

Assessing E-Government Effectiveness in Libya

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ملخص:

هذه الدراسة توجه الانتباه اللازم الى قبول الحكومة الالكترونية الفاعلة في ليبيا، بالتركيز على مدى اقتناع الناس باستخدامها مع هذا التطور التكنولوجي بين شرائح المجتمع خاصة بين فئة الشباب كما هو الحال في باقي الدول النامية لان خدمة الحكومة الالكترونية أصبحت ضرورة اساسية لتقلم كافة المنتجات و الخدمات الحكومية ولتسهيل الوصول الى البيانات و المعلومات الى المستخدمين من كافة الليبيين وعليه فإن هذه الدراسة تظهر مدى فاعلية نموذج الحكومة الالكترونية (TAM) و الذي سيحدث الاثر الايجابي على اداء الحكومة الليبية التي تأخرت في تطبيقه مع رداءة و غلاء خدمة الانترنت الحالية و هذا يؤكد على أن الحكومة الليبية تستطيع الاعتماد على نتائج هذه الدراسة التي طورت نموذج مثالي للحكومة الالكترونية الليبية بغية مساعدة المستخدمين بالحصول على خدمات ذات كفاءته و فاعلية عالية في هذا المجال.

وبالمحصلة فان هذه الدراسة عكست مدى قوة و تأثير نموذج الحكومة الالكترونية على رغبة المستخدمين في التعامل بتطبيقات الانترنت للحصول على المنتجات و الخدمات و المعلومات من المنظومات المخصصة لذلك و الدراسة خلصت الى تقلم دراسة دقيقه للحكومة الليبية لتفعيل الحكومة الالكترونية مع وضع خطة استراتيجية تؤدي الى اكبر استفادة ممكنة من خدمات الحكومة الالكترونية في ليبيا.

الكلمات المفتاحية: الحكومة الالكترونية, الكفاءة, المسؤولية, نموذج الحكومة الالكترونية, ليبيا.

Abstract

This study pays an essential good attention to Technology Acceptance Model (TAM) and will use it extensively to explain and predict users' acceptance of corporate information technology (IT) in the Arab state of Libya. With the booming advancement in the Information Technology sector and the rapid expanding popularity (especially among young Libyan people) of the internet applications in Libya and other developing countries, E-Government has become a priority factor in proactively rendering government services and in making data and information more accessible to Libyan citizens. This study clearly shows how the TAM and E-Government Effectiveness would positively impact the Libyan government which was late in adopting E-Government, on top of the bad and expensive internet services in the entire country. This study developed a successful model of the Libyan E-government system to assist Libyans with more efficient and cost-effective government operations. The study results also revealed that the core constructs of the TAM have very strong influences on users-intention towards E-

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Government products and services. This also denotes that the Libyan government can potentially utilize this study's TAM findings in other contextual settings to strategically design and promote further implementation of E-Government systems.

Keywords: *Electronic Government (E-Government), Effectiveness, Accountability, Technology Acceptance Model (TAM), Libya.*

1. Introduction

The explosion of digital connectivity, significant communication improvement in information technologies and the global competition are revolutionizing the way businesses are performed and the way companies compete. A new, complex and rapidly changing techno-economic order has emerged based on disruptive innovation and discontinuities changes. In this new landscape, knowledge constitutes the most important factor, while learning, which emerges through collaboration, together with the increased reliability and trust, is the most important processes (Lundvall and Johnson, 1994).

These trends suggest that private and public organizations have to reinvent themselves through 'continuous non-linear innovation' in order to sustain their strategic competitive advantage. The extant literature highlights the strong potential of ICT tools for operational Efficiency and Effectiveness, reducing cost, quality services enhancement, convenience, innovation and learning in private and public sectors. However, previous investigations have focused primarily on the effects and outcomes of Information & Communication Technology Developed Countries such as the UK, Canada and EU Countries.

From a technical perspective, it seems that E-Government is a government of new technology to help simplify and automate transactions between itself and its constituents, sectors businesses, or other governments (Jaeger, 2003). Unfortunately, the diffusion process in Libya as a developing country remains slow. Because the gap of IT diffusion between developed and developing nations may be due to financial and socio-economic differences that inhibit access to IT services. Alternately, this huge gap may be due to differences in literacy rates or an inability to effectively use new Information Technology Services. E-Government is a fundamental element in the modernization of all governments worldwide, serving as means towards enhancing, integrity, transparency, accountability, and good governance; making developing governments more result-oriented, efficient, effective, citizen-centered; and enabling citizens and businesses to access governments products, services and information as efficiently and as effectively as possible through the wise use of internet and other channels of communication technologies (Aggelidis & Chatzoglou, 2008). The beneficial use of Information Technology in all government sectors offers great opportunities and more facilities for enhancing service quality and efficiency as well as, leads to trimming down governmental over-staffing and extra expenses. Effective and operational E-

Government facilitates better and more efficient delivery of information, products and services to Libyan citizens, promotes super productivity among ordinary public servants, encourages participation of citizens in government, and empowers all Libyan citizens (Kim et al., 2009a, 2009b).

However, the widespread failure of E-Government projects suggests that E-Government often produces unrealistic optimism (Dishaw & Strong, 1999). Developed countries such as the UK, the U.S.A, Canada, and Finland are still leading the world in the field of E-Government. The information age holds the promise of new and powerful arms in the arsenals of developing countries wrestling against environmental, economic, social, and political changes and challenges. With regret, it is sad to mention that in the African continent nearly 40% of the adult population is illiterate and the PC penetration is the lowest in the whole world. In this respect, E-Government platforms that provide a clear way for more direct governance to citizens and business participations in government would have much less cultural impact than they would in Western Countries. Therefore, it is thus important to examine both the impact and implications of E-Government in Libya and other developing countries (Bwalya, 2009).

The technology acceptance model (TAM) explains and predicts Libyan users' acceptance of new technology. Despite the large volume of research in this area, which focuses almost exclusively on corporate settings, few previous studies have applied the TAM to E-Government Implementation in North African countries. It is necessary and very essential to develop and establish empirical support for the TAM in explaining citizens' Acceptance of E-Government Systems initiated by governments in this area. The purposes behind carrying out this academic study are two-folds.

First, while prior research on the TAM and E-Government focuses on non-industrial and developed countries, and this study focuses on developing countries like Libya, and how Technology Acceptance Model and Methodology impacts the E-Government success and Libya's improvable and developmental aspiration. The author will work on examining whether the environment influences the impacts that the TAM can have for E-Government initiatives in Libya, despite cultural differences and the weak government support in this regard.

Second; this study examines the various factors affecting the intentions of Libyan citizens to use E-Government facilities, and surveys a sample of Employees in 10 Libyan Organizations in order to get the most authentic and transparent feedback belonging to the Technology Acceptance Model regarding E-Government Effectiveness in Libya. The results of this study can be replicated and extended to other countries in North Africa to create a complete picture of critical factors affecting Libyan citizens' acceptance of E-Government Systems in these areas.

2. Research Hypotheses / Assumptions

Technology Acceptance Model confirms that intentions to perform behavior determine actual behavior. Intention itself represents an individual's attitude toward the behavior. The TAM indicates that both perceived usefulness and perceived ease of use are key, independent variables that can determine or influence potential user's attitudes toward behavioral intention (BI). Davis (1989) called for further research to consider the role of additional external changes that influence PU and PEOU. Two important external factors, Information Systems Quality (ISQ) and Information Quality (IQ) – have been consistently found to be influential factors that affected the perceived benefit and ease of use of IT. A review of relevant literature on developing countries E-Government systems reveals a broad spectrum of information technology applications in both government departments and private sectors. When citizens use Libyan e-Government websites to look for information or to start a particular administrative procedure or transaction, they tend to expect more efficiency and effectiveness when compared to their expectations of the traditional service counter approach. Citizens (in Libya) will understand the Libyan E-Government to be a beneficial resource if it can help them gather information or complete administrative procedures more effectively, easier and quicker than normal, (Rabaiah et al, 2006; Lucas & Spitler, 1999). According to Ajzen and Fishbein (1972), attitude and the subjective norms are very important factors on the behavioral intention formation, a proposition that is supported by Technology Acceptance Model. Future Libyan users with a more positive attitude toward IT are likely to be more satisfied with the system and view it as more useful (Ajzen & Fishbein, 1980; Heeks, 2006; Shin, 2007). Therefore, user attitude is hypothesized to positively affect the understanding of usefulness and behavioral intention. DeLone and McLean (1992, 2003) defined Information System Quality (ISQ) as quality appears in a system's overall performance and measured by individuals' perceptions. Because developing countries citizens are faceless in E-Government interactions, the information system's quality becomes the “online storefront” upon which first impressions are formed. If a Libyan citizen perceives an E-Government system to be top quality, that citizen will be more likely to use internet systems to submit applications or access other E-Government online products and services (Wang, 2003). Information quality (IQ), as assessed by citizens, usually influences their satisfaction and perceived usefulness (Moon & Kim, 2001; Aggelidis & Chatzoglou, 2008). Gallagher (1974) used customer perceptions of an information system's value to determine information quality.

The applications of an E-Government in Libya promises to improve the delivery of public goods and services to ordinary citizens not only by improving the process and management of government, but also by redefining the traditional notions and concepts of citizenship and democracy. With the emergence of an information technology economy, the country of Libya could leap to higher levels of socio-economic and political overall development. Based on the technology acceptance model (TAM) theory (Lederer et al.,

2000; Lin & Lu, 2000). This study presents the following eight hypotheses in table 1 below:

H1	E-Government (E-G) services has a positive effect on user behavior intentions.
H2	User's attitude on using (E-GS) positively affect their behavior intentions
H3	Understanding E-G help user attitudes toward the use of E-Government systems
H4	Building E-GS knowledge would ease using the internet to fill out applications.
H5	Understanding E-G has positive effect on users attitudes for using the internet
H6	IQ of E-G filing systems improves the perceived benefit of using the internet.
H7	ISQ of E-G help users to use the internet in submitting application forms online.
H8	Acceptance of E-G would save time, efforts and cost for users and governments

Table 1: Research Eight hypotheses

3. Research Aims and Objectives

The primary objective of this study is to help the Libyan government and internet users to adopt a strategic E-Government System to meet the needs of Libyan information technology users, also to ensure the availability of all needed information, products and services in order to achieve the following:

- 1- To provide a better understanding and clear perception of the usualness of the Libyan E-Government System.
- 2- To define the key activities of the Libyan E-Government System responding to the socio-economic and political revolution and challenges.
- 3- To encourage Libyan users to build trust and sincerity while using the Libyan E-Government applications to please them and ease their life.
- 4- Providing the best quality online products and services for all Libyan users.
- 5- To design the best TAM framework for the Libyan E-Government System.
- 6- Making user's operations more transparent and reducing opportunities for corruption and abusing public money.

4. Research methodology

After developing this study framework, the author has conducted important meetings and interviews with 10 Libyan organizations from different sectors with focusing on Information Technology aspects to assess the validity of the proposed research model. Based on related literature and the feedback gathered from the meetings, results were defined with extensive pre-testing by Libyan academics with significant outside experience

in E-Government operations. Furthermore, Pre-testing results revealed that the meetings were comprehensive and collected the needed data on Libyan citizens who would use E-Government Systems to file applications or use E-Government in their work also their opinions on E-Government Effectiveness.

5. Theoretical background

Osborne and Gaebler (1992) referred to residents / people as customers for governments, since governments need to empower rather than serve, to shift from hierarchy to teamwork and participation, to be mission oriented and customer centered, also to focus more on prevention rather than cure. Governments worldwide are faced with the challenge of transformation and the need to modernize administrative practices and management systems.

According to previous studies and academic literature, E-Government means different, products, services and requirements for different users. In practice, E-Government is digital governmental data and information and a way of engaging in digital transactions with end users. Furthermore, for others E-Government basically consists of the creation of a web site where information about socio-economic, political and governmental issues is presented. These narrow ways of defining and conceptualizing E-Government restrict the range of the facilities and opportunities it offers. One of the reasons why many E-Government initiatives fail is related to the narrow definition and very poor comprehension of the E-Government real Concept, Processes and Functions. Therefore, E-Government is a multidimensional and complex concept, which requires a broad definition and comprehensive understanding, and in this regard we can take a closer look of E-Government progress and the development it registered compared with the developed nations as follows:

5.1. Defining E-Government

Referring to previous academic studies and related literature the author would set up some E-Government definitions in table 2 in the next page:

1. World Bank, 2001	E-
Government is the government owned / operated systems of information and communication technologies that transform relations with the private sector and other government agencies so as to promote users' empowerment, improve service delivery and improve government efficiency.	
2. Abramson and Means, 2001	E-
E-Government can be defined as: The Electronic interaction (transaction and information exchange) between the government, the public such as citizens, businesses and employees.	
3. Fraga, 2001	E-
Government is the transformation of public sector internal and external relationships through net-enabled operations, IT and communications, in order to	

improve: Government service delivery; Constituency participation; Society.

4. Tapscott, 1996

E-

Government is an Internet-worked government which links new technology with legal systems internally with government information infrastructure externally with everything digital and with everybody.

5. UNPA & ASPA, 2001

E-

Governance is the public sector's use of the innovative information and communication technologies, like the Internet, to deliver improved services, reliable information and greater knowledge to facilitate access to the governing process and encourage deeper citizen's participation.

Table 2: Definitions of E-Government

The analysis of the above definitions allows the author to individuate the main issues and components that characterize Technology Acceptance Model for the best E-Government framework for Libyan citizens, some of these definitions were mentioned previously as:

1. Transformation areas (internal, external, relational)
2. Users, customers, actors and their interrelationships (citizens, businesses, government organizations, employees).
3. E-Government application domains (e-services, e-democracy, e-administration).

5.2. Transformation Area

The above analyzed definitions encompass three critical transformation areas of E-Government for developing countries (Hirst and Norton, 1998).

5.2.1. Internal - which refers to the use of Information Communication Technology to improve the efficiency and effectiveness of internal functions and processes of government by interrelating different sectors departments, and agencies. Thus, information can flow much faster and more easily among different governmental departments, reducing processing time scale delay, paperwork bottlenecks, and eliminating long, complicated, bureaucratic and inefficient approval procedures. Internetworking among Libyan different governmental departments, sectors and even Libyan NGO's will certainly improve the internal efficiency by enabling time reductions for using, storing and collecting data and important information, reduction of labor costs and information handling extra costs, as well as the speed and accuracy of online task processing.

5.2.2. External – Information Communication Technology (ICT) opens up new possibilities and golden opportunities for the Libyan Government to be more transparent

to all citizens and businesses, giving them access to a greater range of collected data and information that were generated by government. On the other hand, ICT will also create opportunities for partnership and collaborations among Libyan different governmental institutions (Allen et al., 2001). A new Libyan Electronic government blurs the lines not only within government agencies, but also between the top government management board members and those that touch it (Tapscott, 1996).

5.2.3. Relational –Information Communication Technology (ICT) adoption in Libya may also enable fundamental changes in the relationships between Libyan citizens and the state departments, as well as between nation provinces, with implications for the democratic process and structures of the government. Vertical and horizontal integration of different products and services can be realized, enabling the integration of information and services from various government agencies to help stakeholders getting seamless services. Fountain (2001) uses the concept of the “hypothetical state” that is a governmental entity that is organized with “hypothetical agencies, cross agencies, public-private networks whose structures and capacity depend on the Internet and web applications”. According to these three transformational areas it is obvious that the vertical Libyan E-Government initiative does not consist of a simple business process reengineering. Indeed, as Tapscott (1996) suggests: “It requires a radical rethinking of the nature and functioning of the organization and the relationships between organizations.

5.3. E-Government Web of Interrelationships

The aim of E-Government for Libya encompasses four main groups: Citizens, Businesses, Employees and Governments (other governments and public agencies). Electronic Transactions and Interactions between government and each group constitute the E-Government web of relationships and the respective four main blocks of the vertical Libyan E-Government, that are:

1. Government to Citizens (G2C)
2. Government to Business (G2B)
3. Government to Government (G2G)
4. Government to Employees (G2E)

5.3.1. Government to Citizen: Deals with the relationship between government and citizens and users. E-Government enables Libyan government agencies to talk, listen, relate and continuously communicate with its citizens, supporting, in this way, responsibility, democracy and developments to public services. A broad lane of interactions can be developed ranging from the delivery of services and the provision of welfare and health benefits to regulatory and compliance oriented licensing (Riley, 2001).

G2C allows users to access government data, information and services instantly, conveniently, from everywhere, by use of multiple channels (mobile phone or wireless device). It also enables and reinforces their participation in local community life (send an email or contribute to an online discussion forum).

5.3.2. Government to Business: Consists of the electronic interactions between government sectors and private businesses. It also enables E-transaction initiatives such as E-procurement and the development of all electronic marketplaces for government (Fang, 2002). The opportunity to conduct online transactions with government will cut down red tape and simplifies regulatory processes. Therefore helping businesses to become more competitive. The delivery of integrated, single-source public services creates opportunities for Libyan businesses and government to partner together for establishing a web presence faster and cheaper.

5.3.3. Government to Government: Refers to the relationship between governmental departments, as for example national, regional and local governmental bodies, or with other foreign government organizations. Governments depend on other levels of government within the state to actively deliver products services and allocate responsibilities (Riley, 2001).

Online communication and cooperation allows all Libyan government agencies to share databases, resources poor skills and capabilities, enhancing the efficiency and effectiveness of processes.

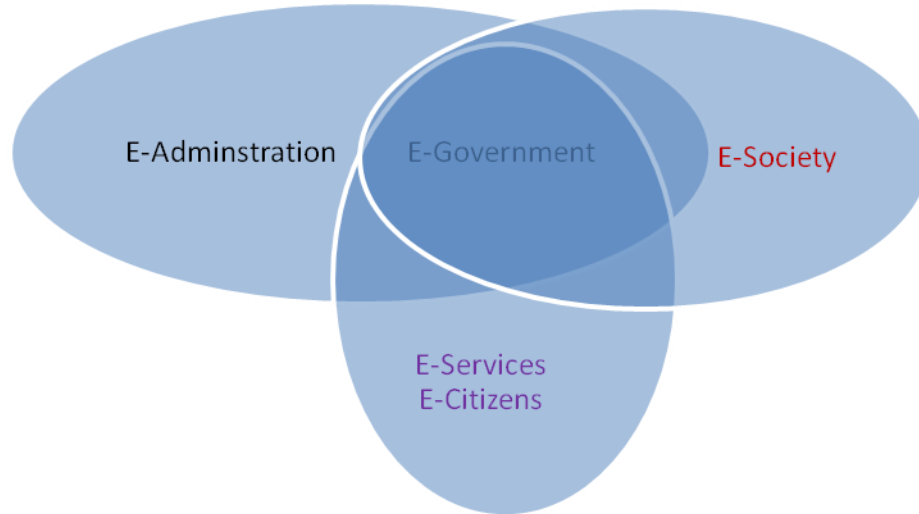
5.3.4. Government to Employees: This main block refers to the relationship between the Libyan government and its employees. G2E is an effective way to provide E-learning, bring employees together and to promote knowledge sharing among them. It provides employees with the possibility of accessing relevant information regarding compensation and benefit policies, training and learning opportunities, civil rights laws, etc. G2E refers also to strategic and tactical mechanisms for encouraging the practice of Libyan government aims and programs, as well as, human resource management, budgeting and accounting (Riley, 2001). The full exploitation and application of these complex webs of inter-relationships requires three main application domains for the Libyan E-Government (Heeks, 2001):

1. E-Administration – for automation and computerization of administrative tasks and for realization of strategic connections among internal processes, agencies.
2. E-Citizens and E-Services – to realize connections and interrelationships among Libyan government and citizens and to deliver automated services.
3. E-Society – to enable relationships and interactions beyond boundaries, among Libyan public agencies, private sector and civil community in general.

These three application domains should be considered as overlapping and E-Government can be found in the overlapping area of

these three application domains, demonstrating the complexities and heterogeneities needed to be handled for assuring its success is shown in (Fig. 1) below:

Figure 1: E-Government domains



5.4. E-Government for Libya

Like any other African developing country, the state of Libya must have its own E-Government System, and there is an article titled, “The e-Government in Africa”, YayehyiradKitaw(2006), the pioneer of E-Government, which is predicting that the development of E-Government in most African countries would be the world's largest and fastest-growing industry in the next decade. We can argue that was an old prediction and the fastest growing E-Government is now in the Western countries and therefore the government of Libya has to promote for an E-Government initiative based on solid and concrete strategy. The objectives of this initiative include better and more efficient delivery of government information, products and services to all Libyan users / citizens, the increased productivity among public servants, the encouragement of Libyan citizens' participation in government, and the empowerment of all Libyans in line with the development priorities outlined in Libya's future vision development plan (Islam & Okuda, 2005). Libya's new E-Government must proactively store government information and transactions, also should include the integrated Financial Management Information System (IFMIS). the Public Service Commission Website and the Official Government Web Portal (OGWP). These online services benefit citizens and government, as well as trimming down extra cost and increase government accountability, by making its operations more transparent and reducing opportunities for administrative and financial corruption. Furthermore online services provide local development opportunities,

such as livelihood, employment, and entrepreneurship training (Jobe, 2009; Agarwal & Prasad, 1999) and Libya's E-Government initiative would create a clean paperless environment, encourages efficient processes, and increases the people's convenience in contacting government different departments and agencies.

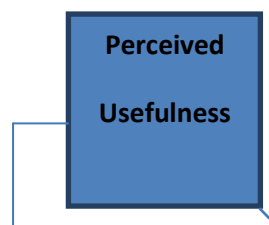
This new electronic system would enable citizens to purchase goods and services, obtain information, submit application, apply for passports, and practice trade on the internet (Carter & Bélanger, 2005; Bertot, 2003). Libya is a young nation where 60% of the population are educated youngsters but still are not empowered in the decision-making processes of the Libyan government. So, it is reasonable to question the relevance of the prospects of E-Government in Libya. In developed countries like the US, Canada, and EU countries, E-Government services have enabled citizens to perform many functions over the web, such as obtaining relevant information, downloading forms, scheduling appointments, and paying taxes and utility bills. Compared to most developed Western countries, Libya is experiencing substantial obstacles to establishing and perfecting its internet infrastructure despite of being one of the wealthiest countries in the Arab world and the biggest oil and gas supplier in Africa!

5.5. Technology Acceptance Model (TAM)

Using Technology Acceptance Model in developing countries as a framework to predict and explain a variety of human behaviors in the Information Technology adoption context (Ajzen & Fishbein, 1980; Gupta & Jana, 2003; Hu et al., 1999).

TAM theorizes that causal linkages flow in an organized sequence of beliefs, attitudes, intentions, and users behaviors (Chen 2002). To examine an individual's actual system use. And most of the previous studies focus on factors that are affecting individual's intentions of system acceptance (Gefen 2003). A general model of Technology Acceptance Model is shown in the (Figure.2) below:

Figure 2: Technology Acceptance Model



Another prior research suggests that users perceived usefulness (UPU) and perceived ease of use (PEOU) are two major influential emotional beliefs that determine users' IT Acceptance. Davis (1989) defined perceived usefulness as "the degree to which a person believes that using a particular system would enhance his or her job performance" and perceived ease of use as "the degree to which users believe that using a particular system would be free of effort" (Davis is also cited in Venkatesh, 2000; Torres et al., 2005).

This study examines the validity of TAM in the E-Government setting in Libya and focuses on how Libyans behave differently, and exhibit different levels of acceptance, than other E-Government users. As well as, Information and communications technologies (ICTs) are playing an increasingly vital role in the daily lives of people in developing countries and why not Libya, revolutionizing work and leisure and changing the rules of doing business.

With the emergence of an information technology socio-economy, the country of Libya could leap to higher levels of environmental, social, economic, and political development. Larsen and Rainie (2002) suggested that E-Government services include information for research, students enrolment and registration, registry office procedures, government forms and services, public policy information, employment and business opportunities, voting and election information, tax filing, license registration, or renewal, payment of shopping, bills and fines, and submission of comments to government officials. However, the successful operation of an E-Government System does not depend only on technology, but rather on the people who are using its online products and services (Akman et al., 2005; Wang & Liao, 2008). Taking another example from the African state of Gambia, Bwalya (2009) has clearly pointed out: "The Gambian E-government has been implemented by the government in collaboration with the

immigration authority aspart of its agenda to provide services efficiently and thereforecontribute a substantial amount of tax returns to people. Theneed for the authority to introduce this computer-based application was specifically to improve immigration service delivery;reduce the time it takes for the department to issue Permits andVisas and Clearing of persons at the ports of entry by about 50%ultimately reducing the cost of doing business for the applicantsin the country”.Ultimately, the e-participation component of E-Government adoption wasintended to encourage and emphasize the proposed adoption famous model ofTAM suggested by Davis in 1989. It was desired that there would be aflow of information between the government and differentstakeholders involved in the development process of its E-Governmentinitiative. Thus, this study focuses on the influential factors of E-Government success from the perspective of the Libyan citizens.

5.6. Model Shifts in the Public Sector

The Internet important presence, digital connectivity, revolution of E-Business models are increasing the pressuring on the Libyan government to rethink hierarchical,bureaucratic organizational new models. Libyan internet users are faced dailywith new moreE-Socio-Ecommerce models implemented by Banks and firms making it compulsory to use Information Communication Technology applications and why not for all governmentaldepartments?

As mentioned before, some previous studiesreferred to citizens as consumers, users and customers for government's different products and services,since governments have to enhance and empower rather than care and serve strategy, to shift from hierarchy to teamworkand real active participation, to be mission oriented and customer focused, and to concentrate on prevention rather than treat and cure. Governments worldwide are faced with challenges of transformation andthe need to modernize administrative practices in the IT management systems (Tapscott, 1996). Recently, the public sector recognized the potential opportunities offered by E-business models to fit with citizens' demands, to offer better services to citizens and toincrease efficiency by streamlining internal processes. Model shifts prevail in the public sector too and the traditional bureaucratic paradigm, characterized by internal productive efficiency and effectiveness, functionalrationality, departmentalization, hierarchical dedicated control and rule-based management (Kaufman,1977), is being replaced by competitive, knowledge based economy requirements, such as: entrepreneurship,organization learning, speed up in service delivery. This new model to thrust the shift toward E-Government is shown in Table 3: which emphasizescoordinated network building, external collaboration and customer services (Ho, 2002).

Table 3: Reinventing Local Governments and E-Government Initiative

<u>Model shifts in public service delivery</u>		
	<i>Bureaucratic Model</i>	<i>E-Government Model</i>
Orientation	Production cost-efficiency	User satisfaction and Control flexibility,
Process organization	Functional rationality, ,departmentalization vertical hierarchy of .control	Horizontal hierarchy, network organization, information sharing
Management principle	Management by rule and mandate	,Flexible management interdepartmental team work withcentralcoordination
Leadership style	Command and control	Facilitation and coordinationinnovativeentrepreneurship
Internal communication	Top down, Hierarchical	Multidirectional network with centralcoordination, direct Communication
External communication	Centralized, formal, limited channels	Formal and informal direct and fastfeedback, multiple channels
Mode of service delivery	Documentary mode and interpersonalinteraction	Electronic exchange, non- face to faceinteraction
Principles of service Delivery	Standardization, impartiality, equity.	interdepartmental team work with

5.7. E-Government for Developing Countries

It is now widely accepted in developing countries that Internet Communication Technology offers increased opportunities for socio-economic development and plays a critical role in rapid economic change, productive capacity improvements and international competitiveness enhancement for third world countries. The range of choicesand opportunities in many developing countries like Libya is expanding. ICT is believed to be a powerfuleabling tool to address some of the key barriers and challenges for entering the globalmarket and for future growth potential. It can transform old challenges and createunprecedented probabilities for sustainable economic development, just as it has done for businesses in the industrial world and developed countries.

Internet Communication Technologies offer the potential not just to collect, store, process, minimizing cost, but also to network, interact and communicate across the world (Crede and Mansell, 1998). Previous Econometric studies havefound evidence of a strong positive relationship between Internet Communication Technology investments and GDP growthillustrating the importance of ICTs for development, both in the commercial and the publicsectors. An OECD (2002) research project, based on national studies about the impact of Internet Communication Technologyon the economy, has shown that ICT investments accounted improvement in many industrial countries.

In Australia, the growth was 1.3% per annum over 1996-2000. Nevertheless, Internet Communication Technology represents a high risk for developing countries – the risk to deepen the digital divide and to further marginalize them with the networking revolution. Countries which fail to embrace and use Internet Communication Technology tools for entering the global network and for addressing development needs, will suffer vital disadvantages in form of information poverty that could further widen the gap in socio-economic status and competitiveness. Recognizing the power of ICTs, many help third world countries for development and to start building and encouraging E-Strategies and initiatives to address a wide range of economic, socio-technological, infrastructural, legal and educational issues.

Consequently, E-Government initiatives have flourished in many developing countries such as Brazil, India, Chile, Argentina, the Philippines, etc., reaping the advantages and opportunities of Internet Communication Technology and the socio-economic knowledge for collaboration, networking, better products and services, efficiency and effectiveness. However, many other initiatives have failed. Heeks found that more than one-third of initiatives are total failures (e.g. the failure of decision support systems in East Africa); further, half can be considered to be partial failures (e.g. the partial failure of management information systems in Eastern Europe); and roughly one-seventh are successes (Heeks, 2003).

An E-Government benchmark study conducted by the American Society for Public Administration (UNPA & ASPA, 2001) aimed to categorize the progress made by developed and developing countries in developing an online presence on a five stages scale: Emerging stage; Enhanced stage; Interactive stage; Transactional stage and Seamless stage, revealed that nearly all 32 countries at the Emerging Presence level were among the world's least developed nations, characterized by static and insufficient information that is infrequently updated, few interactive features, and non-existent online services.

The Transactional stage and in particular the Seamless stage were seen as very distant points for both developed and developing countries like Libya, with a few exceptions (UNPA & ASPA, 2001). The prevalence of stages 1 and 2 among developing countries can be explained by the fact that the adaptive challenges of E-Government go far beyond technology: they call for organizational structures and competencies, new leadership forms, and the transformation of public-private relationships (Allen et al., 2001). Based on these assertions, in this paper I have tried to evaluate and assess the potential of E-Government initiatives for Libya as well as to identify and analyze the principle challenges that may be encountered. Another study focused on E-Government case studies in 9 developing countries was performed and the results obtained are in the following section presenting initiatives that E-Government offers great opportunities for a developing country like Libya for improving its governance and citizen satisfaction level. And to realize the full potential of these applications, Libyan government must accommodate certain unique conditions and be able to manage a set of issues, problems and related challenges.

5.8. Opportunities of Developments

Benefits assured by use and application of E-Government in developing countries are the same as those in developed countries. The differences between these two groups could result from the fact that many potential benefits of E-Government are not reaped by developing countries as a consequence of their limited use of E-Government. Table 4 shows the main opportunities E-Government has triggered in our analyzed cases:

Table 4: E-Government Opportunities

- | |
|--|
| <ol style="list-style-type: none"> 1. Cost reduction and efficiency gains 2. Quality of service delivery to businesses and customers 3. Transparency, anticorruption, accountability 4. Increase the capacity of government 5. Network and community creation 6. Improve the quality of decision making 7. Promote use of ICT in other sectors of the society |
|--|

5.9. Cost Reduction and Efficiency Gains

Researchers (Tapscott, 1996; Amit and Zott, 2001; Malhotra, 2001) agree that ICT has considerable potential to contribute to efficiency gains and cost reductions for private organizations. Furthermore, these benefits constitute a major aspect of E-Government initiatives. Putting services on-line substantially decreases the processing costs of many activities compared with the manual way of handling operations. For example, it costs the US Inland Revenue Service \$1.60 to process a paper tax form, but only \$0.40 to process an electronic form (Al-Kibsi et al., 2001). The appropriate application of ICT may possibly reduce the number of inefficiencies in processes by allowing file and data sharing across government departments, thereby contributing to the elimination of mistakes from manual procedures, reducing the required time for transactions. Efficiency is also attained by streamlining internal processes, by enabling faster and more informed decision making, and by speeding up transaction processing. Example: In Beijing's Business E-Park, there is a new system (www.zhongguancun.com.cn) that applies the latest computer and Internet technologies to improve the efficiency and responsiveness of government. If businesses choose to use this system, they can reduce the time required for gaining approval for specific applications from 2-3 months to few days. Moreover, data can now be submitted on line, greatly increasing the quality of service for customers (Lin et al., 2001).

5.10. Quality Service Delivery to Businesses and Users

In the typical traditional model of public service delivery, the procedures are long time consuming with lack of transparency. A business that wishes to obtain a license to fill out a number of application forms, has to visit a number of different offices and spend

aconsiderable amount of time and money. If a Libyan citizen wishes to be issued with a certificate or any other official document, he or she will have to travel to the central government departments and go to different offices to spend a lot of time for a simple service. The consequences are high costs and Libyan citizen will never be satisfied. Therefore, a Libyan E-Government system will definitely reduce bureaucracy and offer round the clock accessibility, fast and convenient transactions, and obviously enhances the quality of services, in terms of time, content and accessibility. For example: In Brazil Citizen Assistance Service Centers have been created offering over 500 separate services. These centers are placed in shopping malls and other public places, and people going to shop can simultaneously apply for different public services such as booking a ticket, getting an identification card, looking for a new job, applying for a passport, and checking on their retirement eligibility. Customer satisfaction studies revealed that over 89% of citizens evaluated the service centers as excellent (Rinne et al., 2001a). Thus, the quality of services is ensured by reducing cost and time that users spend on getting official documents, waiting and queuing to get documents, traveling, as well as more customized products and services, error free documents, and 24 / 7 / 365 Days accessibility.

6. Research Fieldwork

The chosen data collection methodology for this study was through 10 intensified meetings. Furthermore, the selected questions, deep discussion and interviewees answers were analyzed to evaluate the Technology Acceptance Model on 3 point measure (1: weak, 2: Average, 3: strong) and the collected answers were as follows:

Tenth Meeting Result:

Interviewee Name: Abdulghani Al-Jarrari

Institution Name: Al-Ghobah Institute

Position / Role : University Lecturer

Date: 27-01-2021

Multiple Choice Skills Questions	Weak	Average	Strong
Q1. E-Government would suit the Libyan people's culture.			Yes
Q2. E-Government would provide the needed information.			Yes
Q3. Using E-Government would help me at my work.			Yes
Q4. I strongly request E-Government services in Libya.			Yes
Q5. E-Government would be useful and ease my life.			Yes
Q6. I would use E-Government in all related matters.			Yes
Q7. It would be secure to use E-Government on my mobile.			Yes
Q8. I would use E-Government than visiting state offices.			Yes
Q9. I would trust E-Government applications once provided.			Yes
Q10. I would advise others to use E-Government in Libya.			Yes

Ninth Meeting Result:

Interviewee Name: Eng. Sabri Mahmoud El-Hassi

Institution Name: Libyan Gulf Oil Company

Position / Role : Project Manager

Date: 27- 01-2021

Multiple Choice Skills Questions	Weak	Average	Strong
Q1. E-Government would suit the Libyan people's culture.			Yes
Q2. E-Government would provide the needed information.			Yes
Q3. Using E-Government would help me at my work.			Yes
Q4. I strongly request E-Government services in Libya.			Yes
Q5. E-Government would be useful and ease my life.			Yes
Q6. I would to use E-Government in all related matters.			Yes
Q7. It would be secure to use E-Government on my mobile.	Yes		
Q8. I would use E-Government than visiting state offices.		Yes	
Q9. I would trust E-Government applications once provided.			Yes
Q10. I would advise others to use E-Government in Libya.			Yes

Eighth Meeting Result:**Interviewee Name:** Mr Faraj Muhammad El-Shalwy**Institution Name:** Derna Solidarity Branch**Position / Role :** Head of Internal Audit**Date:** 26- 01-2021

Multiple Choice Skills Questions	Weak	Average	Strong
Q1. E-Government would suit the Libyan people's culture.		Yes	
Q2. E-Government would provide the needed information.			Yes
Q3. Using E-Government would help me at my work.			Yes
Q4. I strongly request E-Government services in Libya.			Yes
Q5. E-Government would be useful and ease my life.			Yes
Q6. I would to use E-Government in all related matters.			Yes
Q7. It would be secure to use E-Government on my mobile.			Yes
Q8. I would use E-Government than visiting state offices.			Yes
Q9. I would trust E-Government applications once provided.			Yes
Q10. I would advise others to use E-Government in Libya.			Yes

Seventh Meeting Result:**Interviewee Name:** Muhammad Al-Jailany**Company Name:** Deran Solidarity Branch**Position / Role :** Head of Department**Date:** 26-01-2021

Multiple Choice Skills Questions	Weak	Average	Strong
Q1. E-Government would suit the Libyan people's culture.		Yes	
Q2. E-Government would provide the needed information.			Yes
Q3. Using E-Government would help me at my work.			Yes
Q4. I strongly request E-Government services in Libya.			Yes
Q5. E-Government would be useful and ease my life.			Yes

Q6. I would to use E-Government in all related matters.			Yes
Q7. It would be secure to use E-Government on my mobile.		Yes	
Q8. I would use E-Government than visiting state offices.			Yes
Q9. I would trust E-Government applications once provided.			Yes
Q10. I would advise others to useE-Government in Libya.			Yes

Sixth Meeting Result:**Interviewee Name:Alaa Ali Al-Ekker****Institution Name: Omar Al-Mukhtar University****Position / Role : University Lecturer****Date:26-01-2021**

Multiple Choice Skills Questions	Weak	Average	Strong
Q1. E-Government would suit the Libyan people's culture.			Yes
Q2. E-Governmentwould providethe needed information.		Yes	
Q3. Using E-Government wouldhelp me at my work.	Yes		
Q4. I strongly request E-Government services in Libya.			Yes
Q5. E-Government would be useful and ease my life.	Yes		
Q6. I would to use E-Government in all related matters.			Yes
Q7. It would be secure to use E-Government on my mobile.			Yes
Q8. I would use E-Government than visiting state offices.			Yes
Q9. I would trust E-Government applications once provided.		Yes	
Q10. I would advise others to useE-Government in Libya.			Yes

Fifth Meeting Result:**Interviewee Name: Dr.AhmedZaed****Company Name: University of Sabha****Position / Role : University Lecturer****Date: 26-01-2021**

Multiple Choice Skills Questions	Weak	Average	Strong
Q1. E-Government would suit the Libyan people's culture.		Yes	
Q2. E-Governmentwould providethe needed information.			Yes
Q3. Using E-Government wouldhelp me at my work.		Yes	
Q4. I strongly request E-Government services in Libya.			Yes
Q5. E-Government would be useful and ease my life.			Yes
Q6. I would to use E-Government in all related matters.		Yes	
Q7. It would be secure to use E-Government on my mobile.		Yes	
Q8. I would use E-Government than visiting state offices.			Yes
Q9. I would trust E-Government applications once provided.		Yes	
Q10. I would advise others to useE-Government in Libya.			Yes

Fourth Meeting Result:**Interviewee Name: Mr. Abdulkhalig Adam Abdeljalil**

Company Name: Media & Culture Ministry

Position / Role : Administration Officer

Date: 27-01-2021

Multiple Choice Skills Questions	Weak	Average	Strong
Q1. E-Government would suit the Libyan people's culture.		Yes	
Q2. E-Government would provide the needed information.		Yes	
Q3. Using E-Government would help me at my work.			Yes
Q4. I strongly request E-Government services in Libya.			Yes
Q5. E-Government would be useful and ease my life.			Yes
Q6. I would to use E-Government in all related matters.			Yes
Q7. It would be secure to use E-Government on my mobile.		Yes	
Q8. I would use E-Government than visiting state offices.			Yes
Q9. I would trust E-Government applications once provided.			Yes
Q10. I would advise others to use E-Government in Libya.			Yes

Third Meeting Result:

Interviewee Name: Mr. Farhat Fathallah Yonis

Company Name: Omar Al-Mukhtar University

Position / Role : Students Affairs Officer

Date: 27-01-2021

Multiple Choice Skills Questions	Weak	Average	Strong
Q1. E-Government would suit the Libyan people's culture.	Yes		
Q2. E-Government would provide the needed information.			Yes
Q3. Using E-Government would help me at my work.			Yes
Q4. I strongly request E-Government services in Libya.			Yes
Q5. E-Government would be useful and ease my life.			Yes
Q6. I would to use E-Government in all related matters.			Yes
Q7. It would be secure to use E-Government on my mobile.	Yes		
Q8. I would use E-Government than visiting state offices.			Yes
Q9. I would trust E-Government applications once provided.			Yes
Q10. I would advise others to use E-Government in Libya.			Yes

Second Meeting Result:

Interviewee Name: Dr. Muhammad Elsayd

Company Name: Tert Clinic Centre

Position / Role : GP

Date: 25-01-2021

Multiple Choice Skills Questions	Weak	Average	Strong
Q1. E-Government would suit the Libyan people's culture.			Yes
Q2. E-Government would provide the needed information.			Yes
Q3. Using E-Government would help me at my work.			Yes
Q4. I strongly request E-Government services in Libya.			Yes
Q5. E-Government would be useful and ease my life.			Yes
Q6. I would to use E-Government in all related matters.			Yes
Q7. It would be secure to use E-Government on my mobile.			Yes
Q8. I would use E-Government than visiting state offices.			Yes
Q9. I would trust E-Government applications once provided.			Yes
Q10. I would advise others to use E-Government in Libya.			Yes

First Meeting Result:**Interviewee Name: Mr. Muftah Ben Omran****Institution Name: Businessman****Position / Role : Construction Sector****Date: 23- 01-2021**

Multiple Choice Skills Questions	Weak	Average	Strong
Q1. E-Government would suit the Libyan people's culture.		Yes	
Q2. E-Government would provide the needed information.			Yes
Q3. Using E-Government would help me at my work.			Yes
Q4. I strongly request E-Government services in Libya.			Yes
Q5. E-Government would be useful and ease my life.			Yes
Q6. I would to use E-Government in all related matters.		Yes	
Q7. It would be secure to use E-Government on my mobile.			Yes
Q8. I would use E-Government than visiting state offices.			Yes
Q9. I would trust E-Government applications once provided.			Yes
Q10. I would advise others to use E-Government in Libya.			Yes

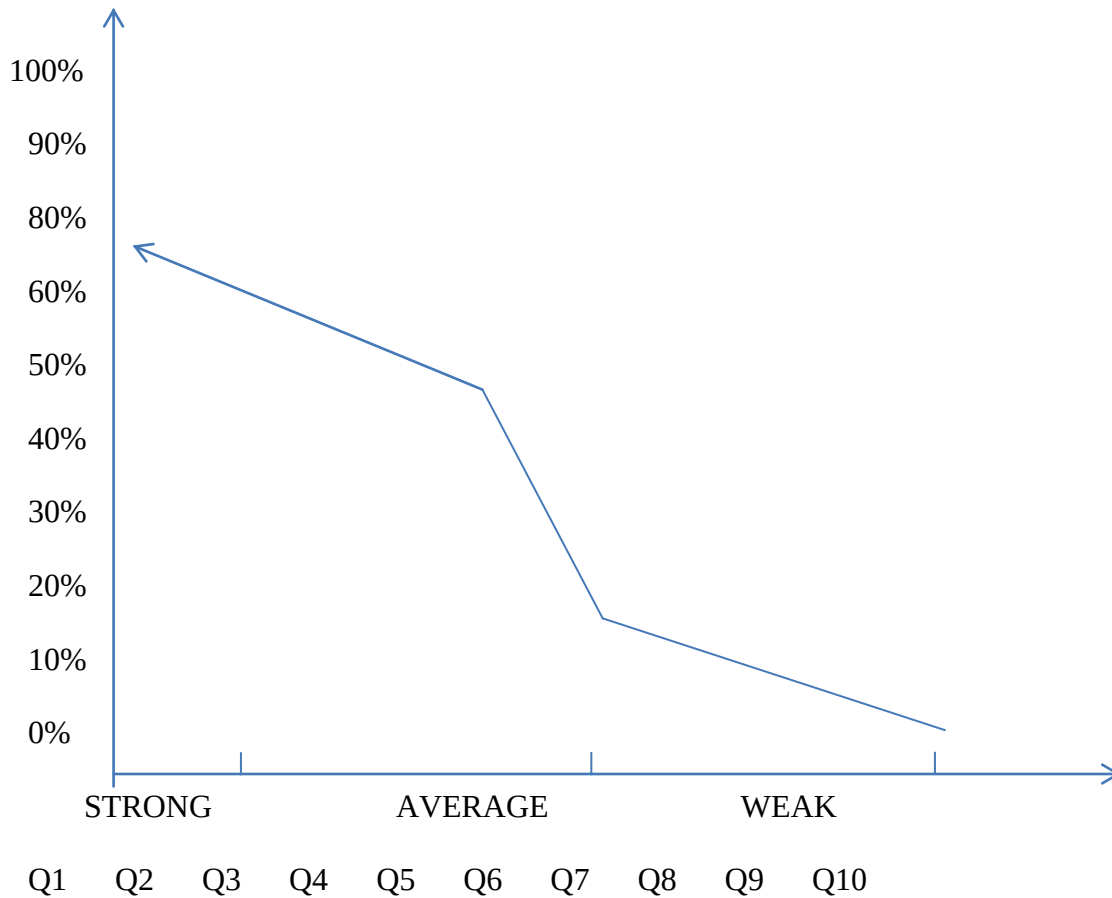
6.1 Meetings Answers Statistical Analysis:

Required Skills Answers Percentage	Weak	Average	Strong
Q1. E-Government would suit the Libyan people's culture.	1%	5%	4%
Q2. E-Government would provide the needed information.	0%	2%	8%
Q3. Using E-Government would help me at my work.	1%	1%	8%
Q4. I strongly request E-Government services in Libya.	0%	0%	10%
Q5. E-Government would be useful and ease my life.	1%	0%	9%
Q6. I would to use E-Government in all related matters.	0%	2%	8%
Q7. It would be secure to use E-Government on my mobile.	2%	3%	5%
Q8. I would use E-Government than visiting state offices.	0%	1%	9%
Q9. I would trust E-Government applications once provided.	0%	2%	8%

Q10. I would advise others to use E-Government in Libya.	0%	0%	10%
Answers overall Percentage	5%	16%	79%

Note: Meetings Answers Diagram Analysis is shown below in figure 3:

figure 3: Meetings Answers Diagram Analysis



7. Initial Results and Discussion

Based on previous literature review and the Statistical Analysis of the Meetings Answers, challenges and changes in technology and customers knowledge have become a key factor in designing an E-Government system for Libya which must work on national policies and strategies to reap the benefits of the socio-economic growth and development and I'm certainly convinced that E-Government in Libya is believed to play a fundamental role to this end. It does not only facilitate market-led initiatives but it also plays a major role in initiating the process of capability building and in coordinating the actions of a large number of interested stakeholders (Mansell and Wehn, 1998). It also offers the

potential of reshaping the public sector activities and processes, building relationships between Libyans and their government, enhancing transparency, increasing government capacity and providing a “voice” for those outside the government. Nevertheless, the ability of Libya to reap the full benefits of E-Government is limited and is largely hampered by the existence of many political and socio-economic hindrances. But, despite these obstacles Libya experienced, the reference cases provided here show that developing countries should and could take advantages of the Information Communication Technology revolution. Finally, There are some important tips to consider for a successful design and implementation of E-Government initiatives:

- 1- E-readiness assessment - Start with an e-readiness assessment study which permits stakeholders to understand the current state of the internet networks infrastructure, legal and regulatory framework, also the current level of human resources and skills, as well as, the main impediments within Libya's borders. It is possible to produce E-Government strategies and application for building the best online products and services for Libyan citizens in a very effective way.
- 2- Raise awareness among Libyans and private organizations - Organize workshops, events, seminars, conferences with the objective of raising awareness about real opportunities and benefits that E-Government can bring. Prepare for long-term solutions to problems by ensuring the availability of appropriate training programs for future management of technological and business changes.
- 3- To design an Effective E-Government System, be smart and begin with feasible pilot projects, tailored to specific contexts. Build up steadily the responding to all citizens needs and expectations. Be prepared to make the required changes on the road. Agility and flexibility assure the success.
- 4- Stimulate collaboration and coordination among Libyan government sectors and agencies to increase efficiency and effectiveness in process handling. Address threats, challenges and opportunities in strong partnership with private organizations, major donors, research institutions and universities, and support cross fertilization of ideas, solutions and customers knowledge.
- 5- Assessing and evaluating different alternatives, ways and solutions for Libyan digital government development including application technology and multi-channel access to services. Find viable solutions to ensure the effective participations of the community in the socio-economy data system.
- 6- Adopt a holistic approach, with clear vision and strategy to overcome the barriers and challenges for change. Integrate E-Government with other development strategies and policies to ensure a broad base diffusion. The active role of top Libyan leaders is crucial especially at the earliest stages, to raise awareness, make Information Communication Technology development a national priority, build and maintain wide commitment and involvement at public and private levels.
- 7- Prepare to manage technological knowledge and change - Establish knowledge management processes and tools to ensure storage, usage, easy retrieval of strategic information and knowledge for better and fast decision-making process, for further adaptation and development, for realizing the necessary improvements and always search for better and innovative value added services and solutions for an Effective Libyan E-Government System.

8. Conclusion and Final Recommendations

Technology Acceptance Model (TAM) have strong influences on Libyan citizen's intentions of using the new E-Government Systems and Applications, also the empirical results show that both information quality (IQ) and perceived ease of use (PEOU) positively influence on users perceived usefulness (UPU) in the Libyan E-Government System. Moreover, PEOU significantly affects citizen's attitudes towards using the E-Government Systems Technology. In the meantime, Libyan users attitudes toward using the E-Government systems significantly affect their behavioral intentions. Consistent with prior TAM literature, the core constructs of the TAMs (information quality, perceived usefulness, perceived ease of use, attitude towards using, and behavioral intention) have an important and strong influence on Libya's E-Government usage intention. However, due to Libya's inconsistent and unstable electricity availability compared to Western world, proves Libya's poor government infrastructure is a critical failure factor in unsuccessful E-Government initiatives. Accessing government documents via E-Government resources is quite difficult for Libyan citizens. In some cases, Perceived Usefulness (PU) does not have a strong impact on behavioral Intentions and attitudes in developing countries with inconvenient IT infrastructure. To improve Libya's Information System understanding, the Libyan government should introduce control systems and web portals on their sites. Accessibility to Information is problematic and users sometimes hesitate to access online E-Government systems. Also this study has several limitations which future research can address. The investigation of E-Government Systems and Application Success Models are relatively new to Libya. Thus, generalizing findings in this discussion of E-Government categories or user groups is not solid enough, but still can be a good base for further research. As well as, cross-cultural validation using a large sample elsewhere is requiring a greater generalization of the proposed model (TAM). Libyan citizens using the E-Government system put forth a great effort to meet successful results. TAM has strong influences on user intention towards E-Government products and Services. This implies that the Libyan government can potentially utilize this study's; Technological Acceptance Model (TAM) findings in other contextual settings to design and promote E-Government Systems and Application for Libya.

References:

- 1- Agrifoglio, R., Black, S., & Metallo, C. (2010). Twitter acceptance: The role of intrinsic motivation. Proceedings of ALPIS, Sprouts: Working papers on information systems, 10(9), 1–7 Retrieved May 28, 2010, from <http://sprouts.aisnet.org/10-9> 2010.

- 2- Akman, I., Ali, Y., Mishra, A., & Arifoglu, A. (2005). E-Government: A global view an empirical evaluation of some attributes of citizens. *Government Information Quarterly*, 22(2), 239–257.
- 3- Bertot, J. (2003). The multiple dimensions of the digital divide: More than the technology 'haves' and 'have nots' *Government Information Quarterly*, 20(2), 185–191.
- 4- Bwalya, K. J. (2009). Factors affecting adoption of e-Government in Zambia. *Electronic*.
- 5- *Journal of Information Systems in Developing Countries*, 38(4), 1–7.
- 6- Campeau, D. R., & Higgins, C. A. (1995). Computer self-efficacy: Development of measure and initial test. *MIS quarterly*, 19(2), 182–211.
- 7- Carter, L., & Bélanger, F. (2005). The utilization of e-Government services: Citizen trust, innovation and acceptance factors. *Information Systems Journal*, 15(1), 20–25.
- 8- Chau, P. Y. K., & Hu, P. J. H. (2001). Information technology acceptance by individual professionals: A model comparison approach. *Decision Sciences*, 32(4), 699–719.
- 9- Chen, L. D., Gillenson, M. L., & Sherrell, D. L. (2002). Entering online consumers: An extended technology acceptance perspective. *Information Management*, 39, 705–719.
- 10- Agarwal, R., & Prasad, J. (1999). Are individual differences germane to the acceptance of new information technologies? *Decision Sciences*, pp 41.
- 11- Aggelidid, V. P., & Chatzoglou, P. D. (2008). Using a modified technology acceptance model in hospitals. *Journal of Medical Informatics*, 89, 181–183.
- 12- Cronbach, L. (1970). *Essentials of psychological testing*. New York: Harper International editions.
- 13- Davis, F. D. (1989). Perceived usefulness, perceived ease of use and user acceptance of information technology. *MIS Quarterly*, pp 45-49.
- 14- Day, M., Demir, G., Oliver, D. P., Courtney, K., & Hensel, B. (2007). Exploring underutilization of videophones in hospice settings. *15 Telemed J E Health*, 13(1), 25–31.
- 16- DeLone, W. H., & McLean, E. R. (1992). Information system success: The quest for dependent variable. *Information Systems Research*, pp 81-84.
- 17- Dishaw, M. T., & Strong, D. M. (1999). Extending the technology acceptance model with task-technology-fit constructs. *Information Management*, pp 35-37.

- 18- ECA/Government of the Gambia (2004). National e-Government program for Africa.
- 19- Report available at. www.uneca.org/aisi/docs/Gambiae-Gov-report.pdf.
- 20- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable and measurement error. *Journal of Marketing Research*.
- 21- Gallagher, B. J., III (1974). An empirical analysis of attitude differences between three kin-related generations.
- 22- Youth and Society, 5, 327–349 Retrieved August 18, 2010, from <http://yas.sagepub.com/content/5/3.toc>.
- 23- Gefen, D., Straud, D., & Elena, K. (2003). Trust and TAM in online shopping: An integrated model. *MIS Quarterly*, pp 125-128.
- 24- Gupta, M. P., & Jana, D. (2003). E-Government evaluation: A framework and case study. *Government Information Quarterly*, pp 134-136.
- 25- Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). *Multivariate data analysis* (5th Ed.). New Jersey: Prentice-Hall.
- 26- Heeks, R. (2006). *Implementing and managing e-Government: An international text*. London: Sage, pp 19-23.
- 27- Heo, J., & Han, I. (2003). Performance measure of information systems (IS) in evolving computing environments: An empirical investigation. *Information Management*, pp 116.
- 28- Hiller, J. S., & Belanger, F. (2001). *Privacy Strategies for Electronic Government* (pp. 162–198).
- 29- North America: Rowman and Littlefield Publishers.
- 30- Hu, P. J., Chau, P. Y. K., Liu Sheng, O. R., & Tam, K. Y. (1999).
- 31- *Journal of Management Information Systems*, pp 91–94.
- 32- Igbaria, M., Zinatelli, N., Gragg, P., & Cavaye, A. (1997). Personal computing acceptance factors on small firms: A structural equation model. *MIS Quarterly*, pp 134-136.
- 33- Islam, B., & Okuda, A. (2005). E-government — The case of the Gambia. Presentation made at the World summit on Information Society, Geneva 2003–Tunis, 2005 Retrieved October 6, 2009, from http://www.uneca.org/codi/codi4/codi_iv_report.pdf.

34-Jaeger, P. T. (2003). The endless wire: E-Government as global phenomenon. *Government Information Quarterly*, pp 132-137.

35- Jobe, E. D. (2009). Electronic/mobile government in Africa: Progress made and challenges ahead. Retrieved April 20, 2010

36- Karahanna, E., Straub, D. W., & Chervany, N. L. (1999). Information technology adoption across time: A cross-sectional comparison of pre-adoption and post-adoption beliefs. *MIS Quarterly*, pp 35-38.