


# Challenging the Challenges of E-Government: The Ethiopian Context

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## ABSTRACT

The advancement of information and communication technologies is influencing lifestyles. Making human being involved in the evolution of the life process, information and communication technology has been changing activities. Societies are significantly reacting to events and activities locally and globally. This situation transfers the world society to a networked mood of life. The more a society utilizes technology, the more the secret of world is understood. When revising many kinds of literature about e-government implementation, the researcher found most journal articles and books analyze successions or failures of e-government. This paper is different in that it forwards some possible ways to overcome and solve problems in the implementation of e-government. Even though revising successes and failures of e-government projects is important to get experiences, thinking over how to avoid those challenges is more fruitful when adopting e-government applications.

## KEYWORDS

Benefit, Communication, Corruption, Finding, Implementing, Information, Reduction, Technology

## INTRODUCTION

E-government started to appear in the mid-1990s. Today, it embraced by almost all over the world. There are many types of research conducted both in theoretical and practical aspects of e-government. Different writers discussed almost all aspects of e-government. This paper reviews the challenges that face e-government and how to overcome these challenges.

## Part-A: GENERAL INFORMATION ABOUT E-GOVERNMENT

### Definitions of E-government

The word “E-Government” is composed of two different words: “electronic” and “government”. It is defined by different scholars based according to their focuses. The common thing that all writers show is the terminologies they give show that e-government is utilizing of information and communication technologies to provide better services to people.

Some definitions limit e-government to internet-based applications only. However, e-government includes all digital activities that are connected to the internet. Some others restrict e-government to government sectors only. It includes governmental and non-governmental activities.

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e-government by Dawes (2002) as the utilization of internet-based technology to assist public activities, involve citizens, and supply public services to people (Dawes, 2002).

e-government is explained by World Bank (2002) as the utilization of information and communication technology instruments like wide area networks, mobile computing, and the internet by public agencies to exchange information with citizens, private sectors, and public sectors (World Bank, 2002).

Drucker, P F (2001) explains e-government as the utility of prominent information and communication technologies to simplify the operation of managements (Drucker, 2001).

Randeep (2005) defines saying “e-government is broadly understood as the use of information and communication technologies by the government to enhance the range and quality of government information and services provided to clients in an efficient, cost-effective and convenient, while making government processes more accountable, responsive and transparent (Randeep, 2005).

According to Richard Heeks (2006), e-government is also known as “electronic Government or Digital Government or e-Governance. Government is a rapidly growing phenomenon, which increasingly influences the public sector works and over promises a solution to many public sector problems (Heeks, 2006).

e-government is defined by Bhatnagar (2004) as the use of information and communication technology to manipulate public activities efficiently, effectively and with minimum costs, to make public services easier, more accessible information and to make public sectors work properly according to citizens’ needs (Bhatnagar, 2004).

United Nations (2001) defined e-government as the use of the internet and websites to provide public services to citizens and exchange information between government and citizens (United Nations (UN), 2001, p. 1).

As in the definitions above, there is no commonly accepted definition of e-government. This is partly because the electronic government is a recently originated phenomenon and major English dictionaries do not list it (Bhatnagar, 2004).

The keyword here is the government; not electronic. E-government should be considered as a facilitator, complementary and alternative approach to public management and service delivery. This approach should be a system to redefine the method by which governments interact with their people and civil service sectors.

## **Objective of the Study**

The purpose of this literature review was to elaborate on the benefits of e-government implementation and to forward how to resist those challenges of adopting e-government.

## **Methodology of the Study**

The researcher has obtained the data required in this paper mainly from several kinds of literature written in the field. The main sources used in this paper are books, journal articles, conferences and seminar papers, United Nations reports, World Bank reports, and some websites. The paper is compiled based on different steps like searching relevant sources, collecting important ones, prioritizing and reading prudently for summarizing the most relevant information for the topic. The most challenge facing the researcher was getting a new idea about the topic where most articles and books mention similar concepts and definitions. Most sources discuss either advantage or disadvantage or benefit and failure. Only a few works of literature forward some solutions for the challenges facing the adoption of e-government.

## **Study Context**

Since the researcher wants to make his country the start of his study to contribute to advance information and communication technologies in Ethiopia, he makes Ethiopia his context of the study.

## **E-government Vision of Ethiopia in 2020**

Ethiopia has planned to realize economic progress and to provide qualified and affordable services to citizens thereby delivering effective, efficient and transparent governance, innovating all services, creating entrepreneurship to improve life-standards by adopting SMART government initiatives (KPMG, 2016).

## **Information and Communication Technology Initiatives of Ethiopia**

According to Sisay Tolla (2018), the Ethiopian government has recognized and affirmed the national information and communication technologies policy directive. Information and communication technology is recognized by the government of Ethiopia as a platform enabling Ethiopians to participate in public sector processes. It also plays a role to have access to global information and knowledge (Tolla, 2018).

## **PART-B: BENEFITS OF E-GOVERNMENT**

### **Easy and Quick Implementation**

Paper-based traditional works consume time, energy and money. e-government solves this problem. All government agencies and departments can share information through e-government to build a mega database. If the Ethiopian government applies e-government at national level, citizens can get policies and decisions easily and can react with these governmental activities wherever they are. Public policies and decisions can reach citizens in short time. When e-government is perfectly established and adopted, it does governmental processes with considerable speed and less human and material resources.

### **Inclusive Governance**

Good governance can be measured by the level of trust between the public sector and citizens. E-governance builds trust in that citizens can follow up on what is going in government sectors. This is an essential factor for the relations between governments and its people. Participating in decision-making and policy-designing processes, citizens involve in national issues. This develops government transparency and accountability.

### **High Operational Efficiency**

Governments may want to provide services to citizens with high quality. Citizens may measure their government by the quality and effective services. E-government facilitates and solves problems of lagging and resource loose. Citizens can enjoy quick services provided by public sectors. This improves the relations between government and citizens. E-government minimizes national transaction costs and bureaucratic processes, which helps public sector operations effectively and efficiently. It enables online payments with less handled documents. This results in increasing the rationality of administrative processes. Procedures of driving licenses, medical cards, and student registration, for example, are time-consuming because such processes involve multiple copies of paper applications and documents, visiting services offices, handling several forms and official data. This does not mean that citizens are not required to visit public services offices at all. There should be a clear understanding that e-services simplify procedures.

### **High Level of Trust on Government**

In the practical world, governments survive in power if at least some of their citizens accept them. E-government adds values of governments on the eyes of their people because life is simplified to the extent that citizens can communicate with public officials at any time and place. This makes citizens trust their governments because they save costs as well as understand what is going on in

public offices. Public officials can also understand citizens' needs and respond to these needs online. E-government strengthens the accuracy, transparency, and facility of governmental services. These characteristics of government activities significantly improve a high level of trust.

### **Running Cost Reduction**

Technology helps governments minimize running costs because e-government is a cost-effective system. Issues like population surveys or public opinion gathering need a huge budget. E-government systems can do these with low costs. Indeed, the adoption of e-government also needs a huge amount of money but it saves resources. Quality services and reduction of service time substitute the cost. Contrasting to public operating budgets, e-government can save a more considerable amount of time, energy and money than traditional operating systems.

### **Reduction of Corruption**

one of the most challenging problems in developing countries is corruption. It is the biggest hindrance to good governance especially in poor states (Anttiroiko, 2008). Amartya Sen (1999) states that the commonness of corruption is prominently considered as a major blocker to the economic development like what is seen in many African and Asian countries (Sen, 1999, p. 275)

E-government solves this challenge to facilitate economic growth and equality among individuals of citizens in a country. What should be understood is that fighting corruption is not the prior responsibility of e-government. If fighting corruption is decided as a major task of e-government, its vision must be put in that way. In this case, there should be at least two preconditions. The first one is there should be a national declaration of fighting corruption. This means government offices must declare anti-corruption then this should be publicized to mobilize the whole society. Second there should be anti-corruption government. The government offices should be clear off corruptions. This also needs the readiness of government officials that they should be loyal and pay scarifying for the sake of eradicating this crime.

### **Accountability**

According to Anttiroiko (2008) accountability in a political context refers "to the trait of being answerable to the electorate for political or administrative actions and represents an important factor in securing good governance (Anttiroiko, 2008, p. 281). E-government facilitates accountability through preparing different information technology, managerial and administrative mechanisms. Andreas Schedler (1999) has defined "accountability" as "A is accountable to B when A is obliged to inform B about A's (past or future) actions and decisions, to justify them, and to suffer punishment in the case of eventual misconduct (Schedler, Diamond, & F.Plattner, 1999). Once transparency is established, accountability will control government officials.

### **Transparency**

Once accountability is achieved, automatically transparency will be realized in government sectors. This results in democracy, which is all about transparency. Among the uses of information and communications technology, it improves the transparency of government activities as it is a tool for enhancing the transparency of public sectors. The actual degree of government transparency still represents an open issue, even if information and communication technologies play an important role in barrier reduction (Aikins, 2012).

### **Effectiveness**

Effectiveness is a positive administrative improvements issue in government sectors. Adoption of e-government may show effective managerial activities of the sectors. Information and communication

technology helps governments to achieve better development and design relevant policies. E-government invites governments to make citizens participate in national issues.

Effectiveness and efficiency of a government rely on multifarious variables that should be carefully monitored by the government. These variables can be replaced by modern ones by the necessity of administrative modernization through time (Saeed, Ramayah, & Mahmood, 2017).

### **Empowerment**

Information and communication technologies empower citizens by providing information to increase interaction between government and citizens. An informed society becomes aware national issues. Ethiopians, for instance, do not know what is going on in the country except some molded news through social media. This is not enough for citizens to participate in national issues.

There should be a clear image of government agendas and activities that citizens participate in. A nation, which does not know what is going on its land, cannot participate in decision-making processes and even cannot contribute to national development through accessing to information and more competent government management (Ming, Awan, & Somani, 2013).

### **Convenience**

The usage of E-government allows both users and citizens to achieve valuable objectives at any time and place with no need of visiting government offices physically. According to Pavlichev (2004), e-government promises to make a new era of convenience to citizens by providing government forms, information and online transactions (Pavlichev & Garson, 2004, p. 2). The most targeted reason for conducting online transactions was Convenience. E-government provided citizens with price, delivery, and speed what they need from government or what government needs from them. Over the last decades, information and communication technologies' revolution was being measured by e-mail that people could communicate from remote places, share information and conduct different transactions. Computerization helps people record accounting and social information and shares it equally to users. Citizens can approve and discussions about political, social, economic and cultural issues at home online. They can elect or guide their leaders while they are at home.

### **Democratization**

For centuries, the chain of dialogues is trying to dig around problems that cause long-term problems and block them from the eyes. The density of the rubble and the expulsion of habit and the out siding of their scopes are to become forgotten and neglected. Perhaps, the most difficult of these problems is the problem of "democracy". Defining democracy is not the concern of this paper. Because there are too many definitions of democracy and too many disagreements over how one measures the success and failures of democracy. Putting Abraham Lincoln's definition of government gives a clear understanding of democracy. He says: 'government of the people, by the people, and for the people' (Heywood, 2004, p. 222). One of the ultimate goals of e-government is citizen participation in government issues. People can involve in national issues with their governments. Public officials can interact with their citizens through e-government to get feedback about national issues. Accurate and proper decisions can be made by government-citizens cooperation.

### **Economic Growth and Development**

E-government systems adoption promotes economic growth and economic development of a country by providing services electronically to save significant costs. Since the adoption of e-government assists the modernization of government sectors, it is possible to implement economic and social improvements. Economic growth and Economic development are different concepts. The former is important but not enough for economic or national development. According to Nafziger (2012), economic growth is defined as "increases in a country's production or income per capita" and economic development is defined as "economic growth accompanied by changes in outcome sharing

and economic system (Nafziger, 2012, s. 14). E-government supports both economic growth and Economic development by increasing gross national product or gross national income, which is an economy's total output of goods and services. E-government improves the material status of poor people by adopting e-agriculture, e-industry, e-service, e-people, e-education and so on. These all contribute development and growth of national products, which in turn increase both gross national products, which stress on quantitative measures and economic development that focuses on capacity changes like education, adoption of technology, administrative coordination. E-government is the accompaniment to economic and social progressions. It is helpful for public sectors to be responsive in economics and society changes. E-government supports developments in the business sector. Advanced information and communication technologies can improve both government and private sector services. Countries like Ethiopia need applying e-government to attain economic development. The more Ethiopia uses information and communication technologies, the more its advancement will increase in economic development.

## **PART-C: IMPLEMENTING E-GOVERNMENT NEEDS AND CHALLENGES**

It is obvious that if a government considers the digital divide and decides to advance its services, it provides endless opportunities for citizens. Resolutions to conflicts of development need advancement in government procedures. Effective and efficient services need solving many challenges. Citizens demand accountability, participation, qualified service, transparency, and speedy service delivery. This forces governments to advance and better work for better changes. No matter how challenges are strong, genuine leaders, with together loyal private sectors and citizens, can establish sustainable and perfect advancements by using information and communication technologies. Mostly, the adoption of e-government systems was done either by sound public sector reformation, which resulted in improvement of governance conditions, or a catalyst for their introduction (Misuraca, 2007, p. 61). There are many problems in developing countries that challenge applications of e-government systems. Unless these barriers are avoided, it will be difficult to adopt the systems. E-government systems need political, social, economic and cultural supports. These all play a significant role in implementing the systems and benefiting from them. This is because of e-government systems touch values of citizens, Government operations, Strategic/politics, and Government finance. Governments are the first effort making of succession in adopting e-government. That is why governmental barriers are the most hinders to adopt technology-wise systems.

### **E-government Requires Government Facilitations**

Among the problems that face e-government applications is governmental reformation. Institutional rearrangements usually affect e-government systems. Governments should facilitate access to technical and financial support for adopting e-government systems. An appropriate environment is necessary for the systems. Clearing this environment from any problem is the first responsibility of public sectors. Both governmental and private sectors should assure the systems in the way that there will be a succession of governing electronically.

### **E-government Committed Leadership**

Any part of human life needs good leadership. Better leaders forward their organizations to better stages. Establishing effective and transparency systems is one of good leadership, which is a good characteristic of good governance. If there is leadership commitment, e-government projects can break their goals. Good governmental leadership is very important for the adoption of e-government systems. Leaders should be cost and information and communication technology sensitives, and long-run visionary for stakeholders buy-in, resource savers, and facility providers for e-government to break the goal. So, e-government projects must be taken as one of governing tools and tasks. E-government projects can be affected by organizational system, leadership commitment, culture,

project situation, partnership, institutional structure, individual qualifications, and attitudes. For E-government systems, to be effective, should be assisted by insurance, technical and financial services (Mothataesi & Mazebe, 2014). Naturally, information and communication technology depends on effective leadership.

### **E-government Needs Organizational Structure**

Traditionally, governmental organizations are hierarchical. This creates many obstacles between the applications of technology and governmental leaders. To assist e-government systems, there is a need of a group of qualified people. This group will monitor implementation activities, ensure e-government investment platforms and set clear mandates and positions or responsibilities for adopting e-government systems. This group designs supportive policies and guidelines, practices and processes styles, and administration buy-in. Government employees need well-arranged training to improve their understanding of the e-government systems models. Proper institutional environment supports the creation of qualified progress in all directions and assures that progression to be sustainable (Mothataesi & Mazebe, 2014). This is because there is no static working style, which leads toward advancement. Decisions, regulation frameworks, budget amounts and skill levels will be beyond the existing conditions. The whole public sectors may require to rearrange their systems to advance technology because the e-government systems need problem solving and conflict settlement (Misuraca, 2007). Even stakeholders (not-state actors) will be involved in institutional changes that they should cooperate with e-government leaders.

### **E-government Needs Better Human Skill**

E-government systems are technology-wise that they need well-trained staff of personnel possessing enough skills. The e-government systems are supported by qualified man-power and capabilities. Well-skilled human resource plays an important role in integrating and sustainability of the systems. Training and skills are fundamental and their absence causes chaotic conditions in e-government systems because those people who lack skills in the utilization of technology are functionally disadvantaged of e-government services. This will be a challenge of e-government systems in the real world as it is seen in some developing countries. Both technical and financial assurance always result in good government systems applications.

### **E-government Needs High Technology Literacy Rate**

Before implementing e-government systems, citizens should know how to use computers and internet services. Especially educated people should know how to use information and communication technology products. Governments should work hard in avoiding technology illiteracy. Developing countries, like Ethiopia, are expected to maximize literacy rates in the way that their people can utilize the services of e-governing systems. Social obstacles like illiteracy, backwardness and less income are some of the social challenges facing e-government systems.

### **E-government Needs Information and Communication Technology Infrastructure**

E-government needs good telecommunications infrastructure. Thus, governments should focus on connection quality and price peruse. Otherwise, users may not be interested in using the systems. This problem is common in most developing countries, especially in Africa. Telecommunication systems are vital for e-government systems. According to Ndou (2004), for appropriate sharing of information, there should be good internet access and open up new channels for communication and any other online services (Ndou, 2004). Lack of technological infrastructure is a major bottleneck for e-government systems adoption. To benefits from e-government systems, there should be appropriate e-government infrastructure.

## **E-government Needs Better Internet and Telecommunications Infrastructures**

There should be enough access of internet and telecommunication infrastructure to apply e-government systems. High cost of internet access and low hand width in both fixed-line and wireless access networks are some of the challenges confronting e-government systems in developing countries (Silva, 2015, p. 316). Telecommunications facilities are not well developed in Ethiopia. Performances of e-government systems depend on internet connection. Weak internet connection cannot invite e-government utilization. Therefore, e-government systems must get a fair internet connection to provide the required advantages. Ethiopia is expected to focus on network availability in order to benefit from e-government systems.

## **E-government is Affected by Bureaucratic Bottlenecks**

Flexibility is the key issue to adopt e-government systems (Evans, 2017). Rigid bureaucracy system affects e-government systems. E-governance system ensures speed and flexibility to get rid of time-wasting thereby to fulfill all forms of inefficiency. So, bureaucratic bottlenecks become counter-productive to e-governance.

## **E-government Needs Finance Allocation**

In order to make e-government systems successful and sustainable, there should be promotions. E-government systems can fail unless they are financed. This is what is observed in most developing countries. Since e-government projects stand for public services, they should be provided a full-scale budget.

## **E-government Needs Government Promotion**

One of the key challenges that face e-government systems is promoting or enhancing system insurance. Technical, financial, institutional, and operational challenges usually face e-government projects (Mahul & Stutley, 2010). There should be continuous promotion about e-government projects and should be taken as one of the most powerful factors of successfulness of some innovations. Implementing e-government projects needs to be sponsored by governmental agencies. Naturally, technology adoption requires promotion to accomplish its tasks.

## **E-government Requires Technical Ability**

One of the challenges of applying e-government systems is a technical issue. Thorough risk assessment to the ongoing system is a fundamental issue for the sustainability of the systems. Technical challenges may face before and after implementing the system. A single mistake in the system may cause failure in the whole system.

While a paper-based service is transformed into e-service, culture resistance will appear. When public sectors provide weak training for governmental officials in information and communication technology usages, e-government projects will fail. Transparency is important but some officials afraid of it. E-government results in transparency and effectiveness.

## **E-government is Challenged by Language Barriers**

All nations should understand technology in their language to avoid language barriers in benefiting from technology. However, the English language is the most dominant language in technology and websites. In Ethiopia most people do not speak English. This hinders the distribution of e-government systems services to the whole nation. Ethiopian is expected to either providing e-government in the national language or expanding the English language.



## Hyper-Surveillance

Once information and communication technologies begin to develop, e-government strengthens government-citizens interactions. To some extent, more interaction between government and citizens affects government activities. Because such strong interaction leads to a lack of some government privacies, which may not be understood by every citizen. Moreover, there may be an unwanted flow of national strategic information.

## PART-D: CHALLENGING THE CHALLENGES OF E-GOVERNMENT

### Possible Solutions

Ethiopia should challenge these problems to attain its e-government vision by which it will compete with the technologized countries. There are many techniques to overcome disadvantages that appear in the adoption of e-government. The first is establishing a skillful and technical committee, which controls the whole activities. The second is engaging a skilled agency from a well-known country in standardized e-government. The third is establishing a well-studied e-government policy. The fourth is adopting cyber laws and regulations to the standard implementation of e-government. The fifth is sufficient budget for implementation of e-government systems.

### Findings

After reviewing various literature, the researcher reach at some findings. The most common challenges facing the implementation of e-government in developing countries are poor infrastructure for information and communication technologies as well as lack of skilled human resources, political frameworks, poor internet connection, language barriers, economy level, and illiteracy. Weak interest of government affects strongly the implementation of e-government. Financing, promoting and facilitating e-government comes mainly from the central government. Strong, smooth and active leadership is important to sustainable e-government benefits.

## CONCLUSION

As technologies continue to develop rapidly, Ethiopia should launch information and communication technologies properly to improve the governance system using e-government. Ethiopian is expected to pay attention to how to develop technology for the sake of better governance and better citizens' life. Here are some recommendations for developing countries in general and Ethiopia specifically for better e-government implementation. Ethiopian is expected to implement other effective projects to eliminate information and communication illiteracy from society. Ethiopia should launch activities to set up provisions of organized training to people regularly in schools and irregularly opening computer centers until citizens experience information technology. Thereby, it is possible to create an information-based society. There should be launching different awareness television, radio and newspaper, and magazine programs and topic. There should be specific websites and social media that transfer information and communication technology in most popular languages of the country including some foreign languages. There should be private companies, which can invest knowledge transfer focusing on information and communication technologies in Ethiopia. The Ethiopian government is expected to facilitate information and communication technologies infrastructure. There must be strong work on this crucial part of development from individual to government levels. There must be government promotion and mobilization towards cooperation. The other most crucial task is facilitating internet access in the nation-wide level. As the internet is the most fundamental part of information and communication technologies, the Ethiopian government should facilitate better internet connection. As illiteracy is another difficulty that challenges citizens in using e-government, the Ethiopian government needs to provide well- organized illiteracy elimination programs in the

country. There should be a cooperation of the society with the government to create trust in providing necessary feedbacks to take measures in correcting problems. There should be a strong allocation of the youth on hard-working actions by creating job opportunities. A better economy invites people to use information and communication technologies and e-government. Since e-government supports democratic governance, the government of Ethiopia is expected to pay special attention to launching e-government systems in the country.

### **Future Work**

With the rapid development of information and communication technologies in the world, developing countries must improve their information and communication technology status to advance economic and social developments. Ethiopia, as a developing country, is expected to improve its e-government status. The researcher's next work will involve conducting a large-scale survey to explore e-government implementation challenges. Then, finding a solution to these challenges will be the next step according to the context of Ethiopia.

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