

The Role of Knowledge Management Infrastructure in the Quality of Electronic Services: Applied Study in the Jordanian Banking Sector

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Abstract

The main purpose of this study is to determine the role of knowledge management infrastructure in the quality of electronic services in the (6) Jordanian banks that located in Amman city. The sampling unit and analysis (respondents) composed of (285) customers dealing with the target banks. In order to achieve the study objectives, the researcher designed a questionnaire consisting of (27) paragraph to collect the required data from study sample. The multiple regression analysis was used to testing the hypotheses. Empirical results found that the knowledge management infrastructure have a positive impact on the quality of electronic services in Jordanian Banking Sector. Based on these results the study recommending that the banking should focus largely on their knowledge management infrastructure consisted of (technology, structure and culture) in order to achieve the quality of electronic services and acquire new customer and maintain in the current customers to lead to competitive advantage . Also the study recommending that conducting more future research and studies on the role of knowledge management infrastructure in the quality of electronic services in the different area and contexts , because the results of current study limited to Jordanian sector . Therefore this study recommending conduct more study in the other sectors such as hospital, hotels in order to generalize the results.

Keywords: Knowledge management, Knowledge management infrastructure, quality of electronic services, Jordanian banking sectors.

1. Introduction

The term of knowledge management is very important to all companies and business organizations to improve their performance. Many scholars had attempted to identify the concept of knowledge management because of the new technologies and initiate new concepts such as globalization, innovation and creative ,therefore, the most of companies whatever profit or nonprofit try to acquire new knowledge and then achieve their goals.

Tanriverdi and Venkatraman (2005) noted that knowledge has become the key economic resource and the dominant and perhaps even the only source of comparative advantage.

From literature review there is a lack of previous studies focused on how to examine the role of knowledge management in the quality of electronic services especially in Jordanian banking sector. On other hand many studies examined the role of knowledge management processes in the commercial banks of Iran (Rasoulinezhad, 2011) and the Impact of knowledge management infrastructure on organizational performance with moderating role of KM performance: An Empirical Study on Banking Sector of Pakistan(Imran, 2014).

Therefore, this study aims to supplement the literature and cover this gap in knowledge by explains empirically the role of Knowledge management infrastructure in the quality of electronic services: Applied study in Jordanian Banking Sector. Thus, the main question of this study is: what is the role of Knowledge management infrastructure in the quality of electronic services in Jordanian banking sector.

2. Literature review

2.1 Knowledge management concept

Many researchers have identified the concept of knowledge management. According to chang and chuang (2011) they are identified the concept of knowledge management which are process include firm creates as the degree to which the firm creates, shares and utilizes knowledge resources through functional boundaries. Knowledge management concept has become very popular topic for sustaining competitive advantage and improving organization performance (zaied, hussien and Hassan,2012).

Many scholar like Filemon and Uriarte (2008) defined the concept of knowledge management as the

comprehensive process that's including many components such as locating, organizing, transferring and using the information and expertise within an organization. Knowledge management is the process in order to identify its real value and its appropriate utilization for the organization's competitive advantage (Nemati & Jamshidi, 2007). Knowledge Management described as a systematic process in order to capturing and communicating knowledge people can use (Moballegghi, M and Moghaddam, G.G. ,2011). Moreover, the companies still struggle to measures its real knowledge management effect on their economic performance (Omerzel et al., 2011).

Hence, the Knowledge Management (KM) is considered as backbone for the organizations to support and accomplish its task (Jennex, Smolnik, & Croasdell, 2012). According to zaied (2012) also the Knowledge Management (KM) provides the organizations sustainable competitive advantage by adopted advanced technologies, better processes, strong and good collaborative structure, sharing knowledge and attitude, and protection system and problem solving tools. In additionally Ghorab (2015) noted that Knowledge has become one of the most important valued commodities in the modern economy. On other hand, the Knowledge management (KM) is a process that transforms individual knowledge into organizational institutionalized knowledge (Al-Qarioti, 2015).

In fact, knowledge management is a response to serious need of organizations to exploit and use source of knowledge in an era that knowledge is the most important capital of organizations (Yaghoubi and Maleki, 2015). Based on an through review of literature, (Beigzadeh and Ameli ,2015) were examined the Investigation of knowledge Management Effect on Strategic Orientation and Organizational Performance.

On other side the knowledge management infrastructures is considered the mechanism for the organization to develop and improve its knowledge and stimulate the creation of knowledge within the organization as well as the sharing and protection of it. Many scholars discussed the knowledge management infrastructure elements such as technology; structure; culture and human resources (zaied, Hussein and Hassan, 2012).

According to (Javadein , Ramazani and keshavarzi ,2013) the knowledge management infrastructure today has two main features:

(1) The organizations are integrating knowledge management infrastructure into its business philosophy making it more common practice to become more and more superior.

(2) Also knowledge is becoming available while at the same time knowledge itself is becoming more sophisticated that's making knowledge management infrastructure more complex.

The following components selected for measuring the knowledge management based on the literature that reviewed which are technology, structure and culture as follow:

2.1.1 Technology

Technology refers to as the technical systems within an organization, which determine how knowledge travels throughout the enterprise and how knowledge is accessed.

Goh (2005) described the impact of technology in order to create innovation and organizations gained competitive advantage through new and customer demanded products that will be increase the sales revenue.

According to (Rasula et al, 2012) they defined technology as a technical mechanism that an organization holds for effective knowledge transmission within and outside the organization.

2.1.2 Structure

The knowledge structuring includes many processes such as defining, categorizing, indexing and linking digital objects as documents (Bose, 2002). The structure is System thinking, an organization is conceived of as being composed of elements and relations between elements (Nguyen, 2010).

2.1.3 Culture

One of the biggest challenges, therefore, to successfully implementing KM is to properly address the cultural change issues. The KM efforts must be focused on this aspect of organizational change and must develop programs to reach out to individuals involved (Filemon and uriarte, 2008).

Therefore, the key components of a knowledge culture are a climate of trust and openness in an environment where persistent learning and research are highly valued, esteemed and supported (Martin ,2000).

2.2 *Electronic service quality*

The electronic service has become more commonly and consider as one of the most key determinants for successful e-business (Jamie & Aron, 2010).

Researchers in the domain of electronic service quality have realized that, as the important for the Internet users. Therefore, many scholars and academic researchers defined the electronic service quality as a core element for the organization to achieve their goals and objective.

On other side the E-service is very important topic with the growth of the e-commerce and there are a number of

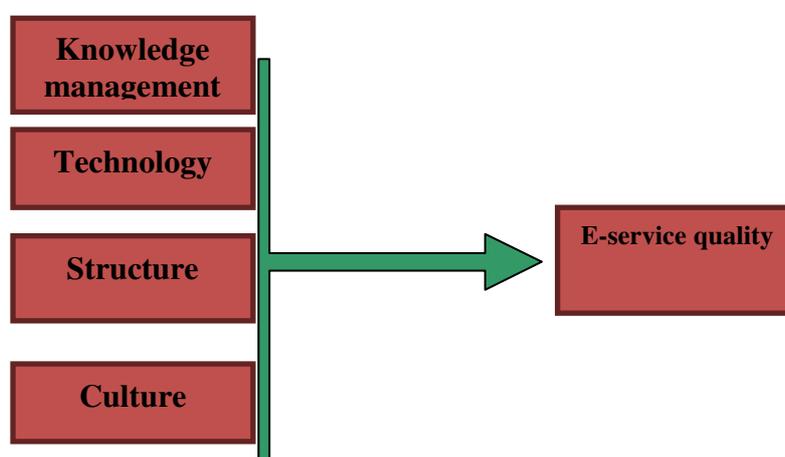
published studies have offered a variety of conceptual definitions (Sylvie& Ina, 2010).

According to Collier and Bienstock (2006) defined e-SQ as “customer’s perceptions of the outcome of the service along with recovery perceptions if a problem should occur”. some scholars believe that e-service quality is refers to the effectiveness and efficiency of online browse, online purchase, and delivery of goods and services. Moreover, E-SQ Is defined broadly To Encompass All Phases of a Customer’s Interactions with A Web Site: The Extent to Which a Web Site Facilitate sufficient And Effective Shopping, Purchasing, And Delivery (Parasuraman et al. ,2005).

According to Santos (2003) described E-Service Quality as entire customer perceptions or evaluations of electronic service experience of the online marketplace. In order to measuring E-Service Quality the academics research and scholars proposed 15 dimensions of E-Service Quality which are (Madu and Madu , 2003) :

Performance, Features, Structure, Aesthetics, Reliability, Storage Capacity, Serviceability, Security And System Integrity, Trust, Responsiveness, Product/Service Differentiation And Customization, Web Store Policies, Reputation, Assurance, and Empathy. According to (Zeithaml, Parasuraman, And Malhotra 2002) they are proposed five dimensions which include Information Availability and Content, Ease of Use, Privacy/Security, Graphic Style and Reliability and they adopted in the current study.

3. Study Model



4. Study Hypotheses

The main purpose of current study is to examine the role of knowledge management infrastructure in the quality of electronic services. Therefore, the main hypothesis is:

H0: There is no impact with statistical significant at ($\alpha \leq 0.05$) of knowledge management infrastructure (structure, technology, and culture) on the quality of electronic services.

5. Methodology

The study aims to test the impact of knowledge management infrastructure on the quality of electronic services from the perspectives of customers of the target banks, according to this objective the appropriate methodology is the descriptive and field analytical methodology. Therefore, the researcher used the both methodologies by reviewing the literature related to the study variables that includes knowledge management infrastructure and the quality of electronic services, and analyzing the data collected through the respondents’ answers on the questionnaire items.

4.1 Study Population and Sample

The study population encompasses (6) commercial banks located in Amman city. and the study sample included all the study population. The sampling unit and analysis (respondents) consisted of (285) customer dealing with the target banks. Table (1) presents the characteristics of the respondents.

Table1.The characteristics of Respondents

Variable	Category	Frequency	Percentage
Gender	Male	165	57.9
	Female	120	42.1
Years of dealing with the bank	Less than (5) years	12	4.21
	From (5) to less than (10) years	46	16.14
	From (10) to less than (15) years	92	32.29
	From (15) to less than (20) years	89	31.22
	(20) years and above	46	16.14
Age	From (18) to (25) years	4	1.4
	From (26) to (32) years	25	8.78
	From (33) to (40) years	129	45.26
	(41) years and above	127	44.56
Total		285	100%

4.2 study Instrument

The instrument of the study is a questionnaire developed by the researcher through reviewing the theoretical literature related to the knowledge management infrastructure and the quality of electronic services. The questionnaire consisted of three parts: The first part includes the demographic variables of respondents in terms of gender, years of dealing with the bank and age. The second part of the questionnaire includes the paragraphs related to the knowledge management infrastructure, which adopted from different studies. The third part of the questionnaire includes the paragraphs related to the quality of electronic services, which adopted from different studies. The answers to the second and third part of questionnaire relied on a Likert's Scale, ranging from strongly disagree (1); disagree (2); moderately agree (3); I agree (4); and strongly agree (5).

4.3Instrument Validity

Some academicians and technicians reviewed the study instrument during the preparation phase of the research, according to their opinions the questionnaire suitable to the current study, in addition to that, the researcher conducted a pilot test on a small sample to ensure the clarity of questionnaire items.

4.4 Instrument's Reliability

The reliability of the instrument determined by the Cronbach alpha coefficients which applied by the researcher in order to guarantee the internal consistency between questionnaire items. The alpha values was (0.89) for the knowledge management infrastructure items and (0.85) for the quality of electronic services items and (0.83) for the instrument as a whole. These values higher than the acceptable value (60%) therefore it is acceptable for the purposes of current study.

5. Results and Discussion

5.1 Hypotheses Testing

Before testing the study hypothesis by regression analysis, the researcher conducted many tests to ensure there is no high correlation between the independent variables (Multicollinearity) and to ensure the normal distribution of data, these testes included Variance Inflation Factory (VIF) Test, Tolerance Test and Skewness Test and table (2) presents their results.

Table 2.The results of VIF, Tolerance, and Skewnes tests

Independent Variables	VIF	Tolerance	Skewness
Structure	3.61	0.368	0.498
Culture	3.49	0.351	0.473
Technology	3.07	0.397	0.428

The results in table (2) shown that the values of (VIF) for the study variables less than (10) and the values of (Tolerance) higher than (0.05) which mean there is no high correlation (Multicollinearity) between the independent variables (knowledge management infrastructure). In addition, the results shown that the values of Skewness less than (1) and that mean the normal distribution of the data. Based on these results the researcher used a multiple regression analysis to testing the main hypothesis of the study. Table (3) presents the model summary while table (4) presents the ANOVA analysis and table (5) presents the beta and t values for the study hypothesis.

Table 3.The Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of The Estimate
1	0.839	0.735	0.701	0.361

*Predictors: (Constant), Culture, Structure, Technology

The results in table (3) shown that the value of R square is (0.735) and that means the model explains (0.735) from the variance in the dependent variable (the quality of electronic services) by the knowledge management infrastructure.

Table 4.ANOVA Analysis

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	328.401	4	46.119	1019.620	0.000
Residual	24.713	281	0.047		
Total	353.114	285			

*Predictors: (Constant), Culture, Structure, Technology

**Dependent Variable: Quality of electronic services

The results in table (4) shown that the value of (F) is (1019.620) with significant (0.000) which is lower than the specified value (0.05) therefore the model is fit and acceptable.

Table 5.Beta and t values for the main hypothesis

Model	Unstandardized Coefficients		Standardized Coefficients	t.	Sig.
	B	Std. Error	Beta		
1 (Constant)	0.069	0.057			
Culture	0.659	0.049	0.731	22.116	0.000*
Structure	0.573	0.037	0.622	18.731	0.000*
Technology	0.648	0.047	0.719	20.644	0.000*

*Significant at the level of statistical significance ($\alpha \leq 0.05$)

**Dependent Variable: Quality of electronic services

The results of multiple regression analysis in table (5) shown that the knowledge management infrastructure has impact on the quality of electronic services. The values of beta and t-tests show that the culture, structure, and technology has a positive impact on quality of electronic services at ($\alpha \leq 0.05$). In addition, the results shown that the culture has a highest impact (beta 0.731), then technology (beta 0.719), and the lowest impact was for the Structure (beta 0.622).

6. Conclusion and Recommendations

The current study examined the role of knowledge management infrastructure (technology, structure and culture) in the quality of electronic services in Jordanian Banking Sector.

Empirical results found that the knowledge management infrastructure have a positive impact on the quality of electronic services in Jordanian Banking Sector. Based on these results the study recommending that the banking should focus largely on their knowledge management infrastructure consisted of (technology, structure and culture) in order to achieve the quality of electronic services and acquire new customer and maintain in the current customers to lead to competitive advantage . Also the study recommending that conducting more future research and studies on the role of knowledge management infrastructure in the quality of electronic services in the different area and contexts , because the results of current study limited to Jordanian sector . Therefore this study recommending conduct more study in the other sectors such as hospital, hotels in order to generalize the results.

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