

# Nature and Quality of Smart Government Services: The Case of the UAE

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#### **ABSTRACT**

The aim was to identify the critical factors that influence the development of eServices and also to examine the theories relevant that can help in providing a theoretical framework for smart government and eServices. The study also explores the critical factors that influence and effect smart government in the UAE. To be resolve these objectives and to answer the research question the study explored the Technology Acceptance Theory and the Diffusion of Innovation theory, this study arrives at a conceptual framework and theoretical model that provides the aspects of smart government which must be looked at in order to successfully and effectively address the provision of eServices. The framework discussed shows what the relevant factors which contribute to the intention and decision to use eServices are. With the use of a Likert scale based questionnaire data was gathered and analyzed to reach a conclusion.

Keywords: Quality; Smart Government; Services.

# INTRODUCTION

The information revolution and the genesis of a society reliant upon information has brought about an age where Information Communication Technology (ICT) reigns supreme as a radically different infrastructure upon which modern society is based. The internet, the largest man-made machine, has driven change in all spheres of activity, however, not until the previous decade did governments hone the internet and use it as a mechanism for more enhanced and efficient services. These are termed 'smart government services', 'eServices', or 'online services' which are delivered to the service-seeker in order to fulfill a specified set of needs and requirements. The research incorporated into this study focuses on elaborating the nature of the smart government initiative taken by the United Arab Emirates (UAE). It considers the salient features of a smart government and provides an insight into the characteristics, styles of work, services provided, and effect of smart government services in the UAE.

#### BACKGROUND

United Arab Emirates (UAE), on 5th April 2000, announced its intention to give rise to a modern economy founded upon the principles of trade and tourism in order to allow the UAE to become self-sustainable in the face of rapidly depleting oil reserves(1). The decision to construct an online Dubai Government based on the web was a rational step towards transforming the government, mechanism of service delivery, and community interaction. In a rapidly evolving world, the UAE honed the digital revolution and became part of the digital race(3).



SMART services

Figure 1: Research funnel



### **AIMS**

Through developing the literature on eServices, smart government, and discussing the proposed theories used to analyze smart government implementation, this study will fulfill the following aims:

- 1. To identify the critical factors that influence the development of eServices,
- 2. To examine the theories relevant that can help in providing a theoretical framework for smart government and eServices.
- 3. To investigate the critical factors that influence and effect smart government in the UAE.

#### **OBJECTIVES**

The objectives of this study are as follows:

- 1. To identify and explore the elements of smart government in the UAE and the nature of eServices,
- 2. To compile the present literature on smart government and relate it to eServices in the larger context,
- 3. To provide a theoretical framework for implementing smart government and eServices.

### RESEARCH QUESTION

**RQ:** What is the nature and quality of smart government services and what theories explain them?

#### ORIGINALITY OF THE STUDY

The originality of this study is a result of its unique focus on eServices and eService delivery as part of smart government(3). Whereas past studies have limited their focus to the implementation of smart government, the consequences and impact of smart government initiatives, and the efficacy of smart government, this study limits the focus to eServices and analyzes it from the philosophical standpoint of theories and approaches to smart government (3,6,11). These theories are, as mentioned previously, the TAM theory and DOI theory. Both theories combine to provide uniquely relevant contributions to the smart government literature and have important ramifications for eServices and eService delivery.

# SIGNIFICANCE OF THE STUDY

The significance of this study is derived from its discussion of smart government, the internet, and ICT(11). This discussion aspires to be a distinct contribution to the body of knowledge regarding online service delivery by providing an original contribution that tests the ideas of smart governance in the UAE(18). Moreover, this research addresses the initiative of smart governance and e-governance in the UAE and looks at how service delivery to citizens has been transformed through the initiative. This research will firstly address the experience of eServices by the main stakeholders in the context, namely the citizens, businesses, and government employees.

Due to the fact that smart government initiatives are currently aimed at revamping the conception of governance and introducing new ways of catering to the needs of citizens, this study becomes more significant as it puts the focus on the government itself to see how well they are providing services to their citizens and in what ways smart government can help the government to provide services to people and to make them more easily accessible (11,3).

### **RESEARCH HYPOTHESIS**

Based upon the research objectives and the research questions, the following research hypothesis are formed.

H1o: Compatibility of use has a significant impact on the Perceived Ease of Use of E-services

H2o: Trust on e-Services and it Compatibility has a significant impact on the Perceived Ease of use of E-services

### CONTRIBUTION TO KNOWLEDGE

The results and findings of this study will contribute to the development of the body of knowledge regarding smart government(14). It will have a significant impact on the smart government and e-government literature as it will discuss relevant theories provided by different researchers and compile them into a coherent framework that will be beneficial for future studies and initiatives in smart government(6). Since the primary focus of this study is on the UAE, it will



have relevant contributions for the UAE academia as it will show how barriers to service delivery in the context of the Middle East can be resolved.

#### CONTRIBUTION TO PRACTICE

The primary aim of this study is to produce a theoretical framework that can be used for designing smart government initiatives when it comes to planning and mapping eServices. It will express the perceptions of relevant stakeholders such as the citizens, government officials, and businesses in order to promulgate the UAE body of knowledge regarding smart government(3). The theoretical framework provided as a result of this study will be critical to the future of smart government and further initiatives taken by the UAE.

### KNOWLEDGE GAP



Figure 2: Knowledge gap.

Figure 2 illustrates that the two stark knowledge gaps for smart government in the UAE stem from the focus of previous studies entirely on traditional forms of e-governance and illustrating the evolution of e-governance to other initiatives such as m-governance(11,3). Moreover, the focus has entirely been on analyzing either the effectiveness, efficiency, or implementation of e-governance while analyzing it entirely from the point of view of the public sector(3). The private needs of citizens are not considered or discussed. As a result, this study fulfills the knowledge gap by considering the citizens, looking at the aspect of eServices, and contextualizing eService provision to the needs of citizens.

#### LITERATURE REVIEW

#### **SMART GOVERNMENT IN UAE**

Smart government in UAE is the leading smart government initiative within the UAE currently in its utilization of Information and Communication Technology (ICT) to give information and services to general society, with the objective of facilitating the lives of individuals and organizations in relating with the government and contributing in setting up UAE as a primary financial hub(1,7). As indicated by http://www.government.ae/portal, it was established in 2001 by the Ruler of Dubai, His Highness Sheik Mohammed bin Rashed Al Maktoum who is likewise the Vice President and Prime Minister of UAE, on the official portal of UAE smart government. http://www.government.ae/which expects to give online services and information to all natives, occupants, guests, organizations and other government entities(1). By coordinating the eServices offered by distinctive government bureaus of UAE and accessible in Arabic and English, the portal does its tasks in a joint effort with every one of the offices and entities that go under the legislature of UAE(9). Figure 3 demonstrates the English rendition of the online eService portal of UAE. The portal is kept up by an IT and business management group and furnishes all clients with complete information on UAE, the UAE, news redesigns pertinent to the UAE government organization and financial advancement, furthermore it incorporates crucial guides named as "How To's" for people, and a variety of eServices that are classified for residents, citizens, businesses, and visitors(13). As per http://www.government.ae/, this "How To" area of the portal gives tips and guidelines on the most proficient method to fulfill key tasks with government offices and entities which can spare the citizens time, effort, and money(14). The required service may include getting visas, acquiring driving licenses, getting national identity cards, going about in UAE and other famous eServices.



Figure 3: UAE eService portal / Smart Government Portal.



### SMART GOVERNMENT SERVICES IN THE UAE

In accordance with boosting the distribution of its smart government services, the UAE government has likewise dispatched e4all, an official magazine of the UAE smart government which is accessible in print and online adaptations(28). The preeminent objective of the magazine which has its own site is to advance government offices' online services and build familiarity with smart government eServices which will bring about change in individuals' state of mind towards the method for utilizing government driven initiatives and persuading organizations and people to embrace innovative methods for managing the government through ICT and the Internet (12,28).

In 2006, Diane Milne of IT Weekly reported that UAE government trusted that insufficient individuals were utilizing its online services(11). Mr Salem Khamis Al Shair, eServices Director of smart government in a closed meeting on the matter of eServices pointed out the issues for the lack of usage of eServices as absence of open-mindedness and absence public trust in secure financial transactions over the web(1,6). In 2007, in an assessment of UAE ae the entry of UAE smart government as a concentrated portal for all administration divisions and services, brought about these observations: poor classification where the list items were the results of searches were mixed and not classified, and second, the results were not classified to the relevant department providing the eService(13,14). This outcomes produced trouble for the customer who is left with the remaining option being to initiate a deeper and more time consuming search into the website in order to look for the specific service and find the specific department providing the service(6,11).

The formation of the Department of UAE eGovernment (DDeG) turned out to be significant in the eTransformation procedure of UAE that unites initiatives, stabilizes systems and overcome impediments towards an effective smart government (11). Thus, this office will remain a crucial point of all departments and will serve as an entryway for bringing together eServices and executing globalized standard criteria(11). Two principle government offices were combined bringing about the foundation of DDeG; the first division was eServices Department which is in charge of giving the backing and support to government offices, empowering them to offer their services electronically; the second is the Department of Government Information Resource Planning which is in charge of the common inner frameworks and government correspondence between offices.

# TECHNOLOGY ACCEPTANCE MODEL (TAM)

The Technology Acceptance Model or TAM by Davis, et al. (1997), is an appropriation of a behavioral intention hypothesis, called the Theory of Reasoned Action by Ajzen and Fishbein (23). It has been signified that behavioral intentions are motivated by and the capacity of a person's mentality toward the conduct and subjective standards encompassing the execution of the conduct(20). In 1985, Fred Davis recommended that the TAM deal more specifically with the expectation of the worthiness of an information system(13). TAM's motivation is to look at the worthiness of an innovation and to distinguish the changes which must be transferred to the system to make it satisfactory to clients (13). This model indicated in Figure 2 uncovers that the agreeableness of a data framework is controlled by two fundamental variables: perceived usefulness and perceived ease of use.

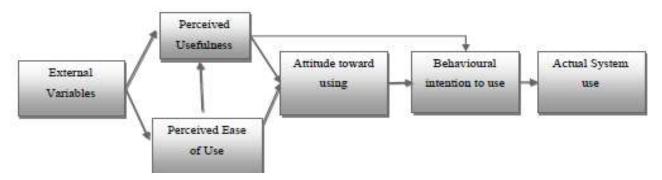


Figure 4: The TAM model adapted from (Al-Khouri, 2013).

Perceived usefulness alludes to the extent to which a person trusts that the utilization of a system will enhance performance while perceived ease of use alludes to the extent to which a person trusts that the utilization of the framework will be smooth(13,23). The TAM model hypothesizes that the utilization of an information system is controlled by the behavioral intention which is dictated by the individual's state of mind towards utilizing the



system(13). In addition, this state of mind of a person in his/her utilization of a system is controlled by his/her conviction that it will enhance his/her performance and that the system is smooth during utilization(23). Hence, this model conjectures an immediate connection between perceived usefulness and perceived ease of use to the agreeableness and selection of an information system(9). On the off chance that an end-client does not welcome an information system, the likelihood that it won't be utilized is high(6). Then again, in the event that he/she see that the system will enhance his/her performance and proficiency at work, it would urge customers to use it whatever point an internet-enabled computer provides the opportunity. On the other hand, when there are two frameworks offering the same components, a client will discover more helpful the particular case that is simpler to utilize. Hence, the measure of perceived usefulness and perceived ease of use of an information system is urgent information to be broken down for the effective execution of smart government services.

### DIFFUSION OF INNOVATION (DOI) THEORY

The second theory that is utilized in this study is the Diffusion of Innovation Theory by Everett Rogers (27). This hypothesis alludes to the procedure by which an innovation is conveyed through specific channels after some time among the individuals from the social system (21). The investigation of this definition gives four principle components that are available in the dispersion and development process. These are: 1.) innovation that alludes to ideas, objects, and practices that are seen as new, 2.) communication channels, this alludes to the methods by which messages are passed on, 3.) time that includes the choice procedure, relative time and the rate of appropriation, lastly, 4.) social framework that alludes to the arrangement of interrelated units mutually fulfilling an objective (21,25).

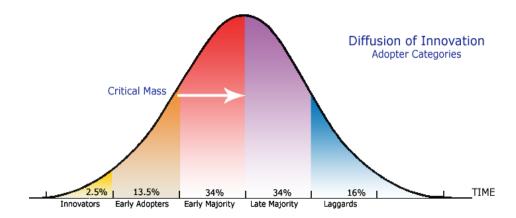


Figure 5: DOI theory graph obtained from (Wonglimpiyarat & Yuberk, 2005).

Figure 5 represents the Diffusion of Innovation (DOI) Theory. This model which is otherwise called the innovation adoption curve of Rogers furthermore as the multi-step flow hypothesis groups the adopters into different classes, in light of the thought that certain people are more open to adjustment than others (15,25). As referred to in his book, Rogers gives the five classifications of adopters: the first are pioneers around 2.5%-13.5% who are daring individuals that draw change, the second are early adopters around 34% who are respectable, sentiment pioneers, and experiment with new thoughts in a cautious manner, the third are early lion's share around 34% who are astute individuals, watchful however tolerating change all the more rapidly, the fourth are late dominant part around 34% who are suspicious individuals who will utilize new thoughts and items just when a greater part is utilizing it, and the fifth are the laggards around 16% who are conventional individuals and are conservative towards new thoughts (18). This model premises that attempting to rapidly and enormously persuade individuals of another disputable thought is troublesome if not pointless(29). It bodes well to begin with persuading pioneers and early adopters. Moreover, the classifications of Rogers may additionally be utilized to gauge focused on gatherings for successful correspondence(25). The DOI demonstrate additionally demonstrates that early adopters select the innovation initially, trailed by the greater part, until an innovation or advancement is simple(28). This model has been prevalently utilized as a part of research on innovation dispersion that spotlights on the conditions which improve or diminish the probability that another thought, item or practice will be received by individuals from a given society. Subsequently, it can be said that the individuals' state of mind toward another innovation is a key component in its dissemination. Besides, as noted by Rogers in his book, this dissemination is an aftereffect of a procedure that happens over the long run through five stages, to mind: persuasion, knowledge, decision, confirmation and implementation.



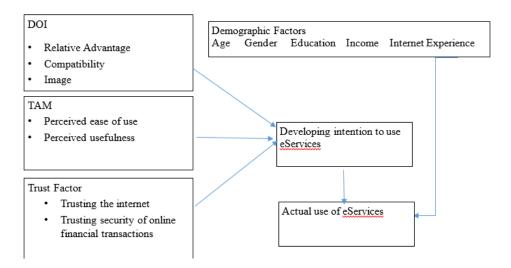


Figure 6: Theoretical framework for this study.

As demonstrated in figure 6, the behavioral intention to utilize the eServices is controlled by a variety of factors which are expressed through the two theories, TAM and DOI, demographic factors, and the trust factor. The DOI focused on judging how well individuals react to systems which involve innovation and how well they adapt to innovation(1,29). As a result, the primary factors which override an individual and press them to use an information system were relative advantage, compatibility of the system, and the image or perception regarding the system(9,14). In contrast, the TAM focuses more on the convenience factor and sees how easily a person can use the information system. In this case, the information system is the eService provided as part of the smart government initiative. It was also seen in the literature review that numerous customers shy away from eServices because they do not trust the internet and they do not see it as a credible source of service delivery(12,26). Moreover, there is mistrust with regards to the security of transactions conducted on the web. Lastly, demographic components are also important as age, education, and income may be primary factors which contribute to the decision to use eServices(23). While younger people may be more attuned to using online services through the internet, elders may not be as acquainted with different forms of technology that enable eServices. As a result, it becomes important to look at the age of the customers as well(24). The income bracket is also an important determinant since a person's income may determine whether they have access to the required forms of technology needed to access eService.



Figure 7: Left Hand Side: Dependent Variables, Right Hand Side: Independent Variable.

Figure 7 describes the division of variables in this study. Whereas the independent variable is the final decision to use eServices or not, or the intention to use eServices, the dependent variables which exhibit variation and within which variation is attempted to be explained are given in Figure 7. Through the use of the variables, the survey has been designed for this study.

It is seen that results from DOI and TAM have an immediate impact and provide a direct path towards behavioral intention to use eServices(13). This examination has utilized Rauniar et al. (2014) advice were it was expressed that "the reason for this deviation is that in work settings, intentions to use IT may be based on anticipated job performance consequences of using the system regardless of overall attitude. In other words, an employee may dislike a system, (i.e., has a negative attitude towards it), but still use the system because it is perceived to be advantageous in terms of job performance"(23).



In the United Theory of Acceptance and Use of Technology (UTAUT) model Venkatesh et al. (2003) consolidated relative point of preference and saw convenience in one build and named it "performance expectancy" (25). Moreover, Taylor and Todd (1995b), and Agarwal and Karhanna (1998: 3) have likewise expressed that "perceived usefulness in TAM is equivalent to Rogers' relative advantage", on the grounds that both look at impact on performance(27). Then again, Carter and Belanger (2005: 10) have contended that "the overlap is not clear" (27). A case which was additionally given before: RA will inspect staff member's perspective and purposes behind being in support or against smart government services. Perceived usefulness will look at staff members or customers perspectives if smart government services are valuable to them or not(28).

This shows they are not precisely the same. To anticipate perplexity, the researcher has connected Carter and Belanger (2005) propositions in the framework, were they have utilized these two builds as a part of their model(9). Agarwal and Karhanna (1998) have additionally contended that numerous studies couldn't distinguish between perceived usefulness and compatibility. Be that as it may, in this research perceived usefulness and compatibility will look at two different things. For instance, compatibility will analyze if the smart government fits with the current framework or not. Perceived usefulness will analyze if staff individuals or customers discover the eServices are helpful in their performance or not(13).

Convenience "is identical to complexity" (Smith, et al., 2014; Dombeu & Huisman, 2011). A possible example could be seeing whether the eServices are simple to utilize or not. In this way, the scientist has additionally expected it is the same. This examination utilized Carter and Belanger (2005) advice to utilize convenience rather than intricacy in light of the fact that usability is all around more multifaceted in nature(1). Moreover, Moore and Benbasat (1996) have likewise bolstered usability, saying that convenience, helpfulness and similarity are joined with utilization.

#### RESEARCH METHODOLOGY

#### RESEARCH DESIGN

The nature of the study is explanatory as the study aims to explore the nature and quality of smart government services being offered by UAE Smart Government. Though there have been similar researches that have assessed the nature and/or quality of smart government in other geographical locations but rarely there are any researches focused on the perception, nature and quality of UAE e-Government. The lack of available research make the domain novel and a topic that entails in depth exploration (Newman &Ridenour, 2008). To ensure that a significant amount of data is collected and there is consistency is the gather data, the survey based quantitative research methodology has been selected for the study.

### RESEARCH APPROACH

There are research approaching that can go with an exploratory research but for this study a quantitative approach has been opted. Muijs (2010) explains that a quantitative approach aims at amplification and clarification of the research question through the use of numerical data that can be manipulated and analyzed through mathematical and statistical models (Muijs, 2010). The approach would is selected due to the deductive nature of the study where the study would narrow down the perceptions of users regarding the nature and quality of e-services.

### RESEARCH INSTRUMENT

Research instrument is the device or the means that a researcher uses for the sake of data collection and information gathers that can pave way for the resolution of the research questions. Considering the nature and approach of this study a Likert scale based questionnaire was selected to be the research instrument. Likert scales are helpful in the studies where the perceptions, opinions or attitudes towards a phenomena are being investigated (8). The research instrument for the study was divided into four categories. The first section inquired about the demographic variables, the second section inquired about the Perceived ease of use, the third section extracted information about the compatibility of e-services and finally the last section was dedicated towards the trust and security dimension of e-services.

# RESEARCH SAMPLE

The aim of the study was to explore the nature and quality of smart government services being offered by UAE Smart Government. There are a thousands of users of UAE smart services hence it was intended to have a large sample size to be able to portray a true estimation of the total population. Babbie (2010) defines a research sample to be part of the



total research population that would be tested to draw generalizations for the entire population (2). The number of eservices of UAE Smart government vary with period of time hence it is difficult to estimate the accurate number of population size. In 2014 DSG launched a new service and 11,200 people registered for this service (10). Keeping this statistic as a benchmark, a sample of 600 was selected using the simple random sampling technique. The sample is large and represents more than 5% of the total population.

#### DATA COLLECTION AND ANALYSIS

The main research instrument is a survey based questionnaire that employs Likert Scales for extraction of opinion from the users. Boone and Boone (2012) state that Likert scales are ordinal in nature hence descriptive statistic work best with Likert Scales (4), accepting this assumption the study uses descriptive statistics but to answer the research questions inferential statistics are also used. The techniques used for analysis include the test for reliability and validity, the descriptive analysis, the demographic analysis and regression.

### DATA ANALYSIS AND DISCUSSION

#### **DEMOGRAPHIC ANALYSIS**

A demographic analysis is the method of studying the dimensions and dynamics of the population of a model. The demographic analysis of the sample reveals the key characteristics of the sample that was used for the sake of the study. The outcomes from a demographic analysis serve important if further exploration of the acquired results is need or for examining external factors and finding compounded probabilities.

Variable	Details	Frequency	Percentage
Gender	Male	426	71.00 %
Female		174	29.00 %
Age	Equal of less to 25	53	8.8%
_	Between 26 to 30	153	25.5%
	Between 31 to 35	164	27.3%
	Between 36 to 45	115	19.2 %
	Between 46 to 55	59	9.8 %
	Above 55	56	9.3 %
Education	Higher School	50	8.3 %
Level	Bachelors	112	18.7 %
	Masters	328	54.7 %
	Philosophy in Doctorate	110	18.3 %
Experience	Equal or less than 5 years	54	13.50 %
	5 to 10 years	97	24.25 %
	10 to 15 years	116	29.00 %
	More than 15 years	84	21.00 %
	Less than AED 12,000	0	0.00%
Monthly	AED 12,000 – AED 20,000	318	53.00%
Income	AED 20,000 – AED 45,000	171	28.5%
	More than AED 45,000	111	18.5%

The demographic analysis reveal that majority of the participants of the study were male, only a quarter of the sample that is 29% were female users of the e-services. More than half of the respondents belonged to the age group of 25 to 35, though a significant number of more older and even younger samples were part of the study making is balanced in terms age aspect. Again in terms of qualification, the majority or more than 50% had Master's degrees and as per experience, the dominating groups were those with 5 to 10 years of experience and 10 to 15 years of experience. The majority of respondents fell in the income group that was earning a monthly income that equaled or was less than AED 20,000 per month.



#### **RELIABILITY ANALYSIS**

As the questionnaire includes the multi questions so it is necessary to measure the consistency of the questions. In SPSS, value of Cronbach is the most important measure of reliability.

Section	Cronbach Alpha Coefficient
Overall Questionnaire	0.800
Compatibility	0.725
Perception of Ease of	0.801
Use	
Trust	0.756

The value of the Cronbach Alpha Coefficient is more than the required value of 0.70 hence it is deemed that the research instrument is valid and reliable.

#### **CORRELATION ANALYSIS**

The correlation test is a measure of the strength and direction of relationship that subsists between two or more variables in any equation or model. In this model there exist three variables, namely, Perception of Ease of Use, Compatibility and Trust. The following correlations were obtained when correlation analysis was performed.

Correlations				
		Perceived Ease of Use	Compatibility	Trust & Compatibility
Perceived Ease of Use	Pearson Correlation	1	.210**	.185**
	Sig. (2-tailed)	100	.000	.000
	N	600	600	600
Compatibility	Pearson Correlation	.210**	1	.220**
	Sig. (2-tailed)	.000		.000
	N	600	600	600
Trust &	Pearson	.185**	.220**	1
Compatibility	Correlation			
	Sig. (2-tailed)	.000	.000	
	N	600	600	600

The Pearson correlation "r" between the perception of ease use and compatibility was calculated to be 0.210, which a weak but positive association. The positive sign or the absence of a negative indicator that there is a positive relation between the two variable and the level of significance was calculated to be 0.000 which is less than the p-value hence the relationship can be considered statistically significant.

The Pearson correlation "r" between the perception of ease use and Trust & compatibility was calculated to be 0.185, which a weak but positive association. The positive sign or the absence of a negative indicator that there is a positive relation between the two variable and the level of significance was calculated to be 0.000 which is less than the p-value hence the relationship can be considered statistically significant.

### **MODEL SUMMARY**

Model summary is important as it facilitates in understanding the variation and the causes behind the variation in any model. The model that is being tested in this study aims to study the perceived ease of use of e-services. There are 3 variables in it. The dependent variable is the perceived ease of use and the independent variables are Compatibility and Trust. The model summary is presented in the table below:



Model Summary					
Mode	R	R	Adjusted	Std. Error	
1		Square	R Square	of the	
				Estimate	
1	.254 <sup>a</sup>	.065	.061	.21268	
a. Predictors: (Constant), Trust_Compatibility,					

The value of "R" is a representation of the correlation among the variables in the model, the calculated correlation is found to be 0.254 which indicates that the variables are weakly correlated with one another. The value R-Square indicates the percentage of variation in the dependent variables that is explainable through the independent variables. Here it shows that only 6% of the variation is explainable.

#### **REGRESSION ANALYSIS**

Regression analysis is a popular statistical test that is used to study the relationship and impact of one variable over other in a study. Mostly the variables are clustered as either dependent variable (or outcome variable) or independent variables. The model is known as regression model. The regression model consisted of one dependent variable that is the perceived ease of use is this case and two independent variables which are compatibility (diffusion of innovation) and trust and compatibility (Technology Acceptance Model). Both the independent variables have a p-value statistic of less than 0.005 hence they are considered significant.

The standard regression equation is:

 $Y = \alpha + \beta 1X1 + \beta 2X2$  Where:

- Y = Perceived Ease of Use
- A = Constant
- $\beta$  = Per unit change in variable
- X1 = compatibility (diffusion of innovation)
- X2 = trust and compatibility (Technology Acceptance Model).

When values of the variables are substituted in the regression equation, the following equation is derived. Y = 1.637 + 0.280(Compatibility) + 0.284(Trust and Compatibility)

# PRINCIPAL FACTOR ANALYSIS\COMMUNALITIES ANALYSIS

Communalities indicate the amount of variance in each variable that is accounted for. When the principal component analysis for the total questionnaire (excluding the demographic variables) was performed the results indicate that all 24 variables out of 25 have an extraction percentage of more than 40% hence they indicate that all questions are valid and important. These 24 variables must remain intact but one variable P3 which has an extraction rate of 0.131 must be removed.

Communalities				
	Initial	Extraction		
C1	1.000	.664		
C2	1.000	.914		
C3	1.000	.911		
C4	1.000	.928		
C5	1.000	.928		
<b>C6</b>	1.000	.716		
<b>C7</b>	1.000	.926		
C8	1.000	.892		
C9	1.000	.928		
P1	1.000	.821		
P2	1.000	.731		



P3	1.000	.131	
P4	1.000	.811	
P5	1.000	.936	
P6	1.000	.977	
P7	1.000	.782	
P8	1.000	.985	
P9	1.000	.985	
P10	1.000	.985	
TC1	1.000	.875	
TC2	1.000	.966	
TC3	1.000	.966	
TC4	1.000	.911	
TC5	1.000	.933	
TC6	1.000	.927	
<b>Extraction Method: Principal Component</b>			
Analysis.			

### HYPOTHESIS TESTING

The hypothesis are tested using the regression test. When testing the hypothesis we have derived that when all independent variables would become nullified or zero, still the perceived ease of use shall be 1.637.

Regression Model						
Model		Unstandardized		Standardized	t	Sig.
		Coefficients		Coefficients		
		В	Std. Error	Beta		
1	(Constant)	1.637	.357		4.591	.000
	Compatibility	.280	.064	.178	4.383	.000
	Trust and	.284	.079	.146	3.606	.000
	Compatibility					
a. D	a. Dependent Variable: Perceived Ease of UAE					

To check and test the hypothesis, it is important to assess the p-vale and the level of significant of independent variables.

Hypothesis	Result
$H_{1o}$ : Compatibility of use has a significant impact on the Perceived Ease of Use of E-services	p-value 0.000) < 0.05 Hypothesis is accepted
H <sub>20:</sub> Trust on e-Services and it Compatibility has a significant impact on the Perceived Ease of use of E-services	p-value 0.000) < 0.05 Hypothesis is accepted

#### **CONCLUSION**

As a result of looking at the Technology Acceptance Theory and the Diffusion of Innovation theory, this study arrives at a conceptual framework and theoretical model that provides the aspects of smart government which must be looked at in order to successfully and effectively address the provision of eServices. The framework discussed shows what the relevant factors which contribute to the intention and decision to use eServices are. The study maintains an important distinction between the behavioral dimension to intend to use eServices and the actual, final use of eService by a customer. There are various factors at play such as demographic factors and trust factors as well which contribute to the decision to use eServices. The analysis of the empirical data indicates that there exists a positive but weak correlation among the variables but all independent variables are statistically significant and have an impact on the dependent variable. This study therefore recommends that customers be looked at from a lens that takes into accounts these aspects. As a result, when eServices are being developed or when a smart government initiative is considered, it is important to take into account the recommendations of the TAM, DOI, Trust Factor, and Demographic factors in order to determine the best ways to extend the services to the widest possible consumer base. It is also important to make sure



that there are no security issues which prevent the user from finally using eServices. Many users due to the fear of online insecurity and loss of financial data do not make use of eServices, all of which are legitimate concerns which the government must respond to by providing a secure and foolproof information system.

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