404$, $p < 0.01$) and SMEs performance ($b_{18} = 0.270$, $p < 0.01$). This result is consistent with prior study asserting that entrepreneurial social competence is positively related to SMEs business performance (Meutia, 2013). In addition, it seems likely that relational to partners, supplier and customer are positively influenced with innovation (Sharabati et al., 2010). Thus, ***Hypothesis 3a, 3b, 3c, and 3d is fully supported.*** All in all, hypothesis 3 is fully supported.

Additionally, this research found that firm type which is a control variable has significant positive effect on innovation creation ($b_5 = 0.412$, $p < 0.01$), entrepreneurial proactiveness ($b_{15} = 0.344$, $p < 0.05$), and SMEs performance ($b_{20} = 0.351$, $p < 0.01$), meaning that in human capital capability phenomena, different firm types has greater impact on innovation creation, entrepreneurial proactiveness and SMEs performance. In contrast, firm capital as a control variable has negatively significant influences on risk intelligence ($b_9 = -0.274$, $p < 0.01$), and SMEs performance ($b_{19} = -0.286$, $p < 0.01$). Hence, the influence of firm type and firm capital on human capital capability and its consequences may study in the future as well.

Table 4: The results of regression analysis for effects of human capital capabilities on its consequences constructs^a

Independent Variables	Dependent Variables					Testing Results
	1 INE(a)	2 RII(b)	3 PRO(c)	4 PER(d)	5 PER	
H1 : Knowledge and Skills (KSK)	0.199* (0.066)	-0.071 (0.065)	-0.082 (0.068)	-0.025 (0.065)		Partial Supported
H2 : Learning and Development (LDE)	0.516** (0.058)	0.408** (0.058)	0.407** (0.060)	0.494** (0.057)		Fully Supported
H3 : Social Competence and network (SOC)	0.390** (0.055)	0.432** (0.054)	0.404** (0.056)	0.270** (0.054)		Fully Supported
H4 : Innovation Creation (INE)					0.243** (0.050)	Supported
H5 : Risk Intelligence (RII)					0.049 (0.059)	Not Supported
H6 : Entrepreneurial Proactiveness (PRO)					0.605** (0.049)	Supported
FC	-0.097 (0.088)	-0.274** (0.087)	-0.113 (0.090)	-0.286** (0.086)	-0.249** (0.064)	
FT	0.412** (0.088)	0.231 (0.087)	0.344** (0.090)	0.351** (0.086)	0.068 (0.067)	
F	63.936	66.853	58.416	68.545	172.483	
Adjusted R ²	0.511	0.522	0.488	0.529	0.740	
VIF	2.692	2.692	2.692	2.692	4.028	

^aBeta coefficients with standard errors in parenthesis, ** p < 0.01, * . p < 0.05

Accordingly, the results in Table 4 assert that innovation creation has significant positive effect on SMEs performance ($b_{23} = 0.243$, $p < 0.01$), similar to Rosli and Sidek (2013) who claims that innovation has a positive relationship with business performance. Thus, ***Hypothesis 4 is supported.*** However, risk intelligence has no effect on SMEs performance ($b_{24} = 0.049$, $p > 0.05$). The converse results of the research can explain by previous works of Chenuo and Maru (2015) suggesting that risk taking is negatively related to SMEs performance in Nigeria. For the findings, it has been given that SMEs do not have clear strategy for dealing with risks situation and how to take risk, even though they believe the fact that risk taking is an important factor for SMEs success. Thus, ***Hypothesis 5 is not supported.*** Furthermore, the results show that entrepreneurial proactiveness is positively associated with SMEs performance ($b_{25} = 0.605$, $p < 0.01$) consistent with literature reviews (Naldi et al., 2007; Baker and Zainol, 2015). In addition, Lumpkin and Dess (2001) proposed that to become a leadership position within the industry, the entrepreneur should have a proactive behaviour. ***Therefore, Hypothesis 6 is strongly supported.*** For two control variables, firm capital has some statistically significant effects on SMEs performance ($b_7 = -0.249$, $p < 0.01$) whereas firm type has no significant effects on SMEs performance ($b_{13} = 0.068$, $p > 0.05$). As a result, it means that the firm capital has an impact on the relationship between entrepreneurial capability and SMEs performance. Thus, next research should verify the effect of firm capital on SMEs performance as well.

Based on these empirical findings, the study has been able to provide a more detailed understanding human capital capabilities and outcomes in SMEs of Thailand. In this research, it has been implication that human capital capabilities are key success factors for SMEs performance in Thailand. However, the findings indicate that SMEs in Thailand seem still weak in their knowledge and skills but quite strong in learning and development and social competence and network. It means that SMEs in Thailand lacks of the knowledge and skills for risk intelligence and SMEs performance. To overcome the above problem, SMEs manager must also be capable to understand the key skills and the importance of information technology for risk intelligence and decision making. Thus, government should allocate funds to upgrade them more entrepreneurial competencies especially in the area of business related

knowledge such as marketing skills, financial accounting skills and technology operation knowledge. Likewise, SMEs owner or managers need to adopt an entrepreneurial mindset at the heart and the ability of the owner/managers to success for risk intelligence. In addition, the owner or manager of SMEs should acquire knowledge of the competitors, the new technology and source of competitive advantage in business for decision making with risk taking environment. In addition, the company should upgrade SMEs by creating human capital capabilities in area of creativity and social network to achieve the firm success. The findings contribute to the knowledge based theory by illustrating the important role of human capital capability as a strategy that leads to competitive advantage of SMEs.

Conclusion

With respect to the main research question, the empirical results indicate that (three dimensions of human capital capabilities (professional knowledge and skills, learning and development, and social competence and network) have positive impact on entrepreneurial capability and SMEs performance both direct and indirect linkage. Learning and development, and social competence and network directly influence on the SMEs performance whereas professional knowledge and skills has indirect effect on the relationships via innovation creation. Furthermore, we find that learning and development is the most important dimensions to explain the effects of human capital capabilities on SMEs performance. Based on these results, it follows that the optimal procedure for SMEs in Thailand is to focus on the three components of human capital capabilities in order to increase SMEs performance especially by learning and development, and social competence and network. The results of the study support the notion that firms which actively cultivate and increase their human capital capabilities are likely to upgrade SMEs performance. Moreover, the study shows the strong influence of social competence and network on innovation creation, risk intelligence, proactiveness and SMEs performance in Thailand. Our findings have important implications for firms to describe human capital capabilities in the line of KBV which being increasingly recognized as the major driver of SMEs performance. According to KBV, firms should renew and maintain their

competitive advantage via human capital capability which is hard to copy and imitate for competitor. Additionally, further study may consider studying specific businesses and regions to confirm the findings. In summary, this research contributes significantly toward understanding how SMEs in Thailand generates human capital capabilities to increase innovation creation, risk intelligence, and proactiveness, ultimate, achieves SMEs performance. Especially, learning and development, and social competence and network are the vital sources for SMEs in Thailand, thus, the executives should clearly improve learning and development, and social competence and network for competition ability and gaining competitiveness.

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References

Aaker, David, A., Kumar, V. and Day, George S. (2007) *Marketing research*. 8th ed., New York. John Wiley and Sons.

Armstrong, J., Scottand, O. and Overton, T.S. (1977) Estimating non-response bias in mail surveys. *Journal of Marketing Research* 14(3): 396-402.

Arowomole, A.M. (2003) The impact of entrepreneurial alertness on business performance. The case of selected companies in Nigeria. *Journal of Business Management* 1: 64-75.

Auw, E. (2009) Human capital, capabilities and competitive advantage. *International Review of Business Research Papers* 5(5): 25-36.

Badriyah, N. and Noermijati, N. (2015) Social competence, human capital and entrepreneurial success (A Study on the Owner of Fish Trading Business). *Asia-Pacific Management and Business Application* 3(3): 182-195.

Carmeli, A. (2004) Strategic human capital and the performance of public sector organisations. *Scandinavian Journal of Management* 20(4): 375-392.

Chang, C. and Lee, M. (2008) The linkage between knowledge accumulation capability and organizational innovation. *Journal of Knowledge Management* 12(1): 3-20.

Chenuos, Nehemiah, K. and Maru, L. (2015) Entrepreneurial orientation and firm performance: evidence from small and Micro-Enterprises in Kenya. *European Journal of Business and Management* 7(27): 187-196.

Eniola, A.A., Entebang, H. and Sakariyau, O.B. (2015) Small and medium scale business performance in Nigeria: Challenges faced from an intellectual capital perspective. *International Journal of Research Studies in Management* 4(1): 59-71.

Hair, J. F., Black, B. B., Anderson, R. and Tatham, R. L. (2010) *Multivariate data analysis*, New Jersey, NJ. Pearson Education.

Haslinda, A. And Hiok, O. (2009) Modelling HRD practices in Malaysian manufacturing firms. *European Journal of Social Sciences* 8(4): 640-652.

Hayton, J. (2015) Leadership and management skills in SMEs. *Warwick Business School: Department of Business, Industry and Skills*. [Online URL: https://www.gov.uk/government/uploads/system/uploads/attachmentdata/file/407624/Leadership_and_Management_Skills_in_SMEs.pdf] accessed on Nov 22, 2016.

Kogut, B. and Zander, U. (1992) Knowledge of the firm combinative capabilities, and the replication of technology. *Organizational Science* 3: 383-397.

Lumpkin, G. T. and. Dess, G. G. (2001) Linking two dimensions of entrepreneurial orientation to firm performance: the moderating role of environment and industry life cycle. *Journal of Business Venturing* 16(3): 429-451.

Marimuthu, M., Arokiasamyl, A. and Ismail, A. (2009) Human capital development and its impact on firm performance: evidence from developmental economics. *The Journal of International Social Research* 2(8): 265-272.

Markman, G. and Baron, R. (2003) Person-entrepreneurship fit: why some people are more successful as entrepreneur than others. *Human Resource Management Review* 13(2): 281-301.

Meehan, J. and Muir, L. (2008) SCM in Merseyside SMEs: Benefits and barriers. *The TQM Journal* 20(3): 223-232.

Meutia. (2013) Improving competitive advantage and business performance through the development of business network, adaptability of business environment and innovation creativity: an empirical study of batik small and medium enterprises (SME) in Pekalongan. Central Java, Indonesia. *Aceh International Journal of Social Sciences* 2(1): 11-20.

Miller, D. (1983) The correlates of entrepreneurship in three types of firms. *Management Science* 29(7): 770-791.

Nahapiet, J. and Ghoshal, S. (1998) Social capital, intellectual capital, and the organizational advantage. *Academy of Management Review* 23(2): 242-266.

Naldi, L., Nordqvist, M., Sjöberg, K. and Wiklund, J. (2007) Entrepreneurial orientation, risk taking, and performance in family firms. *Family Business Review* 20(1): 33-47.

Nunnally, J. C. and Bernstein, I. H. (1994) *Psychometric Theory*. New York: McGraw-Hill.

Okumagba, P.O. and Okinono, O. (2016) Human capability and entrepreneurial development in the Niger delta region of Nigeria. *Information Management and Business Review* 8(3): 406-414.

Office of Small and Medium Enterprises Promotion (OSMEP) (2015). *Annual Report 2015*.

Osaze, E.B. (2003) Corporate proactive management Lagos Centre for management development. *Performance – A Replication Study*: 175-198.

Otieno, S., Bwisa, H.M., and Kihoro, J. M. (2012) Influence of entrepreneurial orientation on Kenya's manufacturing firms operating under East African regional integration. *International Journal of Learning and Development* 2(1): 299-320.

Quaye, D. M. and Acheampong, G. (2013) Are SMEs owner-managers entrepreneurs? evidence from Ghana. *European Journal of Business and Management* 5(23): 37-47.

Ramzan, M. and Zafar, M. (2014) Liquidity risk management in Islamic banks: A Study of Islamic banks of Pakistan. *Interdisciplinary Journal of Contemporary Research in Business* 5(12): 199-215.

Ritter, T. and Gemünden, H.G. (2002) The impact of a company's business strategy on its technological competence, network competence and innovation success. *Journal of Business Research* 57(5): 548-556.

Roos, G., Bainbridge, A. and Jacobsen, K. (2001) Intellectual capital analysis as a strategic tool. *Strategy and Leadership* 29(4): 21-26.

Rosli, M.M. and Sidek, S. (2013) The impact of innovation on the performance of small and medium manufacturing enterprises: evidence from Malaysia. *Journal of Innovation Management in Small and Medium Enterprise*: 1-16.

Rauch, A., Wiklund, J., Lumpkin, G.T., and Frese, M. (2009) Entrepreneurial orientation and business performance: An assessment of past research and suggestions for the future. *Entrepreneurship Theory and Practice* 33(3): 761-787.

Santos Rodrigues, H. P. (2010) The influence of human capital on the innovativeness of firms. *The International Business and Economics Research Journal* 9(9): 53-64.

Savoiu, Gheorghe. (2016) Enterprise, entrepreneur and entrepreneurship: the main semantic chain in contemporary economics.[Online URL: oaji.net/articles/2014/941-403074429.pdf] accessed on December 26, 2016.

Sharabati, Abdel-Aziz A., Jawad, S. and Bontis, N. (2010) Intellectual capital and business performance in the pharmaceutical sector of Jordan. *Management Decision* 48(1): 105-131.

Sharabati, A. A. (2013) The Relationship between human capital and Jordanian pharmaceutical organizations' business performance. *International Journal of Academic Research in Business and Social Sciences* 3(1): 260-279.

Singh, A. (2012) Financial globalization and human development. *Journal of Human Development Capability* 13(1): 135-151.

Sun, Bo and Zeng, Z. (2014) Proactive Personality and Career Success: A Person-organization fit perspective. *International Conference on Economic Management and Trade Cooperation* (EMTC 2014): 21-26.

Taylor, A. and Greve, H. (2006) Superman or the fantastic four? Knowledge combination and experience in innovative teams. *Academy of Management Journal* 49: 723-740.

Tehseen, S. and Ramayah, T. (2015) Entrepreneurial competencies and SMEs business success: the contingent role of external integration. *Mediterranean Journal of Social Sciences* 6(1): 50-61.

Thipsri, N. and Ussahawanitchakit, P. (2008) Effects of technological capability on new product development and export performance: an empirical research of exporting cosmetics business in Thailand. *International Journal of Strategic Management* 8(2): 1-14.

Tilman, M. (2013) *Risk Intelligence. The European financial review*-December 2013. [Online URL: <http://www.europeanfinancialreview.com/?p=591>] accessed on December 22, 2016.

Triopsakul, S. (2016) The study of entrepreneurial opportunities seeking in entrepreneurial process: the evidence from GEM data. *NIDA Business Journal* 19: 45-64.

Ucbasaran, D., Wright, M., and Westhead, P. (2008) Opportunity identification and pursuit does an entrepreneur's human capital matter?. *Small Business Economics* 30(2): 153-173.

Wambugu, A. W., Gichira, R., Wanjau, K. N., Mung'atu, J. (2015) The relationship between risk and performance of small and medium agro processing enterprises in Kenya. *International Journal of Economics, Commerce and Management* 3(12): 441-455.

Wang, H.K., Yu-Fang, Y., Cheng-Fei, T. and Yu-Chieh, L. (2008) An empirical research on the relationship between human capital and innovative capability: a study on Taiwan's commercial banks. *Total Quality Management* 19(11): 1189-1205.

Wu, D. (2009) *Measuring performance in small and medium enterprises in the information and communication technology industries*. [Online URL <https://researchbank.rmit.edu.au/eserv/rmit:6859/Wu.pdf>] accessed on October 17, 2016.

Zheng, C. (2009) Keeping talents for advancing service firms in Asia. *Journal of Service Management* 20(5): 482-502.