Making Sense of E-Government development in Saudi Arabia: A Qualitative Investigation

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Abstract—The implementation of eGovernment across countries is rapidly increasing. However, with this increase in the development of eGovernment projects especially in developing countries such as Saudi Arabia, there are still some difficulties facing the proper development of eGovernment. This paper aims to explore how eGovernment implementation and development can be understood in the context of Saudi Arabia based on the developers' perspectives. An attempt is made to identify the factors influencing the development of eGovernment and contribute to cause the delay of its initiatives at government organisations in Saudi Arabia. To achieve the aim, an unstructured interview within a qualitative approach was adopted in this study. Grounded theory techniques based on Strauss and Corbin approach (1990) were employed in this study in order to analyze the collected data.

Keywords-eGovernment; Saudi Arabia; Development; Grounded Theory Techniques

I. Introduction

The focus of this study is the eGovernment concept in Saudi Arabia as one of these countries that still facing difficulties in implementation of its eGovernment. In actual fact, the Saudi Arabian government has already commenced implementation of its eGovernment concept named "Yesser" in 2005 [1]. Yesser is an umbrella for all eGovernment activities, procedures, legislations and other related issues and acts as the government's controller. The program has been launched and regulated in cooperation with three entities, which are the Ministry of Communication and IT, the Ministry of Finance and Communication, and the IT Commission [1]. Therefore, some eGovernment facilities are already in place. However, the duration of the eGovernment program, which has been set by the Saudi government, was not seem to be enough to achieve the expected outcomes according to what has been done so far and published in the literature. In particular, the Saudi government's clear statement regarding eGovernment, mentioned by several researchers such as [2, 3] as well as in several websites such as the Yesser eGovernment website (the official Saudi eGovernment website launched for the purpose of eGovernment implementation), asserted that, "*By the end of 2010, everyone in the kingdom will be able to enjoy from anywhere and at anytime – world class government services offered in a seamless user friendly and secure way by utilizing a variety of electronic means*" Yesser Vision.

It is now 2012; Yesser eGovernment program has changed its vision from offering electronic services to be supporting the infrastructure projects especially at the government organisations due to the noticed weakness in the infrastructure at public sectors [1].

II. Aim and significance of this study

The eGovernment phenomenon has become a wide area for research and study [7]. Yet, despite this emphasis on the concept of eGovernment in the literature, there is still a lack of research, especially on the factors that impede its applications and the reasons for this, specifically in Saudi Arabia [4, 5, 6]. Much of the published research regarding eGovernment in Saudi Arabia was considering the adoption side to the concept of eGovernment. However, most of the reviewed literature in relation to the eGovernment implementation at government organisations in Saudi Arabia was very few and their outcomes were as an expectation for the factors that might affect eGovernment during implementation process because the program of eGovernment has not accomplished during conducting previous research. Furthermore, most of the previous research about eGovernment implementation in Saudi Arabia used different research approaches which sometimes play role in reaching the results and clarifying the phenomenon being studied. In this study, the factors that influencing the implementation and development of eGovernment will be explored from the view of point the people who involved in the implementation of eGovernment and we call them here as developers.

III. Research Methodology

This section provides information about the methodological stance that will adopt it in this study. This study adopts the unstructured interviews method within a qualitative approach. Moreover, the techniques of grounded theory based on the approach of Strauss and Corbin (1990) [8] were employed to analyze the collected data.

Finally, complete content and organizational editing before formatting. Please take note of the following items when proofreading spelling and grammar:

A. Interview method

Qualitative interviewing is a type of interview method that is often associated with qualitative research and the one adopted in this study. It is not just a normal interview that stressed interviewing skills as it has generic characteristics, which include the flexibility in style of interview, focusing on people's actual experiences more than general beliefs, and stressing the relationship between the interviewer and interviewee that are considered as crucial to the method [9].

Twenty one in-depth interviews were conducted with different groups of participants involved in the implementation and development of eGovernment. These groups include IT managers, IT experts, members from eGovernment program, and IT academics engaged in the development of eGovernment. The current study adopts purposive or purposeful of sampling as it is considered to be the best for this study within a qualitative approach. Sampling in grounded theory is called 'theoretical' by most of researchers rather than 'purposeful' however, the two terms are interchangeable [10].

B. Grounded Theory Techniques

As mentioned, this study adopted the techniques of grounded theory derived from the approach of Strauss and Corbin (1990) [8]. As identified in the literature there are four main approaches/types of grounded theory used within IS research (as illustrated in the Table 1) and analytic which is the use of grounded theory technique is one of them.

Using of grounded theory techniques here as an Analytical method, means using only the techniques and procedures of grounded theory to analyze the collected data and generate meaning for the area under study. The usage of grounded theory techniques for coding can be employed any or all of the three phases of coding (open, axial, and selective) and it does not required for multiple rounds of interviews as well as it does not require to stick with any particular formulation of grounded theory [11, 12]. Researchers using this approach usually come up with diagrams that explain the situations, events, people, and activities being researched through defining the relationships between categories and concepts that formed by codes and then create understandable meaning of this.

TABLE I. Four grounded theory approaches used in IS research

Approach	Principles	Coding	A priori Theory	Paradigm model	Typical Refs
Glaserian	Required	Open, Selective	No	Viewed as family of codes	Glaser & Strauss (1967); Glaser (1992)
Straussian	Required (Glaser disputed adherence)	Open, Axial, Selective	No	Greater emphasis	Strauss & Corbin (1990, 1998)
Analytical	Not necessarily	Any or all used	Maybe used	Some times used	Variety
Mixed	Not necessarily	Any or all used	Maybe used	Some times used	Mingers (2001)

Source: [38]

IV. The use of grounded theory procedures to analyze the Data

Next sections will briefly explain the used of grounded theory techniques and procedures.

A. Open Coding

It is called initial coding which is the first phase/step in coding collected data. It is defined by [8] (p. 61) as "the process of breaking down, examining, comparing, conceptualizing, categorizing data". Data in this phase of coding is broken down into small pieces in order to manage it and conceptualize it through assigning a label to it that represent its meaning [8].

In this study, open coding is considered as an initial step in the analysis process. A total of 320 codes were emerged and created based on 21 interviews. Two methods of coding were employed which are (i) In Vivo as referring to using the codes and terms that participants assign to their ideas and concepts during the interviews in order to preserve participants meaning regarding their views [13] and (ii) Simultaneous Coding as referring to "the application of two or more different codes to a single qualitative datum, or the overlapped occurrence of two or more codes applied to sequential units of qualitative data" (p. 55) [14].

B. Axial Coding

It is the next procedure in grounded theory that comes immediately after the open coding step where the process of putting data back together takes place in this step in order to make connection and links (relationships) between categories [8]. It is also called theoretical coding where the process of referring sub-categories to their categories and

making relationships among them is taking place in order to start creating meaning [16, 11]. This meaning should reflect what the empirical data is about regarding the reasons caused the delay in eGovernment implementation.

In this analysis phase, codes were refined to find out core codes in order to compare these codes to others for the purpose of finding similarities and differences in terms of concepts that can be placed together within sub categories. The total major categories created in this phase of coding and after refining the categories are twelve major categories and given the names of cooperation and collaboration, organisations and needs at organisations, IT professionals and IT skills, eGovernment implementation and challenges, awareness and training, provision of electronic services, education about the concept of eGovernment, financial allocations and incentives for IT staff, regulations & procedures and plans, e-readiness, ICT infrastructure, motivators. These main categories presented in Figure 1.
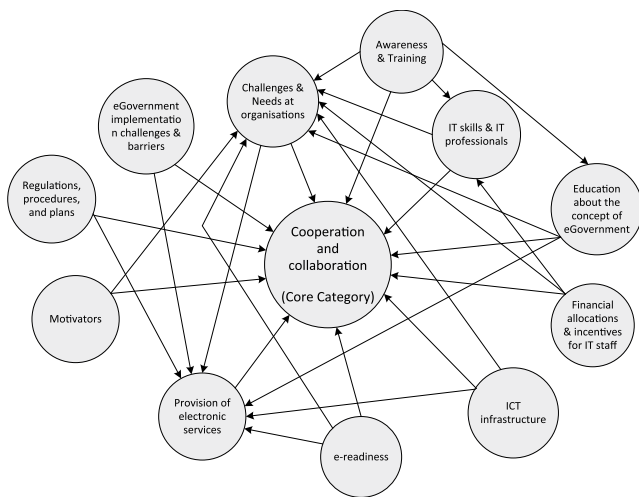

Figure 1. Core category and relationships

C. Selective Coding

Selective coding or focused coding is closely similar to the axial coding but here it is on more abstract level [15]. The aim of this step of analysis is to find out the central category among created categories which will become the central of the research phenomenon and other categories will be the causal conditions which basically the factors that influencing and caused the core phenomenon [8, 17, 18].

Determining the core phenomenon which will be the central and core category is based on showing the stress of the concept in the data through finding out how frequently the concept appears in the data. However, determining the frequencies based on the number of participants who mentioned particular concept rather than the number of times a concept appears in the data [19].

The concept of 'cooperation and collaboration' was mentioned and stressed by sixteen participants and

determined in this study to be the core concept (core category) as indicted in Table 2 and illustrated in Figure 1.

TABLE II. Determining the most frequent concept in the data

No.	Main concepts / Core codes	Number of participants
1	Cooperation an collaboration	16 out of 21
2	Challenges & Needs at organisations	15 out of 21
3	IT skills & IT professionals	14 out of 21
4	eGovernment implementation challenges & barriers	14 out of 21
5	Awareness & Training	14 out of 21
6	Provision of electronic services	14 out of 21
7	Education about the concept of eGovernment	13 out of 21
8	Financial allocations & incentives for IT staff	10 out of 21
9	Regulations & procedures	10 out of 21
11	e-readiness	9 out of 21
12	ICT infrastructure	8 out of 21
13	Decision-makers & top management	8 out of 21
14	Delay in applying eGovernment	7 out of 21
15	Motivations	7 out of 21
16	Roles & responsibilities	6 out of 21
17	Strategies and Plans	6 out of 21
18	Support of Yesser	5 out of 21
19	Utilizing the experiences of eGovernment	4 out of 21

V. The use of grounded theory procedures to analyze the Data

This section will discuss the factors that been found in the empirical data to have an influence the implementation of eGovernment at government organisations in Saudi Arabia according to the results of analysis.

A. Cooperation and collaboration

The category of cooperation and collaboration is found in this study as the core category/ the central phenomenon which has relationships with all other surrounding categories as shown in Figure 1. The category of cooperation and collaboration contains sub-categories and core codes where placed into this category as they all relate to the same concepts of cooperation and collaboration.

The cooperation and collaboration in its all aspects as mentioned by the most of participants in this study are the main and important factors that have an influence on the implementation of eGovernment initiatives at government sectors and especially the first factors that contributing to cause the delay in the implementation of eGovernment. Discussing the factors of cooperation and collaboration will be done through the following sub-sections.

1) Cooperation and collaboration between government sectors.

Cooperation and collaboration between government sectors/agencies in terms of sharing data, services, experiences in eGovernment, and developing eServices are importantly needed for eGovernment implementation in Saudi Arabia

as the proper implementation for eGovernment projects cannot be performed without the cooperation and help of government sectors with each other. An IT expert working in Al-Elm Company explained the need for cooperation between government sectors by saying that '*Cooperation between government sectors to develop the services is needed, because in most cases offering any service requires obtaining and collecting information from more than a government body*'. Another participant from the same company showed an example on the importance of cooperation between government sectors in exchanging the required data for providing eServices by saying that '*one of eServices that we are currently developing is informing marriage, when someone gets married he needs to certify and authenticate that at the ministry of justice and getting a family card issued by agency of civil affairs. So, ministry of justice supposes to exchange the information of marriages electronically with the agency of civil affairs to ensure accuracy of the data and complete the transaction*'. Therefore, the extent of collaboration between the government sectors is very important because If there is one of the government sectors not happy and desire to provide such information then the transaction and the service won't be complete it.

2) Lack of cooperation between government sectors.

The previous point showed the importance of cooperation between government sectors to enhance the implementation of eGovernment projects because some of these sectors do not properly cooperate with each other for the same regard as indicated by some participants. An IT expert in Al-Elm Company discussed the experience of his sector about the cooperation with other government sector by saying that '*We have a cooperation with an important sector in the country and actually we are a part of that sector and we are the only sector authorized to communicate with them to supply and support with the needed information for building electronic services for other government sectors in the country but unfortunately we have an inactive cooperation with them and sometimes we need to wait lots of time to get their response in things that we need*'. Another IT manager at King Saud University also showed the lack of response for cooperation by another government sector in making the electronic link that will facilitate the exchange of data between the two sectors by saying that '*The preparation for linking in our environment is done now and tested to make sure is ready but still waiting to test the connection in their side –another government sector-*'.

3) Lack of cooperation with Yesser program.

it is one of the main factors among the cooperation and collaboration factors that influencing the implementation of eGovernment and caused the delay in its initiatives as indicated by the empirical data. One of e-services project managers in Yesser program was referring the very low process in connecting and linking the government sectors with Yesser to the lack of cooperation by saying that '*The*

linking process of government sectors with Yesser was very slow caused by the lack of cooperation from some of the government sectors. So, I am neither optimistic nor pessimistic, but we only achieved around 40% of what we have planned to reach*'.

From the government sectors side, one of the IT managers at General Directorate of Education in Riyadh mentioned the cooperation with Yesser by saying that '*There is no direct cooperation with the Program of Yesser and if so then it should be via the Ministry of Education*'. Another IT manager at ministry of justice expressed their relationship with Yesser by saying that '*our relationship with Yesser has only started few months ago*'. This means the cooperation of that ministry with Yesser has started late for unknown reasons.

4) Plans, strategies and changing procedures for cooperation.

Setting up strategies and plans for cooperation between government agencies is another (cooperation and collaboration) factor that influencing the implementation of eGovernment projects. Such strategies and plans can draw the roadmap for government sectors in relation to the cooperation in implementing of eGovernment and what is needed for that. One of the IT experts from Al-Elm Company was expressing their relationship of cooperation with Yesser by saying that '*Let's say that there is no direct relationship in a clear model with Yesser program*'. Yesser program is acting as a controller and enabler for eGovernment at government sectors while Al-Elm Company is working as a developer for eServices for both government and private sectors. These two sectors are currently the main ones needed for helping the government sectors to implement eGovernment projects. Yesser as the one that has the full responsibility for eGovernment implementation and authorised directly by the government should have plans of cooperation with Al-Elm Company in terms of drawing plans and setting up strategies that can help the implementation of eGovernment at government sectors.

5) Understanding the cooperation concept for eGovernment implementation.

The cooperation and its purpose to implement eGovernment have to be understood by all government sectors. An e-Services project manager at Civil Affairs Agency discussed the importance of understanding the concept of cooperation by showing an example as he stated that '*in the case of death if it is recorded directly then other related sectors can do their duties towards this died person and in the same time can prevent any kind of misusing for his/her identity in undesirable purposes. So, cooperation of Health Ministry will benefit other sectors and cooperation of other sectors will benefit the Ministry of Health. This concept of cooperation has to be understood by all sectors because it is a collaborative work more than an individual work*'. He also described the status of government sectors without the cooperation in implementing eGovernment by saying '*The concept of electronic government*

is a collaborative work between government sectors... the government sectors before moving towards e-government they were like islands every sector works for itself.. Meant doing only its responsibilities'.

6) Cooperation of top management.

Top management plays a great role on accelerating or delaying the implementation process of eGovernment at government sectors. An IT manager (e-services project manager) at the ministry of higher education stated that '*Top management has a very important role in the process of accelerating or delaying the implementation eGovernment. So, it has to be supportive'.* He also mentioned that '*The main factors in the success of e-transformation is the commitment for senior management ... if the leader (Manager - Chairman - Minister) has a background knowledge of the true benefit of electronic transformation then the influence will be noted on the entire sector. For instance, here in the ministry –ministry of higher education- we are supported by the minister'.*

The support of top management is very important and especially the support of top management given to IT department to complete eGovernment projects. An IT manager at ministry of justice mentioned that '*Direct support and confidence from the minister given to the manager of information and communication department at the sector is very important to help removing some of the obstacles that can face the development and implementation processes'.* The projects of eGovernment would not be possible to implement without support of the top management within the organisation.

7) Cooperation of financial departments at government sectors.

Funding the eGovernment projects at government sectors is the responsibility of the financial departments within organisations and these departments in most cases do not give the IT projects a proper care. An IT manager at the ministry of education stated that '*IT projects in government sectors take long time to get approved by top management and finance department compare to the private sectors where the IT projects get a high priority'.* Another IT manager at King Saud University mentioned that '*Last few years, King Abdullah has command to allocated huge budgets to government sectors in order to help them in E-transformation however, some financial departments within government sectors are not helping the IT projects to be implemented in specified time regardless the poor equipment that provided for such projects due to they looking for lowest offers provided by IT businesses'.*

8) Cooperation with researchers.

Cooperation of government sectors and Yesser program with universities and academic centers is important. It can enhance the implementation process of eGovernment through finding out the challenges that can affect the implementation as well as the efficient ways to introduce new concepts to the workplace such as eGovernment. One of the IS academics at King Faisal University stated that '*I can say that there is a lack of benefit from academic research regarding eGovernment implementation and making a partnership with universities'.* Another IS academic at King Abdulaziz University mentioned that '*Sometimes we send many emails to some government sectors like the ministry of commerce asking for a statistical info to help us in doing research but unfortunately we usually do not get response from them'.* An IT manager at ministry of defence thought that '*Government agencies have to employ and host researchers to find the good ways for applying technologies such as eGovernment'.*

B. Challenges and needs at government organisations

The category of challenges and needs at government sectors is referred to the issues and concerns that been found in the empirical data to have an influence on the implementation of eGovernment projects within government organisations. These issues are considered to be challenges and needs facing government organisations while implementing eGovernment projects. This category is one of the major categories that surrounded the core category of 'cooperation and collaboration' as illustrated in Figure 1.

1) Understanding the concept of eGovernment.

As discussed in previous point (V.A.5) the concept of eGovernment has to be understood by both employees and top managements within organisations because most of the participants indicated that there is a wrong understanding for the concept of eGovernment across government sectors.

2) Change management.

Resisting the change to eGovernment at government sectors was indicated by some participants. One of the e-services project managers at Yesser program stated that '*there is a resistance noted from some government sectors regarding the implementation of eGovernment'.* Another e-services project manager at Yesser program mentioned that '*Some of the expected reasons that led to eGovernment delay include the change resistance and effectiveness of the efforts regarding eGovernment implementation'.*

An IT manager at ministry of Islamic affairs was referring the delay on the implementation of eGovernment projects to the change management issue as one of the main issues influencing the eGovernment implementation in Saudi Arabia. He stated that '*It is the issue of change management within the government sectors more than any something else. We do not have problem with financial resources or technical aspects because they are available'.* He continued saying that '*The change management is really needed for change strategy because it is the most difficult aspect as I said the financial and technical aspects are available and remains the human aspect which is the hardest part of the equation'.*

3) Technical departments at government sectors.

The implementation of eGovernment projects or any IT projects within government organisations would not possible without the help of the IT qualified staff working at IT technical departments. Therefore, the absence of the active role for these IT departments would have an influence on the implementation of eGovernment and its initiatives within government organisations and in general leads to the delay in the implementation process for eGovernment projects.

An IT manager at the ministry of education stated that 'Technical departments in all different government agencies are supposed to be more developed than what they are now. This is due to the lack of qualified IT staff as well as poor training in the Information sector at different government departments'. Another IT manager at justice ministry mentioned that 'In the past there was no IT department at the ministry that can rely on for electronic transactions, but before five months ago we have established one'. As it can be seen, some government organisations were not having IT departments and even more some of these sectors lack for appropriate IT equipment. The IT manager at justice ministry said that 'Currently we do not communicate electronically with other government sectors because the ministry does not have a data center that can be relied on'.

4) The ownership & reputation.

Another issue that been identified in the empirical data as to have an influence on the implementation of eGovernment projects at government sectors is the ownership of eServices and the gained reputation credits for developing the eServices. Usually, the development of eServices is a shared task between more than a government body as to have cooperation between sectors in designing the service, obtaining the required data for building the service, and implementing the service. through the implementation and development of an eService each government sector involved within the development process look for owning the eService that been developed and gaining the credits in front of public for doing such thing by referring the development of that eService to them. It has happened only with few sectors but still be considered as a hinder for those sectors to cooperation again to develop other services. An IT expert at Al-Elm Company stated that 'The implementation of eGovernment in Saudi Arabia is very slow and this is due to several problems, including the ownership of the service and the reputation credit of doing this should goes to whom? especially if several sectors and departments are involved in the development and designing of an electronic service'. He also mentioned that 'Participation in the development of eServices to get the credit and the ownership of eServices are the main problem that we are facing right now in our eGovernment projects with government sectors especially the services which need for cooperation of different parties'.

5) Sincerity in work.

Another influencing issue on the implementation of eGovernment projects at government sectors as been found in the empirical data is the absence of sincerity in work or in other words, the lack of feeling about the country benefit from the implementation of eGovernment projects by employees and top managements within government organisations. An IT expert in Al-Elm Company stated that 'There is a lack of feeling about citizens' pains by responsible managers and decision-makers at vital government sectors as they think of that as normal things that happen every day so, their view of e-transformation is something that not urgent and it does not deserve to be given a high priority'. An IT consultant at ministry of higher education mentioned that 'I think government sectors do not lack for budgets and money rather than feeling of doing this for country benefit. We need sincerity in work'.

6) Electronic Systems.

The absence and weakness of electronic systems is another issue that been identified in the empirical data that have an influence on transferring data from government sector to another which affecting the implementation of eGovernment projects. An IT expert at Al-Elm Company said that 'One of the problems that we are facing is the weakness and the absence of electronic systems in government sectors that can be used for linking these sectors with each other to electronically transfer the data'. Another sub-issue is the differences in databases used for electronic system across departments of a one sector. An IT manager at ministry of justice mentioned the same issue as one of the challenges that justice ministry has faced during the implementation of eGovernment projects by saying that 'We had the second problem in distributed databases among ministry departments across the country which has a different encryption'. Moreover, the lack of integration between electronic systems used within organisation is another sub-issue that been identified to have an influence on the implementation of eGovernment at government sectors. Another IT consultant at the ministry of higher education stressed on the integration between the system used within the organisation by saying that 'There is something important has to be done at government sectors which are the integration between systems used in the same organization'.

Understanding the used systems within government organisations by employees is also another sub-issue. An eServices manager and IT expert at at the ministry of higher education stated that 'Another problem is that understanding systems by employees ... some employees they do not understand why some procedures for doing services have been changed within electronic transactions because they used to do paper transactions in different way and different procedures'.

C. IT professionals and IT skills

This category of IT professionals and IT skills is one of the major categories that surrounded the core category of

'cooperation and collaboration'. It is referred to the issues such as IT skills required for government employees and qualified IT staff that can help in the implementation of IT project within organisations.

1) IT SKILLS.

Having IT skills and knowledge about IT by employees and top managements within government sectors is important to help them contributing on the implementation of eGovernment projects through using and utilizing the new technologies that been introduced to the work environment. Some participants indicated that government employees need for training on IT as they lack for IT skills. An IT manager at the electronic services unit at general directorate of education in Riyadh stated that '*In our sector we have a lack of IT skills to some employees who need for comprehensive training sessions*'. Moreover, another IT manager at the ministry of commerce stressed on the issue of IT skills to government employees and top managers by saying that '*We have a big number of employees who do not know how to deal with technologies even computers and unfortunately the majority of them are managers*'.

2) IT PROFESSIONALS AND HUMAN RESOURCES.

The lack in IT qualified staff at government sectors were indicated by some participants and they mentioned that it has an influence on the implementation of eGovernment. One participant from Yesser Consulting Group stated that '*There is a significant lack of human resources and expertise necessary for the transition to electronic transactions at government sectors beside the lack of readiness of these sectors*'. An IT manager at higher education ministry mentioned the impact of the absence of IT qualified staff on the implementation of eServices by saying that '*I also expect the absence of specialists in information technology had a major impact on the implementation of electronic government*'. More participants indicated the lack of IT qualified staff working at government sectors. An IT manager and the e-services manager at Civil Affairs Agency stated that '*There is no doubt we have a lack of human resources as they are very few*'. An e-services project manager at Yesser mentioned the same issue by saying that '*IT departments in government sectors lack for IT people as we saw some departments have only two people and that is not enough*'.

3) IT PROFESSIONALS AND FINANCIAL DEPARTMENTS.

Some participants believe that financial departments need to have IT professionals who can help in taking right decisions about the IT projects because most of working staff at these departments are not fully aware about technology. An IT manager at the ministry of higher education stated that '*Normally people who work in financial departments within government sectors are not aware in technology so sometimes they take incorrect decisions regarding IT projects or even they take long time to accept funding the IT projects*'. Another IT manager at King Saud University mentioned that '*Financial departments within government sectors need to have IT professionals who have knowledge and experience in IT projects and who can decide on what is needed for their sectors*'.

Having IT professionals working at financials departments in government sectors would help the decisions taken regarding IT projects by the organisations as such people have a good background and knowledge to decide on good offers. IT projects are not like other projects which look for the lowest prices from offers however, it need for a high features and requirements. Having a poor equipment would affect negatively on the implementation.

D. EGOVERNMENT IMPLEMENTATION CHALLENGES AND BARRIERS

The category of eGovernment implementation challenges and barriers is referred to the issues that been found in the data to have an influence on the projects of eGovernment at government sectors in cooperation with Yesser program. This category is one of the major categories that surrounded the core category of 'cooperation and collaboration' as presented in Figure 1.

1) FOLLOWING UP THE IT PROJECTS.

Following up the projects of eGovernment at government sectors is essential because it can help in maintaining the cooperation of government sectors with Yesser as well as determining easily the level of readiness at these government sectors. An e-services project manager at Yesser program stated that '*monitoring the process of projects at government sectors or what so enrolled is important*'. In order to monitor the status of eGovernment projects at government sectors, an eGovernment projects manager should be appointed in each government sector whether by the government sector itself or by Yesser program. This action would help Yesser to easily communicate with these sectors through those representatives (project managers) in regard to the projects of eGovernment. An e-business analyst working in Yesser program stated that '*if there is a project manager from Yesser or from any government sector that can observe the integration of such projects especially IT projects it will be better*'.

2) BELIEVE IN CHANGE.

Belief in electronic services by government sectors is pointed out by some participants as one of the current obstacles that facing the implementation of eGovernment. One of the IT experts at Al-Elm Company stated that '*In my view, one of the current obstacles that facing the implementation of electronic government is the belief in electronic services and its importance by government agencies*'. He also mentioned that '*the second problem that facing the implementation of eGovernment is the extent of government agencies willingness to change because some sectors in the country initially accept the change, but when you tell them that implementation*

requires a set of procedural changes they reject because they fear of change'.

Willingness to change towards eGovernment by government sectors is required to effectively cooperate with Yesser program and other related sectors to implement the projects of eGovernment. This willingness to change can be obtained through believing these government sectors in electronic services can enhance the work and reduce the workload.

3) THE 150 SELECTED GOVERNMENT SERVICES.

It is one of factors that been identified in the empirical data as affecting and influencing Yesser plans and strategies during the implementation of eGovernment. Specifying the electronic services with 150 services that Yesser wants to start implementing at Government sectors without the engagement of the government sectors is the issue here. One participant from Yesser mentioned that one of the main problems that delay our projects with government sectors regarding eGovernment is depending on previous plan which contained developing 150 services for public sectors. An eServices project manager at Yesser program mentioned that '*The program of Yesser started with a plan consists of 150 services which was a mistake from my view of point. Because how come you limit and specify the services with 150 service without consulting and engaging the government sectors to see whether these services are main ones to them and are important to start with or there is something else more important'.* Moreover, an e-business analyst at Yesser stressed on the same issue by saying that '*I think we have 1000 services but we have not reached the 150 that Yesser has specified within plan. Also, a lot of these 1000 services are informative services & enquires'.*

Yesser after five years since the beginning of eGovernment program has noticed that this plan was not successful anymore as it goes wrong with desire of government sectors. Because the majority of government sectors did not see the proposed and suggested services are main ones and important for them to implement because they got other services which have more priority to start with. An eServices project manager stated that '*The good thing in the new five-year plan from 2010-to-2015, we are not going to depend and stick with 150 services .. We are going to work with each government sector and see which services they want to develop by now and start with'.*

4) PARTNERSHIP STRATEGY WITH PRIVATE SECTORS.

The implementation of eGovernment projects which basically include planning, designing, and implementing electronic services as well as preparing the ICT infrastructure needs the involvement of private sectors and especially technical sectors to assist in this regard. An IT consultant at the ministry of higher education asserted on this issue by saying that '*I think it is important to have the idea of partnership with the private sector to complete eGovernment projects'.* An

e-business analyst at Al-Elm Company showed the need for involving the private sectors within the implementation of eGovernment by saying that '*Al-Elm Company has a direct relationship with some government sectors in the country for the implementation and provision of electronic services which, as I said previously it is a profitable company which looks at the profit at the first place because there is no alternative, meaning that the government by itself can not launch the electronic services without getting technical sectors such as Al-Elm company involved in such projects'*

The involvement of private sectors is important especially at the current time where no enough IT qualified staff existed within government sectors as discussed in section (V.C.2) and the current weakness at the IT departments within organisations as discussed in section (V.A.1).

5) DOCUMENTATION OF PROCEDURES AND PROCESSES.

It is very important point that most of the government sectors while shifting to eGovernment do not document the processes and procedures that have been done regarding the implementation of eGovernment initiatives for future development. An e-business analyst at Yesser program mentioned that '*some government sector or almost all of them they do not document their processes and nothing regarding procedures'.* Another participant from Yesser who is an eServices projects manager stressed on this issue by saying that '*It is important to document the procedures that have been done within eGovernment projects to make sure the progress of such projects would not be affected with a leave of individuals who were responsible for projects'.*

E. AWARENESS AND TRAINING

This category of awareness and training encompasses factors that been found in the data to be related to the issue of awareness and training at government sectors. This category is one of the major categories that been identified through the empirical data as illustrated in the Figure 1.

1) AWARENESS FOR EMPLOYEES.

Providing training and awareness through running the workshops and educational sessions are essentially required by both Yesser to all government sectors and government sectors to their employees.

Most of the interviewed participants indicated that there is a lack of awareness and training about IT at government sectors. One of the IT managers in the electronic unit at General Directorate of Education in Riyadh mentioned the lack in the awareness about using technologies at government sectors by saying that '*We have a lack in the awareness about the use of technology for public employees across government sectors'.* Another IT manager at Planning and Information Affairs division at the ministry of higher education stressed on the issue of awareness for employees by saying that '*Lack of employees' awareness of the expected benefits for*

eGovernment is also one of the difficult issues that facing eGovernment implementation'. An IT manager at the ministry of Islamic affairs added that '*Government sectors should focus on aspects of IT awareness and training'*. Providing awareness and training helps employees to understand the electronic systems they used and the purpose for its use.

2) Awareness for managers and decisions-makers.

As an extension of what has been discussed in the previous section regarding the need for providing awareness and training to government employees, this section will highlights the need of awareness and training for managers and decision makers at government.

One of the academics in IS field at the King Faisal University indicated the need for providing awareness and training especially to managers because they play a great role on affecting on the entire sector therefore, they must be educated. He stated that '*There must be awareness and education programs about what is the eGovernment for staff and managers because some managers do not want the change which can reflect on staff'*. Another participant from the electronic unit at General Directorate of Education in Riyadh mentioned that '*Decisions makers need for a lot of awareness about the usefulness of e-services and eGovernment'*.

F. Provision of electronic services

This category includes all concepts connected to the provision of electronic services that been found in the empirical data to have an influence on the implementation of eGovernment projects. This category is one of the major categories that created in the axial coding phase in the analysis. Specifically, it is one of the categories that surrounding the core category of 'cooperation and collaboration' as illustrated in Figure 1.

1) Designing of eServices and electronic systems.

The design of electronic systems or electronic services needs to be easy to use and much understandable for government employees especially with current lack in IT skills for employees at government sectors as discussed in section (V.C). One of IT managers at the ministry of education mentioned this issue which the complexity in the design of electronic services as one of the reasons caused the delay in the implementation of eGovernment. He stated that '*The complexity in the design and delivery of electronic services is a real reason to delay its implementation'*.

2) Linking government sectors.

It is another affecting factor that been identified in the data to have an influence on providing electronic services through the lack of linking government sectors with each other to exchange the required data to build and offer electronic services. One of important steps that government sectors need to do while implementing eGovernment is making and establishing the link with GSB (Government Service Bus) to start electronically communicate with other sectors in such easy and secure way. It is like an integration channel developed by Yesser to connect all government sectors through.

Some participants indicated the lack in process of linking government sectors with GSB which is associated with the lack of cooperation from the government sectors side. An eServices projects manager at Yesser mentioned that '*The linkage process of government sectors with Yesser was very slow caused by lack of cooperation from some of the government sectors'*. Another eServices project manager at Civil Agency mentioned the importance and the benefits for linking the agency of Civil Affairs sector with the ministry of health. He mentioned that '*Second project that we are going to implement is fallen under the umbrella of G2G, which is the linkage with the Ministry of Health ... of course the link with the Ministry of Health for registering two things which are the birth and death'*. He continued that '*Creating the link with the ministry of health helps to raise the efficiency of information, speed up the registration of the information and inform related sectors instantly to do their roles'*.

3) Privacy and security.

Privacy and security are important issues that always associated with developing electronic services. As indicated by some participants in this study that there is a need to have a privacy officer in each government sector that can review the electronic service before offering it to ensure it would not breach the privacy of others. An IT expert at Al-Elm Company explained the reason for the presence of a privacy officer in government sectors by saying that '*The importance of having a privacy officer in all government sectors is to ensure reviewing and studying the eServices before offering them'*. Moreover, awareness about privacy and security while designing and offering electronic services should be disseminated across government sectors because there some sectors do not believe in such thing as indicated by the same participant. He stated that '*There is some government sectors are aware about privacy policy while others do not believe in such thing'*.

G. Education about the concept of eGovernment

The category is one of the major categories that been created at the axial coding phase during the analysis as shown in Figure 1. Understanding the concept of eGovernment by the top managements and employees within government organisations is very important need to enhance the implementation process of eGovernment projects.

1) Lack of education about eGovernment.

Education about eGovernment is importantly needed at both organizational and national levels because there is a lack of knowledge about eGovernment program Yesser as

indicated by a participant. An IS academic at King Faisal University stated that '*Last year, I did a research and I asked the people a question if whether they know Yesser and if they visit the national portal website for Saudi Arabia and the responses of 120 people were no which form 85% of the total sample*'. In particular, some other participants indicated that there is a misunderstanding about the eGovernment and what is really about at government sectors. An IT manager at the ministry of education explained this misunderstanding in terms of implementation of eGovernment by saying that '*some government agencies are misunderstood the meaning of eGovernment and they thought that their duty is only uploading the application forms online and let citizens download them*'. Another IT expert at the Al-Elm Company explained another misunderstanding for eGovernment in terms of impact by government employees by saying that '*there is a misunderstanding by government sectors employees for the aim of eGovernment as in the most cases they thought that it means reduce the number of staff*'. The real meaning of eGovernment should be clearly disseminated across government sectors because some employees at these sectors have a misunderstanding for such concept.

H. FINANCIAL ALLOCATIONS AND INCENTIVES FOR IT STAFF

Financial allocations & incentives for IT staff category refers to the issues and concerns of financial allocations and incentives specified to IT staff that been found in the empirical data to have an influence on the existence of IT staff at government sectors. This category is one of the major categories that been identified at the axial coding phase during the analysis as illustrated in Figure 1.

1) PROVISION OF FINANCIAL INCENTIVES.

According to what has been found in the empirical data, this factor play great role in motivating those IT staff at government sectors to work forward with Yesser program and other government sectors in regard to the implementation of eGovernment.

The existence of IT staff at IT departments within government sectors are important because they are the key elements to help in the implementation of eGovernment projects. Therefore, IT staff needs to be motivated financially and morally. One of the IT managers at King Saud University explained this issue by saying that '*Actually, these incentives are whether financial or even appreciations motivate government officials to work effectively and learn new things*'. An IT manager at the ministry of Islamic affairs mentioned that '*Normally, employees in the public sector lack for incentives which can motivate them to learn new things and make an effort to work*'.

Some participants indicated the lack of IT staff working at government sectors and they referred that to the lack of financial incentives and allocations specified to the IT staff.

An IT manager at the electronic services unit at general directorate of education in Riyadh stated '*We have a lack of Saudi IT people in our sector and the reason is due to shortages of incentives and financial allocations*'. Another IT manager at King Saud University asserted the same issue by saying that '*The lack of experienced people in government organisations comes from the rarity of incentives and allocations specified for those IT specialists working in government sectors*'.

2) THE NEED FOR INCREASING THE SALARY SCALE FOR IT STAFF.

As extension to the discussion done in previous point, the existence of IT staff working at IT departments within government organisations is influenced by another factor which is the lack of salary scale specified to such qualified staff compared to the private sectors. An IT consultant at the ministry of higher education explained the reason behind the lack in qualified IT staff at government sectors by saying that '*We have lack of qualified IT people in the government sectors and the reason is due to the lack of the salary scale for such people*'. A participant from Yesser who is an eServices project manager referred the problem of existing of IT staff at government sector to the same reason by saying that '*Qualified IT people would not come to work in government sectors with salary of 6000 or 7000 Riyal while they can gain the double in private sectors*'.

I. REGULATIONS, PROCEDURES AND PLANS

Regulation, procedures and plans category refers to the issues and concerns that been found in the empirical data to have an influence on the delivery of electronic services.

The category is one of the major categories that been created in the axial coding phase and developed in the selective coding during the analysis as presented in Figure 1.

1) THE COMPLEXITY IN PROCEDURES & THE NEED FOR CHANGE.

Designing and offering electronic services is required to change or modify some traditional procedures that associated with providing services at government sectors in order to suit the new direction of eGovernment. An eServices project manager at the agency of civil affairs asserted the same issue by saying that '*Procedures and existing systems in the agency of civil affairs were built on a paper-based structure. So, we need to re-formulate these procedures in order to suit e-government direction*'. An IS academic at King Abdulaziz University mentioned the need for changing procedures before designing and offering electronic services as he stated that '*The work is automated and become electronic but, the procedures are still as in the traditional way. I mean administrative procedures must be changed and modified to facilitate providing electronic transactions*'. Another participant indicated the complexity in procedures for doing services with government sectors as an important issue affecting the implementation of eGovernment. An IT manager at the ministry of higher

education stated that the current procedures for doing transactions with government sectors is the problem because it is complicated and complex. He mentioned that '*The problem is the current administrative procedures for existing transactions with government sectors which seem to be very complicated. So, the complexity of these procedures makes it difficult to join eGovernment in such a quick way*'.

2) The need for unifying procedures.

Unifying procedures for doing the same service/transaction at different places is one of the problems that facing Yesser with some government sectors during the implementation of eGovernment. One of the eServices project managers at Yesser program mentioned this issue by saying that '*We are trying with Ministry of Municipal and Rural Affairs to unify the procedures at Amanahs and municipalities because some procedures are different from municipal to another*'. An IT manager at Planning and Information Affairs division at the ministry of higher education asserted the same problem with the cultural missions offices and he has considered as an challenge and obstacle by saying that '*We have a problem with cultural attaches which is each attaché office has its own culture in terms of work procedures*'.

3) The lack of strategic plans.

It is one of the factors that been found on the data to have an influence the implementation of eGovernment. One of IT manager at King Saud University mentioned the lack in plans by saying that '*There is no strategic plan is adopted by high authorities in the country for E-transformation and can clarify the targets and objectives*'. He also indicated the lack of clarity in the national strategic plans for eGovernment by saying that '*The plan of the national strategic for E-Government is not clear .. Even Yesser has changed its program target this year from e-services providing to become supporting infrastructure projects*'.

Another IT manager in the electronic unit at General Directorate of Education in Riyadh stressed on the impact of the absence of clear regulations and plans on the implementation of eGovernment projects especially for decision makers by saying that '*The absence of clear regulations and plans for some of the leaders in the decision-making make the implementation of e-government more difficult*'.

J. E-readiness

E-readiness category refers to the ICT capabilities in government organisations that can assist these organisations in delivering of electronic services as well as enhancing the communication channels between the sectors involved in the implementation of eGovernment projects.

1) Provision of electronic communication channels.

As indicated by some participants that some government sectors lack for simple tools of communication that can assist

employees to easily communicate with each other such as the email. One of the IT managers in the electronic unit at General Directorate of Education in Riyadh mentioned that '*There is a weakness in the internal communication between the staff of the sector through email as there are no official email accounts created by the sector for its employees*'. Another IT manager at the ministry of commerce mentioned the same issue which is the lack in providing email accounts to employees by saying that '*In our ministry we lack for official email accounts for employees and only few people in this sector using their personal hotmail accounts to communicate and complete the work sometimes*'.

2) The lack of e-readiness at government sectors.

It is one of the main influencing factors that affecting the implementation of eGovernment projects at government agencies. One of the IT experts at Yesser Consulting Group mentioned the variation in the e-readiness between government agencies and the reflected impact of that in the cooperation of government sectors with Yesser by saying that '*There is a variation between government sectors regarding the e-readiness which definitely reflect on the performance of these sectors and the extent of cooperation with Yesser*'. Another IT manager at the ministry of education asserted on the variation in e-readiness between government agencies by saying that '*Also the disparity of e-readiness between government sectors has another impact on eGovernment implementation in the whole country*'. Some participants from Yesser indicated this variation between government sectors in e-readiness as a problem currently existed that impedes Yesser to implement the eGovernment project in the specified time. An eServices project manager at Yesser stated that '*the problem here is dealing with different government sectors and the majority of these sectors are not ready to implement eGovernment*'.

K. ICT infrastructure

The category of ICT infrastructure included concepts that are related to the issues and concerns that been identified through the empirical data to have an influence on the ability and readiness of government sectors to provide electronic services and implement the projects of eGovernment. The category of ICT infrastructure is one of the major categories that been created at the axial coding phase during the analysis as shown in Figure 1.

1) Provision of ICT infrastructure.

Having high standards ICT equipment helps any government organization to successfully offer e-services with less or even no problems. According to one of the IT experts at Al-Elm Company said that '*There is a problem within providing electronic Services when the system is down you can doing nothing ... and this makes it essential to supply the appropriate equipment such as servers and others equipment in order to offer electronic Services with less or even no*

problems. The role of providing the infrastructure is mainly the responsibility of government sectors however; Yesser is the one responsible to provide the shared infrastructure that can be used to link government sectors with each other such as GSB (Government Service Bus). An IT expert at Yesser Consulting Group mentioned that '*Yesser has a key role in the provision of a shared infrastructure, but the responsibility remains on the government sectors to develop their infrastructure at their agencies*'.

2) The weakness in the infrastructure.

The lack in the infrastructure was indicated by some participants. An IT manager at King Saud University mentioned the lack in the infrastructure for some government sectors by saying that '*Yesser is facing the problem of lacking in the infrastructure for many government sectors which impede it to link these sectors with each other as I know this from colleagues working in Yesser*'. An IT expert at Yesser Consulting Group stressed on the same problem by saying that '*There are problems in the infrastructure and they are deep, but these things are much easier than things that required the human side and change management comes under this*'. Moreover, some participants indicated the weakness of infrastructure at their organisations or at other sectors they deal with. One of the IT managers in the electronic unit at General Directorate of Education in Riyadh at the ministry of education stated that '*the current infrastructure is not ready yet and it needs for more development*'. Such delay in the development of the infrastructure has an influence the implementation of eGovernment projects on the same ministry and sharing data with other government sectors.

L. Motivators

The category of motivators refers to the all issues that been found in the data to have a positive influence on the implementation of eGovernment projects at government sectors. This category is one of the major categories that been created at the axial coding phase and developed in selective coding during the analysis as presented in Figure 1.

1) Having the intension to work towards eGovernment.

Having intention to shift to eGovernment by government sectors is essential in order to effectively and continuously cooperate with Yesser and other related sectors to implement the projects of eGovernment. An IT manager at King Saudi University mentioned the importance of having intention to work forward to implementing eGovernment implementation as to do more than what is in the plans. He explained that '*The University has taken strong steps, but we are still not satisfied because if you reach satisfaction then you are not working for development. We believe that we can do more ... we can do more. Actually, we are not looking for reputation in marketing and ranking however, we have a roadmap of initiatives that we are planning to achieve*'. Having the intention and desire to

implement of eGovernment projects by government sectors leads to efficient cooperation of that sector with Yesser program and other government sectors involved in the same regard.

2) Engaging beneficiaries within decisions-making.

Engagement of beneficiaries within decisions-making in relation to the implementation of electronic services as well as the offered electronic services is important in order to meet the needs of targeted users from such services. Some participants indicated the efforts made at their organisations to obtain the feedback from the users regarding the offered electronic services for the purpose of development. An IT manager at King Saud University mentioned that '*Regarding students, university has implemented a special system for students called 'eRegister' which enable students to access various interactive services via online. Also, we are really keen to get students opinions regarding the system through asking students to fill a survey*'. Another eServices project manager at Planning and Information Affairs division at the ministry of higher education mentioned their experience in getting the feedback from students regarding electronic services offered by the ministry of higher education by saying that '*I can not assume that all students and employees are happy with electronic services provided by higher education … so we have designed a survey and planned to send it to all students overseas in order to measure their satisfaction about electronic services provided over the 'student portal' and asking for suggestions*'.

3) The support of Yesser.

According to the results, it is noted that the support and effort that Yesser has made in relation to the implementation of Government is in the right direction however, it lacks for the cooperation of government sectors as discussed in section (V.A). One of the IT managers at the ministry of defense mentioned the effective support of Yesser during the implementation of the eGovernment projects at the ministry. He stated that '*We contacted Yesser to ask for consultation and support in building a website and designing some electronic services, indeed Yesser's representatives came and helped us. I am trying to say that Yesser has an obvious efforts and good contribution in applying the eGovernment*'. He continued saying that '*Actually, Yesser and its team are really supportive and work well towards applying the eGovernment across government agencies and it has a big role in this regard*'.

4) Utilizing the experiences of eGovernment.

One of the good practices during and before the implementation of eGovernment projects is to benefit from the advanced experiences of others in eGovernment whether internal or external experiences. Internal experiences are from inside the country and external is the ones borrowed from the international experience under the condition of taking what only is suit the implementation environment. One of the IT

managers at the ministry of higher education stressed on getting the benefit from the local experience in eGovernment implementation and activate it in other sectors where needed to. He stated that '*Benefit from the experiences of the advanced sectors in the field of electronic government in the country and activate it into other sectors*'. He continued saying that '*I think that benefit from the expertise and international experiences in the field of e-government is something crucial and needs to be done*'. The results also show one of the successful local experiences in eGovernment which is the experience of higher education ministry. Such experience can be taken as a good example to be followed by other government sectors and Yesser has to play active role in this. An IT manager at the ministry of higher education stated that '*One of the good examples for eGovernment application is the ministry of higher education through its electronic portal designed for its students who studying overseas*'.

Conclusion

This study explored the factors that been found in the empirical data to have an influence on the implementation of eGovernment and contributing to cause the delay of its initiatives at government organisations in Saudi Arabia.

The results indicate that cooperation and collaboration factors are the main and important factors that currently influencing the implementation of eGovernment as well as contributing to cause the delay of its initiatives at government organisations in Saudi Arabia. The factors of cooperation are the main influencing factors that affecting the implementation of eGovernment projects at government sectors beside other identified factors such as lack of e-readiness at government sectors, lack of IT staff at government sectors, lack of financial allocations and incentives specified to IT staff, lack of strategic plans, lack of awareness and education about electronic services and the real benefits, lack of understanding the concept of eGovernment, and others more.

Most of the identified factors to have an influence on the implementation of eGovernment projects at government sectors can be overcome and solved through the effective cooperation between all government sectors involved in the implementation of eGovernment projects such as government sectors, Yesser program, and Al-Elm Company.

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