

A Proposed Path Model for Interdepartmental Collaboration in Thi-Qar University, Iraq

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Abstract:

Recently, Thi-Qar University has decided to employ sophisticated technologies for sharing information among the University's departments. In fact, this is not deemed as a first project in the Thi-Qar (or called Dhi-Qar) Province; this initiative is considered as a second initiative that local government has been trying to implement. Since 2004, Thi-Qar Province, with help from Italy government, sought to implement the information sharing initiative among the local agencies. Due to numerous barriers and issues, including resistance to change and financial issues, this initiative has not been completed yet. Moreover, the failure rate of the implementation of e-government among developing countries is high because there is a gap between the design and the reality. Consequently, highlighting the factors that may affect information sharing initiative among the departments of Thi-Qar University is crucial. This study aims to propose the path model for information sharing among the departments of Thi-Qar University based on former studies on information sharing and various theories related to this phenomenon. For future work research, this model will be validated by distributing the questionnaires among the staff and the administrators for them to rank the significant critical factors that affect the information sharing initiative among the departments in Thi-Qar University.

Key words: Intra-agency, Inter-departmental, Information sharing, University of Thi-Qar, Iraq

Introduction

Information sharing amongst the agencies or the departments (also so-called G2G) indicates that more than one of the government components strives to share information together to provide better services to the citizens or customers and to organizations to reduce the workload of the staff. Indeed, there are many forms of e-government applications (some scholars call them interactions) such as a Government to Citizens (G2C), Government to Business (G2B), and Government to Government (G2G). The latter is considered crucial for e-government initiative. Moreover, recently, exchange of information among the public sector elements has increased substantially because of the need to monitor terrorist and other illegal activities (Fan, Zhang & Yen, 2014), and these characteristics for sharing information electronically are very important for unstable countries such as Iraq. However, the importance of the launch of information sharing in the public sector has been highlighted after the terrorism events in U.S.A (Atabakhsh, Larson, Petersen, Violette & Chen, 2004). Moreover, information sharing is deemed an important initiative for increasing the public sector's efficiency and performance (Yang & Maxwell, 2011).

This research seeks to concentrate on information sharing in the intra-organizational level (Inter-departmental). Focus on the G2G due to information sharing in the public sector is considered as a backbone of e-government initiatives (Bwalya, 2011). Also, Thi-Qar (also called Dhi-Qar; therefore, this study uses these terms interchangeably) has not finished implementing the major project among local agencies, which was started in 2004. Therefore, previous experiences of various countries will help present factors that may affect the success of information sharing among the departments in

Thi-Qar University, especially when the university has recently indicated its intention to implement information

sharing in intra-organizational level (Salman, 2015). Utilizing the Information and Communication Technologies (ICTs) in the public sector (such as agencies or universities) will assist to seamlessly integrate and facilitate faster and more efficient public service delivery and transparency (Bwalya & Mutula, 2014). Similarly, cross-boundary information sharing plays a decisive role in the stages of e-Government development, and many researchers such as Klievink and Janssen (2008: 2009) and Siau and Long (2005) agree with this. Moreover, a number of IS scholars have recognized the importance of information sharing, especially in the e-Government research area (for example, Cresswell, Pardo, Canestraro, Dawes and Juraga, 2005; Gil-Garcia, Schneider, Pardo and Cresswell, 2005; Pardo, Cresswell, Thompson and Zhang, 2006; Pardo and Tayi, 2007; Klischewski and Scholl, 2008; Schooley and Horan, 2007). While information sharing among the governmental organizations thru modern technologies is important, developing countries still lack of focus on this area.

Research Problem Identification

At the present time, almost all governments (developing or developed countries) try to harness modern technologies to enhance the quality of service for the citizens, businesses, and the governments themselves. Thus, Iraq in general and, Dhi-Qar province in particular, is seeking to join in this race through the use of modern technologies. After the war in 2003, the Italian government pledged to enhance the technology aspect of the new government in Iraq. Dhi-Qar was the first province selected for the implementation of the e-Government project (particularly the information sharing among governmental agencies). However, regrettably, after more than 10 years since the initiative has been launched and after huge amounts of money have been spent for the hardware and

training of employees, the project is still not well-implemented (Al-Mutmar, 2014).

Currently, the University of Dhi-Qar, announced the application of e-Government initiative in intra-organizational level (Inter-departmental) (University of Thi-Qar, 2015). Furthermore, Yang, Pardo and Wu (2014) stated that information sharing in the public sector is a complex task. Moreover, the reasons for the delay of the main project among the local agencies in the province have not been investigated both in practice and theoretically. Therefore, this study seeks to identify the factors that may have impact on information sharing based on the previous studies on this phenomenon in the various governmental levels.

Theoretical Background

Nowadays, the public sectors in many countries boast about the efficiency of their electronic systems. ICTs apparently allow public services to become cheaper, faster, and more democratic. Therefore, the electronic government (also so-called e-Government) has become a buzzword, the shining future of the public realm. However, although this optimism on e-Government has spread among the developed and developing countries, the latter still face many barriers and challenges in implementing e-Government (Heeks, 2005). In this section, all the concepts and information related to the e-government are discussed.

The initiatives of public sector (agencies or departments) to harness modern technologies (such as Internet and mobile devices) to support good governance, strengthen existing relationships and build new partnerships within civil society are called e-Government initiatives. Dempsey and How (2003) defines e-Government as: *“the use of new information and communication technologies (ICTs) by governments as applied to full range of government functions.”* Moreover, the European

Commission notes that communication technologies in Public Administrations are combined with organizational changes in order to improve public services and democratic processes and strengthen support to public policies (Corsi, 2007).

Additionally, almost all government agencies in developed countries have taken progressive steps toward the web and ICT use, adding coherence to all local activities on the Internet, widening local access and skills, opening up interactive services for local debates, and increasing the participation of citizens on promotion and management of the territory (Bwalya, 2013; Yaghoubi, Haghi & Asl, 2011). On the other hand, the potential for e-Government in developing countries remains largely unexploited, and if exploited, it is not carried out in an appropriate manner. ICT is believed to offer considerable potential for the sustainable development of e-Government (Qamruzzaman, 2014). However, various environmental, organizational and technological factors, issues and challenges pertain in developing countries, requiring focused studies and appropriate approaches.

In the Iraqi context, in June 2004, The United Nations appealed to the international community to help the new Iraqi government in order to create the foundations of e-government; therefore, the Iraqi government signed a memorandum of understanding with the Italian government to develop this sector, through the Iraqi Ministry of Science and Technology and Italian Ministry of Innovation and Technology. The Italian government therefore provided financial and technical support for the establishment of an internal network to connect the Governmental institutions (whether local or federal level) (Al-Dabbagh, 2013). After all these years, there are very few initiatives in the public sector to successfully exploit new technologies. However, the main purpose of the application of modern technologies in the public sector is still neglected. Therefore, utilization of the experiences of previous studies will assist to shed light on the issues that may have effect on

information sharing among organizations, such as Thi-Qar University, or that may influence the application of new technologies in the public sector because information sharing can be considered as the backbone of e-government initiatives.

Previous Studies of the Information Sharing

According to Alsaghier, Ford, Nguyen, and Hexel (2011) it is easier to achieve the early stage of e-Government, where information services are introduced. However, they also added that when entering the later stages of e-Government development, changes become more complex because there are needs to renovate administrative operation and business process, to synthesize different public databases, to alter current legislation, or to develop new organizational regulations. Therefore, to identify the critical factors that may affect information sharing among departments at the University of Dhi-Qar is considered crucial. Consequently, the previous studies that addressed information technology in various governmental levels are deemed essential for this study. These previous studies will be discussed to highlight the issues and the factors that were harnessed for each study. In addition, the researcher seeks to use Nvivo 10 software to analyse these studies.

In 2007, Jing and Pengzhu carried out two case studies in Chinese. The main objective of their research was to understand how four aspects: external pressure, inter-agency relationship, organizational readiness, and perceived performance, influence the government agencies that engage in information sharing activities. Qualitative approach, which included face to face interviews with staff and managers of government agencies, was the main technique for collecting data. The findings highlighted a number of unique challenges that influence information sharing in government agencies in the Chinese context such as: inconsistency of legal/policy,

project championship, inter-agency networks and compatibility and process security. Figure 1 illustrates the conceptual model for Jing and Pengzhu's study (Note: Figure 1 is based on the description in Jing and Pengzhu's study, Page 234).

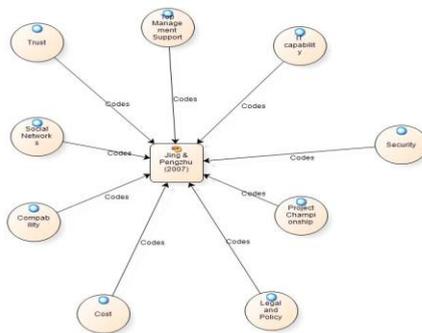


Figure 1. Factors based on Jing and Pengzhu study, 2007

Although electronic information sharing in the public sector is considered necessary, unfortunately, it remains a great challenge worldwide, especially in developing countries (Al-Khafaji, Shittu & Osman, 2012; Al-khafaji, Shittu & Osman, 2014). There are an inadequate number of studies that focus on developing countries in this area, and current literature investigated the barriers and issues mainly in the developed countries. The second study was also carried out by Jing and Pengzhu (2009) who concentrated on the Chinese context. The interview was the key instrument for gathering data from the employees in the government agencies. After analysing the data, the researchers explored the five layers that influence information sharing in Chinese context. These categories are comprised of: (1) External Environment Layer, (2) Upper-level Managerial Agencies layer, (3) Inter-agency Partnership Layer, (4) Organizational Readiness Layer, and (5) Individual Expectation Layer. Figure 2 below illustrates the main factors for this study.

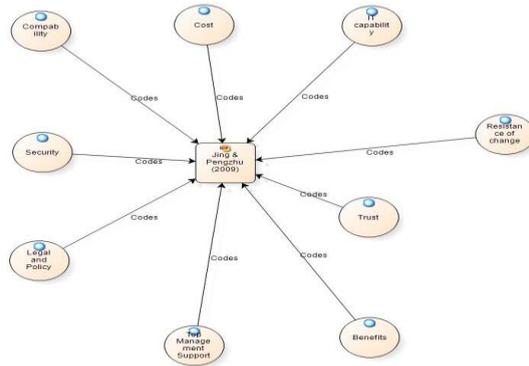


Figure 2. Factors based on Jing and Pengzhu study, 2009

With modern technologies, exchange of information among government agencies has become more feasible. Recently, the government agencies around the world have realized the importance of the exchange of information for addressing many issues, such as administrative and political issues (corruption, anti-terrorism, etc...). Therefore, in 2011, Yang and Maxwell conducted a research about the factors that influence the information sharing process in various levels. In this study, the focus is on the intra-organization issues. Figure 3 below shows the factors that may affect the information sharing based on Yang and Maxwell's study.

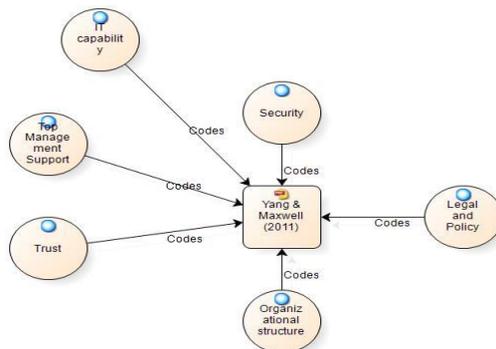


Figure 3. Factors based on Yang and Maxwell study, 2011

As mentioned earlier, electronic information sharing among governmental agencies has the ability to enhance the productivity and performance of government operations, improve police-making, and improve services for the citizens. Still, majority of previous literature mainly focused on central or federal level organizations. On the other hand, there are few studies that concentrate on the local level organizations in both e-government and information sharing initiatives. Therefore, in 2013, Bigdeli, Kamal and deCesare conducted a study on information sharing among local agencies in developed countries. They sought to investigate the barriers to information sharing among governmental organizations in developed countries in the local level. Bigdeli, Kamal and deCesare highlighted the factors based on previous research on information sharing in public or private sectors, inter-organizational systems adoption, and inter-departmental collaborations. This study proposes a conceptual framework that can be used as a tool for decision-making through electronic sharing information. The framework consists of five components: external environment, organizational capacity, technology environment, EIS characteristics, and inter-departmental environment. Figure 4 below identifies the factors that are essential for this study.

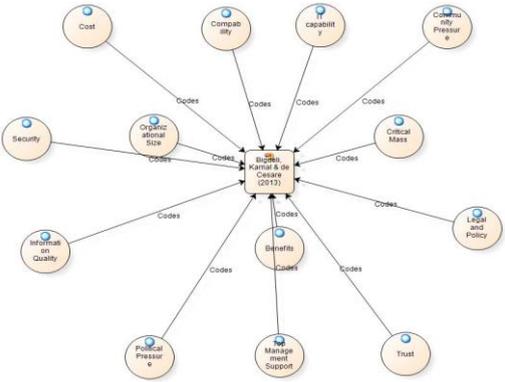


Figure 4. Factors based on Bigdeli, Kamal and deCesare study, 2013

The last study on information sharing was carried out by Yang, Pardo and Wu (2014). However, their research is different from the studies that have been discussed previously. Yang et al, focused on how information is shared across the vertical and horizontal boundaries of government agencies. The qualitative data were collected through semi-structured interview with key actors from central and local government agencies. The results indicate that there is no single type of information sharing that can satisfy all the needs and concerns of government agencies. For that reason, they suggested that a balance between centralized and decentralized types of information sharing should be achieved to obtain the advantages and diminish disadvantages.

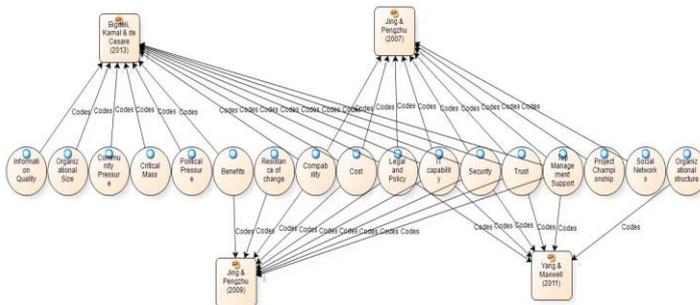


Figure 5. Summaries of the factors based on the former studies (Nvivo 10)

In sum up, the Figure above summarises the factors used in the previous study and information sharing process in the public sector and in various levels.

Path Model and Hypotheses

This section will visualize the relationship between the dependent and independent variables. Thus, the highlight of the hypotheses needs to be studied. Figure 5 depicts the path model based on analysis of the previous studies using Nvivo 10.

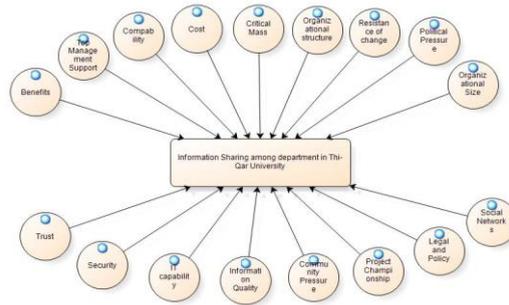


Figure 6. Path model for Information sharing of the Thi-Qar University (Nvivo 10)

According to Hair, Hult, Ringle, and Sarstedt (2013) path model is a diagram used to visually display the hypotheses and variable relationships that are examined when SEM is applied. Consequently, this study posits the following hypotheses:

- H1: Benefits may affect electronic information exchange among departments in Thi-Qar University.
- H2: Costs may affect electronic information exchange among departments in Thi-Qar University.
- H3: Trust may affect electronic information exchange among departments in Thi-Qar University.
- H4: IT Capability may affect electronic information exchange among departments in Thi-Qar University.
- H5: Information quality may affect electronic information exchange among departments in Thi-Qar University.
- H6: Top management support may affect electronic information exchange among departments in Thi-Qar University.
- H7: Compatibility may affect electronic information exchange among departments in Thi-Qar University.
- H8: Legal/policy may affect electronic information exchange among departments in Thi-Qar University.
- H9: Security may affect electronic information exchange among departments in Thi-Qar University.
- H10: Organizational Size may affect electronic information exchange among departments in Thi-Qar University.

H11: Political Pressure may affect electronic information exchange among departments in Thi-Qar University.

H12: Critical Mass may affect electronic information exchange among departments in Thi-Qar University.

H13: Organizational structure may affect electronic information exchange among departments in Thi-Qar University.

H14: Resistance of change may affect electronic information exchange among departments in Thi-Qar University.

H15: Community Pressure may affect electronic information exchange among departments in Thi-Qar University.

H16: Project Championship may affect electronic information exchange among departments in Thi-Qar University.

H17: Social Networks may affect electronic information exchange among departments in Thi-Qar University.

Conclusion and Future Research

The major aim of this conceptual study is to propose a path model for information sharing among departments in University of Dhi-Qar. Thus, the literature review is considered as the main source to highlight the factors that may impact this initiative. To examine the proposed path model with the university's staff, the researcher strives in the future work to distribute the questionnaires and employ Structural Equation Modeling (SEM) to focus on the critical factors. In the Iraqi context in general, more empirical studies are required when using new technologies in the public sector, whether in the rural area or the urban area. To what extent the stakeholders are satisfied from these initiatives are also essential. Therefore, before any empirical work is conducted, a road map or a conceptual model for this study has been developed.

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