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The Role of Information Technology in Customer Satisfaction at the Commercial Banks in the State of Kuwait and the Kingdom of Bahrain

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The study recommended that attention should be given to customer satisfaction at the commercial banks in the State of Kuwait and the Kingdom of Bahrain by identifying customers' needs and trying to meet them through opening channels in addition to allow them being partners in the development process commensurate with their desires and achieving the banks goals.

Keywords: information technology, availability of devices software, databases, human resources, networks, customer satisfaction, commercial banks, state of kuwait, kingdom of bahrain.

I. Introduction

IT is increasingly gaining attention as organizations widely adopt and use more and more the latest IT tools and mechanisms due to the constant motion and development from one hand and from the other hand the increasing IT impact on every life aspect (Al.Shammari, 2008, page 25).

Due to the profound challenges that face these organizations such as competition, liberalization of external markets, interne, communication revolution and changing environment, many organizations seek to best implementation of IT to increase the operations efficiency, improving the outputs and to help them overcoming these challenges (Single, 2007, P91_93).

So, IT is an important and effective tool used to improve the institutional performance as a whole and customer satisfaction in particular due to its direct impact on how the works are done within the establishment in addition to the IT ability to accurately reveal the necessary information and data in an organized, secured and fast paced manner (Al-Razao, 2006, p41).

Customer is currently also one of important subjects that organizations focus on as customer satisfaction will contribute to stabilize the organization's revenue, customer satisfaction also prevents the customer from converting other competitors' products and services especially in sectors where competitors rendering very similar products and services. Competition also makes several products and services very similar to each other. Therefore, organizations started to look for excellence to achieve customer satisfaction and retaining them (Al-Mostafa, 2013, p 298).

For the abovementioned justifications, this study comes to identify the role played by IT among commercial banks in Kuwait and Bahrain in customer satisfaction.

II. The Timetable of the Study

The current study intended to identify the role of IT in customer satisfaction among commercial banks in the state of Kuwait and kingdom of Bahrain, which we distributed in October 2019.

III. Problem Statement

Introducing skills and knowledge related to IT and its systems on the organizational work will help users and workers in the administrative field to reduce time and achieve a competitive advantage based on meeting the customers desires and their satisfaction. But this issue from the theoretical aspect along with the availability of persons who are able to deal with this new technology. So, the cognitive problem came from the knowledge controversy of researchers and concerned persons. As some of them emphasize on that availability of IT in organizations does not have the impact on the organization and does not reflect on the organizations' work and thus they will be unable to achieve a competitive advantage for the organization and especially on customer satisfaction. While others stressed on that there is a strong relationship for IT on maximizing its impact on the organizations' work and customer satisfaction. For example, Barry Shore, 1996

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study explained that IT is a strong tool but it does not achieve competitive advantage as it is may be abused and then the organization will not achieve a distinguish performance for the organization. While Calderon & others study, 2001 stressed that there is a strong relationship between IT and its reflection on the macro performance of the organizations which is approved by (Ismail, 2009) study. So, this study came to investigate those theoretical differences for the access to reach a useful result for the concerned persons. The study also came to answer the following question "what is the role of IT in customer satisfaction in commercial banks in Kuwait and Bahrain?"

IV. Significance of the Study

The importance of the study came from the theoretical subject provided by the role of IT in customer satisfaction a afield study in the commercial banks. Discussing also IT contribution in GDP and the possibility for conversion the income sources of oil countries represented by the study population in Kuwait and Bahrain.

The importance of the study came also from addressing weak and strength points in the study population in relation to its work to contribute in developing the wok by stressing on the existing strength points and identifying weak points in order to overcome and control them.

V. Study Objectives

1. To identify the role of IT in customer satisfaction at commercial banks in Kuwait and Bahrain.
2. Reaching out results and recommendations that benefit the study population to identify strengths points and stressing on it in relation to implementation IT and its role service at commercial banks in Kuwait and Bahrain and to identify weak points to have recommendation that limit them.

VI. Primary Hypothesis

There is no statistically significance difference at the significance level ($a \leq 0.05$) for IT on customer satisfaction at the commercial banks in the state of Kuwait and kingdom of Bahrain.

VII. Study Methodology

The study used the descriptive analytical methodology to clarify the study's main variables (IT and Customer satisfaction) and identifying their elements. It also aimed at the main topics of these variable. The study instruments used secondary instrument such as books, scientific research, theses, websites and other resources to achieve the objectives of the study and to build theoretical side of the study. It also used the primary instrument i.e. questionnaire to measure the impact of IT on customer satisfaction.

VIII. Previous Studies

1.1 (Ashok, Day & Nsruls study, aimed to identify the innovative operations on customer satisfaction for IT companies in UK. Study concluded that there was no impact for innovation operations on customer satisfaction as customer satisfaction is connected to other variables such as how to deal, provision of services, level of customer dis-satisfaction from this method of dealing. The study recommended that surveys should be conducted to identify the impact of innovation on customer satisfaction and the extraneous factors that enter between innovation and customer satisfaction.

2.1 Al-Sa'ad, 2015 study, aimed to identify the impact of administrative operation re-engineering on customer satisfaction level in Jordan. analyzing the responses revealed that there is high level for implementing administrative operation re-engineering in Irbid Electricity Company from the perspective of the employees, but the customer satisfaction level of the company rendered services was at medium level from their perspective. The study recommended to that attention should be paid to customer satisfaction as it have a positive impact on the study population.

3.1 Abood & Kana'an, 2012 study, aimed to identify the level of customer satisfaction if the quality of Islamic banking services in Syria. Analyzing the responses for the sample of the sample revealed that there is difference between customer expectations for the dimensions and quality of Islamic banking services provided and their recognition to the actual performance of those services at the concerned bank. In conclusion, the study set some recommendations to develop the banking services at the bank.

4.1 Peter Weill & Mstgreth H. Olson study to investigate the impact of IT on the institutional performance. The study concluded that the there is an importance to differentiate and separate the type of investment in IT, as it has an importance in developing the institutional performance. The study recommended to enhance the usage of IT in a higher level of practice.

5.1 Mawdudur Rahman & Mostaq M. Hussain, 2008 study, aimed to identify the IT and its role on performance assessment. The study concluded that increasing attention of more IT by the organizations for its impact on the organization performance. Managers with high affinity to IT are the most influencers in their organizations' performance between the managers who have a weak or medium affinity toward IT.

6.1 Saudi, 2006 study, aimed to identify the impact of computerized administrative information systems on the Social Security Corporation employees'

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performance. The study have reached number of results, the most important were:

There is an impact for the main supplies of managing and operating computerized Information system (physical, software, human and organizational) in the professional performance.

7.1 Gazzawi, 2006 study, aimed to identify the level of knowledge and skills of IT and information systems which are implemented in the accounting software in Jordanian and American Universities. The study have reached many results, the most important was: accounting software in Jordan and American universities do not work to qualify the accounting students to enable them being able to meet the needs of accounting profession and the society. The study recommended to increase the level of practice for IT which was at medium level at this study.

8.1 Alrasibi, 2006, study aimed to identify departments of information systems and measures used to measure its performance and effect on the business organization performance. The study concluded that there is a relation between elements of performance for IT department and business organizations performance on multiple regression test.

IX. Discussion

After addressing some previous studies, we can see that the aforementioned studies had studied a single variable for the current study by taking the independent or the dependent variable. Even the previous studies was some how similar to this study, this study was different in terms of variables, measurement indicators which in turn reflected on the methodology is used.

In addition to that the study population of this study is unique as the previous study did not take this study population into consideration which is commercial banks, so, the results and recommendations will be useful for the implementation population and will reflect on citizens of Kuwait and Bahrain.

a) Information Technology

Currently, business organizations had witnessed an accelerated change in its business environment and technological and information revolution is one of change's milestone in the meantime. So, business organization should work motivate the individuals' potentials for what is expected on their innovative worl to deal with the clients (Senn, 1995, p31-33).

IT definitions are various, some specialists addressed the IT concept in a narrow way where it refers tp the technological aspect of the information systems, i.e it is considered an integral part from the information systems. But the wider perspective, it points to a variety of information systems, users and the comprehensive management of the organization (Salemi, 2000, p 83)

Some of them said that it is: all the hardware, software, networks, databases used to receive, process, store, retrieve, print and e-transfer data in form of texts, sounds, figures and pictures for concerned users and parties (Mazem, 2010, p66).

IT concept has expanded to include not only computers and communications but another component which is consumer electronics used to meet people's demands and desires including TV, CD recorders, sound devices and etc… (Al-Sairafi, 2009, p110).

IT points to implement the scientific methodology in dealing with information, providing new methods to organize the work and depend on the machine to deal with dat, information and accuracy in processing and operation data and the speed in transferring data and information between different parties and efficiency in decision making, and paying attention to the environment, situation, keep up with and to develop it (Schwalbe, 2011, p69-70).

Regarding the relation connecting IT and information systems (IS), it is represented by that IT is considered a method to facilitate the work of information system and it enable the IS to undertake its functions. While IS can be defined as the systems that can be used to acquire the required information, IT outcomes are represented by emerging several development fields as advanced software such as expert systems, Artificial Intelligence, databases, office automation, e-mail, internet, digital phones, laptops and in addition to many innovations of the technology (Ajlouni, 2007, p16).

i. *IT components*

IT includes the following components and dimensions;

a. *Computers*

They are the hardware and related devices, it is composed of three main parts, input units, processing units and output units that carry out several functions to facilitate the work within the organization (Salemi, 2000, P92), regarding the computer components, they are the followings (Dalahmeh, 2007, p334): input units, ventral processing units, storage units, and output units that converts the stored data in the storage units and processing operations to the suitable output methods.

b. *Software*

Software are detailed groups of instructions and orders prepared by programmer which directs the physical components of the computer to work in a specific way to gain certain outcomes (Al-Jasem, 2005, p98). Software can be categorized into two categories (Al-shanti, 2009, p88-90):

a- *Operating Systems:* Which are groups of software that manage operations in the computer which include: operating systems, language translation software, benefit program and Databases management systems.

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b- Implementation software: Software that direct the computer system to perform specific activities to process information of interest for the user. Implementation software include e-tables, data management software, text process software, office publishing software, presentation drawings software, multi-media software and communication software.

c. *Databases*

They are logic organization for groups of connected files. Data in these files are integrated and connected with specific relations which make finding information easy to achieve the required goals. Data in these bases organized and stored in ideal method to avoid repetition of data (Al-Shanti, 2009, p91). Databases achieve the following features: removing repetitions and increase in the data, unifying the connected data, they allowed the independency of software and data, improving the communication between user and system, increasing the confidentiality and security of data (Al-Rawi, 2002, p63), databases also help to integrate the information and speed retrieve and process of data.

d. *Networks*

Using computer networks had spread within departments and institution of various types due to the use of computer and its attachments at various fields to improve the performance, increase the works efficiency and speed (Al-Gunaimi, 2000, p19). Networks are computers connected to each other by communication lines to enable users sharing the available resources and transfer the information among these computers (Al-rawi, 2002, p99).

It is already known that the tremendous and accelerated development in the computer technology and communications which make these development effective tools in the field of spreading the information and facilitating the access to reach such information by as much as possible of beneficiaries. (Post, 2006, p244-245).

e. *Human component*

Workers at the IT field are employees who engaged in finding and keeping all or some of these works: IT strategy, computer systems, software systems, infra structure or related business operations wether they are in IT companies or at the management of IT in other companies (Al- Melhem, 2008, p150). Types of employees in IT fields are: system manager, system designers, programmers, chief of database, specialists of communications techniques, technical team, data entries, specialists in the operations research field (Kasasbeh, 2011, P 71_73).

f. *Customer satisfaction*

Customer satisfaction is the positive or negative impression that the customer feels toward a consumption experience/ purchasing a service/ product, which is usually resulted by comparing what is expecting before purchasing/ consumption with the recognized performance (Um alkhair, 2016, p12).

Customer satisfaction is the customer's feeling level resulted from comparing the recognized performance and what is expected. So, it is psychological state for the after-sale process and consumption for a service or a product. So, customer satisfaction is psychologic feeling for the customer reflecting the difference between the commodity or service performance and customer's expectations (Abo Faza, 2015, p19).

Customer satisfaction was defined as the customer's feeling of joy or disappointment resulted from comparing the product performance and his pre-expectations of this product. It is thus, the customer's recognition of the organizational effectiveness to render products or services that meet the customer's needs and desires (Khatheer and Mariemi, 2017, p 33).

So, Customer satisfaction is defines as a recognition indicator measures the level of customer acceptance for the after-sale and use of product or service which usually come from the comparison process conducted by the customer between his expectations and performance of this product/ service after purchasing and using of this product or service.

g. *Methods of improving customer satisfaction*

The importance of customer satisfaction topic come from its crucial role in organization sustainability and its making for profits. This satisfaction helps the organization to continue in the business field and gain a competitive advantage, gain a sustainable long and short-term profit. Customer satisfaction is a fundamental criterion to judge on the organization performance. The importance of this topic as it is considered a scale to measure the quality of service. It is also considered the feedback for the organization outcomes (Um alkhair, 2016, p 13).

Achieving customer satisfaction is not an easy or free process but is rather a complex one requires a fully conversant and a clear work objectives and procedures in addition to the need for a cost. The significant taking care of organizations focus on customer satisfaction. As total cost according to the inverse proportion between total cost and the costs incurred as a result of dis-satisfaction with the incurred cost as a result or achieving the customer satisfaction is a cost that eventually leads to the final objective for any business organization which is making profit and then sustainability and competitivity of this organization (Al- Sa'ad, 2015, page 40).

X. The Validity and Reliability of the Instrument

We sent the study's instrument to a group of reviewers to ensure the face validity and the suitability of

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its formulation, to ensure the validity of the instrument. The internal consistent coefficient based on Cronbach's alpha equation as per table (1) below.

XI. Study Population and Sample

The commercial banks in Kuwait and Bahrain represent the study population of this study. 5 banks in Kuwait: National Bank of Kuwait, Burgan Bank, Kuwait Finance House, Boubyan Bank and Warba Bank, and (5) banks in Bahrain: Future Bank, Bank of Bahrain and Kuwait, Ahli United Bank, and al baraka bank represent the study sample. We took several customers' opinions to measure their satisfaction in each bank of the study population in even percentages.

XII. Testing Hypotheses

Table (2) shows means and standard deviations related to the fluency. Means varied between (3.10-3.78), dimension of "software" with a mean of (3.78) was at rank 1 while dimension " customer satisfaction" was the last with a mean of (3.10). the mean for the fluency as a whole was (3.61).

a) *Testing first main hypothesis: First primary hypothesis:* There is a no statistically significance at the significance level ($a \leq 0.05$) for the IT in customer satisfaction at the commercial banks in the state of Kuwait and kingdom of Bahrain.

Table (3) shows Regression analysis for the impact of IT as a whole in the customer satisfaction in commercial banks in the state of Kuwait and the Kingdom of Bahrain and we can conclude from table 3 below that the Explanatory variance was (0.344) which means that IT as a whole explained 34.4% of customer satisfaction. We can conclude that there is a statistically impact of the IT as a whole on customer satisfaction as t-value was 5.375 with alpha 0.000. this result indicates the rejection of the hypothesis.

i. *Testing the First Sub-hypothesis:* There is no statistically significance impact of computers availability at the significance ($a \leq 0.05$) on customer satisfaction in banks in the state of Kuwait and kingdom of Bahrain.

We can conclude from table 4 below that the Explanatory variance was (0.055) which means that computers availability explained 5.5% of customer satisfaction. We can conclude that there is no statistically impact of the computers availability on customer satisfaction as t-value was 1.795 with alpha 0.078. this result indicates the acceptance of the hypothesis.

ii. *Testing the second Sub-hypothesis:* There is no statistically significance impact at the significance level ($a \leq 0.05$) for databases on customer satisfaction in the commercial banks in the state of Kuwait and kingdom of Bahrain.

We can conclude from table 5 below that the Explanatory variance was (0.072) which means that computers availability explained 7.2% of customer satisfaction. We can conclude that there is statistically significant impact of software on customer satisfaction as t-value was 2.070 with alpha 0.043. this result indicates the rejection of the hypothesis

iii. *Testing the third Sub-hypothesis:* There is no statistically significance impact at the significance level ($a \leq 0.05$) for databases on customer satisfaction in the commercial banks in the state of Kuwait and kingdom of Bahrain.

We can conclude from table 5 below that the Explanatory variance was (0.128) which means that computers availability explained 12.8% of customer satisfaction. We can conclude that there is statistically significant impact of software on customer satisfaction as t-value was 2.837 with alpha 0.06. this result indicates the rejection of the hypothesis

iv. *Testing the fourth Sub-hypothesis:* There is no statistically significance impact at the significance level ($a \leq 0.05$) for human resources on customer satisfaction in the commercial banks in the state of Kuwait and kingdom of Bahrain.

We can conclude from table 7 below that the Explanatory variance was (0.312) which means that Human resources explained 31.2% of customer satisfaction. We can conclude that there is statistically significant impact of software on customer satisfaction as t-value was 4.995 with alpha 0.000 this result indicates the rejection of the hypothesis

v. *Testing the fifth Sub-hypothesis:* There is no statistically significance impact at the significance level ($a \leq 0.05$) for networks on customer satisfaction in the commercial banks in the state of Kuwait and kingdom of Bahrain.

We can conclude from table 8 below that the Explanatory variance was (0.219) which means that networks explained 21.9% of customer satisfaction. We can conclude that there is statistically significant impact of software on customer satisfaction as t-value was 3.921 with alpha 0.000 this result indicates the rejection of the hypothesis

XIII. Results

1. There is a statistically significant impact of computers availability on customer satisfaction in the commercial banks in Kuwait and Bahrain.
2. There is a statistically significant impact for software, databases, human resources and networks on customer satisfaction in the commercial banks in Kuwait and Bahrain.
3. There is a statistically significant impact for IT as a whole on customer satisfaction in the commercial banks in Kuwait and Bahrain.

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XIV. Recommendations

1. This study recommends enhancing the work of human resources to deal with IT as appropriate with the importance of IT and what is the expectation on customer satisfaction.
2. The type of network in the bank should suit the volume of work demanded to be accomplished in the organization, network should also be of high speed and suit the demands of work
3. Taking care of customer satisfaction, conducting research to identify the customers' needs and their try to meet them by opening communication channels and to be partners in the development to meet their desires and achieve the bank objectives.

XV. List of Tables

Table 1: Internal Consistency coefficient (Cronbach's alpha)

Dimension	Internal consistency
Computers availability	0.74
Software	0.76
Databases	0.73
Human Resources	0.73
Network	0.77
Information technology as a whole	0.85

Table 2: Means and standard deviations to measure the availability of IT and customer satisfaction in commercial banks in the state of Kuwait and the Kingdom of Bahrain in descending order based on their means.

Dimension	Mean	Standard deviation	Level
Software	3.78	0.29	**High**
Databases	3.75	0.34	**High**
Computers	3.72	0.41	**High**
Human resources	3.65	0.43	Medium
Networks	3.61	0.46	Medium
IT as a whole	**3.72**	**0.28**	**High**
Customer Satisfaction	**3.10**	**0.672**	**Medium**

Table 3: Regression analysis for the impact of IT as a whole in the customer satisfaction in commercial banks in the state of Kuwait and the Kingdom of Bahrain.

Independent variable	Beta	T-value	T- statistical value	Correlation	Explanatory variance	f- Value	F statistical value
IT as a whole	0.587	5.375	0.000	0.587	0.344	28.888	0.000

Dependent Variable: customer satisfaction

Table 4: Regression analysis for the impact of computers availability in customer satisfaction in commercial banks in the state of Kuwait and the Kingdom of Bahrain.

Independent variable	Beta	T-value	T- statistical value	Correlation	Explanatory variance	f- Value	F statistical value
Computers	0.235	1.795	0.078	0.055	0.344	3.223	0.078

Dependent Variable: customer satisfaction

Table 5: Regression analysis for the impact of software in customer satisfaction in commercial banks in the state of Kuwait and the Kingdom of Bahrain.

Independent variable	Beta	T-value	T- statistical value	Correlation	Explanatory variance	f- Value	F statistical value
Software	0.269	2.070	0.043	0.269	0.072	4.285	0.043

Dependent Variable: customer satisfaction

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Table 6: Regression analysis for the impact of software in customer satisfaction in commercial banks in the state of Kuwait and the Kingdom of Bahrain.

Independent variable	Beta	T-value	T- statistical value	Correlation	Explanatory variance	f- Value	F statistical value
Databases	0.357	2.837	0.006	0.357	0.128	8.048	0.006

Dependent Variable: customer satisfaction

Table 7: Regression analysis for the impact of software in customer satisfaction in commercial banks in the state of Kuwait and the Kingdom of Bahrain.

Independent variable	Beta	T-value	T- statistical value	Correlation	Explanator y variance	f- Value	F statistical value
Human resources	0.559	4.995	0.000	0.559	0.312	24.947	0.000

Dependent Variable: customer satisfaction

Table 8: Regression analysis for the impact of networks in customer satisfaction in commercial banks in the state of Kuwait and the Kingdom of Bahrain.

Independent variable	Beta	T-value	T- statistical value	Correlation	Explanator y variance	f- Value	F statistical value
Networks	0.467	3.921	0.000	0.467	0.219	15.378	0.000

Dependent Variable: customer satisfaction

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