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CURRENT STATE OF E-SERVICES IN SAUDI ARABIA: THE CASE OF INTERMEDIARIES IN FACILITATING GOVERNMENT SERVICES IN MADINAH CITY

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Abstract

The government of Madinah has launched 'Khdamatec' electronic Offices (e-Offices) concept under their national electronic Government (e-Government) modernisation agenda to facilitate service delivery to citizens and seamless interaction to communicate their needs. By offering e-Offices around the government departments, Madinah government hopes to increase accessibility of e-Government services and make steps forward to electronic age, encourage Medina' citizens to participate and use e-Services and bridging digital divide. However, the empirical findings illustrate that the adoption and diffusion of the e-Office concept and e-Government in the wider context at a lethargic pace. This paper highlights some of the challenges faced by the Madinah city in implementing the e-Office concept and e-Government.

Keywords: E-government, Madinah City, Challenges, Intermediaries.

1. INTRODUCTION

Over the years, Information Communication Technology (ICT) has been considered to be significant in modernising and transforming most organisational functions and operational practices (Beynon-Davies, 2005). Literature indicates that ICT has acted as an intermediary in facilitating effective interaction between a wide range of stakeholders (Grimsley *et al.*, 2007; Zhang *et al.*, 2005). In terms of providing electronic service delivery, ICT has played a significant role in the private and public sector (Beynon-Davies and Williams, 2003). However, much of the research that has been published pays close attention only to issues of functionality (Millard, 2007; Layne and Lee, 2001) and the technical aspects (Chen, 2002; Safai-Amin, 2000) of ICT in an electronic service delivery context. Comparatively little attention has been paid to issues pertaining to usability, accessibility and the availability of public electronic services from a citizen's perspective (Carter and Belanger, 2005; Becker and Nowak, 2003). Emergence of the need for electronic service delivery in the public sector has been influenced by the need to serve citizens using better, more efficient and transparent

means of interacting with government using web-based systems (Fang, 2002; Brannen, 2001). When the Internet emerged in the mid 1990s (Lee *et al.*, 2005), it was merely utilised for information provision, sharing and educational purposes; nevertheless, today it has become part of day-to-day and operational activities for many people (Lofstedt, 2005; Villaplana, 2003). From a commercial perspective, the Internet has become an important business medium for organisations attempting to expand their market portfolio through web presence (Richards and Jones, 2006). On the other hand, Pan *et al.*, (2006) asserts that non-profit organisations such as governments can increase the availability of their information, and improve their security, services and local citizens' satisfaction of their services through Internet.

Most governments in developed and developing countries have established web portals to offer electronic service delivery to their citizens (Chen *et al.*, 2006; Lee *et al.*, 2005). Among others, Saudi Arabia is one such developing country that has cultivated its web presence since the late 1990s (Kostopoulos, 2003; Al-Tawil, 2001). Literature indicates that with the help of these web portals, government organisations increase their productivity (Norris and Moon, 2005), gain a competitive advantage (Deakins and Dillon, 2002; Whitson and Davis, 2001) and reduce the gap between the different government agencies and local authorities (Eyob, 2004; Silcock, 2001). However, there are differences in the adoption and implementation of e-Government within several government organisations at a national and international level (Heeks, 2002; Moon, 2002). These differences can be attributed to the individual organisational requirements, circumstances, readiness (Lam, 2005), and structure, size and cultures (Kamal *et al.*, 2008; van Dam *et al.*, 2005). Although developing countries in the Gulf Cooperation Council (GCC) region have invested heavily in e-Government implementation(Al-Shafi and Weerakkody, 2008; Al-Shafi, 2007), several researchers argue that these implementations have resulted in varying results and delayed outcomes (Al-Shafi and Weerakkody, 2007; Kurunananda and Weerakkody, 2006).

Saudi Arabia is a rich developing country in the Middle Eastern region that has started implementing national e-Government projects since 1998(Sahraoui *et al.*, 2006; Abanumy *et al.*, 2005). According to the UN report, in the context of e-Government readiness, Saudi Arabia has significantly transformed its electronic service delivery from 2005 to 2008(UN, 2008). The Saudi Arabian e-Government efforts are largely focused on big cities like Riyadh, Mecca and Madinah. However, an in-depth analysis of these cities illustrate that they have merely managed to implement basic e-Government services, with emerging research studies accentuating various barriers to successful implementation and progress which are linked to the government (or service providers) and the citizen (user aspects) (Al-Fakhri *et al.*, 2008; Al-Shehry *et al.*, 2006; Abanumy *et al.*, 2005). According to a recent report by Internet World usage and population statistics (IWS, 2008) the total population in Saudi Arabia is around 28,146,657 and about 6,380,000 Saudi citizens have Internet access. Despite a dramatic increase in the number of Internet users from around 200,000 in 2000 up to 6,380,000, a growth of about 3,090.0 %,(ibid), there are still delays in utilizing and adopting e-government services. The rationale for undertaking this study is to further explore the reasons for this slow progress and its related challenges, as they influence successful e-Government implementation in Saudi Arabia from a government perspective.

In order to undertake an exploratory study, this research focuses on Madinah, a city in Saudi Arabia. Madinah launched e-Government services in 2003, and at present is considered to be the second important city in Saudi Arabia. The rationale for selecting Madinah for this research is influenced by the fact that in terms of national progress, Madinah is the only city that has implemented the e-Office concept under their local e-government initiatives. The e-Government implementation efforts in Madinah are divided into five different stages (as outlined by the United Nations) that revolve around offering basic information to more complex transaction level services (UN, 2005). These stages are as follows:

- *Stage I* – comprises of basic government services that are available online; static government information is offered to citizens through an official website,
- *Stage II* – government websites provide public policies and government information,
- *Stage III* – offers an interactive presence with online services that support consumer needs such as interacting using the telephone, email and fax,
- *Stage IV* – is about two way interactions between the government and their citizens, and
- *Stage V* – integrates all the levels of Government-to-Government (G2G), Government-to Citizen (G2C), Government-to-Employee (G2E) and Citizen-to-Business (C2B) services.

Having studied the aforesaid stages of e-Government, e-Government in Madinah currently "is mostly under development and presently providing stage II and III e-Government services, although this project promises a gateway with both transactional and networked presence (stages IV and V)" (Sahraoui, 2006, p. 17). The national e-Government program in Saudi Arabia aims to facilitate access to government services for different stakeholders and raise the quality of the interaction of citizens, residents and businesses by using new ICTs to improve the flow and exchange of information (Al-Shehry *et al.*, 2006; Sahraoui, 2006). In order to explore the e-Government efforts in Madinah City, the authors use a qualitative case study research approach, involving two sets of in-depth interviews with two board directors of a large government department and a senior member from the Board of Directors of the Steering Committee of the e-Government in Madinah City. The interviews were complemented with observations in a large e-Office, which is a physical premise that acts as an intermediary for citizens who require access to e-Government services. The physical premise (referred to as the e-Office) consists of interactive terminals and administrators (officers) to assist citizens with their online services with different government agencies. The focus of this research is to investigate the role of e-Offices (or intermediaries) in facilitating e-Government services in Madinah City. This approach allowed the authors to get a good understanding of e-Government service delivery practices in a real-life context and offered a perspective on the challenges facing the e-Government progress in Madinah City and Saudi Arabia at large.

In order to realise the aim of this study, this paper is structured as follows: Section 2 illustrates the literature perspective on e-Government. Thereafter, in Section 3, the authors present the research methodology adopted to conduct empirical research investigating the e-Government practices in Madinah City. In Section 4, the authors present the case study conducted, with the empirical findings of the interviews carried out in Madinah City and, highlighting the key issues influencing e-Government, as seen by a specialist in e-Government implementation and adoption. Finally, the paper summarises the conclusions and presents some recommendations for further research in Section 5.

2. E-GOVERNMENT: CONCEPTUAL PERSPECTIVES

Several researchers have offered different definitions of the e-Government phenomena. However, these definitions differ depending on e-Government interests and perspectives, as well as on the community's goals and values (Lowery, 2003). Literature indicates that the main focus has been given to relational perspectives, such as G2G, G2B, G2E and G2C related to e-Government service delivery. While these relational perspectives illustrate a number of definitions, there is no universal definition for e-Government (Criado and Ramilo, 2003). For the purpose of this research, the definition adapted is offered by Carter and Belanger (2005). They propose that *"e-Government is the use of information technology to enable and improve the efficiency with which government services are provided to citizens, employees, businesses and agencies"*(Carter and Belanger, 2005, p. 5). Based on this definition, the paper concentrates on the services provided to citizens using a qualitative study in an intermediary (e-Office) that facilitates citizens' access to e-Government services.

As the focus of this research is to comprehend citizens' interaction with government services, therefore, the authors focus on a G2C perspective. This conception of delivering e-Government services to citizens provides opportunities for citizens to access the services from home, rather than travelling long distances for face-to-face interaction at government agencies (Carter and Belanger, 2005). In addition, it provides various other services, such as information provision, community services, tax payment, license applications, education, health care, libraries, and hospital information (Jaeger, 2003; Warkentin *et al.*, 2002). The literature shows that such activities with the citizens make up the primary goal of e-Government (Al-Khouri and Bal, 2007; Jaeger, 2003). Typically there is a relationship between government bodies or agencies and their citizens to provide services, such as sharing polls and voting online (Huang and Bwoma, 2003).

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2.1 Benefits

Like several other phenomena such as e-Business, e-Commerce, and e-Learning that provide multiple benefits, e-Government also delivers a number of services to its stakeholders. Improvements in the IT infrastructure will positively effect the government organisations in terms of technologies and business processes (UN, 2008; Al-Khouri and Bal, 2007; Signore *et al.*, 2005). Moreover, the basic value of e-Government is to enable different stakeholders to access government services around the clock (Albusaidy and Weerakkody, 2008; Bwoma and Huang, 2003; Reffat, 2003). According to many researchers, there are several benefits derived by e-Government. For example, e-Government implementation reduces government expenditures through direct channel communication between the public sector, private sector and other government organisations, by integrating various government agencies' systems with a single web portal (Al-Khouri and Bal, 2007; Aydinil *et al.*, 2007; Signore *et al.*, 2005). Furthermore, e-Government increases public expectations and improves the services, to offer more transparent and accessible services to users (Al-Khouri and Bal, 2007) and create public-private sector collaboration. As a result, the majority of governments around the world are challenged to build their organisations and services to benefit from e-Government by establishing one stop access points, which facilitate the retrieval of information independent of the departments offering these services (Huang and Bwoma, 2003).

The benefits of e-Government to developing countries such as Saudi Arabia are immense, particularly given the size and extent of the population. Saudi Arabia occupies an area of 2,240,000 square kilometres (about 865,000 square miles) in the Southern-Eastern region of Asian (MEP, 2008). Thus, distance often hinders citizens from travelling to government departments to access required services; travelling to a capital city to access the services offered by a central government department from a another region is time consuming and costly (Al-shafi and Weerakkody, 2007; Huang and Bwoma, 2003). Conversely, e-Government facilitates the reduction in the physical contact between citizens and government employees demanded by traditional services. Finally, the use of the Internet will reduce the costs incurred by the traditional government in providing services (Huang and Bwoma, 2003; Reffat, 2003).

2.2 Challenges

Where e-Government presents several benefits to the private and public organisations, it also results in a number of challenges to the different stakeholders internal and external of the organisations. For example, privacy and security issues have been highlighted by many researchers as a significant factor impacting e-Government implementation (Jaeger and Thompson, 2003; Fountain, 2003; Lam, 2005; Chen, 2003; Aldrich *et al.*, 2002; Evangelidis *et al.*, 2002). Likewise, establishing an integrated e-Government infrastructure is a major challenge faced by many government organisations around the world (Wang *et al.*, 2004, Medjahed *et al.*, 2003). This opens new channels to sharing information through the Internet

and is a relatively difficult challenge especially in developing countries (Nations and Administration, 2001). Further, research has also identified many barriers to adopting e-Government services, such as trust (Carter and Belanger, 2005; Ebrahim and Irani, 2005; Ndou, 2004; Dawes *et al.*, 2004), computer literacy (Pilling and Boeltzig, 2007; Pan *et al*., 2006), authentication (Akman *et al.*, 2005), risks (Phippen, 2007; Ebrahim and Irani, 2005), usability (Criado and Rami, 2005; Chouderie *et al.*, 2004), accessibility and availability (Jaeger and Thompson, 2003). Of the aforementioned challenges and barriers, computer literacy and accessibility are largely caused as a result of digital divide; this often represents the gap between the economically well-to-do and less well-to-do in a country as well as developed and developing nations (Lam and Lee, 2005). The digital divide means the gap that appears between citizens that use technology, have access to Internet, and have literacy skills, and those citizens who do not have access to the technology(B langer and Carter, 2006;Fountain, 2003). According to B langer and Carter (2006), the digital divide is classified into the ability to access the Internet and citizens' skill needed to use technologies. Further, barriers to accessing the Internet were classified as age, level of education, income. The skill needed by citizens was classified into two types: skills needed by citizens in order to obtain e-Government services and information literacy (Belanger and Carter, 2006; Jaeger, 2003). Although an increasing number of citizens are utilizing e-government services, the digital divide can be considered as one significant barrier that impedes many citizens from adopting e-government services (Belanger and Carter, 2006).

These barriers are attributed to the absence of basic ICT infrastructure. Capturing the benefits of e-Government initiatives is considered one of the major challenges in developing countries. For example, offering multiple methods to access government services for different stakeholders, such as: computers, Internet, wireless devices, TV network and mobile service centres, etc, is seen as good practice in e-Government service delivery (Sarikas and Weerakkody, 2007). According to Al-Shehry *et al.*, (2006), Saudi Arabia is facing a significant risk of digital divide, not only among citizens in general but even among employees in the government realm. Similarly, the study conducted by Abanumy and Mayhew (2007) illustrates the lack of web-based information availability in Saudi Ministries. However, the same study finds that there are substantial improvements in the online presence in Saudi Arabia; for example, in 2003 up to 13 ministries had websites and 18 ministries in 2005, compared with 20 ministries in 2007. However, the study also explores the issue that the information provided by the different ministries in Saudi Arabia does not meet citizens' expectations due the lack of information availability (ibid). The diffusion of e-Government services has been given much attention by a number of researchers (Eyob, 2004). For example, Heeks (2005) suggests that the rate of adoption and diffusion of e-Government and the factors influencing adoption and diffusion varies between countries. Heeks (2005) also explains how e-Government initiatives differ from developed counties like European nations, to middle-income countries like Latin America and East Asia, to those developing countries that make no progress or limited usage of ICT in an e-Government context.

2.3 The Role of Intermediaries in Delivering Public Services

The concept of using a third party or intermediary to facilitate access to a product or service can offer several benefits to the recipients (Bailey and Bakos, 1997). When taken in the context of government or public services, intermediaries help to increase the points of availability of services for citizens and help increase the adoption of public service delivery from the government's perspective (Griffin and Halpin, 2004). Secondly, using an intermediary supports the training and education needs of citizens by facilitating the assisted use of technology; this enables the gradual transition of citizens to 'self-using' new technology (Griffin and Halpin, 2004). Moreover, this business model can be technology-driven and is scalable, as per public adoption rates from the citizens' perspective. Therefore there is an increased convenience for both citizens and businesses in using the intermediaries as a multi-service vending facility (Bailey and Bakos, 1997). In some developing countries,

the global vision for public service delivery is to transform the services of government agencies and to offer them through different channels such as intermediary offices. In fact, the concept of intermediaries is not a new idea in real life activities. For example, a post office can be considered as an intermediary point in helping citizens and businesses to indirectly access public services from anywhere in a country. In the United kingdom and United States, the post office is considered as an independent agency that is responsible for mail delivery and communication gateway between business and individuals.

3. RESEARCH METHODOLOGY

To empirically explore and validate the arguments set out above in deep and meaningful manner, a qualitative case study approach was considered to be suitable (Walsham, 1993). A case study examines a phenomenon in its natural setting, employing multiple methods of data collection to gather information from one or a few entities, e.g. people, groups, or organisations (Yin, 1994). Cavaye (1996) also argues that case studies enable the researchers to investigate a phenomenon in depth, getting close to the phenomenon, providing rich primary data and revealing its deep structure within the organisational context. In the context of this paper, data was collected via documentation provided, interviews, and observation. Data collection via documentation consisted of official information reports published by the Iimaratalmadinah organisation within the Saudi Arabia government realm. These publications do not provide an overall illustration of the current state of affairs; on the contrary, to a certain extent they highlight the major benefits and current challenges facing e-Government implementation in Madinah City. As the purpose of this research is to investigate the current state of the Madinah City e-Government initiative and to examine the role of intermediaries in an e-Government context, the authors adopted an in-depth interview strategy. Interviews are regarded as the main tool of qualitative research for data collection process (Denzin and Lincoln, 1998). In this research, interviews constituted the main data source in the case study. The interviews were conducted between August and November 2008, by visiting the interviewees in a large government department at Madinah City.

Two board directors of a large government department of Madinah City were interviewed using semi-structured interviews (Bryman and Bell, 2003), which lasted around an hour and half and offered the opportunity to obtain an overview of the e-Government implementation in Madinah City, as well as of the specific challenges facing the government. The interview also focused on exploring the benefits and challenges facing the e-Offices, the primary channel for e-Government diffusion in Madinah. Another semi-structured interview was conducted with one of the Board Directors (BD) of the Steering Committee of the e-Government project in Madinah City. The main advantage of semi-structured interviews is the flexibility they offer in understanding events by getting more detailed information (Yin, 2003). The interviews were complemented and supported with observation, by visiting three e-Offices in Madinah City in different areas. Since the only sources of published information on e-Government in Madinah are official government reports and publications, the use of multiple methods or triangulation was useful for gathering more details about e-Government diffusion and related challenges in Madinah City, and to get an in-depth perspective of the wider aspects of the research context (Denzin, 1989). Moreover, the triangulation approach helps the authors to compare the written and spoken version, and increased the reliability of findings by confirming evidence from multiple sources.

4. Case Study – Madinah City E-Government Initiative and the Role of Intermediaries in Delivering Public Services

The e-Government program in Madinah is a partnership between the government and private sector. Based on this partnership, electronic services are developed, managed and expanded

on an incremental basis in Madinah city. According to the BD, the e-Government program in Madinah City is a set of different projects operating in the Madinah region in order to develop a comprehensive e-Government system. Those projects are: government procurement, training, design, e-learning, e- commerce, digital economy and Khdamatec. However, all of these projects are still under study only the Khdamatec (e-Office) project has been established (ibid). The concept of e-Government in Madinah is designed to cover 60 government bodies working in the region. This program includes three phases:

- *First I* – is about strategic studies to determine the readiness of all government agencies operating in the region,
- *Second II* – shows solutions and programs that will bridge the technical and human gaps and,
- *Third III* – illustrates the figure of economic and social development in order to support the program in continuing investigating feasibility and stability for the long term. This phase includes the development of civil investment companies that support the work environment and non-government organisations in the area of knowledge. The overall e-Government program is facilitated by a number of electronic offices (e-Offices) called 'Khdamatec' (Imaratalmadinah, 2008).

The overall vision of Khdamatec (or Madinah e-Offices) involves the management and operations of electronic service delivery and related systems, and training of management staff in different government agencies in the use and delivery of e-Services. Khdamatec agencies are seen as an initial model of one of many multi-channel strategies that are identified in Madinah City for e-Government service delivery. The main reason for developing this method is to establish a new and convenient way to deliver services to citizens and to assist those citizens who are less computer-savvy to adopt e-Government systems. The motivation for establishing the e-Offices was mainly influenced by the following:

- The difficulty of verifying the identity of stakeholders (e-Identification),
- The challenges that Madinah citizens faced using technology and accessing Internet (digital divide) and,
- The difficulty of finding reliable methods that citizens can follow in order to pay services that request a payment (e-Payment).

As aforementioned, Madinah has adopted a multi-channel system for citizens to interact with the government services using different methods. In this context, Madinah's strategy for developing e-Government revolves around the use of multi-channel systems particularly to reduce any digital divide that single channel (online-only) e-Government may cause. Based on previous empirical findings by Sahraoui of (2006) in Saudi Arabia, the gap of the digital divide is very high; the rate of internet usage by citizens is 14.87,% with illiteracy rate at an alarmingly high 30%. However, the interviewees in this case study argued that a high level of usage of Internet and electronic services has appeared within the last three years. Nevertheless, the Communication and Information Technology Commission (2008) reported that 51% of the total population (average age between 15-60 years) use the Internet and electronic services in Saudi Arabia. According to the statistics report by Ministry of Interior (2008), in cities more than 80% of citizens use Internet, as compared with less than 20% in the villages. This is regarded as a barrier related to the digital divide; to resolve this, a solution has been proposed involving private investors who would establish service centres (e-Offices) in Madinah in order to assist citizens with electronic transactions. These e-Offices follow government legislation and technical requirements in terms of security, data protection and electronic transactions.

4.1 E-Offices Facilitating E-Government Services in Madinah City

The aim of using e-Offices in Madinah's e-Government strategy is to help citizens adopt e-Services using a third part intermediary channel where citizens can enroll with the e-Offices and use e-Government services with the assistance of an administrator, i.e. Khdamatec workers. These workers access the central e-Government portal and complete the online transactions (i.e. print required information from relevant government agencies or make payments to a government department) on behalf of citizens. The identification of citizens in e-Offices is controlled by password and national identification number and the e-Officers are able to track citizens' transactions, applications for a service and/or request by using these details anytime i.e. 24/7. The e-Offices are the initial gateway for citizens to access different government services; this is done using a unique and secure gateway code that is offered to the citizen by the e-Office. According to the interviewees, to connect to e-government systems, citizens are required to have a code (user name and password), which is given after they register with the e-Office. These codes can be only given if the citizen presents themselves physically at the e-Office and present their national ID. Citizens' authentication is one of the main reasons behind the e-Office concept. In addition, government departments use mobile text messaging to confirm to the citizen that they have received the citizen's request from their e-Office or from the citizens, and use the same method to inform them when the service/transaction request is complete. Figure 1 summarises the way e-Offices function in parallel to the other multi-methods that are offered for accessing public services in Madinah City.

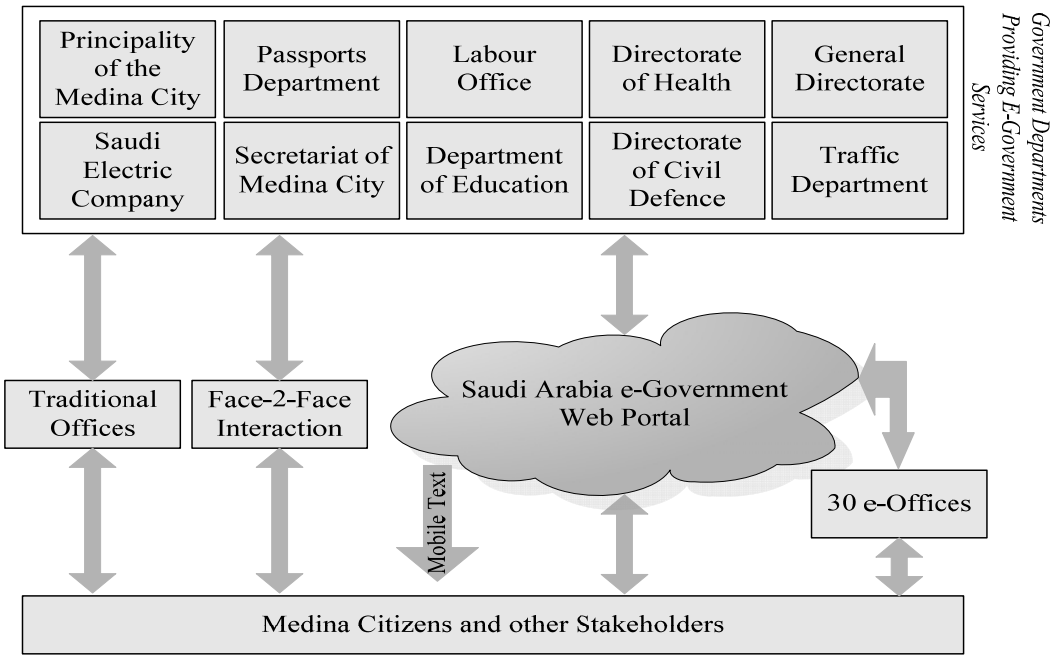

Figure 1: E-Government Concept in Madinah City

The traditional offices, as illustrated in Figure 1, work as intermediaries to deliver public services, but use manual methods. In addition, these traditional offices work on behalf of citizens as a front-end of government agencies. Madinah's e-Government strategy evolved through many objectives. One of the main goals is to deliver e-services to citizens. To achieve this, it was crucial to involve the traditional offices, which have been operating in the region for a long time as intermediaries between government and their citizens have enjoyed the trust of citizens and provided frequent face-to-face contact with them. In fact, the e-Offices that provide government services electronically were originally traditional offices; in order to convert them to e-Offices there are some standard requirements to be reached. For example: staff's qualifications, commitment in formal attendance and some technical requirements for data security. In Madinah City, 30 e-Offices are built around offering services from different

government departments. They stand as intermediaries in order to facilitate communication between citizens and these government organisations. Ten government departments have participated thus far from a total of 60 in the region (Table 2). However, not all departments in the region have participated in the e-government projects, the participating departments were selected in accordance with the services that concerns citizens' daily life and level of the departments' readiness in providing e-government services.

The infrastructure plans for the e-government projects in Madinah city include: PCs and software, networks, databases, emails, mobile computing and Websites. These equipments and applications are provided by Madinah government for each department and employees in each department are trained to use new systems. According to the interviewee," *we trained two employees in each government department and provide them high speed internet connections"*. Relatively, the interviewees explained that they strived to keep the e-services simple to understand and use by citizens in order to create a higher level of citizen satisfaction; the underlying principle was that the governments' website should be designed in a way that would be easy even for the elderly and non-qualified citizens to understand and use. The objective is to increase the level of e-literacy among citizens. This program will provide a basic password and username to the e-government portal; this will lead to increase the level of awareness and increase the usage of online government services.

In January 2008, Imaratalmadinah (2008) reported that the number of beneficiaries of e-Government services in Madinah City was more than 50,000 citizens. The services that have been launched to date amount to 396, whereas, the services that are remaining and planned to be released are around 76. Table 1 explores the various uses of electronic services in Madinah city.

Services	Request new services	Procedures	Information	Tracing Request	Request new services	Total
Launched	91	91	87	88	39	396
Planned for Launch	22	17	18	19	0	67

Table 1: Services in Madinah City

Whereas, Table 2 illustrates the types of e-Government services that already exist in Madinah City.

Sequence	Government Departments	Service Type	
		Queries	Tracking
1	Principality of the Madinah	19	44
2	Secretariat of Madinah	2	9
3	General Directorate of Water in Madinah	5	10
4	Department of Education	6	8
5	The traffic department Madinah Region	44	88
6	Madinah Passports Department Madinah area	5	10
7	Directorate of Civil Defence Madinah Region	2	4
8	Saudi Electricity Company	6	2
9	Madinah district police	12	24

Table 2: Enabled Services Currently Available at the Khdamatecs' Website

Interviewees also suggested that the e-Offices concept has reduced the waiting time for citizens' services and/or applications to be processed. While the traditional modes of government services and processing of various applications took anytime between 24 to 48

hours, the new e-Offices concept takes between 5 to 20 minutes. This is dramatic improvement in efficiency of the service level.

4.2 Challenges Facing Diffusion of Services Using e-Offices

While the overall implementation progress of e-Government has been slow nationally, the introduction of e-Offices has not done much to convince citizens to use e-Government services in Madinah City. Interviewees responsible for overseeing e-Government implementation in Madinah City identified a number of challenges currently facing the e-Offices. For example, the main challenge facing the e-Offices relate to funding issues in relation to marketing the concept and spreading the awareness of e-Government among Madinah City citizens. The interviewee suggested that the income generated from the e-Offices is currently inadequate to support a media campaign (i.e. using TV, mobile text messaging, news paper, etc.) to promote awareness among citizens. Respectively, there are some departments that did not adopt e-Government idea in order to provide e-Services to their citizens as planned. However, in terms of promoting privacy among citizens to encourage them to use e-Services, Madinah City put a high fine for using the e-Government portal through e-Offices. These strict regulations aim to maintain the use of the e-Government portal, increase its credibility in front of citizens, and guarantee the information submitted for government's departments is correct. This has undoubtedly led to adoption and diffusion of the e-Office concept and e-Government in the wider context at a lethargic pace.

Moreover, according to the interviewees, there are still concerns about the security issues in implementing e-Government technologies; they stated that:

> "*… the e-Service concept did not succeed in GCC countries. The reasons behind this failure is that: (a) user confidence and information security is still very weak through the use of Internet and (b) resistance to change in government employees and requiring citizens to visit the government departments in order to get the services …*"

The interview and observation sessions revealed that the services provided through the e-Offices are not fully implemented yet. It was obvious that this was also having a negative influence on the adoption and diffusion of various e-Services. One of the negative impacts added by BD was the integration of different government departments:

> *"…To ensure effectiveness of e-government services and increase the acceptance by the Madinah citizens, the Madinah City departments must move towards integration of various technologies across the government agencies. In the Madinah e-government context, one of the most important challenge concerns in the current e-government model is the integration between different government agencies..."*

Furthermore, as reported by the interviewees, ensuring that the services offered cater for the elderly citizens of Madinah City is another major challenge identified in the e-Offices. As explained by MOI (2008), technologies such as mobile phones, computers and Internet are mostly adopted by young citizens between 16-35 years. However, according to MEP (2003), although the population older than 15 years in Madinah City is reported to be around 750,737, only around 50,000 citizens are using e-Government services. This indicates that only around 6.7 percent of citizens participate in e-Services, either through e-Offices or the Madinah e-Government web portal. However, one of the positive aspects identified by the interviewees related to the attitudes and culture of the Madinah citizens was that:

> "*… culture may not affect the adoption of e-Government services in Madinah City i.e. when applying for the payment services for the first time in Madinah City, using the card, the process was considered as useful and successfully adopted by citizens …*"

The interview sessions highlighted another challenge, i.e. authentication – how to identify citizens using e-Government services. This challenge is due to a lack of trustworthy security systems, which is acting as a barrier and preventing the development of e-Government services.

5. DISCUSSIONS AND CONCLUSION

The literature has identified trust, privacy, security and computer literacy as issues influencing the implementation and diffusion of e-Government services. This study also identified financial, security and integration between different government departments as the most prominent issues impeding e-Government implementation and diffusion. Financial aspects were identified as having a negative impact on attracting citizens to take advantage of e-Government services in Madinah. Moreover, financial issues also had an impact in term of e-readiness in preparing the different government departments for e-Government. Madinah City is trying to cope with difficulties that may face e-government implementation caused by the digital divide (i.e. computer literacy and elderly citizens) through multiple initiatives; for example, adding the e-Offices concept under e-government strategies. This research found that a number of government departments in Madinah City have implemented e-Government services. However, it also found that Madinah e-Government implementation efforts faced a number of challenges. Those challenges are not only related to the government departments themselves (i.e. e-readiness), but also relate to citizens' using these e-Services.

The promise of e-Government is that governments will achieve numerous benefits**.** Several researchers assert that the theoretical needs in implementing e-Government services come from the need to focus on the citizens' expectations and willingness to adopt e-Services. The interviews revealed that the adoption of e-Government services was positively influenced by the culture of the Madinah people. However, in contrast, culture has been identified as a major obstacle when implementing and diffusing e-Government services from a literature perspective. The development of the e-Government web portal in Saudi Arabia requires funding to develop or acquire new software and hardware, as well as human resources (Abanumy and Mayhew, 2005). The challenges faced by the Saudi government and the comparative disparity between the private and public sector are highlighted by Al-Shehry *et al.,* (2006). They suggest that "it is clear that Saudi organisations with financial support had made progress in terms of IT infrastructure and there are still significant differences between these organisations and their public sector counterparts in the use of technology"(Al-Shehry *et al.*, 2006, p. 15).

Given the overall empirical findings in this paper, it can be concluded that the Madinah City e-Government initiatives are in the initial stage and need to provide more services and bridge the digital divide. However, the young citizens are those who most use new technologies; the government should implement user-friendly applications that meet the citizens' expectations in the future (Kurunananda and Weerakkody, 2006) and provide young and elderly citizens with computer literacy education. Furthermore, to attract citizens to adopt e-Government services as well as to ensure successful implementation of e-Government, the Madinah City departments need to cooperate in order to allow two-way communication, between different government departments on one hand, and with public (citizens) on another, all through one portal. In the context of e-Government initiatives in Madinah City, researchers have described e-Government implementation and present only government documentations, observations and limited interviews. However, to increase the generalizability of empirical findings, the

authors of this paper have planned to pursue further research in fourth quarter of 2009 and establish other interviews with e-Government officials in Madinah City.

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