



Beyond Bricks and Mortar Offices: Exploring the Rate of Web Development Progress of Government of Ghana Websites from the E-Government Stage Model

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Abstract

The advancement in information and communication technologies has significantly reshaped the performance of public administration. This paper examines the readiness of Government of Ghana websites towards the implementation of e-government in public sector institutions. The study examines 115 ministries, departments, and agencies in Ghana and evaluates their readiness based on the five-stage e-government model. The analysis based on the existing e-government literature shows that the Government of Ghana websites are only an extension of the “Bricks and Mortar” offices with the exception of them being available 24/7. All the websites examined have not made progress in enabling online communication and interaction between government and citizens. Our conclusion, based on our analysis, is that, public administration in Ghana is at the lower stages of the e-government model (interactive presence – stage III). This paper recommends that the Government of Ghana must integrate e-government into her broader policy goals, service delivery objectives, and broader public engagement with citizens, and activities related to information society. Information is a substantial component of public administration and the need for e-government for the promotion of democratic values and effective public services cannot be overlooked.

Key words: E-government, Stage-model, Ghana, Website, Technology.

1.0 Introduction

On August 1, 2006, Ghana and the World Bank Group entered into a US\$ 42.00 million agreement towards the e-Ghana Project. According to World Bank (2014a), the e-Ghana Project is to assist the Government of Ghana in e-government applications. The core objective is not only to generate growth but also employment by “leveraging information and communication technology (ICT)” through public-private partnerships (WB, 2014a). This objective will be achieved through the development of “IT Enabled Services industry” towards the improvement of efficiency and transparency in selected government functions” (WB, 2014a). The entire project consists of four components, scheduled for completion by the end of December 2014.

The first component of the e-Ghana project among other things will assist the National Communications Authority (NCA) in the performance of its duties by regulating the telecommunication industry, decreasing international telecommunications cost, and enhancing the quality of telecommunication services (WB, 2014a). The second component will support information technology enabled services (ITES) operating in Ghana (WB, 2014a). The third component will “develop IT architecture and interoperability standards for government applications and networks” under public-private partnership through the facilitation of the delivery of e-government services by ministries, departments, and agencies (WB, 2014). The fourth component is the Ghana Integrated Financial Management Information System (GIFMIS). The focus of this component is the automation of key financial institutions in Ghana, including the Ghana Revenue Authority and the Register General’s Department. The recent report on the e-Ghana project dated July 21, 2014 indicates that the fourth component has had 66% of the appropriated budget executed and the progress status is satisfactory (WB, 2014b). This is an indication of a step towards the improvement of e-government services in Ghana.

Very important to the progress made on the e-Ghana project is the readiness of e-government applications in the various ministries, departments, and agencies. The fourth component has the training element for some selected ministries and departments, but how prepared are these departments and agencies in the e-government stage model? While e-government has different stages of development, transactions and integrated stages are the important stages where e-government applications can effectively function (Alfarraj, Drew and AlGhamdi, 2011; Al-Shehry, 2008; Baum and Di Maio, 2000; Coursey and Norris, 2008; Layne and Lee, 2001). To analyze the readiness of ministries, departments, and agencies in Ghana for the full use of the e-Ghana project, this paper asks the question: What is the level of readiness of Government of Ghana websites in the e-government stage model?

Recent reports on the development of e-government reveal different levels of implementation in different parts of the world (Abanumy, Mayhew & Al-Badi, 2003; Almarabeh & AbuAli, 2010; Benbasat & Zmund, 1999; Coursey & Norris, 2008; Friedman, 1994; Sein, 2011). Investments in the implementation of e-government in various countries have increased tremendously, including developing countries (Heeks, 2002, 2003; Heeks & Bailur, 2007; Heeks & Stanforth, 2007). While some e-government investments have been very successful, others have either partially or totally failed (Heeks, 2002). The slow development and implementation of e-government in public administration has mainly accounted for this global digital divide (UN, 2014). Heeks (2002) notes that, e-government is only slowly diffusing within Africa, because of a lack of e-readiness for e-government that can be charted along six dimensions” (p. 1). This is a further indication of the significant challenges to e-government implementation in developing countries in Africa. An observation by Sein (2009) indicates that “implementing e-Government initiatives in developing countries is a complex and challenging process that faces many hurdles” (p. 1). Alternatively, there are some e-government projects that are reinforcing public sector reform and have improved efficiency and effectiveness within the public sector in most

developing countries (Heeks, 2002). The e-Ghana project is an example of such projects that will reinforce public administration through the effective and efficient delivery of public services.

The progresses made in both wired and wireless technologies in recent years have attracted increasing interests from both researchers and practitioners on the concept of e-government (Castelnovo & Simonetta, 2007; Nygren, 2009; Sahraoui, Gharaibeh & Al-Jboori, 2006). Several literatures exist on website and e-government in both developed and developing countries. For example, Abanumy, Al-Badi and Mayhew (2005) evaluate the e-government website in Saudi Arabia and Oman. Hsieh, Huang, and Yen (2013) also examine web services in Taiwan. Karkina and Janssenb (2014) evaluate Turkish websites based on public value perspective. While Paris (2006) examines web accessibility in Northern Ireland, Smith (2001) also reported studies on websites and their values in New Zealand. Literature on evaluating government websites in Africa is very scanty. Studies observing the stages of e-government implementation in Africa are further limited. Thus, this paper is applying evaluation criteria based on the stages of e-government model to the Government of Ghana Websites. Government websites play a significant role in the implementation of e-government. An evaluation of government websites based on the stages of e-government will inform ministries, departments and agencies to be more prepared for e-government implementation because government websites are crucial in the delivery of e-Services which many scholars posit to make public administration effective and efficient (Abanumy, Mayhew & Al-Badi, 2003; Al-Khoury & Bal, 2007; Almarabeh & AbuAli, 2010; AL-Shehry, et al., 2006; Castelnovo & Simonetta, 2007; Nygren, 2009; Sahraoui, Gharaibeh & Al-Jboori, 2006).

The rest of the paper is structured as follows: section two examines e-government and public administration reform in Africa. The third section assesses the importance of websites in the development of e-government, models of e-government stages, and the development of e-government in Ghana. The fourth section details the research design and methodology. The fifth section discusses the results, conclusions and recommendations for future research.

2.0 E -Government and Public Administration Reform in Africa

2.1 The Contribution of E-government to Public Administration Reform in Africa

The use of information technology in Africa dates as far back as four decades ago. Information technology is seen as an “evolution” rather than “revolution” (Heeks, 2002, p. 4). The most important element of e-government implementation is computer networks, ranging from intranet to the Internet. One of the contributions of e-government to public administration is the improvement in administrative processes. E-government reduces administrative cost and the time it takes to accomplish administrative goals. It also enhances planning, monitoring, and control of administrative performance processes and procedures (Heeks, 2002). In this regard, e-government helps in both human and financial management. This enables Government-to-Government (G2G) connections at the various branches of government at horizontal and vertical levels. These in turn facilitate processes and strengthen government institutions. Heeks (2002) notes that ICT in Africa is used in “automation” mode, thus replacing clerical labor processes (p. 5). In his study on Egypt, Kamel (1998) observed how e-government was used to address challenges in customs tariffs. According to Kamel (1998), there was an inter-ministerial hostility as a result of a new tariff meant to reduce the burden on the poor and increase revenue for the government. Consequently, a computerized system was designed which addresses all the challenges by generating revenue with a special concession to low-income people (Kamel, 1998). This exemplifies the contribution of e-government to public administration through the leverage of administrative processes in Africa.

E-government has made great strides in recent years in providing information to citizens in Africa. The Government-to-Citizens (G2C) connection draws citizens closer to public administration. Many countries in Africa, including Ghana, which have returned to a democratic system of governance, have emphasized the commitment to transparent and connected democracy. Various institutions are adopting social media such as Facebook and You Tube to open their governments to citizens, as citizens look to government to keep them informed and support their cause and needs.

Government-to-Business (G2B) enhances the connection between the private sector and public administration. G2B reduces the difficulties in doing business through the provision of one-stop access to information through digital communication on the Internet. G2B focuses on the link between public administration and businesses and nonprofits in various transactions in the form of bidding for contracts and grants application. For example, the Ghana Community Network Services Limited (GCNet) operates an electronic system which processes trade and customs documents in Ghana to revenue collection agencies (GCNet, 2014). Though this is a public-private partnership, it has improved the services of the revenue collection agencies for the government. A G2B interaction usually leads to an increase in awareness of government services as well as saves cost and improves efficiency in transactions. Similar to GCNet in Ghana is the one-stop tax payment point in Mauritius. Just like the GCNet which is public-private partnership, the one-stop tax payment point has reduced the time and human resources needed for businesses and government to process tax (Heeks, 2002). It has reduced the anomalies in the tax reporting system and has significantly improved validation checks, funds transfer time and data entering time and cost. Though Africa is rated very low in e-government implementation, countries in Africa are making progress in e-government application for public sector efficiency. The various examples discussed in this section go to buttress the use of e-government in the improvement of public sector agencies and departments.

2.2 The Challenges to E-Government in Africa

Several studies indicate the challenges to e-government development in Africa (Ifinedo, 2012; Krishnan & Teo, 2012; Krishnan, Teo, & Lim, 2013). The development of e-government in Africa is very slow. E-government projects in many developing countries, particularly, Africa is not widespread, compared to other developing nations in Asia and Latin America. Many of the e-governments projects, implemented in Africa ended up in failures, either in part or whole (Heeks, 2002).

One of the challenges related to the adoption of e-government and ICT at large in Africa stems from the literacy rate. Literacy rates are still very low, making the adoption of ICT very difficult even when they are provided (UN, 2009). More importantly, many of the tools are not in the local language understood by the majority of the populace. For

example, after reviewing the 81 Government of Ghana websites for this study, not even a single one of them has been translated from the English language to the most widely spoken language “Twi”. Many countries in Africa have still not had their digital culture developed, resulting in resistance to e-government in public administration (UN, 2009).

Limited financial resources hinder many African countries, causing them to shy away from e-government implementation. Gross Domestic Product (GDP) is one of the measures of national income and output for a given economy, and many African countries have low GDP (Andersen, 2006). Hence, adopting e-government technology is difficult due to the cost involved (Andersen, 2006). Public sector employees’ readiness is another challenge to e-government development in Africa. Many public sector employees are not ICT literate to adequately manage and work with digital tools employed in e-government. Consequently, the need for various governments to reorganize the human resources within the public sector is very crucial in order to solve the ICT literacy gap and the human resource infrastructure gap (Andersen, 2006; Heeks, 2002).

E-government runs on communication infrastructure. These infrastructures are very expensive to acquire and many African countries cannot afford them. The infrastructural challenge is a major issue since it serves as the backbone of e-government; and many countries in Africa are ranked very low in the infrastructure index (ITU, 2012). The infrastructure goes with expertise. Many African countries lack the expertise due to cost of training and remuneration. The cost involved in purchasing this equipment and the expertise required to manage the equipment significantly impact on e-government adoption (Andersen, 2006; UN, 2009).

3.0 The Stages of E-Government Model and Development of E-Government in Ghana

3.1 Government Websites and E-Government

Information and Communication Technologies (ICT) are widely regarded as playing pivotal roles in public administration and national development (Abanumy, Mayhew & Al-Badi, 2003; Al-Khoury & Bal, 2007; Almarabeh & AbuAli, 2010; AL-Shehry, et al., 2006; Castelnovo & Simonetta, 2007; Nygren, 2009; Sahraoui, Gharaibeh & Al-Jboori, 2006). The introduction and diffusion of electronic government (e-government) is regarded broadly as a major step in transforming the relationship between public administration and citizens. The last two decades have witnessed increasingly diffused levels of e-government which have significantly reformed public administration. E-government has reformed public service in its effectiveness and efficiency. It has also enhanced the relationship between government and citizens. Moreover, it has promoted citizens’ access to information and citizens’ participation in democratic processes, as well as integration and communication between various government agencies and departments. At the center of e-government is the website (Hsieh, Huang, and Yen, 2013; Karkina and Janssenb, 2014). Government websites are the platforms that enable citizens to take active part in decision making processes which also facilitate citizens’ trust and satisfaction in government services (Karkina and Janssenb, 2014). Making information available to citizens through websites improves accountability and transparency in government agencies and departments (Hsieh, Huang, and Yen, 2013). Aside the citizen-government collaboration, websites serve as the communication platform between government agencies (Smith, 2001). Thus, e-government promotes cross-agency collaboration. The collaboration models of e-government are in the form of government-to-citizen (G2C), government-to-business (G2B), government-to government (G2G) and government-to-employee (G2E) (Abanumy, Al-Badi and Mayhew, 2005). These various e-government models enable citizens’ access to government information and build stronger ties with government. All these enhance the quality of services provided by government agencies and departments. Through information sharing, government websites also create high awareness among citizens, which eventually results in stronger participation in governance. Websites are regarded as the government desk which serves as the center of information to citizens (Paris, 2006). They have improved access to information which was once hidden from citizens or are hard to find. Government websites have successfully eradicated the barriers to citizen-government relationship that has previously existed prior to 1990s, particularly, in industrialized countries where websites originate and are also the first adopter.

3.2 E-Government in Ghana

Ghana is a country located in sub-Saharan Africa in the western part of the African region. Ghana attained independence from the United Kingdom in 1957 and became a republic in 1960 under her first president Dr. Kwame Nkrumah. Between 1966 and 1991, Ghana has undergone several changes in government, including military and civilian forms of government. Ghana returned to democratic government in 1992 under her fourth republic and has successfully held six general and parliamentary elections. The structure of government departments and agencies are promulgated in the 1992 constitution. Ghana currently has 23 ministries (www.ghana.gov.gh). Each ministry has agencies and departments that carry out various functions in 10 administrative regions. Each region has metropolitan, municipal and district administrations. There are 216 administrative districts in Ghana (www.ghana.gov.gh).

Ghana has performed well on the E-government Development Index (EGDI) for 2014. Ghana improved on her ranking from 145 in 2012 to 123 in 2014 (UN, 2014). The nation previously ranked 147 in 2010, 138 in 2008, 133 in 2005, and 143 in 2004 (UN, 2014). The rankings indicate some level of improvement in the performance of Ghana on the EGDI. Ghana launched her official government web portal in 2012 for dissemination of information and provision of online services, which includes Government-to-Citizens (G2C), Government-to-Business (G2B), and Government-to-Government (G2G).

Like any other developing country, Ghana faces many challenges in public administration, including corruption, low level of transparency, and poor services. With support from the World Bank, the nation is implementing the e-Ghana project which will facilitate the application and use of e-government in various departments and agencies (WB, 2014). The e-Ghana project has two goals. First, it seeks to assist “the Government of Ghana to generate growth and employment by leveraging Information and Communications Technology (ICT)” in both public and private sectors (WB, 2014). Thus, the first goal is to develop an IT enabled services industry. The second goal is to contribute to improved efficiency and transparency of selected government functions through e-government applications (WB, 2014).

The e-Ghana project has three major components. The third component is on e-government applications and Government communications. The goal of this component is to ensure an “increase in the ratio of electronic to manual

transactions between government and recipients by application” (WB, 2014, p. 5). The closing date for the e-Ghana project was revised from June 2014 to December 30th 2014. The assumption is that ministries, departments, and agencies must possess some level of readiness for effective implementation of e-government.

3.3 The Stages of E-Government Model

E-government has different meanings, but in broader terms, it refers to the provision of public services to citizens electronically. However, according to this study, e-government is the “use of information and communication technology (ICT) and its application by the government for the provision of information and public services to the people” (UN 2012, 14). There has been a dramatic increase in the use of e-government in public administration to provide citizens with information about public services (Lee, Chang, and Berry, 2011). Studies have identified various stages in the use of e-government to deliver public services to its fullest (AL-Shehry, et al., 2006; Nygren, 2009; Sahraoui, 2000; Sahraoui, Gharaibeh & Al-Jboori, 2006). Scholars in academia such as Hiller (2001), Layne and Lee (2001), Moon (2002), and international organizations such as the Gartner Group (2000) and Deloitte and Touché (2001) have discussed various stages of e-government model. While some scholars discuss four stages of the e-government model (Baum and Maio, 2000; Layne & Lee, 2001), others examine e-government model in five stages (ASPAs, 2001; Hiller, 2001; Moon, 2002) and six stages (Deloitte & Touché, 2001).

Baum and Maio (2000) and Layne and Lee (2001) proposed a four-stage model of e-government. Layne and Lee (2001) structured e-government on technical, managerial, and organizational usefulness. The authors saw e-government as a development phenomenon. The four stages proposed include “online presence catalogue, transaction, vertical integration, and horizontal integration” (Layne and Lee, 2001, p. 124). The Gartner Group (Baum and Maio, 2000) also suggested a four-stage model, made up of web presence, interaction, transaction, and transformation.

ASPAs (2001), Hiller (2001) and Moon (2002) proposed a five-stage model of e-government. Hiller (2001) and ASPAs (2001) believe that the aim of e-government is to enable government deliver web-based services to its citizens. However, the five-stages proposed by both authors only differ in phrasing and not content. Hiller (2001) suggested an emerging web presence, enhanced web presence, interactive web presence, transactional web presence, and fully integrated web presence for the stages of e-government model. The United Nations (UN) and American Society for Public Administration (ASPAs, 2001) also suggested a five-stage model consisting of an emerging presence, enhanced presence, interactive presence, transactional presence, and a seamless or fully integrated presence. Moon (2002) also suggested a five-stage model of e-government that includes simple information dissemination, two-way communication, service and financial transaction, vertical and horizontal integration, and political participation. Deloitte and Touché (2001) posit a six-stage model of e-government development, consisting of information publishing and dissemination, two-dimensions of transaction, multipurpose portals, personalization of portals, service clustering, and full integration and enterprise transaction.

All the stages of e-government models described above have some similarities and differences. The proposed four-stage model by Layne and Lee (2001) and five-stage model by Moon (2002) are based on technical, managerial, and organizational usefulness. The five-stage e-government model proposed by Hiller (2001) and ASPAs (2001) are very similar, compared to other models, because both of them focused on the use of web-based tools for public services. The five-stage model proposed by Baum and Maio (2000) is also similar to Hiller (2001) and ASPAs (2001). The six-stage model developed by Deloitte and Touché (2001) differs from the other proposed models because it is based on customer service to citizens.

This paper adopts the five-stage model presented by Hiller (2001) and ASPAs (2001), which is a web-based model. In this paper, Government of Ghana websites are evaluated based on an emerging presence, enhanced presence, interactive presence, transactional presence, and fully integrated presence (Hiller, 2001; ASPAs, 2001). This paper posits that for e-government to fully achieve its intended aims and objectives of effective and efficient delivery of public services to citizens, government websites must play an important role and e-government must be developed on the stages adopted (Hiller, 2001; ASPAs, 2001).

The first stage according to Hiller (2001) and ASPAs (2001) is emerging presence. For a website to be considered as an online presence, the agency or ministry must have an official website containing information about the ministry and its activities (UN, 2008). The second stage is the enhanced presence. According to Hiller (2001) and ASPAs (2001), at the enhanced stage, the ministry or agency must provide information to citizens on public policy and the government. This also includes organizational news and publications on various activities of the agency or ministry (UN, 2008). The third stage is the interactive presence. This stage provides citizens and the general public with information on downloadable forms and simple two-way communication. This is to enhance the ease of services to citizens such as email as well as the ability to post comments online. Citizens receive feedback in the form of email or reply to comments they post online (UN, 2008).

Transactional stage of the e-government model is the fourth stage where government agencies begin to offer online services (e-Services) to citizens (UN, 2008). The e-Services are available 24/7 for easy access without limitation to time and location. Application for ID cards and license renewals are some of the e-Services offered at the transactional stage of the e-government model. With the implementation of the e-Ghana project far advanced into the fourth stage, this study expects Government of Ghana websites to be at the transaction stage of the e-government model where they can offer online services. The final stage is the connected stage of the e-government model where the government activates back offices by becoming an online entity (UN, 2008). This stage is the most developed level of online government services. It has five characteristics. First, there are horizontal connections. Thus, government agencies are connected to each other to share information and database (UN, 2008). Second, there are vertical connections, where the central government and local government agencies share information (UN, 2008). Third, there is the infrastructure connection, where interoperability issues are addressed with no limitations. Fourth, there is government to citizen connections (G2C) (UN, 2008). Finally, there is connection among the various stakeholders. These stakeholders include the government, the private sector, academic institutions, nonprofit institutions and civil society (UN, 2008).

4.0 Research Design and Methodology

This section describes the method by which information was gathered on the ministries, departments, and agencies as well as the depth and breadth of the services based on the e-government stage model discussed earlier in this study. The empirical survey of government websites in Ghana focuses on the elements of the five stages of e-government model. Data collection was done during the summer of 2014 (June 01 and July 30).

The first phase of data collection was the identification of some ministries, departments, and agencies of government. The first source of data was the official portal of Government of Ghana (Ghana.gov.gh). This website was used to identify the ministries, departments, and agencies. Not all departments and agencies were identified through the official portal. Thus, the study also relied on the websites of the main ministries where departments and agencies were listed as partners. This stage was purposely to identify as many ministries, departments, and agencies as possible. A total of 115 institutions were identified, out of which 22 were ministries and 93 were departments and agencies.

The second phase was to search for each institution to locate its web presence. The study did not expect all the identified ministries, departments, and agencies to have web presence. It relied on the google search engine to identify the web presence of these institutions. After a careful search, using the official name of the institution, 81 institutions were identified to have web presence or official websites, representing 70.43%. The study was carried out on the websites of 81 institutions that have web presence. It was based on Hitler (2001) stages of e-government model. The various components or elements of the stages were adapted from Abanumy et al. (2003) who also undertook a similar study on Saudi Arabia and Oman.

The next phase was to survey the various government websites based on the elements provided by Abanumy et al. (2003). At each of the stages, each element was given '1' if it exists and '0' if it does not exist. The first stage of the e-government model is the emerging presence which has agency name, phone number, and address as the elements. At the enhanced presence stage, the website is expected to have organizational news and publication as the elements. The third stage, interactive presence, has officials' email addresses, online comment field to enable two-way communication, and the ability to download organizational forms. Elements for the transactional presence (the fourth stage) include e-form (electronic form) and e-payment (electronic payment). The final stage of the e-government model is expected to be fully integrated (both horizontally and vertically). Thus, websites of various organizations must have full integration across organizations or with other government and private agencies. In surveying the fourth and fifth stages of the e-government model, a test was conducted on the elements to ascertain that they work and possess the ability to deliver the required services. The data was initially coded in Microsoft Excel and later transferred into SPSS. Various studies have used availability of an official website to analyze the stages of e-government model (Abanumy, Al-Badi, & Mayhew, 2005; Alfarraj, Drew & AlGhamdi, 2011).

5.0 Results

5.1 Data Analysis and Results

Table 1 displays the final results for the stages of the e-government model using the 115 identified ministries, departments, and agencies in Ghana.

Table 1: Online survey of the number of Government of Ghana websites in each of the stages between July 25, 2014 and August 5, 2014.

Stage No.	E-government Stage	Components	No. of Government Websites (n=115)	Percentage (n=81)
0	No Presence	No Official Websites Presence / Available	34	-
I	Emerging Presence	Agency name Agency phone number Agency Address	81	100
II	Enhanced Presence	Organizational news Publication	62	76.54
III	Interactive Presence	Official email Post comment online Simple Two way communication Download Organizational Form	72	88.89
IV	Transactional Presence	e-form e-payment	0	0
V	Fully Integrated	Full integration across organization	0	0

Source: Adapted from Abanumy et al., (2003).

A total of 81 institutions, representing 70.43% have web presence (official websites). At the emerging presence stage (stage I), all the 81 institutions with website have the elements. Thus, all the agencies have agency name, phone number, and address at their websites. The enhanced presence stage (stage II) is made up of 62 of the 81 institutions. This represents 76.54%. The interactive presence stage (stage III) has 72 out of 81 institutions. This represents 88.89% of all the 81 organizations with official website. No department, agency, and ministry has components of the transactional presence stage (stage IV). Three of the institutions, the Ministry of Finance, the Ministry of Roads and Highways, and the Bank of Ghana (BOG) have e-forms, but these forms do not work (at least at the period the study was undertaken). Since the forms on these websites do not work, they are not considered to have the transactional presence. The final stage of the e-government model is the fully integrated stage (stage V). Similar to transactional presence, no institution has the fully integrated capability. The ministries have links to some of the agencies under their ministry but this cannot be considered as a seamless or fully integrated stage according to Hitler (2001).

5.2 Discussion

This paper tries to address the question: what is the level of readiness of Government of Ghana websites in the e-government stage model? E-government and web site has a key role to play in the development of public administration in Ghana and other countries in Africa. It is expected that the Government of Ghana official websites should be in the fifth stage of the e-government model and have the capability to allow citizens to undertake online services 24/7 with no limitation to time and location.

The survey of 115 ministries, departments, and agencies in this study indicates that only 81 institutions have web presence. The analysis of the 81 ministries, departments, and agencies show that almost all the institutions are in the first, second, and third stages of the e-government model. The results demonstrate that the Government of Ghana websites are in the first three stages of the e-government model: emergence presence, enhanced presence, and interactive presence. Hence, the Government of Ghana websites are currently in the interactive stages of the e-government model. Analysis of the data available indicates that public administration, and for that matter, the Government of Ghana websites are very weak in the fourth and the fifth stages of the e-government model. Hence, agencies and departments in Ghana are not ready to render online services to citizens. The implication is that public administration in Ghana is not ready for e-Services.

Government agencies and departments have made progress in developing their websites for the implementation of e-government applications. However, this is not enough to position public administration in the cyberspace for e-Services. In order for public administration in Ghana to function as an online service provider, it is important to ensure that the Government of Ghana websites are in the transaction and integrated stages of the e-government model. According to UN (2008), the transactional stage of the e-government model is the stage where government agencies begin to offer online services (e-Services) to citizens. The Government of Ghana must enhance the various websites to the level of the transaction stage of the e-government model. The government must address the slow development of her websites and take measures to ensure that they fall between stages IV and V of the e-government model. This is very important as almost all the selected government websites in this study fall between stages I and III of the e-government model.

5.3 Conclusion and Direction for Future Studies

This paper presents the results from an examination of ministries, departments, and agencies in Ghana based on the stages of the e-government model. All the websites studied remain in the early stages of the e-government model (emergence presence, enhanced presence, and interactive presence). None of the websites studied is making full use of the available technology in e-government. E-government in Ghana is almost like the extension of government offices; with the only difference being the accessibility of these websites 24/7. The Government of Ghana must integrate e-government into her broader policy goals and service delivery objectives. The broader public engagement of citizens, public management, and activities related to information society are necessary. Information is a substantial component of public administration; however, the citizens' interaction with ministries, departments and agencies in Ghana online is highly limited.

This study is limited to Ghana and as such, may not be generalizable to other countries in sub-Saharan Africa. Additionally, the study is based on some selected ministries, departments and agencies. The study has not surveyed all the agencies in Ghana. The study is also limited to the stages of e-government with no consideration of public value and citizen interest or quality of services provided through these websites. A future study should examine the quality of these websites and the public value perspective.

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