Intellectual Capital, Innovative Performance and the Moderating Effect of Entrepreneurial Orientation among Small and Medium-sized Enterprises in Jordan

Mohammad Abdal Karim Alzuod[1]*, Mohd Faizal Mohd Isa[2], Siti Zubaidah Bt. Othman[3]

[1]School of Business Management, Universiti Utara Malaysia, UUM Sintok 06010, Kedah, Malaysia, [2]School of Business Management, Universiti Utara Malaysia, UUM Sintok 06010, Kedah, Malaysia, [3]School of Business Management, Universiti Utara Malaysia, UUM Sintok 06010, Kedah, Malaysia. *Email: mzuody@yahoo.com

ABSTRACT

The aim of this study investigates empirically the role of moderating effect of entrepreneurial orientation (EO) in relationship between intellectual capital (IC) and innovative performance (IP) among Jordanian small and medium-sized enterprises (SMEs). Data was gathered by using a questionnaire survey. The questionnaire was distributed to a sample of 600 managers/owners from Jordanian SMEs. 325 usable questionnaires were returned. Partial least squares-structural equation modeling technique had been applied to analyses the data. The findings showed that dimensions of IC (human capital and customer capital) were found positively and significantly related to IP. In addition, this study supports the effect of EO that moderate partially in relationship between IC and IP.

Keywords: Innovative Performance, Intellectual Capital, Entrepreneurial Orientation, Small and Medium-sized Enterprises, Jordan
JEL Classifications: L26, O34

1. INTRODUCTION

Firms are faced with challenges concerning their survival and as such, they are continuously promoting differentiation and innovation whether or not it is related to the new product and service creation (Khalili et al., 2013; Comlek et al., 2012). Majority of firms are in need of creating innovative performance (IP) to direct them to create new products and services and enhancing the quality of their goods and services as well as acquiring an organizational structure that meets the requirements of competitive environment (Khalili et al., 2013; Riani, 2013). Therefore, in the context of small and medium-sized enterprise (SMEs), entrepreneurial environment with effective innovators are needed if such enterprises are desirous of increasing their level of expert and their survival level (Fernandez-Mesa and Alegre, 2015). SMEs displaying IP may be affected by limitations in resources like the lack of qualified and experienced workforce or financial capabilities (de Leeuw et al., 2014).

However, there is a need for more empirical research to be conducted to shed light on the intellectual capital (IC) concept in order to furnish an accurate description of the its effect. Prior studies reported that firm size positively and significantly influence IP (Chen et al., 2011). In the present study, the researcher focuses on SMEs that have limited operations, minimal capital outlay and a few human resources. The SMEs are significantly different from their larger counterparts in their business models and thus, call for a divergent approach from them (Nasir, 2013).

In the context of Jordan, although Jordanian SMEs contribute significant to the economy, the sector has been plagued with challenges beginning from when Jordan developed into a highly deregulated and open market economy. Jordanian government has acknowledged the importance of innovation in developing the country economy. Thus, this research can make an effective contribution to understand the utmost way to plan for successful SMEs in Jordan. This study also should benefit both scholars and practitioners regarding ways for increasing the level of IP among

the SMEs. A literature search reveals limited empirical studies on the issues of IC and IP among Jordanian SMEs.

2. LITERATURE REVIEW

2.1. IP

The challenges for companies to survive are doing so differentiation and continuous innovation, whether it is related to the creation of new products and services (Khalili et al., 2013). So, according to Khalili et al. (2013) focused to definition of IP in newness of products and services, they defined IP as it contains new products and new projects which are leading to these: New products and services improving the quality of goods and services, and adopting organizational structure with competitive environment requirements.

Khalili et al. (2013) proposed assessments to measure the IP in firms that include; number of new good and service projects, number of innovations for work processes and methods, number of innovations that are-or possible to be patented, renewal of organizational structure and mentally to adapt the changing environmental conditions, marketing new products before than competition and finally the rate of new products in the production line. Furthermore, Hagedoorn and Cloodt (2003) defined IP as the achievements of companies in terms of ideas, sketches, and models of new devices, products, processes and systems. But, Lokshin et al. (2009) focused to its definition of IP as a radical innovations and incremental innovations which are the two extremes on the continuum of the novelty degree of a product. Accordding to Gunday et al. (2011) that IP is the integration of the overall organizational achievements that stems from its renewal and improvements efforts in different innovative aspect of firm namely, processes, products, and structure.

Previous studies have shown that here are many factors that could effect on IP. Some of the factors that have been shown to have a positive relationship with IP. These factors include the IC (Han and Li, 2015; Campanella et al., 2014; Wu et al., 2008), and entrepreneurial orientation (EO) (Khalili et al., 2013; Riani, 2013). Furthermore, there is a lack of studies on EO that focusing on IC and IP. Hence, the researcher did not find single study that explains the role of moderating effect of EO in the relationships between IC and IP. Therefore, it is an indicator that EO, as a moderating variable with IP, has not been extensively examined.

Lastly, based on the resource-based view theory (Barney, 1991), the heterogeneous resources are characterized as valuable, rare, inimitable and non-substitutable to obtain and maintain competitive advantage of firm that could lead to enhanced firm performance. Availability of ideas, talents, projects and employees' and managers' knowledge base by IC, it is necessary to achieving of IP.

2.2. IC

IC is an input to innovation; innovation as a result of the use of knowledge and IC, the innovation process as a knowledge management process (González-Loureiro and Dorrego, 2012). Innovation represents a way to create more value in a firm.

Therefore, it seems that firms with a greater strategic focus on innovation should have higher ratios of value creation. So, firms with the same level of IC might not derive equal benefits, because they differ in their ability of sensing, seizing and reconfiguring such capital (Han and Li, 2014).

In the present study, IC is defined based on the definition provided in literature that refers to the concept as the intangible assets that the firm has and it comprises of human capital (HC), structural capital (SC) and customer capital (CC) (Wu et al., 2008). This definition covers all main dimensions of IC; HC, SC and CC.

2.3. IC and IP

In the past, studies on IC and IP have shown a mix results when tested in various settings. While some of studies have shown significant relationships between IC and IP, the findings they reported were inconsistent. Majority studies that reported a positive and significant relationship between the two variables (e.g., Alpkan et al., 2010; Chahal and Bakshi, 2015; Delgado, 2011; El-Telbani, 2013; González-Loureiro and Dorrego, 2012; Halim et al., 2014; Han and Li, 2015; Wu et al., 2008; Zerenler et al., 2008). On the other hand, there are few other studies have shown some of IC dimension negatively related to IP (e.g., Campanella et al., 2014; Subramaniam and Youndt, 2005).

In conclusion, many studies have been conducted and found all three IC dimensions such as HC, CC and SC were significantly positively related to IP (Alpkan et al., 2010; El-Telbani, 2013; Halim et al., 2014; Han and Li, 2014; Wu et al., 2008). Therefore, it is hypothesized that:

H_1: There is positive relationship between IC and IP

H_{1a}: There is positive relationship between HC and IP

H_{1b}: There is positive relationship between SC and IP

H_{1c}: There is positive relationship between CC and IP.

2.4. EO as Moderating Variable

In order to maintain innovation and success in markets, it is important for firms to have assets, processes and structures that contribute to its flexibility and opportunities for sensing and acquiring (Jantunen, 2005). EO was defined by Lumpkin and Dess (1996) as the processes, practices and activities of decision making that facilitates new entry. It is a process of entrepreneurship that is known and accepted for its five dimensions namely innovativeness, riskiness, proactiveness, aggressive competitiveness and autonomy.

In the present study, EO is defined by adopting the definition from literature that describes it as the willingness of the firm towards adopting innovative activities and taking risks to come up with new products/services and to introduce new markets, and proactively make a move prior to its competitors in availing of new opportunities in the market (Soininen et al., 2012). This definition covers all dimensions of EO that are generally highly intercorrelated with each other, which drives to combining these dimensions into one single concept (Soininen et al., 2012).

Various studies have been conducted in relationship between EO and IP. The studies that reported a positive and significant relationship between EO and IP include Khalili et al. (2013), Riani (2013), Madhoushi et al. (2011). Wiklund and Shepherd (2003) showed EO can assist innovative SMEs in a process, creating and introducing new products and technologies, can generate extraordinary performance.

Thus, the EO has not been studied previously as moderating variable with IP. The study would expect the EO as interacting with the IC to identify the moderating effects on IP. The study expects the EO can be enhancing the relationship between IC and IP. Also, there is still exists an unclear support that indicates a direct relationship between the variables. According to Wales et al. (2013a) that some of internal constructs facilitating or impeding the application of EO remain largely unexplored as moderating variable.

Reviewing the literature also has indicated that the moderating role of EO on the relationship between IC and IP has received less attention from researchers. Therefore, this study intends to expand the knowledge on IP of SMEs by examining the moderating role of EO on the relationship between IC and IP.

Prior studies indicate that innovativeness, risk-taking and proactiveness exhibit moderate to high correlations with one another in practice (Covin et al., 2006). The fact that empirical studies frequently examine the dimensions in aggregate, with roughly three out of every four adopting a unidimensional approach, suggests that there is strong convergence in the literature (Wales et al., 2013). The innovativeness, risk-taking and proactiveness dimensions were combined most frequently to form a unidimensional conceptualization of EO; about 80% of the total unidimensional articles used as a construction (Wales et al., 2013b), such as: Fernandez-Mesa and Alegre (2015), Soininen et al. (2015), Shehu and Mahmood (2014), Dada and Fogg (2014), Kreiser (2011), Wu et al. (2008), Avlonitis and Salavou (2007), Covin et al. (2006), Wiklund and Shepherd (2003), Kreiser et al. (2002), Covin (1991) and Covin and Slevin (1989).

Though there was limited study that focusing on the moderation effect of EO on IC and IP, the resource-based view theory (Barney, 1991) argued that having the appropriate resources are important to compete in the market and this is ultimately a matter of EO. As argued by Nahapiet and Ghoshal (1998), innovation is a process of combining assets and thus, EO may facilitate the company's ability to appropriately utilize resources and innovates. In other writing, Wiklund and Sheperd (2003) also suggested that EO can enhance the relationship between knowledge-based resources and firm performance. Therefore, it is hypothesized that:

H_2: EO moderates the relationship between IC and IP

H_{2a}: EO moderates the relationship between HC and IP

H_{2b}: EO moderates the relationship between SC and IP

H_{2c}: EO moderates the relationship between CC and IP.

2.5. Theoretical Framework
As a result, the IC and EO appear to be major interests in order to develop the capacity for IP in organizations. Consequently, the above discussion leads to the theoretical framework as given in Figure 1.

3. MATERIALS AND METHODS

3.1. Respondents of the Study
The total number of the SMEs in Jordan is 43091 (Social Security Corporation, 2016). However, for practical reasons, only 11227 SMEs in Amman, Irbid and Zarqa that have been in operation for more than 3 years were chosen in the population for this study. These cities were chosen as they are among the cities that have the most SMEs in Jordan.

A systematic random sampling method was applied and a total of 600 questionnaires were distributed through a representative appointed at each city. The distribution and collection of the survey instruments took about 4 months. Of the 600 questionnaires distributed to managers/owners of SMEs, only 325 questionnaires were found to be useful for further analysis, which indicates a response rate of 54.1%. The respondents of this study consisted of 82.5% of the 325 SMEs in this survey were in Amman. Majority of the age of the SMEs (61.2%) were above 10 years. According to type of industry that 51.4% of SMEs were manufacturing. In terms of the total number of employee in the SMEs, the category of 20-99 (medium enterprises) was the largest group (64.9%). Most of the ownership of SMEs had (46.2%) of limited liability.
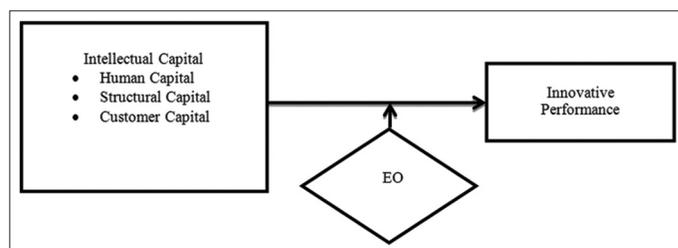
3.2. Measurements
Five-point Likert scale was used in all measures, whereby 1 represents "strongly disagree," 2 represents "disagree," 3 represents "neutral," 4 represents "agree" and 5 represents "strongly agree." Firstly, IP measured by seven items developed by Gunday et al. (2011). IC was measure using by three dimensions namely, HC, SC and CC. HC was measured by 6 items scale adopted from Wu et al. (2008), while SC was measure using by 7 items scale adopted from Wu et al. (2008). CC is measured by six items. Finally, EO is measured by 9 items developed by Soininen et al. (2012).

3.3. Data Analysis
This study employed SPSS 20.0 for all descriptive analysis and partial least squares (PLS) path modeling using Smart PLS 2.0 software to perform data analysis (Wold, 1985; Hair et al., 2014; Wong, 2013; Henseler et al., 2009). A PLS model is normally analyzed and interpreted in two stages (Hair et al., 2014; Valerie,

Figure 1: Theoretical framework

2012); the measurement model and structural model to test the hypothesis.

3.4. Measurement Model

According to Hair et al. (2011), and Gotz et al. (2010) there are three step procedures for evaluating the measurement model namely, individual item reliabilities, convergent validity and discriminant validity. According to Hair et al. (2014) and Hair et al. (2011), indicator loadings (factor loadings) should be higher than 0.70. Based on the above recommendations, this study used a cut-off value for factor loadings at 0.70 as being significant. As shown in Table 1 and Figure 2, all item loads a range from 0.70 to 0.91 into their respective construct.

Next, the convergent validity of each construct was assessed. Convergent validity refers to the extent to which item truly represents the intended latent construct and indeed correlate with other measures of the same latent construct (Hair et al., 2011; Valerie, 2012). Convergent validity was assessed by examining the average variance extracted (AVE) and composite reliability (CR) of 0.70 (Hair et al., 2011; Valerie, 2012). Chin (1998) recommends that AVE of more than 0.5 and the CR of 0.7 or above are deemed acceptable. As can be seen from Table 1, all loadings and AVE are above 0.5 and the CR values are more than 0.7. Therefore, it can be concluded that convergent validity has been established.

The discriminant validity as next step, according to Hair et al. (2011) stated that discriminant validity stipulates that each latent construct's AVE should be higher than the construct's highest squared correlation with other latent construct (Fornell and Larcker's, 1981) and the indicators loadings should be greater than all its cross loadings. In the present study, discriminant validity of the measures was assessed through the Fornell and Larcker's (1981) criterion. Similar with correlation matrix depicted in Table 2.
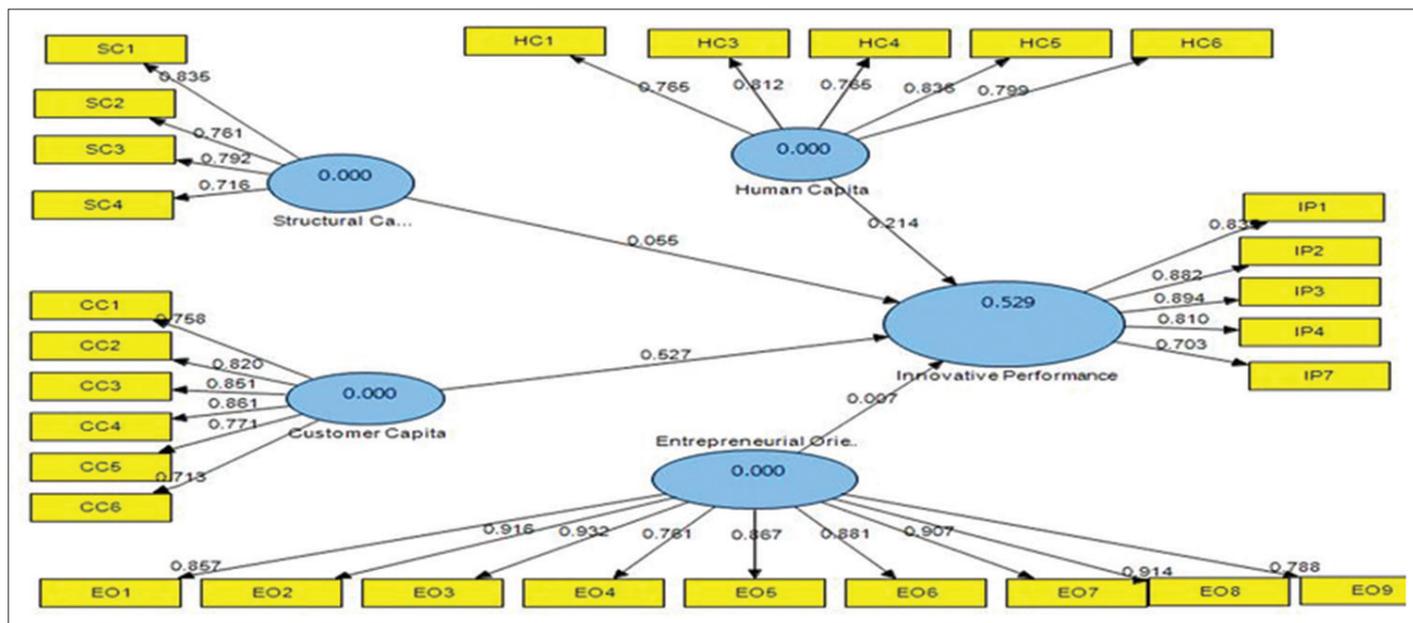
3.5. Structural Model

The structural model illustrates the relationships between latent variables or constructs that were hypothesized in the model of research. The significance of all path estimates and the variance explained (R^2) of the endogenous constructs were applied to determine the goodness of the theoretical model (Chin, 2010).

Table 1: Result of the measurement model–convergent validity

Constructs	Items	Loading	AVE	CR
IP	IP1	0.83	0.68	0.92
	IP2	0.88		
	IP3	0.89		
	IP4	0.81		
	IP7	0.70		
HC	HC1	0.76	0.63	0.90
	HC3	0.81		
	HC4	0.76		
	HC5	0.84		
	HC6	0.80		
SC	SC1	0.83	0.60	0.86
	SC2	0.76		
	SC3	0.79		
	SC4	0.72		
CC	CC1	0.76	0.64	0.91
	CC2	0.82		
	CC3	0.85		
	CC4	0.86		
	CC5	0.77		
	CC6	0.71		
EO	EO1	0.86	0.76	0.94
	EO2	0.92		
	EO3	0.93		
	EO4	0.76		
	EO5	0.87		
	EO6	0.88		
	EO7	0.91		
	EO8	0.91		
	EO9	0.79		

IP: Innovative performance, HC: Human capital, EO: Entrepreneurial orientation, CC: Customer capital, SC: Structural capital, AVE: Average variance extracted, CR: Composite reliability

Figure 2: Construct validity for study model

As presented in Table 3 and Figure 3, the results of the structural model from the PLS output.

HC was found positively and significantly related to IP ($\beta = 0.292$, $t = 2.099$, $P < 0.05$), hence, supporting Hypothesis 1a. In addition Hypothesis 1b showed no significant relationship between SC and IP ($\beta = 0.164$, $t = 1.148$, $P > 0.10$), thus, this Hypothesis 1b was not supported. CC was found positively and significantly related to IP ($\beta = 0.231$, $t = 1.644$, $p < 0.05$), hence, supporting Hypothesis 1c.

Table 3 and Figure 3 present the results on the moderating effect of EO on the relationship between IC and IP. Hypothesis 2a predicted an interaction between HC and EO to effect IP. However, the hypothesis was not supported ($\beta = -0.240$, $t = 0.551$, $P > 0.10$).

Similarly, Hypothesis 2b, which predicted an interaction between SC and EO to effect IP, hence, the hypothesis was not supported ($\beta = -0.430$, $t = 0.947$, $P > 0.10$). Lastly, Hypothesis 2c, which predicted an interaction between CC and EO to effect IP, hence, the hypothesis was supported ($\beta = 1.064$, $t = 2.582$, $P < 0.05$).

4. RESULTS AND DISCUSSION

In general, the findings of this study support previous findings, except the finding regarding to SC. The finding relating to SC is not as hypothesized; it shows that there is no relationship between SC and IP. Hence, let's examine this finding first. The current findings showed that SC is not a factor that could influence IP, one possible explanation for this situation is that SC included all non-human storehouses of knowledge in organizations, but SMEs do not have enough of these resources that enhance the environment for innovation in its production, because of their small size and recent establishment. Hence, SMEs need longer time to increase and improve level of IP.

Table 2: Discriminant validity of construct

	CC	EO	HC	IP	SC
CC	0.80				
EO	−0.10	0.87			
HC	0.67	−0.09	0.80		
IP	0.70	−0.06	0.60	0.83	
SC	0.63	−0.03	0.65	0.53	0.78

Diagonal represents the square root of average variance extracted while the other entries represent squared correlations. IP: Innovative performance, HC: Human capital, EO: Entrepreneurial orientation, CC: Customer capital, SC: Structural capital, AVE: Average variance extracted

The findings of the study also revealed that HC and IP were positively related. It seemed that the findings of this study confirm the findings of previous research (Alpkan et al., 2010; El-Telbani, 2013; Halim et al., 2014; Han and Li, 2014; Wu et al., 2008; Zerenler et al., 2008). In other words, HC is important for IP.

Table 3: Summary of the structural model

Hypothesis	Relation	Beta	Standard error	t value	P value	Finding
H$_{1a}$	HC→IP	0.292	0.139	2.099	0.02**	Supported
H$_{1b}$	SC→IP	0.164	0.143	1.148	0.13	Not supported
H$_{1c}$	CC→IP	0.231	0.141	1.644	0.05**	Supported
H$_{2a}$	HC*EO→IP	−0.240	0.435	0.551	0.29	Not supported
H$_{2b}$	SC*EO→IP	−0.430	0.454	0.947	0.17	Not supported
H$_{2c}$	CC*EO→IP	1.064	0.412	2.582	0.01***	Supported

***significant at 0.01 (one-tailed), **significant at 0.05 (one-tailed), *significant at 0.1 (one-tailed). IP: Innovative performance, HC: Human capital, EO: Entrepreneurial orientation, CC: Customer capital, SC: Structural capital
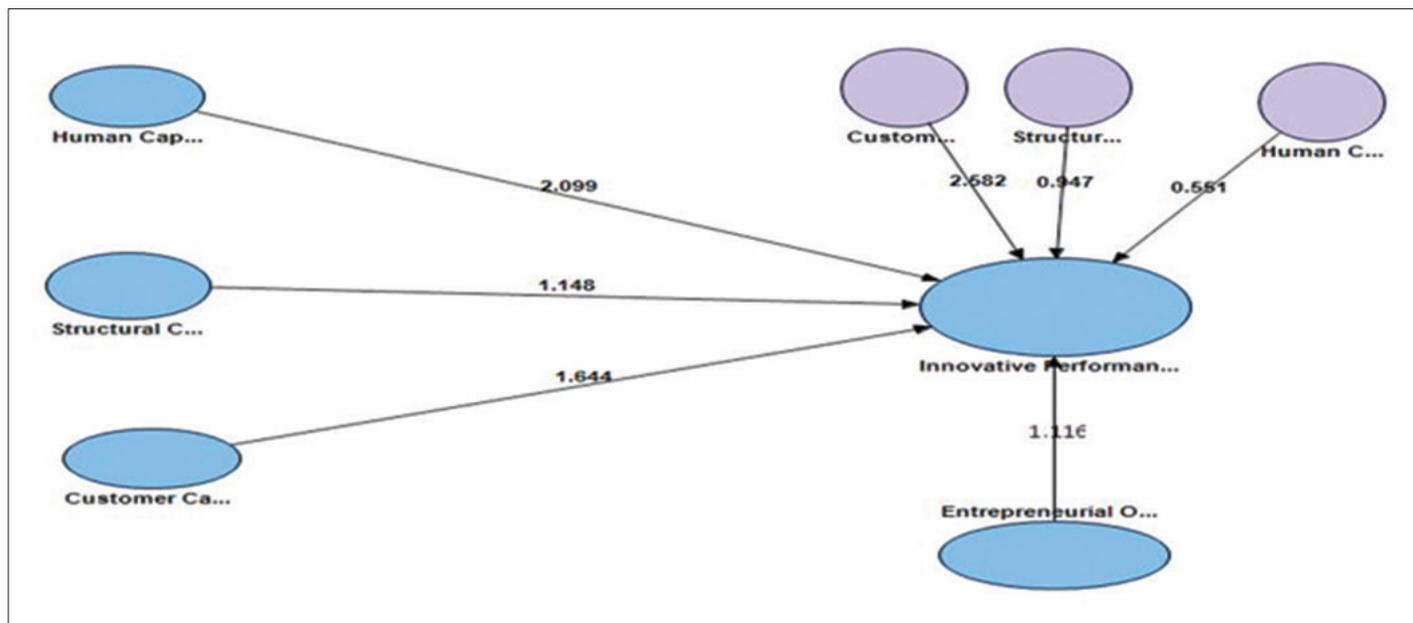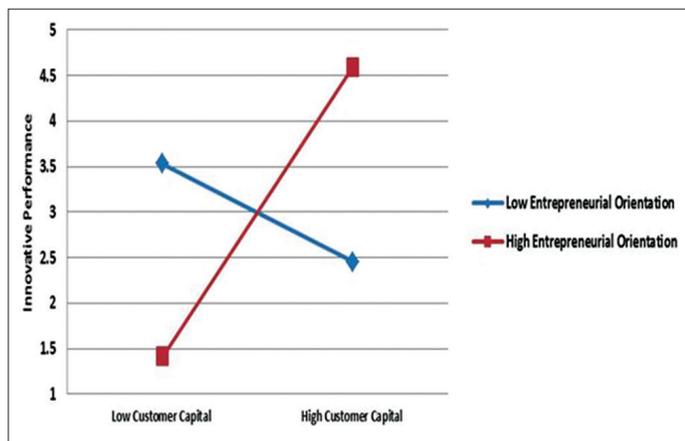
Figure 3: The structural model

Figure 4: Plot of interaction between customer capital and entrepreneurial orientation on innovative performance

Indeed, when SMEs are highly acquired with their HC they are able to do their performance better and thus is able to higher innovation.

Another factor that was found to have a positive effect on IP is CC. SMEs that is supportive of its CC means that the firms value the contribution of their level of IP. Therefore, this study confirm the findings of previous research (Alpkan et al., 2010; El-Telbani, 2013; Halim et al., 2014; Han and Li, 2014; Wu et al., 2008; Zerenler et al., 2008).

From the findings, H_2 is partially rejected. EO did not significantly moderate on the relationship between HC, SC and IP. In contrast, as shown in Figure 3. EO have significantly moderate on the relationship between CC and IP. In other words, Figure 4 indicates that the relationship between CC and IP was strongest in the case of high EO, and weakest in the case of low EO. That means, under both conditions of low and high CC, the results reported that SMEs with high levels of CC reported a significantly better IP.

5. CONCLUSION

In conclusion, IC are good for enhancing IP, which implies that SMEs must do to enhance these three dimensions of IC (HC, SC and CC). In addition, this study supports the effect of EO that moderate partially in relationship between IC and IP among SMEs in Jordan.

REFERENCES

Alpkan, L., Bulut, C., Gunday, G., Ulusoy, G., Kilic, K. (2010), Organizational support for entrepreneurship and its interaction with human capital to enhance innovative performance. Management Decision, 48(5), 732-755.

Avlonitis, G.J., Salavou, H.E. (2007), Entrepreneurial orientation of SMEs, product innovativeness, and performance. Journal of Business Research, 60(5), 566-575.

Barney, J. (1991), Firm resources and sustained competitive advantage. Journal of Management, 17(1), 99-120.

Campanella, F., Peruta, M.R.D., Del Giudice, M. (2014), Creating conditions for innovative performance of science parks in Europe: How manage the intellectual capital for converting knowledge into organizational action. Journal of Intellectual Capital, 15(4), 576-596.

Chahal, H., Bakshi, P. (2015), Examining intellectual capital and competitive advantage relationship: Role of innovation and organizational learning. International Journal of Bank Marketing, 33(3), 376-399.

Chen, J., Chen, Y., Vanhaverbeke, W. (2011), The influence of scope, depth, and orientation of external technology sources on the innovative performance of Chinese firms. Technovation, 31(8), 362-373.

Chin, W. (2010), How to write up and report PLS analyses. In: Vinzi, V.E., Chin, W.W., Henseler, J., Wang, H., editors. Handbook of Partial Least Square. Berlin, Heidelberg: Springer. p655-690.

Chin, W.W. (1998), The partial least squares approach to structural equation modelling. In: Marcoulides, G.A., editor. Modern Methods for Business Research. Mahwah, New Jersey: Laurence Erlbaum Associates. p295-336.

Comlek, O., Kitapçi, H., Çelik, V., Özşahin, M. (2012), The effects of organizational learning capacity on firm innovative performance. Procedia-Social and Behavioral Sciences, 41, 367-374.

Covin, J.G. (1991), Entrepreneurial versus conservative firms: A comparison of strategies and performance. Journal of Management Studies, 28(5), 439-462.

Covin, J.G., Slevin, D.P. (1989), Strategic management of small firms in hostile and benign environments. Strategic Management Journal, 10(1), 75-87.

Covin, J.G., Green, K.M., Slevin, D.P. (2006), Strategic process effects on the entrepreneurial orientation-sales growth rate relationship. Entrepreneurship Theory and Practice, 30(1), 57-81.

Dada, O.L., Fogg, H. (2014), Organizational learning, entrepreneurial orientation, and the role of university engagement in SMEs. International Small Business Journal, 34(1), 1-19.

de Leeuw, T., Lokshin, B., Duysters, G. (2014), Returns to alliance portfolio diversity: The relative effects of partner diversity on firm's innovative performance and productivity. Journal of Business Research, 67(9), 1839-1849.

Delgado, M. (2011), The Role of Intellectual Capital Assets on the Radicalness of Innovation: Direct and Moderating Effects. Working Papers Published at UAM-Accenture, University of Madrid, Madrid. Available from: http://www.uam.es/docencia/degin/catedra.

el Telbani, N. (2013), The relationship between intellectual capital and innovation in Jawwal Company-Gaza. Jordan Journal of Business Administration, 9(3), 619-650.

Fernandez-Mesa, A., Alegre, J. (2015), Entrepreneurial orientation and export intensity: Examining the interplay of organizational learning and innovation. International Business Review, 24(1), 148-156.

Fornell, C., Larcker, D.F. (1981), Evaluating structural equation models with unobservable variables and measurement error. Journal of Marketing Research, 18, 39-50.

González-Loureiro, M., Dorrego, P.F. (2012), Intellectual capital and system of innovation: What really matters at innovative SMEs. Intangible Capital, 8(2), 239-274.

Gotz, O., Liehr-Gobbers, K., Krafft, M. (2010), Evaluation of structural equation models using the partial least squares (PLS) approach. In: Vinzi, V.E., Chin, W.W., Henseler, J., Wang, H., editors. Handbook of Partial Least Squares: Concepts, Methods and Applications. Heidelberg: Springer. p691-711.

Gunday, G., Ulusoy, G., Kilic, K., Alpkan, L. (2011), Effects of innovation types on firm performance. International Journal of Production Economics, 133(2), 662-676.

Han, Y., Li, D. (2015), Effects of intellectual capital on innovative performance: The role of knowledge-based dynamic capability. Management Decision, 53(1), 40-56.

Hagedoorn, J., Cloodt, M. (2003), Measuring innovative performance:

Is there an advantage in using multiple indicators. Research Policy, 32(8), 1365-1379.

Hair, J.F., Hult, G.T.M., Ringle, C.M., Sarstedt, M. (2014), A primer on partial least squares structural equation modeling (PLS-SEM). Thousand Oaks: Sage Publications.

Hair, J.F., Ringle, C.M., Sarstedt, M. (2011), PLS-SEM: Indeed a silver bullet. Journal of Marketing Theory and Practice, 18, 139-152.

Halim, H.A., Ahmad, N.H., Ramayah, T., Hanifah, H. (2014), The growth of innovative performance among SMEs: Leveraging on organisational culture and innovative human capital. Journal of Small Business and Entrepreneurship Development, 2(1), 107-125.

Han, Y., Li, D. (2014), Effects of intellectual capital on innovative performance: The role of knowledge-based dynamic capability. Management Decision, 53(1), 40-56.

Henseler, J., Ringle, C.M., Sinkovics, R.R. (2009), The use of partial least squares path modeling in international marketing. Advances in International Marketing, 20(1), 277-319.

Jantunen, A. (2005), Knowledge-processing capabilities and innovative performance: An empirical study. European Journal of Innovation Management, 8(3), 336-349.

Khalili, H., Nejadhussein, S., Fazel, A. (2013), The influence of entrepreneurial orientation on innovative performance: Study of a petrochemical company in Iran. Journal of Knowledge-based Innovation in China, 5(3), 262-278.

Kreiser, P.M. (2011), Entrepreneurial orientation and organizational learning: The impact of network range and network closure. Entrepreneurship Theory and Practice, 35(5), 1025-1050.

Kreiser, P.M., Marino, L.D., Weaver, K.M. (2002), Assessing the psychometric properties of the entrepreneurial orientation scale: A multi-country analysis. Entrepreneurship Theory and Practice, 26(4), 71-94.

Lokshin, B., van Gils, A., Bauer, E. (2009), Crafting firm competencies to improve innovative performance. European Management Journal, 27(3), 187-196.

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.

Madhoushi, M., Sadati, A., Delavari, H., Mehdivand, M., Mihandost, R. (2011), Entrepreneurial orientation and innovation performance: The mediating role of knowledge management. Asian Journal of Business Management, 3(4), 310-316.

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

Nasir, W.M. (2013), The Relationship between Strategic Orientation and Firm Performance: Evidence from Small and Medium Enterprises in Malaysia. (Doctoral dissertation, Victoria University).

Riani, A.L. (2013), Relationship between Entrepreneurial Orientation, Marketing Orientation, Knowledge Management and Innovative Performance. Paper Presented at the International Conference on Innovation Challenges in Multidisciplinary Research and Practice. Kuala Lumpur, Malaysia. Available from: http://www.globalillum in at ors.org/wp-content/uploads/2013/08/proceeding-final.pdf.

Shehu, A.M., Mahmood, R. (2014), The mediating effect of organizational culture on the relationship between entrepreneurial orientation and firm performance in Nigeria. Mediterranean Journal of Social Sciences, 5(23), 480-488.

Social Security Corporation. (2016), Annual Report 2015, Amman, Jordan. Available from: https://www.ssc.gov.jo/Arabic/ElectronicLibrary/Pages/Statistical%20information.aspx.

Soininen, J., Martikainen, M., Puumalainen, K., Kyläheiko, K. (2012), Entrepreneurial orientation: Growth and profitability of finnish small- and medium-sized enterprises. International Journal of Production Economics, 140(2), 614-621.

Soininen, J., Puumalainen, K., Sjögrén, H., Syrjä, P., Richter, C. (2015), What drives entrepreneurial orientation in small firms? The roles of owner-manager and financial conditions. International Journal of Business Excellence, 8(1), 85-103.

Subramaniam, M., Youndt, M.A. (2005), The influence of intellectual capital on the types of innovative capabilities. Academy of Management Journal, 48(3), 450-463.

Valerie, F. (2012), Re-discovering the PLS approach in management science. Management, 15(1), 101-123.

Wales, W.J., Gupta, V.K., Mousa, F.T. (2013a), Empirical research on entrepreneurial orientation: An assessment and suggestions for future research. International Small Business Journal, 31(4), 357-383.

Wales, W.J., Parida, V., Patel, P.C. (2013b), Too much of a good thing? Absorptive capacity, firm performance, and the moderating role of entrepreneurial orientation. Strategic Management Journal, 34(5), 622-633.

Wiklund, J., Shepherd, D. (2003), Knowledge-based resources, entrepreneurial orientation, and the performance of small and medium-sized businesses. Strategic Management Journal, 24(13), 1307-1314.

Wold, H. (1985), Partial least squares. In: Kotz, S., Johnson, N.L., editors. Encyclopedia of Statistical Sciences. Vol. 6. New York: Wiley. p581-591.

Wong, K.K.K. (2013), Partial least squares structural equation modeling (PLS-SEM) techniques using SmartPLS. Marketing Bulletin, 24(1), 1-32.

Wu, W.Y., Chang, M.L., Chen, C.W. (2008), Promoting innovation through the accumulation of intellectual capital, social capital, and entrepreneurial orientation. R and D Management, 38(3), 265-277.

Zerenler, M., Hasiloglu, S.B., Sezgin, M. (2008), Intellectual capital and innovation performance: Empirical evidence in the Turkish automotive supplier. Journal of Technology Management and Innovation, 3(4), 31-40.