A Study of Exploring the Causes of Deviation and Improving the Delivery of IT Projects in The UAE Federal Government Sector

دراسة عن البحث في أسباب الانحراف وتحسين تطبيق مشاريع تكنولوجيا المعلومات للقطاع الحكومي في دولة الإمارات العربية المتحدة

BY

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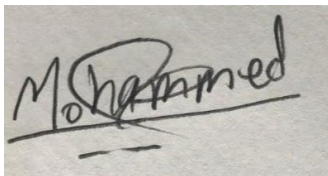**Prof. Halim Boussabaine**
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ABSTRACT

UAE is consider pioneer in adopting new e-services in the MENA region. This study was conducted to highlight the importance of e-Services for UAE residents and identifying the causes that may limit the user of e-Services. Data was collected and analyzed based on based on quantitative research approach and both factor analysis and regression analysis were implied on the collected data. Two hypothesis were tested in the following study. First hypothesis was related to identifying whether the delays in delivery of e-services negatively impacts the effectiveness of the e-services while the second hypothesis was to test whether shortage of funds, poor decision making abilities, ineffective communication skills and poor management structure are the primary causes of delays in delivery of IT services.

After applying the required analysis for the first hypothesis, the results are contrary to our hypothesis, which means that we have to reject our first hypothesis that delays in delivery of e-services negatively affect the effectiveness of e-services. The study also show that we have sufficient evidence that delays in delivery of IT projects are caused by ineffective communication skills, shortage of funds, poor management structure and poor decision making abilities. Therefore, we have to accept our second hypothesis.

The future studies should focus on predicting the main factors for delay in IT related projects along with comparing different software houses to compare the causes and predicting factors for the delay in IT related projects

نبذة مختصرة

تعتبر الإمارات العربية المتحدة رائدة في تبني خدمات إلكترونية جديدة في منطقة الشرق الأوسط وشمال أفريقيا. أجريت هذه الدراسة لتسليط الضوء على أهمية الخدمات الإلكترونية لسكان دولة الإمارات العربية المتحدة وتحديد الأسباب التي قد تحد من استخدام الخدمات الإلكترونية.

تم جمع البيانات وتحليلها استنادًا إلى منهج البحث الكمي وتم تضمين تحليل العوامل وتحليل الانحدار (Factor Analysis and Regression Analysis) على البيانات المجمعة.

تم اختبار فرضيتين في الدراسة التالية. كانت الفرضية الأولى متعلقة بتحديد ما إذا كان التأخير في تقديم الخدمات الإلكترونية يؤثر سلبًا على فعالية الخدمات الإلكترونية بينما كانت الفرضية الثانية هي اختبار ما إذا كان النقص في الأموال وضعف قدرات اتخاذ القرار ومهارات الاتصال غير الفعالة وهيكلة الإدارة الضعيفة الأسباب الرئيسية للتأخير في تقديم خدمات تكنولوجيا المعلومات.

بعد تطبيق التحليل المطلوب للفرضية الأولى، تتعارض النتائج مع فرضيتنا، مما يعني أنه يجب علينا رفض الفكرة بأن التأخير في تقديم الخدمات الإلكترونية يؤثر سلبًا على فعالية الخدمات الإلكترونية. كما أظهرت الدراسة أن لدينا أدلة كافية على أن التأخير في تسليم مشاريع تكنولوجيا المعلومات ناجم عن عدم كفاءة مهارات الاتصال ونقص الأموال وضعف هيكل الإدارة وضعف قدرات اتخاذ القرار. لذلك، علينا قبول فرضيتنا الثانية.

يجب أن تركز الدراسات المستقبلية على التنبؤ بالعوامل الرئيسية للتأخير في المشاريع المتعلقة بتكنولوجيا المعلومات، إلى جانب مقارنة دور البرمجيات المختلفة لمقارنة الأسباب والتنبؤ بعوامل التأخير في مشاريع تكنولوجيا المعلومات ذات الصلة.

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1. CHAPTER ONE: INTRODUCTION

1.1 STUDY BACKGROUND

The significant advancement in information and communication technologies has occurred on the basis of the emergence of the internet, web based technologies and international networked economies. In the presently rising competitive and globalized business environment, e-technologies play a crucial role in the day-to-day lives. The emergence of e-services has distorted the technical, economical, political as well as societal backgrounds (Chen & et al., 2006). An enormous revolution in the technological aspects all over the world is taking place and most nations adopt technological applications to offer services with the help of these technologies. E-government offers electronic structures and electronic services instead of conventional systems and services so that people can be served in better ways (Evans & Yen, 2005). There are many benefits of e-services and mobile services offered by the government so that wastage of time and efforts can be reduced. Additionally, in order to enhance the efficiency of the organizations and to facilitate the allocation of information between the government departments and other sectors, e-government offers incessant services for citizens (Carter & Belanger, 2004). Moreover, e-government services help in reduce bribery, ameliorate conviction, and improved safety in information system. Furthermore, better health and education services can be offered to citizens, especially those that have special needs (Parent et al., 2004). Collaboration and the supportive nature of people can be promoted in the organization with the help of e-government services (Hung et al., 2006). Therefore, it can be stated that a significant improvement is essential information technology in the government sector of every developing nations as it can offer amplified opportunities for effort and commercial purpose (Li, 2003). Electronic and mobile services offered by government departments can persuade citizens to partake in the work and decision making

process of the government that can facilitate the overall development of the nation. This is a better way for every government to interact directly with the citizens by abolishing the intervention of mediators in no time. Thus, it is critical to ensure that projects should not get delayed and this has enhanced the need for identifying the critical factors that are responsible for delay and improvement of information technology projects. In this context, the present paper intends to identify the different success and delaying factors that are responsible for the delivery of mobile services and e-services projects in the UAE Federal Government Sector.

1.2   STATEMENT OF THE PROBLEM

According to the report of Global Information Technology 2010-2011, United Arab Emirates leads the MENA region in adopting information technology (NEWCOMBE, 2014). E-government planning of the UAE government considered as critical step for achieving UAE Vision 2021 as a principle initiative of the 2012-13 UAE government strategy (Dutta & Mia, 2011). E-services and mobile services of the UAE government have evolved significantly since 2001. Some of the popular e-services launched by the government is e-Dirham, e-government program, e-government strategy, e-government implementation plan and e-government portal. In 2010, the government has adopted development of the Government Service Development Strategy, which become the third basic element of the strategy of e-government (Al-Khouri & Bal, 2007). A significant number of studies have been conducted for identifying the factors that create influence on the citizens' intention to adopt e-government services (Baker & Bellordre, 2004). Some of the important factors that play crucial roles for encouraging citizens for adopting E-government services are expediency, user-friendliness, trustworthiness, compatibility, external impact, internet safety and relative advantage (Nysveen et al., 2005). Some studies state that due to lack of awareness, gender differences, cultural divergences and lack of benefits given to the tax payers of

online services can hinder the growth process of e-services offered by the government (Parent et al., 2004). Till this day, a little study have been conducted for exploring the factors that affect the delay and improvement of the e-services and mobile services by the government in developing nations, specifically in the Arab world. In spite of the fact that the research studies have examined elements that identify the acceptance of e-government facilities by employing various models, namely, the Unified Theory of Acceptance and Use of Technology (UTAUT) model(AlAwadhi & Morris, 2008), few research has been conducted for identifying the factors which can create significant impact on the recognition of e-government services and mobile services in developing nations, such as United Arab Emirates(AlShihi, 2005). The present research study has been made to fill this gap in literature. The precise objective of the present research study is to achieve insight about the factors that affect the delay and improvement of e-government services and mobile services in the United Arab Emirates.

1.3   SIGNIFICANCE OF THE STUDY

With the rapid expansion in the information and technology initiatives, the United Arab Emirates is recognized as one of the most advanced nation that offer world class information technology and communication framework. The local initiatives corresponding to the e-government facilities by the UAE government were started in 2001. The evolution of e-services by the UAE government can be portrayed as follows in figure 1:
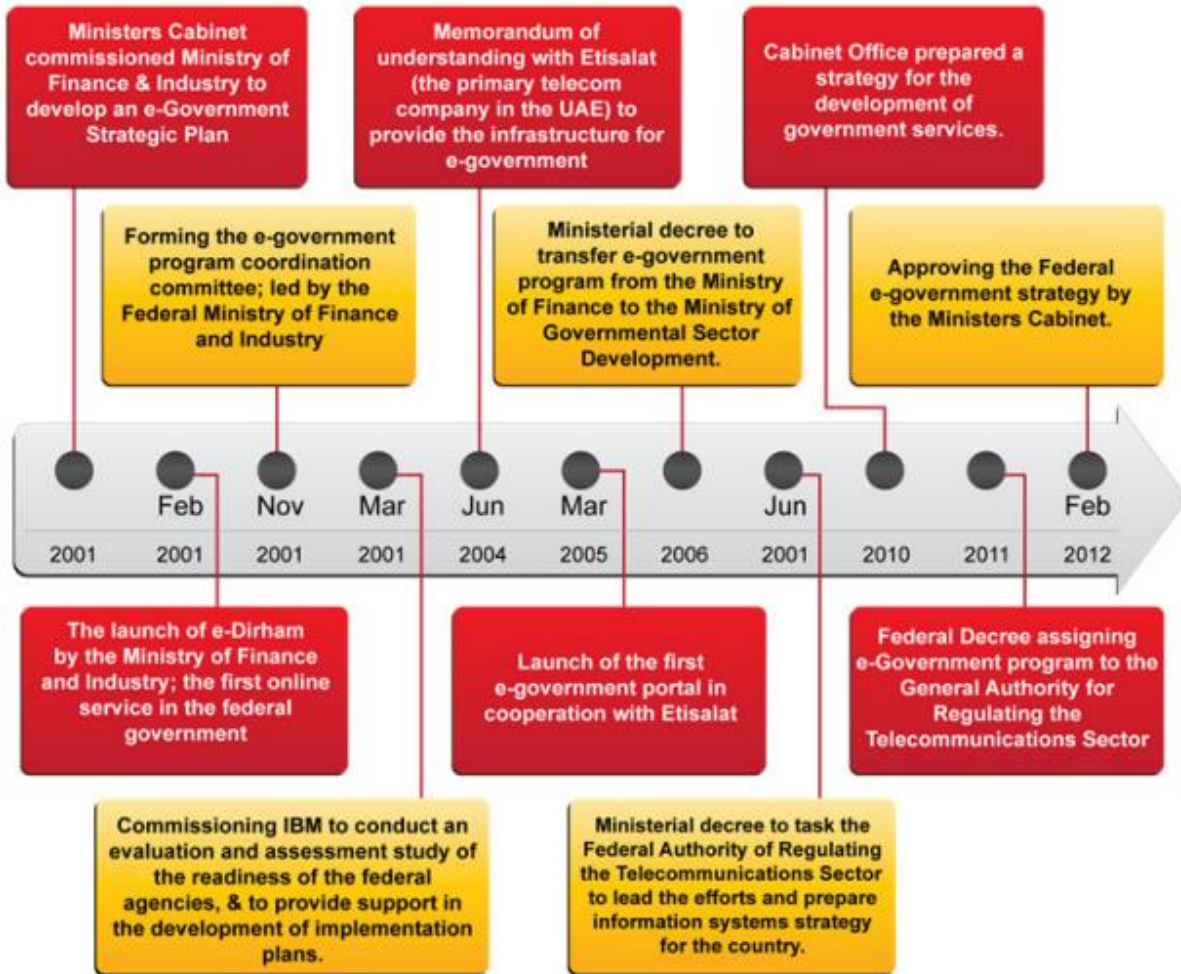
Figure 1: UAE Federal eGovernment Evolution, Adapted (Al-Khouri, 2012)

UAE has achieved a rank of 28 in the 2012 as per the survey against the rank of 49 in the 2010 survey in terms of achieving success in the e-government facilities and services (UNPACS, 2014). As per the report of the 2010 survey, UAE has acquired a rank of seven in terms of the online service index (UNPACS, 2014). Recently, the UAE government has proclaimed a revised e-Government Transformation Strategic Framework by incorporating various strategic proposals at a federal level so that all government services can be transformed and be made accessible through

different channels. These strategies have helped penetrate the highest percentage of internet users among all other Middle East regions. This fact is portrayed as follows in figure 2:
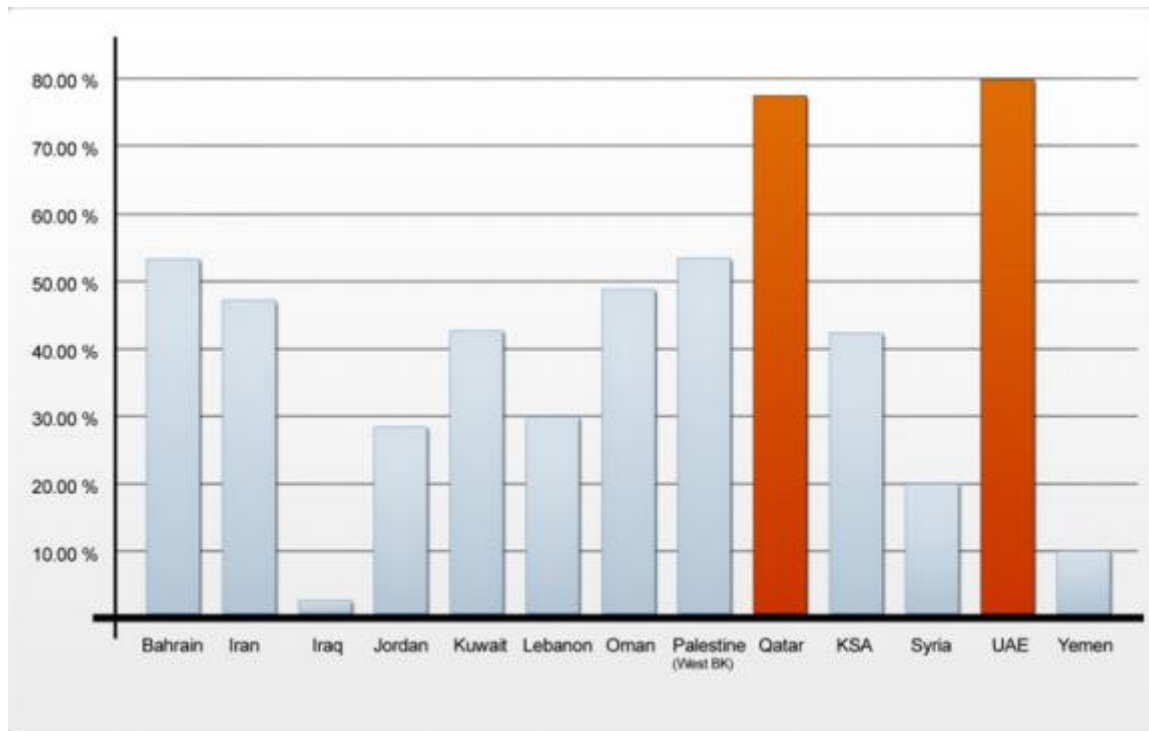
Figure 2: Percentage of internet populations at different Middle East (Internet World Stats, 2016)

The above figure portrays that the United Arab Emirates has the highest percentage of internet user populations with approximately 70 percent of the people followed by Qatar. The initiation of e-services in the public sector is the signal for transformation of economic activities from the conventional information monopolies and hierarchies. However, e-service remains a challenge for both the citizens and government for almost every developing nation (Nikkhahan et al., 2009). The government has to take necessary steps not only to maximize the benefits obtained from the online services but also to mitigate the risks incurred from economical, social and cultural aspects that are related to rapid technological change. Thus, it is primarily important to focus on identifying

the factors that can affect the delivery of e-services and mobile services instead of focusing on the achievements in the technological solutions. The present study is significant in the sense that the outcomes of the study can increase the speed of delivering for e-services offered by the UAE government departments. Moreover, it can also remove obstacles that increase the budget of the federal government. No significant literature studies have been conducted to identify the critical success factors that can influence the delivery of IT projects in the United Arab Emirates. Thus, it is expected that the findings and outcomes of the present paper can help policy makers and government departments to better understand the way to develop and improve the delivery and quality of e-services in the United Arab Emirates. The identification of the critical success factors can cover three major dimensions such as environment, readiness and service. It can add rich value to the recognition of gaps and opportunities in the e-government facilities offered by the UAE government.

1.4 STUDY AIMS AND OBJECTIVES

The present study principally aims to classify the factors that are responsible for increasing and deteriorating the delivery of e-services and mobile services by the government of the United Arab Emirates. To accomplish this aim, the research objectives of the present study are structured as follows:

- Explore the key causes of delay in delivering the electronic services and mobile services offered by the government of the United Arab Emirates.
- Assess the number of changes incurred during the implementation process of the electronic projects that affect the timeframe of the projects.

- Recommend the best practices for which the adoption of e-services and mobile services can be implemented effectively by the UAE government sector by reducing the overall timeframe.

1.5 STUDY DESIGN

The present research study is based on the quantitative research approach. This approach can help identify the factors responsible for altering the speed of delivering information technology projects implemented by the UAE government. Quantitative research study is primarily based on the extensive review of literatures. Secondary information about the electronic services have been collected from books, peer reviewed journals and research reports including various international media.

1.6 STUDY STRUCTURE

The entire study is divided into five major chapters: Introduction, Literature review, Methodology, Data analysis & Findings, and Conclusion and Recommendation.

In the introduction chapter, a brief overview of the study topic has been presented. At first, the current position and rank of United Arab Emirates has been evaluated in terms of offering e-services and mobile services to the citizens. In the next stage, the significance of identifying the factors responsible for delivery of the e-services of the UAE government has been discussed.

In the Literature Review chapter, an extensive review of different literatures has been conducted through which a deeper insight can be generated on e-services offered by the government. The critical evaluation of the findings obtained from different literatures can help understand the role of the planning process, budgetary framework and scope on the timeline of the IT project.

The Methodology chapter discusses different research approaches that have been adopted to accomplish the research objectives to identify the factors that can enhance the efficiency of e-services and mobile services offered by the UAE government.

The data and information collected from various sources have been analyzed in Analysis chapter. The last chapter Conclusion, presents a summary of the findings obtained from the entire study. On the basis of the findings, some recommendations have also been made for which the efficiency and delivery speed of e-services and mobile services can be improved in the UAE Federal government sector.

2. CHAPTER TWO: LITERATURE REVIEW

2.1 INTRODUCTION

The E-government initiative can be referred to as the method of using all available information and communication technologies in order to assist regular administration service of the government. The administrative service offered by the government through internet helps improve citizen's access to the government information activities (Chen & et al., 2006). Moreover, it also helps to ensure the participation of citizens in the government activities and satisfy the customers with the services. In a developing nation like the UAE, the e-government service can put up specific situations, conditions, requirements and hindrances (Dutta & Mia, 2011). The major problem with the e-government service occurs on account of poor infrastructural facilities and provisions, corruption, feeble educational structure as well as asymmetrical access to the skills and technology (Al-Khouri & Bal, 2007). Poor accessibility to available resources and poor technological advancements is compounded by a lack of accessibility to the proficiency and information. The e-government services offered through the usage of mobile devices not only provides economical and consistent services to citizens but it can also help the public sector reshape into a new form and restructure with full potential (Carter & Belanger, 2004). These facets can help strengthen the relationship between citizens, enterprises and government by providing permission for the open communication, involvement and public speeches in the process of prepare national rules and regulations (Hung et al., 2006). In the current section, the researcher has conducted an inclusive aggregated analysis of different literatures in order to appraise the e-government projects offered by the UAE government. The aggregated analysis has been conducted after reviewing different scholarly articles, books, dissertations and conference proceedings. A few studies have been conducted to evaluate the IT projects offered by the UAE government and thus

the present study has tried to fill this gap in literature. The review of the literatures in the present section focuses on three major segments. First, it aims to evaluate the present status of e-government projects in UAE. Secondly, it aims to identify the factors that cause delay in implementing IT projects by the UAE government. Thirdly, it aims to identify ways for which the UAE government can improve the speed and quality of implementing IT projects.

2.2   BENEFITS AND OUTCOMES OF E-GOVERNMENT SERVICES

The advancement in mobile technology significantly helps expand the capacity and ability of government so that it can deliver quality and timely services to citizens and business. Mobile government facilitates a capable and transformational ability to both expand access to existing administration, and grow the conveyance of new administrations (Bhavnani et al., 2008). Moreover, it also helps expand the cooperation in government operations, moving past the underlying grouping of e-government on trade and e-tax assessment and enhancing internal operations. This helps encourage civic engagement, along with the establishment of translucent democracy, instructive progression and creative wellbeing administrations (OECD , 2009). The merger of cell phones as well as innovative media applications can help reinforce immediate access to coordinated information; location based benefits, and engaged nationals from the foundation of the rising effect of mobile services. Mobile and electronic technologies help enhance the value of government services such as the following: Electronic wallet card connected to a cellular telephone in Bahrain, the United Arab Emirates or the Philippines voting, enlistment and decision making in Morocco, Kenya, Estonia and Ukraine,supporting the farmers with climate and market price alarms (United Nations Department of Economic and Social Affairs, 2008). Thus, e-services supported with simultaneous applications in mobile phones are deemed as being a user-friendly solution with positive effects on the expected service take-up (European Commission, 2004). In

fact, e-services have been considered essential for easing out the structural changes in major organizations, which further gives way to increased flexibility and innovativeness. For instance, as listed out by Byrd and Turner (2001), numerous dimensions of high-tech flexibility such as data transparency, compatibility, technology management, technical skills, connectivity, functional skills, etc. have been associated with such changes. Particularly, Malhotra (2001) has recognized technology flexibility as the ability to cope with the integration of new e-Business applications with the existing infrastructures. The multi-focused, multidisciplinary teams, which are created in context of the introduction of e-services in organizations, are simultaneously associated with the need to increase mutual understanding among the various individuals involved. The continual functioning of e-services across organizations mandates an increased level of communication among the personnel involved, which is further claimed to result in enhanced professional, interpersonal and management skills through the strategies, resources, and approaches used by several disciplines (NCPEA).

Another common advantage associated with e-governance services is its high reliability factor, which lends it greater trustworthiness among other services (European Commission, 2004). As noted by several researchers including Miyazaki & Fernandez (2001), Bélanger et al., (2002), Bélanger & Hiller (2005), the e-government research is dominated by the issues pertaining to 'privacy' and 'security'.

2.3   INFORMATION AND TECHNOLOGICAL ADVANCEMENT IN UAE

Government expenditure and investment in cloud computing and business analytics hold up the IT market segment in the United Arab Emirates (AlAwadhi & Morris, 2008). The expenditure on information and technological advancement has increased to US$4.7 billion in the year 2013 from US$3.9 billion in the year 2012. The advancement of the computer business segment improves the

aggregated equipment incomes to US$ 2.4 billion in the year 2013 from US$ 2.2 billion in the 2012 (UNPACS, 2014). The expenditure on software packages in United Arab Emirates expected to increase up to US$ 843 million in the 2013, increasing 10% against the previous year (UNPACS, 2014). United Arab Emirates has the third most noteworthy rate of internet users in the Middle East region. United Arab Emirates has 5.859 million Internet clients, which signifies that the internet penetration rate is 70.9 percent of the UAE's population (Enzer, 2011). The United Arab Emirates has one of the most noteworthy mobile device users all over the world which is 166.9% toward the end of 2012 and the aggregate number of mobile users has increased to 13.775 million (Dubai Chamber, 2015). The development status of information technology in United Arab Emirates is presented as follows:

Computer Hardware Sales	US$ 2.4 billion (2013)
Software Sales	US$ 843 million (2013)
IT Services Sales	US$ 1.4 billion (2013)
Telephones – main lines in use:	1.967 million (2012)
Mobile phones:	13.775 million (2012)
Internet country code:	.ae
Internet hosts:	337,804 (2012)
Internet users:	5.859 million (2012)

Table 1: Information and technological advancement in UAE (Business Monitor International, 2014)

The UAE has two operators implementing improvement to their system framework, utilizing the 4G LTE system (Business Monitor Worldwide UAE, 2013b; TRA, 2012).

2.4 E-GOVERNMENT DEVELOPMENT AND E-PARTICIPATION

The e-Government advancement or availability as indicated by the United Nations survey incorporates online administrations, human capital and telecom frameworks as reflected in table 2. As per the study conducted by the United Nations in 2012, UAE acquired one of the top 25

world pioneers in e-Government advancement with a value index of 0.7344 (UNPACS, 2014). According to the worldwide ranking, UAE propelled 21 points from rank 49 in 2010 to rank 28 in 2012. UAE likewise gained ground in its online administrations with an index value of 0.8627 in 2012 against 0.2503 in 2010 (NEWCOMBE, 2014). The United Arab Emirates' e-government methodology offers high quality services, customer centric service and integrated government services. It concentrates on infrastructure development, system availability, service accessibility, citizen consideration, and improvement of a national identity management framework (Dutta & Mia, 2011). Moreover, the objective of the e-government gateway is to give better administrations to customers and embrace them in the government approaches, laws, and public interest activities. UAE delivers government services through different channels, such as free access to public service through stands or Wi-Fi and mobile-based networks, such as mobile web application (Al-Khouri, 2012).

Country	Online Service Index (2012)	Human Capital Index (2012)	Telecommunication Infrastructure Index (2012)	E-Government Development index (2010)	E-Government Development Index (2012)	2010 Global Ranking	2012 Global Ranking
UAE	0.8627	0.7837	0.5568	0.5349	0.7344	49	28
Kuwait	0.5817	0.7885	0.4179	0.5290	0.5960	50	63
Egypt	0.6013	0.5588	0.2232	0.4518	o.4611	86	107
Saudi Arabia	0.7974	0.7677	0.4323	0.5142	0.6658	58	41

Table 2: Development of E-Government services in the UAE (Abdelhafez & Amer, 2014)

The above table shows that Egypt had not shown much improvement in its e-government readiness as well as the e-government development index. Due to its inability to keep pace with the development rate of other countries, the global ranking of Egypt has fallen in 2012. Saudi Arabia also made progress in terms of online services. Considering the readiness index in terms of e-government development, figure 3 can be considered.
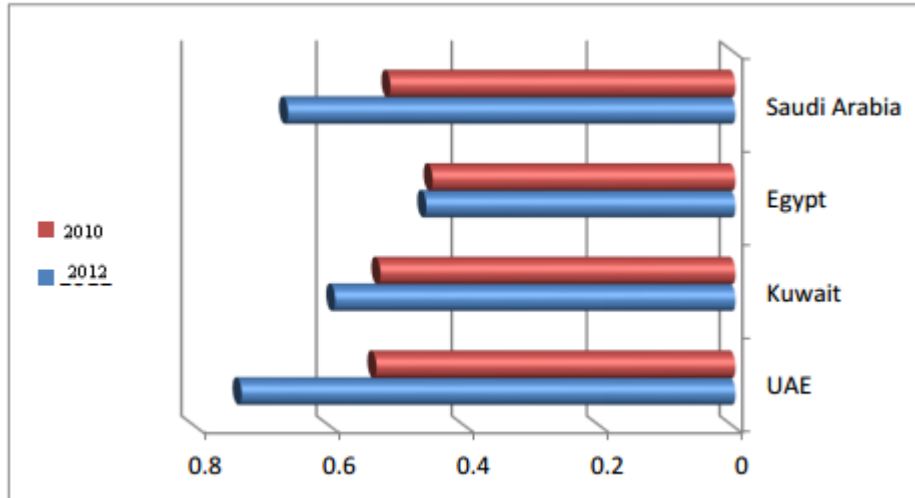
Figure 3: E-government initiative in major countries of the Middle East region (Abdelhafez & Amer, 2014)

In figure 3, the e-government initiative in the UAE, Saudi Arabia and Kuwait shared exceptional progression. The governmental gateways of these nations empower numerous resident transactional services through the web and utilize multi-channels to give the services. Then again, Egypt shared little advance in its e-government advancement.

E-participation

E-participation is a technique that empowers governments to communicate with their citizens. To improve the government's capacity to communicate and get feedback from the citizens, government gateways must have surveys, overviews, or input bases. Therefore, e-participation evaluates how governments interfacing with citizens utilizing web2.0 techniques, (for example, web journals, SMS and visit rooms), correspondence advances, (for example, Facebook and twitter) and other informal community devices (UN Report, 2012). UAE, Saudi Arabia and Egypt made amazing progress in e-investment as indicated by the UN study 2012 as appeared in figure 6 (UNPACS, 2014).

Country	Index 2012	Index 2010	Ranking 2012	Ranking 2010
UAE	0.7368	0.1286	6	86
Kuwait	0.1842	0.2286	25	53
Egypt	0.6842	0.2857	7	42
Saudi Arabia	0.6316	0.1000	9	102

Table 3: E-participation index (Abdelhafez & Amer, 2014)

UAE is one of the best nations performing e-participation and it has captures the sixth position in global ranking as appeared in table 3. The Emirates government gateway has been connected with various stages like forums, web journals, blogs, overviews and surveys to encourage successful correspondence between the government and its citizens.

This gateway has an updated listing of important contact numbers, input channels for government services and long range informal communication records of the elected elements. The developmental path for the e-participation index is reflected as follows:
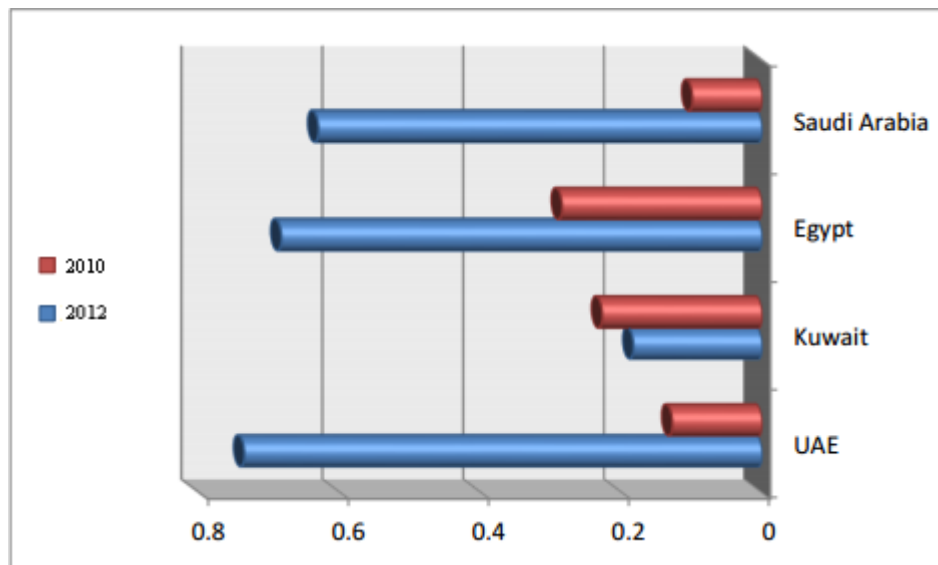
Figure 4: E-participation index of Middle East countries (UN Report, 2010)

Figure 4 reflects that Egypt is recognized as one of the best performing nations in terms of e-participation in 2012. The position of Saudi Arabia is also good in terms of e-participation rate as it supports through social events popular assessments utilizing reviews, websites and public counsels. However, the government initiative and government portal of Kuwait can be criticized in terms of e-participation index.

2.5 FACTORS CAUSING DELAY IN IMPLEMENTATION AND ADAPTATION OF E-GOVERNMENT PROJECT

In the Hawaii International Conference on System Sciences, Suha, and Anne described e-government to be an application of communication and information technology effectively communicate or transfer the knowledge of transaction procedures that occur within the government to the public or in between the different government agencies of different levels from the federal to the local levels and therefore in turn empower local citizens with access of the knowledge of government actions and transactions (AlAwadhi & Morris, 2008). E-government activities are initiated at the government levels but its success also depends on the citizen's acceptance and adaptation of the e-government services and initiatives (Bertot et al., 2010). Therefore, as pointed out by different authors in their researchers on e-government acceptance in different regions like (Bwalya, 2009); (Colesca & Dobrica, 2008), the government officials need to understand the factors that influence the acceptance of e-government services as well as the factors that may cause delays in the implementation of the same (Lofstedt, 2012).

The literature on e-government services and its adaptation and implementation processes include a number of studies that has used technological acceptance theories like the TRA or the Theory of Reasoned Action by the (Wangpipatwong et al., 2008), TAM or the Technology Acceptance Model by the (Lin et al., 2011),the UTAT or the Unified Theory of Acceptance and Use of

Technology by the (AlAwadhi & Morris, 2008) and the TPB or the Theory of Planned Behavior by the (Gamal Aboelmaged, 2010). In these studies, the scholars have described the factors that motivate the adoption of e-government projects and services (AlAwadhi & Morris, 2008). Likewise it can be said that in the situation that there is a lack of these factors or the influence levels are low, there occurs a delay in adaptation of the e-government services and projects.

Dillon and Daekins in 2002 described that one of the most important factors that affects the decision of adaptation of such e-government services and also causes delay due to the citizen's indecisiveness is associated with the user's sense of privacy and security of these services (Deakins et al., 2010). Moreover, in (Klun et al., 2011), the scholars have described that in 2004, Peterson, Hart and Bagchi had claimed that the cause of delay and process of adaptation of the e-government services are also determined by the socio-cultural environment as well. This has also been confirmed by Chen, Huang, and Russell in their research study on the comparison regarding the adaptation of e-government services between developing and developed countries, have observed that culture often poses as a barrier in implementation and adaptation of e-government services especially in developing countries (Chen et al., 2006).

The delay in the implementation processes has also been researched by other authors who have pointed out that gender differences play an important role in the adaptation and the implementation process. Researchers have shown that men are more task-oriented than females and that females have lower self-efficacy and higher anxiety towards computers and mobiles due to low aptitude for technology (Celik, 2016); (Ayo et al., 2012).

However, Igbaria in 1993, claimed in his earlier research work that the evidence regarding the effects of gender difference on the implementation of e-services is equivocal, and there are a number of studies that have proved that such differences affect and delay implementation

processes, while other researchers have claimed that gender differences do not affect the same (Turner et al., 2010).

According to (Choudrie et al., 2012), another factor that affects the adaptation and implementation processes of e-government and IT services in a society are either collectivism traits or individualism traits whichever is more dominant in the particular culture. In a collectivistic society, the relations amongst individuals are stronger than that in an individualistic society. It has also been observed that the adaptation of IT leads to a fall in the face-to-face interactions, therefore, in a collectivist society the implementation process of the IT and e-services may take longer and face restrictions than that in an individualistic society (Klun et al., 2011).

Moreover, Fink and Jaruwachirathanakul in (Jaruwachirathanakul & Fink, 2005), have observed that in the Thailand culture upholds face-to-face contacts and that personal relations add value to users or customers experiences especially during financial transactions. This cultural aspect often delays the implementations process in many cultures. It is also connected to the fact on how much the society feels threatened by the implementation of new technology.

In (Alghamdi & Beloff, 2016), the researchers have taken in account the findings of Bellordre and Baker's research that lack of awareness also affects the appropriation and utilization of IT. Delays in implementation may also result from the lack of familiarity of the technologies and its advantages. This has been observed by researchers that delays factors are generally associated with groups of elderly people, groups of people whose cultural or religious background stops them from changing any processes, or people with disabilities, who are afraid of change and adaptation processes. Dimitrova and Chen in (Chen & Dimitrova, 2006), has reported that if the end users are unaware of the potential advantages of technology and e-services, they will tend to oppose and delay implementation processes.

However, in this context, Beynon-Davies has argued in his research that the awareness of technology and e-services does not imply that there will not be any obstacle in the adaptation process and delays in implementation of the e-government processes (Beynon-Davies, 2005). In his research, he has shown that the adaptation of the Inland Revenue e-services has been slow and delayed although there had been a number of marketing campaigns to motivate and make the users aware of the online processes. Beynon-Davies concluded that this was due to the fact the online services failed to benefit the user with additional conveniences than traditional methods, so people were unwilling to change to e-services even though they were aware of the services.

Evidently there is a lack of research and limited literature content exploring the factors that affect and delay the adaptation and implementation processes of government e-services especially in the context of the GCC countries as explained by Alshihi (Alshihi, 2005). There has been a number of evidence of researchers investigating the factors with the use of the Unified Theory of Acceptance and Use of Technology model (AlAwadhi & Morris, 2008), but there is an obvious lack of literature concerning the delay and resistance to accept online government services in countries like the UAE.

Alshihi in his research had examined the appropriation of e-tax services in Oman, which is one of the GCC nations (Alshihi, 2005). He interviewed private sectors workers, public sector employees and workers from different sectors of the society. He observed a number of barriers that delayed adoption process of e-government services in all these sectors such as the lack of IT knowledge in end-users, the under-advertising of e-government arrangements and activities, the lack of awareness and absence of legitimate enactment and laws. The lack of confidence the the government. According to Alshihi, culture played a negligible role in the implementation process of e-services while the fore mentioned discoveries demonstrated high impact.

It has been observed that customarily, all transactions between citizens or business owners with the government agencies had always occurred in an administration office. With the development of communication and information technologies, it is conceivable to find easily reachable government service centers by the users. Many a times, these centers have an automatic kiosk machine to carry out the process without any human interaction; these services can also be accessed by the user through their computers at their homes or offices. Subsequently, e-Government means to make the connection amongst government and local residents/citizens that is G2C, government and business endeavors (G2B), and between one government agency and another (G2G) more straightforward, transparent and reasonable .

In any case, it has been observed through the literature study that e-government is the utilization of IT or Information Technology to enhance the productivity, viability, straightforwardness, and government's responsibility (Kraemer & King, 2006). According to many authors, these are unavoidable change ventures by the government (Anon., 2005), therefore, even if faced with resistance or delays, the e-government services are inevitable in all nations especially in the era of information technology and internet solutions (Misuraca, 2009).

There is an increased interest on e-government by researchers and scholars, but the existing literature has failed to sufficiently tend to two key issues concerning the execution and adaptation of e-government frameworks:

- Clear understanding of the elements affecting the selection and acknowledgment of e-Government frameworks, and reason for their delay in implementation
- Factors that influence the effective usage of the e-services and the relate causes of delays and failures.

As mentioned earlier, there has been a growing trend for governments worldwide to implement e-government services. The reason behind the riding trend, has been addressed by many scholars as the result of the expected benefits of the adaptation of ICT in the public sector (Alkhaleefah et al., 2010). The advantages of using e-services and automation in the public sector can be attributed to the expanded proficiency, cost effectiveness, and improved quality of service. In this manner, governments are contributing vigorously and setting tight due dates on e-Government ventures keeping in mind the end goal of the advantages of implementing e-government services (Evangelidis, 2005). In any case, late studies show that most nations have not been entirely successful in successfully implementing the e-services in their public sectors (Evangelidis, 2005); (Lee et al., 2008).

According to (Abu-Samaha & Abdel Samad, 2007), Jordon's government, one of the developing GCC nations, has made certain initial efforts in order to redefine governmental services and facilitate the facilities of submitting tax payments and conduct governmental transactions online. Jordan plans to profit from e-Government by turning out have a more responsible, straightforward and beneficial user platform. However, there is a lack of unqualified employees and insufficient HR administrations, which have been an issue for Jordan and other developing nation, which has resulted into delays and problems in their implementation processes. As indicated by (Heeks, 2008) almost 35% of electronic government projects have failed especially in developing economies, 50 percent did not achieve desirable results and just 15 percent have been successful. The most significant issue behind failure and delays in e-government projects especially in developing nations as per (Heeks, 2008) is because of the gap between the design (expected) and outcome (real) in regards to technology, information, objectives, values and procedures, employee skill sets, management resources, time and cost. Therefore, the failure and success of e-government

projects has been pointed out by a number of scholars as the extent of gap between the design of the project and the real scenario of the projects (Alkhaleefah et al., 2010).

Consequently, the developing nation such as the UAE has to develop plans to bridge this gap by taking advantage of the benefits of implementing e-government projects, as mentioned by a number of authors. According to (Athmay, 2013), developing nations in the GCC countries like the UAE are facing challenges and delays in implementing e-services in the public sector effectively, due to a variety of issues regarding, such as the lack of accountability, bureaucracy, the lack of participation by the citizens in the processes, and government authority. It has also been observed by scholars that the UAE has not been able to apply ICT solutions properly in their projects and therefore they are subjected to delays and failures in the current scenario.

Therefore, this failure and delay of e-government services can be attributed to a number of elements, given as;

- Digital gap or knowledge gap between different communities.

- Lack of legitimate enactment and laws.

- Absence of national policies regarding technology.

- Insufficient application of ICT.

- Lack of monetary support.

- Presence of technological illiteracy.

- Under skilled and technologically inexperienced workforce.

(Alshihi, 2005); (Athmay, 2013); (Heeks, 2008)

Apart from the challenges that are mentioned above, there are a number of internal challenges that delay the implementation processes within the government processes. According to the mentioned literatures and scholarly studies, these internal issues are associated with the understanding of the

vision of the project implementation by all the concerned staff and any failure on the part of the leader to encourage its followers in motivating and initializing the e-government services and projects that lead to internal delays. This is clearly associated with the organizational culture and behavior within the government agency. The outer difficulties incorporate the quick changes in innovation, and alternate difficulties like individuals who don't have PCs or don't have admittance to the Internet, and individuals who utilize the online administrations require an insurance of protection and security where the data gave won't be abused. In this manner, the accomplishment of e-Government projects is exceptionally reliant on legitimate system for their operations. On the other hand, the external issues that affect the success and delay of implementation processes are associated with rapid changing technology, insecurity of citizens in making transactions on the net, technological illiteracy amongst the mass or the lack of access of internet (Zhao et al., 2012). Al-Shafi , El-Haddadeh and Weerakkody in their research work (Weerakkody et al., 2011), examined the different factors that cause delay and problems for e-government project implementation in case of a developing GCC nation on the basis of its prevalent social, political, organizational and technological contexts.

Other researchers like Field, Muller, Lao and other contemporary scholars have confirmed e-government projects are highly beneficial when implemented successfully (Ebrahim & Irani, 2005). The factors affecting this implementation process can be identified with collaboration and coordination issues within the government agencies and cost issues regarding the implementation charges. Actualizing ICT, especially in large scales, can majorly affect the quality of services and can raise various issues, mostly relating to the government operations.

As indicated by other studies and literature, the absence of technical support on the government websites and especially the lack of knowledge about the e-government projects and services offered cause delays and failures for the implementation of these services.

In the exploratory study (Basamh et al., 2014), Qudaih, Basamh and Suhaimi investigated on the acceptance and implementation processes of Saudia Arabian e-government projects. The study distinguished computer literacy, accessibility, infrastructure costs, availability, trust issues and privacy issues as a portion of the significant difficulties and obstructions that hinder the execution and delays of e-government projects in Saudi Arabia.

Al-Shafi in his study (Al-Shafi, 2009), has researched the key factors that impact e-government projects' implementation processes and the variables affecting national appropriation in the condition of Qatar. ,Lee,Sang and Lee [13] have contemplated on the elements and difficulties that has led execution and implementation problems which delays in Cambodia. They investigated the difficulties that are fundamental to actualizing of e-government projects and found problems resulting from the lack of prioritization, poor infrastructure of ICT, lack of support from the leadership, illiteracy and lack of technically sound staff (SANG et al., 2009).

In (Bwalya, 2009), Bwalya did research on the implementation challenges of e-services of the Zambian government. As seen by all the other authors through this literature review, the factors causing delays and challenges to the implementation process were similar, such as poor infrastructure of ICT, language barrier, non-contextual government policies, lack of management, etc. All these factors have been seen by most of the authors as the factors that contribute to the highest to the delays in proper implementation of e-government projects.

Similarly, Ovio,Markkula and Ahmad investigated on these factors in Pakistan (Ovais Ahmad et al., 2013). In their research, they found that the difference between expected results and real

outcomes of e-government projects played a crucial role in effort expectancy and performance expectancy. Moreover, they have also noted that in developing Muslim countries, the social factors influence the clients' adaptation of government e-services which results in hindrance and delays. In other literature findings, these scholars also pointed out that lack of data privacy, inadequate leadership support, lack of awareness and technological illiteracy and absence of appropriate infrastructure hamper the projects.

Maiga and Nbafa in their article (Nabafu & Maiga, 2012), have outlined the requirements that can help the governments of Uganda in implementing their online services successfully. The requirements include building ICT infrastructure; motivate the users by showing them the benefits of acquiring e-services and projects by spreading awareness, financial resource build-up and spreading technological literacy. On similar note, Rokhman also recognized through his research the factors that can help the Indonesian government to implement e-projects without delays and hindrance (Rokhman, 2011), by proposing a model for successful implementation.

Thus, given the increasing incidence of delays in the IT projects and the associated wide range of causes for such delays, there is an urgent need for ensuring that a proper planning process is followed for effective functioning of e-governance. This is especially true for the implementation of ICT related reforms, as in the present case. As stated by Bhatnagar (2004), empirical evidences have indicated that the ICT related reforms needs to be cautiously planned before their implementation for achieving an effective and efficient outcome.

2.6 CHANGES DURING THE IMPLEMENTATION PROJECT THAT EFFECT THE TIME FRAME

Changes during the implementation process pose as a problem. These changes have been observed by many authors as gap problems between the hard and soft issues. These are similar to the

problems arising in the case of organizational change. In this case the success of governments'
initiatives relies on the alignment of the government functions and the actual practices. According
to (Ebrahim & Irani, 2005), the public sector needs to reengineer and change processes to
implement the technologies in order to implement e-government projects successfully. On the
similar note in the article (Dada, 2006), the implementation processes require similar tools like
change management strategies and failure to implement these strategies will lead to failure and
delays as the bridge will not be made between the social contexts and new technological
advancements.

Acknowledgment of technological innovations in providing e-services or m-services for regular
day-to-day activities has been widespread but authors have questioned whether the acceptance of
such technology in public sector is readily acceptable by the citizens. It is critical to understand
the obstructions that caused by the changes that are necessary for the successful adaptation and
implementation of mobile or internet service projects especially in the public sector. The
government faces a lot of uncertainty due to all the reasons that have been explained through this
literature review and hesitates to provide huge funds on these projects, which may not be accepted
and used by its citizens. A number of citizens are tech-savvy and can easily accept the shift in the
service dimension but these changes are often resisted by others that lead to delays and failure of
successful implementation (El-Kiki & Lawrence, 2007).

Adopting e-projects or m-services and technologies to deliver services that have been traditionally
delivered face-to-face or through personal transactions, requires change. The traditional systems
have been a habit for citizens for generations therefore, it requires time for them to accept and
change to acquire services online where cause delays. Moreover, many authors have also pointed

out other factors that make people resist this change and cause delays such as economic factors, socio-cultural practices, and security concerns of transactions on the internet.

In many cases these resistance to changes often come from within the government offices, as the employees fear that the online services will take their jobs, as their services will not be required. The authors have also suggested that these delays in adopting government services can be managed by increasing employee participation, communication, training, and education of the employees to learn about technological services. Therefore, the employees will adopt to the changes so that they can motivate the citizens to do the same and implement the services successfully. By motivating and supporting the officials to understand the benefits that the change from the traditional process will bring about, the leadership can eliminate the resistance and delay (Rannu et al., 2010).

It has been seen through this review that the customers that are citizens also create barriers of change and therefore cause delays and failures of e-projects developed by the government. The most common electronic device used by citizens is the mobile phones. Therefore, the e-government services can be made available on the phones through its m-services that will make it easier for the customers to change from traditional systems to the new age m-service delivery as they will find it easier to use and make time and cost effective. In any case, marketing of the services has to be made so that the customers are aware of the benefits of using such m-services. Moreover, security assurance has to be provided as well. Nevertheless, practices require changing the mind frames of the citizens through prolonged marketing and advertisements till a sense of security and awareness is grown. The side effect of this is the loss of time and delay in successful implementation.

In the study, Carroll, has indicated the following factors that decide whether citizens will change and adapt to m-government services in time, without delay (Carroll, 2006);

- The ease of use plays an important role in customer's decision of using the m-services, as well as value for money, availability of device and infrastructure, efficiency in time and distance, convenience, quality and reliability of information, usefulness, risk and security breach, SMS based system or computer online site base system, responsiveness of the site, etc.

- The citizen's trust on the government services and public sector as well as reliance on the net providers and mobile service technology.

- Self-efficacy also plays an important role for the customer to change.

As confirmed by a number of authors in this review, socio-cultural resistance to e-services and lack of interest in m-government can also be derived from the lack of confidence on new technology, as well as bureaucratic mindsets including risk adverseness and failure to think innovatively (Al-Khouri, 2012); (Bwalya, 2012); (Abdelhafez & Amer, 2014); (Hung et al., 2006). Finally, the resistance to change and the reason for delay can also be attributed to the inadequate digital literacy rate of the targeted users. This is one of the main causes that result in delays in the implementation process, since the end users fail to adopt these changes in public sector service delivery, even if they are aware of the benefits. Authors worldwide have proposed that governments should concentrate more on developing m-government and online services to provide more inclusive public services. In the meantime, educate more and more citizens about its benefits. By ensuring multi-channeled delivery policies and strategizing to enhance its county's IT capacities and skills, the government can manage the resistance and be able to reap the benefits of m-government.

2.7 PROCEDURE TO IMPROVE PROJECT PERFORMANCE

Several research studies have been conducted to identify ways which government can enhance its efficiency to deliver IT projects to its citizens and minimize the delay in operation (Bwalya, 2012). These steps are discussed as follows:

Managing Strategy and Shareholders

To enhance efficiency of e-government and m-government projects, the government should try to develop ways in which both the internal and external stakeholders can be managed efficiently. These stakeholders are IT executives, vendors, associates and regulators (Conklin & Whiet, 2006). The stakeholders' concern is important because they can ensure the alignment of the government's business strategy with the IT solutions that are being developed. The shareholders can identify potential risk factors and can have access to the best expertise of the vendors for an extended period.

Strengthen Technological Advancement

The technical aspects of the IT projects include design and infrastructure, operational trade-offs excellence assertion, relocation and compress strategy, and project capacity that have to be developed effectively. Moreover, it is also essential to concentrate proportionately on different technological issues and objectives by creating a central data warehouse system (Conklin & Whiet, 2006). This strategy can help minimize the inconsistency in commercial finance information, centralized finance information and risk information. To reduce the number of changes occurred in the implementation process, the project team has to be focused on purely developing the IT design resolution corresponding to the data warehouse despite tackling the final objective that was to control inconsistency occurring in information (Gauld & Goldfinch, 2006).

Building Effective Teams

The project teams that deliver m-government and e-government services need to have common vision, communicative procedures and high performance culture (Kramer, 1999). To enhance the efficiency of project team members, government needs to increase budget allocation for delivering values services and ensure that it had required business resources to fully utilize the technology and deliver social values within specific timeframes (McLeod & Pippin, 2009)

Cost Management

E-Governance has been commonly found to be suffering from the problem of unproductive investments, which urgently require attention through continual monitoring (Misra, 2008).

The huge costs associated with setting up the various components of e-governance, primarily the Government Data Centre (GDC), involve capital costs for infrastructure, huge operating costs to be incurred for managing and administering various types of servers, as well as recurring deployment of multiple applications on distinct platforms (Bhattacharya, 2012). These costs must be managed effectively so as to access the benefits of e-governance.

This cost management would also enable the timely recognition and management of the new challenges that come up as a result of e-governance adoption, for lawyers and jurisdiction. Thus, the governmental activities which are regulated by legal frameworks are well within the legal arena of work (Asgarkhani, 2005). This also necessitates imbibing or adapting to the legal law so as to cope with the new technological advances.

2.8 CONCLUSION

Therefore, it can be concluded from this literature review that most of the authors and literature on this topic point to very similar factors that cause delays and problems in the implementation process of e-government projects. From the undertaken review, it is apparent that implementation of m-government and undertaking online services have become an imperative tool for smarter and

faster public service delivery worldwide. In the case of developing countries and the GCC countries, m-government and online services are characterized by delays and problems and this review has provided an overview of the factors that make the e-government projects get delayed especially in developing nations. The major issue that has been noted by many scholars is the gap between the actual working system and the expected or proposed design of the service. In any case, it can be seen through the study of the literature that the prospect of e-services and government project implementation through the use of mobile technologies has been studies upon in recent times only, and there is a lack of literature on the same.

3. CHAPTER THREE: METHODOLOGY

3.1 INTRODUCTION

The methodology chapter aims to discuss different statistical tools and techniques that can be applied to analyze data and accomplish the research objectives. Before adopting any specific statistical tools and techniques, it is important to discuss the respective advantages and disadvantages of the methods. This can help to understand the relevance of the chosen methodology. Additionally the chapter also compares the various research approaches and identifies the most suitable approach to conduct the study. Apart from mentioning the research approaches, the methodology chapter also specifies the sample size, sampling strategy, and data collection procedure and data analysis methods that have been adopted to conduct the present research study and draw potential inferences on the research objectives.

3.2 RESEARCH APPROACH

In order to identify the potential causes of delay in the implementation of the e-service and mobile service projects by the UAE government, a quantitative research methodology approach has been considered (Crowther & Lancaster, 2008), for which the data has been collected from a web based survey questionnaire. (Garboan, 2009). The adoption of the quantitative research methodology is most suitable for conducting the present study as the study seeks to identify the factors that cause delay, further analysis of these factors to is conducted that help minimize the project delivery time (Degu & Yigzaw, 2006). This is in line with the established aim of a quantitative research, which establishes statistically significant conclusions about a population by studying a representative sample of the population (Creswell, 2003). It thus aims at collecting primary responses from the chosen sample in quantitative terms to avoid any researcher or interviewee bias, or subjectivity in the context of the statements recorded.

3.3   RELEVANCE OF THE RESEARCH APPROACH

The quantitative research approach has been commonly adopted by a number of researches in the field of natural and social sciences, including physics, biology, psychology, sociology and geology. The present academic research required a significant amount of responses for fulfilling its stated objective of providing useful recommendations. However, the sole consideration of the qualitative approach is not an effective as it considers lesser number of respondents and make it difficult to structure the responses (Packer and Addison 1989). This, thus, increases the need of utilizing the quantitative research study.

The quantitative technique helps deliver the outcome of the research in numerical type (Saunders et al., 2009). The collection of the numerical data helps explain specific facts. The quantitative research approach is conducted primarily based on a questionnaire survey, verifications, rating scales and other physiological procedures (Blumberg et al., 2005). As it involves a large number of respondents, it is more appropriate to generalize the findings of the study. It involves a wide group of sample and numeral number variables that are examined at one a time (Hair Jr et al., 2011); (Kothari, 2006). The control and monitoring power for conducting the quantitative study is higher compared to the qualitative approach (Saunders et al., 2009). In spite of its structured nature, the major drawbacks of the quantitative data lie on account of complexities in the calculation process (Ramona 2011). Without the use of software the calculation process of quantitative study becomes highly time consuming and complex (R. W. Morris 1991). The involvement of multiple trial and error methods also increases the time required to conduct the study (Morris, 1991).

3.4   RESEARCH QUESTION

To accomplish the research objectives, the research questions for the present study can be structured as follows:

1. What are the important factors that can cause delay in the implementation process of the IT related projects by the UAE government?

2. What is the impact of delayed service periods on the effectiveness of the IT projects initiated by the UAE government?

3. How can the delay in implementing the IT projects initiated by the UAE government minimized?

3.5 RESEARCH HYPOTHESIS

The hypothesis testing is considered a crucial technique to enhance the probability of correctness of the hypothesis (Goldmann 2011). Based on the research questions portrayed in the above section, the hypothesis for the study can be structured as follows:

- H1: The delay in delivery of IT related projects by the UAE government could create significant negative impact on the effectiveness of these projects.

- H2: Poor decision-making abilities, shortage of funds, ineffective communication skills and poor management structure are the principle reasons for causing delays in implementation of the IT projects by the UAE.

3.6 SAMPLING TECHNIQUE

To collect the samples, government officials have been chosen from different government departments on a random basis. In order to choose the respondents, from each of the department, purposive sampling strategy has been applied (Palys, 2008). The respondents have been chosen on the basis of their designation, knowledge about the e-service, and association with the launch of e-service projects (Teddlie & Yu, 2007). These sorting criteria have helped to choose the appropriate sampling group and infer appropriate findings about the cause of project delays (Curtis et al., 2000). A total sample size of 150 respondents were chosen for conducting the quantitative study.

This number of respondents was deemed feasible given the academic nature of the research, and its associated time and financial constraints. As stated by Zikmund (2001), it is advisable to choose a sample over the entire census given such restraints. The sample can thus be chosen rationally, to pose as a statistically identical group to the population from which the conclusions for the sample can be later inferred to the population.

3.7　DATA COLLECTION

The data collection strategy is primarily concerned with the quantitative data for the present research. Quantitative data has been collected with the help of a web based survey questionnaire. These were sent out through the social networking site named LinkedIn, with help received from a college colleague for easy reach. The government entities were approached through email, while the university colleagues were sent questionnaires through WhatsApp groups if not available through emails. The research has rationally chosen the online mode of survey, not only based on the time and cost restraints, but also aiming at collecting larger number of samples for the research (Buchanan and Hvizdak, 2009). The researcher further recognizes that, as claimed by Evans & Mathur (2005), "clear, visible, respondent-friendly privacy policies are imperative" (p. 211) for online surveys. Thus, in line with this requirement, these self-administered web surveys were included with an option of anonymity, which was aimed at reducing the social pressure, and thus reduce the targeted social desirability bias (McLeod, 2008). The responses have been collected on five point Likert scale basis (Saunders et al., 2009), which consists of an ordinal scale to measure the level of agreement or disagreement by using a fixed choice response format (Bowling, 1997; Burns, & Grove, 1997). At first, the e-mail id has been collected from the government departments after obtaining the required approvals. Then, the survey questionnaire is sent to the respective e-

ids with the declaration form that consists of a detailed explanation of the research objectives with a request to contribute and fill in the survey.

The survey data has been collected within a period of 12 weeks. Reminder messages and emails have been sent to the selected respondents. The questionnaire design contains different questions pertaining to its set of objectives. Each question has a set of statements that aim at gathering the necessary views from the respondents. For instance, the first question consists of statements, which explicitly aim at presenting the viewpoints of the respondents regarding the importance of successful e-services implementation. It covers the wide range of claims put forward and reviewed under the literature section. The next question particularly gathers responses relating to the vitality of planning in e-governance. The third set of statements pertains to the reasons for the increase in the e-services. The research also aimed at putting forth the perceived benefits from such services, which is sought after by the next set of statements. However, the research goes one-step forward by also covering under its purview, the limitations of the present scenario. The next set of statements deal with the experienced limitations of the same.

3.8 DATA ANALYSIS

The quantitative data has been analysed with the help of inferential statistical techniques. Some of the inferential statistics applied in the study are descriptive test statistics including frequency distribution analysis, p-value analysis, and regression analysis (Ghasemi & Zahediasl, 2012). Descriptive statistical techniques helps to understand the demographics of the respondents. The most important factors responsible for causing delay in the project implementation process are determined by regression analysis method by observing the Anova analysis and corresponding p values of the coefficients.

4.   CHAPTER FOUR: ANALYSIS

4.1   DESCRIPTIVE STATISTICS

Four questions constitute the Demographics & General information; the first two questions are related to demographic aspects like gender, and group age followed by two questions inquiring the educational background and work experience.

What is your age?		
Answer Options	**Response Percent**	**Response Count**
18 to 24	9.8%	13
25 to 34	45.1%	60
35 to 44	37.6%	50
above 45	7.5%	10

Figure 5: Respondent's Age Group
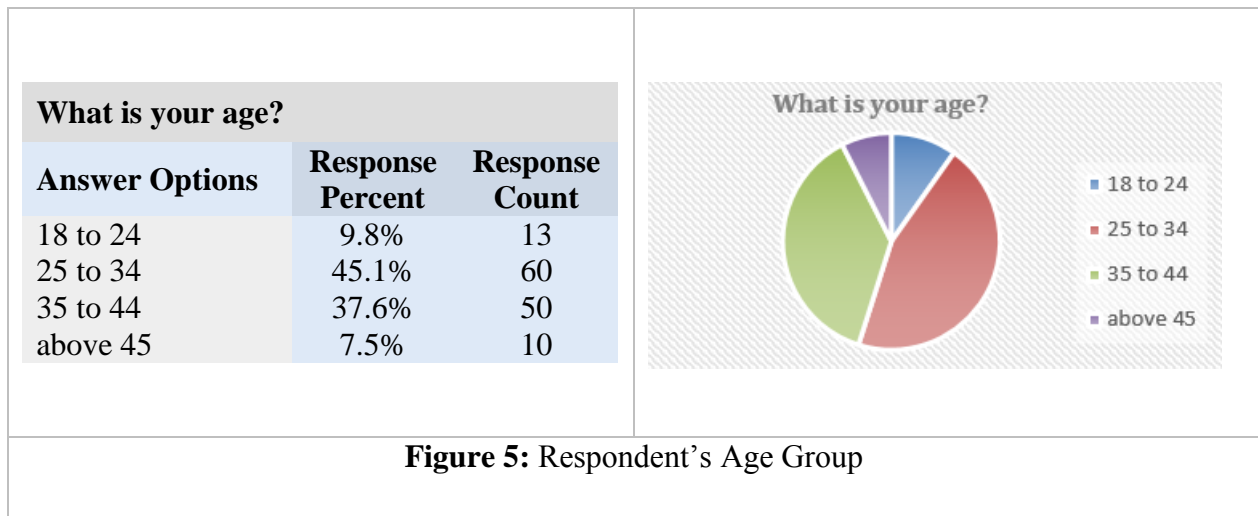
From the above figure 5 "table & chart" we can observe that about 45.1% of the respondents were aged between 25 to 34 years. The below figure indicates that about 61% of the respondents were males.

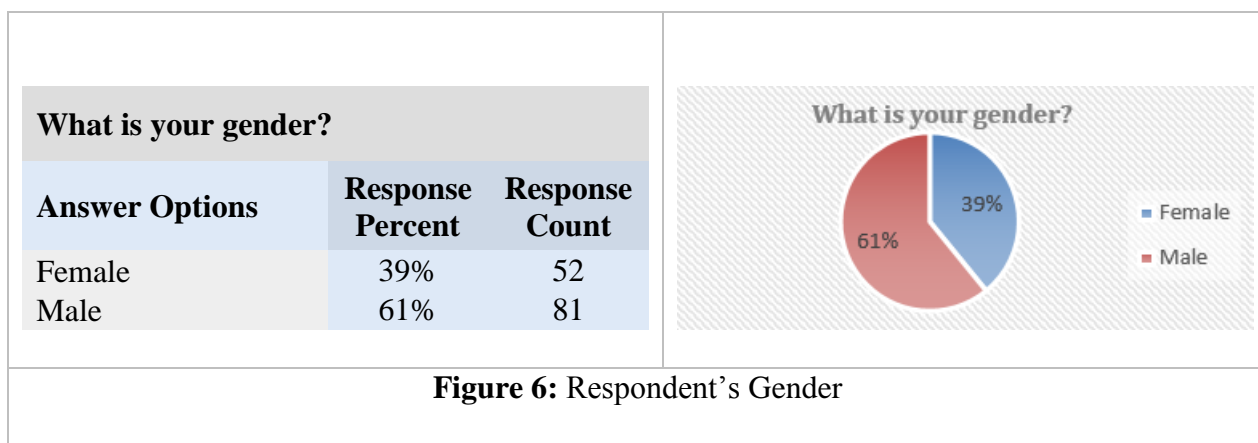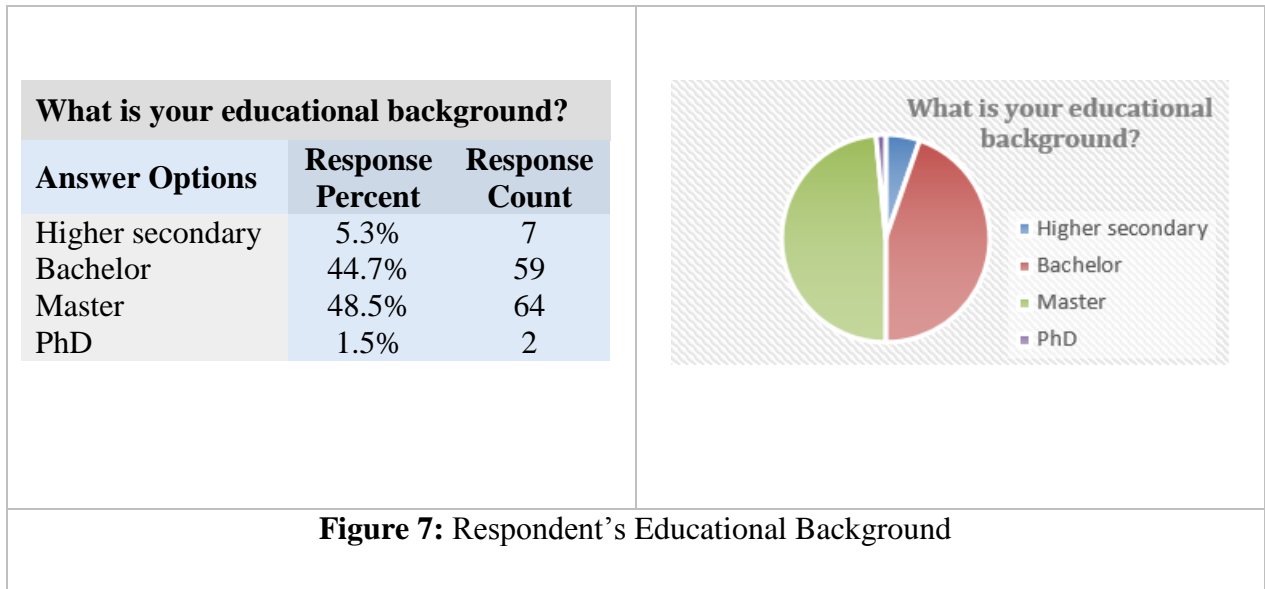| What is your gender?		
Answer Options	**Response Percent**	**Response Count**
Female	39%	52
Male	61%	81

Figure 6: Respondent's Gender

Figure 7, reveals that about 48.5% of the respondents were educated up to master degree and 44.7% were educated up to bachelor degree. Around 94.7% are bachelor degree and above.

What is your educational background?		
Answer Options	**Response Percent**	**Response Count**
Higher secondary	5.3%	7
Bachelor	44.7%	59
Master	48.5%	64
PhD	1.5%	2

Figure 7: Respondent's Educational Background

By looking at figure 8, we can notice that about 53.4% of the respondents had work experience of more than 10 years.

What is your work experience?		
Answer Options	**Response Percent**	**Response Count**
0-1 year	3.8%	5
1-5 years	20.3%	27
5-10 years	22.6%	30
Above 10 years	53.4%	71

Figure 8: Respondent's Work Experience
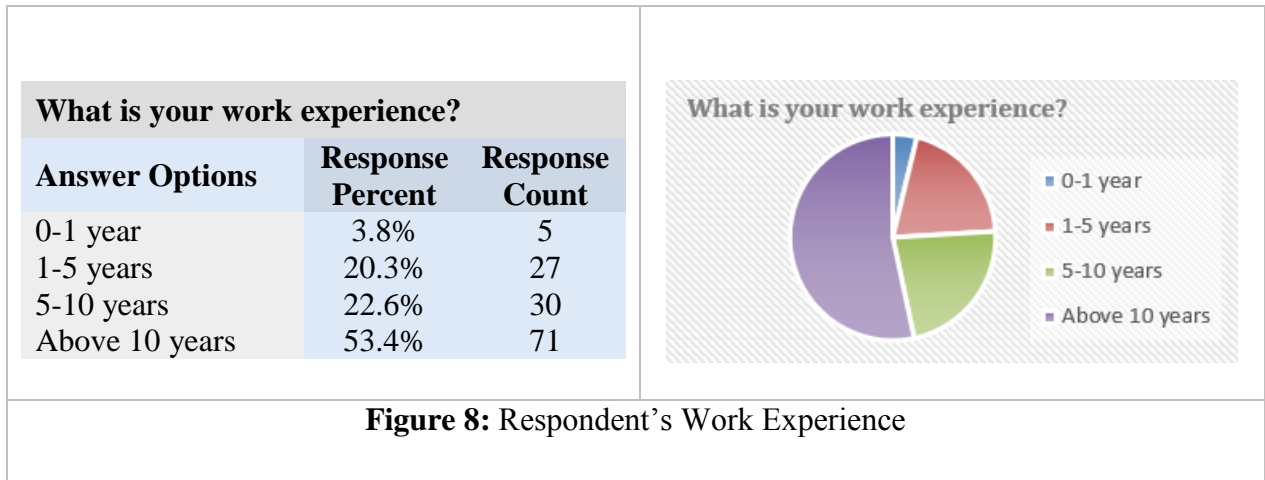
4.2 IMPORTANCE OF SUCCESSFUL IMPLEMENTATION OF E-SERVICES

Table 4 & Figure 9 shows that almost 74.4% respondents agreed that E–services facilitates a capable and transformational ability is very important, 73.7% responded expressed that E-services helps to expand dynamic native cooperation in government operations is very important, and 72.9% respondents conveyed that E-services provide alternative ways of working to promote innovation is also very important.

Answer Options	Very Important	Important	Not Important	Response Count
E-services facilitates a capable and transformational ability	99	33	1	133
	74.4%	**24.8%**	**0.8%**	**100%**
E-services helps to expand dynamic native cooperation in government operations	98	32	3	133
	73.7%	**24.1%**	**2.3%**	**100%**
E-services provide alternative ways of working to promote innovation	97	33	3	133
	72.9%	**24.8%**	**2.3%**	**100%**

Table 4: Respondent's opinion regarding the Importance of Successful Implementation of E-Services
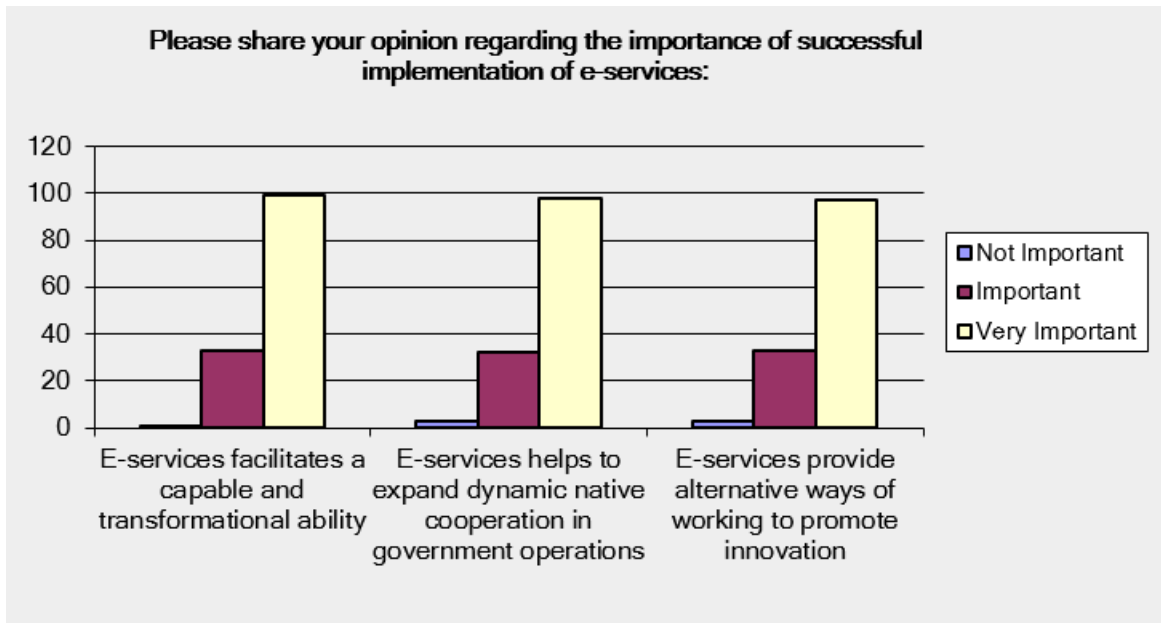
Figure 9: Respondent's opinion regarding the Importance of Successful Implementation of E-Services

4.3   SIGNIFICANCE OF PLANNING IN E-GOVERNMENT

Table 5 & Figure 10 shows that 56.5% respondents strongly agreed that planning enables the department to efficiently attend to every project by tracking delays, 53.5% strongly agreed and expressed that Planning helps to attract more customers is very important, 48.1% respondents conveyed that Planning keeps each and every customer satisfied is strongly required, and 52.7 also strongly agreed that planning promotes transparency, effectiveness, and efficiency of the E-services.

What is your opinion regarding the significance of planning in e-government? Please share your level of agreement against the following statements:						
Answer Options	Strongly agree	Agree	Neither agree/ disagree	Disagree	Strongly disagree	Response Count & Percentage
Planning enables the department to efficiently attend to every project by tracking delays	74	55	1	1	0	131
	56.5%	42.0%	0.8%	0.8%	0.0%	100%
Planning helps to attract more customers	69	46	12	2	0	129
	53.5%	35.7%	9.3%	1.6%	0.0%	100%
Planning keeps each and every customer satisfied	63	42	20	6	0	131
	48.1%	32.1%	15.3%	4.6%	0.0%	100%
Planning promotes transparency, effectiveness and efficiency of the e-services	69	51	8	3	0	131
	52.7%	38.9%	6.1%	2.3%	0.0%	100%

Table 5: Respondent's opinion regarding the Significance of Planning in E-Government
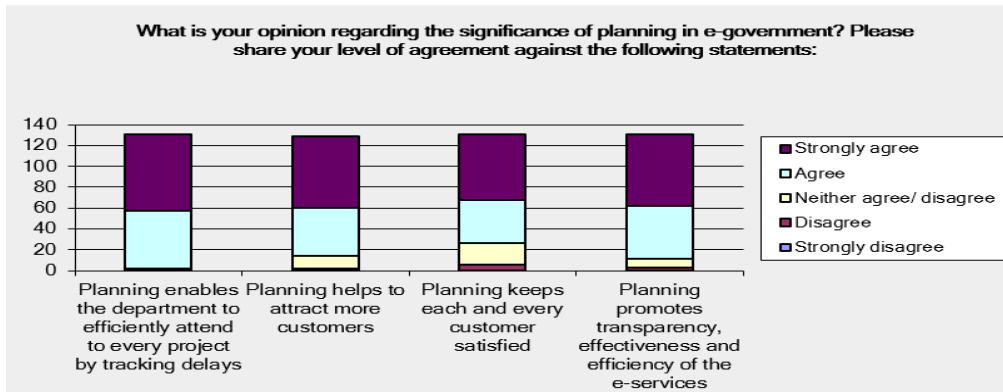
Figure 10: Respondent's opinion regarding the Significance of Planning in E-Government

4.4 FACTORS LEADING TO AN INCREASE OF THE USE OF E-SERVICES

Table 6 & Figure 11 shows that 49.2% respondents strongly agreed that E-services provide expediency and are practical to use and 47.7% agreed to the same. Also 59.1% of the respondents conveyed that services contributes to the technological growth and development in a country.

Please share your level of agreement regarding the factors leading to an increase of the use of e-services:						
Answer Options	**Strongly agree**	**Agree**	**Neither agree/ disagree**	**Disagree**	**Strongly disagree**	**Response Count & Percentage**
E-services provide expediency and are practical to use	64	62	3	1	0	130
	49.2%	**47.7%**	**2.3%**	**0.8%**	**0.0%**	**100%**
E-services are user-friendly and compatible with the mobile devices	63	51	12	4	0	130
	48.5%	**39.2%**	**9.2%**	**3.1%**	**0.0%**	**100%**
E-services are trust worthy and reliable in terms of internet safety	47	39	39	4	1	130
	36.2%	**30.0%**	**30.0%**	**3.1%**	**0.8%**	**100%**
E-services contributes to the technological growth and development in a country	77	47	6	0	0	130
	59.2%	**36.2%**	**4.6%**	**0.0%**	**0.0%**	**100%**

Table 6: Respondent's opinion regarding the factors leading to an increase of the use of e-services
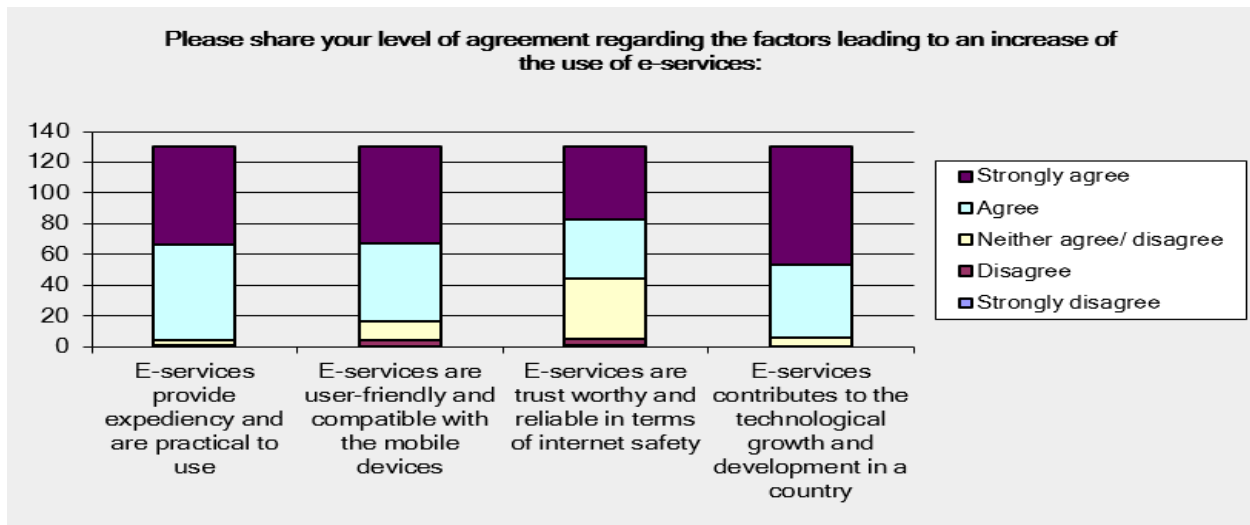
Figure 11: Respondent's opinion regarding the factors leading to an increase of the use of e-services

4.5 BENEFITS OF E-SERVICES

Table 7 & Figure 12 shows that 52.7% respondents strongly agreed that E-services promote structural changes to enable high flexibility and creativity and 41.2% agreed to the same. Also 42.3% of the respondents strongly agreed that e-services create multi-disciplinary teams to promote collaboration and 40.8% respondents simply agreed to this proposition. Respondents also strongly agreed with the propositions that e-services encourage communication and e-services are efficient at balancing the work.

What is your level of agreement towards the benefits of e-services?						
Answer Options	Strongly agree	Agree	Neither agree/ disagree	Disagree	Strongly disagree	Response Count & Percentage
E-services promote structural changes to enable high flexibility and creativity	69	54	6	2	0	131
	52.7%	41.2%	4.6%	1.5%	0.0%	100%
	55	53	20	2	0	130

E-services create multidisciplinary teams to promote collaboration	42.3%	40.8%	15.4%	1.5%	0.0%	100%
E-services encourage open communication among the subordinates	53	49	19	6	2	129
	41.1%	38.0%	14.7%	4.7%	1.6%	100%
E-services are efficient at balancing the work environment	50	57	17	5	1	130
	38.5%	43.8%	13.1%	3.8%	0.8%	100%

Table 7: Respondent's opinion regards the benefits of e-services
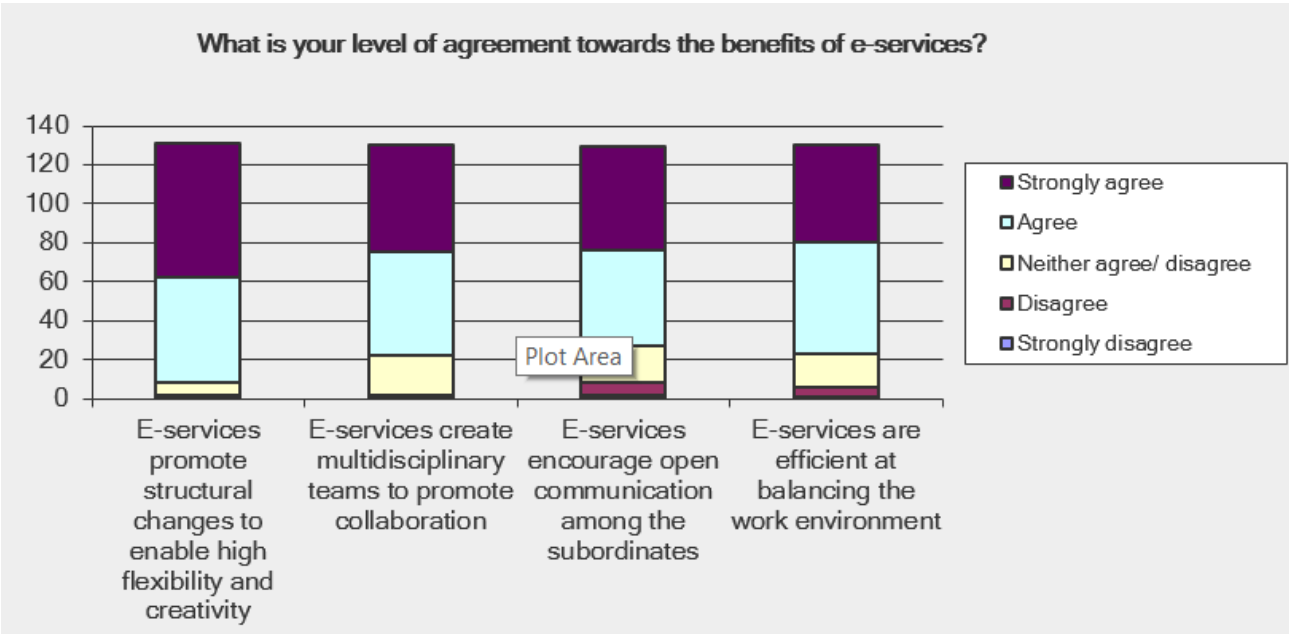
Figure 12: Respondent's opinion regards the benefits of e-services

4.6 CAUSES LIMITS THE SUCCESSFUL IMPLEMENTATION OF E-SERVICE

Table 8 & Figure 13 shows that around 78% respondents agreed that lack of telecommunication, network structure and limited PC access is consider being one of the reasons that limit the successful execution of e-services. Also around 86.9% of the respondents agreed that lack of accessibility of financial resources is the cause that limits the successful implementation of e-services. Respondents also strongly agreed with the propositions that lack of ICT literacy, high

cultural divergence, high cost of business investment and limited network access are the causes
that limit the successful implementation of e-services.

Some of the causes that limit the successful implementation of e-Service are listed below. Please share your views on your level of agreement.						
Answer Options	Strongly agree	Agree	Neither agree/ disagree	Disagree	Strongly disagree	Response Count & Percentage
Lack of telecommunications and network infrastructure and limited PC access	49	62	8	8	2	129
	38.0%	48.1%	6.2%	6.2%	1.6%	100%
Lack of accessibility of financial resources for developing an e-service infrastructure	52	61	12	5	0	130
	40.0%	46.9%	9.2%	3.8%	0.0%	100%
Lack of ICT literacy among the employees	48	54	18	6	4	130
	36.9%	41.5%	13.8%	4.6%	3.1%	100%
High cultural divergence and gender differences among the employees	26	44	30	20	8	128
	20.3%	34.4%	23.4%	15.6%	6.3%	100%
High cost of business investment	40	49	20	20	0	129
	31.0%	38.0%	15.5%	15.5%	0.0%	100%
Limited networking and Internet access	48	56	8	16	2	130
	36.9%	43.1%	6.2%	12.3%	1.5%	100%

Table 8: Respondents' opinion regarding causes that limit successful implementation of e-
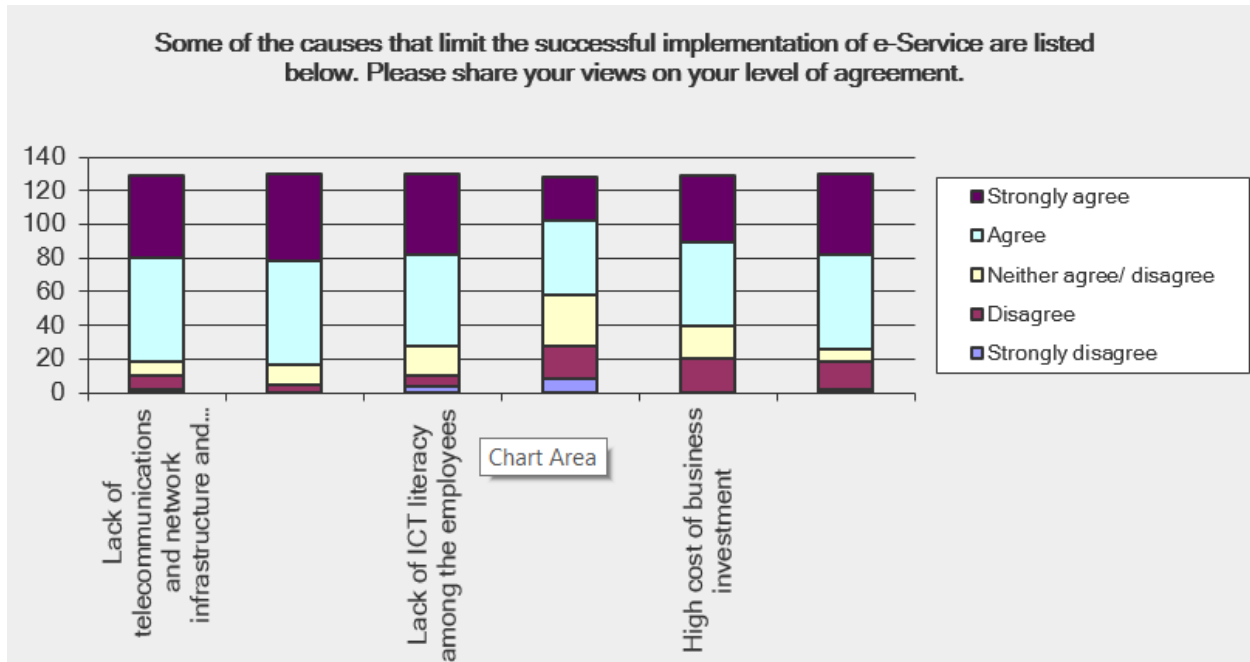services

Figure 13: Respondents' opinion regarding causes that limit successful implementation of e-services

4.7 FACTORS AFFECTING THE DELAYED DELIVERY OF E-SERVICES

Table 9 & Figure 14 show that around 91.5% respondents agreed that poor decision making ability delays the delivery of e-services. Also around 78.9% of the respondents agreed that shortage of funds causes the delays in delivery of e-services. Respondents also strongly agreed with the propositions that ineffective communication skills delay the delivery of e-services, poor management structure delays the delivery of e-services and customer's indecisiveness delays the delivery of e-services.

Factors affecting the delayed delivery of e-services are as follows. What is your level of agreement?						
Answer Options	Strongly agree	Agree	Neither agree/ disagree	Disagre e	Strongly disagree	Respons e Count & Percent age
	60	58	8	3	0	129

Poor decision-making abilities delays the delivery of e-services.	46.5%	45.0%	6.2%	2.3%	0.0%	100%
Shortage of fund delays the delivery of e-services.	52	49	19	7	1	128
	40.6%	38.3%	14.8%	5.5%	0.8%	100%
Ineffective communication skills delays the delivery of e-services	56	57	10	6	0	129
	43.4%	44.2%	7.8%	4.7%	0.0%	100%
Poor management structure delays delivery of e-services	69	41	14	3	1	128
	53.9%	32.0%	10.9%	2.3%	0.8%	100%
Customer's indecisiveness of adopting e-services causes delays	42	51	17	14	3	127
	33.1%	40.2%	13.4%	11.0%	2.4%	100%

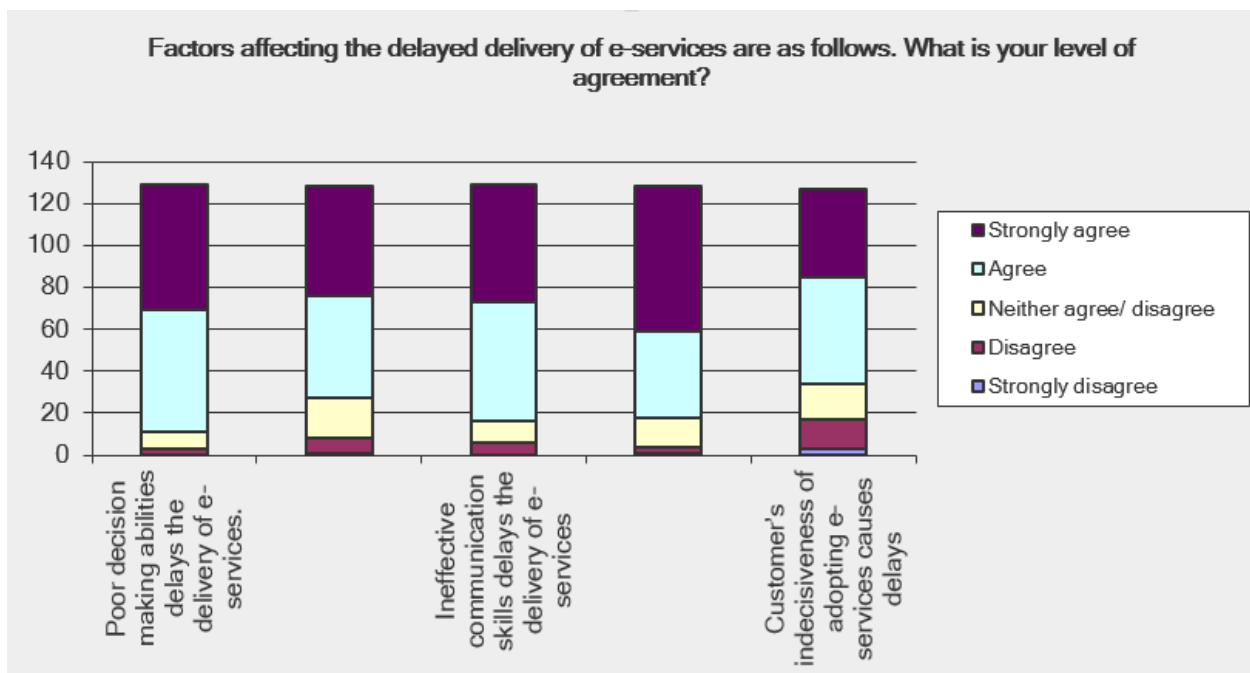**Table 9**: Respondents' opinions regarding delayed delivery of IT services

Figure 14: Respondents' opinions regarding delayed delivery of IT services

4.8   NEED OF COST MANAGEMENT FOR SUCCESSFUL IMPLEMENTATION OF E-SERVICES

The table given below shows the importance of cost management in successful implementation of

e-services:

What is your level of agreement on the following statements regarding the need of cost management for successful implementation of e-services?						
Answer Options	**Strongly agree**	**Agree**	**Neither agree/ disagree**	**Disagree**	**Strongly disagree**	**Response Count & Percentage**
Cost management is required for setting the infrastructure of e-services via Internet connection	55	64	10	2	0	131
	42.0%	48.9%	7.6%	1.5%	0.0%	100%
Cost management is required to maintain the hardware and software components of e-services	56	58	15	2	0	131
	42.7%	44.3%	11.5%	1.5%	0.0%	100%
Cost management is required to manage the legal issues	38	57	24	11	1	131
	29.0%	43.5%	18.3%	8.4%	0.8%	100%
Cost management is required to adapt rapid technology changes	58	53	16	4	0	131
	44.3%	40.5%	12.2%	3.1%	0.0%	100%

Table 10: Respondents' opinions regarding delayed delivery of IT services

4.9 FACTOR ANALYSIS

Factor analysis is a technique through which dimension reduction is done. This means that if we use 11 variables in our research, it might not be possible that all 11 variables are effective for the study. Factor analysis tells us the most important factors, which should be used. We have done principal component analysis to find out what factors are useful for this study and which variables should not be bothered with. In our research, we find out 3 factors that are relevant to our study based on the Eigen values greater than one. However, before factor analysis is ran, we need to find out whether the sample is adequate to run factor analysis. For this, we have to use KMO and Bartlett's test. KMO test is a measure of sampling adequacy and its minimum value should be 0.5. The value of 0.5 indicates that the sample size is just adequate or significant for the study. In our

case, the value of KMO test is 0.803 which indicates that the sample size is significant for the study.

Bartlett's sphericity test is a measure of whether the correlation matrix is an identical matrix or not. The significance value of a Bartlett's test of Sphericity should be below 0.05. In our research, the value is 0.000 which shows that the results are significant and useful.

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.803
Bartlett's Test of Sphericity	Approx. Chi-Square	375.938
	df	55
	Sig.	.000

Table 11: Bartlett's Test

Communalities		
	Initial	Extraction
Lack of telecommunications and network infrastructure and limited PC access	1.000	.548
Lack of accessibility of financial resources for developing an e-service infrastructure	1.000	.749
Lack of ICT literacy among the employees	1.000	.493
High cultural divergence and gender differences among the employees	1.000	.744
High cost of business investment	1.000	.656
Limited networking and Internet access	1.000	.643
Poor decision making abilities delays the delivery of e-services.	1.000	.555
Shortage of fund delays the delivery of e-services.	1.000	.407
Ineffective communication skills delays the delivery of e-services	1.000	.632
Poor management structure delays delivery of e-services	1.000	.609
Customer's indecisiveness of adopting e-services causes delays	1.000	.640
Extraction Method: Principal Component Analysis.		

Table 12: Communalities

This above communalities table (table 12) shows that the extracted values are closer to one which means that these are acceptable. If the extracted values had been smaller than 0.5, then we would have to eliminate those variables.

	Total Variance Explained					
Component	**Initial Eigenvalues**			**Rotation Sums of Squared Loadings**		
	Total	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**
1	4.265	38.771	38.771	2.622	23.833	23.833
2	1.311	11.915	50.686	2.207	20.060	43.893
3	1.101	10.006	60.692	1.848	16.799	60.692
4	.843	7.661	68.353			
5	.678	6.167	74.520			
6	.660	6.004	80.524			
7	.592	5.379	85.902			
8	.512	4.659	90.561			
9	.450	4.092	94.653			
10	.303	2.750	97.404			
11	.286	2.596	100.000			
Extraction Method: Principal Component Analysis.						

Table 13: Total Variance

Table 13 shows that only the first 3 components are important because they had eigen values greater than 1. These components accumulate for almost 61% of the variance in the dependent variable.
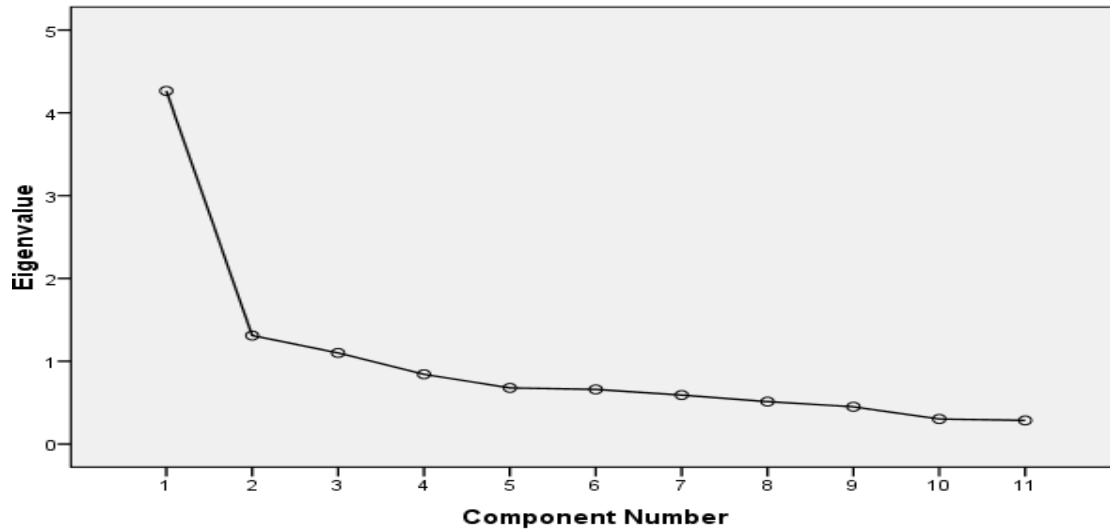
Figure 15: Screen Plot

The scree plot also depicts the components with respect to their Eigen values. It shows that only 3 components out of 11 have Eigen values greater than 1 and the rest of the components are not that much important in this research.

The below table 14 shows Rotated Component Matrix. Rotated component matrix groups the variables with respect to the factors they strongly load in. The below given table shows that first three and sixth variable strongly loads in 1st factor, last three and seventh variable strongly load on factor 2 while third and fourth variable loads strongly on third factor.

Rotated Component Matrix[a]			
	Component		
	1	2	3
Lack of telecommunications and network infrastructure and limited PC access	.673		
Lack of accessibility of financial resources for developing an e-service infrastructure	.854		
Lack of ICT literacy among the employees	.612		
High cultural divergence and gender differences among the employees			.840
High cost of business investment			.691
Limited networking and Internet access	.748		

Poor decision making abilities delays the delivery of e-services.		.705	
Shortage of fund delays the delivery of e-services.			
Ineffective communication skills delays the delivery of e-services		.744	
Poor management structure delays delivery of e-services		.714	
Customer's indecisiveness of adopting e-services causes delays		.549	.581
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.			
a. Rotation converged in 7 iterations.			

Table 14: Rotated Component Matrix

The above given table shows that lack of telecommunication, network infrastructure and limited PC access, lack of accessibility of financial resources, lack of ICT literacy, and limited networking and internet access load strongly on factor one. The rotated component matrix value for lack of telecommunication, network infrastructure, and limited PC access is 0.673 which is higher 0.5. The table above only shows values higher than 0.5 because lower values have been suppressed. Lack of accessibility of financial resources, lack of ICT literacy and limited networking and internet access have values 0.854, 0.612 and 0.748 respectively.

The variables that load strongly on second factor are poor decision making abilities, ineffective communication skills, poor management structure, and customer indecisiveness of adopting e-services. The value for poor decision making abilities is 0.705 which is higher than 0.5. Ineffectiveness of communication, poor management structure and customer indecisiveness of adopting e-services have values 0.744, 0.714, and 0.549 respectively.

The variables that load strongly on third factor are high cultural divergence and gender differences, and high cost of business investment. The value for high cultural divergence and gender differences is 0.840 while value for high cost of business investment is 0.691. These values are above the value of 0.5 indicating that these variables load strongly on factor 3.

The last table of factor analysis is component transformation matrix. Component transformation matrix displays the correlations of the extracted factors. This is shown below in the below table number 15:

Component Transformation Matrix			
Component	1	2	3
1	.689	.554	.467
2	-.294	.803	-.518
3	-.662	.219	.717
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.			

Table 15: Component Transformation Matrix

4.10 REGRESSION ANALYSIS

Regression applied to test the two hypotheses devised for this study. The first hypothesis of this study was to check whether delays in IT projects negatively impact on the effectiveness of e-services while the second hypothesis was to test whether delays in deliver of IT projects are caused by shortage of funds, poor decision making abilities, poor management structure and ineffective communication skills. Regression analysis is done on SPSS software and the results are given below:

4.10.1 TESTING 1ST HYPOTHESIS

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.177[a]	.031	.023	1.14055
a. Predictors: (Constant), DelaysindeliveryofITprojects				

The given summary table indicates that there are two significant values for R and R^2. R shows about that how the different variables are dependent or independent and how they are correlated. When the given case is considered then it is seen that the given variables are weakly correlated with one another. The value is 0.177 and it is below 0.50 that is considered to be the minimum requirement for correlation. The value of R^2 shows that how the variance in the dependent variable is explained by the different independent variables. The value in the given case is 0.031 that is a weak indicator as the independent variables only shows 3.1% variance in dependent variable.

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.032	1	5.032	3.868	.052^a
	Residual	154.803	119	1.301		
	Total	159.835	120			
a. Predictors: (Constant), DelaysindeliveryofITprojects						
b. Dependent Variable: EffectivenessofITprojects						

The given table for ANOVA shows that how effectively the regression model has provided the explanation related to the dependent variable. Here the significant value is 0.052 that is good as the minimum value that is acceptable is 0.05 hence the model is insignificant therefore the regression model has not explained about the dependent variable.

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3.154	.341		9.249	.000
	Delays in delivery of IT projects	.072	.036	.177	1.967	.052
a. Dependent Variable: EffectivenessofITprojects						

The coefficients table shows the significance of the independent variables in predicting the value of the dependent variable. The coefficients table indicates that the results for delays in delivery of IT projects are not significant in predicting effectiveness of IT projects. This is because delays in delivery of IT project have a significance value of 0.052 which is a little above 0.05. Although the t-statistic of the variable is more than ±1.96, the significance value tells us that the results are not significant at 5% level of significance. However, the results are significant at 10% level of

significance. Nevertheless, cut-off point of level of significance for our study is 5% which means that delays in delivery of IT projects are not significant in predicting the effectiveness of IT projects. This indicates that we have to reject out first hypothesis that delays in delivery of IT projects cause negative impact on effectiveness of IT projects.

4.10.2   TESTING 2ND HYPOTHESIS

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.523[a]	.273	.240	2.85925
a. Predictors: (Constant), Customer's indecisiveness of adopting e-services causes delays, Poor management structure delays delivery of e-services, Shortage of fund delays the delivery of e-services., Ineffective communication skills delays the delivery of e-services, Poor decision making abilities delays the delivery of e-services.				

The summary table indicates that there are two significant values; R and R^2. The value of R indicates that how the independent and dependent variables are in correlation. In the given case, both the variables are correlated to each other. The value obtained in 0.523 that is a little greater than the minimum required value for correlation. The value of R^2 indicates that how the variance related to dependent variables is explained by independent variables. The value in this case is 0.273 that shows that it is a strong indicator as the independent variable provides the explanation that 27.3% of the variance is in the dependent variable.

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	337.710	5	67.542	8.262	.000[a]
	Residual	899.282	110	8.175		
	Total	1236.991	115			
a. Predictors: (Constant), Customer's indecisiveness of adopting e-services causes delays, Poor management structure delays delivery of e-services, Shortage of fund delays the delivery of e-services., Ineffective communication skills delays the delivery of e-services, Poor decision making abilities delays the delivery of e-services.						
b. Dependent Variable: CausesfordelaysinimplementationofITprojects						

ANOVA table provides the explanation related to the regression model that how well it has explicit the dependent variable. Here, the significance value is very important. In the given case the significant value is 0.000 that is considered to be effective as the minimum acceptable significant value is 0.05 and if the obtained value is below to the significant value then the model is considered to be significant. This indicates that the regression model provides the effective explanation related to the dependent variable.

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.449	.881		5.049	.000
	Poor decision making abilities delays the delivery of e-services.	.103	.469	.021	.221	.826
	Shortage of fund delays the delivery of e-services.	1.138	.352	.305	3.237	.002
	Ineffective communication skills delays the delivery of e-services	.729	.401	.174	1.818	.072
	Poor management structure delays delivery of e-services	.410	.396	.098	1.035	.303
	Customer's indecisiveness of adopting e-services causes delays	.392	.340	.113	1.154	.251

a. Dependent Variable: CausesfordelaysinimplementationofITprojects

The coefficients table shows the significance of the independent variables in predicting the value of the dependent variable. The coefficients table shows that only shortage of funds is significant in predicting the dependent variable. This is because shortage of funds has a significance value of 0.02 which is below 0.05 and the t-value is 3.237 which is more than ±1.96. Other variables such as ineffective communication, poor management structure, customers' indecisiveness of adopting e-services and poor decision making has significance values above 0.05. This shows that these variables are not significant in predicting the delays caused by these variables.

For the regression analysis, we have transformed the questions related to the causes that limit the successful implementation of e-services. This transformed variable serves as the dependent variable for the second hypothesis. Dependent variable in the second hypothesis is delays in the implementation and delivery of e-services. The transformed variable is named as causes for the delays in implementation of IT projects. This variable combines all the causes that limit the implementation of IT projects.

When regressed with independent variables, it tells us whether experts think that causes that limit the successful implementation are high when poor decision-making abilities, shortage of fund, ineffective communication skills and poor management structure are evident. The results show that the causes that limit the successful implementation of IT projects are high only when there is shortage of fund. The results are only significant for the variable shortage of funds because its significance value is less than 0.05.

The results for poor decision making abilities, ineffective communication skills, poor management structure and customer indecisiveness of adopting e-services are not significant with p-values more than 0.05. The p-value of poor decision making abilities is 0.826; p-value for ineffective communication skills is 0.072, p-value for poor decision making abilities is 0.303 while p-value for customer's indecisiveness of adopting e-services is 0.251. This shows that the results for these variables are insignificant.

Overall, ANOVA table shows that predictor variables are efficient in predicting the dependent variable. The ANOVA table results have a significance value of 0.000 below the minimum threshold of 0.05 which shows significant results. This means that we have to accept our second hypothesis because sufficient evidence is available to prove that delays in delivery of IT projects are caused by lack of decision making abilities, ineffective communication among employees,

shortage of funds, poor management structure and customer indecisiveness of adopting e-services. Although very little variation in dependent variable is explained by the independent variables, predictor variables efficiently predict the dependent variable.

5. CHAPTER FIVE: CONCLUSION

With the rapid expansion of technology and e-services, there was a need to study the importance of e-services for the govt. of UAE as UAE is considered pioneer in adopting new e-services in the MENA region. This study was conducted to fill this gap. This research study focused on identifying whether experts think that e-services provide the expected benefits to UAE or not. This research was also conducted to identify the causes that limit the successful implementation of the IT projects and causes for the delays in delivery of e-services.

The research employed quantitative research approach to collect and analyze the data. Factor analysis and Regression analysis were applied on the data to conclude results. Two hypotheses were devised for this study. First hypothesis was related to identifying whether the delays in delivery of e-services negatively impacts the effectiveness of the e-services while the second hypothesis was to test whether shortage of funds, poor decision making abilities, ineffective communication skills and poor management structure are the primary causes of delays in delivery of IT services.

We ran factor analysis to reduce the variables for the delays in delivery of IT services and the causes for delays in delivery of IT services. The results of factor analysis show that out of the 11 variables included in the study, only three factors are extracted based on the Eigen values greater than 1. These 11 variables load strongly on these 3 factors. There is no need to use all 11 variables for the study, three variables can be used which explain the most variance. The total variance explained table of factor analysis shows that the first factor explains around 20.8% of the variance, second factor explains 20.1% of the variance while third factor explains 16.8% of the variance. These three factors cumulatively explain 60% of the variance in the data.

The second most important thing in the factor analysis is the rotated component matrix table. Rotated component matrix groups the variables with respect to the factors they strongly load in. Rotated component matrix table shows that lack of communication, network infrastructure and limited PC access, lack of accessibility of financial resources, lack of ICT literacy and limited networking and internet access load strongly on first factor while poor decision making abilities, poor management structure, ineffective communication skills load strongly on second factor. Variables that load strongly on third factor include high cost of business investment, and high cultural divergence and gender differences.

After running factor analysis, we applied linear regression to test the two hypotheses. First hypothesis of this study was to test whether delays in delivery of e-services negatively impacts the effectiveness of e-services projects. The results of the regression analysis indicate insignificant results at 5% level of significance although the results were significant at 10% level of significance. The p-value of ANOVA table was 0.052, slightly above than 0.05, our cut-off point for 5% level of significance. This p-value indicates that the results are insignificant and delays in deliver of e-services cannot any negative impact in the effectiveness of e-services. The results are contrary to our hypothesis which means that we have to reject our first hypothesis that delays in delivery of e-services negatively impact the effectiveness of e-services.

Our second hypothesis was to test whether ineffective communication skills, shortage of funds, poor management structure and poor decision making abilities cause delays in delivery of IT services. Overall, the results of regression analysis are significant. ANOVA table results show significant results indicating regression equation is a good predictor of dependent variable which is delays in delivery of IT projects. The p-value in ANOVA table is 0.000 which is below 0.05 indicating significant results. These results show that regression equation effectively predicts the

dependent variable. However, the coefficients table shows that only shortage of funds has significant impact on causing delays in delivery of IT services. The p-value of shortage of funds is 0.02 which is less than 0.05 and indicates significance in predicting delays in delivery of IT projects. All other variables have p-values above 0.05 which indicates insignificance in predicting delays in delivery of IT projects. Based on the regression results, we have sufficient evidence that delays in delivery of IT projects are caused by ineffective communication skills, shortage of funds, poor management structure and poor decision making abilities. Therefore, we have to accept our second hypothesis.

5.1 FUTURE RESEARCH

As the present research only tells us which factors are causing delays in delivery of IT projects without consideration of any particular industry; there are many recommendations for future research. The future studies should focus on predicting the main factors for delay in IT related projects along with comparing different software houses to compare the causes and predicting factors for the delay in IT related projects. Odds ratio along with CIs should be calculated in future to see predicting factors for the delay by taking into the consideration the outcome variable that is Delay in IT related projects.

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APPENDIX

A Study of Exploring the Causes of Deviation and Improving the Delivery of IT Projects in UAE Federal Government Sector

Questionnaire

1. **What is your age**?
    - o   18 to 24
    - o   25 to 34
    - o   35 to 44
    - o   Above 45

2. **What is your gender?**
    - o   Male
    - o   Female

3. **What is your educational background?**
    - o   Higher secondary
    - o   Bachelor
    - o   Master
    - o   PhD

4. **What is your work experience?**
    - o   0-1 year
    - o   1-5 years
    - o   5-10 years
    - o   Above 10 years

5. **Please share your opinion regarding the importance of successful implementation of e-services:**

S. No	Statements	Very Important	Important	Not Important

1	E-services facilitates a capable and transformational ability			
2	E-services helps to expand dynamic native cooperation in government operations			
3	E-services provide alternative ways of working to promote innovation			

6. What is your opinion regarding the significance of planning in e-government? Please share your level of agreement against the following statements:

S. No	Statements	Strongly disagree	Disagree	Neither agree/ disagree	Agree	Strongly agree
1	Planning enables the department to efficiently attend to every project by tracking delays					
2	Planning helps to attract more customers					
3	Planning keeps each and every customer satisfied					

| 4 | Planning promotes transparency, effectiveness and efficiency of the e-services | | | | | |

7. Please share your level of agreement regarding the factors leading to an increase in e-services:

S. No	Statements	Strongly disagree	Disagree	Neither agree/ disagree	Agree	Strongly agree
1	E-services provide expediency and are practical to use					
2	E-services are user-friendly and compatible with the mobile devices					
3	E-services are trust worthy and reliable in terms of internet safety					
4	E-services contributes to the technological growth and development in a country					

8. What is your level of agreement towards the benefits of e-services?

S. No	Statements	Strongly disagree	Disagree	Neither agree/ disagree	Agree	Strongly agree
1	E-services promote structural changes to enable high flexibility and creativity					
2	E-services create multidisciplinary teams to promote collaboration					
3	E-services encourage open communication among the subordinates					
4	E-services are efficient at balancing the work environment					

9. **Some of the causes that limit the successful implementation of e-Service are listed below. Please share your views on your level of agreement.**

S. No	Statement	Strongly disagree	Disagree	Neither agree/ disagree	Agree	Strongly agree
1	Lack of telecommunications and network infrastructure and limited PC access					
2	Lack of accessibility of financial resources for developing an e-service infrastructure					
3	Lack of ICT literacy among the employees					
4	High cultural divergence and gender differences among the employees					
5	High cost of business investment					
6	Limited networking and Internet access					

10. Factors affecting the delayed delivery of e-services are as follows. What is your level of agreement?

S. No	Statements	Strongly disagree	Disagree	Neither agree/ disagree	Agree	Strongly agree
1	Poor decision making abilities delays the delivery of e-services.					
2	Shortage of fund delays the delivery of e-services.					
3	Ineffective communication skills delays the delivery of e-services					
4	Poor management structure delays delivery of e-services					
5	Customer's indecisiveness of adopting e-services causes delays					

11. What is your level of agreement on the following statements regarding the need of cost management for successful implementation of e-services?

S. No	Statements	Strongly disagree	Disagree	Neither agree/ disagree	Agree	Strongly agree
1	Cost management is required for setting the infrastructure of e-services via Internet connection					
2	Cost management is required to maintain the hardware and software components of e-services					
3	Cost management is required to manage the legal issues					
4	Cost management is required to adapt rapid technology changes					