A REVIEW ON E-GOVERNMENT IN GHANA

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Abstract: Governments in both advanced and developing countries worldwide, including Ghana, are progressively using internet technologies to offer various public services to their citizens. This has brought about the advancement of numerous electronic government projects intended to improve government service delivery to its citizens and enhance interaction with industry and Business. The Government of Ghana has strongly supported e-government services since 2012. It has come up with projects like E-Justice/court computerization, E-services for the service offered by 10 governmental agencies comprising the Food and Drugs Authority (FDA), Passport Office, DVLA, Birth and Deaths Registry, Ghana Tourist Board, AMA, and others. The Government of Ghana has made a great effort to put into service the use of Electronic Government. The E-Government has many potential benefits: cost reduction and efficiency improvements; allows businesses and citizens to see policies, rules, governmental and political information; ensures transparency and accountability. Unlike traditional service provision mode, E-government reduces bureaucracy, provides easy use of service, ensures convenient and fast transaction, and improves service quality in terms of accessibility, time, and content. Despite the beneficial impacts of E-government, it also has some challenges: inadequate ICT infrastructure, technical expertise for designing, setting up, and carrying out ICT infrastructure, and knowledge for handling and exploiting online processes. The majority of existing works on e-government focus on developed countries, with only a few considering developing countries. Considering the differences in environmental factors such as culture between developed and developing countries, studies conducted in developed countries may not be generalized for developing countries. As a scholarly contribution, this study examines the e-governments in Ghana.

Keywords: Electronic Government, information and communication technologies, transparency, accountability, projects.

INTRODUCTION

Since the last two decades, information and communication technologies (ICT) have influenced the Society in a remarkable way, largely because of the growth and improvement of the internet (Ndou, 2004; Al-Shafi & Weerakkody, 2008; Alateyah et al., 2012). The reliance on ICT has expanded far beyond our anticipations. Many organizations have acknowledged the importance of this growth and entered the digital highway. Globally, governments have started to acknowledge the prospective opportunities provided by ICT to fit with the demands and needs of citizens and have begun to institute transactions and information online in what is currently referred to as Electronic Government (E-Government). E-Government employs IT, for example, mobile computing, the internet, and a wide area network to convert activities of Government and to offer organizations and citizens more fitting access to information and services of the Government (Ndou, 2004). According to Jaeger and Thompson (2003), Electronic Government is the Government’s use of new technologies to aid, streamline and computerize transactions between the Government and its citizens, institutions, or other Government.

IT usage provides massive prospects for improving efficiency and service quality and reducing governmental expenditures in the government sector. Functional and effective E-Government expedites transactions better and more useful services and information delivery to residents, enhances efficiency among government employees, and inspires citizens’ participation (Al-Shafi & Weerakkody, 2008). Globally, the advanced countries such as Finland, Canada, and the US are leading in Electronic-Government (United Nations, 2010; Tran & Chen, 2017). The IT era possesses the potential of new and influential weapons in the arsenals of emerging states struggling against political, economic, and societal challenges. Approximate 40% of the African adult populace is uneducated, and computers’ penetration is the lowest worldwide (OECD, 2009; United Nation, 2010). In this perspective, E-Government programs that offer a way for more direct Government to Business and citizens’ involvement in governance would have considerable cultural influences than they would in developed nations. Therefore, it is useful to assess both the implications and impact of E-Government systems introduced by the governments in developing countries. Espousing Information Technology in the government sphere may not be easy to achieve, especially in developing countries. The success of information technology cannot itself be accrued, as it greatly depends on how the service targets and exploits the IT. Even though E-Government brings about innovative means of service delivery and transparency, not all individuals are aware of IT’s use in relation to government services. The success of E-Government projects is dependent not only on the support of the Government but also on how information about E-Government is spread among citizens. This is where the spread of E-Government innovations among the citizens of Ghana has been put into question. This paper examined E-Government projects in Ghana.
CONCEPTS AND DEFINITIONS OF E-GOVERNMENT

It is virtually impossible to define Electronic Government to fit everyone's needs or opinions (Jaeger & Thompson, 2003; Carter & Belanger, 2005; Seng, Hideki & George, 2011). Seng et al. (2011) indicated that even though E-government expressions have become a slogan all over the globe, there is a lack of universal agreement on the actual description or meaning of Electronic Government, more importantly concerning the main E-government characteristics. A number of authors have described Electronic Government in several ways. Some scholars described E-government as an application. For instance, Fang (2002) defined E-government as a means by which government uses the best-advanced ICTs, especially Web-based internet application to give businesses and citizens ideal suitable right to use government services and information to enhance the services and to give better prospects to be involved in democratic practice.” Lu, Zhu and Chen (2004) explained E-government as an application of information and communication technology (ICT) to achieve the efficiency, accountability, and transparency of transactional and informational exchanges between government to government, government to business, and government to the citizen.” On this view, Carter and Belanger (2005) stated that E-government services enhance the convenience and accessibility of government information and services to people.

In addition, E-government has been used to signify everything from electronic government services through the internet to communication and exchange services and information with other arms of Government, businesses, and citizens (United Nation, 2010). Alghamdi, Goodwin, and Rampersad (2011) described E-Government as IT usage to improve governance. Moreover, Carter and Belanger (2005) described E-government as using information technology, particularly telecommunications, to aid and enhance the effectiveness with which government information and services are delivered to government agencies, businesses, workers, and citizens. This study emphasized E-government as Government to citizens by using information and communications technology (ICT) for service delivery and consumption.

TYPES OF E-GOVERNMENT

Many researchers have suggested that there are several types of E-Government. These include Government to Government E-Government, Government to business E-Government, Government to citizen E-Government, and Government to employees E-Government (Alsaghier et al., 2009; Seng et al., 2011; Hideki & George, 2011). Government to Government denotes the rapport between governmental institutions, for example, local, regional, and national governmental institutions or with other foreign governmental agencies. Government to Government embodies the spine of E-government in which administrations (local, state, and federal) incorporate their internal processes and coordination into a central system (Seifert, 2003; Alsaghier et al., 2009). The core objective of Government to Government Electronic government is to expedite procedures of intergovernmental agencies by rationalizing coordination and collaboration (Seifert, 2003; Alsaghier et al., 2009). The cooperation and coordination online allows government agencies and institutions to share databases, resources, pool capabilities, and skills to enhance procedures effectiveness and efficiency. Government to Business E-government scheme has received substantial attention, partly due to the high interest of the business industry and the prospect for cost reduction through increased competition and better procurement practices (Seifert, 2003; Alsaghier et al., 2009). Government to Business actively drives E-transactions projects, e.g., Electronic procurement and the improvement of an electronic marketplace for government procurements; and action government procurement bids via electronic process for commodities and information exchanges, and transaction of goods and services electronically (Fraga, 2002).

Government to Citizens E-government sees to the rapport between Government and citizens. In this regard, governmental institutions are allowed to talk, listen and communicate with their citizens, ensuring democracy, accountability, and enhancement of public services. Riley (2001) highlighted that a wide range of collaborations could be established, including the provision of health and welfare benefits and provision of services to governing and compliance-oriented licensing. Government to Citizens E-government permits residents to make use of government services, and information's conveniently and directly from anywhere by using mobile phone, computer, wireless device, or Web television. Government to Citizens E-government further empowers and strengthens citizens' involvement in local community life (have a say in an online discussion forum) (Riley, 2001; Alsaghier et al., 2009; Seng et al., 2011). Government to Employee E-government refers to the kind of rapport between the Government and its workers or staff. Government to Employee E-government is a real means to offer e-learning, get workers/staff together, and enhance knowledge sharing among them (Fraga, 2002). It provides the workers with the prospects of making use of pertinent information concerning: civil rights laws, learning and training opportunities, benefits and compensation policies, etc. (Riley, 2001).

Heeks (2001) underscored that the complete use and execution of these drivers of e-government call for three key domains:

a. **Electronic Administration** for computerization and automation of managerial duties and for recognition of planned relations among internal units, functions, and processes.

b. **Electronic Services and electronic Citizens** to recognize relations and interrelationships among Government and its people and to make available computerized services.
c. **Electronic Society** to allow interactions and relations beyond borders, among private sector, communal institution, and civil community as a whole.

These three areas overlap, and Electronic Government can be located in the overlapping zone of these domains, signifying the heterogeneities and complexities required to be managed for guaranteeing its accomplishment (Ndou, 2004) (figure 1).

![Diagram: Electronic-governance domains (Source: Ndou, 2004)](image)

**Figure 1: Electronic-government domains (Source: Ndou, 2004)**

### BENEFITS AND PROSPECTS OF E-GOVERNMENT

Electronic Government has many potential benefits (Amit & Zott, 2001; Ndou, 2004; Al-Shafi & Weerakkody, 2008; Alateyah et al., 2012; Tran & Chen, 2017), which include:

a. Information communication and technology (ICT) has substantial budding to add to cost reduction and efficiency improvements for both public and private industries.

b. Services placed online greatly decrease the fee of processing numerous activities compared with the usual means of conducting activities.

c. E-government provides citizens with opportunities to directly partake in decision-making by enabling them to give their own submissions and ideonline communities and forums, thereby ensuring transparency.

d. E-government allows businesses and citizens to see policies, rules, governmental and political information.

e. E-government improves conventional way of providing public service, which processes are long, lack transparency, and also time-consuming. E-government, unlike the traditional model of service provision, reduces bureaucracy, provides easy use of service, ensures convenient and fast transaction, and improves service quality in terms of accessibility, time, and content.

f. Intranets enable many organizational units to share a database of common patrons and to combine the capacities and talents of their associates for solving problems. These services will consequently guarantee transfer and quicker flow of information, improved and quicker decision making processes, cheaper and quicker goods, and services delivery, and unplugged paper bottlenecks.

g. Constant interaction and communication between Government and its citizens adds to awareness creation about the prospective ICT contribution to the activities of local communities. One major significance of the E-government program comprises of the ICT usage promotion in other areas. For Electronic Government to communicate, relate and transact projects by electronic means with citizens, businesses, and other participants, it is a requisite to have a good command of the usage of ICT applications and tools.

### CHALLENGES IN E-GOVERNMENT INITIATIVES

Even though E-Government has many benefits, there are also some challenges, which include the following (Talero & Gaudette, 1996; UNPA & ASPA, 2001; World Bank, 2003):

a. To convert to E-Government, a guiding set of principles and models, or E-government architecture, is a requisite. Several emerging and developing countries go through a digital divide, and they are unable to set out appropriate ICT infrastructure for E-government implementation. World Bank (2003) stressed that the
digital divide between developed and emerging countries is huge, with developed nations boasting 416 personal computers per 1000 people while developing nations personal computers per 1000 people is 6.

b. Another key problem that has to do with the E-government scheme is the dearth of ICT expertise in the public institutions. This situation is more problematic in some of the developing and emerging countries, where human resource training and qualified staff has been a challenge for decades. E-government necessitates hybrid human know-how (management, commercial and technological). Technical expertise for designing, setting up, and carrying out ICT infrastructure, in addition to knowledge for handling and exploiting online processes, are inadequate in most developing countries.

c. Handling E-government principles and functions necessitates an array of new policies, laws, rules, and legislature modifications to deal with electronic activities comprising data protection, freedom of information, electronic archiving, computer crime, electronic signatures, and copyright issues. E-government dealings simply signing a digital treaty or contract, which has to be acknowledged and protected by an official law, which secures and protects these forms of processes or activities.

OVERCOMING THE CHALLENGES OF E-GOVERNMENT
The foremost thing in E-government initiatives is ICT infrastructure (Bhatnagar and Vyas, 2001). To overcome the challenges of E-government, the Government should make available solid ICT infrastructures throughout the country (World Bank, 2003). Nonetheless, an infrastructure for ICT does not simply consist of computer equipment and telecommunications. ICT literacy and E-readiness are also essential in order for the citizens to be capable of utilizing and profiting from applications of E-government. Having the free will, desire, and education to make use of information is crucial to E-government. Apparently, the greater the extent of human progress, the more probable residents will be motivated to adopt and use services of E-government. There should be technical expertise for designing, setting up, and carrying out ICT infrastructure, in addition to knowledge for handling and exploiting online processes. To tackle human development matters, knowledge management schemes are requisite emphasizing on seminars, workshops, staff training so as to produce the necessary expertise needed for handling E-government (Ndou, 2004; Al-Shafi and Weerakkody, 2008). Cooperation and collaboration at local, regional, and national levels, in addition to between public and private institutions, are essential components in the development procedure of E-government. To guarantee that the community and stakeholders will be in collaboration or partnership in the E-government initiative, it is vital to try to foster trust in Government. Corporation between the public and private institutions is required so as to provide skills, abilities, and resources that the Government is deprived of (OECD, 2001).

ELECTRONIC GOVERNMENT INITIATIVES IN GHANA
The Ghana National Information Technology Agency (NITA) was founded by an Act of Parliament (NITA Act, Act 771, 2008) as the ICT Initiative Operation division of Government, and it has since its inauguration built the foundational ICT structural design, operational with some $150 million Chinese EXIM Bank loan, plus a $30 million concessionary bit, $40 million World Bank loan, and later another €37 million concessionary loan from the Danish Government (myjoyonline.com). NITA has constructed 29 Base Stations in the country - all connected, and 10 gigabit/sec ring in Accra linking all Municipal District Assemblies (MDA), and three 4-gigabit/sec sub-rings linking all of them MDAs) to all 10 regional offices in one network mesh. It has created 10 online portals for designated government institutions on a pilot basis - the agencies comprise the Passport Office, Driver Vehicle License Authority, Births and Deaths Registry, Accra Metropolitan Assembly, Passport Office, and others. The network is constructed to get through to districts and distant communities through many ways, comprising high capacity microwave links, direct last-mile fiber optic connectivity, VSAT network, access over the Ministry of Finance and Economic Planning (MoFEP), and leased terrestrial circuits from local telecoms and ISPs (internet service providers). This, according to NITA would allow the network to connect not only the municipal/district assemblies but Police Stations, Hospitals, Agricultural Extension Service Offices, Schools, Post Offices, and any other public agency in all the towns that are within the coverage areas of the network (National Communication Authority, 2018). This will make government transactions more efficient, transparent, and paperless, and governmental corporations, institutions, and agencies will be capable of providing information in real-time and provide services to businesses and to the public via their online portals coordinated and handled at the national central data Centre.

Under the Ghana e-government scheme, all the three arms of Government and the agencies under them are to be computerized and connected electronically at the district, regional and national levels. Other major state institutions, corporations, and organizations are also to be computerized to aid them to cooperate with and serve private businesses and individual citizens electronically through their online portals. The Ghana E-government is done to get e-services, e-immigration, e-Parliament, e-health, e-justice, and others on stream (myjoyonline.com). The e-Justice, e-Executive, and e-Parliament only reveal the idea to computerize the Judiciary (courts and the Judicial Service), the Legislature (Parliament and Parliamentary Service), and the Executive (the Presidency, ministries, divisions, and agencies together with the metropolitan/municipal, and district assemblies - MMDAs). The E-government scheme in Ghana has begun producing results by aiding to disperse Government's salary budget
accounting and revenue collection management. Also, the Ghana Integrated Financial Management Information System (GIFMIS) of the Controller and Accountant General's Department operates on it, and it aids them to disperse government budget and accounting management by allowing regional budget office's entry to the central data network in the capital, Accra, for the purposes of real-time reporting. What the regional budget offices get and expend are done online in real-time, enabling the head office to know what is going on in the regions. Moreover, the Ghana Revenue Authority (GRA) employs the E-government network to transfer data online from districts to regions and also from regions to the national office. All these are ensured in real-time, handled at the NITA data Centre (myjoyonline.com; NCA, 2018).

CONCLUSION
E-government is increasingly being widely employed by many countries to aid governmental activities and delivery of services. E-government provides citizens with opportunities to directly partake in decision-making by enabling them to give their own submissions and ideonline communities and forums, thereby ensuring transparency. It allows businesses and citizens to see policies, rules, governmental and political information. E-government unlike the traditional model of service provision reduces bureaucracy, provides easy use of service, ensures convenient and fast transaction, and improves service quality in terms of accessibility, time, and content. E-government can be made efficient and effective through improvement in ICT infrastructure, internet coverage, and IT training. Moreover, the Government of Ghana must invest in mass media communication to promote and encourage citizens to patronize e-government services. Feedback must be sought from the users of e-government in order to continually improve upon e-government service quality.

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REFERENCES


