International Journal of Small Business and Entrepreneurship Research
Vol.3, No.7, pp.1-16, December 2015
Published by European Centre for Research Training and Development UK (www.eajournals.org)

THE ROLE OF KNOWLEDGE MANAGEMENT IN DEVELOPING THE CHARACTERISTICS OF ENTREPRENEURIAL ORGANIZATION ENTREPRENEUR STYLES AS MODERATOR VARIABLES (APPLIED STUDY IN THE JORDANIAN PHARMACEUTICAL MANUFACTURING SECTOR)

Ahmad Ali Salih[1], Hanadi Salameh[1], Haitham Ali Hijazi[1] and Mohammed Abu Zaid[2]

[1]Middle East University, Amman, Jordan.
[2]Al-balqa Applied University, As Salt, Jordan.

ABSTRACT: *The goal of this paper is to study the relationship between knowledge management (knowledge creation and knowledge sharing) and the five characteristics of entrepreneurial organization related to agility, sustainability of organizational values, simplicity of organizational structure, and innovation freedom. In addition, the study analyzes the moderating impact of entrepreneurial styles (Gambler, Dreamer, Entrepreneur, and Consolidator) on the relationship between knowledge management and organizational characteristics. The independent variable of the study is knowledge management with its two sub variables related to knowledge creation and knowledge sharing. The dependent variable is the characteristics of entrepreneurial organization with its four dimensions. The moderator variable is the entrepreneurial styles. The results of the study revealed that there is no direct impact of knowledge management practices as a whole in terms of knowledge creation and knowledge sharing on the characteristics of entrepreneurial organization as a whole. On the other hand, it was evident from the results of the study that there is an impact of knowledge sharing only on the sustainability of organizational values, the simplicity of organizational structure, and organizational creativity freedom; knowledge creation however, did not have any impact on sustainability of organizational values or simplicity of organizational structure. In terms of the moderating impact of entrepreneurial styles, it was evident that there is an indirect effect of knowledge management practices in terms of knowledge creation and knowledge sharing on the characteristics of entrepreneurial organization in the presence of only the entrepreneur style. On the other side, there was no indirect effect of knowledge management practices in terms of knowledge creation and knowledge sharing on the characteristics of entrepreneurial organization in the presence of gambler, consolidator or dreamer entrepreneurial styles.*

KEYWORDS: Knowledge Management, Development, Entrepreneurial Organization, Entrepreneur Styles, Pharmaceutical Manufacturing Sector, Jordan

INTRODUCTION

Competitive advantage implies gain of superiority over others, hence business organizations are all starving to achieve market competitive advantage. Knowledge management is an important methodology in the development of creative behavior in small and medium-sized companies, particularly in relation to the acquisition of market, competitive and customer related knowledge. The large amount of data collected, stored, and processes by organizations made processes of knowledge management possible and so much rewarding for businesses. Nowadays, with the world economy conditions worsening, reductions in government investment, and unemployment levels going high, entrepreneurship is considered the best way

ISSN 2053-5821(Print), ISSN 2053-583X(Online)

to confront these economy challenges (Frashah, 2002). The importance of entrepreneurship and its key role in the development of societies caused many of developed and developing countries to acknowledge its importance (Shane & Venkataraman, 2000; Brenkert, 2008; Tanoira & Valencia, 2014). Entrepreneurship and knowledge management are both considered among the most important to impact economic and business success (Ravasi & Turati, 2005). As a result of recent transformation of global economy from managed to entrepreneurial economy, knowledge, innovation and entrepreneurship are regarded as new driving forces for economic growth (Audretsch, & Thurik, 2004). This study investigates the relationship between knowledge management and entrepreneurship to show the effect of knowledge management on entrepreneur projects and organizations in the pharmaceutical industry.

Entrepreneurship

Entrepreneurship is the process of exploring and developing opportunities to create value for pre-established or new organizations. Entrepreneurship refers either to the activity of founding a new company or of initiating new activities within an existing enterprise (Gans & Stern, 2010). According to the international reports of entrepreneurial business (GEM, 2004), the concept can be defined as any initiative to establish new projects or expand existing projects by individual or group of individuals. Griffin (2005) defined entrepreneurship as the process of planning, organizing, functioning, and making risk assumptions of business projects. The concept of entrepreneurship can be also defined as a process of discovery, assessment and exploitation of opportunities for products and goods creation and development (Shane & Venkataraman, 2000). An entrepreneur is the person who manages large production projects (Hisrich, 2005). Buchholz and Rosenthal (2005) define an entrepreneur as a person who creates something new or unfamiliar in a community to meet an underlying need of customers. Entrepreneurs bear risks, violate familiar rules, penetrate agreed upon borders, and walk opposed the current situation (Brenkert, 2008). According to (Tanoira & Valencia, 2014), the entrepreneur is an individual able to start a project usually rejected by others. An entrepreneur has the ability to know how to understand the physical characteristics of the environment and fight against any inconvenience and does not fear failure, demonstrate capability for team work and motivating others. Entrepreneurs are consisted of not only individuals but also small groups, higher education institutions, medium-sized organizations, big business, or state capital.

Entrepreneurial Styles

It was noted by (Landau, 1982) that entrepreneurial can be classified to four main styles in light of creativity and risk taking. 1. A gambler style embodies an entrepreneur that is characterized by a low level of creativity and a high level of risk tolerance. The gambler-style entrepreneur generates value through market risk taking to compensate for a lower level of creativity. 2. A consolidator entrepreneur is the one that develop and work on projects with low levels of risk taking and innovation with marginal improvement on what exist in the market. 3. The dreamer style represents an entrepreneur who is trying to combine a high level of creativity with a low level of risk. Many entrepreneurs prefer to work according to this pattern, having that said, Landau (1982) believes that a dream cannot be achieved without any risk taking; and that all creativity inherently carries risk. Thus, the greater the innovation level, the higher the risk level. 4. Entrepreneur is the fourth entrepreneurial style which combines a high level of creativity and a high level of risk taking. True entrepreneurs work according to this style as they must accept risk with high innovative ideas and products but they use their high level of creativity and innovation to manage and reduce risk.

ISSN 2053-5821(Print), ISSN 2053-583X(Online)

Figure 1 illustrates Landau (1982) classification of entrepreneurship styles where the vertical axis represents risk bearing or tolerance and the horizontal axis represents innovation characteristic.

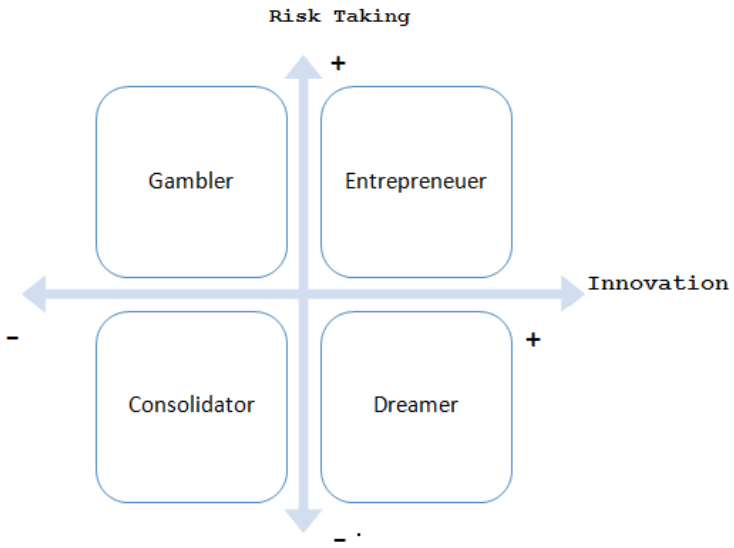

Figure 1: Entrepreneurial Style Matrix

Knowledge Management

The ability to manage knowledge is crucial in today's knowledge economy. The creation and circulation of knowledge have become progressively among the major factors in achieving business and market competitive advantage. A successful organization is one that learns, remembers, and acts based on the best available information, knowledge, and know-how. Knowledge is defined as information resulted and driven from the combination and enrichment of experience, context, interpretation and reflection (Davenport & Prusak, 1998). A good definition of knowledge management involves the capturing and storing of knowledge, together with the appreciation of intellectual assets (Dalkir, 2005). Knowledge management is the systematic synchronization of an organization's people, technology, processes, and structure to achieve value through reuse and innovation (Choo & Bontis, 2002). This is achieved through the promotion of creating, sharing, and applying knowledge as well as through the valuable lessons learned and best practices that are fed back into corporate memory in order to promote continued organizational learning. Choi and Lee (2002) defined knowledge management as the ability of an organization staff to use knowledge resources and complementing them with other organizational resources and capabilities. Sallis and Jones (2002) stated that knowledge management is a general explanation of culture, process, substructures and the technologies that are in an organization. Knowledge management is a mix of strategies, tools, and techniques; knowledge management encompasses everything to do with knowledge as well as information technology system that store, manage, organize, analyze, improve and distribute organizational knowledge and business expertise (Groff and Jones 2003). According to Kibet and Carter (2010), knowledge management is not a collection of technological views for one issue, but it is a social and humanity process and the technological tools facilitating it. Similarly, Afrazeh (2010) defined knowledge management as the process of discovery, achievement, development and creation, maintenance, assessment and appropriate usage of knowledge in appropriate time by the fit person in the organization. This is done by having a joint collaboration between human resources, IT, communications

ISSN 2053-5821(Print), ISSN 2053-583X(Online)

and the suitable organization schedule to achieve a defined set of goals (Anumnu, 2014). Barroso (2011) defines knowledge management as the systematic process of discovering, selecting, organizing, summarizing and presenting information in such a way that improves recognition of people in their fields of interest. The principle of adding intellectual aspects into knowledge management was also considered by (Adam & Mccreedy, 1999; Stankosky, 2008) through which they stated that knowledge management involves and requires leveraging intellectual assets to enhance organizational performance.

According to Choi & Lee (2002), knowledge management encompasses four sub-processes: (1) creation; (2) manifestation; (3) use, and (4) transfer. On the other hand, Takeuchi, & Nonaka (2004) stated that knowledge management processes should include knowledge acquisition, knowledge transfer, knowledge sharing, and knowledge utilization processes. Barroso (2011), such sub-processes were: (1) acquisition; (2) generation; (3) use, and (4) transfer of knowledge. The knowledge management includes creation, interpret, disseminate, use, maintenance and refinement of knowledge (Kibet & Carter, 2010). In summary, all researchers agree that generally, knowledge management is the process of gathering, managing and sharing employees' knowledge capital throughout the organization to enhance existing organizational business processes, introduce more efficient and effective business processes and remove redundant processes . It is a discipline that support and sponsor a collaborative and integrated approach to the creation, capture, access and use of an enterprise's knowledge assets.

Knowledge management brings so much advantage to business organizations through the development of systems and processes to acquire and share intellectual assets on individual and team levels to maximize the value of an organization intellectual base across various functions and various scattered locations. This is becoming highly important and critical to business organizations and executives; when most executives were asked of their greatest asset, knowledge held by their employees was the mostly cited one, and what makes it complicated for them is that when employees walk out the door, they take valuable organizational knowledge with them (Lesser and Prusak, 2001). This intellectual capital is the secret giving companies a competitive advantage, hence, knowledge management seeks to accumulate intellectual capital that will create unique core competencies and lead to superior results (Rigby, 2009).

Knowledge Management and Entrepreneurship

Knowledge management plays a very important role in transforming organizations. Taleghani (2011) pointed out that knowledge management is one of the considerable factors for the development of organizational entrepreneurship process. As a result of business challenges and demands related to globalization, different needs of customers, hard pressure of competition, hard transfer of technology and information and communication led to having knowledge as a strategic need to ensure organization’s success. And since small and medium organizations are the heart of entrepreneur business, the investigation of the relationship between knowledge management and entrepreneur projects and organizations is of great value and impact on the development of entrepreneurship (Taleghani, 2011). Having that said, the empirical research in this area is still limited, and there is a need to expand on it. A research undertaken by Calcagno (2003) attempted to study the impact of knowledge management and entrepreneurial culture in the creation of competitive advantage reported on a significant role of knowledge management in creating an entrepreneur competitive advantage in production companies of Guilan Province. Shadfard et. al. (2013) found that knowledge management and entrepreneurial culture individually have a statistical relationship with organization’s

ISSN 2053-5821(Print), ISSN 2053-583X(Online)

competitive advantage taking in consideration that knowledge management by itself has a higher impact on competitive advantage compared with entrepreneurial culture. Kojori1 and Salarian (2014) recommended business organizations to establish more programs that focus on knowledge management and entrepreneurial skills as both are proven to have a fundamental impact on the development of organizational performance, improving the ability of organizations to adapt to surrounding business environments, and increasing its market competitive advantage.

The previous findings spurred the researchers of this study to investigate this subject in the environment of Jordan to explore the impact of knowledge management in building entrepreneurial organizations taking into consideration the impact of entrepreneurial styles.

Characteristics of Entrepreneurial Organizations

Entrepreneurial organizations are different from non- entrepreneurial ones as they have more interest in entrepreneur projects and are more agile when it comes to decision making and work process. In addition, entrepreneurial organization focus on high quality of service and products to achieve more competitive advantage, hence they call for simple organizational structure that is lean and encouraging for employees' entrepreneur behavior in terms of high innovation and risk taking. As entrepreneurial organizations are usually formed in response to an innovative and special idea, values, or vision, it is one of the main characteristics of an entrepreneurial organization to maintain this vision and values. As usually the number of employees in an entrepreneurial organization is small while the challenge and work is much, risky, and unconventional, employees are empowered to do more and make critical decisions. Employees are independent and can function freely in the organization within the framework of the entrepreneurial organization goals, objectives, and vision (Hisrich, 2005). Based on the above, the study chose to investigate entrepreneurial organizational characteristics in terms of agility, sustainability of organizational values, simplicity of organizational structure, and innovation freedom (Thomas & Waterman, 2012).

Problem of the Study

Pharmaceutical manufacturing companies in Jordan face local and international competition. To address these competition fronts, pharmaceutical manufacturing companies in Jordan believe in the importance of instilling a culture of entrepreneurship through which organizations accrue the knowledge and practices they need to face competition. Having that said, organizations don't seem to be able to identify the variables enabling them to achieve entrepreneurial leadership in a very competitive market. The study answers the question "Does knowledge management have an impact on the development of entrepreneurial organization, and would this impact change when taking entrepreneurial styles as a moderator variable?"

Importance of the Study

The importance of the study stems from the fact that it is looking into the impact of knowledge management practices and entrepreneurial styles in establishing an efficient and effective entrepreneurial organization that is able to face market competition and challenges. Specifically, this study investigates this in the pharmaceutical manufacturing sector in Jordan. The results of the study will help the researchers drafting a set of recommendation that will allow entrepreneurial organizations to leverage distinctive employees' entrepreneurial

ISSN 2053-5821(Print), ISSN 2053-583X(Online)

characteristics as well as knowledge management practices and processes to ensure the establishment and development of a successful entrepreneurial business organization.

Study Objectives

The current study seeks to achieve the following objectives:

1. Determine the level of knowledge management practices in the surveyed organizations.
2. Determine the level of entrepreneurship practices in the surveyed organizations.
3. Define the impact of knowledge management practices on building entrepreneurial organizations.
4. Analyze and define the impact of knowledge management on developing the characteristics of entrepreneurial organization in light of the various entrepreneurial styles (Gambler, Dreamer, Entrepreneur, and Consolidator) as moderator variables.

Model of the Study

Looking at the model of this research study in Figure 1, we can state that:

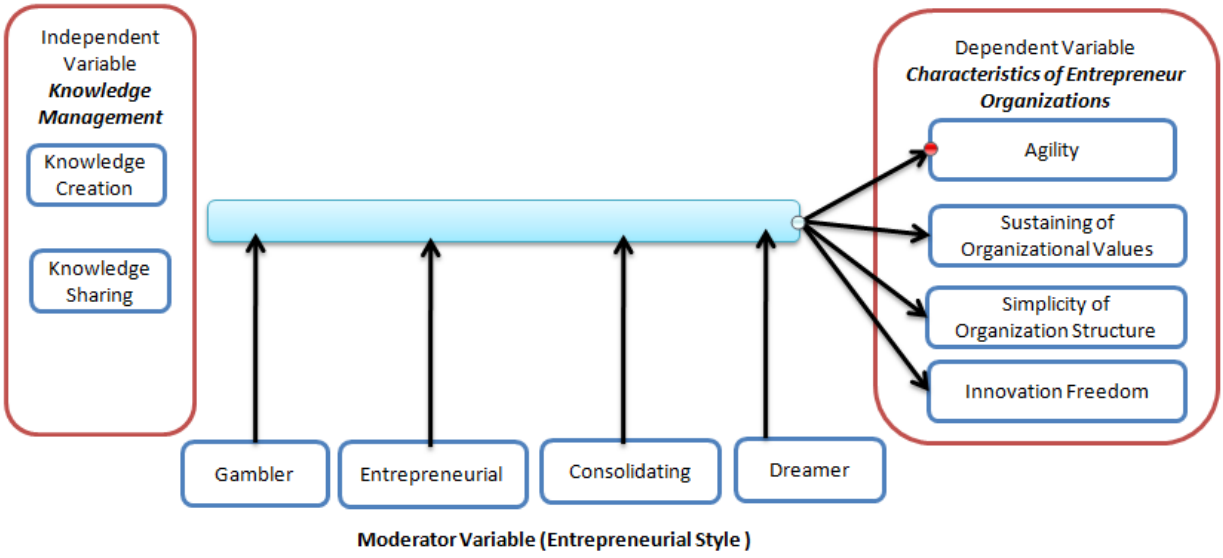

Figure 1: Study Model

a. The independent variable of the study is knowledge management with its two sub variables related to knowledge creation and knowledge sharing. The selection of knowledge creation and knowledge sharing was done based on the study conducted by (Hijazi & Salameh, 2014) due to the fact that these two aspects of knowledge management are the most influential.

b. The dependent variable is the characteristics of entrepreneurial organization with its four dimensions as identified by (Hisrich, 2011).

c. The moderator variables are the entrepreneurial styles as defined by (Landau, 1982).

ISSN 2053-5821(Print), ISSN 2053-583X(Online)

d. The study model assumes a direct impact of knowledge management on entrepreneurial organization characteristics both collectively and individually. The validity of this assumption will be verified through the study.

e. The study model assumes the presence of an indirect effect of knowledge management on the characteristics of entrepreneurial organizations collectively as well as individually; the research study will validate this assumption as well.

Hypotheses of the Study

The study has eight hypotheses

H_{01}. There is no direct impact of knowledge management practices in terms of knowledge creation and knowledge sharing on organizational agility.

H_{02}. There is no direct impact of knowledge management practices in terms of knowledge creation and sharing on the sustainability of organizational values.

H_{03}. There is no direct impact of knowledge management practices in terms of knowledge creation and sharing on the simplicity of organizational structure

H_{04}. There is no direct impact of knowledge management practices in terms of knowledge creation and sharing on organizational creativity freedom

H_{05}. There is no indirect effect of knowledge management practices in terms of knowledge creation and knowledge sharing on the characteristics of entrepreneurial organization in the presence of *gambler* entrepreneurial style as a moderator variable.

H_{06}. There is no indirect impact of knowledge management practices in terms of knowledge creation and knowledge sharing on the characteristics of entrepreneurial organization in the presence of *dreamer* entrepreneurial style as a moderator variable.

H_{07}. There is no indirect impact of knowledge management practices in terms of knowledge creation and knowledge sharing on the characteristics of entrepreneurial organization in the presence of *entrepreneur* entrepreneurial style as a moderator variable.

H_{08}. There is no indirect impact of knowledge management practices in terms of knowledge creation and knowledge sharing on the characteristics of entrepreneurial organization in the presence of *consolidator* entrepreneurial style as a moderator variable.

Limitations of the Study

The study is limited to investigating the impact of knowledge management on the characteristics of entrepreneurial organization taking into consideration the presence of entrepreneurial styles. The study focused on studying the mentioned impact and relationship in the Jordanian pharmaceutical industry by surveying employees of various job titles and responsibilities in various Jordanian pharmaceutical manufacturing companies.

ISSN 2053-5821(Print), ISSN 2053-583X(Online)

METHODOLOGY

Population, data collection, and sample

The data was collected using a structured questionnaire distributed on employees of 13 pharmaceutical manufacturing companies in Jordan. Different steps were followed to carry out the data collection. The unit of analysis for this study was the company.

Of the 200 employees invited to participate, a total of 104 usable questionnaires were received a response rate of 52%. The responding employees belong to different departments within their organization, which allows for a good representation of the company and its departments in general.

Measures

The key variables in this study were measured using 5-point Likert scales based on previous literature. To determine the degree of acceptance of the questionnaire statements, the following weights were adopted: 1–2.33 Weak, 2.34–3.67 Medium, and 3.68–5.00 High. As shown in Table 1 the dimensions of the independent variable (knowledge management): knowledge creation and knowledge sharing had a mean of (4.1042) and (4.2708), respectively. They also had a standard deviation of (1.01875) and (0.55989), respectively. The means of the two variables are relatively high; also, the standard deviation of knowledge creation is larger than the standard deviation of knowledge sharing. This indicates that there is greater dispersion in the responses of the sample in terms of knowledge creation compared with knowledge sharing.

The dimensions of the independent variable have achieved mean values ranged from (4.3077) to (3.4455). The standard deviations of the dimensions of this variable has been characterized by a relative convergence, all of which were less than (1), which refers to the convergence of the values with its mean.

Table (1): Descriptive results of the independent and dependent variables

	Mean	Std. Deviation	Knowledge Creation	Knowledge Sharing	Agility	Sustainability of Org. Values	Simplicity of Org. Structure
Knowledge Creation	4.1042	1.01875					
Knowledge Sharing	4.2708	.55989	.356				
Agility	4.1795	.68725	.083	.334			
Sustainability of Org values	4.3077	.62264	.407	.449	.442		
Simplicity of Org. Structure	3.4455	.81068	.046	.373	.186	.147	

The matrix of coefficients correlation between the independent variable and dependent variable generated (15) correlation relationships, nine of which are accounted for (60%) of the significant correlations while 6 accounted for (40%) with no significant correlation. Having that said, there was no linear correlation among these relationships.

ISSN 2053-5821(Print), ISSN 2053-583X(Online)

Looking at Table 2, it is clear that the *entrepreneur* style was the most practiced one with 42 individuals making up (40.4%); a high percentage, followed by the consolidator style with (28) individuals with (26.9%), the gambler and drea*mer styles were reported by (18) individuals (17.3%) and (16) individuals (15.4%), respectively. The Range value among the four styles was broad with a value of (26) at percentage of (25%).

Table 2: Description of Entrepreneurial Styles

Sequence	Style	Frequency	Percentage	Rank
1	Gambler	18	%17.30	3
2	Dreamer	16	%15.40	4
3	Entrepreneur	42	%40.40	1
4	Consolidator	28	%26.90	2
Sum		104	%100	

Validity and Reliability Test

To test the reliability of the variables, Cronbach's alpha was calculated to determine consistency among the study variables. The value of coefficients among all the statements of the questionnaire is .961, .907 between the variables related to the knowledge management, and .949 among the variables related to organizational characteristics. These values indicate the reliability of the study tool.

Results

In order to test the eight hypotheses of the study, the researchers used multiple regression analysis, and hierarchical interactive regression analysis.

Table 3: Statistical Results for H01 and H05

	Model1		**Model2**		**Model3**	
	β	***t***	**β**	***t***	**β**	***t***
Knowledge Creation	.041	.406	.069	.665	.357	.080
Knowledge Sharing	.348	3.470	.352	3.515	.227	.446
1			.110	1.140	.094	.148
2					.166	.168
3					.089	.095
R^2	.113		.124		.127	
F	6.417		4.724		2.860	
R^2	.113		.011		.083	
F	6.417		1.301		0.179	

ISSN 2053-5821(Print), ISSN 2053-583X(Online)

Looking at the results of Table 3 (model 1) and the values of *t* test, we can interpret that there is no statistical impact of knowledge creation on organizational agility as the t value and B value are (0.406) and (0.041), respectively. On the other hand, the results indicate that there is an impact of knowledge sharing on organizational agility at the level of (0.05) with *t* and *B* values of (3.470) and (0.348), respectively. This leads to partial rejection of H_{01}.

With regard to the fifth hypothesis, it was tested using interactive hierarchical regression test. The results are shown in Table 3 (model 3). During the statistical test in the first phase, the independent variable (knowledge management) was introduced, and the results indicated the presence of an impact of knowledge sharing (B = .348, P <.05). In the second phase, the moderator variable of Gambler entrepreneur style was introduced; in the third stage, the interaction between the Gambler style and knowledge management was observed. The results of the tests did not show an effect of the interaction between the gambler entrepreneur style and the dimensions of knowledge management (knowledge creation B =. 166, P> .05) and (knowledge sharing B = .089, P> .05) on the characteristics of entrepreneurial organizations. This means that the presence of gambler entrepreneurial style does not serve the relationship between the independent and dependent variables as it did not have a significant impact in altering the relationship. Hence, the research accepts the fifth hypothesis (H_{05}).

Table 4: Statistical Results of Hypotheses H_{02} and H_{06}

	Model1		**Model2**		**Model3**	
	β	***t***	**β**	***T***	**β**	***T***
Knowledge Creation	.283	3.118	.280	2.984	.277	.591
Knowledge Sharing	.348	3.826	.348	3.809	.332	1.110
1			.012	.134	.099	.834
2					.611	1.233
3					.003	.011
R^2	.271		.272		.287	
F	18.817		12.429		7.884	
R^2	.271		.000		.015	
F	18.817		.018		1.048	

Table 4/model 1 shows the results of *t* test for the impact of knowledge creation on the sustainability of organizational values, the results confirm that the former has an impact on the latter. Similarly, the results confirm that knowledge sharing has a considerable impact on maintaining organizational values. Hence, organizations can ensure maintaining their organizational values through the implementation and support of knowledge creation and knowledge sharing processes and tools. Based on the above, the second hypothesis (H_{02}) is rejected and the alternative one is accepted.

With respect to the sixth hypothesis (H_{06}), and looking at Table 4/model 3, we can see that in the first phase of introducing the independent variable (knowledge management), the results indicates that there is an impact of knowledge sharing (B = .348, P < 0.05) and knowledge creation (B = .283, P < 0.05) on the characteristics of entrepreneurial organization. In the second phase of the statistical test, the moderator variable (dreamer entrepreneurial style) was

ISSN 2053-5821(Print), ISSN 2053-583X(Online)

introduced; afterwards, the interaction among knowledge management, the "dreamer" entrepreneurial style, and organizational characteristics was observed. The results did not show that there is an effect or impact of the interaction among knowledge creation, knowledge sharing and the "dreamer" entrepreneurial style. Hence, the sixth hypothesis was accepted as the moderator variable did not have any impact on the relationship between the dependent and independent variables.

Table 5: Statistical Results of Hypotheses H_{03} and H_{07}

	Model1		**Model2**		**Model3**	
	β	***T***	**β**	***t***	**β**	***t***
Knowledge Creation	.100	1.016	.112	1.102	1.325	2.704
Knowledge Sharing	.409	4.160	.411	4.160	.112	.359
1			.048	.503	.275	2.230
2					1.545	2.984
3					.584	1.839
R^2	.148		.150		.222.	
F	8.775		5.891		5.588	
R^2	.148		.002		.072	
F	8.775		.253		4.513	

For H_{03}, Table 5 (model 1) shows the results of testing the impact of knowledge creation on the simplicity of organizational structure, (t=1.016 and B=0.100), the insignificance of the values indicates that knowledge creation does not have any contribution on the streamlining of organizational structure. Opposite to this, knowledge sharing appear to have a significant impact on the simplicity of organizational structure (t=4.160 and B=0.409). This result leads to partial rejection of H_{03}.

With respect to the results of the seventh hypothesis (H_{07}), based on the results of Table 5 (model 3), we can see the results indicating the presence of an impact of knowledge creation (B = .100, P <.05) and knowledge sharing (B = .409, P <.05). In the second phase, the moderator variable (entrepreneur style) was introduced. In the third, the interaction among the moderator variable, dependent and independent variables was observed. The results show that there is an impact of the entrepreneurial style on the relationship between knowledge management and entrepreneurial organizational characteristics. Thus, it can be said that the seventh hypothesis (H_{07}) is rejected and the alternative hypothesis is accepted.

ISSN 2053-5821(Print), ISSN 2053-583X(Online)

TABLE 6: Statistical Results of Hypotheses $H_{04}$and H_{08}

	Model1		**Model2**		**Model3**	
	β	***t***	**β**	***t***	**β**	***T***
Knowledge Creation	.064	.650	.084	.823	.800	1.573
Knowledge Sharing	.343	3.465	.340	3.4289	.224	.693
1			.078	.816	.050	.391
2					.778	1.448
3					.139	.422
R^2	.137		.143		.162	
F	8.038		5.562		3.794	
R^2	.137		.006		.019	
F	8.038		.665		1.121	

Table 6 (model 1) shows the results of testing the impact of knowledge creation on the creativity freedom in entrepreneurial organization. With (t =0.650) and (B=0.064), it is noted that knowledge creation does not contribute to creativity freedom. As for knowledge sharing, the results confirms that it has a very good impact on creativity freedom (t=3.465 and B=0.064) as creativity increases after sharing of knowledge. Based on this, the study rejects H_{04} partially.

Concerning the results of testing H_{08}, as shown in Table 6 (model 3), the results indicate that there is an impact of knowledge creation (B = .343, P <0 .05) and knowledge sharing (B = .064, P < 0.05) practices on the characteristics of entrepreneurial organizations. After adding the moderator variable (consolidator entrepreneurial style) to the relation and observing its interactive effect on the relationship between the dependent and independent variables, it was observed that there is a lack of effect of the moderator variable on the relationship between the dependent and independent variables, hence, we accept H08.

Summary of Study Results

1. The results confirmed that the knowledge sharing process is the first priority for the companies surveyed, followed by the process of knowledge creation. This means that the surveyed companies need to share knowledge to increase the expertise and knowledge they have; this is justified by the fact that the surveyed company rely on larger pharmaceutical manufacturing companies to create knowledge.

2. It turned out that the surveyed companies had a deep interest and concern with the characteristics of entrepreneurial organizations, and that the sustainability of the organizational values was topping the four characteristics. This is justified by the fact that the surveyed organization realize that the presence and sustainability of institutional values is the key to building entrepreneurial organization as the values represent the principles of moral, intellectual and rules to follow what is right, and reject what is wrong.

3. It was evidence from the results of the study, the lack of multi-colinearity between the dimensions of the independent variable (knowledge management) which indicates that each dimension is measuring a specific occurrence.

ISSN 2053-5821(Print), ISSN 2053-583X(Online)

4. It was confirmed through the results of the study that there is a variation in the practices of entrepreneurship styles in the surveyed organization. This is explained by the fact that the surveyed employees and departments vary in their practice level of entrepreneur practices and understanding as well as the practices and beliefs in term of decision making.

5. The first hypothesis was partially rejected in terms of knowledge sharing, which indicates that knowledge sharing has an impact on the agility of entrepreneur organizations. This is due to the fact that the organizations sample has needs to share knowledge among its employees to respond quickly to competition and market demand as it is solely focused on manufacturing and operational aspects of drugs manufacturing more than medical research and new knowledge creation in that field. Knowledge creation in the field of medical and drugs manufacturing is solely left for large drugs organizations.

6. The second hypothesis was accepted which indicates that knowledge management practices in terms of knowledge creation and knowledge sharing does not have an impact on the sustainability of entrepreneurial organizational values.

7. The third hypothesis was partially rejected with regards to knowledge sharing as the results showed it has an impact on simplifying organizational structure. This is justified by the fact that sharing knowledge among organizational members increases the skill and knowledge level of employees in a matter that is empowering employees eliminating management centralization and organizational bureaucracy.

8. The fourth hypothesis was partially rejected in terms of knowledge sharing as it was proven from the results of the study that knowledge sharing contribute to innovation freedom .

9. The results of the study lead to accepting all hypotheses except H_{07} related to the moderating effect of the entrepreneurial styles on the relationship between knowledge management and the characteristics of entrepreneurial organizations. As the study's results show that entrepreneurial style has no moderating effect on the impact of knowledge management on the characteristics of the entrepreneurial organizations except for the *entrepreneur* style which has a positive moderating effect.

DISCUSSION AND RECOMMENDATIONS

It is recommended for organizations to increase and support practices and processes encouraging and fostering sharing of knowledge through increased dialogues and informal meetings among employees, as well as the revitalization of horizontal cooperation among departments through the promotion of a culture of cooperation and teamwork, and the adoption of challenging and competitive goals that are incentive driven. In addition, revitalization of knowledge creation and sharing can be achieved by holding team, department level and cross departmental workshops to foster sharing of knowledge and innovation projects as well as encourage creativity and collaboration with strategic partners and international pharmaceutical companies.

ISSN 2053-5821(Print), ISSN 2053-583X(Online)

Moreover, the results of the study highlight the importance of developing and supporting all entrepreneurial organization characteristics giving more attention to the sustainability of organizational values. Organizational values are important as they define the culture, mindset and behaviors holding an organization together and inspiring its people and employees to do the right thing rather than the easy thing. Instilling a winning organizational culture is not easy at it requires altering how people think of the company and altering habitual behaviours. According to Mehan, Rigby, and Rogers (2008) companies that create and sustain winning cultures are inclined to implement five key practices. 1. Performing a culture audit to identify organizational strength and weakness in terms of its current culture. 2. Aligning the management team and ensuring horizontal collaboration to build a winning culture. 3. Defining performance indicators that instil an environment of accountability. Organizational culture and values should support its strategic objectives and goals, hence, explicit measurable targets should be set and held accountable to each employee including management and regular employees. 4. Managing and supporting culture drivers and hard regulations including organization structure, decision authority, talent management systems, evaluation criteria, and measures and incentives. 5. Communication and celebration; communication and being attuned to customers' feedback, perception, and suggestions is crucial to ensure the organization is on the right path in terms of strategic culture, values, and goals. In addition, having consistent and sustained communication with employees of end goals and the behaviours necessary to get organizational goals is essential to maintain momentum among employees. Employees need to feel excited about the future and rewarded for making progress toward maintaining organizational values through achieving its goals. Hence, creating incentive programs and celebrating success are important step in creating and maintaining a successful organization culture and values.

Finally for the surveyed companies, it is recommended that they increase the practices of entrepreneur style through holding training workshops on entrepreneurship practices such as forming small working group to encourage innovation, and accelerate the promotion and career growth of individuals demonstrating entrepreneur style leadership and practices.

REFERENCES

Adam, R. and Mccreedy S. (1999). A critical review of knowledge management models". *The Learning Organization, 6(3)*, 91-100

Afrazeh A., 2010. Knowledge Management (concepts, models, measurement, and implementation). Tehran: Moalefat Publishing.

Anumnu S. (2014). Knowledge Management and Development of Entrepreneurial Skills Among Students in Vocational Technical Institutions in Lagos, Nigeria. *Electronic Journal of Knowledge Management,, 12(2*), 144-154

Audretsch,D., &Thurik,R. (2004). A model of entrepreneurial economy. International *Journal of entrepreneurship Education*, 2(2):143-166.

Barroso, F. (2011). *Knowledge management in enterprises and productive social organizations in the state of Yucatan.* Proceedings of the XVI International Congress of Accounting, Administration and Informatics. School of Accounting and Administration. National Autonomous University of Mexico

Barroso, F. *(*2011*).Knowledge management in enterprises and productive social organizations in the state of Yucatan.* Proceedings of the XVI International Congress of Accounting,

ISSN 2053-5821(Print), ISSN 2053-583X(Online)

Administration and Informatics. School of Accounting and Administration. National Autonomous University of Mexico

Brenkert, George G. (2008) Innovation, Rule Breaking and the Ethics of Entrepreneurship, *Journal of Business venturing*, (24), pp. 448-464

Buchholz, A. and Rosenthal S. (2005) The Spirit of Entrepreneurship and the Qualities of Moral Decision Making: Toward a Unifying Framework, Journal of Business Ethics, (60), pp. 307-315

Calcagno,M. (2003). The Evolution of the competitive advantage concept in strategy. Department of management and business Administration Ca' Foscari university, Venezia, P 11.

Choi, B. and Lee, H. (2002). Knowledge management strategy and its link to knowledge creation process. *Expert Systems with Applications*, 23, 173-187.

Choo, C. and Bontis. N. (2002). *The Strategic management of intellectual capital and organizational knowledge.* New York: Oxford University Press.

Dalkir K. (2005).*Knowledge Management in Theory and Practice*. Elsevier Butterworth-Heinemann, MA. USA

Davenport, T. H., and Prusak, L. (1998). *Working Knowledge How Organizations Manage What They Know.* Boston: Harvard Business School Press.

Frashah D., Ali, 2002. Entrepreneurship and entrepreneurs, definitions and properties, *Journal of Industry*, pp: 33.

Gans, J.; Stern, S. (2010): "Is there a market for ideas?" *Industrial and Corporate Change, 19(3)*, 805–837.

GEM (2004). General Entrepreneurship Monitor, *Executive Report*, London, London Business School

Griffin, Ricky W. (2005) *Fundamentals of Management: Core Concepts and Applications*, Boston: Houghton Mifflin Company

Groff , T. and Jones T. (2003) . *Introduction to knowledge management: KM in business* . Burlington, MA : Butterworth-Heineman .

Hijazi, H. and Salameh, H. (2014). Impact of Social Capital on Knowledge Sharing at the Public Sector in Jordan. *Information and Knowledge Management*, 4(1), 20-30.

Hisrich, Robert D. (2011). Entrepreneurship. New York, McGraw-Hill Education.

Hisrich, Robert D. and Peters Michael P. (2005). *Entrepreneurship*, New York, Mc Graw Hill

Kibet P.J and Carter M.J. (2010), Knowledge management and competitive advantage in *the hand book of organizational learning and knowledge management, 6(6),* 295-309

Kojori D. and Salarian M. (2014). The relationship between and Corporate Entrepreneurship (Case Study: General Directorate of Ports and Maritime of Mazandaran Province, Iran). *International Journal of Current Life Sciences*, 4(6), 2339-2343.

Landau, R. (1982). The innovative milieu, in Landstedt, S.B. and Colglarzion, E.W. Jr (Eds), *Managing Innovation: The Social Dimensions of Creativity, Invention, and Technology*, Pergamon Press, New York, NY, pp. 53-74.

Lesser , E. and Prusak L. (2001) . Preserving knowledge in an uncertain world. MIT Sloan Management Review 43 (1): 101 – 102 .

Meehan P., Rigby D., and Rogers P.(2008) . Creating and Sustaining a Winning Culture, Harvard Business Review, January.

Ravasi D. and Turati C. (2005). Exploring entrepreneurial learning: a comparative study of technology development projects. Journal of Business Venturing, 20:137-164.

Rigby D. (2009). Management Tools 2009: An Executive ' s Guide, http://www.bain.com/management_tools/home.asp

ISSN 2053-5821(Print), ISSN 2053-583X(Online)

Sallis E. a Jndones G.(2002). *Knowledge (concepts, models, measurement and management in Education: enhancing learning and implementation).* London, Moalefat Publishing.

Shadafard, S. et al. (2013). The Comparison between Knowledge Management and Entrepreneurship Culture on Competitive Advantage in Manufacturing Company of Gilan. *Interdisciplinary Journal of Contemporary Research in Business,* 5(1), 1029-1036

Shane, S. and Venkataraman, S. (2000) The Promise of Entrepreneurship as a Field of Research, *Academy of Management Review*, vol. 25 (1) pp. 217-226

Stankosky , M. (2008) . Keynote address to ICICKM (International Conference on Intellectual Capital, Knowledge Management and Organizational Learning), 9 – 10.

Taleghani, M. (2011). Knowledge Management and Organizational Entrepreneurship: Organization of Education in Guilan Province. *International Journal of Information and Education Technology*, *1*(5), 389.

Tanoira F. and Valencia R. (2014). Knowledge Management, Entrepreneurial Competencies and Organizational Development In Micro and Enterprises in Rural Regions in Yucatan, Mexico. *European Scientific Journal*, *10(1*), 177-193

Thomas J. P. and Waterman R. H. Jr. (2012). *In Search of Excellence: Lessons from America's Best-Run Companies (Collins Business Essentials)*. Bloomsbury UK

ISSN 2053-5821(Print), ISSN 2053-583X(Online)