USING TAM TO STUDY THE USER ACCEPTANCE OF IT IN THE YEMENI
PUBLIC SECTOR (MINISTRY OF SOCIAL AFFAIRS AND LABOUR-YEMEN)

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Dedicated to my beloved parents, wife, and children

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ABSTRACT

Although IT offers promising improvements in public sector efficiency, there is a consensus that these cannot be realized until IT tools become widely spread and used. This study aims to improve the utilization of IT in the context of the Yemeni public sector by identifying the factors that influence IT user's acceptance. The Research proposes a model based on the Technology Acceptance Model with some added factors that are believed to have a significant influence in the context being studied, such as: organizational culture and individual factors as external factors, perceived personal benefit, and gender as a moderator to the relationships between organizational culture and both perceived usefulness and perceived personal benefit. To test the model and the proposed hypotheses, quantitative method was used. A questionnaire was prepared and validated by five experts, and then distributed and answered by 139 employees of the ministry of Social Affairs and Labour (MoSAL) in Hadhramout- Yemen, who use IT in their jobs. The SmartPLS software was used to test measurement model, and to assess the structural model and test the proposed hypotheses. The results revealed the significance of the proposed factors, organizational cultural was found to be very influential on perceived usefulness and perceived personal benefit, and perceived usefulness, in turn, was very important determinant of attitude, and consequently, on the behavioural intention of employees towards using IT, the gender impact was also proven statistically, however, the individual factors was found to have no significant influence on the perceived personal benefit, as the model suggested. The study is expected to have significant impact on the study domain, public sector in Yemen, by enriching the managerial knowledge about the importance of the factors investigated in this study. More importantly, the study will enrich the body of literature on technology acceptance by introducing a case study that has not been previously covered, namely, a public sector organization in a growing country with special cultural and social conditions.

ABSTRAK

Walaupun IT menawarkan penambahbaikan cerah dalam kecekapan sektor awam, terdapat konsensus bahawa ini tidak dapat direalisasikan sehingga alat IT menjadi meluas dan digunakan. Kajian ini bertujuan untuk meningkatkan penggunaan IT dalam konteks sektor awam Yaman dengan mengenal pasti faktor-faktor yang mempengaruhi penerimaan pengguna IT. Penyelidikan mencadangkan satu model berdasarkan Penerimaan Teknologi Model dengan beberapa faktor ditambah yang dipercayai mempunyai pengaruh yang besar dalam konteks yang sedang dikaji, seperti: budaya organisasi dan faktor individu sebagai faktor-faktor luaran, manfaat peribadi dilihat, dan gender sebagai moderator kepada hubungan antara budaya organisasi dan kedua-dua manfaat dan tahap faedah diri dilihat. Untuk menguji model dan hipotesis yang dicadangkan, kaedah kuantitatif telah digunakan. Soal selidik telah disediakan dan disahkan oleh lima pakar, dan kemudian diedarkan dan dijawab oleh 139 kakitangan kementerian Hal Ehwal Sosial dan Tenaga Kerja (mosal) di Hadhramout-Yaman, yang menggunakan IT dalam pekerjaan mereka. Perisian SmartPLS telah digunakan untuk menguji model pengukuran, dan untuk menilai model struktur dan menguji hipotesis yang dicadangkan. Keputusan mendedahkan kepentingan faktor-faktor yang dicadangkan, budaya organisasi telah didapati sangat berpengaruh pada manfaat dan tahap dilihat faedah diri, dan kegunaan dilihat, seterusnya, adalah penentu sangat penting dalam sikap, dan akibatnya, pada niat tingkah laku pekerja terhadap menggunakan IT, kesan jantina juga telah terbukti secara statistik, bagaimanapun, faktor-faktor individu telah didapati tidak mempunyai hubungan yang signifikan dengan kepentingan peribadi yang dilihat, sebagai model yang dicadangkan. Kajian ini dijangka memberi kesan besar ke atas domain kajian itu, sektor awam di Yaman, dengan memperkayakan pengetahuan pengurusan mengenai kepentingan faktor-faktor yang dikaji. Lebih penting lagi, kajian ini akan memperkayakan khazanah sastera penerimaan teknologi dengan memperkenalkan satu kajian kes yang belum sebelum ini dilindungi, iaitu sebuah organisasi sektor awam di negara berkembang dengan keadaan budaya dan sosialkhas.

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CHAPTER 1

RESEARCH OVERVIEW

1.1   Introduction

As a response to revolutionary achievements in the ICT industry and the growing proliferation of computers in the last 15 years, there were so many initiatives, in the developing countries, aimed to leverage these new technologies as tool to automate and speedup work processes in the public sector, that is, to improve efficiency and deliver higher quality services to the stakeholders. Also these ICT projects were hoped to form a strong basis for the government transformation programs. Usually- but not necessarily- most of those initiatives were performed under the umbrella of e-government concept.

However, most of these initiatives failed ˉunfortunately- to realize the ambitions and achieve the expected results. In fact, the disappointing success rates of ICT projects are a phenomenon that is not limited to the developing countries. In 2003, for example, the American "Standish Group", (which issues the important "CHAOS" report about ICT projects successes and failures), reported that only 34% of the ICT projects were considered successful, 51% didn't go according to the pre-implementation plan (but achieved some of its goals), and 15% of the projects was a complete failure(Dijk, 2009). This, poor success rate becomes poorer when it comes to the public sector, in 2004 for example, The Royal Academy of Engineering and

the British Computer Society revealed that 84% of the public sector Information Systems projects resulted in some level of failure(Goldfinch, 2007).

There is a long list of the factors that cause these failures, and the literature is full of studies that tried to identify these factors from different perspectives, for example: (Leydesdorff & Wijsman, 2007) classified the failure factors of governments ICT projects to three categories:

Context-driven: includes culture, leadership, and organizational factors.

Content-driven: technology and business process related issues.

Process driven: includes formulation of strategies and change management.

And the above is just an example, other researchers have different classifications of the root causes of ICT failures, and the next chapter (chapter2) will discuss more about these factors.

Despite these different classifications, there is a consensus that the significant improvements in firm's productivity that IT provides, will only be achieved if the IT tools are widely used(Oliveira & Martins, 2011). That's leads us to the concept of user acceptance as an important determinant and critical success/failure factor of any ICT project. In its 2010 CHAOS report, The Standish Group stated that: projects with poor user involvement, perform poorly as a result, and also that lack of user involvement comes at the top of the list of project failures reasons(The Standish Group International, 2010).

The concept of user acceptance represents the basis of this study, and in the next chapters there will be a detailed discussion about the concept and the theories and models that study it.

1.2   Problem Background

To give a clear explanation about the problem background, this section will be divided into subsections, the first one will describe the place which this study will cover (The labour sector in the Ministry of Social Affairs and Labour-Yemen), and the second section will state the outcomes of previous IT adoption experiences.

1.2.1 Introduction about the study domain

Yemen is one of the developing countries in the south western corner of Asia, in its struggle to improve the economic situation of the country; government tries to attract foreign capitals to invest in different sectors in Yemen. Hadhramout, is largest and richest governorates in Yemen, it occupies about one third of the total area of the Republic of Yemen, and it contributes significantly in the national income and budget. Oil and gas, other minerals, fishery, agriculture, tourism, are all examples of the economic sectors by which Hadhramout contributes in the Yemeni economy.

These diversified resources along with the large area of the province and the far spaced locations of investments activities put a great challenge on the authorities that are responsible of monitoring and facilitating such activities; and the ministry of social affairs and labour is one of these authorities.

The labour sector in the Ministry of Social Affairs and Labour-Yemen is responsible of applying the rules and regulations Stipulated in the Yemeni Labour Law on the private sector incorporations, for example Oil and Gas production and exploration companies, fishery, factories, service facilities. It deals with things like employment policy, working conditions, the proportion of foreign workers for the local, minimum wages, occupational health and safety (OHS).

The labour sector in the Ministry of Social Affairs and Labour plays a pivotal role in the government plans for economic development of the country, since it provides a wide range of services for the private sector organizations, weather these organizations are local private partners or foreign companies investing in one of the economic various sectors.

Labour Sector consists of several departments, the main three departments that this study will focus on are: Employment Department, which is responsible for the local candidates, Manpower Department which is responsible for the foreign workers and Inspection Department which is considered as the moving arm of the sector.

Following are the major functions of each department:

1)   **Employment Department***:*

a - Maintain LMIS (Labour Market Information System), a data base of local job seekers.

b - Receive notifications of job vacancies.

c - Nominate the suitable candidate to the vacancy, based on the criteria stated in the job description.

d- Deliver educational lectures in (job seeking skills), for new graduate students.

2)   **Manpower Department***:*

a- Issue work permits for foreign workers.

b- Issue visa requests to be presented to the local immigration authority.

3)   **Inspectiont Department***:*

a- conduct inspection visits.

b- investigate about: employment policy, foreign workers, contracts, working conditions, OHS.

c- maintain files of every company contains the above information, and the results of the inspection visits, and violations record.

1.2.2 Previous IT projects and current situation:

Because of the previously mentioned challenges and difficulties, and because the government were striving to create an investment attracting environment for both local and foreign investors, IT considered as a pivotal enabler for the required improvements in public departments efficiency and as a result to provide the customers with high quality services that increase their satisfaction.

i. LMIS:

In 1997, the Yemeni government with the cooperation of United Nation Development Programme (UNDP) initiated a 5 years project named Labour Market Information System (LMIS), this project aimed to create reliable database of the labour market and available manpower. The system aimed to help reducing the unemployment problem, to provide the private sector incorporations with their needs of qualified workers. It is also aimed to provide the decisions and policy makers with precise information about the labour market.

During the first 5 years of launching that project, and to promote the new system there were many training sessions for the employment department employees on using the new system, and there were also financial bonuses for the employees who use the system. After five years, as initially planned, the fund for had stopped considering that the system was already installed and utilized successfully, that ending of the funding project, resulted in stopping the training sessions and the financial rewards. The system started to be underutilized gradually since then, until it is finally became completely obsolete in 2009, despite thousands of working hours that spent in preparing and installing the LMIS, and the hundreds of training hours,

and the huge amount of money that were pumped in that project and related activities, no one now in any employment department in Yemen, still use the system!

ii.   Foreign Workers Information System:

This system was created in 2010 to automate the process of issuing work permits for the foreign workers, and issuing work visa requests, and also to keep records for all foreign workers and their companies, these information will serve different departments in the labour sector, basically the manpower, and the inspection department to monitor the foreign workers ratio, and also it aimed to provide the management with statistical reports about the foreign workers in the province. Although deploying the system was intended to facilitate the work of the department employees, the system was faced with a strong resistance, many employees thought that their old manual way of doing their jobs is easier and more efficient than the new system. A training session held in 2011 helped in increasing the level of acceptance among the employees, but, the system still facing the threat of abandonment, if this happened, that will be another example of wasted time and money in an IT project.

1.3   Problem Statement

Based on what was stated above, and to help our public sector to develop better understanding about how to achieve better utilization of the funds that are spent in IT investments, the main issue that will be highlighted by this research is:

"How to determine the factors that influence the acceptance of IT by the employees of the Yemeni public sector"

The following sub questions will lead the research in the next chapters:

i.   What are the problems when adopting IT in the public sector?
ii.   What are the factors that affect the user acceptance of IT in Yemeni public sector?

iii.   How can we understand the relationships between the factors that affect IT user acceptance in the context of Yemeni public sector?

iv.   How can we evaluate the strength of the hypothesized relationships?

1.4   Study Objectives

This study has the following objectives:

1)   To investigate about the determinants of IT adoption in thepublic sector.

2)   To identify the factors that influence the user acceptance of IT in the context of public sector in Yemen.

3)   To propose a model for employees' IT acceptance in the MoSAL-Hadhramout- Yemen.

4)   To validate the proposed model in the context of ministry of MoSAL-Hadhramout- Yemen.

1.5   Scope of study

The scope of this study is identified by the following dimensions:

i.   Public sector– is the wider frame; the study will focus on IT acceptance by the employees of context of ministry of social affairs and labour, Hadhramout-Yemen.

ii.   TAM Technology Acceptance Model – will be the theoretical foundation of this study, expanded version of TAM will be used as the tool to examine the

IT acceptance in the study domain (of ministry of social affairs and labour, Hadhramout-Yemen) .

1.6   Significance of the study

The significance of this research can be summarized as follows:

- The importance of human factor and user acceptance and involvement is proven, and since many studies found that the absence of user acceptance toward new technologies is one major failure factor, this study will try to enrich the managerial knowledge in our public sector and to raise the awareness about the importance of this pivotal issue.

- The results of this study about the factors that influence the users attitudes towards new technologies and information systems are hoped to have a positive impact on the culture and mindset of the management in the ministry of social affairs and labour, and that will lead, hopefully, to better practices when adopting new IT tools.

- This study tries to solve a dilemma in our governmental sector which is the disappointing results of huge investments in IT.

- When the results of this study reveal, the results can be generalized to other similar Yemeni ministries and public sector departments, since the circumstances and practices associating the technology adoption are almost the same (with some exceptions).

1.7 Chapter Summary

This chapter, started with an introduction to the project as a whole describing the area of study, then the problem background was discussed giving a clear description about the domain of this study, with explanation about the problem that will be addressed in this study. This is important to understand the reason behind choosing this topic. After that, the problem statement was presented along with the research questions and objectives. The scope of the study then described defining the boundaries of this research work, and finally the significance of the study was discussed in terms of how the results of this research can contribute effectively in solving the problems that have been identified.

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