

## **A Proposed Framework to Support the Competitive Advantage of Mobile Phone Service Companies in the Kingdom of Saudi Arabia**

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### **Abstract**

*This research aimed to determine the relationship between customer knowledge management and competitive advantage through mediating innovative ability, applied on companies of mobile phone services. The structural equation modelling was used to measure this relationship. A quantitative method was chosen using the deductive approach in this research.*

*To analyze the primary data, AMOS statistical software was used to measure the direct, indirect, and total effects between research variables. The sample size was 229 units. The results showed that there was a positive significant correlation between customer knowledge management, innovative ability, and competitive advantage. It also showed that there was a positive significant effect of customer knowledge management on innovative ability, and competitive advantage. It also indicated a positive significant effect of innovative ability on competitive advantage. It was also found that innovative ability significantly mediates the relationship between customer knowledge management and competitive advantage.*

**Keywords:** *mobile phone services, AMOS statistical software, customer knowledge management.*

### **Introduction**

As a result of the intense competition and globalization that characterize business environment, organizations are in a very difficult situation that requires them to pay attention to enhancing their competitive advantages and improving performance in a way that exceeds the capabilities of competitors, rises to the global level, and ensures profitability and continuity in the market. The innovative ability of the organization is one

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of the main factors in enhancing the competitive advantage of business, and when creativity is developed through knowledge management, the organization is more sensitive to information and changes that occur in the external environment (Moses, 2017).

The innovative ability of the organization depends on the extent of its connection with external environmental variables and adaptation to them. No organization can continue and remain in the market without adapting to these variables. There is no doubt that the customer variable is one of the most important external variables, and the main reason for the existence of any organization, as the organization cannot continue in the market without paying attention to their needs and desires and the constant changes that occur in them, and working to satisfy them in a way that exceeds their expectations. This obligates the organization to have continuous contact with the customer, starting with identifying his needs and desires before and during the process of producing the good or service, and ending with learning his opinions regarding the goods and services that were provided to him compared to the goods and services of competitors, which enables the organization to provide distinguished goods and services that satisfy the needs and desires of customers (Hoyer et al., 2010).

The customer is one of the most important sources of learning about the external market, and knowledge of the external market represents the main tool in discovering opportunities and risks in the competitive market, which enables the optimal exploitation of these opportunities and the development of the necessary policies to confront risks (Hollebeek, 2013).

It is extremely difficult for an organization to permanently maintain a competitive advantage if the organization is unable to provide unique goods and services that are difficult to imitate by others. This can only be achieved by paying attention to the available knowledge, managing it effectively, and creating a structure for using new knowledge, which enables the organization to achieve a stable competitive advantage (Nodehi and Afarin, 2014), where customer knowledge management works to connect the external environment with the internal environment (Chen, 2008) and transfer and share information not only between customers or between employees, but between customers and the organization (Zhang, 2011). Through customer knowledge management, the roles of customers from being mere passive recipients of the goods and services provided by the organization to real participants in the organization's value creation processes (Gibbert et al., 2002), providing the organization with many information and ideas, in addition to sharing them with others (Ghasemi and Vahid, 2015).

Based on the above, the current study examines the impact of customer knowledge management in enhancing the organization's innovative and competitive ability, by applying it to one of the important sectors within the Kingdom of Saudi Arabia.

## Literature Review

The theoretical framework and previous studies are presented through exposure to customer knowledge management, innovative ability, and competitive advantage, the relationship between customer knowledge management and innovative ability, the relationship between customer knowledge management and competitive advantage, the relationship between innovative ability and competitive advantage, and finally the research gap and building the study framework, as follows:

### (1) Customer knowledge management:

This variable is addressed through exposure to both the concept of customer knowledge management and the dimensions of customer knowledge management, as follows:

Knowledge is considered one of the most important assets that organizations possess, as it is the primary factor for the success and development of their business (Khodakarami and Yolande, 2014). Edvinsson and Michael (2009) divided knowledge into two types: explicit knowledge and tacit knowledge. The first is defined as knowledge expressed in numbers and words, such as product specifications, and this type of knowledge is easy to transfer across individuals. The second is personal knowledge that is difficult to share with others, because it does not have an official character.

Customer knowledge is one of the types of knowledge management related to customer relationship management, and the basic strategic resource for the success of any organization (Halinen, 2005), as the customer is an inexhaustible source of information and knowledge, and by obtaining and managing it well, the organization can provide distinguished goods and services. The more connected the organization is to the customer and the more capable it is of listening and interacting deeply with him, the more it can retain customers and win new customers. (Ghasemi, and Vahid, 2015).

And he knows (Gao et al, 2011) Customer knowledge is a vital combination of experience, values, and information that is created by customers. Murillo and Annabi (2002) indicated that customer knowledge focuses on two aspects: customer knowledge that relates to the product that he is interested in purchasing. The knowledge that the organization must have regarding the needs and desires of customers with the aim of using that knowledge to help the customer make the purchasing decision.

Regarding customer knowledge management, he defined it (Taherparvar et al., 2014) as the strategic process that leading companies deploy to their customers and transform them from mere recipients of products into true partners of the knowledge available in the organization. While Zhang (2011) defined it as the process of capturing, transferring, and applying relevant data, information, and knowledge with customers to obtain benefits for the organization and the customer. (Sulaiman, 2011) defined it as a continuous process of generating, disseminating, and using customer knowledge within the organization and between the organization and its customers. And (Khodakarami and Yolande, 2014) defined it as an important asset within the organization that depends on collecting, managing, and disseminating knowledge, which enables the organization to carry out competitive activities (Ghasemi and Vahid, 2015)

From reviewing many previous studies related to customer knowledge management, it became clear that there is a discrepancy between researchers regarding the dimensions used to measure customer knowledge management. Some of them approached customer knowledge management through the perspective of processes related to the management itself, and some of them approached it from the perspective of types of customer knowledge management, and some studies Which dealt with customer knowledge management processes. Previous studies such as (Shafik, 2009; El-Helaly et al., 2015; Gebert et al., 2003; (Gebert et al., 2003) identified four dimensions of customer knowledge management, which are: knowledge transparency, knowledge dissemination, knowledge development, And knowledge efficiency. The study (El-Helaly et al., 2015) also identified four dimensions of customer knowledge management, which are: knowledge acquisition, knowledge storage, knowledge dissemination, and knowledge use. As for the study (Shafik, 2009), it identified three dimensions of the management process. Knowledge: collecting information, generating knowledge, and disseminating knowledge.

As for the studies that dealt with the types of customer knowledge management (knowledge from customers, knowledge about customers, and knowledge for customers), such as, studies (Taherpavar et al., 2014; Nejatian, 2011; Sulaiman et al., 2011; Gebert et al., 2003), as knowledge from customers and knowledge about customers enables the organization to recognize changes in the needs and desires of customers, while knowledge of customers enables the organization to provide appropriate knowledge and

information to customers and thus increase their confidence and ensure their dealings with the organization, and it will depend. The current study is on the three types of customer knowledge management, and these types can be referred to as follows:

- Knowledge from customers: It is information obtained from customers, related to products, competitors, and markets, and helps to understand the external environment, and this type of knowledge helps improve the organization's innovative ability, and thus the ability to provide new products that suit the needs and desires of customers, (Taherpavar et al., 2014). Therefore, one of the biggest challenges facing organizations is obtaining knowledge from customers, investing it properly, and transforming it into clear knowledge that can be used for development within the organization (Desouza and Awazu, 2005). This knowledge can be obtained from social media, such as discussion forums, which is one of the important tools used in customer knowledge management, which helps organizations acquire knowledge from customers. These forums enable the diversity of participating customers, and thus obtain different levels of knowledge about their needs, the problems they face, and the doubts they have regarding the products provided by the organization. Or provided by competitors (Maswera et al., 2006), which helps increase its ability to develop new ideas, improve existing goods and services, and provide innovative goods and services not previously provided.
- Knowledge to customers: It is knowledge related to customers' perspectives, motivations, values, backgrounds, needs, and desires, the date of the start of their transactions with the organization, and their demographic characteristics..., which helps to understand customers better, and thus increases the ability to satisfy their needs and desires (Smith and McKeen, 2005).
- Knowledge for customers: It is the knowledge that the organization provides to customers to help them, satisfy their knowledge needs, and promote their knowledge, and the nature of this knowledge affects customers' perception of service quality (Gebert et al., 2003) and to help them make optimal purchasing decisions. Organizations use many tools and methods to provide this knowledge, including workflow applications, which are one of the most popular methods used by organizations, such as Saudi government institutions, through e-government.

(2) Innovative ability:

This variable is addressed through exposure to both the concept of the organization's innovative ability and the dimensions of innovative ability, as follows:

As a result of globalization, rapid change in markets, and the intense competition that the business environment currently imposes on organizations, the goods and services provided are characterized by a short life cycle, which obligates organizations to constantly improve and update all the goods and services that are provided to customers so that they can continue in the market, and therefore continuity has become. Creativity is not optional for organizations, but rather has become imperative to ensure survival and continuity.

Many managers of innovative organizations explain that creativity does not result only from the use of scarce resources or the application of new ideas, but rather it results from the capabilities that the organization possesses to achieve this, and this appears in many leading organizations, despite having the same capabilities, technology and resources. It clearly shows that some of them are superior to others, and this is due to these organizations possessing innovative capabilities that enable them to adapt to the surrounding variables and provide new goods and services that are difficult to provide by competitors.

Researchers have varied definitions of innovative ability. Ghasemi, and Vahid, (2015) as accepting, absorbing, and applying new knowledge, including the organization's ability to accept and create new concepts and apply them in modifying existing products or developing new products. Balan (2010) also defined it as: a feature related to the

organization that gives it the ability to adapt. Rapid development with all the variables involved, thus introducing new and improved products. Gul (2008) defined it as the organization's possession of dynamic capabilities that enable the organization to interact between the organization's internal knowledge and the requirements of the external market. Vedina (2008) also referred to it as the organization's possession of high skills that enable it to transform all its resources into innovative outputs. Mathuramaytha (2012) also defined it as the organization's ability to transform ideas and knowledge acquired from its internal and external environment into new goods, services, and processes.

From the above, it can be said that innovative capacity is the organization's possession of human and material capabilities that enable it to adapt to external and internal environmental variables, in a way that achieves maximum exploitation of available opportunities and effectively confronts surrounding risks. Therefore, the organization's innovative ability helps to satisfy market needs by providing new goods and services, applying appropriate technology, and responding quickly to technological changes (Gul, 2008).

From a review of previous studies related to innovative ability, it became clear that there are three main dimensions of innovative ability, which are (absorptive capacity, adaptability, and thinking ability), and they can be addressed as follows: (Ghasemi and Vahid, 2015; Jarabkowski, 2004;)

- Carrying capacity (Absorptive Capacity): It means understanding and absorbing new knowledge, and this appeared in the concept (Ghasemi and Vahid, 2015) of innovative ability, as it is the organization's ability to absorb knowledge and information, apply it, and exploit it optimally within the organization, and this ability is seen as the key to creating value through investment. In knowledge, the most important sources of the organization's absorptive capacity are investment in research and development, direct participation in the field of product manufacturing, and sending workers for technical training to increase their skills (Ionescu and Dumttru, 2015).
- Adaptability: It means the organization's ability to interact with all surrounding variables, and this appeared in the concept of (Balan, 2010; Gul, 2008) for the organization's innovative ability, which means the organization's ability to keep pace with all surrounding environmental changes, through continuous connection with all elements of the external environment, whether general, such as economic, legal, technological, and social variables... or the private external environment, such as customers and suppliers, intermediaries, and competitors... which enables the organization to identify all external opportunities and work to exploit them and all risks and work to confront them. Therefore, the organization's success in keeping pace with external variables is due to its internal strength, which is represented by its innovative capabilities (Jarabkowski, 2004).
- The ability to think (Capacity of thinking: It means that the organization possesses high skills capable of innovative thinking, making the greatest possible use of available knowledge and ideas, and working to transform them into new goods, services, and processes. This dimension appeared in the definition of (Mathuramaytha, 2012; Vedina, and Baumane 2009). for innovative ability, which means the organization's ability to generate new and innovative ideas, by paying attention to the opinions of employees and customers, constantly learning about them, and paying attention to criticism. The need for innovative solution to problems is necessary when the organization faces a challenge or problem and seeks new ideas because it does not have a prior solution that it knows and uses. For problems to be solved efficiently, both convergent and divergent thinking must be used. Divergent thinking leads officials to many unconventional solutions, while Convergent thinking makes them analyze, evaluate, and develop these solutions to reach an effective decision.

(3) Competitive advantage:

This variable is addressed through exposure to both the concept of competitive advantage and measuring competitive advantage, as follows:

Competitive advantage has occupied an important place in the strategic thinking of the organization, especially after the increasing intensity of competition and globalization. The emergence of the idea of competitive advantage dates to the 1970s through the McKinsey Consulting Company and based on the Japanese organizations' conquest of global markets despite environmental changes, due to their high capabilities in Choose markets that show their strengths. The idea began to spread widely in the early 1980s among American organizations, and starting from this date, the concept of competitive advantage occupied an important place in the business world. (Nazir, 2016)

There are many researchers' definitions of the concept of competitive advantage. He defined it as (Stoilkovska et al., 2015) as: knowledge and capabilities that the organization possesses and that are difficult to imitate or obtain by competitors, and (Hassan, 2017) defined it as: the organization's exploitation of its diverse capabilities and resources to obtain something distinctive that enables it to satisfy the desires of its current and prospective customers. In the way it outperforms its competitors in the sector in which it operates," (Moses, 2017) defined it as an advantage or element of superiority for the company that is achieved if strategies aimed at competing are followed.

From the previous definitions of competitive advantage, competitive advantage means that the organization possesses new methods that do not exist among competitors, which enables it to exploit external opportunities and face risks better than competitors.

Competitive advantages arise because of internal and external factors. Internal factors are the organization's possession of material, human, and moral resources that enable it to provide goods and services better than competitors. An organization that has skilled, trained, and innovative workers and expertise, advanced work technology, and effective leadership can produce goods and services. High quality and low cost, thus gaining customer trust, but excellence in internal factors is not enough to achieve excellence without paying attention to external factors and recognizing the rapid changes in the external environment, whether general (political, economic, social, technological, legal) or private (customers, suppliers, Intermediaries, competitors...) and thus identify the opportunities and risks facing the organization, and work to strengthen the internal aspects in a way that ensures that opportunities are exploited and risks are faced better than competitors. (Stoilkovska et al., 2015)

Many studies reviewed showed that competitive advantage depends largely on three main factors, which are low cost, flexibility, and improving quality (differentiation) (Al-Mulla, 2017; Moses, 2017; Ionescu and Dumttru, 2015), and these factors can be explained as follows:

- Low cost: It is the organization's ability to carry out all its work at a low cost compared to competitors, which enables it to control its prices and increase its sales. This is done through optimal exploitation of the organization's material and human resources.
- Speed of response to customers: It is the organization's ability to provide the good or service to customers in less time than competitors, and this can be achieved through communication and information technology and communicating with customers 24 hours a day.
- Quality: It is the organization's ability to provide correct and unique goods and services that are in line with or exceed customers' expectations and desires. This can be achieved through continuous study of all customers' needs and desires, and what is provided by competitors, and working to provide goods and services that are unique from competitors and exceed customers' expectations.

4) The relationship between customer knowledge management and creativity:

As a result of the importance of knowing customers and information as one of the most important sources of knowledge and ideas, organizations have turned in recent years to interest in customer-based creativity. Traditional models of creativity have been rejected recently, which are based on control and success in the organization's internal

environment is sufficient to achieve excellence and success. New approaches to creativity emphasize the need to pay attention to using and managing customer knowledge as a primary source for providing new and distinct outputs, through customer participation in organizational processes, attention to their needs and desires, and thus maximizing benefit and presenting innovative ideas. (Yi et al., 2011; Auh et al., 2007), and both (Wang and Wang, 2012; Sakkab, 2002; Magnusson, 2003) have indicated that organizations are currently increasingly interested in communication and development (Connect and Develop) more than Research and Development based on the fact that the innovative ideas proposed by customers are more innovative than the ideas proposed by employees, and thus affect the speed and quality of creativity positively.

To strengthen the customer's position in the market, new approaches focus on key questions such as "How do we innovate?" "How do we achieve competitive advantage," "How do we create value," "How do we provide distinguished information," For example, (Belkahl, 2011; Chesbrough, 2006) concluded that the client's knowledge and information play a major role in the innovative process, by identifying new opportunities and knowledge for creativity. This ability enables organizations to identify external knowledge and manage it internally.

Customer knowledge has become one of the main premises of innovative ability in management literature and knowledge economics (Rupak, 2008; Gann, 2000; Harty, 2005), as all studies reviewed concluded that customer knowledge management plays a major role in enhancing the innovative ability of the organization (Auh et al., 2007; Yi et al., 2011; Rollins and Halinen, 2005; Gibbert et al., 2002; Lu, 2008; Johannessen and Olsen, 2010; Hoyer et al., 2010; Rollins and Halinen, 2005; Belkahl and Triki, 2011; Taherparvar et al., 2014; Ghasemi, and Vahid, 2015). In the study (Taherpavar et al., 2014), which aimed to study the relationship between customer knowledge management, innovative ability, and organization performance in Golan's companies, it was found that there was a significant positive effect of customer knowledge management in its three dimensions (knowledge from customers, knowledge about customers, and knowledge for customers) on the innovative ability within the companies under study, and it also found that there is a positive and significant effect of customer knowledge management in its three dimensions on the performance of the companies under study, whether financial performance or non-financial performance.

Based on the above, the following hypotheses can be formulated:

H1: There is a significant correlation between customer knowledge management, innovative ability, and competitive advantage.

H2: There is a significant effect of customer knowledge management on innovative ability.

5) The relationship between customer knowledge management and competitive advantage.

Many studies have been interested in studying the relationship between knowledge management in general and the organization's competitive advantage, it was concluded that knowledge management enhances the organization's competitive advantage, through the ability to solve problems, strategic planning, and flexibility in making decisions efficiently and effectively in accordance with the needs of the surrounding environment. The ability to achieve organizational goals and the ability to reduce time and cost and create value. such as studies (Nasimi et al, 2013; Al-Mutlaq, 2017; Ashharabali, 2010; Dassey, 2012; Dassey, 2012; Al-Mutairi, The Customer 2017; Abdul Ghafour, 2015; Yu et al, 2017; Moses, 2017; Yu et al, 2017; Nasimi et al, 2013; Yeung et al., 2008).

Based on the above, the following hypotheses can be formulated:

H3: There is a significant effect of customer knowledge management on competitive advantage.

6) The relationship between creativity and competitive advantage:

Many previous studies were interested in studying the relationship between creativity and competitive advantage, and all the studies that the researcher reviewed agreed that creativity is the basic foundation of competitive advantage (Cook, 2010; Hana, 2013; Nauwankas, 2013; Hassan, 2017; Ajaj, 2015; Assaf, 2015; Sami, 2013; Dogan, 2016 ; ;Syafarudin, 2016; Ionescu and Dumttru, 2015 Nauwankas, 2013 ; Mahmoud, 2010).

Based on the above, the following hypotheses can be formulated:

H4: There is a significant effect of innovative ability on competitive advantage.

H5: Innovative ability significantly mediates the relationship between customer knowledge management and competitive advantage.

### **The research gap:**

Although there are many Arab and foreign studies that have examined creativity in general, there is a scarcity of foreign and Arab studies (within the researcher's knowledge) that have been concerned with examining the determinants of the organization's innovative capacity, which are (adaptation capacity, absorptive capacity, capacity for thinking).

There are many studies that examined the relationship between customer knowledge management and creativity in general, but in all of these studies the focus was on the different types of creativity within organizations, such as productive creativity, marketing creativity, and organizational creativity, and attention was not given to the determinants of the organization's innovative ability except in one study. Only, it is (Taherparvar et al., 2014).

There are many studies that have examined the relationship between creativity of its various types and competitive advantage, but there is not a single study (and that is within the researcher's knowledge) that has examined the relationship between innovative ability in its various dimensions (adaptation ability, absorptive ability, ability to think), and competitive advantage.

There are many studies that have examined the relationship between knowledge management in general and competitive advantage, but there is no study (to the best of the researcher's knowledge) that has examined the relationship between customer knowledge management and competitive advantage.

There are a few studies that have been concerned with examining the effect of customer knowledge management in enhancing the organization's innovative and competitive ability.

Based on the above, there is a research gap that is covered in this study, by testing the proposed framework shown in Figure (1).



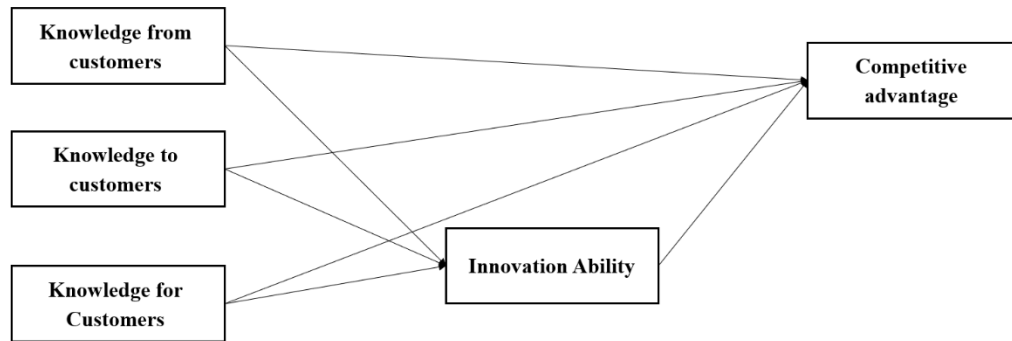


Figure (1): The proposed Model.

## Methodology

The study derives its scientific and applied importance as follows:

(1) Scientific importance:

The lack of any Arab studies (and that is within the researcher's knowledge) concerned with examining the relationship between customer knowledge management and innovative ability, customer knowledge management and competitive advantage, despite the importance of these concepts considering the prevailing trend that focuses on the need to focus on customers by the organization. Marketing A successful person begins with the customer and ends with the customer, by identifying all his needs, desires, and the changes that occur in them. The more connected the organization is to the customer and the more capable it is of listening and interacting deeply with him, the more it will have the ability to retain customers and win new customers. (Ghasemi and Vahid, 2015). Which can lead to enhancing the organization's innovative ability and competitive advantage. Hence, the researcher hopes that this study represents a new addition to marketing knowledge, in the field of customer knowledge management, innovative ability, and competitive advantage.

(2) Practical importance:

At the applied level, the study seeks to identify the degree of practice of branches of companies providing mobile phone services in the Kingdom of Saudi Arabia to manage customer knowledge, the availability of innovative capabilities, and the competitive advantage of these companies and then provide those responsible for managing these companies with data and information that illustrate the role that customer knowledge management plays in enhancing innovative ability and competitive advantage, to achieve direct benefit for companies. Place of study.

The research population consists of employees of companies providing mobile phone services in the Kingdom of Saudi Arabia, and the sample size was determined at a confidence level of 95%, and within a standard error of 5%, which are also acceptable error limits in research (Abu El-Ela, 1994). The sample size was determined by a program sampling size. The sample was estimated at (262) units, who were drawn in a stratified random manner. The number of valid questionnaires had reached 220.

In this study, we relied on a survey to collect data from the companies under study. To achieve the research objectives, a survey list consisting of 39 statements was prepared to measure the variables of the study, as shown in the study appendix. It was measured using a five-point Likert scale, and its levels include completely agree (5) Even completely disagree (1), and Table (3) shows the numbers of items measuring each variable in the questionnaire, and the previous studies that were relied upon in preparing these items.

Table (3): Measuring study variables.

Study variables	Measurement
Customer knowledge management	Taherpavar et al., 2014; Nejatian, 2011; Sulaiman et al., 2011; Garcia-Murillo and Annabi, 2002.
Innovative ability	Ghasemi, and Vahid, 2015; Ionescu and Dumttru, 2015; Balan, 2010; Gul, 2008; Mathuramaytha, 2012; Vedina, 2008
Competitive advantage	Al-Mulla and Al-Jabali, 2017; Moses, 2017 ; Ionescu and Dumttru, 2015

Source: Prepared by the researchers according to previous studies.

To conduct the validity test, confirmatory factor analysis was used. It is an application of the Structural Equation Model, using the AMOS version 20 program, as follows:

Confirmatory factor analysis of the customer knowledge management variable: The results of the statistical analysis, which are shown in Table (4), showed the significance of all standard coefficients, except for the coefficient of the fourth and ninth statements. Therefore, the researcher excluded these statements. The analysis also showed that the goodness of fit index The Goodness of Fit Index (GFI) (its value ranges between zero and one, and the closer it is to one, the more significant the model is) had a value of 0.779. It also turned out that the Comparative Fit Index (CFI) (its value ranges between zero and one, and the more It approached the correct one whenever the model was significant (its value reached 0.796, and thus indicates the significance of the scale).

Table (4): Standardized coefficients for the factor analysis of the customer knowledge management

Item No.	Standardized Loadings coefficients		
	The first factor	The second factor	The third factor
1	** 0.737		
2	** 0.641		
3	** 0.697		
4	0.543		
5		**0.604	
6		** 0.660	
7		** 0.596	
8		** 0.676	
9			0.078
10			** 0.635
11			** 0.789
12			** 0.757
13			** 0.767

\*\*Significant at the 0.01 level, Where: The first factor: knowledge from the customer, the second factor: knowledge to the customer, the third factor: knowledge for the customer.

Source: Prepared by the researchers.

Confirmatory factor analysis of the innovative ability variable: The results shown in Table (5) showed the significance of all standard coefficients. The value of the quality of conformity index was 0.811, and the value of the comparative conformity index was 0.818. This indicates the significance of the scale.

Table (5): Standardized coefficients for factor analysis of the innovative ability

Item No.	Standardized Loadings coefficients		
	The first factor	The second factor	The third factor
1	** 0.661		
2	** 0.841		
3	** 0.724		
4	** 0.734		
5		** 0.786	
6		** 0.725	
7		** 0.874	
8		** 0.711	
9		** 0.731	
10			** 0.708
11			** 0.822
12			** 0.825
13			** 0.786

\*\*Significant at the 0.01 level, where: The first factor: absorptive capacity, the second: the ability to adapt, and the third: the ability to think

Confirmatory factor analysis of the competitive advantage variable: The results shown in Table (6) showed the significance of all standard coefficients, and the value of both the goodness of fit index and the comparative conformity index was one correct, and this indicates the significance of the scale.

Table (6): Standard coefficients for factor analysis of the competitive advantage variable

Item No.	Standardized Loadings Coefficients		
	The first factor	The second factor	The third factor
1	** 0.651		
2	** 0.741		
3	** 0.734		
4	** 0.764		
6		** 0.776	
7		** 0.775	
8		** 0.878	
9		** 0.715	
10		** 0.736	
11			

Item No.	Standardized Loadings Coefficients		
	The first factor	The second factor	The third factor
12			** 0.768
13			** 0.862
14			** 0.867
15			** 0.778

\*\*Significant at 0.01, Where: The first factor: low cost, the second: improving quality, and the third: flexibility

Due to the clear discrepancy between the study variables, Cronbach's alpha reliability coefficient was relied upon, as shown in Table (7).

Table (7) Reliability test for research variables

Research Variables	Dimensions	Number of Items	Alpha coefficient
Customer knowledge management	Knowledge from customers	3	0.706
	Knowledge to customers	4	0.758
	Knowledge for customers	4	0.833
Innovative ability	Carrying capacity	4	0.864
	Adaptability	5	0.788
	The ability to think	4	0.854
Competitive advantage	Cost reduction	4	0.843
	Quality improvement	6	0.765
	Flexibility	5	0.875

The results of the reliability analysis showed the following:

- Customer knowledge management scale, it has been shown that the alpha coefficient for the scale is estimated at between 0.706 to 0.833, which indicates a high degree of reliability of the scale. It is known that if the alpha coefficient is in the range of (0.50 to 0.60), it is considered acceptable and sufficient, and a coefficient that reaches 0.80 is considered reliable and reliable to a degree. Very large (Idris, 2008: 423).
- Innovative ability scale: It was found that the coefficient ranged from 0.788 to 0.864, which indicates a high degree of reliability of the scale.
- Competitive advantage scale: It was found that the alpha coefficient for the scale reached 0.765, to 875, which indicates a high degree of reliability of the scale.

The research relied on the deductive approach, by reviewing previous studies, whether theoretical or applied, that are related to the problem of the study, identifying the causes and various dimensions of the problem and formulating it within the framework of a set of hypotheses that accept the research, meaning that the study will move from the general to the specific (i.e. relying on general rules and applying them in Special situations), then real-world data is collected to test the validity of hypotheses using statistical measures.

## Results and Discussion

### 1) Correlation between study variables:

To find out the correlation between the research variables, the researcher formulated the first hypothesis of the study, which is: “There is a significant correlation between customer knowledge management and innovative ability.”

The statistical analysis conducted using the Spearman correlation coefficient showed the results for this relationship as shown in Table (8).

Table (8): Correlations between research variables

		1	2	3	4	5	6
1	Knowledge from the customer	1					
2	Knowledge to the customer	0.527**	1				
3	Knowledge for the customer	0.468**	0.635**	1			
4	Total customer knowledge management	0.773**	0.852**	0.841**	1		
5	Innovative ability	0.369**	0.581**	0.589**	0.603**	1	
6	Competitive advantage	0.693**	0.709**	0.807**	0.887**	0.681**	1

\*\*Significant at the 0.01 level

Table (8) show that the first hypothesis is accepted: There is a positive effect correlation between Customer knowledge management dimensions (knowledge from the customer, knowledge to the customer, and knowledge for the customer), innovative ability and competitive advantage, as the following is evident from Table (8):

– There is a significant correlation between the three dimensions of customer knowledge management (knowledge from the customer, knowledge to the customer, and knowledge for the customer), where the correlation coefficient between knowledge from the customer and knowledge for the customer was 0.527, knowledge from the customer and knowledge about the customer 0.468, and finally knowledge for the customer and knowledge about the customer 0.635. The significance of the correlation for the three relationships was 0.01.

– There is a significant correlation between knowledge from the client and both innovative ability and competitive advantage, as the correlation coefficient between knowledge from the client and innovative ability reached 0.369, and knowledge from the client and competitive advantage was 0.693, and the significance of the correlation between these relationships became clear at a significance level of 0.01.

– There is a significant correlation between knowledge of the customer and both innovative ability and competitive advantage, as the correlation coefficient between knowledge of the customer and innovative ability reached 0.581, while the correlation coefficient between knowledge of the customer and competitive advantage reached 0.709, and the significance of these relationships became clear at 0.01.

– There is a significant correlation between knowledge about the customer and both innovative ability and competitive advantage, as the correlation coefficient between

knowledge about the customer and innovative ability reached 0.589, while the correlation coefficient between knowledge about the customer and competitive advantage was 0.807, and the significance of these relationships became clear at a significance level of 0.01.

- There is a significant correlation between customer knowledge management in general and both innovative ability and competitive advantage, as the correlation coefficient between customer knowledge management and innovative ability reached 0.603, while the correlation coefficient between customer knowledge management and competitive advantage reached 0.887, and the significance of these relationships became clear at a significance level of 0.01.

- There is a significant correlation between innovative ability and competitive advantage, as the correlation coefficient between the two variables reached 0.681, at a significance level of 0.01.

2) Direct and indirect effect relationships between customer knowledge management, innovative ability, and competitive advantage, to test these relationships, the proposed model of these relationships was prepared using Structural Equation Modeling (SEM), using AMOS Version 20.

To determine the level of significance of direct relationships between model variables, the maximum likelihood method was used, the results were as shown in Table (9).

Table (9): Significant indicators of the research model

Indicator	*Standardized Value	Obtained Value
$\chi^2$ Significance (P. value)	< 0.05	0.000
Goodness Fit index (GFI)	> 0.90	1
The square root of residuals (RMR)	< 0.06	zero
Comparative Fit index (CFI)	> 0.95	1

\* Standard value according to (Baek, 2007)

Table (9) shows the significance of the model, and the statistical analysis showed the results of the path test as shown in Table (10).

Table (10): Direct, indirect, and total effects of proposed model

Variable			Direct path coefficient	Indirect path coefficient	Total path coefficient
Independents	Mediators	dependents			
Knowledge from the customer	-	Innovative ability	0.057**	-	0.057**
Knowledge to the customer	-	Innovative ability	0.559**	-	0.559**
Knowledge for the customer	-	Innovative ability	0.296**	-	0.296**
Innovative ability	-	Competitive advantage	0.383**	-	0.383**
Knowledge of the customer	Innovative ability	Competitive advantage	0.246**	0.122**	0.368**
Knowledge of the customer	Innovative ability	Competitive advantage	0.296*	0.214**	0.510**

Variable			Direct path coefficient	Indirect path coefficient	Total path coefficient
Independents	Mediators	dependents			
Knowledge about the customer	Innovative ability	Competitive advantage	0.071**	0.076**	0.147**

\*\*Significant at 0.01. \*Significant at 0.05.

As shown in Table (10), the results were as follows:

- There is a direct significant effect of the dimensions of customer knowledge management (knowledge from the customer, knowledge for the customer, and knowledge about the customer) on innovative ability, at a significance level of 0.01, and the value of the direct path coefficient for the three dimensions was, in order, 0.057\*\*, 0.559\*\*, 0.296\*\*, In addition, the three dimensions explain a percentage of 0.664 of the explained variance in innovative ability, and the remaining percentage is due to other factors not included in the model. Therefore, the second hypothesis was accepted. This is due to the organization's interest in managing customer knowledge by identifying all their needs, desires, and opinions about the products provided and comparing them to competitors' products, in addition to collecting all data related to customers, such as their credibility, the problems they face, and their credit strength. All of this provides the organization with a strong knowledge base that enables it to increase its innovative capabilities, through the availability of all data and information related to the surrounding environment, which enables understanding, sensing and sensitivity to all external variables and thus adapting and dealing positively with them, in addition to correct thinking and effective decision-making. This result is consistent with previous studies that the researcher reviewed that were concerned with examining the relationship between knowledge management and creativity, such as studies(Berghmam, 2006; Mukherji, 2012; Auh et al., 2007; Yi et al., 2011; Rollins and Halinen, 2005; Gibbert et al., 2002; Lu, 2008; Johannessen and Olsen, 2010; Hoyer et al., 2010; Rollins and Halinen, 2005; Belkahla and Triki, 2011; Taherpavar et al., 2014; Ghasemi, and Vahid, 2015; Wang and Wang, 2012).
- There is a direct significant effect of the dimensions of customer knowledge management (knowledge from the customer, knowledge for the customer, and knowledge about the customer) on competitive advantage, at a significance level of 0.01, and the value of the direct path coefficient for the three dimensions was, respectively, 0.246\*\*, 0.296\*, 0.071\*\* and thus the third hypothesis was accepted. The researcher attributes this positive moral effect to the fact that the organization's interest in customer knowledge management provides it with all knowledge and data related to customers, thus increasing the organization's ability to provide distinguished goods and services compared to competitors, in terms of quality and price. This result is consistent with previous studies that the researcher reviewed that examined the relationship between knowledge management and competitive advantage, and among these studies:(Al-Mutlaq, 2017; Ashharabali, 2010; Dassey, 2012; Dassey, 2012; Al-Mutairi, The Customer 2017; Abdul Ghafour, 2015; Moses, 2017; Yu et al, 2017; Nasimi et al, 2013; Yeung et al., 2008 ;).
- There is a direct significant effect of innovative ability on competitive advantage, at a significance level of 0.01, and the value of the direct path coefficient was 0.383\*\*, and therefore the fourth hypothesis was accepted. The researcher attributes this positive moral impact to the organization's availability of innovative capabilities through its high ability to absorb and understand external variables, its high ability to adapt to them, and its high ability to think positively associated with sensing and understanding all external variables, which enables the organization to provide goods and services that are distinct from competitors. This is through its high ability to produce at a low cost, and its high ability to provide high-quality goods and services, in addition to its high flexibility in adapting to all external variables and dealing positively with them. This result is

consistent with previous studies that the researcher reviewed, which dealt with examining the relationship between innovative ability And competitive advantage, one of these studies (Hassan, 2017; Ajaj, 2015; Assaf, 2015; Sami, 2013; Dogan, 2016; ;Syafarudin, 2016; Ionescu and Dumttru, 2015 Nauwankas, 2013 ; Mahmoud, 2010).

Regarding indirect effects: The results were as follows:

- The positive effect increases for the dimension of knowledge from customers on competitive advantage when averaging innovative ability, the value of the increase reached 0.122 (which is the value of the indirect path).
- The positive effect of the knowledge dimension of customers on competitive advantage increases when innovative ability is centered, as the value of the increase reached 0.214, and the value of the indirect path represents.
- The positive effect of the distance of knowledge about customers on competitive advantage increases when innovative ability is centered, as the value of the increase reached 0.076, and represents the value of the indirect path.

From the above, the fifth hypothesis is accepted, and the researcher attributes the positive moral effect to the customer's interest in the knowledge obtained from customers, related to their needs, desires, and opinions about the organization's products, and the knowledge that is provided to customers that helps them make effective decisions, in addition to the availability of all relevant information. With customers, such as credibility, credit strength, and the problems they face, all of this leads to increasing the organization's ability to provide goods and services with quality and competitive price, and thus increasing the level of the organization's competitive advantages. This level can be improved if there are innovative capabilities in terms of the ability to absorb external variables, adapt to them, and the ability on positive thinking.

The statistical analysis showed the results for the interpretation factor as follows:

- Knowledge from the customer, knowledge about the customer, and knowledge about the customer each explain 0.664 of the explained variances in innovative ability, and the remaining percentage is due to other factors not included in the model.
- Knowledge from the customer, knowledge for the customer, knowledge about the customer, and innovative ability each explain 0.927 of the explained variances in competitive advantage, and the remaining percentage is due to other factors not included in the model.

## CONCLUSION

It is necessary to pay attention to customer knowledge management by those in charge of companies providing mobile phone services, as the results of the study found that there is a significant positive effect of customer knowledge management on both innovative ability and competitive advantage. Therefore, the researcher recommends those in charge of these companies to pay attention to customer knowledge management by doing the following:

- Providing all information related to services in a good and smooth manner to customers.
- When the company provides a new service, all information related to it must be provided to customers.
- Interest in learning all customers' opinions about the quality of services provided to them and comparing them to the services provided by competitors.



- Listening carefully to customers, learning about all their demands and the problems they face, studying them well, and working to solve them in a way that matches or exceeds their aspirations.
- Paying attention to creating an information base that includes all data and information about customers, such as their CV, credibility, and credit strength, thus increasing the company's ability to make the right decisions when dealing with customers.

The management of the companies under study must pay attention to enhancing innovative ability, as the results of the study showed that there is a positive moral effect of innovative ability on competitive advantage directly, and it also mediates the relationship between customer knowledge management and competitive advantage, and therefore the researcher recommends that officials in these companies pay attention to enhancing the company's innovative ability. By doing the following:

- Recognizing all information about the external environment, being sensitive to all problems of the external environment, and dealing with them positively.
- Work to evaluate competitors' experiences and benefit from them to provide goods and services superior to what is provided by competitors.
- Working to exploit all the knowledge obtained to provide distinguished goods and services that are compatible with all external variables and meet all market requirements.
- Working to continuously update the technology used based on technological developments, which enables the provision of distinguished goods and services in terms of quality and cost.
- Paying attention to the continuous development of services provided to customers.

The management of the companies under study must pay attention to enhancing competitive advantages, as the research results showed that there is a positive correlation between customer knowledge management, innovative ability, and competitive advantage. Therefore, the researcher recommends that the officials of these companies enhance competitive advantages by doing the following:

- Focus on providing services at competitive prices.
- Expanding the use of electronic activities and thus the ability to save many costs that are spent on traditional activities.
- Periodic monitoring of the services provided, thus reducing errors, which enables the costs of the services provided to decrease.
- Emphasizing the need to provide unconventional services that are difficult to imitate by competitors.
- Ensure commitment to promises with customers so that the customer maintains a positive image of the company.
- Ensure that the required services are provided correctly from the first time and work to reduce errors to a minimum.
- Responding to all external changes and not underestimating them and working to provide services that are compatible with these external variables.
- The availability of all information to the employees, which enables them to respond immediately and correctly to all customer inquiries.
- Paying attention to speed and convenience compared to competitors when providing services to customers.
- All services development activities provided are based on the needs and desires of customers.

The researcher suggests preparing other research related to customer knowledge management, innovative ability, and competitive advantage. These proposals are as follows:

- Applying the current study to other important sectors such as the tourism sector, education sector, and health sector.
- The role of customer knowledge management in supporting new product adoption intentions.
- Using customer knowledge management as an input to improve brand value.
- The impact of customer knowledge management on customer citizenship.
- The impact of customer knowledge management on customer retention.

## References

- Abdel-Ghafour, Saleh (2015), "Knowledge management requirements and their role in achieving competitive advantage in universities in the Gaza Strip, Master Thesis, Al-Aqsa University, Gaza, Palestine. (Arabic Text).
- Ajaj, Muhammad Haitham Abdul Rahman, and Haitham, Hamo Al-Shubaili Al-Abadi (2015), "The Impact of Creative Orientation in Achieving Competitive Advantage: A Field Study in a Group of Jordanian Communications" Orange-Jordan), First International Scientific Conference, Business Organizations: Opportunities, Challenges, and Aspirations, University of Al-Balqa Applied Sciences, Jordan, 1-24. (Arabic Text).
- Alavi, M. (2001), "Knowledge Management and Knowledge Management", Systems: Conceptual Foundations and Research, Vol. 25, No. 1, 96-107.
- Al-Mulla, Mustafa Muhannad Nouri, and Al-Jabali, Samir Musa Mahmoud (2017), The impact of customer relationship management dimensions on customer loyalty through competitive advantage: a case study in Jordanian airline companies, Jordan, master thesis, College of Business, Middle East University. (Arabic Text).
- Al-Mutairi, Nayef Lafi, and Al-Zaboon, Muhammad Saleem (2017), "The degree of employing knowledge management in confronting the obstacles to achieving competitive advantage in Kuwaiti higher education institutions from the point of view of faculty members," Educational Journal, Kuwait, Volume (32), Issue (125). ), 53-97. (Arabic Text).
- Al-Mutlaq, Turki bin Ali Hamoud (2017) "Cognitive investment and its relationship to building competitive advantage for emerging universities in the Kingdom of Saudi Arabia," Journal of Educational and Psychological Sciences - Bahrain, Volume (18), Issue (3), pp. 261-299. (Arabic Text).
- Ashharabli, Inaam Ali (2010), "Investing productive knowledge in advanced management information systems: concept and application," Library Message, Volume (45), Issue (2), 9-38. (Arabic Text).
- Auh, S., Bell, SJ, McLeod, CS and Shih, E. (2007), "Co-production and customer loyalty in financial services", Journal of Retailing, Vol. 83, No. 3, 359-370.
- Balan P, and Lindsay N, (2010), "Innovation capability: Exploring the factors that make up this construct in the services sector", AGSE, P 938www.swinburne.edu.au/lib/ir/onlineconferences/agse2010/000144.pdf.
- Belkahl, W. and Triki, A. (2011), "Customer knowledge enabled innovation capability: proposing measurement scale", Journal of Knowledge Management, Vol. 15, No. 4, 648-674.
- Berghman, L.M. (2006), "Building competences for new customer value creation: an exploratory study", Industrial Marketing Management, Vol. 35, 961-973.
- Chen, Y. (2008), "The positive effect of green intellectual capital on competitive advantages of firms", Journal of Business Ethics, Vol. 77, No. 3, 271-286.

- Chesbrough, H. (2006), "Open innovation: a new paradigm for understanding industrial innovation", in Chesbrough, H., Vanhaverbeke, W. and West, J. (Eds), *Open Innovation: Researching a New Paradigm*, Oxford University Press.
- Cook, Peter (2010), "Creativity Management", translated by Khaled Al-Amra, Cairo, Dar Al-Farouk for Publishing and Distribution. (Arabic Text).
- Dassi, Wahiba (2012), "The role of knowledge management in achieving competitive advantage: an applied study in Syrian government banks," *Al-Bahith Magazine*, vol. (11), pp. 165-176. (Arabic Text).
- Desouza, K. and Awazu, Y. (2005), "What do they know?", *Business Strategy Review*, Vol. 16No. 1, 42-45.
- Dogan E., (2016), "The effect of innovation on competitiveness", *Ekonometri ve Statistic*, Vol., 24, 60-81
- Doorn, J.K. (2010), "Customer engagement behavior: theoretical foundations and research directions", *Journal of Service Research*, Vol. 13, No. 3, 253-266.
- Edvinsson L., Michael S. (2009), "Intellectual Capital: Realizing Your Company's True Value by Finding Its Hidden Brainpower", New York: Harper Business, 10-15
- El-Helaly N., Ebeid A., and El-Menbawe A., (2015), "The Role of Customer Knowledge Management Process in Service Recovery Performance: An Applied Study to the Egyptian National Railways", *International Journal of Management and Applied Research*, Vol. 2, No. 1, 1-20
- Gann, D. (2000), "Innovation in project-based, service-enhanced firms: the construction of complex products and systems", *Research Policy*, Vol. 29, No. 7/8, 955-972
- Garcia-Murillo, M. and Annabi, H. (2002), "Customer knowledge management", *Journal of the Operational Research Society*, Vol. 53No. 8, 875-884.
- Gebert, H., Geib, M., Kolbe, L. and Brenner, W. (2003), "Knowledge-enabled customer relationship management: integrating customer relationship management and knowledge management concepts", *Journal of Knowledge Management*, Vol. 7No. 5, 107-123
- Ghasemi, M., and Vahid R. (2015), "The survey of the impact of customer knowledge management (CKM) on continuous innovation and financial and non-financial performance of Noor credit institution", *Coluban J. Life Sci*, Vol. 17, No.1., 40-49
- Gibbert, M., Leibold, M. and Probst, G. (2002), "Five styles of customer knowledge management, and how smart companies use them to create value", *European Management Journal*, Vol. 20No. 5, 459-469.
- Gul, S. A, Cengiz Y, (2008), "Innovative Capability, Innovation Strategy and Market Orientation: An Empirical analysis in Turkish software industry", *International Journal of Innovation Management*, Vol.12, No.1, March, 69-111.
- Halinen A. (2005), "Routledge Advances in Management and Business Studies, Relationship Marketing in Professional Services: A Study of Agency-Client Dynamics in the Advertising Sector", *Journal of Service Research*, Vol. 8, No. 2, 196-232.
- Hana, U. (2013), "Competitive Advantage Achievement through Innovation and Knowledge", *Journal of Competitiveness*, Vol. 5, No. 1, 82-96
- Harty, C. (2005), "Innovation in construction: a sociology of technology approach", *Building Research and Information*, Vol. 33No. 6, 512-522.
- Hassan, Muhammad Mahmoud Sayed Muhammad (2017), "Productive creativity and its role in enhancing competitive advantage," *Scientific Journal of Commercial and Environmental Studies*, Kingdom of Saudi Arabia, Volume (8), pp. 104-127. (Arabic Text).
- Hollebeek, L.D. (2013), "The customer engagement value interface: an exploratory investigation", *Australasian Marketing Journal*, Vol. 21, No. 1, 17-24.
- Hoyer, W.D., Chandy, R., Dorotic, M., Krafft, M. and Singh, S.S. (2010), "Consumer cocreation in new product development", *Journal of Service Research*, Vol. 13, No. 3, 283-296.

- Idris, Thabet Abdel Rahman (2008), *Marketing Research: Methods of Measurement, Analysis, and Hypothesis Testing*, (Alexandria: University House). (Arabic Text).
- Ionescu A. and Dumttru N.R., (2015), "The role of innovation in creating the Competitive Advantage", *EGOFORUM*, Vol. 4, No. 1., 121-139.
- Jarabkowski P, (2004), "Strategic as Practice: Reclusiveness, Adaptation, and Consumer", *Research Journal of Consumer Research*, Vol.30, No. 4, 529-560,
- Johannessen, JA and Olsen, B. (2010), "The future of value creation and innovations: aspects of a theory of value creation and innovation in a global knowledge economy", *International Journal of Information Management*, Vol. 30No. 6, 502-511.
- Khodakarami, F. and Yolande E.C. (2014) "Exploring the role of customer relationship management (CRM) systems in customer knowledge creation", *Information & Management*, Vol. 51, 27-42
- Magnusson, P.R. (2003), "Benefits of involving users in service innovation", *European Journal of Innovation Management*, Vol. 6, No. 4, 228-238.
- Mahmoud, JA, (2010) "The Impact of Marketing Innovation on Creating a Sustainable Competitive Advantage: The Case of Private Commercial Banks in Jordan", *Asian Journal of Marketing*, Vol.4, No.3, 113-130.
- Maswera, T., Dawson, R. and Edwards, J. (2006), "Assessing the levels of knowledge transfer within e-commerce websites of tourist organizations in Africa", *Electronic Journal of Knowledge Management*, Vol. 4, No. 1,59-66
- Mathuramaytha C., (2012), "Developing Knowledge-Sharing Capabilities Influence Innovation Capabilities in Organizations – a Theoretical Model", *International Conference on Education and Management Innovation IPEDR*, Vol.30.
- Moses T., (2017), "Knowledge Management Strategies for Competitive Advantage in the Convenience Foods Franchise Industry", PhD Desertion, Walden University.
- Mukherji, S. (2012), "A framework for managing customer knowledge in retail industry", *IIMB Management Review*, Vol. 24, No. 2, 95-103.
- Murillo, M. G. and Annabi, H. (2002) "Customer knowledge management", *Journal of the Operational Research Society*, Vol. 53, 875-884.
- Nasimi MH, Samaneh N., Masoumeh SK, Hadi SK, Fatemeh B., and Hadi M. (2013), "Knowledge Management and Competitive Advantage for Organizations", *Kuwait Chapter of Arabian Journal of Business and Management Review*, Vol. 2, No.5. 24-46.
- Nauwankas JP (2013),"Application of Innovation Strategy to Create A Sustainable Competitive Advantage at National Bank Of Kenya Limited", Master Thesis, University of Nairobi,
- Nazir, Bouchhoua (2016), "Intellectual Capital as a Tool for Achieving Competitive Advantage," *Journal of Law and Human Sciences*, Zian Achour University of Djelfa, Algeria, Issue (28), pp. 75-86. (Arabic Text).
- Nodehi A, and Afarin A., (2014), "Analysis of impact of customer knowledge management on customer loyalty (case study: Tehran private banks)", *Indian J. Sci.Res*, Vol. 7, No.1, 394-399.
- Rollins, M. and Halinen, A. (2005), "Customer Knowledge Management Competence: Towards a Theoretical Framework", *Proceedings of the 38th Hawaii International Conference on System Sciences*.
- Rupak, RW (2008), "Shared knowledge and product design glitches in integrated product development", *International Journal of Production Economics*, Vol. 114, No. 2, 723-736.
- Sakkab, N.Y. (2002), "Connect & develop complements research and development at P&G", *Research Technology Management*, Vo. 45No. 2, pp. 38-45.
- Shafiq, Mona Youssef (2009), "A proposed model of the relationship between the ability of companies providing mobile phone services in the Kingdom of Saudi Arabia to manage

- knowledge and build relationships with customers,” *Saudi Arabia Journal of Business Studies*, Kingdom of Saudi Arabia, Volume (33), Issue (2). ), 125-158. (Arabic Text).
- Sharif, Murad (2017), “The importance of applying the principles of comprehensive quality management in achieving the competitive advantage of university libraries: a field study of a sample of Algerian university libraries,” *Studies - Educational Sciences - Jordan*, Volume (44), pp. 223-259. (Arabic Text).
- Smith, HA and McKeen, JD (2005), “Developments in practice xviii - customer knowledge management: adding value for our customers”, *Communications of the Association for Information Systems*, Vol. 16, No. 1, 744-755.
- Stoilkovska, A., Natasha R., and Sashko G. (2015), “Innovative Business Models a Factor for Competitive Advantage of the Companies”, *UTMS Journal of Economics*, Vol. 6, No.1, 135–146.
- Sulaiman, S., Ariffin, M., Esmailian, GR, Faghihi, K. and Baharudin, B. (2011), “Customer knowledge management application in Malaysian mobile service providers”, *Procedia Engineering*, Vol. 15, No. 4, 3891-3895.
- Syafarudin A., (2016), “Strategy of leadership and innovation in improving Company Performance Against Competitive Advantage: A Case Study of PT. Pegadian (LTD) Indonesia”, *International Journal of Economics, Commerce and Management*, Vol. IV, No. 6, 96-116.
- Taherparvar N, Reza E., and Mohammad D. (2014), “Customer knowledge management, innovation capability and business performance: a case study of the banking industry”, *Journal of Knowledge Management*, Vol. 18, No. 3, 591-610
- Vedina R, and Baumane I, (2009), “innovation capabilities in small catching-up economies: Evidence from food production and tourism sector SMEs”, [Spain,ebooks.narotama.ac.id/.../Innovation%20Systems%20in%20Small%20Catching-Up%20Economics](http://Spain,ebooks.narotama.ac.id/.../Innovation%20Systems%20in%20Small%20Catching-Up%20Economics)
- Yeung, AH, Lo, VH, Yeung, AC and Cheng, TC (2008), “Specific customer knowledge and operational performance in apparel manufacturing”, *International Journal Production Economics*, Vol. 114, No. 2, 520-533
- Yi, Y., Natarajan, R. and Gong, T. (2011), “Customer participation and citizenship behavioral influences on employee performance, satisfaction, commitment, and turnover intention”, *Journal of Business Research*, Vol. 64, No. 1, 87-95
- Yu C, Zhengang Z., Chunpei L. and Yenchun JW, (2017), “Knowledge Creation Process and Sustainable Competitive Advantage: The Role of Technological Innovation Capabilities”, *Sustainability*, 9, 2280
- Zhang, J., Hoenig, S., Benedetto, AD, Lancioni, RA and Phatak, A. (2009), “What contributes to the enhanced use of customer, competition and technology knowledge for product innovation performance? A survey of multinational industrial companies' subsidiaries operating in China”, *Industrial Marketing Management*, Vol. 38, No. 3, 207-218.
- Zhang, Z. (2011), “Customer knowledge management and the strategies of social software”, *Business Process Management Journal*, Vol. 17, No. 1, 82-106.