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The Impact of Information Technology (IT) on Assessing the Quality of Notifications Based on Standard No. 2420 in the Public Sector in Kuwait

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Abstract

The researcher aimed to explore impact of information technology (IT) on assessing the quality of notifications based on standard No. 2420 in the public sector in Kuwait. He aimed to explore the impact of several variables - like: computers & software, communication systems, and IT users' skills – on the quality of notifications based on standard No. 2420 in the public sector in Kuwait. The population consists from all the internal audit departments in ministries and public bodies in Kuwait. The researcher has chosen a conveyance sample consisting from 200 individuals. He distributed questionnaire forms to them. 167 questionnaire forms were retrieved. They are valid for statistical analysis. The researcher found that information technology (IT) has a significant impact on assessing the quality of notifications based on standard No. 2420 in the public sector in Kuwait.

Keywords: Information Technology (IT), quality of notifications, public sector

1. Introduction

Since the beginning of the 21st century, several changes have been made. Due to such changes, organizations have been facing several challenges, such as: globalism, severe competition and ICT revolution. Since the beginning of the 21st century, the number of developments has been increasing. Organizations have been exerting effort to invest in such developments in order to increase their performance efficiency and performance effectiveness. The emergence of many developments led to an increase in the significance of information technology (IT). It led to an increase in the aim of IT on the effectiveness of the decisions. Using developments became essential in order to improve the performance efficiency and performance effectiveness of organizations.

Information technology (IT) plays a major and vital role in supporting the organizational activities. That applies whether the organizations are profit organizations or non-profit ones. It involves hardware, software, operations launched through information system and administrative operations. It involves human resources. It involves the skills needed for designing the software, and hardware and carrying out the operations needed for producing information and developing, managing and monitoring information systems.

Information technology (IT) is considered a significant field that employees must be having much knowledge about. That's attributed to having rapid developments in this field. Information technology (IT) affects the way in which organizations are run. It affects the way in which control is enforced on organization.

The present study is significant due the reasons below:

1) This study sheds a light on the major role of information technology (IT) in assessing the quality of notifications based on standard No. 2420 in the public sector in Kuwait

2) This study offers results that contribute to improving the capabilities of employees in the public sector in Kuwait to use information technology (IT) for assessing the quality of notifications based on standard No. 2420.

2. Statement of the Problem

The use of information technology (IT) has been increasing in organizations and departments. In fact, it became essential for achieving success in any organization. Similar to any other organization, ministries are in need for using information technology (IT). There has been an increasing attention in improving the quality of notifications

based on standard No. 2420.

The problem of the present study lies in the questions below

Q.1 What is the impact of information technology (IT) on the quality of notifications based on standard No. 2420 in the public sector in Kuwait?

Q.2. What is the impact of computers and software on the quality of notifications based on standard No. 2420 in the public sector in Kuwait?

Q.3. What is the impact of communication systems on the quality of notifications based on standard No. 2420 in the public sector in Kuwait?

Q.4. What is the impact of IT users' skills on the quality of notifications based on standard No. 2420 in the public sector in Kuwait?

3. The Study's Hypotheses

The study's hypotheses are shown below:

H1. Information technology (IT) has a significant impact on the quality of notifications based on standard No. 2420 in the public sector in Kuwait.

H2. Computers and software have a significant impact on the quality of notifications based on standard No. 2420 in the public sector in Kuwait.

H3. Communication systems have a significant impact on the quality of notifications based on standard No. 2420 in the public sector in Kuwait.

H4. IT users' skills have a significant impact on the quality of notifications based on standard No. 2420 in the public sector in Kuwait.

4. Theoretical Framework

Information technology (IT) refers to a set of individuals, data, procedures, hardware and software that operate jointly in the aim of meeting the goals of an organization (Al-Khanaq, 2005). It is necessary to be aware of the significance of information technology (IT) in managing knowledge. According to Hansson (2015), the term (technology) is a Latin word that is derived from two words (i.e. techno and logy). Techno refers to art or skill. Logy refers to knowledge or discipline. Information technology (IT) refers to all the items that are connected to computers, such as: internet, network, programs, devices, and the ones who are specialized in this technology (Kumar, 2014; Naidoo & Hoque, 2018).

The use of information technology (IT) in business transaction led to improving the operational efficiency of companies. Information technology (IT) played a major role in achieving development in developed countries (Olusola & Oluwaseun, 2013). The development of information technology (IT) in various fields led to providing companies with new opportunities. It led to improving the methods used for conducting business transactions, submitting payment and delivering services and products. According to Barua et al. (2004), Simchi-Levi et al. (2013) and Rana (2013), information technology (IT) affects business transactions in the following aspects:

1) Automate offices: Information technology (IT) is an integral element of business operations. It contributed to automating many industrial and business systems. It contributed to processing various types of data in order to reach the required information to carry out the required tasks (Barua et al., 2004; Hansson, 2015).

2) Information technology (IT) allows saving a great amount of data: It allows business organization to save numerous records. Such records can be used for various goals. Such records include: payroll records, inventory records, resources records, sales records and the records submitted for the management. They can be easily accessed and read through using information technology (IT). They can be easily updated through using information technology (IT) (Barua et al., 2004).

3) Information technology (IT) contributes to raising the productivity level: Computers contributed to automating office procedures and tasks. That can be done through using the word processor software. In the manufacturing operations, using information technology (IT) contributes to carrying out tasks within a shorter duration of time. It contributes to reducing the wastage of resources in organizations. It contributes to raising the productivity levels of organizations (Simchi-Levi et al., 2003).

4) Information technology (IT) facilitates the process of exchanging information and data: Due to the emergence of social media, major changes occurred to the business operations. Social media can be used for exchanging information and data with others. Computer networks and the use of email accounts have been playing a

significant role for exchanging information and data within the organization (Dawson & Mahdi, 2007). Thus, information technology (IT) has been playing a major role in carrying out transactions, and promoting cooperation and coordination. It has been playing a major role in supporting the decision-making process and managing the supply chain (Simchi-Levi et al., 2003).

5) Improving competiveness: Information technology (IT) serves as a reliable and economic mean for carrying out business transactions in an electronic manner. It enables the organization to create relationships with customs online. It can be used for offering support to customers (24 / 7). It can be used for raising the effectiveness of the strategies used for improving competiveness. It can be used for raising the effectiveness of the strategies used for entering new markets (Simchi-Levi et al., 2003).

6) Security: Security is considered a critical issue in all organizations. Information technology (IT) can be used to prevent certain employees in the organization from accessing certain information. That can be done through using special security programs. Such programs contribute to ensuring integrity and security (Rana, 2013).

7) Reducing costs: Through using information technology, organizations shall be able to reduce the costs of transactions and distributing goods and services to customers (Rana, 2013).

There are two types of software. Such types are shown below:

1) **Operating software**: It refers to the software that is used for managing the hardware for carrying out procedures and mathematical and logical operations. It is used for managing the flow of information. It is used for managing the process of saving information in the main memory. It is used for processing and executing orders. It enables the computer and its device to execute orders and run applications. Examples for operating software include: MS-Dos and Windows. The emergence of Windows is connected to the prevalence of Microcomputers. Operating software is an integral element of any computer. The device that doesn't include operating software can't be considered a computer. Each type of computer has special operating software (Verma, 2005).

2) **Application software**: It refers to the programs that operate for carrying out a specific task. Various types of application software are developed in the field of agriculture, management, science, agriculture, engineering, medicine, art and etc. (Malaga, 2005).

Application software is an essential part of computer. The ones responsible for marketing, and designing this software generate much profit (Martin, 2002).

The quality of notifications based on standard No. 2420

Based on standard No. 2420 that's connected to quality of notifications, notifications must be brief, valid, objective, clear, constructive, and timely.

Notifications must be valid, and free from mistakes and distortions. They must involve valid information about facts. They must be objective and unbiased. They must be clear, logical and easy to be understood. They must be free from unnecessary technical terms. They must provide one with all the significant and relevant information. They must be brief and related to the topic. They must be free from unnecessary details. They must be free from repetitions. They must be constructive and beneficial. They must contribute to making improvements when needed. They must include all the required information and details that are need for supporting the validity of certain conclusion or recommendations. In other words, they must be comprehensive. They must be issued on the right time and within an appropriate duration of time. They must enable the administration to take the required reformative procedures (https://na.theiia.org/translations/PublicDocuments/IPPF-Standards-2017-Arabic.pdf)

5. The Study's Methodology

The researcher adopted a descriptive analytical approach in order to explore the impact of information technology (IT) on assessing the quality of notifications based on standard No. 2420 in the public sector in Kuwait. He adopted this approach to obtain, classify, and analyse data. He adopted this approach to offer a descriptive for the study's population and the targeted phenomenon

5.1 The Study's Population and Sample

The population consists from all the internal audit departments in ministries and public bodies in Kuwait. The researcher had chosen a conveyance sample consisting from 200 individuals. He distributed questionnaire forms to them. 167 questionnaire forms were retrieved. They are valid for statistical analysis.

5.2 Data Collection Methods

5.2.1 Primary Data

The researcher collected primary data. Primary data was obtained to meet the study's goals. It was obtained

through the use of a questionnaire. It allowed the researcher to test the hypotheses and answer the study's questions. The questionnaire sheds light on all the theoretical aspects

5.2.2 Secondary Data

The researcher collected secondary data. Secondary data refers to the data that was obtained through public libraries, libraries at universities, references and the relevant previous studies.

5.3 Statistical Analysis

In order to analyse the data obtained through the questionnaire, the researcher used the SPSS program / Version 26. He also used several statistical methods. Such methods include: the simple and multiple regression test for testing the study's hypotheses.

6. Results

6.1 Sample Characteristics

It is found that 55.1% of the sample is males and the rest is females, also it is found that 51.5% of the sample has got bachelor degree as well as 42% of the sample has experience between 11-15 years.

Also it is found that there are positive attitudes toward each variable because its mean is greater than median of the scale (3). As shown in Table 1:

Table 1. Descriptive analysis

	N	Minimum	Maximum	Mean	Std. Deviation
Computers and software	167	1.60	5.00	3.9054	.83617
Communication systems	167	1.40	5.00	3.6970	.82253
IT users' skills	167	1.00	5.00	3.5222	.89949
quality of notifications	167	1.40	5.00	3.6240	.89841

6.2 Reliability Test

Cronbach alpha is used to test the consistency of the scale, alpha value = 0.964 is accepted since it is greater than accepted value 0.60 (Sekaran, 2006).

6.3 Hypotheses Testing

H1. Information technology (IT) has a significant impact on the quality of notifications based on standard No. 2420 in the public sector in Kuwait.

Table 2. H1 analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.826[a]	.683	.677	.51066

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	91.478	3	30.493	116.931	.000[b]
	Residual	42.506	163	.261		
	Total	133.984	166			

Coefficients[a]

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	.232	.197		1.177	.241
	Information technology	.217	.079	.202	2.733	.007
	Communication systems	.350	.115	.320	3.053	.003
	IT users' skills	.356	.096	.356	3.692	.000

Multiple Regression is used to test the hypothesis, it is found that r = 0.826 is significant and reflects strong relationship between independent and dependent variables. Also F = 116.931 is significant at 0.05 level, so that we accept the above hypothesis, that is, Information technology (IT) has a significant impact on the quality of

notifications based on standard No. 2420 in the public sector in Kuwait.

H2. Computers and software have a significant impact on the quality of notifications based on standard No. 2420 in the public sector in Kuwait.

Table 3. H2 analysis

Model		R	R Square	Adjusted R Square	Std. Error of the Estimate	
1		.724[a]	.524	.521	.62149	
ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	70.252	1	70.252	181.880	.000[b]
	Residual	63.732	165	.386		
	Total	133.984	166			
Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	.586	.230		2.542	.012
	Computers and software	.778	.058	.724	13.486	.000

Linear Regression is used to test the hypothesis, it is found that r = 0.724 is significant and reflects strong relationship between independent and dependent variables. Also F = 181.88 is significant at 0.05 level, so that we accept the above hypothesis, that is, Computers and software have a significant impact on the quality of notifications based on standard No. 2420 in the public sector in Kuwait

H3. Communication systems have a significant impact on the quality of notifications based on standard No. 2420 in the public sector in Kuwait.

Table 4. H3 analysis

Model		R	R Square	Adjusted R Square	Std. Error of the Estimate	
1		.796[a]	.634	.631	.54537	
ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	84.908	1	84.908	285.472	.000[b]
	Residual	49.076	165	.297		
	Total	133.984	166			
Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	.409	.195		2.101	.037
	ind2	.869	.051	.796	16.896	.000

Linear Regression is used to test the hypothesis, it is found that r = 0.796 is significant and reflects strong relationship between independent and dependent variables. Also F = 285.472is significant at 0.05 level, so that we accept the above hypothesis, that is, Communication systems have a significant impact on the quality of notifications based on standard No. 2420 in the public sector in Kuwait.

H4. IT users' skills have a significant impact on the quality of notifications based on standard No. 2420 in the public sector in Kuwait.

Table 5. H4 analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.791[a]	.626	.624	.55096

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	83.898	1	83.898	276.383	.000[b]
	Residual	50.087	165	.304		
	Total	133.984	166			

Coefficients[a]

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	.840	.173		4.863	.000
	IT users' skills	.790	.048	.791	16.625	.000

Linear Regression is used to test the hypothesis, it is found that r = 0.791 is significant and reflects strong relationship between independent and dependent variables. Also F = 276.383 is significant at 0.05 level, so that we accept the above hypothesis, that is, IT users' skills have a significant impact on the quality of notifications based on standard No. 2420 in the public sector in Kuwait.

7. Conclusions

The researcher aimed to explore impact of information technology (IT) on assessing the quality of notifications based on standard No. 2420 in the public sector in Kuwait. He aimed to explore the impact of several variables - like: computers & software, communication systems, and IT users' skills – on the quality of notifications based on standard No. 2420 in the public sector in Kuwait. He concluded the results shown below

- Information technology (IT) has a significant impact on the quality of notifications based on standard No. 2420 in the public sector in Kuwait
- Computers and software have a significant impact on the quality of notifications based on standard No. 2420 in the public sector in Kuwait
- Communication systems have a significant impact on the quality of notifications based on standard No. 2420 in the public sector in Kuwait
- The IT users' skills have a significant impact on the quality of notifications based on standard No. 2420 in the public sector in Kuwait

8. Recommendations

In the light of the study's results, the researcher recommends:

1) Providing administrators with training about the latest developments in the field information technology (IT). That should be done in order to enable those administrators to raising the quality level of notifications based on standard No. 2420 in the public sector in Kuwait
2) Addressing all the weaknesses that are connected to the use of information technology in the public sector in Kuwait. That shall contribute to raising the quality level of notifications based on standard No. 2420 in the public sector in Kuwait
3) Developing an advanced database for the public sector in Kuwait
4) Providing more attention to the development of the software that is used in the Kuwaiti ministries and public bodies. Such software must be developed in a regular manner.
5) Setting effective mechanisms for enforcing control on the expenditures related to information technology (IT) in ministries. That should be done in order to utilize funds effectively for raising the quality level of notifications based on standard No. 2420 in the public sector in Kuwait

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