

# The Future of E-government in Saudi Arabia

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**Abstract.** E government is representing paradigm shift in governments' conduct of its business and delivery of service to their citizens. The concept includes utilizing information and communication technology to provide government services. The subject of e government across the globe has received immense discussion, especially on governance. However, little has featured about the e-government of the Asian countries. This paper discusses and explores E-governance of Asia countries and mainly focuses on the case of Saudi Arabia. We quests to achieve this by conducting online, physical and one on one survey with a number of Saudi nationals. While most researches are chosen from the local areas, we have also surveyed Saudi nationals living and working abroad. This is done on the premise that future of e-government in Saudi Arabia will impact both local and abroad Saudi nationals. Moreover, the researcher has reviewed most recent academic journals and other scholastic materials covering the subject of e government. Issues which are explored include e governance, social, economic, political, technological and legal environment. Further, we intend to review the successes, limits and challenges of e governments among trend setting nations such as Korea, Kenya and some European nations. Data gathered was analyzed using SPSS 2.0 software and presented in tables, pie charts and graphs. It is expected that this research will provide an indispensable roadmap to policy makers in Saudi Arabia in designing the future of e government in Saudi Arabia.

**Key words:** E government, Information Communication Technology, Government services, social, economic, political, technological and legal environment.

## 1 INTRODUCTION

The explosion of information and communication technology, evolution of smartphones and adoption of mobile telephony by masses across the world has brought about paradigm shift across different spheres of life. The impressive power of communication and information technology as well as technological advancements in unison have transformed the way people communicate, learn and transact business with government and private sector. For instance, internet one of the ICT tools has revolutionized peoples' connections and interactions across the world. According to Fredrick Sand the United Nations (2015), the telephone took 75 years to reach over 50 million users but the World Wide Web has surprisingly taken merely 4 year to hit the same number of users. In an effort to enhance service delivery to its citizenry, governments have resulted to use of ICT giving birth to E-government.

### 1.1 Definition of e-government

According to (David McClure 2010), electronic government describes the government's use of information technology and especially web based and mobile based applications to ensure quick, easier and enhanced delivery and access of government services and information to its citizenry,

employees, business partners and other entities and business. Therefore, e-government describes a smarter approach to making smaller and smarter government, improving service delivery and empowering the citizens with tools to access and interact with the government (*internetworldstats*). As a result, the citizens can get cheaper, faster, better, more transparent and more accessible government services. The components of e-government according to (Turban et al. 2012) include:

1. Promotion of civic engagement through empowering the public to participate in discussions and interactions with government officials
2. Provision of greater access to government services and information
3. Provision of development opportunities and in particular rural development and availing benefits to conventionally undeserved communities.
4. Ensuring a more transparent and accountable government through transparent operations thereby reducing corruption and wastage

(Anersen&Henriksen 2015) defines e-government as a peculiar form of electronic business with special characteristics and objectives. According to the duo, e-government uses the web, mobile and internet based technologies to avail government services online to other government agencies, business and citizens with the aim of achieving economic benefits.(Alshehri, Drew &Alfarraj 2012) observes that e-government represents a paradigm shift in the entire public sector structure, culture, values and the approaches of conducting business through application of the potential of the information communication technology as the primal tool in a government establishment. The trios' observation echoes the Organization for Economic Cooperation and Development (OECD) who define e-government as the application of ICT technologies and especially the internet as a means to realize better government.

E-government provides public services to persons within its authority to electronically transact with the government (Al-Khateeb, Faloudah, Bahumayd&Zafar, 2015). The services offered vary with the different needs of its users. Of essence, the diversity in user needs has resulted to different types of e-government such as government to citizen (G2C), government to employees (G2E), government to business (G2B) and government to government (G2G) (Carter & Belanger, 2015).

According to (Pankowska 2015), much of the current perception on e-government revolves around great efficiency and quality in delivery of public services built on user centricity, knowledge based, distribution and network. In the European Union, for instance, the e-government vision in the next decade centrally places e-government at the cradle of modernization of public management and reform (Al-Khalifa, 2010). Technology is also seen as a strategic tool to revolutionize public administrations' structures, regulatory framework, processes, human resources and culture. They are geared towards better provision of advanced governments and ultimately increased public value.

(Benkert 2014) argues that modern e-government is more about the government at 80% than 'e' at 20%. (Mehra 2015) concedes that in e-government, the technical component is the easiest and as such governments must reorganize their internal structures and reengineer their administration. In today's governments, the primal challenge is how they identify, manage, venerate citizens and equally and effectively serve them. As a result, most people perceive e-government as a fundamental reformation tool to exacerbate wastages, corruption, develop democracies, increase efficiency, save on time, ameliorate ICT infrastructure and improve quantity and quality of services (Alghamdi&Beloff, 2014). It is in this regard that information will be held secretly but instead shared equally to become public access and right. As a result, citizenry expect and demand instant diffusion of useful and valuable information through advanced internet connection speeds therefore reducing costs for the citizens as well as the government and create trust amongst them (Kaaya, 2013).

According to (Alkhlewi, Walters & Wills 2015), e-government evaluation framework development began in 2000. Major scholastic materials such as universities, official organizations and consultants list the four frameworks to include:

- a) Accenture in 2000 applied e-government across 22 developed countries
- b) Brown University in 2001 applied worldwide
- c) United Nations in 2002 applied worldwide
- d) Cap Gemini Europe also in 2002 applied e-government across European countries

According to (Bauerlein, 2011), the UN benchmarking research, the e-Europe benchmarking project, the Accenture e-government benchmarking study and the Brown University study ranked countries for implementation of e-government. These reports are profusely media hype naming country X as leading and country Y as falling behind without accounting for major e-government implementation measures crucial in scope of full framework of e-government.

## **2.0 E-GOVERNMENT IN SAUDI ARABIA**

As a testament, the 2011 uprisings and riots in Middle East portrayed the new global governance standards where citizens in developing countries demand more accountability and better performance of their governments. In Saudi Arabia, a majority of government services are provided by offices with same working hours as private companies and educational institutions. Consequently, long lines for hours and days are obvious norms as the clerks are often buried in paperwork. As a result, e-government implementation and the future it holds for the citizenry is paradisiac (Basamh, Hani & Mohd, 2014)). It promises to exacerbate worn out productivity, wasted effort, frustration, money and time. Saudi masses will independently perform their tasks with several clicks whenever and wherever they want no matter the time of the day or night. In this regard, e-government in Saudi Arabia is a necessity but not a luxury.

The Saudi government in 2001, established the Telecommunication Commission followed by creation of Ministry of Information Communication and Technology and initiation of e-government “Yesser” program in 2003 (A-Sabti, 2013). The latter was launched officially in 2005. In Arabic, “Yesser” stands for “make it easy”. The program marked the benchmark for enabling and facilitating transformation of public sector into an information society. Each government agency was tasked with actual execution of its own website. As at today, each of the 22 government ministries has a website. The Al Nuaim’s study revealed that 21% (8) of the ministries failed to implement the chief properties of an e-government website. Furthermore, 45.4% of the websites were partially completed in the first stage. Still, 13.6% of the ministries’ websites were in second stage while 27.2% of the ministries did not have an online presence. In 2006, Yasser’s five year plan budget stood at \$3 billion and aimed to have at avail 150 top priority services to Saudi citizenry and residents 7 days a week for 24 hours, a user satisfaction level of 80% and 75% usage level.

The UN’s Telecommunication infrastructure index ranked Saudi Arabia’s e-readiness as low as 0.119 in 2003, 0.139 in 2004, 0.145 in 2005 and 0.2110 in 2008. The internet use in 2000 in Saudi Arabia stood at merely 200,000 which bulged to 2540000 in 2007. By 2011 internet usage in the Kingdom had shot to 70% of the population representing an optimistic future for adoption and implementation of e-government in the kingdom. The Kingdom’s rank in e-government implementation shot in 2010 when the UN’s benchmarking report put Saudi Arabia on position 58 up from 78.

## **3.0 RESEARCH METHODOLOGY**

The researcher in this research study adopted quantitative research method applying survey questionnaires to gather data. The survey included an interpretive study comprising of sample populations gathered from employees from government, IT departments and members of Saudi Arabia’s general public residing in the country and abroad. According to (Neuman 2016), survey

questionnaire data collection method is popular and widely used instrument for documenting participants responses to the research questions asked in a predetermined order. The researcher undertook a rigorous questionnaire design to provide a reliable and validated measure to the research in addition to ensuring crystal clear understanding for participants and accurate answers and most appropriate responses (Al-Shareef, 2013; Al-Smmary, 2015; Al-Solbi& Al-Harbi, 2015). The research survey aimed at assessing the perception of the Saudi citizenry's perception towards the e-government infrastructure in the kingdom. In addition, the survey sought to identify challenges and strengths of the system in view of providing suitable recommendations to policy makers to better improve the e-government system.

### 3.1 Research Survey

Here we present a summary of the research survey that we have conducted to conclude our findings. These analysis of this survey is presented in the following section.

**Table 1.0 Survey Questions**

No	Question
1	The e-government websites are efficient in processing my requests such as downloading application documents
2	The government websites and portals require minimal efforts in undertaking tasks to completion
3	I find the government's web portals and websites to be flexible to interact with.
4	I find the government's web portals and websites to be flexible to interact with.
5	The government websites and portals provide real time feedback about all processes and status
6	It is easy to make the government's web portals and websites do exactly what I want
7	The government's web portals and websites provides a mechanism for reviewing, confirming, and correcting information before finalizing forms for submission.
8	I find the time that government's web portals and websites take to download files suitable.
9	As a user, I'm satisfied with the functionality of the Government's web portals and websites
10	I am satisfied with the support information (online-line help messages, documentation) provided with this government's web portals and websites

Part one contained personal and basic information about the respondents. Part two contained usability, effectiveness, functionality, learnability, usefulness, accessibility, security and flexibility of the e-government system in Saudi Arabia, it used a roster scale of 5 with strongly disagree = 1, Disagree = 2, Neutral = 3, Agree = 4, Strongly agree = 5

### 3.2 Targeted Respondents

Prior to administering the survey questionnaire, the researcher clarified to the respondents on the purpose and direction of filling responses out. The survey was distributed at public places such as shopping centers, public universities, public offices, cyber cafes and shared online. A link to the online survey was shared across social media forum for Saudi nationals abroad.

### 3.3 Survey structure

The survey was organized in two parts, namely Part 1 and Part 2 covering demographical information and assessment of e-government infrastructure respectively. Demographic details covered the particulars of the respondents such as gender, age, level of education, occupation, knowledge of computer and language skills. Part two stretched from subsection a to subsection g. It assessed the e-government system in Saudi Arabia on usability, effectiveness, functionality, learnability, usefulness, accessibility, usability, flexibility and universality. The researcher targeted

105 respondents from local and diaspora scene. The researcher received 96 fully answered and deemed them sufficient to use in data analysis. Data gathered was subjected to SPSS 2.0 software for analysis. Selected variables were tested through exploratory, inferential and descriptive statistical analysis.

#### 4.0 DATA ANALYSIS AND DISCUSSION

The researcher highlights in this section the principal findings as well as indications to answer the research question subject to the survey results.

##### 4.1 Demographic Information

96 respondents were involved in the findings. The section presents the descriptive and inferential statistics of this study used to test the hypothesis and as analyzed using SPSS 2.0 software. The researcher assumed that the respondents had accessed, used or explored any of the websites for the government's ministries and agencies. 59 of the respondents were male while 37 were female. 52.09% of the respondents were aged between 18 and 35 years representing a youthful respondent. The rest were aged between 36 and 61 years. More than 50% of the respondents had more than 4 years' experience using computers and the internet.

The following tabulation summarizes the demographic information of the respondents.

##### 4.2 Reliability and Validity of Data

The researcher adopted the Cronbach's Alpha to test the reliability of responses in the questionnaire. The Cronbach's Alpha was set at 0.939 and using 32 item. It was applied to assess the reliability of each of the 8 attributes. The result of the survey was found to be highly reliable because the value was above 0.5. Similarly, all Cronbach's Alpha for all the 8 attributes were higher than 0.5 implying that the results of the survey questionnaire in each of the attributes were reliable. The Cronbach's Alpha is a measurement model that exhibits the relationship between responses to each attribute and their underlying latent construct. The researcher further introduced convergence validity measure to assess the degree to which several attributes used to measure the same concept agree. Convergent validity in this case is considers composite reliability, factor loadings and average variance.

The researcher further paired the samples *t* tests to assess the users' overall degree of dissenting or assenting to the usability, effectiveness, functionality, learnability, usefulness, accessibility, safety, flexibility and universality of e-government infrastructure in Saudi Arabia.

Table 2

Variable		Frequency	Percentage
Gender	Female	37	38.54%
	Male	59	61.45%
Age (years)	18 – 25	29	30.21%
	26 – 35	27	28.13%
	36 – 45	21	21.88%
	46 – 55	15	15.61%
	56 – 65	3	3.12%

	Over 65	1	1.04%
Education	Doctorate	1	1.04%
	Masters	2	2.08%
	Bachelor	66	68.75%
	Diploma	21	21.88%
	High School	5	5.21%
	Other	1	1.04%
Computer Skill & Knowledge	Very good	11	11.46%
	Good	36	37.50%
	Moderate	48	50.00%
	Poor	1	1.04%
Level of Experience	1 – 5 years	43	44.79%
	6 – 10 years	47	48.96%
	11 – 20 years	5	5.21%
	Over 20 years	1	1.04%

### 4.3 Overall Reaction Ratings

Incidentally, 6 of the eight parameters used to measure the overall ratings of the governments' websites and online portals rated higher than the mean response ( $M = 0.617$ ). Two factors namely: usefulness and accessibility of the e-government system in Saudi Arabia rated lower than the mean response implying that additional scrutiny was necessary. The researcher therefore concluded that Saudi Arabia citizenry that used the e-government infrastructure found the government websites as deficient in scale of operations and were somewhat inaccessible. Overall, it was strikingly evident from the responses that government websites are outstandingly flexible and can be accessed from anywhere across the globe ( $M = 0.816$ ). The table above summarizes the mean score for each of the attributes.

### 5.0 CONCLUSIONS

Initial results of this survey indicated that the Saudis are more than welcoming and embracing e government. They are impressed and satisfied with the functional websites and government portals. In addition, they agree that e government is the future for innovative and transformational governments. Government's use of technology was found to be a use and powerful tool despite flaring accessibility and usability functions. Still, the researcher observed that evaluating the websites against each of the eight parameters demands meticulous planning and is a time consuming venture. There is more that the Saudi government needs to cover to realize in full the objectives of Yesser project. In spite, the researcher feels greatly compensated by the achieved results of this study.

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