The Effect of Self-Efficacy in the Acceptance of Information Technology in the Public Sector

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Abstract

Purpose: *In order for the organizations to realize the full benefits of the application of IT, it is important for those who have to use the technology to accept it. Knowing what makes employees accept or resist to some technology is important so that the investment made on the IT application yields a good and satisfactory return. The study is to test the success of the technology acceptance model in Yemen culture. In addition, This study aims to investigate the factors influencing the acceptance of technology in public sector such as individual defferences (self- efficacy) in the theory of technology acceptance in order to provide better understanding for the factors influencing the acceptance of information technology among the individual perceptions. The study also aimed to highlight the role of of self-efficacy in facilitating information transaction between top management and government.*

Methodology: *survey questionnaire was distributed to 53 government utilities and 357 cases were used in the analysis. Structural Equition Modeling AMOS 18 was used for the analysis of the proposed model.*

Findings *the study confirmed the theory of TAM and showed its potential capability in the Middle East, particularly in Yemen. the study has provided empirical evidence for the positive effect of self-efficacy on the intention behaviour to use towards the actual usage for the technology throughout the positive effect on preceived usefulness and ease of use. Empirical evidence has shown that the employees and managers have the capability to use the technology.*

Significance*: This study has provided empirical evidence for the effects of new technology determinants in the government sector. In particular, it has successfully revealed that computer self-efficacy is important determinants in influencing the adoption of technologies. Also for the practicul usage, the study contributed to the empirical knowledge to increase the success rate for accepting or adopting the information technology in the government sector.*

Keywords: Technology Acceptance Model, computer self-efficacy, Structural Equition Modeling, Yemen.

Literature Review

0.1 Information Techynology (IT)

Before the study starts to go farther in the next section of the actual usage of the information technology, the study provided some definitions for IT to facilitate the understanding of the actual usage of the technology. There are many definitions of IT from different perspectives depending on the focus of each study.

According to (Watson, 2007) IT includes hardware, software and elecommunication equipment which is used to capture, process, store, and distribute information. Another study was conducted by (Brynjolfsson, 1991) defined IT as Office, computing machines, communications equipment, instruments, photocopiers and related equipment, and software and related services. According to (Ajiferuke and Olatokun, 2005) IT refered to any equipment, or interconnected system or subsystem of equipment that is used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission.

Based on the above definitions, the present study defines IT as office, computing machines, hardware, software, instruments, photocopiers, telecommunication equipment, related services, which are used by employees to capture, process, store and distribute information.

Also, Perceived ease of use and perceived usefulness are considered as belief factors that mediate the relation between actual usage of IT and the external variables that affect technology acceptance. According to TAM, employees accept to use new software after they perceive it to be useful and easy to use (Davis, 1989). Perceived usefulness refers to the degree of which the user believes that the use for a particular system will support his work. On the other hand, perceived ease of use refers to the degree of the user's belief that the usage for a particular system will be out of effort (Davis, 1989).

0.2 Individual Differences

Individual differences are defined as the individual's perspective about his own ability to succeed in the result he wants to reach it or goal he wants to achieve depending on the desire he has to achieve his goal (Lewis, Agarwal, & Sambamurthy, 2003). Another definition is the dissimilarities among people including differences in perception and behavior, traits and personality characteristics and circumstances (Stylianou & Jackson, 2007). Individual differences in acceptance for IT are an issue for researchers. According to Agarwal and Prasad (1999), "The importance of individual differences as a significant theoretical construct in technology acceptance is indisputable. What is not clear however is the extent to which individual differences matter in work settings because of the limited managerial control that can be exercised over such differences" (p. 23). Hence, the present study aims to investigate this variable.

Agarwal and Prasad (1999) also suggest that individual differences can be utilized to organize the profile of individuals to be more acceptable of new technologies. The information about the individual user can help in recruitment and selection activities. However, acknowledging the mediating influence of beliefs and the reality that managers often cannot choose individuals to become users of IT, Agarwal and Prasad also suggest that technology acceptance can be facilitated by utilizing other intermediations that directly affect beliefs such as training and developing a learning culture. Partitioning out the variance explained by these differences would permit clearer insight into the effects of other managerially controllable constructs on technology acceptance (Agarwal, 2000).

0.2.1 Computer Self-efficacy

In order to exhibit the importance of computer self efficacy and its effect on individual beliefs, this study defines computer self-efficacy as the judgment of the user's ability to perform the computer related task (Slylianou & Jackson, 2007).

In their study, Park and his colleagues (2006) sought to identify variables that would determine technology acceptance. They found psychological traits like personal innovativeness, technology readiness, and self-efficacy are stronger determinants of acceptance of computer technology than demographic factors (age, gender, education). The study also revealed that older users with high self-efficacy accepting technology are more than younger users with low self-efficacy. Organizational characteristic and individual characteristic interact with technology characteristics to influence acceptance of technology through positive effect on perceived usefulness.

Studies have also demonstrated that self-efficacy and computer anxiety have strong influence on use of a system through their effect on perceived ease of use and perceived usefulness (e.g. Brown, 2002), even though they differ in the effects of computer self-efficacy on beliefs: some revealed significant effect while others did not. For example, Darsono (2005) investigated how external variables such as individual differences and system characteristics influence lecturers as professionals to accept Internet technology. The study differentiated between common end-user knowledge workers, managers in different levels and individual professional especially lecturers as individual professionals in terms of autonomous specialized training (dependent work), practice and professional work arrangement. The study found that individual differences (computer self-efficacy, knowledge of search domain) and system characteristics (terminology, screen design, relevance) have an indirect impact on perceived usefulness, ease of use and lecturers' intention to use the Internet but computer self-efficacy and screen design have direct impacts on using the Internet.

A similar study was conducted by Gong, Xu, and Yu (2004) to identify additional determinants of the technology acceptance in the education sector.

The study found direct and indirect significant effects of perceived usefulness on intention to use the system, and these effects are strong on the intention to use more than the effect on attitudes. They also found that self-efficacy has a strong direct effect on intention to use and perceived ease of use but the effect on ease of use is more than on the intention to use.

Sharp (2006) examined the development, extension, and application of TAM for information systems educators and found that computer self-efficacy is a significant determinant of perceived ease of use. Similar finding was also reported elsewhere (Chan & Lu, 2004; Gong et al., 2004. Lewis, Agarwal, and Sambamurthy (2003) also demonstrated similar result, in which they reported that computer self-efficacy had a significant effect on ease of use alone but not on perceived usefulness. From this study, it appeared that perceived instrumental outcomes associated with technology use are not influenced by individual judgments of their ability to engage in technology use.

Hwang and Yi (2003) conducted a study on the effect of intrinsic motivation and computer self-efficacy by using TAM on the use of web-based information systems. The study found that behavioral intention to use and self-efficacy have a significant effect on actual use, and even perceived enjoyment and self-efficacy are significant determinants of ease of use. The study found that self-efficacy is a strong determinant of ease of use and actual use and perceived enjoyment has a significant direct effect on ease of use. The study supported all the relations in the technology acceptance model. Similar results were also reported by other researchers (e.g. Jones & S. Hubona, 2005; Klloppiing & McKiinney, 2004).

Slylianoa and Jackson (2007) revealed that self-efficacy influences the technology usage for long period and even influences the selection of what technology to use (i.e. e-commerce and Internet technology) and its perceived usefulness. In a study conducted by Teo (2009) aimed to build a model to predict the level of technology acceptance by pre-service teachers at a teacher training institute in Singapore, he found that computer self-efficacy has a direct effect on behavioral intention to use technology and perceived ease of use. He also reported that technological complexity and facilitating conditions affect intention to use indirectly. He further demonstrated that computer self-efficacy has more impact on perceived usefulness and less effect on perceived ease of use.

Another similar study conducted by Klopping and McKinney (2006) aimed at examining the role of experience on consumer's intentions to shop online. They found moderating effects of self efficacy, perceived usefulness and playfulness to intention to use e-commerce, and that experience has a direct and indirect effect on intention to use e-commerce. However, Chau (2001) did not find any effect of computer self efficacy on beliefs.

In a different study, Shih and Huang (2009) found that perceived ease of use does not have a positive direct effect on perceived usefulness but it has a positive direct effect on intention. On the other hand, perceived usefulness was found to have a positive direct effect on intention. Behavioral intention directly and positively affects actual use. This finding was supported by Shih, Fang (2006). Shih also demonstrated that self-efficacy does not have any relation with perceived usefulness but a positive relation with perceived ease of use. Finally, top management support has a positive direct effect on self-efficacy and perceived usefulness and perceived ease of use.

0.2.2 The Theories

The Technology acceptance Model (TAM) has been widely used to predict user acceptance and use based on perceived usefulness and ease of use.

predictive power and the parsimony of TAM has earned the model reputation, *but parsimony has also been sighted as the model's constraint* (Venkatesh 2000). Mathieson (1991) believes that TAM is predictive but its generality does not provide sufficient understanding from the standpoint of providing system designers with the information necessary to create user acceptance of new systems Wu, Chen, (2005)

An individual’s decision to accept IT is a conscious act that can be sufficiently explained and therefore predicted by his/her behavioral intention (Chau & Hu, 2002). Due to the fact that there is difficulty in identifying determinants of individual intention towards the acceptance of technology, technology acceptance model (TAM) is used in the current study. TAM is an established model in explaining IT acceptance behavior and provides a framework to investigate the impact of external variables on IT use.

There are a number of technology acceptance models and frameworks to explain factors influencing user adoption. Three frequently used models in the literature are as follows:

1. Technology Acceptance Model (TAM) (Davis, 1993).
2. Technology Acceptance Model TAM2 (Venkatesh & Davis, 2000).
3. The Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003).

0.3 Methodology

0.3.1 Response Rate

The response rate and descriptive statistics were run as the first stage of analysis. As mentioned earlier, all in all 760 questionnaires were distributed. Of these, 585 were returned, yielding a response rate of 77%, which is considered very good (Cable & Derue, 2002) in comparison to other studies found in the relevant literature. Also, 160 cases with missing value and 68 cases outlires were deleted from 585 questionnaires were returned. Therefore, the data were ready for the analysis are 357 cases.

0.3.2 Data Collection Procedures

Data collection was carried out in 2009. Managers and employees were informed about the research and they were made clear that the information collected was solely for academic purposes and data would be aggregated. In other words, their identity would be made anonymous and confidential.

The questionnaire was written in two languages: English and Arabic language, as some respondents could not understand the English language. The original questionnaire in English was translated into the Arabic language by an official translation office of the United Group to Acquire U.S. Facilities Management Company UNESCO.

Before the questionnaires were distributed, permission was obtained from the CEO in every government utility after which a meeting was conducted with the information technology managers to request permission to carry out the survey and to distribute the questionnaires to the employees in the departments.

0.3.3 Data Collection Instrument - Questionnaire

The main research design of this study is survey. The main reason for choosing the survey questionaire method was that it provides high predictive value for assessing the efficiency of the individuals in the socities, especially when the target subject under study is related to individual's perception, belief and opinion (Yalcinkaya et al, 2007). Data on individual cognitive perceptions, in this study, like belief and intention of the managers and employees in the public sector were tested via a research survey.

In the survey, questionnaires were distributed amongst employees and managers randomly selected in the government organizations to gain a better understanding of the factors that affect the acceptance of these target users of information technology (Alsohybe, 2007).

The questionnaire consists of items to measure ten constructs: perceived ease of use, perceived usefulness, attitude toward information technology, intention to use, computer self-efficacy, organization culture, subjective norms, information quality, top management support, and government support. The following section will describe the instruments individually.

0.3.3.1 Individual characteristic - Computer Self-efficacy Instrument

Computer self-efiicacy instrument was adopted from Bani Ali, Anbari, & Money (2008), and Venkatesh, Morris, Davis, & Davis, 2003), who measured managers' beliefs about their computer skills. The questions included work self-efficacy in information technology skills. Managers answer the questions based on the perception about their skills in work content and information technology. Ten items were used, and measured on a five-point scale with '1' "Strongly Disagree," '2' "Disagree," '3' "Neither Agree or Disagree," '4' "Agree," and '5' "Strongly Agree." The items asked are as follows: "I could use software…"

1. If someone showed me how to do it first.
2. If someone else had helped me get started.
3. If I had used similar packages before this one to do the same job.
4. If I had a lot of time to complete the job for which the software was provided.

5. If someone else had helped me get started.
6. If I had never used a package like it before.
7. If there was no one around to tell me what to do as I go.
8. If I had only the software manuals for reference.
9. If I had just the built-in help facility for assistance.
10. If I had seen someone else using it before trying it myself.

0.3.4 Data Analysis Method

In the current study, SPSS 16 was used for the primary analysis as well as the Structural Equation Modeling (SEM) with AMOS18. In other words, the main statistical technique employed in this study was multivariate analysis to test the research hypotheses. The use of SEM was due to the fact that it has been increasingly used in behavioral and social science research such as organizational behavior, management, business, and applied psychology (Byrne, 2010). Further, SEM can test a variety of theoretical models and provides a practical tool for researchers exploring relationships in those areas (Byrne, 2010; Schumacker & Lomax, 2004). Technically, SEM combines confirmatory factor analysis used in apparent factor structures and path analysis generally used to explore causal relationships among sets of variables.

0.4 Findings

0.4.1 Hypotheses Evaluation

H: Self-efficacy has a positive effect on perceived ease of use of a particular new system.

The result supports the hypothesis that self-efficacy has a significant positive effect on perceived ease of use (Y = .190, T-value = 2.918, $p < .002$). For every increase in self-efficacy by one, the perceived ease of use increases by .190 standard point. It seems that the employees and managers in the public sector perceived that they have the abililty to use the information technology and they perceived it as it is easy to use. The result also indicated that perceived self-efficacy is a significant predictor of perceived ease to use for the information technology . The result is in line with previous studies that found that computer self-efficacy is a significant determinant of perceived ease of use (e.g. Hwang & Yi, 2003; Park et al., 2006; Sharp, 2006). The result also provides support for the study conducted by Gong, Xu, and Yu (2004), who revealed that self-efficacy has a strong direct effect on intention to use and perceived ease of use. However, the result of this study did not support the study conducted by Shih, Fang (2006) who found that self-efficacy does not have a positive relation with perceived usefulness and a positive relation with perceived ease of use.

H: Self-efficacy has a positive effect on perceived usefulness of a particular new system.

Unexpectedly, the hypothesis was rejected and self-efficacy has a negative non-significant effect on perceived usefulness (Y = -.041, T-value= -.679, $p < .002$). It seems that the information technology the employees and managers use is not perceived as being useful regardless of whether or not employees and managers in the public sector have self-efficacy (the ability to use the technology). This result is consistent with the previous study conducted by Shih, fang (2006) who found that self-efficacy does not have a positive relation with perceived usefulness and a positive relation with perceived ease of use. The result also supports other studies (e.g. Chau, 2001; Klopping & McKinney, 2006) that demonstrated the insignificant effect of computer self efficacy on beliefs.

However, the present study found that self-efficacy has a significant positive effect on behavioral intention to use the information technology. In other words, the employees and managers perceived the information technology is easy to use and hence intend to use it. However, they perceived this information technology as being not useful probably due to the non-integrity of the tiny sub-system which composes the information system. But this problem could be solved by using web service system to integrate or make communication among these sub systems possible even if it is designed with different programming languages.

0.5 Discussion and Conclusion

Organizations are investing in the information technology and providing all the necessary requirements such as hardware, software, system and the infrastructure support in order to improve the efficiency and productivity of the organization.

However, if individuals under or over estimate available resources, they might take poor usage decision of the information technology. Therefore, in order for organizations to address these issues, it is important to measure the usage level of the acceptance of the information technology. The level of usage, however, could be explained by the level of perceptions and believes such as ease of use, usefulness and the intention to use towards the actual usage.

In sammary, the findings in this study provide explanation for the usage of the new information technology among employees and managers in the Yemeni government sector by using the information technology acceptance theory and united theories (TAM2 and UTAUT). Based on the analyses, the model showed good of fitness of the measurements. It was also found that the structural and causal model can explain the employee's and manager's usage and adoption of information technology.

Parallel with previous studies (e.g. Hwang & Yi, 2003; Park et al., 2006; Sharp, 2006; Gong, Xu, and Yu (2004), the present study showed that individual characteristics or individual differences (self-efficacy) has a significant positive effect on perceived ease of use because employees and managers believe that they are able to use the sub-systems in different units in the organization. However, computer self-efficacy was found to have an insignificant effect on perceived usefulness which is consistent with Igbaria and Iivari, (1995). This may be because the information system is composed of sub-systems working together that are not synchronized or integrated effectively. When this happens, the employees and managers perceive the system as not being useful. But the problem of integrity of the multi-systems involving many softwares and databases can be effectively solved by using a web service system to enable communication among these sub-systems functional even if it designed with different programming languages. Computer self-efficacy makes a difference in the perception among individuals about technology; those with high computer self- efficacy may be technology literate than those with low self efficacy.

0.5.1 Theoretical contribution

The contribution of this reseach, in the theoretical prospective, lies in identifying some factors such as self-efficacy, organization culture and government support that could be important in their influence on the acceptance for new information technology, particulary in the public sector of the republic of Yemen. This study was conducted to find empirical support for the model of technology acceptance (TAM2) and the unified theory of acceptance and use of technology (UTAUT) within the public sector of the republic of Yemen, to examine technology acceptance and utilization issues among public employees to improve the success of IS implementation in this arena, and to explore self-efficacy, organization culture and the government role in supporting the adoption of information technology within the public utilities employees either as a strategy or as logistic support.

This research contributes to the theoretical grounds of information technology acceptance by testing the capability of the technology acceptance model for generlizing and explaining the usage of the new technology. This reseach contribute to the theoretical grounds of information technology acceptance by studying the success factors that provide empirical assessment of the critical factor in the technology acceptance model. This factor is indvidual characteristics such as self-efficacy.

This research contributes to the theoretical grounds of information technology acceptance by combining technology acceptance model (TAM2) with the unified theory of acceptance and use of technology (UTAUT) to provide better explanation for the affect of organization culture on technology acceptance and to overcome the shortcoming in TAM2, which does not consider the effect of social influence such as culture (Venkatesh, Morris, Davis, & Davis, 2003).

From the managerial perspective, this research not only contributes to the theoretical grounds. Its also contributes to the empirical knowledge to increase the success rate for accepting or adopting the information technology in the government sector in the Republic of Yemen. This research validates the importance of organization culture, subjective norms, government support, top management support, information quality and self-efficacy in influencing the behaviour intention to use towards the actual usage for the information technology. The existance of government support, subjectives norms, and self-efficacy factors are essencial to drive the managers and employees preceptions and believe to use the technology more than other factors. This research proved that these factors hold true in the Republic of Yemen.

This prove, therefore, it support the notion that technology acceptance model could be generalized in middle east settings and hence the reliance to the effors that testing western finding in the local organizations with local samples.

This study has mentioned perceived gap in the technology acceptance literature in the middle east in particular, in the Republic of Yemen and responding to calls that support that technology acceptance lacks empirical research and there are needs for understanding its factors and their influences in the acceptance for the technology. This study tested the validity and relability of the technology acceptance scales in the public sector of Yemen, which adopted from the orginal theory or the studies which undertook the orginal theory in their studies.

This research is one of the very few technology acceptance studies in the middle east region. In Yemen, this is the first research effort to investigate the factors that effect the acceptance of information technology in the public sectors in the Republic of Yemen. The empirical research has extended understanding of the indvidual charactrestics and its impact on the acceptance for the information technology which have not been addressed together in previous studies in Yemen.

0.5.2 Methodological Contribution

From the methodological prospective, this study has contributed to Methodological grounds in that, most of the literatures on technology acceptance have focused on the behavior intention to use the technology since the behavior intention is the merely or only determined related to actual use for the system Davis et al., (1989); Kiraz & Ozdemir, (2006).

In the technology acceptance model (TAM) which consists of four main factors as major determinants of technology acceptance. These factors are perceived ease of use, perceived usefulness, attitudes towards usage, and behavioral intention to use, and the external variable subjective norms and self-efficacy in technology acceptance (TAM2). Davis developed a reliable and valid scale to measure these factors. However, these scales were developed in different countries in the private sector. To show robustness and validity of the measurements, they suggested that the instrument should be tested with different groups and different settings. In response to their suggestion, this study assessed the applicability of these scales and tested it in the public sector in the Republic of Yemen.

The scope of technology acceptance study has to be extended to various contexts, that was suggested by (Venkatesh, Morris, Davis, & Davis, 2003). Therefore, in this study, the public sector was selected as the context of the technology acceptance study. The positive result in this current study strengthens the methodology by adding a new setting and research context.

However, this study supports the study conducted by Venkatesh, (2000) which mentioned about the important to a locate another scales for measuring the subjective norms indicator. In this study, the reason was due to the high errior correlation between the two scales of the subjective norms and another factors scales, especially the organization culture factor scales which did not tested in the orginal theory (TAM).

According to Agarwal, there are four factors catogries that influenced the technology acceptance. These factors categories are indvidual charactrestics, social charactrestics, technology charactrestics, institutional charactrestics. Most of the previous studies focused in one or two factors categories. In this study, however, the study inclueded the four factors categories following the unified theory of acceptance and use of technology (UTAUT).

Based on the recommendation from the previous studies Al-Gahtani, (2004); Gorke, (2006); Yalcinkaya, (2007); Almutairi, (2007); Loo, Yeow, and chong (2009); kim, lee, law, (2007); Smith (2008); Agarwal (2000), this study tested the validity of the set construct (self-efficacy, subjective norms, organization culture, information quality, top management support and government support) which influence the technology acceptance. At long last after factor analysis was run, all the indecators loading in their construct as explained in chapter four.

0.5.3 Limitations of the Study

Some limitations of the present study are noteworthy to be highlighted, as follows:

1. This research included all employees and managers in the government sector who are currently using the information technology and those who seldom use the technology. The studies confronted some difficulties in getting permission or distribute the questionnaire in some utilities due to the underestimator for the academic research. However, the study succeeded in distributing the questionnaire in these utilities by using personal communication and permissions from the top management in these utilities.
2. The study planned to collect the data using both qualitative and quantitative methods so that the data gathered could have been more varied and rich Alsohybe, (2007) to enable the researcher to provide qualitative explanations for the information technology acceptance in the government sector. However, due to the current situation in Yemen, such approach was not feasible. In other words, the conflict that currently exists in Yemen prevented the researcher from conducting interviews with the target sample (top management and officials in the government). However, the study succeeded in obtaining the valid finding by using one method which is quantitative methods to achieve the study goals.
3. The study found that self-efficacy, a cognitive belief of an individual about his/her ability to manage information technology, did not receive significant result. One of the reasons for this may be due to the weaknesses of the indicators used to measure this factor. As mentioned by previous authors Eastin, Larose, (2000), it is difficult to measure cognitive belief. Therefore, the study recommends that future studies choose carefully strong indicators of this variable.

0.5.4 Recommendations for Practical

There are some recommendations for the practitioners and the officials in any government who are in charge of decision making and formulating the information technology strategy. Since the information technology is developing rapidly, it is important for them to understand the drivers (variables) that influence the acceptance of any new technology. In particular, those in charge should make sure that the technology adopted, be it the hardware or software, is perceived to be useful and easy to use to encourage users to accept and finally use the technology. If the technology is perceived to be useless and difficult to use, any investment made by those in authority will not yield any return as expected and such investment is a waste of resources, time and effort. This means that before implementing and installing the new technology, some feasibility studies need to be carried out first Smith , Green, (2002).

0.5.5 Recommendations for Future Studies

With regards to future studies, the following recommendations are proposed:

- The scope of the study targets the individuals in the government sector. Therefore, future researchers can consider conducting studies in the private sector individuals or carry out comparative studies between the public sector and private sector in the republic of Yemen or any country.
- This study used quantitative method for collecting the data and could not conduct qualitative data due to the conflict between the political partiesand the civil war, which prevented this study from conducting the necessary interviews with the relevant individuals. Thus, future studies could consider employing qualitative methodology to gether qualitative information on technology acceptance.

0.5.6 Conclusion

The study has provided empirical evidence for the effect of some determinants on acceptance of the technology in the government sector. In particular, it has managed to reveal that computer self-efficacy plays an important role in influencing technology acceptance. As such, the findings validate TAM theory and demonstrate the applicability of this theory to the Middle Eastern context, particularly in the Republic of Yemen. This study has important implications to practitioners and managers on the need to carefully consider the factors that could promote the use of the new technology in a country like Yemen. More so, the findings are important for the Yemeni government if it seriously desires for the country to move forward in its effort in encouraging and promoting the population to be technologically literate and savvy. This research represents an effort to understand the factors affecting the usage of the information technology from the perspective of Yemen public sector. The findings successfully answered the research objectives 1) whether the extent of technology acceptance model (TAM2) and the unified theory of acceptance and use of technology (UTAUT) explain the intention to use the information technology among the government employees in the Republic of Yemen. 2) The effect of individual differences such as self-efficacy on the acceptance of new technology among employees in the public sector.

The approach used is to assess the relationship between these variables and the employee's and manager's intention behavior to use the information technology so that it provides comprehensive understanding for the public sector practitioners for future researcher amongst academicians. Furthermore, the survey questionnaire enhanced the findings by providing detail account of how these factors affecting on the usage for the technology. The findings successfully answered the research objectives as follow:

The capability of technology acceptance model (TAM2) and the unified theory of acceptance and use of technology (UTAUT) to explain the intention to use the information technology among the government employees in the Republic of Yemen. The study has provided empirical evidence for the positive effect of preceived usefulness and preceived ease of use on the intention behaviour to use towards the actual usage for the technology. Empirical evidence has shown that the employees and managers increase their usage for the technology when they preceived the technology is useful and ease to use, that inhance their intention to use or adopt the technology.

The relationship between individual differences such as self-efficacy and the acceptance of technology, the study has provided empirical evidence for the positive effect of self-efficacy on the intention behaviour to use towards the actual usage for the technology throughout the positive effect on preceived usefulness and ease of use. Empirical evidence has shown that the employees and managers have the capability to use the technology.

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