



## Impact of Knowledge Management Models on Entrepreneurial Organizations and Mediating Role of Strategic Entrepreneurship: An Exploratory Study of Asiacell Mobile Communications, Iraq

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### ARTICLE INFO

### ABSTRACT

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**Purpose:** Organizations that wish to create a competitive advantage, drive business growth for productivity and profitability and harness the knowledge and expertise of their human capital through knowledge management models. This study aimed to investigate the nature of the influence of knowledge management (KM) models in entrepreneurial organizations through the mediating role of strategic entrepreneurship. **Methods:** The descriptive survey method was used as the research design. A self-reported questionnaire consisting of 36 items comprising three constructs, Models of KM, Entrepreneurial Organization and Strategic Entrepreneurship, was administered over the sample of 115 employees of Employees of Asiacell Mobile Communications Company, Iraq. The SPSS, ver. 25 was used to measure the Alpha Cronbach coefficient, the arithmetic mean, the standard deviation, and the Pearson correlation coefficient.

**Findings:** The findings of the study discovered that there is a significant correlation and influence between the effect of knowledge management models in the entrepreneurial organizations through the mediating role of strategic entrepreneurship. The most important conclusions of the study were the interest in providing the effect of knowledge management models in the entrepreneurial organizations through the mediating role of strategic entrepreneurship that suits the requirements, expectations, and perceptions of customers. **Implications for Research and Practice:** The study would help the policy makers and entrepreneurs to take initiatives in designing proactive and relevant knowledge management models, focusing on the role of entrepreneurial organizations to improve strategic entrepreneurship.

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## Introduction

Today's work environment depends much upon organizations to create a competitive advantage over rival organizations and drive business growth, in order to consistently improve productivity. This requires harnessing not only the knowledge and expertise of the human capital, the employees but also to retain critical data about the company safe and secure. Formally known as Knowledge management (KM), it deals with not only collection, combination, and transfer of knowledge assets, but also creation of new knowledge (Nonaka & Takeuchi, 1995). It is a process of capturing, storing, sharing and efficiently managing the knowledge assets that requires systematic application of knowledge acquisition and its structural management (Zouari & Dakhli, 2018); acquisition and separation of organizational processes and activities (Brajer-Marczak, 2016); and learning, sharing, and standardizing the organizational knowledge (Bashir & Farooq, 2019).

There are two types of knowledge: tacit and explicit. Tacit knowledge stands for the skills, ideas and expertise that a person possesses and can also apply dexterously but may not necessarily explain or express. Often people are unaware of the tacit knowledge they possess or how it can be valuable to others. On the contrary, explicit knowledge is the documented knowledge, where information is documented and accessible to all as it passes along and exchanges hands. It can include research reports, articles, datasheets and whitepapers. Knowledge management is also a domain where tacit knowledge can be attempted to change into explicit through personal contact, training and regular interaction. With the help of technology, it has become much easier to articulate, codify, store and access any type of knowledge.

Knowledge management also allows an organization to accumulate, store and effectively share knowledge and thus create a culture that can significantly improve work productivity, efficiency and employee satisfaction. Other key benefits of effective KM include faster and more effective onboarding, spending less time in creating new knowledge and encouraging innovation. When an employee joins an organization, KM measures help find information quickly, thus not requiring the tedious process of induction and onboarding. Employees grow into real knowledge individuals as they spend less time in finding answers to repetitive questions. This boosts productivity as employees with the help of expertise do their job effectively and efficiently. According to a Gallup study (Gallup et al., 2009), through effective knowledge management, employees can easily retrieve information they need at a fast pace which means more effective decision making from the top to the bottom in an organization.

The term entrepreneurship was originally coined by Schumpeter (1947) who used it to describe market driven activities that business needs to be involved in. Mazzucato (2011) defines the term as a market-disruptive activity of an enterprise that causes a "creative destruction" leading to innovation and competitive advantage. Other studies Drucker (2014); Ries (2011) have also equated entrepreneurship with innovation and market volatility. Entrepreneurship, owing to its significance, has therefore attracted attention of all enterprises. They wish to develop entrepreneurial orientation in the employees in order to increase the organization's capacity and to discover new opportunities in the competitive market. In other words, entrepreneurial orientation reflects the organization's ability to search for and exploit new markets using a set of methods, practices and decision-making

methods that help managers to work in a pioneering manner (Nasir, 2013). Martínez-Climent et al. (2019) assert that entrepreneurial orientation radically transforms into a strategic entrepreneurship through which new opportunities are determined and entrepreneurial behaviors are carried out inside the organization.

Strategic entrepreneurship plays a key role in defining the strategic plan, direction, strategic practice, evaluation and monitoring, which produces strong performance (Kokfai et al., 2015). Bengesi and Le Roux (2014) believes that strategic entrepreneurship represents the relationship between strategic management and entrepreneurship in business organizations. Strategic entrepreneurship enhances the competitive advantage of small and medium-sized organizations (Ibidunni et al., 2018). It provides a mixture of other models to the owners of strategic entrepreneurship and the market share of the organization and control of operations while benefiting from the intellectual property and financing of the parent company on a purely commercial basis (Shulman et al., 2011).

Strong et al. (2008) correctly stated that knowledge is useful only in those organizations that have the entrepreneurial ability and can strategically implement that knowledge. Other studies have emphasized upon maneuvering the complexity of KM into such KM models that can bring out its subtlety and substance (Jakubik, 2007, 2011). In spite of its significance, there is little research on KM in the context of entrepreneurship (Markham, 2002; Markham et al., 2010). The present study takes the initiative to show the necessity of paying attention to knowledge management models, and focusing on the role of entrepreneurial organizations in improving strategic entrepreneurship. It also aims at giving a clear and accurate perception of the importance of knowledge management models, entrepreneurial organizations and strategic entrepreneurship and highlight the organizations' interest in the entrepreneurial aspect. Specifically, this study framed the following two research objectives: (1) to know the degree of availability of knowledge management models in the sample identified (2) to determine the interest level of the surveyed sample in entrepreneurial organizations in the context of strategic entrepreneurship.

This study examines the impact of models of knowledge management on entrepreneurial organizations through the mediating role of strategic entrepreneurship. It explores a sample of employees of the Asiacele Mobile Communications Company in Iraq, to examine the extent to which KM practices and models are used for productivity, sustainability and growth.

## Literature Review and Theoretical Framework

### *i. Knowledge management models*

Knowledge management refers to the operation of systematic application of knowledge acquisition, structuring, management and dissemination throughout the organization to speed up work, reuse best practices and minimize the cost of rework (Zouari & Dakhli, 2018). Brajer-Marczak (2016) referred to knowledge management as processes and activities related to knowledge creation, acquisition, separation, exchange and use in purpose to raise the organization's efficiency, effectiveness and the ability to learn. Bashir and Farooq (2019) indicated that knowledge management is a means of learning, sharing, and standardizing knowledge to gain company efficiency. In their turn, Qi and Chau (2018)

identified knowledge management represents as a systematic and integrated operation for coordinating activities at the organization level to obtain knowledge, create, store, share, develop and disseminate it by individuals and groups in pursuit of organizational goals. Hawkins (2014) observe that knowledge management refers to the performance of activities involved in knowledge discovery, capture, sharing and application for purpose to improve the effect of knowledge on obtaining the unit's goal in a cost-effective manner. In the same context, Sun et al. (2020) indicated that knowledge management is the level to which an organization makes, shares and uses knowledge resources between functional boundaries. In the same context, Tooranloo and Saghafi (2018) sorted that knowledge management represents the capacity-based organizational action to mobilize and create resources based on knowledge.

Knowledge management models can be expressed by several dimensions including Employees' Training, Teamwork Culture, Sharing and Transferring Knowledge and Developing Expertise and Competencies. Employees' training, the first dimension, represents the procedure of developing employees' skills and learning new ideas, rules and procedures in purpose to improve the effectiveness and efficiency of the jobs occupied by employees (Abomeh & Peace, 2015). Likewise, Berber and Slavić (2016) pointed out that the training of employees represents a set of planned and organized activities focused on acquiring knowledge, skills and attitudes to ensure the development of employees. Along the same lines, Falola et al. (2014) resulted in the training of employees refers to a method used by the organization to transfer skills, knowledge and capabilities of employees related to work requirements in purpose to enhance the performance of employees in current and future tasks.

The second dimension of Teamwork Culture is an emerging set of standards, values, and procedures that team members improve and share (Dimas et al., 2019). Jamsheed and Majeed (2018) noted that team culture is a branch of organizational culture that can be developed taking into account the political, geographic, ethnic, religious, or the other dynamics of teams. Roberge (2019) believes that team culture is the way things are done in the team as it is the social structure that nourishes the psychology of the team. Likewise, the dimension of sharing and transferring knowledge is the best source of communications among individual employees. Knowledge sharing can be interpreted as the process of searching for knowledge in its places of the organization, thus the knowledge sharing in this context means is effective transforming of knowledge, that is, who owns the knowledge is able and reluctant to share it with others, as knowledge could be available individuals, groups, departments or organizations (Altahir, 2012).

Finally, the dimension of developing expertise and competencies contributes to KM practices in organizations (Mira & Odeh, 2019) as they play a key role in improving the organizational performance as well (Fischer & Barth, 2014). In the same context, Kausar and Azhar (2015) showed that the development of expertise and competencies contributes to improving the internal factors of individuals, which include knowledge, skills and values that individuals rely on to better accomplish their effort. Dullayaphut and Untachai (2013) found that the development of competencies and expertise contributed to creating a complicated mixture of skills and accumulated knowledge that are experienced by organizational operations and that support organizations to coordinate their activities and take advantage from the assets they own.

## ii. Strategic Entrepreneurship

Leadership works to enhance entrepreneurship and the strategic entrepreneurship activities of the organization (Pardakhteh & Mohammadi, 2016). Shepherd et al. (2010) described strategic entrepreneurship as the highest level an organization can reach in maintaining its own efforts and procedures. As the ability of strategic entrepreneurship lies in that it is a basic function in defining the strategic plan, trends, strategic practice, evaluation and monitoring, which enhances the strategic performance of the organization as well as it leads to increasing the effectiveness and efficiency of the organization and creating wealth and increasing growth for it. Strategic entrepreneurship significantly defines a company's strategic plan, direction, strategic practice, evaluation and monitoring, and predicts employee performance (Kokfai et al., 2015).

Bengesi and Le Roux (2014) believe that strategic entrepreneurship represents the relationship between strategic management and entrepreneurship in business organizations. Strategic entrepreneurship enhances the competitive advantage of small and medium-sized organizations (Ibidunni et al., 2018). Shulman et al. (2011) claimed that strategic entrepreneurship is an approach that provides a mixture of other models to the owners of strategic entrepreneurship and the market share of the organization and control of operations while benefiting from the intellectual property and financing of the parent company on a purely commercial basis. Ferreira et al. (2014) see that strategic entrepreneurship generates a significant participation in the success of the organization.

Strategic Entrepreneurship can be measured through three dimensions namely Innovation, Risk Tolerance and Available Opportunities. Innovation denotes to research, experimentation, initiative, and develop a unique service model; it also outperforms competitors and meets customer requirements. In light of economic change and complexity, organizational service innovation tends to be an important catalyst for efficient operations management. Service innovation has a positive effect on core capability and organizational creativity. Moreover, there is an important focus on the importance of service innovation in order to achieve service success and competitive advantage (Kokfai et al., 2015).

The next dimension of Risk Tolerance indicates the desire to concur on higher levels of uncertainty about the outcome of some actions. Effective risk management is determined by uncertainty about the scope, potential significance, and/or the unfortunate outcome of a decision. The organization has advantages with the ability to effectively manage risks that are likely to try with new technology, are keen to capture opportunities available in the market and are prepared to manage risks. In addition, the reason for this behavior is innovation, creativity, service exclusivity and competitiveness. Thus, many researchers concur that effective risk management is crucial to an organization's success. Effective risk management also reflects the organization's ability to seize and invest opportunities that guarantee a successful outcome, and this relates to manage uncertainty and menace the organization's activities and resources related to superior results (Kokfai et al., 2015). Likewise, the dimension of Available Opportunities represents management of change resulting from participation and development capabilities that affects the capabilities, sales and technology of this industry is important for managing the current business (Kokfai et al., 2015).

### iii. Entrepreneurial Organizations

Entrepreneurial organizations represent organizations that result from creative ideas with independent and innovative values (Bagheri & Lope Pihie, 2011). Shepherd et al. (2010) concluded that the entrepreneurial organizations represent the maximum level that the organization can reach in maintaining its own efforts and procedures. On the other hand, Moghaddam et al. (2015) indicated that entrepreneurial organizations are the comprehensive view of the organization that promotes creative strategic processes within it, as well as invests a set of new products. There are several reasons that encourage organizations to turn into entrepreneurial organizations, namely, developing cost-effective solutions to meet the challenges of global competition; making maximum use of the internal intelligence of the working individual; innovation to enhance flexibility, competitiveness, and interactivity; avoiding the loss of business to emerging organizations in economies; and exploiting new market opportunities (Narasimhan, 2010).

Entrepreneurial organizations can be measured through three dimensions viz., Independence, Creativity, and Proactivity. Independence stands for the freedom that is allowed to employees to practice their entrepreneurial activities at work place from the bottom to the top management. Employees need to prove as champions of productivity, profitability and performance. Creativity is represented in developing new products and processes, or new methods of quality or better value delivery (Ndubisi & Iftikhar, 2012). Riivari and Lämsä (2019) define creativity as the behavioral tendency of an organization to create innovative products and services for its agents. Hussein et al. (2014) indicate that creativity represents the organization's ability to be familiar with all its organizational levels in order to motivate its employees to generate the largest possible amount of creativity and openness to modernity. the process of autonomy also requires that new knowledge be continuously spread within the organization, especially tacit knowledge (Al-Shammari et al., 2016).

Proactivity is an opportunity-seeking behavior that characterizes the entrepreneur's quest to follow and utilization new business opportunities such as offering new products/services by the competitors (Martin & Javalgi, 2016; Sharma & Dave, 2011). Hong and Yang (2016) believe that proactivity refers to the activity in which employees participate in order to bring about changes in the market and the reactions of competitors.

### **Problem Statement and Research Hypotheses**

Most business organizations developed the tendency to mainly invest their potentials for the enhancement of their entrepreneurial role, which motivated them to invest knowledge management models in order to develop their entrepreneurial potentials. This, in turn, contributed to the creation and depletion of the knowledge resources of the organization. Therefore, these rapid environmental developments and great leaps in the business world can raise the following questions: (1) What are the means which can be followed in respect of adopting knowledge management models for the entrepreneurial organizations development? (2) To what extent do knowledge management models contribute to maintaining the nature of entrepreneurial organizations? (3) What is the level of strategic entrepreneurial adopted by the studied sample? In the light of the previous studies and problem statement of the current study, the following research hypothesis were constructed for this study, divided into two groups. Correlation hypotheses and Impact hypotheses.

- *Correlation Hypotheses*

H1: There is a statistically significant link between knowledge management models and their dimensions (employee training, teamwork culture, knowledge sharing and transfer, developing experiences and competencies) and entrepreneurial organizations with their dimensions (independence, creativity, and proactivity).

H2: There is a statistically significant link between knowledge management models and its dimensions (training of employees, culture of the work team, knowledge sharing and transfer, and development of experiences and competencies) and strategic entrepreneurship with its dimensions (creativity and innovation, risk tolerance, and available opportunities).

H3: There is a statistically significant link between strategic entrepreneurship and its dimensions (creativity and innovation, risk tolerance, and available opportunities) and entrepreneurial organizations with its dimensions (independence, creativity, and proactivity).

- *Impact Hypothesis*

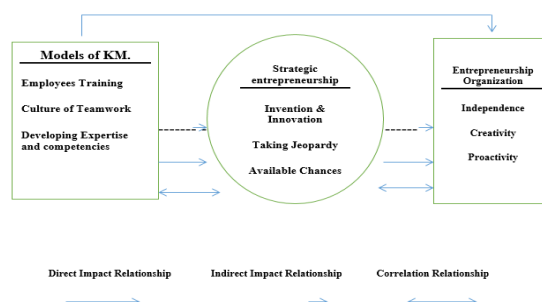
*Direct Impact hypothesis*

H4: There is a direct effect and a positive statistical significance of the knowledge management models in their dimensions (employee training, teamwork culture, knowledge sharing and transfer, developing experiences and competencies) in the entrepreneurial organizations with its dimensions (independence, creativity, and proactivity).

H5: There is a direct effect and a positive statistical significance of strategic entrepreneurship in its dimensions (creativity and innovation, risk tolerance, and available opportunities) and entrepreneurial organizations with its dimensions (independence, creativity, and proactivity).

*Indirect Effect Hypothesis*

H6: There is an indirect effect and a positive statistical significance of knowledge management models with their dimensions (employee training, teamwork culture, knowledge sharing and transfer, developing experiences and competencies) in entrepreneurial organizations with its dimensions (independence, creativity, and proactivity) through the mediating role of strategic entrepreneurship in its dimensions (Creativity and innovation, risk tolerance, and available opportunities). Figure 1 represents these hypotheses graphically.



**Figure 1:** Research Hypotheses of this study

## Research Methodology

- *Research design*

The study adopted a descriptive survey method with a quantitative approach. for its suitability and validity in empirical and phenomenological studies. This method ideally helps in examining the manifestations and relationships between variables and in analyzing and interpreting the phenomenon and reaching conclusions (Al-Assaf, 2016), not just describing the phenomenon in question. Further, it helps in empirically testing the hypotheses.

- *Sample*

The study sample comprised of 115 Employees of the Asiacell Mobile Communications Company in Iraq. This sample represents (64.6%) of the total study population. About half of the sample (48%) were directly involved in strategic decision making, 23.5 % held managerial position responsible for taking decisions like product development and marketing segmentation, and the rest 28.5% were working executives and team members in new projects.

- *Research Instrument and procedure*

A self-report questionnaire was developed and validated for this study. The questions mainly concerned about Employees Training, Teamwork Culture, Knowledge Sharing and Transfer, Developing Expertise and Competencies, Independence, Proactivity, Creativity and Innovation, Risk Tolerance, and Available opportunities. The questionnaire was distributed through employee emails. Each employee was explained the process and purpose of the research in terms of KM and strategic entrepreneurship. The questionnaire was validated by specialists and their opinions were taken on its various dimensions. There were 36 valid statement items on this instrument and it used a Likert scale to measure the responses. Each of the constructs of the study namely Training, Teamwork Culture, Knowledge Sharing and Transfer, Developing Expertise and Competencies, Independence, Proactivity, creativity and innovation, Risk Tolerance, and Available opportunities had four items each. Each statement was representative of the variable chosen for the study. The questionnaire was piloted on a set of employees to verify its validity and reliability, prior to its implementation.

- *Data Analysis*

To answer the study questions and test the hypotheses, statistical packages for social sciences (SPSS) version 25.0 was utilized. The SPSS helped in measuring the frequencies and percentages, Pearson Correlation Coefficient to calculate the internal consistency of the items, Cronbach's Alpha coefficient to calculate the reliability coefficient of different constructs, the arithmetic mean to find out the extent to which the responses of the respondents rise or fall on the items and the Standard Deviation (SD) to identify the extent of the deviation of the participants' responses to each of the study variables' items



## Results

- *Testing the Validity and Reliability of the Measuring Tool*

Reliability refers to the measurement of the questionnaire form to show the extent of the credibility, reliability and suitability of the questionnaire to the sample of the research community, and accordingly, Table (1) presents the coefficients of Alpha Cronbach.

**Table 1**

*Coefficients of Alpha Cronbach.*

Variables	Dimensions	Cronbach Alpha	Cronbach Alpha for Dimensions	Cronbach Alpha for variables
<b>Models of KM.</b>	Employees Training	4	0.900	<b>0.900</b>
	Teamwork Culture	4	0.897	
	Knowledge Sharing and Transfer	4	0.912	
	Knowledge Developing			
	Expertise and Competencies (KDEC)	4	0.908	
<b>Entrepreneurial Organization</b>	Independence	4	0.899	<b>0.896</b>
	Innovation	4	0.897	
	Proactivity	4	0.901	
<b>Strategic Entrepreneurship</b>	creativity and innovation	5	0.905	<b>0.921</b>
	Risks Tolerance	5	0.940	
	Available chances	5	0.932	

The results of Table (1) indicate that the value of Cronbach's alpha coefficients is higher than the imposed rule, which indicates that the extracted value should be higher than (0.70). Therefore, the results that demonstrate in the Table (1) display that the value of Cronbach's alpha is accepted as being higher than the required level. This is an indication of the stability of the measuring instrument.

- *Descriptive statistics analysis*

The findings of Table (2) present that the arithmetic averages of the knowledge management models reached (3.86) and a standard deviation of (0.651), and perhaps the dimension that participated to this is the dimension of Knowledge Developing Expertise and Competencies (KDEC) with its arithmetic mean of (3.98) and the value of standard deviation of (0.758), however the Knowledge Employees Team Culture (KETC) factor were in the last one, where its mean is (3.68) and its standard deviation is (0.964).

**Table 2***Descriptive statistics analysis of the knowledge management factors models*

Item	Arithmetic Mean	Standard Deviation	Sig. Ranking	Item	Arithmetic Mean	Stand. Devi.	Sig. Ranking
kstt1	3.77	0.914	3	kkst1	3.89	1.005	3
kstt2	3.89	0.759	2	kkst2	3.83	0.963	4
kstt3	3.72	0.949	4	kkst3	3.94	0.567	2
kstt4	4	0.909	1	kkst4	3.98	0.608	1
KSTT	3.85	0.731	The 3 <sup>rd</sup>	KKST	3.91	0.479	The 2 <sup>nd</sup>
ketc1	3.6	0.901	4	kdec1	4.11	0.634	1
ketc2	3.62	0.968	3	kdec2	3.91	0.775	4
ketc3	3.85	1.103	1	kdec3	3.98	1.032	2
ketc4	3.66	1.203	2	kdec4	3.94	0.895	3
KETC	3.68	0.964	The 4 <sup>th</sup>	KDEC	3.98	0.758	The 1 <sup>st</sup>
KMM	3.86	0.651			****		

Note: KSTT: Knowledge- Sharing Teamwork and Transfer; KETC: Knowledge- Employees Team Culture; KKST: Knowledge- Knowledge Sharing and Transfer; KDEC: Knowledge- Developing Expertise and Competencies; KMM: Knowledge Management Models

The findings of Table (3) demonstrate that the general arithmetic averages of the entrepreneurial organizations factor were (3.8) and the standard deviation of (1.087), and perhaps this is due to the dimension of interdependence, which ranked first with an arithmetic mean of (3.87) and a SD of (0.797). The creativity factor was at last where its arithmetic mean was (3.79) and its SD was (0.87).

**Table 3***Descriptive statistical analysis of the dimensions of the entrepreneurial organizations variable*

Item	Arithmetic Mean	SD	Sig. Ranking	Item	Arithmetic Mean	SD	Sig. Ranking
eind1	3.85	0.78	3	eorg1	3.91	1.06	1
eind2	3.81	0.798	4	eorg2	3.89	1.108	2
eind3	3.89	1.026	2	eorg3	3.83	1.07	3
eind4	3.94	0.987	1	eorg4	3.83	1.307	4
EIND	3.87	0.797	The 1 <sup>st</sup>	EORG	3.87	1.087	The 2 <sup>nd</sup>
ecre1	4.04	0.806			1		
ecre2	3.62	1.012			4		
ecre3	3.74	1.01			3		
ecre4	3.77	0.937			2		
ECRE	3.79	0.87			The 3 <sup>rd</sup>		

Note: EIND Entrepreneurial Interdependence; ECRE Entrepreneurial Creativity; EORG: Entrepreneurial Organization

The findings of Table (4) present the overall mean or arithmetic mean for the strategic Entrepreneurial factor was (3.89) and a standard deviation of (0.482), and perhaps this is due to the dimension of risk tolerance related to (SRT), where its arithmetic mean is (3.92) and its SD is (0.785), while the factor of creativity and innovation (SCRI) ranked last with a mean of (3.85) and a SD of (0.732).

**Table 4***Descriptive statistics analysis of paragraphs for the dimensions of strategic Entrepreneurial.*

Item	Arithmetic Mean	SD	Sig. Ranking	Item	Arithmetic Mean	SD	Sig. Ranking
scri1	3.62	1.054	5	saop1	3.77	0.698	5
scri2	3.77	0.698	3	saop2	4.19	0.647	1
scri3	3.87	1.076	2	saop3	3.87	0.824	3
scri4	3.77	0.937	4	saop4	3.83	0.601	4
scri5	4.23	0.729	1	saop5	3.87	0.711	2
SCRI	3.85	0.732	The 3rd	SAOP	3.91	0.514	The 2nd
srt1	4.02	0.872	1	STEN	3.89	0.482	***
srt2	3.96	0.833	2				
srt3	3.94	0.818	3				
srt4	3.83	0.761	5				
srt5	3.87	0.824	4				
SRT	3.92	0.785	The 1st				

Note: SCRI Strategic Creativity and Innovation SRT: Strategic Risk Tolerance; SAOP: Strategic Available Opportunities; STEN: Strategic Entrepreneurship

- *Measuring the correlation Among Research Variables*

This item is concerned with measuring of the interconnected relationship between the variables and dimensions of research, which refers to the variable of knowledge management models as an independent variable, strategic entrepreneurship as an intermediary variable, and the variable of entrepreneurial organizations as a dependent variable. It can be noticed from the findings that there is a statistically significant correlation between the research variables and their sub-dimensions which reflects in the testing of the hypotheses.

**H1:** There is a statistically significant interconnected relationship between knowledge management models with their dimensions (employee training, team culture, knowledge sharing and transfer, developing expertise and competencies) and entrepreneurial organizations with their dimensions (independence, creativity, and proactivity). While checking this hypothesis, the strength of the correlation between knowledge management models and entrepreneurial organizations was found to be (0.943), while knowledge management models and the dimensions of entrepreneurial organizations measured (0.880) for the proactive dimension and (0.942) for the independence dimension. Hence H1 was accepted.

**H2:** There is a statistically significant interconnected relationship between knowledge management models with its factors (training of employees, culture of the work team, knowledge sharing and transfer, and development of expertise and competencies) and strategic entrepreneurship with its dimensions (creativity and innovation, risk tolerance, and available opportunities). It was tested that the strength of the link between Models of knowledge management and strategic entrepreneurship was (0.743), while the models of knowledge management and the dimensions of strategic entrepreneurship ranged between (0.653) for the proactivity factor and (0.753) for the creativity factor. Hence H2 was also accepted.

**H3:** There is a statistically significant link relationship between strategic entrepreneurship with its dimensions (creativity and innovation, risk tolerance, and available opportunities) and entrepreneurial organizations with its dimensions (independence, creativity, and proactivity). This hypothesis was tested by measuring the strength of the correlation between strategic entrepreneurship and entrepreneurial organizations which was found reaching (0.797), while Strategic entrepreneurship and the dimensions of entrepreneurial organizations measured (0.719) for the dimension of independence and (0.777) for the dimension of proactivity. Hence the H3 was also accepted.

**H4:** There is a direct impact with positive statistical significance of knowledge management models with their dimensions (employees training, work team culture, knowledge sharing and transfer, and the development of expertise and competencies) in the entrepreneurial organizations with its dimensions (independence, creativity, and proactivity). The testing of this hypothesis showed that there was an increase in the variable of knowledge management models by one standard weight, the entrepreneurial organizations increased with a weight of (0.520), a standard error of (0.011), a critical value of (47.27), and an explanatory value of (0.334). Hence H4 was also accepted. [Table 5](#) enumerates the standard weights for the effect of knowledge management models in the sampled entrepreneurial organization.

**Table 5**

*Standard weights for the effect of knowledge management models in entrepreneurial organizations*

Track		Estimate	S.E.	C.R.	R <sup>2</sup>	P
Training of Employees	Entrepreneurial Organization	0.531	0.096	5.531		***
Teamwork Culture	Entrepreneurial Organization	0.640	0.074	8.649		***
Knowledge Sharing and Transfer	Entrepreneurial Organization	0.732	0.050	14.64	0.334	***
Developing Expertise & Competencies	Entrepreneurial Organization	0.840	0.092	6.957		***
KM Models	Entrepreneurial Organization	0.520	0.011	47.27		***

**H5:** There is the existence of a direct, positive, statistically significant impact of strategic entrepreneurship with its dimensions (creativity and innovation, risk tolerance, and available opportunities) and entrepreneurial organizations with its dimensions (independence, creativity, and proactivity). The testing of H5 revealed an increase in the strategic entrepreneurship variable with one standard weight rate, which also resulted in increase in weight (0.817), with a standard error of (0.162), a critical value of (5.043) and an explanatory value of (0.769). Hence H5 was accepted. [Table 6](#) presents the standard weights for the impact of strategic entrepreneurship on entrepreneurial organizations

**Table 6***Standard weights for the impact of strategic entrepreneurship on entrepreneurial organizations*

Track		Estimate	S.E.	C.R.	R <sup>2</sup>	P
Creativity And Innovation	Entrepreneurial Organization	0.730	0.095	7.684		***
Risk Tolerance	Entrepreneurial Organization	0.572	0.083	6.892	0.769	***
Available Opportunities	Entrepreneurial Organization	0.631	0.078	8.09		***
Strategic Entrepreneurship	Entrepreneurial Organization	0.817	0.162	5.043		***

**H6:** The existence of an indirect impact with a positive statistical significance for knowledge management models with their dimensions (employees training, work team culture, knowledge sharing and transfer, and the development of experiences and competencies) in entrepreneurial organizations with its dimensions (independence, creativity, and proactivity) through the mediating role of strategic entrepreneurship in its dimensions (Creativity, innovation, risk tolerance, and available opportunities). This hypothesis testing resulted in the increase of knowledge management models through strategic entrepreneurship by one standard weight, the identity dimension increased with a weight (0.891), a standard error of (0.091), a critical value of (9.791), and an explanatory value of (0.794), which indicates the necessity for the researched sample to work to develop its potential by (79.4%). Hence H6 was accepted.

### Discussion

This study investigated the contribution of Knowledge management models in strengthening the strategic entrepreneurship in a telecom enterprise. The study examined three variables: Models of KM, Entrepreneurial Organization and Strategic Entrepreneurship. The degree of contribution of all three variables was found to be high. Regarding the Models of KM, a statistically significant interconnected relationship was seen existing between KM models with their dimensions such as employee training, team culture, knowledge sharing and transfer, developing expertise and competencies. The correlation between KM models and dimensions of entrepreneurial organizations like independence, creativity, and proactivity were also high with (0.880) for the proactive dimension and (0.942) for the independence dimension.

Likewise, the correlation between KM models and dimensions of strategic entrepreneurship like creativity and innovation, risk tolerance, and available opportunities ranged between (0.653) for the proactivity factor and (0.753) for the creativity factor. This result agreed to a large extent with the result with [Bashir and Farooq \(2019\)](#) who found KM models ideally required for sharing and standardizing knowledge and achieving entrepreneurial efficiency. These results are also consistent with what was recommended by [Sun et al. \(2020\)](#) that KM models develop knowledge resources to define functional boundaries or with [Tooranloo and Saghafi \(2018\)](#) who regarded knowledge management as a capacity-based organizational action to mobilize its employees. However, the results differ from the result of [Abomeh and Peace \(2015\)](#) and [Berber and Slavić \(2016\)](#) who preferred the training of employees and a planned intervention to acquire knowledge,

skills and attitudes. It also differs from the conclusion reached by Falola et al. (2014) who regarded performance of employees as significant to KM and entrepreneurial enhancement.

Regarding the second dimension, Entrepreneurial Organization, the study found that the sample agreed to a large extent with the domain items. The descriptive statistics reveal that there existed a significant link between entrepreneurial organizations with its dimensions (independence, creativity, and proactivity) and strategic entrepreneurship with its dimensions (creativity and innovation, risk tolerance, and available opportunities) as the strength of the correlation reached (0.719) for the dimension of independence and (0.777) for the dimension of proactivity. This result is consistent with what was recommended by Pardakhteh and Mohammadi (2016) and Shepherd et al. (2010) that strategic plans, trends, and strategic practices enhance the strategic performance of the organization and designing the strategic entrepreneurship policies. On the other hand, this result differs from Shulman et al. (2011) and Ferreira et al. (2014) who believed strategic entrepreneurship was an approach to work in cohesion with other models and achieve all entrepreneurial objectives like market share or control of operations. The finding also contradicts Kokfai et al. (2015) who laid too much importance on service innovation and competitive advantage as key elements of strategic entrepreneurship.

The third dimension of this study revealed the existence of a direct, positive, statistically significant impact of strategic entrepreneurship with its dimensions (creativity and innovation, risk tolerance, and available opportunities) and entrepreneurial organizations with its dimensions (independence, creativity, and proactivity). The findings revealed an increase in the strategic entrepreneurship variable with one standard weight rate. Likewise, an indirect impact was evident with a positive statistical significance for knowledge management models with their dimensions (training of employees, culture of the work team, knowledge sharing and transfer, and the development of experiences and competencies) in entrepreneurial organizations with its dimensions (independence, creativity, and proactivity) through the mediating role of strategic entrepreneurship in its dimensions (Creativity, innovation, risk tolerance, and opportunities), as the increase of knowledge management models through strategic entrepreneurship by one standard weight. This result is in line with Kokfai et al. (2015) which focuses on the organization's ability to risk tolerance and invest time and effort to avail opportunities and manage uncertainty. This finding differs from Narasimhan (2010) which concluded that the main reason for the loss of business is the failure to exploit new market opportunities rather than depending on entrepreneurial dimensions or strategic entrepreneurship.

Overall, there is great agreement among the study sample on all dimensions of KM models, Entrepreneurial Organization and Strategic Entrepreneurship. The fact that all the six hypotheses were supported by the findings reinforces the argument that knowledge management models help in enhancing the role of entrepreneurial organizations and improving strategic entrepreneurship.

### **Conclusion, Recommendations and Limitations**

There is an interconnected relationship between knowledge management models, entrepreneurial organizations and strategic entrepreneurship, which leads to creating positive results between the studied company and customers, which must contribute to the

development of its capabilities by innovating new ways to gain customer satisfaction. The existence of an impact relationship for models of Knowledge Management and Strategic Entrepreneurial in entrepreneurial organizations means that the entrepreneurial organizations must work to develop capabilities and abilities to understand the requirements of customers and work to satisfy them as much as possible.

The findings suggest that the sampled company, Asiacell Mobile Communications, Iraq is keen on providing fair and more attractive services in order to attract the largest possible number of customers and gain the satisfaction and loyalty of customers towards it. It is also evident that the company accepts the need of introducing creativity in providing appropriate information in order to accomplish the tasks required to introduce discrimination to it. The company also works on the need to reduce risks by encouraging workers to deal with crises if they occur. It is concerned with the necessity of having a special feeling and emotion in dealing with workers, as each worker has his own feeling at the job he performs. Last, but not the least, findings suggest that the company is concerned with the need for its employees to participate in conferences and interact with others, which leads to the creation of new ideas and methods for dealing with the various activities of the organization.

Based on the findings, the study has a few recommendations. There is a need that the Asiacell Mobile Communications, Iraq must provide excellent and high quality services to its customers, which will lead to increasing its market share and maintain its prestigious position among customers. The company must also introduce creativity in its operations, which would lead to developing the feeling of interacting with the company's products, resulting in buying products. The company should also develop its own knowledge database in order to provide as much information as possible about the services it adopts. In order to ensure employee satisfaction, the company should take adequate measures to increase employee loyalty by enhancing the credibility and reliability of its products and services. Such methods, approaches and strategies may be devised that that can influence the perceptions of customers in order to motivate them and encourage them to be creative in their work. Finally, there is also a need to provide workers periodic trainings in order to develop and improve their job skills.

There are a number of limitations in this study. With regard to sample size, this study focused on a small sample of entrepreneurs located in a single telecom company. It is quite possible that entrepreneurs in other vertical areas like software, manufacturing, textiles, food & beverages, etc. may have a different approach to KM models and may value it differently. Replicating this study in other industries and other locations by way of addressing and contrasting its findings is a potential theme for future research studies. Another limitation is related to the frameworks adopted. This study assumed that KM models are universally accepted and generalized models for studying entrepreneurial organizations and strategic entrepreneurships. This may not be true with a different sample and a diverse research locale. Additional research could address these limitations and give further direction to the variables of this study.

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