

Linking Between Intellectual Capital and SME Performance Mediating Role of Entrepreneurial Orientation

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Abstract: This study attempts to determine the relationship between intellectual capital dimensions consist of human capital, social capital and organizational capital and women owned SME performance and to determine the mediating effect of entrepreneurial orientation on the relationship between women's intellectual capital and SME performance. The data were collected from women owned SMEs in Kelantan who are the owner or manager of the firm and 86 usable responses were received from a total of 100 distributed questionnaires, giving a response rate of 86 percent. The data obtained was analyzed using SPSS 22 and Smart PLS 3.0 to generate descriptive analysis and hypothesized research model. The finding revealed human capital, social capital and organizational capital has significant influence towards women owned SMEs performance. Besides, the study also indicates that entrepreneurial orientation play role as a mediator intellectual capital (human capital and organizational capital) and women owned SMEs performance, whereas social capital does not become a mediator between intellectual capital and women owned SME performance relationship.

1 INTRODUCTION

1.1 Problem Statement

SMEs has been lead the business phase around the world. Ayyagari, Kunt and Maksimovic (2011) suggested more than 95 percent of enterprises across the world are SMEs, accounting for approximately 60 percent of the private sector employment. In the developing countries, the roles of SMEs become more crucial as they have the potential to improve income distribution, create new employment, reduce poverty and facilitate export growth (Ramukumba, 2014). In Malaysian, women have played a very important role in the economic development and stabilize the economy in periods of recession (Ndubisi & Kahraman, 2006). According to Rozy (2009) women make 50 percent total population, but only 15 percent of the women own business enterprises in Malaysia. According to Pages (2005) women entrepreneurs are becoming more important players in the entrepreneurial landscape although there is no data on the number of women involved in small business, but in the last few decades women participation in small businesses increased

tremendously. Indeed, there are growing women entrepreneurs in Malaysia (Teoh & Chong, 2008), and they play major roles in promoting the development of Malaysia economic, as well as help providing job opportunities (Isa & Jusoff, 2009).

Although there are some researches on women entrepreneurs, they have been conducted extensively in developed countries, and little has been done on women entrepreneurs in developing economies, such as Malaysia (Alam et al., 2011; Hanafi, 2012; Mahmood & Hanafi, 2012). In a competitive environment, intellectual capital is a vital constituent of an organization however, it was found that there is a lack of studies that examine the impact of intellectual capital on the organizational performance of SMEs (Khalique & Isa, 2014).

1.2 Research Objective

The research objective is to investigate the relationship between intellectual capital and women owned SME performance and to determine the mediating effect of entrepreneurial orientation on the relationship between women's intellectual capital and SME performance.

- To determine the significant relationship between intellectual capital and women owned SMEs performance.
- To examine whether entrepreneurial orientation mediates the relationship between intellectual capital and women owned SMEs performance.

2 LITERATURE REVIEW

2.1 Women Owned SME Performance

Women owned SMEs in Malaysia seems too huge pressure on progressives towards world economy (Wahid & Mahmood, 2013) as internal and external business environment, for example globalization, technological innovation and demographic and social change, level of technology, ability of technology, monetary support and entrepreneurship (Mahmood & Hanafi, 2012 ; Wahid & Mahmood, 2013). The precise way to access the organization performance is through growth, financial and sales portray indicates the organization performance (Wiklund, 1999).

Over the past years, the human capital not really focusing on women as they are just a minorities in the workforce, which is totally differ to what happening nowadays when women become important in contributing towards nation and global economy (Moore, Moore, & Moore, 2011). They agreed that entrepreneurial behavior drive women owned SMEs into competitive advantage which is crucial for their business performance (Wahid & Mahmood, 2013).

2.2 Intellectual Capital and Performance

Intellectual capital are intellectual materials that can be captured as assets, such as knowledge, information, intellectual property, and employees' experiences, commitments or capabilities (Barney, 2002 ; Wahid & Mahmood, 2013). Hsu and Fang (2009) has defined intellectual capital encompasses of several elements namely human capital, structural capital and relational capital has influence toward performance. Yet, from the previous literatures there is no consistency in determining the elements in intellectual capital (Wahid and Mahmood, 2013). The dimension that represent intellectual capital-based view of the organization is human capital, relational and structural capital (Reed, Lubatkin and Srinivasan, 2006; Ling, 2012) is significant toward

organization performance. According to Wahid and Mahmood (2013), most of the organization entrenched with people, structures and customer in determining the intellectual capital relationship towards organization performance. On top of that, they agreed that intellectual capital role of total capabilities, knowledge, culture, strategy, process, intellectual property, and relational networks of a company which support the company in creating competitive advantage (Hsu & Fang, 2009). Three intellectual capital dimension that has been used for this study were also suggested by (Khalique, Shaari & Isa, 2011).

2.2.1 Human Capital

Human capital is the heart of intellectual capital as its contribute to major source of value in the firm based on the employees' skills, knowledge and expertise, competence, attitude and intellectual agility (Khalique, Shaari & Isa, 2011). Hsu & Fang (2009) stated, human capital play vital role in eliciting the business capital embedded in employees and not owned by the organization which it may be taken away by the workers and managers' competence, experience, knowledge, skills, attitude, commitment and wisdom. The result had shown that human capital has the direct relationship towards firm performance (Mohammad, Ansari, Ologbo, & Rezaei, 2013).

2.2.2 Social Capital

Social capital represents the value of human connections based on their confidence and on personal networks (Cohen and Prusak, 2001; Khalique, Shaari & Isa, 2011) which includes relationships, attitudes and values that manage interactions among people and contribute to economic and social development in a society (Yazdani and Yagoubi, 2011) based on social networks, informal relation, formal relation and trust (Mohtar, Rahman & Abbas, 2015). Organizations having high social capital can take more competitive advantage (Naphat and Goshal, 1998; Khalique, Shaari & Isa, 2011). Social capital were measure through culture, exchange and relationships and its playing highly significant role in the development of intellectual capital in an organization (Cohen & Prusak, 2001; Subramaniam & Youndt, 2005; Nahapiet & Ghoshal, 1998; Bueno, Salmador & Rodri'guez, 2004).

2.2.3 Organizational Capital

Structure capital of organization (organizational capital) represent all the non-human storehouses of knowledge including database, organizational chart, strategies routines, process manuals and policies (Bontis et al., 2000; Wu and Tsai, 2005; Mohtar, Rahman & Abbas, 2015). It consists of process capital and innovation capital (Johnson, 1999; Hsu & Fang, 2009). Structural capital allows the organization to have better entrepreneurial activities (Mohammad, Ansari, Ologbo, & Rezaei, 2013). Organizational capital encompass of structural capital consists of infrastructure, data and information, procedures and policies (Mohtar, Rahman & Abbas, 2015).

Through economics world, intellectual capital can be seen as the utmost significant firm intangible assets and as the primary principle of value creation; intellectual capital has become more important than physical capital (Mohammad, Ansari, Ologbo, & Rezaei, 2013).

- H1: Human capital has a significant influence on women owned SME performance.
 H2: Social capital has a significant influence on women owned SME performance.
 H3: Organizational capital has a significant influence on women owned SME performance

2.3 Entrepreneurial Orientation Mediate Performance

Entrepreneurial orientation portrays the organizational-level entrepreneurship (Yang, 2008) and it is significant contributor to a firm's success (Mahmood & Hanafi, 2013). Entrepreneurial orientation mainly contributed to improved business performance (Yang, 2006). The researcher emphasized on innovation, proactiveness and risk taking to refer to an organization's entrepreneurial orientation (Wiklund, 1999). This concept has been used by several researchers in order to access the level of entrepreneurial orientation of certain organization.

The implementation of entrepreneurship orientation is important towards women owned business as they may benefit from efforts to increase their level of entrepreneurial orientation in order to survive the dynamic, fast-faced and complex business environment which is characterized by shorter life cycles, globalization, and continuous improvement in technology (Mahmood & Hanafi, 2013). The authors added the entrepreneurial orientation act as a mechanism for the survival and

success of women-owned SMEs. The concept of entrepreneurial orientation comprises of three dimensions, namely, innovativeness, proactiveness and risk taking (Miller, 1983; Mahmood & Hanafi, 2013).

- H4: Entrepreneurial Orientation mediates the relationship between human capital and performance
 H5: Entrepreneurial Orientation mediates the relationship between organizational capital and performance
 H6: Entrepreneurial Orientation mediates the relationship between social capital and performance

2.3.1 Innovativeness

Innovativeness in management systems is usually in response to new environmental conditions, and improving the way in which people are managed and work is organized (Arslan & Cevher, 2013). The benefit of innovation is it would keep them ahead of their competitors, gaining a competitive advantage that leads to improved financial results (Wiklund, 1999).

2.3.2 Proactiveness

Proactiveness concerned on pioneering and it is associated with marker survival positively (Arslan & Cevher, 2013). The higher level of proactiveness portray that the organization or individual able to lead rather than become a competitors follower. The advantage of proactiveness is it gives firms the ability to present new products to the market ahead of competitors, which also gives them a competitive advantage (Wiklund, 1999).

2.3.3 Risk Taking

Risk taking shows entrepreneurs willingness to commit their time and energy to making a good idea an innovative reality in their organization (Arslan & Cevher, 2013). Entrepreneurs with risk taker attributes would be brave in facing the business challenges.

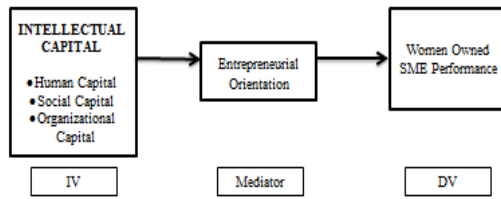


Figure 1: Theoretical framework.

3 METHODS

The unit of analysis for this study is women owned SME, which is located in Kelantan. This study employed quantitative research method and the instrument used to collect the data was survey questionnaires. The target population was the SMEs that owned by women in Kelantan and the resource personnel were selected as respondents to represent their firms. The resource personnel (e.g. manager, executive, supervisor etc.) were selected because they are the key informants of the firms’ operations and strategic decisions, and their views often represent the views of the firms.

In this research 100 questionnaires were distributed and 86 usable questionnaires used were collected from respondents. The researcher used G*Power to compute the acceptable sample size. G*Power Application designed as a general stand-alone power analysis program for statistical tests that commonly used in social and behavioural research (Erdfelder, Faul & Buchner, 2007). The application’s calculation shows that total sample size is 89 and it is near to the 86 usable questionnaires collected for this study.

The descriptive statistical analysis was performed using SPSS for Windows 22.0 to analyse the nature of the data and to develop a profile of respondents. Partial Least Square (PLS) path modelling was used to estimate the hypothesized research model by using Smart PLS 3.0.

4 RESULTS AND DISCUSSION

Table 1: Construct validity and reliability.

Constructs	Items	Loadings	AVE	CR
Women Owned SME Performance	DOP1	0.870	0.574	0.947
	DOP2	0.791		
	DOP3	0.848		
	DOP4	0.720		
	DOP5	0.861		
	DOP6	0.882		
	DOP7	0.834		
	DOP8	0.828		
Human Capital	AHC1	0.817	0.639	0.898
	AHC2	0.828		
	AHC3	0.790		
	AHC4	0.775		
	AHC5	0.784		
Organizational Capital	AOC1	0.844	0.769	0.943
	AOC2	0.868		
	AOC3	0.887		
	AOC4	0.888		
	AOC5	0.896		
Social Capital	ASC1	0.776	0.628	0.894
	ASC2	0.829		
	ASC3	0.737		
	ASC4	0.837		
	ASC5	0.788		
Entrepreneurial Orientation	CEO1	0.695	0.574	0.915
	CEO2	0.765		
	CEO3	0.785		
	CEO4	0.825		
	CEO5	0.738		
	CEO6	0.768		
	CEO7	0.705		
	CEO8	0.771		

Hair, Ringle and Sarstedt (2011) claimed the quality of the measurement model was assessed by examining convergent validity includes factor loading, average variance extracted (AVE) and composite reliability (CR). The above table shown that, results show that indicator loadings for all items exceeded the recommended value of 0.5 (Hair, Black, Babin & Anderson, 2009). AVE were in the range of 0.574 to 0.769, which is above the recommended value of 0.5, and CR ranged from 0.836 to 0.947 which exceeded recommended value of 0.7 (Hair et al., 2009).

Table 2: Discriminant validity.

	EO	HC	OC	P	SC
EO	0.757				
HC	0.621	0.799			
OC	0.686	0.326	0.877		
P	0.784	0.510	0.491	0.831	
SC	0.603	0.742	0.388	0.522	0.792

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

Table 3: Heterotrait-Monotrait ratio.

	EO	HC	OC	P	SC
EO					
HC	0.706				
OC	0.751	0.359			
P	0.849	0.562	0.528		
SC	0.683	0.869	0.436	0.581	

However, Fornell and Larcker (1981) was recently criticized by Henseler et al. (2015), that in most cases the above methods fails to fully scrutinize and validate the issue of discriminant validity and suggested the multitrait-multimethod (HTMT) matrix, to assess discriminant validity. Gold, Malhotra and Segars, (2011) propose a value of 0.90 can claimed that there is a lack of discriminant validity. Hence, the result show that discriminant validity is fulfilled the threshold (table 3).

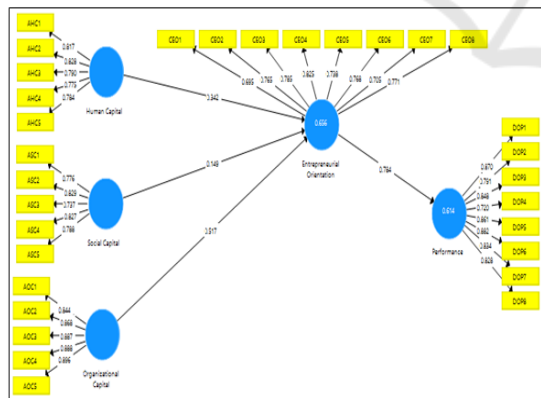


Figure 2: Structural models.

4.1 Hypotheses

Path analysis was performed to evaluate the structural model. Based on Hair et al; (2011), the primary evaluation criteria for structural model are R² values and the level of significance of the path coefficients.

Based on Cohen (1988) for a good model, the value of R² of endogenous latent variable should be more than 0.26. According to figure 1, the R² was found 0.614, indicating that Intellectual Capital dimension consists of human capital, social capital and organizational capital can account for 61.4% percent of the variance in SME performance, which represent a substantial range.

Table 4: Hypotheses direct relationship result.

Hypothesis	beta	t value	Sig.	Result
H1: HC – WOP	0.268	2.980	0.002	Supported
H2: SC – WOP	0.149	1.829	0.047	Supported
H3: OC – WOP	0.405	6.073	0.000	Supported

Significant value $P < 0.05$

For H1, H2 and H3 which stated intellectual capital (human capital, social capital and organizational capital) has a significant influence on women owned SME performance, the result indicates that *human capital* ($\beta = 0.268$, t -values=2.980), *social capital* ($\beta = 0.149$, t -values=1.841) and *organizational capital* ($\beta = 0.405$, t -values=6.073) has a significant relationship found between women owned SME performance. Hence H1, H2 and H3 were supported.

Table 5: Mediator result.

Hypothesis	beta	t value	LL	UL	Result
H4: HC – EO – WOP	0.342	3.092	0.023	0.582	Supported
H5: SC – EO – WOP	0.149	1.841	-0.030	0.363	Unsupported
H6: OC – EO – WOP	0.517	6.002	0.313	0.722	Supported

Furthermore, the above table shows result of an indirect effect between entrepreneurial orientation and SME performance. The result revealed all entrepreneurial orientation play role as a mediator except social capital. The result shows *human capital* ($\beta = 0.342$, t -values=3.092), *social capital* ($\beta = 0.149$, t -values=1.829) and *organizational capital* ($\beta = 0.517$, t -values=6.002). Thus, the study can conclude that entrepreneurial orientation mediates the relationship between intellectual capital (human capital and organizational capital) and women owned SME performance, however social capital does not mediate the entrepreneurial orientation and women owned SME performance. Hence, H4, H6 were supported while H5 was not supported. This result also supported with the values of Boot CI: [LL, UL] straddle a 0 in between

indicating that entrepreneurial orientation is a mediator intellectual capital (human capital, social capital and organizational capital) and women owned SME performance.

5 CONCLUSIONS

The purpose of this study was to determine the relationship between entrepreneurial orientation mediate intellectual capitals towards women owned SME performance. In conjunction with Malaysia to empower SMEs among Malaysian, the result of this research is beneficial to several bodies such as the SMEs, business owners, the Malaysian government, as well as all the agencies involved in Malaysia SMEs entrepreneurial activities such providing best approaches for women owned entrepreneur to compete in competitive business environment. Training to improve the intellectual capital among these groups may be one of the approach for that reason. On top of that, the result of this research shows that the government to encourage entrepreneurship among women as it would contribute to the nation economic growth.

The three constructs that make up intellectual capital (human capital, social capital and organizational capital) are identified to influence each other. The finding of this study confirm that significant relationship exists between intellectual capital comprised of human capital, social capital and organizational capital and women owned SME performance. These findings also highlight the importance of increasing intellectual capital among the owner/managers of SMEs especially women owned company. Consequently, SMEs need to nurturing entrepreneurship based on human capital, social capital and organizational capital to enable them to survive and for the growth of the company as well as contribute to women Malaysian economic growth. This study also indicates that entrepreneurial orientation also may enhance women owned SME performance. Particularly, focusing intellectual capital and entrepreneurial orientation (focusing on innovative, proactive and risk taking) as a mediator in the women owned SMEs is vital as it employs a significant influence on women owned SME performance for human capital and organizational capital. As a result, these finding indicate that it may be helpful for women in Malaysia who are the owner/manager of SMEs in order to place concern more on intellectual capital and entrepreneurial orientation in achieving their above average performance.

However, this study has several limitations that need to be addressed by future research. The limitation could be mitigated given to this prior

study to compare the approaches to women owned SMEs form other regions and the results could be generalized to all women owned SMEs in Malaysia.

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