

Adoption of E-government Services in Libya: A Critical Review

Mansaf M Elmansori^{1*}, Halinah Atan², Asbi Ali³

^{1,2,3}School of Graduate Studies, Management and Science University, Shah Alam, Malaysia

***Corresponding author**

Mansaf M Elmansori

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Abstract: An overview about the situation of electronic government in Libya is presented in this paper. In addition, to provide number of studies that related to the electronic government adoption in both developed and developing countries. The findings indicated that the adoption of electronic government in developing countries especially still in the first stage and the governments should be pay attention towards the adoption of electronic government services.

Keywords: E-government, Citizen Adoption, Trust, Libya.

INTRODUCTION

It is a fact that E-government is operational and fully successful in developing and developed countries. It is the government initiative to indulge citizen in their services and increase their participation in E-government and making the common man life easy by paying their taxes, manuals, tax returns and other services. There are many citizens that are highly concern about the trust, security, data misuse and other feature that restrict their confidence towards E-government [1].

Researchers have limited scope in their study regarding the E-government technology where they have included only TAM construct that are ease of use and ease of usefulness [2] or they are using UTAUT that includes effort, performance, social pressure and facilitating conditions [3].

There are different studies that also include the usefulness and ease of use issues as well [4] and the perspective of the organization to adopt the technology [5]. There are several researches are available that advocates the technical feature that pressurized the social feature to accept the new technological change [6]. It is being argued that TAM is not including the trust and security of the system [7].

As far as the developed countries are concern; E-government studies are far more frequent then the developing countries [8, 9]. In the case of Libya; there is a lack of awareness about E-government because there was no concept or official website of the government was available till 2012 [10] but with the time they are able to developed it which make them 121 from 196 countries that are having official E-government website by 2014. It is a part of the contrary that they are ranked 171 as the citizens are interacting through it [10]. Having confidence upon the E-government website that shows the trust, confidence and security of the citizens [3] technology awareness and government technology infrastructure shows in different studies that are being conducted on Libya [11].

The trend that organizations or government are more towards looking for the technology in order to provide online services and help their customers or

citizens that is the reason developed countries are become more mature in bringing their services through online [12]. In the 21st century it is evident that government is become more powerful with the induction of the E-government services. Therefore; there are different electronic terms introduced such as; M-government, E-democracy, E-voting and E-commerce are the major part of the success of E-government [13].

In the current world; E-government is the best opportunity for the countries to adopt it and provide quality services to their citizens in order to gain their trust and confidence. It is also evident that the success of E-government services is not merely reliant on the government but also on the citizens because if they understand it and accept this kind of services adequately [14]. The traditional ways are obsolete in the modern era therefore, it is the responsibility of the decision makers to provide infrastructure and awareness about the E-government initiatives among their citizens so they will be able to get the desired services and will be effective for the government as well. It is rather important for the researchers to conduct an investigation into factors that facilitate the citizens to adopt the technology in the developing country.

In North Africa studies on E-government is hardly conducted; in this regard fifty articles are being published in which three of them are based on Libya [15]. There are different studies are being conducted in between 2005 to 2010 in different region such as Asia, North America and Asia. It is evident that there are several studies are being conducted on Europe and Asia but there are a few studies are being done on African countries which suggest that there is a lack of concern of the researchers about the infrastructure of the region.

Definitions of E-government

In the literature there is no prominent definition was elaborated by the researchers; but there are definitions which focus upon the services that the government is offering to their citizens. A definition suggests that it is a process of a government to utilize the technology and new way of communication with their citizens which facilitate quality services and provide the adequate knowledge and information that are necessary for them to bring the democracy in every part of their actions and processes [16]. The other definition states that E-government is the way of using the technology and providing services which will benefit to their citizen, businesses, industries and corporations that will facilitate effective efficiency in the public sector such as state, unions, councils, and other areas of the country [16]. It is also suggested that using technology as a mode of communication between the government and citizens [8]. Another way of explaining the E-government suggests that using the internet as the technology to develop interaction with the citizens in an efficient manner [19].

It is evident from the above discussion that E-government definition is different from every researcher perspective but majority of the definition focuses on three features that are citizen, business and employees [17]. According to Fang [16] suggests that service from the government and E-government interaction with the citizens and employees. The approach of the researcher for the current study is to conduct an investigation into the factors that can encourage citizens to accept the E-government in the Libya.

Importance of E-government

E-government has enabled the citizens empowered which have reduced the effectiveness of the government official's powers. It will increase the accountability and transparency of the processes and actions with the high quality services. It is the biggest initiative towards eradicating the corruption from the system [20]. Reduced corruption will urge the citizens and government to expand the growth of the economy in the developing countries that can help the countries to increase the efficiency of the system [21].

Electronic services are the most effective way to interact with the citizens [22]. E-services are

benefiting every individual of the country and their stakeholders [23]. In the case of developing countries E-government is effective for the citizens and they are benefiting from it. The advance technology and new ways in communication has emerged with the different application in the area of E-government to produce ease for their citizens [24]. It is being found that E-government services are highly successful and deliver better services to their citizens that encourage quality services, empowers their citizens reducing the powers of the government officials and others [25]. Government and citizens are interacting with each other in order to boost empowerment, accountability and transparency among the citizens [26]. E-government purpose is to facilitate better services to their citizens and provide information through website that will help the government to reduce the cost and time that can occur during any transaction.

Research suggest that E-government is highly beneficial for the developing countries because of high corruption and highly volume of population has change the mindset of the citizens that bring the change in their behavior and attracts towards the acceptance of the electronic services that are being offered by the country's government. It has improved their living standards, corruption free culture, transparency, accountability and authentic information to their citizens adequately. However, it is being suggested that infrastructure of information technology highly low that reduces the chances of engraining large volume of population towards E-government. In the case of E-government there are number of individuals involved in this process; the major are government, citizen and businesses. It is evident that majority of the population that are living in the developing countries are not using the electronic services and suggests them to stop spending on these initiatives in future [7]. Similarly; in the case of Libya government is encouraging their citizens to use the electronic services but majority of the population is not interested to use these technological interface. Therefore; population of the Libya is highly vulnerable in order to accept the electronic services that are the reason it is suggested to take the initiative towards investigating the acceptance of electronic services of the government.

E-government in Libya

Government put their efforts towards electronic government back in 2002. Therefore, for the development of the framework the overall project was constitutes upon five stages [3]. In the previous researches focused was upon the initiating the E-government projects but the focus should be given towards the acceptance of the electronic government services. It is evident that Fgee and Alkallas [28] have presented a framework to the Libya that include the development of electronic government projects. Citizens were highly concern over the trust and security

of the internet. Different researchers have presented different issues and challenges in the implementation of the electronic government in Libya [3]. These challenges are lack of technical assistance, cultural issues, social, and others. Therefore, it is being suggested that Libya is behind the developing countries and they should initiate their electronic services through educational sector. Libya is among the low in the Arab countries as far as their economy and infrastructure is concern [29]. Researcher has provided a six stage framework for the development of E-government initiative or services in the county. A comparative study suggests that Libya and other Arab countries are having similar features except the oil and high living standards [30]. Research is being conducted on the E-government project in Libya; SWOT analysis was the tool that are being used in the study that highlighted many weaknesses in the information technology structure of the country and lack of knowledge about technology among the citizens [31]. The success of electronic government project lies on the citizens centered but the government is focusing upon the technology. Studies further suggest that citizen should be having enough knowledge about the technology that become helpful in implementing the electronic government project. In the previous studies that are being conducted on the Libya were focused upon the initiation of the electronic government but they have to focus upon the citizens that they should accept the electronic services considerably. In the earlier studies were based upon the technical features of the electronic government rather than the behavioral [32]. There it is suggested that Libya government should focus upon the citizens rather than the technology in general [31].

Current situation of Libyan E-government

Libya was among those countries that were not having any official web site that represents them

internationally as the national site till 2012. After two years which means in 2014; Libya was rank 121 from 193 countries that do not have subsequent web portal in the world. As far as the citizen acceptance is concern they were ranked as 179 from 193 countries in the world. In the current scenario; Libyan's ministers are having online access and they are in pursue of resolving the issues of the citizens about seventy percent. The issue with the minister in having online interaction is that they are only offering email services to the citizens. Therefore, Libya comes under the first and second phase of implementing the E-government services [3]. The rest of the ministers are not having access of the online features which is a concern for the government. Therefore, it is suggested that Libya's government is required to improve the current position of their electronic government services adequately [3]. It will be convenient if the government offer identification services such as ID cards, passport and other legislation services through online for the help of citizen it will be beneficial for them.

The services are not as per standard that will facilitate the citizen of the country therefore; it is necessary to improve it to an extent that it will resolve the issues and problem of the citizens in the country. There is the requirement that government should create awareness about these services so, the citizens will have the capacity to utilize these services adequately in the future. In the coming era; it is evident that it will be the technological era that requires citizens and government to use the technology in order to interact with the others. Therefore, Libya's government should focus upon the development of electronic government initiatives and develop their infrastructure of information technology so; they will be able to get the desired objectives considerably.

Table-1: Survey of the Literature

Authors	Independent variables	Dependent variables	Method	Findings
Ranaweera [1]	-Perceived usefulness -Perceived ease of use -Attitude -Trustworthiness	Adoption of e-government	Quantitative	The results suggested a well fitted model and fit indices recommend the model to apply in the adoption and use of e-government services from the perspective of trustworthiness.
Danila & Abdullah, [33]	-Personal innovativeness -perceived usefulness -perceived ease of use -belief -system quality -Attitude -subjective norm -perceived behavioral control	Intention to use and satisfaction	Proposed model	This study is conceptual study and it utilizes the literature to develop proposed model.
Welch & Feeney, [34]	Perceived ICT capacity Routineness centralization openness	e-government outcome participation decision making	Quantitative	Routineness, centralization and openness partially mediate the influence of perceived ICT capacity on participation and decision making.
Liu <i>et al.</i> , [35]	-Trust in Government -Integrity -Benevolence Technological attributes -Near term usefulness -Long term usefulness -perceived usefulness -social environment -social influence -Image -Gender (moderator) -Age (moderator)	Intention to use mobile government	Quantitative	The results indicate that gender, age and knowledge play a moderator role in encouraging the adoption of mobile government. In addition, perceived ease of use, near-term usefulness, long-term usefulness, integrity, benevolence, image and social influence have significant and positive influences on the intention to use mobile government. Specifically, perceived ease of use, long-term usefulness and social influence have a direct influence on intention to use, while perceived near-term usefulness, integrity, benevolence and image have an indirect influence.
Alateyah, <i>et al.</i> , [4]	-Transaction Security -Information Security -Risk -Privacy -Trust in Internet -Trust in Government -Indirect effect of Culture's on trust -Usefulness -Ease of Use	Use of e-government services	Quantitative	All the tested variables have positive influence on the use of e-government services in Saudi Arabia.
Voutinioti [36]	-Performance expectancy -effort expectancy -social influence -facilitating condition -Trust of the internet -trust of government -trust of the Citizen service canter (CSC) Age	User intention to use e-government	Quantitative	The findings showed that performance expectancy, effort expectancy, trust of intermediary played by CSCs, trust of the government, trust of internet, and finally social influence are key drivers directly and indirectly influencing the user's intention.

	gender education internet experience			
Ahmad <i>et al.</i> , [3]	-Performance expectancy -Effort expectancy -Social influence -Facilitating condition	Behavioral intention	Quantitative	Findings indicated that all the factors of UTAUT have significant influence on the acceptance and use of E-government services in Pakistan.
Alawneh <i>et al.</i> , [37]	-Security and privacy -Trust -Accessibility -awareness of public services -quality of public services	e-satisfaction with e-government	Quantitative	Finding of the study indicated that accessibility of the services, and awareness of public service and its quality are strong indicators of the e-satisfaction with e-government in Jordan. However, security and privacy, and trust have no significant influence.
Shareef <i>et al.</i> , [38]	-Perceived ease of use -Perceived usefulness -Compatibility -Relative advantage -Perceived empathy -Perceived reliability -Perceived security	Use if Mobile – government	Quantitative	perceived ease of use, perceived security), relative advantage, and perceived reliability, were significant factors for accepting E-government services
Lee <i>et al.</i> , [39]	-High quality offline service -Trust	Willingness to adopt E-government services	Quantitative	The analysis revealed that the willingness to adopt e-Government increased when business users perceived high quality service provision in offline service channels. However, trust in the internet technology itself did not have any significant impact on their willingness
Lin <i>et al.</i> , [24]	-User attitude -Perceived usefulness -perceived ease of use -information system quality	Behavior intention to use E-government	Quantitative	The result revealed that information quality and ease of use significantly influence perceived usefulness. Perceived ease of use influence the attitude to use which influence the behavior intention.
Ozkan & Kanat [40]	-Attitude -Subjective Norm -perceived behavioral control -perceived usefulness -perceived ease of use -trust in government -trust in internet -skills -access	Intention and behavior	Quantitative	The outcome of structural equation modeling shows that Trust in government and in internet influences trust which influence attitude and intention to use e-government. Perceived usefulness and perceived ease of use influence attitude to use which influence intention to use. Perceived ease of use and LOC influence perceived behavioral control which influence intention to use e-government.
Belanche <i>et al.</i> , [2]	-Perceived Usefulness -Perceived ease of use -Trust -Attitude	Intention to use	Quantitative	Trust can play a mediating role in TAM model. Trust mediates the influence of perceived usefulness and ease of use on attitude. Attitude influence the intention to use.
Zhan <i>et al.</i> , [41]	-Performance expectancy -Effort expectancy -Social influence -Facilitating condition -Behavioral intention	Use of e-government services	Quantitative	The result reveals that performance expectancy influences employees' behavioral Intention, which finally affects user behavior. Moreover, facilitating conditions affect the use of ICT in government organizations.
Shajari and Ismail [42]	-Perceived usefulness -Perceived ease of use -Trust of internet	Use of e-government services	Qualitative	In order of importance, perceived usefulness, compatibility, and output quality were the most significant factors

	-Trust of government -Image -Social influence -Output quality -Job relevant -Compatibility			followed by trustworthiness factors, perceived ease of use and job relevant. Least important are image and social influence.
Rasouli <i>et al.</i> , [43]	-IT knowledge -Internet access -Trust -Perceived usefulness -Perceived ease of use -Reliability -Self-services -Linkage	Use of e-government	Quantitative	The results indicate that IT knowledge, Internet access, Perceived usefulness, and Self-Service have significant direct effect on acceptance and use of E-GOVERNMENT services
Taiwo <i>et al.</i> , [44]	UTAUT construct performance expectancy effort expectancy social influence facilitating condition behavioral intention web trust construct disposition to trust institution based trust trust beliefs personality construct risk taken propensity	Behavioral intention to user government services	Quantitative	Performance expectancy, social influence, trust belief, and risk taken propensity all had a significant effect on customer's intention to use e-Government. Facilitating condition and institution-based trust have significant effect of risk taken propensity.
Kurfali <i>et al.</i> , [45]	-Performance expectancy -Effort expectancy -Social influence -Facilitating condition -Trust of internet -Trust of Government	Behavirol intention to use E-government services	Quantitative	The factors of original UTAUT model performance expectancy, social influence and facilitating condition have a positive effect on behavioral intention whereas effort expectancy does not. Also trust of internet has s positive effect on both performance expectancy and behavioral intention to use whereas trust of government is a significant determinant only of performance expectancy

Table-1 presents studies that have incorporated the model of TAM which mainly includes the factor of ease of use and usefulness. In addition, the above table shows also that studies deployed the model of UTAUT. UTAUT factors are the performance expectancy, effort expectancy, social influence, and facilitating condition. Venkatesh *et al.*, [46] developed the UTAUT based on unifying eight theories that include TAM, DOI, TPB, TRA and other theories. According to Venkatesh *et al.*, [46, the factor usefulness in TAM is similar to the performance expectancy in UTAUT and relative advantage in DOI. In addition, the ease of use in TAM is similar to the effort expectancy in UTAUT and complexity in DOI [47]. Social influence is similar to subjective norms and facilitating conditions are similar to perceived behavioral control [48]. Thus, since

unifying is the norm of the literature, this study unifies the TAM to go further with the research.

CONCLUSION

Libya's situation is highly unstable in terms of political, social and economic but there is a high literacy rate in the country; unfortunately, government is facing low literacy rate in the field of IT therefore; they don't have the capability to undertake the initiative of E-Government services in the country for a longer period of time. Social factors impact on the adoption of the technology that is the reason it become less effective for the people to adopt and access it. The theoretical model of the study suggested that there is an affirmative impact on different variables that are being used in the study there are some variables that are

insufficient for the study such as; security of intentions and behavior of user.

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