



Faculty of Information and Communication Technology

**IDENTIFICATION OF THE ELECTRONIC INFORMATION
SHARING INFLUENCE FACTORS THAT AFFECT THE
PARTICIPATION BEHAVIOR OF THE EMPLOYEE**

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Master of Computer Science (Internetworking)

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INFLUENCE FACTORS THAT AFFECT THE PARTICIPATION BEHAVIOR OF
THE EMPLOYEE**

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**A thesis submitted in fulfilment of the requirements for the degree of Master of
Science in computer science (Internetworking)**

Faculty of Information and Communication Technology

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2015

DECLARATION

I declare that this thesis entitled "Identification of the Electronic Information Sharing Influence Factors that Affect the Participation Behaviour of Employees" is the result of my own research except as cited in the references. The thesis has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.

Signature : 

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Date : 17/9/2015

APPROVAL

I hereby declare that I have read this thesis and in my opinion this thesis is sufficient in terms of scope and quality as a partial fulfillment of Master of Computer Science (Internetworking).

Signature

.....

Supervisor Name

: Dr. Asmala bin Ahmad

Date

.....17/9/2015

DEDICATION

I dedicate my thesis work to my family and my friends. A special feeling of gratitude to soul of my father, who died since I was a child, Sabah Naser. And to my beloved mother, Najat Akram who encouraged me and a push for tenacity to improve myself throughout all my walks of life. Thank you for giving me a chance and I love you.

I also dedicate this thesis to my beloved children's Raya and Abdullah. And my brothers Dr. Sarmad and Ahmed and my sisters Noor and Enas who have supported me through my life. I always miss and I cherish the memories that we had. I love all of you.

And I do not forget to dedicate this work to my beloved husband Bashar Sabeeh who has always been with me in overcoming difficult times in my life. His patience is the meaning of love, kindness and gentle soul, thus I love you.

ABSTRACT

Electronic information sharing refers to the use of information and communication technology to share the information electronically among people. Electronic information sharing has the potential to help government sectors to increase sharing information electronically in order to improve the public service performance. In addition, this practice may possibly reduce cost of sharing information and help the policy makers to make better decisions. However, in government organisations in Iraq, electronic information sharing practice is still very limited. Therefore, the objectives of this study are, to investigate the barrier and factors that influence participation behaviour of employees while sharing information at the Ministry of Electricity of Iraq. This study is also to evaluate the factors influence participation behaviour of employees while sharing information electronically at the Ministry of Electricity of Iraq. This study used the method of quantitative research in order to achieve these objectives. Initially, questionnaires have been distributed among employees from the Ministry of Electricity of Iraq. The analysis of the data collection was done by using SPSS software in order to get the results. The tools that have been use in this study are Cronbach Alpha, Correlation, and Regression. The result shows that there is one supported factor and three unsupported factors in which should be taken into account in improving the participations of electronic information sharing between the employees from Ministry of Electricity of Iraq.

ABSTRAK

Perkongsian maklumat elektronik merujuk kepada penggunaan teknologi maklumat dan komunikasi untuk berkongsi maklumat secara elektronik sesama manusia. Perkongsian maklumat elektronik mempunyai potensi untuk membantu sector kerajaan dalam meningkatkan perkongsian maklumat secara elektronik seiring dengan usaha memperbaiki mutu perkhidmatan awam. Tambahan pula, amalan ini berkemungkinan berupaya mengurangkan kos perkongsian maklumat dan membantu pembuat polisi untuk membuat keputusan yang lebih baik. Walau bagaimanapun, dalam organisasi kerajaan di Iraq, amalan perkongsian maklumat elektronik masih amat terhad. Oleh itu, objektif kajian ini adalah untuk menyiasat kekangan dan faktor yang mempengaruhi kelakuan penyertaan pekerja dalam perkongsian maklumat di Kementerian Elektrik Iraq. Kajian ini juga menilai faktor yang mempengaruhi kelakuan penyertaan pekerja semasa berkongsi maklumat secara elektronik di Kementerian Elektrik Iraq. Kajian ini menggunakan pendekatan kuantitatif dalam usaha mencapai objektif yang berkenaan. Pada peringkat awal, borang soal selidik telah diagihkan kepada pekerja di Kementerian Elektrik Iraq. Analisis data telah dijalankan menggunakan Alpha Conbach, korelasi dan regresi. Keputusan menunjukkan bahawa terdapat satu faktor yang disokong dan tiga faktor yang tidak disokong yang perlu diambilkira dalam meningkatkan penyertaan maklumat elektronik di kalangan para pekerja di Kementerian Elektrik Iraq.

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ABBREVIATIONS

TOE	-	Technology-Organisation-Environment
G2G	-	Government to government
SPSS	-	Statistical Package for the Social Sciences
G*Power	-	general power analysis program
H1	-	Hypotheses one
H2	-	Hypotheses two
H3	-	Hypotheses three
H4	-	Hypotheses four

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CHAPTER 1

INTRODUCTION

1.1 Introduction

Integration and information sharing among government agencies is one of the highest priorities of decision makers, local governments play a vital role in the nationwide information sharing efforts (Akbulut, 2011). Information sharing can improve the performance and productivity of government operations, provide better service and improve policy-making to citizens and businesses (Gil-Garcia et al., 2007). Local agencies might share information but they fail to do electronically, Hence, much of information conveyed by local agencies has been dated or imprecise (GAO-U.S. General Accounting Office, 2003; MacLellan et al., 2002; Lee et al., 2007; Akbulut et al., 2009). Therefore, local agencies can successfully engage in electronic information sharing, initiative agencies has become a national top priority (Bush et al., 2003; Department of Justice, 2005). Electronic information sharing makes reference to information sharing that happens by communication and computing technologies (Akbulut, 2011).

Electronic information sharing can be accomplished through the use of variety IT solutions including the use of web portals data warehouses, middleware applications, and the like. Usefulness of the exchange of information electronically lies in reducing the time, effort and cost. Electronic information sharing used to share information between the department and the department, or the department and the ministry, or sharing of information between departments in the same circuit. Some examples of electronic information sharing

include sharing individual client- based reports between state health and local agencies, or combining criminal justice information by various agency older systems into an online data warehouse (Akbulut, 2011).

There are three kinds of information sharing; (a) intra-organisational information sharing, which often the goal of individuals in order to share information has been analysed, (b) inter-organisational information sharing, which focus on sharing information between two or more organisations and (c) inter-agency/department information sharing, which focus on sharing information inside the organisation and through its departments (Akbulut et al., 2009). This research focus on the first type (intra-organisational information sharing) in public organisation should share information inside its organisation to make high quality decisions, provide more information and improve public service. The integration and information sharing include, vertical information sharing; for example, national ministry and its local agencies inside the country, between provincial federal government and its numerous agencies. Example of horizontal information sharing refers to share information within several ministries of the state council, among numerous departments of a ministry, among counterpart agencies in different federal provinces, as well as information sharing between the private sector and the public sector (Lei Zheng et al., 2009).

Participation of electronic information sharing based on some important factors. The most influence factor is the behavior of the participation that can impact the staff to share or not to share the information. Moreover, the participation behavior can also influence the increase or decrease the sharing of information electronically. Therefore, it is important to be considered in order to know its effectiveness. The main concern of this study is on the behavior participation of electronic information sharing in staff who works at electricity sector in Iraq.

1.2 Benefits of Electronic Information Sharing

The benefits of information sharing and integration can be classified into three categories according to Dawes's in to: organisation, technical and political (Karla Mendes Calo et al., 2014).

- i- Organisation benefits: related to improvement and solution in capabilities and solution problems of wide-organisations.
- ii- Technical benefits: related to information management and data processing.
- iii- Political benefits: related to enhanced general public image or public value that been developed for information sharing projects. In additional, complete public information, integrated planning and improves service delivery among others.

1.3 Problem Statement

In every public organisation there is a need for information because it the main resource that decision maker use to make their decisions. Thus, the need of share information has been increase day by day. Nowadays, electronic information sharing is necessary within same organisation or with others in order to make decisions in fit time (Akbulut, 2011). However, many challenges facing electronic information sharing implementation like interruption of the civil war made it difficult for a country to store and information poor or lake of top management leader ship to strategically communicate and support the electronic data sharing activities (Flavia Kyeyago Ouma, 2014). Electronic information sharing inside government needs technical and organisational modifications (Pardo et al., 2006). Therefore in order to have efficient and suitable electronic information sharing, governments require overcoming an array of challenges and problems. From a technical view, information system developers are confronted many challenges associated to the existence of various platforms,

different data structures and incompatible network infrastructures (Pardo et al., 2006; Alinaghi Ziaee Bigdeli, Muhammad Mustafa Kamal, 2013). Regrettably, present information sharing practices neither have nor efficiently transported information that local organisations need, neither enough propagated information generated by them (GAO-U.S. General Accounting Office, 2003; Kobach et al., 2011).

Most of the time even if local organisations have been dated or inaccurate (GAO-U.S. General Accounting Office, 2003; MacLellan et al., 2002; Lee et al., 2007; Akbulut et al., 2009). The lack of electronic information sharing is considered a big gap in organisations in order to maximise the organisations information (Mohammed et al., 2014). This problem presently exists among Iraqi organisation and has been recognised by public organisations in Iraq (Al-Aqaby, 2012).

However, researchers have identified the impact of behavioral factors on technology project (Boehm, 1987; Vosburgh et al., 1984). Moreover, (Card et al., 1987) found that technologies to genuine projects had only a 30 percent effect on reliability and none on productivity and 70 percent that human effect had. According to (Gil-Garcia et al., 2010), electronic information sharing is a complex socio-technical phenomenon which is covered both technical and social aspects. In addition, human behaviors bring significant influence on electronic information sharing inside the public sectors (Dawes, 1996; Zhang, Dawes, 2006; Gil-Garcia et al., 2007; Pardo, Tayi, 2007). There is a need to research the human factors in electronic information sharing study (Bigdeli, 2012). Moreover, the research on investigating the electronic information sharing in government sectors has been reduced (Yang et al., 2014). Thus, this research ensure to uncover behavior factors of electronic information sharing and related.

1.4 Research Questions

- i- What is the electronic information sharing barrier that affect the participation behavior of employee?
- ii- What are the electronic information sharing factors that affect the participation behavior of employee?
- iii- How to examine the electronic information sharing factors that affect the participation behavior of employee?

1.5 Research Objectives

The main objectives of this study are:-

- i- To investigate the barrier of electronic information sharing that affects the participation behavior of employee.
- ii- To identify the electronic information sharing factors that affect the participation behavior of employee.
- iii- To evaluate the electronic information sharing factors that affect the participation behavior of employee.

1.6 Scope of Work

- i- This study focuses on information and communication technology techniques by using electronic information sharing in order to provide more efficient information with high quality.
- ii- Electronic information sharing has been adopted in Ministry of Electricity in Iraq. Therefore, Directorate of Electricity in Baghdad will be the specific scope of this research.

- iii- The reason of choosing this directorate because it needs to use the electronic sharing for its information in order to increase the speed of sharing the information within suitable time.
- iv- The study focuses on four electronic information sharing factors which can influence the participation behavior of the staff in ministry of electricity directorate in Baghdad. However, using the survey by distribute the questionnaire to get information from the employees to evaluate this model.

1.7 Importance of study

This study creates conceptual model of behavior electronic information sharing. This model will include four factors that impact on the behavior of the stuff. These factors can increase the exchange of information within the organization thereby reducing the time of the exchange of information compared to the traditional method. Sharing information electronically can reduce the cost of sharing information. Moreover, electronic information sharing can provide more information and that can help the decision makers to make better decisions. Finally, there are other indirect advantages of this research for the customers such as decrease the process time of their transactions.

1.8 Organisation of the thesis

This study consists of five chapters that are structured as follows:

Chapter 1: Introduction

Chapter 1 describes the introduction part. The background of the study is briefly explained in this chapter, benefits of electronic information sharing also illustrated followed