

Examining of Innovative Performance Amongst SMEs in Jordan

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Abstract: The aim of this study is to examine the innovative performance of SMEs in Jordan. The study also investigates the moderating effect of entrepreneurial orientation on the relationship among intellectual capital, organizational learning and innovative performance. Data was gathered using a questionnaire survey. Questionnaires were distributed to a sample of 600 managers/owners of Jordanian SMEs. 325 usable questionnaires were returned. PLS SEM technique was applied to analyse the data. The findings show that intellectual capital (human capital and customer capital dimensions) have a positive and significant effect on innovative performance. Results also showed that organizational learning (information acquisition, information distribution and organizational memory) has positive and significant effect on innovative performance. Finally, the study also found that entrepreneurial orientation (EO) moderates the relationship between customer capital and innovative performance.

Keywords: Innovative Performance; Intellectual Capital; Organizational Learning; Entrepreneurial Orientation; SMEs; Jordan.

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 (Khalil, Nejadhussein & Fazel, 2013; Comlek, Kitapci, Celik & Ozsahin, 2012). Majority of firms are in need of creating innovative performance to direct them to create new products and services therefore 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 SMEs, entrepreneurial environment with effective innovators are needed if such enterprises are desirous for increasing their level of experience and their survival level (Fernandez-Mesa & Alegre, 2015). SMEs displaying innovative performance may be affected by limitations in resources like the lack of qualified and experienced workforce or financial capabilities (De Leeuw, Lokshin & Duysters, 2014).

However, there is a need for more empirical research to be conducted to shed light on the intellectual capital and organizational learning concept in order to furnish an accurate description of its effect. Prior studies reported that firm size positively and significantly influences innovative performance (Chen, Chen, & Vanhaverbeke, 2011). In the present study, the researcher focuses on small and medium-sized enterprises (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 significantly 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. According to Global Innovation Index (GII, 2016) report published by Cornell University, INSEAD

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International Business School, and the World Intellectual Property Organization (WIPO), Jordan occupies the 9th place among Arab nations, and 82nd on a global scale in terms of overall innovative performance. On the basis of the index, Jordan went from the 64th position in 2014, 75th in 2015 to 82ed position in 2016. (GII, 2014; GII, 2015; GII, 2016).

Thus, this study makes 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 innovative performance among the SMEs. A literature search reveals limited empirical studies on the issues of intellectual capital, organizational learning and innovative performance among Jordanian SMEs.

2 Literature Review

2.1 Innovative Performance (IP)

The challenges for companies to survive are doing so different and continuous innovation, whether it is related to the creation of new products and services. Khalili, et al. (2013) definition innovative performance focused on newness of products and services; they defined innovative performance as containing new products and new projects which are leading to: 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 innovative performance in firms that include; number of new goods 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 Cloudt (2003) defined innovative performance as the achievements of companies in terms of ideas, sketches, and models of new devices, products, processes and systems. But, Lokshin, Van Gils and Bauer (2009) focused their definition of innovative performance on radical and incremental innovations which are the two extremes on the continuum of the novelty degree of a product. According to Gunday, Ulusoy, Kilic and Alpkın (2011) innovative performance is the integration of the overall organizational achievements that stems from its renewal and improvements efforts in different innovative aspect of firms namely, processes, products, and structure.

Previous studies have also shown that there are many factors that could affect innovative performance. Some of the factors have been shown to have a positive relationship with innovative performance include organizational learning (Comlek et al., 2012; Fernandez-Mesa & Alegre, 2015; Sanz-Valle, Naranjo-Valencia, Jiménez-Jiménez and Perez-Caballero, 2011; Wang, 2008; Wang & Ellinger, 2011), and entrepreneurial orientation (Khalili et al., 2013; Riani, 2013). Furthermore, there is a lack of studies on entrepreneurial orientation that focus on organizational learning and innovative performance. For example, almost no studies examine the moderating effect of entrepreneurial orientation on the relationships between intellectual capital, organizational learning and innovative performance. Therefore, it is an indicator that entrepreneurial orientation, as a moderating variable with innovative performance, 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 (VRIN) to obtain and maintain competitive advantage of firm that could lead to enhanced firm performance. Availability of ideas, talents, projects and employees'/ managers' knowledge base by intellectual capital and organizational learning, it is necessary to achieve innovative performance.

2.2 Intellectual Capital

Intellectual capital is an input to innovation; innovation as a result of the use of knowledge and intellectual capital, the innovation process as a knowledge management process (González-Loureiro & 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 intellectual capital might not derive equal benefits, because they differ in their ability of sensing, seizing and reconfiguring such capital (Han & Li, 2014).

In the present study, intellectual capital 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, structural capital and customer capital (Wu, Chang and Chen, 2008). This definition covers all main dimensions of intellectual capital; human capital, structural capital and customer capital.

2.3 Intellectual Capital and Innovative Performance (IP)

In the past, studies on intellectual capital and innovative performance have shown a mixed results when tested in various settings. While some studies have shown significant relationships between intellectual capital and innovative performance, the findings they reported were inconsistent. Majority of studies reported a positive and significant relationship between the two variables (e.g. Alpkhan, Bulut, Gunday, Ulusoy & Kilic, 2010; Chahal & Bakshi, 2015; Delgado, 2011; El Telbani, 2013; Gonzalez-Loureiro & Dorrego, 2012; Halim, Ahmad, Ramayah & Hanifah, 2014; Han & Li, 2014; Wu et al., 2008; Zerenler, Hasiloglu & Sezgin, 2008). On the other hand, there are few other studies have shown some of intellectual capital dimension negatively related to innovative performance (e.g. Campanella, Rosaria Della Peruta & Del Giudice, 2014; Subramaniam & Youndt, 2005).

In conclusion, numerous studies found a positive and significant relationship between intellectual capital dimensions such as human capital, customer capital and structural capital and innovative performance (Alpkhan et al., 2010; El Telbani, 2013; Halim et al., 2014; Han & Li, 2014; Wu et al., 2008). Therefore, it is hypothesized that:

H1a: There is positive relationship between human capital and innovative performance

H1b: There is positive relationship between structural capital and innovative performance

H1c: There is positive relationship between customer capital and innovative performance

2.4 Organizational Learning

The essence of organizational learning (OL) is in creating knowledge within the organization that works towards sustaining competitive advantage which will lead to the creation of novel markets and positions (Jones & Macpherson, 2006). Stated clearly, an organization's knowledge is considered as an asset that contributes when managed towards the innovative performance of the firm (Wang & Ellinger, 2011). However, non-systematic and inconsistent practices of learning are still common in SMEs where the firm infrastructure and HR-related solutions are relatively weak (Tam & Gray, 2016).

The present study defines organizational learning as a process that involves information acquisition, information distribution, information interpretation, and organizational memory among employees in the organization (Wang & Ellinger, 2011). This definition covers all dimensions of organizational learning which includes both adoption of behaviour change and creation of knowledge at multiple levels within an organization and is the most suitable definition for SMEs' learning context (Wang & Ellinger, 2011; Wang, 2008; Huber, 1991).

2.5 Organizational Learning and Innovative Performance (IP)

A review of literature also reveals that majority of studies concerning organizational learning and innovative performance has shown mix results when tested in various settings. Numerous studies reported a positive and significant relationship between the two variables i.e. organizational learning and innovative performance (e.g. Abo-Kashef, 2013; Dada & Fogg, 2014; Fernandez-Mesa & Alegre, 2015; Santos-Vijande, López-Sánchez & González-Mieres, 2012); Wang & Ellinger, 2011; Zhou, Hu & Shi, 2015). Contrastingly, Comlek et al. (2012) and Abo-Kashef (2013) found no significant relationship between OL dimensions and innovative performance.

In conclusion, many studies have been conducted and found all four organizational learning dimensions such as information acquisition, information distribution, information interpretation, and organizational memory were significantly and positively related to innovative performance (Comlek et al., 2012; Fernandez-Mesa & Alegre, 2015; Sanz-Valle et al., 2011; Wang, 2008; Wang & Ellinger, 2011). . Therefore, it is hypothesized that:

H2a: There is positive relationship between information acquisition and innovative performance

H2b: There is positive relationship between information distribution and innovative performance

H2c: There is positive relationship between information interpretation and innovative performance

H2d: There is positive between organizational memory and innovative performance

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

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

As such, entrepreneurial orientation has not been studied previously as moderating variable on the relationship between IC and innovative performance. The study would expect the entrepreneurial orientation as interacting with the intellectual capital and organizational learning to identify the moderating effects on innovative performance. The study expects the entrepreneurial orientation can enhance the relationship between intellectual capital, organizational learning and innovative performance. Also, there is still exists an unclear support that indicates a direct relationship between the variables. According to Wales, Gupta and Mousa (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 entrepreneurial orientation on the relationship between intellectual capital, organizational learning and innovative performance has received less attention from researchers. Therefore, this study intends to expand the knowledge on innovative performance of SMEs by examining the moderating role of entrepreneurial orientation on the relationship between intellectual capital, organizational learning and innovative performance.

Prior studies indicate that innovativeness, risk-taking and proactiveness exhibit moderate to high correlations with one another in practice (Covin, Green & Slevin, 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., 2013a). The innovativeness, risk-taking and proactiveness dimensions were combined most frequently to form a unidimensional conceptualization of EO; about 80 per cent of the total unidimensional articles used as a construction (Wales, Parida & Patel, 2013b), such as: Fernandez-Mesa and Alegre (2015), Soininen, Puumalainen, Sjögrén, Syrjä and Richter (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, Marino and Weaver (2002), Covin (1991) and Covin and Slevin (1989).

Though there was limited study that focusing on the moderation effect of entrepreneurial orientation on intellectual capital, organizational learning and innovative performance, 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 entrepreneurial orientation. As argued by Nahapiet and Ghoshal (1998), innovation is a process of combining assets and thus, entrepreneurial orientation may facilitate the company's ability to appropriately utilize resources and innovates. In other writing, Wiklund and Sheperd (2003) also suggested that entrepreneurial orientation can enhance the relationship between knowledge-based resources and firm performance. Therefore, it is hypothesized that:

H3: Entrepreneurial orientation moderates the relationship between intellectual capital and innovative performance

H4: Entrepreneurial orientation moderates the relationship between organizational learning and innovative performance

2.7 Theoretical Framework

As a result, intellectual capital, organizational learning and entrepreneurial orientation appear to be major interests in order to develop the capacity for innovative performance in organizations. Consequently, the above discussion leads to the theoretical framework that is given in Figure 1.

3 Research Methodology

3.1 Respondents of the Study

According to Social Security Corporation (2016) that 43091 is total number of the Jordanian SMEs. Therefore, in the population for this study that was selected only 11227 SMEs in Amman, Irbid and Zarqa for practical reasons. These SMEs were found active and have been in the operation for more than 3 years. 600 SMEs from these three cities are selected based on a systematic random sampling. All 600 questionnaires were distributed by number of SMEs per city. The process of distribution and collection for the survey instruments was almost taken four months. Respondents for this study are managers/owners of SMEs, only 325 questionnaires were found to be useful for further analysis, which refers a response rate of 54.1%. It is noted that 64.9% of the SMEs employed between 20-99 employees. Majority of the SMEs (61.2%) surveyed have been in operation for more than ten years. In terms of ownership of the company, 46.2% of

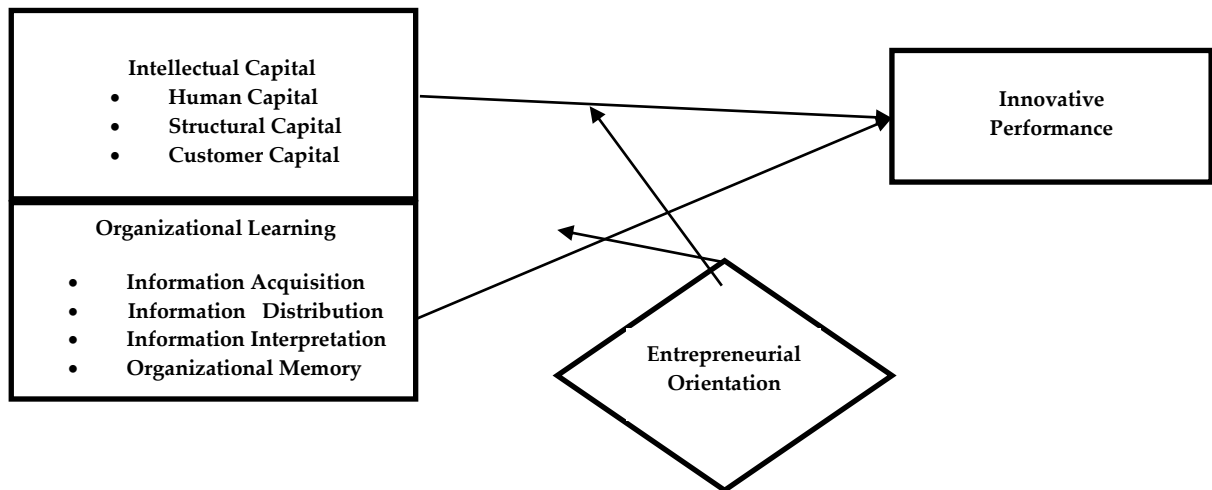


Fig 1: Theoretical Framework

of the SMEs are limited liability. Majority of the SMEs (82%) were located in Amman. Finally, 51.4% of the SMEs were manufacturing. 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, innovative performance measured by seven items developed by Gunday et al., (2011). Intellectual capital was measured using by three dimensions namely, human capital, structural capital and customer capital. Human capital was measured by six items scale adopted from Wu, et al. (2008), while structural capital was measure using by seven items scale adopted from Wu, et al. (2008). Customer capital is measured by six items. Organizational learning was measured using by four dimensions namely, information acquisition, information distribution, information interpretation and organizational memory. Organizational learning is measured by 25 items developed by Wang and Ellinger (2011). Information acquisition was measured by seven items scale while information distribution was measure using by five items scale. Information interpretation was measured by five

items and organizational memory was measured by eight items. Finally, entrepreneurial orientation is measured by 9 items developed by Soinin et al (2012).

4 Data Analysis

This study employed IBM SPSS Statistics 20 for all descriptive analysis and partial least squares (PLS) path modeling using Smart PLS 2.0 software to perform data analysis (Wold, 1985; Hair, Hult, Ringle, & Sarstedt, 2014; Wong, 2013; Henseler, Ringle & Sinkovics, 2009). A PLS model is normally analyzed and interpreted in two stages (Hair et al, 2014; Valerie, 2012); the measurement model and structural model to test the hypothesis.

4.1 Measurement Model

According to Hair, Ringle and Sarstedt (2011), and Gotz, Liehr-Gobbers, and Krafft (2010). There are three steps 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.

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 composite reliability values are more than 0.7. Therefore, it can be concluded that convergent validity has been established.

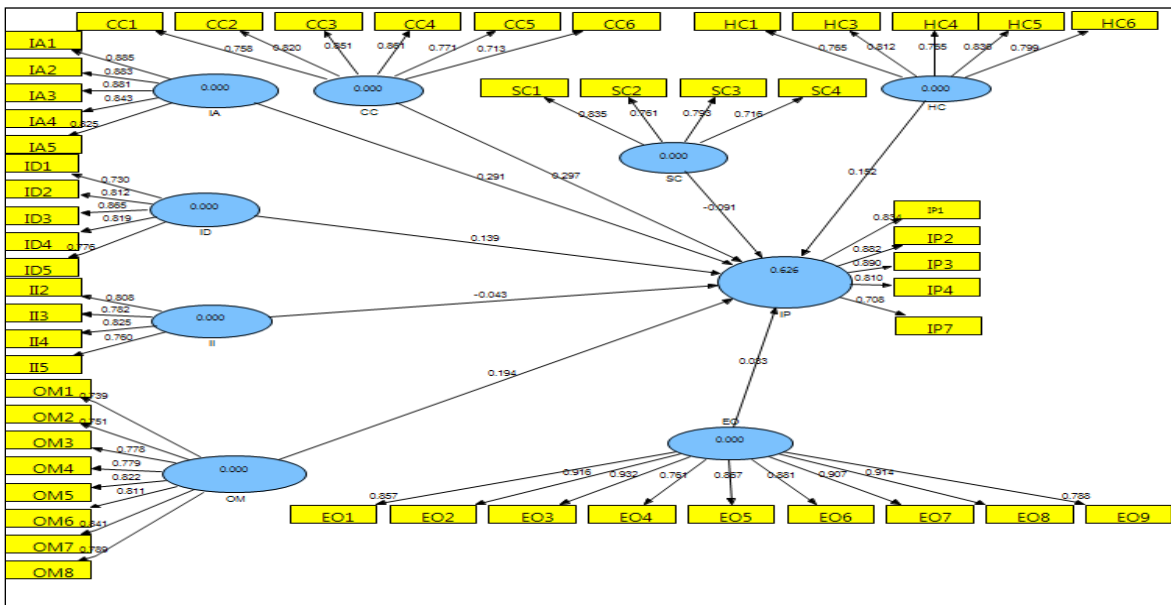


Fig. 2: Construct Validity for Study Model.

The discriminant validity as next step, according to Hair et al. (2011) stated that discriminant validity stipulates that each latent constructs' AVE should be higher than the construct's highest squared correlation with other latent construct (Fornell–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.

4.2 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 (R2) of the endogenous constructs were applied to determine the goodness of the theoretical model (Chin, 2010). As presented in Table 3 and Figure 3, the results of the structural model from the PLS output.

Table 1: Result of the Measurement Model – Convergent Validity.

Constructs	Items	Loading	Average Variance Extracted (AVE)	CR
Innovative Performance	IP1	0.83	0.68	0.92
	IP2	0.88		
	IP3	0.89		
	IP4	0.81		
	IP7	0.71		
Human Capital	HC1	0.76	0.63	0.90
	HC3	0.81		
	HC4	0.76		
	HC5	0.84		
	HC6	0.80		
Structural Capital	SC1	0.83	0.60	0.86
	SC2	0.76		
	SC3	0.79		
	SC4	0.72		
Customer Capital	CC1	0.76	0.64	0.91
	CC2	0.82		
	CC3	0.85		
	CC4	0.86		

	CC5	0.77		
	CC6	0.71		
Information Acquisition	IA1	0.89	0.75	0.94
	IA2	0.88		
	IA3	0.88		
	IA4	0.84		
	IA5	0.83		
Information Distribution	ID1	0.73	0.64	0.90
	ID2	0.81		
	ID3	0.86		
	ID4	0.82		
	ID5	0.78		
Information Interpretation	II2	0.81	0.63	0.87
	II3	0.78		
	II4	0.83		
	II5	0.76		
Organizational Memory	OM1	0.74	0.62	0.93
	OM2	0.75		
	OM3	0.78		
	OM4	0.78		
	OM5	0.82		
	OM6	0.81		
	OM7	0.84		
	OM8	0.79		

Entrepreneurial Orientation	EO1	0.87	0.76	0.94
	EO2	0.93		
	EO3	0.92		
	EO4	0.78		
	EO5	0.86		
	EO6	0.89		
	EO7	0.89		
	EO8	0.92		
	EO9	0.80		

The structural model estimates are shown in Figure 3 and Table 3, including the direct relationship among the variables. The first proposed hypothesis, Hypothesis 1a proposed that human capital is positively related to innovative performance and based on Table 3 and Figure 3, a significant positive relationship exists between the two variables at ($\beta = 0.152, t = 2.518, p < 0.05$), indicating support for Hypothesis 1a. Hypothesis 1b proposed that structural capital is positively related to innovative performance but the result in Table 3 showed a negative relationship and no significant relationship between the two at ($\beta = -0.091, t = 1.492, p > 0.05$), indicating that Hypothesis 1b was rejected. Moving on to Hypothesis 1c, it predicted a significant relationship between customer capital and innovative performance and the results supported this prediction at ($\beta = 0.297, t = 3.745, p < 0.01$), and thus, Hypothesis 1c is supported.

With regards to Hypothesis 2a, it proposed a positive relationship between information acquisition and innovative performance. Based on the result in Table 3 and Figure 3, a significant positive relationship does exist between the two at ($\beta = 0.291, t = 5.207, p < 0.01$), and thus, supporting Hypothesis 2a. Added to this, Hypothesis 2b predicted a positive relationship between information distribution and innovative performance and the result supported the positive relationship at ($\beta = 0.139, t = 2.035, p < 0.05$). This indicates that Hypothesis 2b was supported. In Hypothesis 2c, this study proposed a positive relationship between information interpretation and innovative performance. According to the result in Table 3, a negative relationship and no significant relationship was found between the two variables at ($\beta = -0.043, t = 0.991, p > 0.10$), indicating that Hypothesis 2c was rejected. Lastly, in this study proposed the positive relationship between organizational memory and innovative performance in Hypothesis 2d and this is supported by the result at ($\beta = 0.194, t = 3.329, p < 0.01$). Therefore, Hypothesis 2d was supported.

Table 4 and Figure 4 present the results on the moderating effect of entrepreneurial orientation on the relationship between intellectual capital, organizational learning and innovative performance. The results shown in Figure 4 and Table that Hypothesis 3a proposed the relationship between human capital and innovative performance through the moderating role of entrepreneurial orientation. The obtained result was not supported the hypothesis at ($\beta = 0.060, t = 0.141, p > 0.10$). Similarly, the results shown in Table 4, Figure 4 was not support Hypothesis 3b, which proposed that the moderating role of entrepreneurial orientation on the relationship between structural capital and innovative performance and the results did not support it at ($\beta = -0.380, t = 0.841, p > 0.10$). On the other hand, the results shown in Table 4, Figure 4 was support Hypothesis 3c, which proposed that the moderating role of entrepreneurial orientation on the relationship between customer capital and innovative performance and the results support it at ($\beta = 1.000, t = 1.981, p < 0.05$).

Table 2: Discriminant validity of construct.

	Customer Capital	Entrepreneurial Orientation	Human Capital	Information Acquisition	Information Distribution	Information Interpretation	Innovative Performance	Organizational Memory	Structural Capital
Customer Capital	0.80								
Entrepreneurial Orientation	-0.10	0.87							
Human Capital	0.67	-0.09	0.80						
Information Acquisition	0.58	-0.03	0.50	0.86					
Information Distribution	0.64	-0.11	0.61	0.46	0.80				
Information Interpretation	0.59	-0.17	0.56	0.45	0.53	0.79			
Innovative Performance	0.70	-0.06	0.60	0.64	0.60	0.49	0.83		
Organizational Memory	0.69	-0.21	0.55	0.56	0.63	0.58	0.65	0.79	
Structural Capital	0.63	-0.03	0.65	0.55	0.61	0.46	0.53	0.55	0.78

Note: Diagonal represents the square root of Average Variance Extracted (AVE) while the other entries represent squared correlations

As an expected, the results shown in Table 4, Figure 4 did not support Hypothesis 4a, which proposed that the moderating role of entrepreneurial orientation on the relationship between information acquisition and innovative performance ($\beta = -0.055$, $t = 0.178$, $p > 0.10$). Similarly, the results shown in Table 4, Figure 4 was not support Hypothesis 4b, which proposed that the moderating role of entrepreneurial orientation on the relationship between information distribution and innovative performance and the results did not support it at ($\beta = -0.187$, $t = 0.511$, $p > 0.10$). According to the result in Table 4, which posited that entrepreneurial orientation moderates the relationship between information interpretation and innovative performance, indicating that Hypothesis 4c was rejected ($\beta = -0.136$, $t = 0.596$, $p > 0.10$). Lastly, the results shown in Table 4, Figure 4 did not support Hypothesis 4d, which proposed that the moderating role of entrepreneurial orientation on the relationship between organizational memory and innovative performance ($\beta = -0.416$, $t = 1.160$, $p > 0.10$).

5 Results and Discussion

In general, the findings of this study support previous findings, except the finding regarding to structural capital. The finding relating to structural capital is not as hypothesized; it shows that there is no relationship between structural capital and innovative performance. Hence, let's examine this finding first. The current findings

showed that structural capital is not a factor that could influence innovative performance, one possible explanation for this situation is that structural capital 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

Table 3: Summary of the Structural Model (Direct Relationships).

Hypothesis	Relation	Beta	Standard Error	t- value	p- value	Decision
H1a	Human Capital -> Innovative Performance	0.152	0.062	2.518	0.01**	Supported
H1b	Structural Capital -> Innovative Performance	-0.091	0.062	1.492	0.07	Not Supported
H1c	Customer Capital -> Innovative Performance	0.297	0.084	3.745	0.00***	Supported
H2a	Information Acquisition -> Innovative Performance	0.291	0.056	5.207	0.00***	Supported
H2b	Information Distribution -> Innovative Performance	0.139	0.067	2.035	0.02**	Supported
H2c	Information Interpretation -> Innovative Performance	-0.043	0.042	0.991	0.16	Not Supported
H2d	Organizational Memory -> Innovative Performance	0.194	0.056	3.329	0.00***	Supported

Note: t-values > 1.65* (p < 0.10); t-values > 1.96** (p < 0.05); t-values > 2.58*** (p < 0.01)

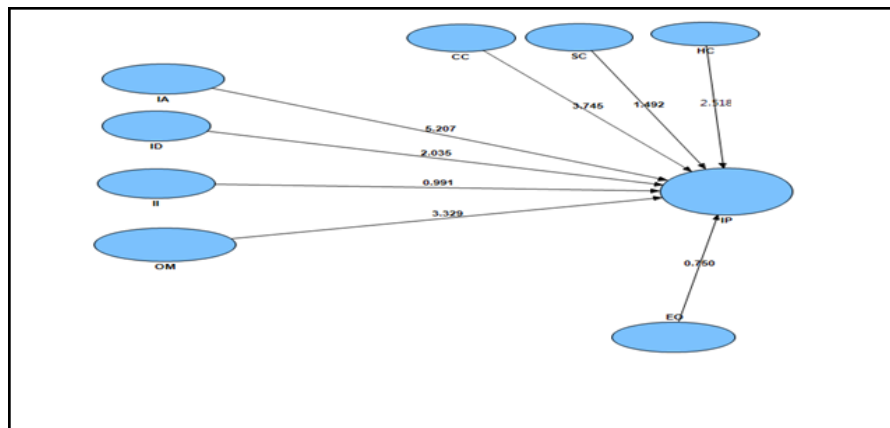
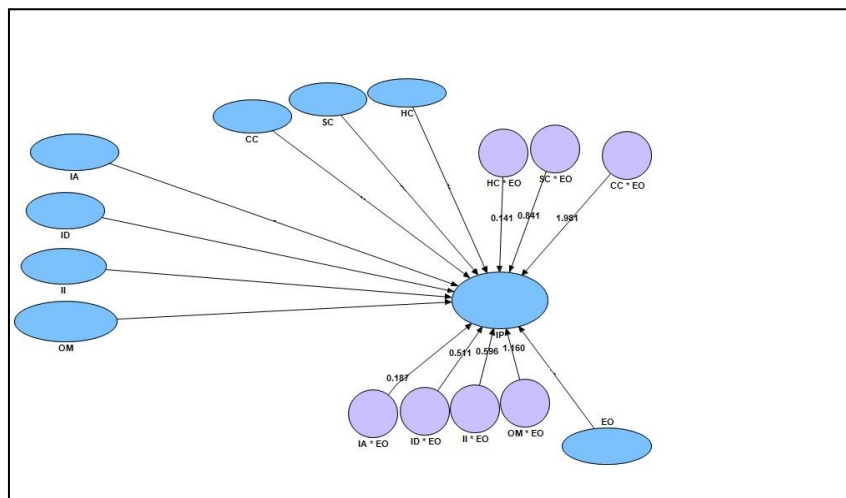


Fig 3: Structural Model (Direct Relationships).

Table 4: Structural model with moderating relationship.

Hypothesis	Relation	Beta	Std Error	t- value	p- value	Decision
H3a	Human Capital * Entrepreneurial Orientation - > Innovative Performance	0.060	0.428	0.141	0.44	Not supported
H3b	Structural Capital * Entrepreneurial Orientation - > Innovative Performance	-0.380	0.451	0.841	0.20	Not supported
H3c	Customer Capital * Entrepreneurial Orientation - > Innovative Performance	1.000	0.505	1.981	0.02**	Supported
H4a	Information Acquisition * Entrepreneurial Orientation - > Innovative Performance	-0.055	0.294	0.187	0.43	Not supported
H4b	Information Distribution * Entrepreneurial Orientation - > Innovative Performance	0.187	0.366	0.511	0.30	Not supported
H4c	Information Interpretation * Entrepreneurial Orientation - > Innovative Performance	-0.136	0.228	0.596	0.28	Not supported
H4d	Organizational Memory * Entrepreneurial Orientation - > Innovative Performance	-0.416	0.359	1.160	0.12	Not supported

Note: t-values > 1.65* (p < 0.10); t-values > 1.96** (p < 0.05); t-values > 2.58*** (p < 0.01)

**Fig. 4:** Structural model with moderating relationship.

establishment. Hence, SMEs need longer time to increase and improve level of innovative performance. The findings of the study also revealed that human capital and innovative performance were positively related. It seemed that the findings of this study confirms the findings of previous research (Alpkan et al., 2010; El Telbani, 2013; Halim et al., 2014; Han & Li, 2014; Wu et al., 2008 ; Zerenler et al., 2008). In other words, human capital is important for innovative performance. Indeed, when SMEs are highly acquired with their human capital 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 innovative performance is customer capital. SMEs that is supportive of its customer capital means that the firms value the contribution of their level of innovative performance. Therefore, this study confirm the findings of previous research (Alpkan et al., 2010; El Telbani, 2013; Halim et al., 2014; Han & Li, 2014; Wu et al., 2008 ; Zerenler et al., 2008).

From the findings, this study supports previous findings, except the finding regarding to information interpretation. The findings relating to information interpretation are not as hypothesized; it shows that there is no relationship between information interpretation and innovative performance. However, a plausible explanation for this inconsistent finding might be due to the information interpretation that included the sharing of the organization of its aims, knowledge and experience to its committed employees and the development of internal rotation programs for employee shifting from one department to the next while providing learning opportunities (Wang & Ellinger, 2011). Jordanian SMEs due to the obvious weakness in its internal environment to work, especially in teamwork, as well as Jordanian SMEs (especially small companies) continue to suffer in the training process and maybe this is due to the limited size of the companies and shortage of the government support to SMEs. The result from the present study indicated that an information acquisition, information distribution and organizational memory were positively related to innovative performance. This finding supports previous studies conducted by Comlek et al. (2012), Fernandez-Mesa and Alegre, (2015), Sanz-Valle et al. (2011), Wang (2008) and Wang and Ellinger (2011). Information acquisition is the important factor to gain new knowledge to improve performance of companies. In the context of Jordanian SMEs, external sources for new knowledge production are needed to development new innovation for performance. The significant relationship between information distribution and innovative performance could be due to the practices and activities that information distribution contains do help SMEs members to share and transfer their individual-level learning and knowledge acquisition to the organizational-level to improve innovative performance. In addition, the present findings of this study showed that Jordanian SMEs focus on distribution of the knowledge which is one of the fundamentals that make the knowledge more valuable for all employees, due to the organizational culture and lack of resources. Lastly, the findings indicated that organizational memory was the important predictor to innovative performance, although organizational memory consider as final stage in the organizational learning process. In addition, it is important for SMEs to own and use updated databases to keep abreast of the current knowledge and experience.

Entrepreneurial orientation was found to significantly moderate the relationship between intellectual capital and innovative performance. The relationship between intellectual capital and innovative performance was the strongest in the case of high entrepreneurial orientation, and the weakest in the case of low entrepreneurial orientation. The results indicated that different levels of entrepreneurial orientation differ much in innovative performance under conditions of high intellectual capital, but smaller differences were noted under conditions of low intellectual capital. In others words, under both conditions of low and high intellectual capital, the results reported that SMEs with high levels of intellectual capital reported a significantly better innovative performance. From the findings entrepreneurial orientation was found to significantly moderate the relationship between organizational learning and innovative performance. Unexpectedly, the relationship between organizational learning and innovative performance was the strongest in the case of low entrepreneurial orientation, and the weakest in the case of high entrepreneurial orientation. The results also, indicated that different levels of entrepreneurial orientation differ much in innovative performance under conditions of high organizational learning, but larger differences were noted under conditions of low organizational learning. In others words, under both conditions of low and high organizational learning, the results reported that SMEs with high levels of organizational learning reported a significantly better innovative performance. However, a plausible explanation for this inconsistent finding might be due to Jordanian SMEs still suffering in the culture of entrepreneurship, although the correlation with knowledge and learning process, where is the source of ideas for raising the level of innovation in SMEs performance. Theoretically, reviewing the literature has shown that

there is lack of studies that testing entrepreneurial orientation as a moderator in innovative performance. If there were studies testing entrepreneurial orientation as a moderator, it was in a different context and in firm performance only (Richard, Barnett, Dwyer & Chadwick, 2004; Wu et al., 2008; Wales et al., 2013b; Li, Zhao, Tan & Liu, 2008).

6 Conclusion

This study aimed to examine the innovative performance of SMEs in Jordan. It also investigates the moderating effect of entrepreneurial orientation on the relationship among intellectual capital, organizational learning and innovative performance. Questionnaire survey is designed and conducted on the data gathered in order to examine model's hypotheses. PLS SEM technique was applied to analyse the data. As a result, intellectual capital (human capital and customer capital dimensions) have a positive and significant effect on innovative performance. Results also showed that organizational learning (information acquisition, information distribution and organizational memory) has positive and significant effect on innovative performance. The study also found that entrepreneurial orientation (EO) moderates the relationship between customer capital and innovative performance. This study is consistent with most previous studies but not all which have been studied in different countries and in different sectors. The findings of study concluded that intellectual capital and organizational learning are good factors to enhance innovative performance, which implies that SMEs must do to enhance these three dimensions of intellectual capital (human capital, structural capital and customer capital), and the four dimensions of organizational learning (information acquisition, information distribution, information interpretation, and organizational memory) .Finally, this study supports the effect of entrepreneurial orientation that moderates partially in relationship between intellectual capital and innovative performance among SMEs in Jordan.

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