

EXAMINING THE PREPAREDNESS OF AN EMERGING ECONOMY TOWARDS E-GOVERNMENT IMPLEMENTATIONS: SWOT ANALYSIS

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ABSTRACT

The last decade has witnessed a number of governments around the world working to capture the vast potential of the Internet to improve government processes. E-government development very often aims to improve public service delivery capability, as well as public administration governance, transparency, and accountability through the development of e-government service delivery capability. E-government has established itself as the transforming element in the way government services are offered to citizens in developed countries. Although this phenomenon is beginning to show promising results in many developing countries, countries like Ghana are still grappling with the challenge to embrace the opportunities that e-governance presents in order to meet the public needs and expectations while being cost-effective. The purpose of this paper therefore is to present a SWOT analysis of e-government implementation in Ghana.

Keywords: e-government, emerging economy, SWOT analysis, Ghana, Africa

1. INTRODUCTION

ICT availability and use can enhance efficient delivery of basic amenities and facilitate the social, economic, cultural and political growth of developing countries (Deliktas and Kok, 2003; Färe, 1994, Jalavaa and Pohjolab, 1999). Some international organizations such as the World Bank, the United Nations and the International Telecommunication Union have argued that investments in ICT are essential for development in the information age (UNDP, 2005, UN 2003, US DOS 2005). Several developing nations have taken heed of the call by increasing their investments in ICT infrastructure to provide enhanced economic and social services to their citizens which also help address the digital divide problem and that proper level of investment in ICT, health and education can enhance development (e.g.,

Ngwenyama et al., 2006). In fact, the UNDP states that at the end of 2003, over 90 developing nations had formulated information and communication policies to stimulate the development of ICT infrastructure (UNDP, 2004).

Research has indicated that with the advancement of information and communication Technologies (ICTs), electronic government (e-government) has emerged as an effective means of delivering government services to citizens (e.g., Lee, Tan, and Trimi, 2005). The question is not whether to invest in ICT as some critics have argued but to what extent should government spend in ICT. Spending in e-government will in the long run help the governments in developing nations such as Ghana to cut its spending and run efficient and effective business with all its stakeholders. There are clear examples in developing countries, where the implementation of public information systems has encountered several challenges, resulting in a poor success record (e.g., Avgerou, 1998). It is therefore important that for countries like Ghana, for e-government implementation to be widespread and successful, very good strategies and practices need to be identified in addition to establishing and prioritizing processes to be e-enabled. Every e-government program needs to have a clear description of the proposed benefits to citizens, what challenges and threats need to be overcome for it to be successful.

In this paper, we examine the readiness of a developing nation, Ghana to implementing effective and efficient e-government systems using SWOT analysis. This research contributes to IS research on the neglected continent especially in e-government domain (Mbarika et al., 2004).

2. BACKGROUND

In 1957, Ghana became the first nation in Africa to gain independence from colonial rule. As a nation Ghana's democratic rule has been under constant attack through coup d'états that generally set the country's social and economic growth backwards. January 2003 was the first time an elected government handed over power to another elected government. Since then Ghana's democratic process has been praised by international governments and institutions and is often prided as a beacon of icon for the democratic process for Africa especially nations south of the Sahara. In January 2009, the opposition party that lost to the incumbent government in 2000 won power and once again power was smoothly transferred enhancing the image of the nation especially among its neighboring countries. With the rapid growth in democracy and rule of law, the new government has promised to use the nation's resources to develop infrastructure, education, health and to prevent crime and reduce poverty etc.

2.1. Background of Ghana

Ghana is a tropical country off the coast of the West African Sub-region, sandwiched between la Cote d'Ivoire (on the West), Burkina Faso (on the North) , Togo (on the East), and South Atlantic Ocean on the South, or specifically the Gulf of Guinea washing 560 kilometers of the coastline. Ghana has a total country area of 238,539 square kilometers. It lies between latitude 6 and 11 degrees north of the equator and is crossed by the Meridian of Greenwich. Ghana has a total population of 23.5 million (UN, 2007).

Accra is the capital city of Ghana. The current city was a fishing village inhabited by the Ga settlers around the fifteenth century (Gough and Yankson, 1997). It later became the seat of

British colonial administration in 1877. By virtue of its strategic location along the coast and its easy access to the hinterlands, it became an economic and industrial hub for Ghana.

Although Ghana is a relatively small Sub-Saharan African developing country, its economy is intricately woven into the global economy. Since the mid 1980s to the present time, various government and liberalization policies have been implemented to bring economic reforms to build infrastructural capacity, increase economic growth, and improve the wellbeing of its citizens (Amoako-Gyampah and Acquah, 2008). Ghana has enjoyed a sustained average growth rate of 5.1% per year, or 2.8% per capita per year, over the last decade, and both these numbers are higher than the Africa average (World Bank 2009), which is a representation of few growth success stories recorded in sub-Saharan Africa (Aryeetey and McKay 2007). At the same time, the inflation rate has been reduced and has more or less stabilized below 15% since 2004. The total foreign direct investment (FDI) flows have also increased significantly over the past decade (World Investment Report 2007).

2.2. Democracy in Ghana

Ghana, like a dozen or so other African countries made a transition to democracy in the early 1990's by introducing multiparty elections. Ghana has had five democratic experiments since her independence in 1957, the current one starting in 1993. All the four democratic experiments have revolved around two relatively stable political parties; a continuity perhaps auguring success within the third wave of democratization. Ghana has always had a two-party like national system during its often interrupted democratic history (Austin 1970; Chazan 1983). While there has always been a stable two-party system at the national level, there are variations in party system types in the regions. These regional variations developed as a product of ethno-political fragmentation and group concentration (Mozaffar et al. 2003). However, instead of these variations acting against the national two-party arrangement, they rather actually sustain and reinforce this system. The roots of this two party system with the various regional variations extend to the campaign in the late 1940s for Gold Coast decolonization. These early systems have survived turbulence to maintain reasonably consistent ideological formulations and stable aligners.

The current party scene of the fourth republic largely reflects two traditional political ideologies (there are other smaller parties of very insignificant membership). The roots with the various regional variations extend to the campaign in the late 1940s for Gold Coast decolonization. The two big tent parties with national appeal and comprehensive platforms are the liberal New Patriotic Party (NPP) and the populist National Democratic Congress (NDC). The NDC rose on the populist remnants of Rawlings's military regime (1981-92). It is ideologically akin to the Nkrumahists and adopts similar electoral strategies. The NPP is dominated by an intellectual, business, and professional elite, dedicated to liberal governance and a free market economy. It caters to many urban adherents. The NDC and NPP have dominated in four fourth republic elections, alternating in office. Together they claim most constituent identifiers. All the political parties seek to capture political office through elections, and as in several dominant democratic regions, competition in Ghana politics is high especially given the willingness of voters to shift support between the various political parties from one election to the next. Ghanaians are experienced at multiparty elections which is evident in the fact that the two main parties (the NDC and the NPP) have alternated in governing during the current republic. The parties share support from a margin of flexible voters who shift allegiance based on political, moral, personal, policy issues and environmental factors.

2.3. Electronic government

In the information age, a major driving force for human development is information. Governments all over the world seek to employ e-government. Just as technology is employed by organizations to improve operations, governments can improve their operations and use the tax payers' money effectively using technology. This may be the reason why US President Barack Obama during the 2008 presidential campaign, promised to use technology to enhance government operations. E-government can bring citizens and businesses closer to the government in a more efficient and effective way through the Internet. Through the internet, citizens and business can transact business with government institutions.

E-government is the ability to obtain government services through non-traditional electronic means, enabling access to government information and the completion of government transactions on an anywhere, any time basis and in conformance with equal access requirements. The emergence of e-government offers a potential to reshape the public sector and build relationships between citizens and the government. It can also be described as a way for government to use the new technologies to provide citizens and businesses with the convenient access to government information and services, to improve the quality of the services. Factors that hinder e-government implementations include security, privacy, and lack of financial resources (Norris and Moon, 2005). E-government is found to be transforming the way governments function through the implementation of various e-government models such as government-to-citizen (G2C), government-to-business (G2B), Government to government (G2G) and Government internal efficiency and effectiveness (IEE) (Lee, Tan and Trimi, 2005). To ensure effective e-government implementation, a fourstage e-government development model has been proposed (Layne and Lee, 2001).

3. SWOT Analysis METHODOLOGY

To have long term sustainability, an e-government system implementation and growth must concentrate its future objectives on its strengths, while averting its weaknesses. In addition to responding to internal strengths and weaknesses, an organization or institution needs to be familiar with the opportunities and threats resulting from the external environment. Such recognition of the strengths and weaknesses, along with the evaluation of the opportunities and threats, takes place on the basis of a SWOT. SWOT Analysis is a strategic planning tool used to evaluate the Strengths (S), Weaknesses (W), Opportunities (O), and Threats (T) involved in a project such e-government implementation. SWOT is a strategic planning method used to evaluate the strengths, weaknesses, opportunities, and threats involved in a project or in a construction enterprises venture. The conceptual structure of the SWOT framework is shown in Table 2. It is one of the widely used methods in economic activities to evaluate the internal and external factors that are favorable and unfavorable to achieving the project's objective (Houben et al. 1999). For instance Ghazinoory and Ghazinoori (2006) used SWOT to propose a method for formulating government strategies for improving national innovation systems in developing countries. SWOT analysis has also been used in decision making techniques (Kaplinski 2008).

Table 1: SWOT Analysis Framework

	Internal Factors	External Factors
Favorable Factors	STRENGTHS a resource that can be effectively used to achieve its objectives	OPPORTUNITIES any favorable situation in the external environment
Unfavorable Factors	WEAKNESSES a limitation, fault or defect that makes achieving objectives difficult	THREATS any unfavorable situation in the external environment that is potentially damaging to its strategy

4. ANALYSIS AND RESULTS

Table 2 is a summary of the SWOT matrix for e-government implementation in Ghana. We present discussion of the components of the matrix in below.

4.1 Strengths

Although ICT infrastructure in the country is generally poor, those in the major metropolitan cities are good. The average labor cost for local ICT experts is relatively low in comparison to those in developed nations. There is growing interest in ICT related courses in both trade and tertiary institutions. This provides a source for ICT human asset that the government can source for e-government services.

4.2 Weaknesses

Ghana has several technical challenges with e-government implementation. Digital divide is a major problem for the nation in general and for people in the rural area in particular. Although cost of ICT has continuously been decreasing since Moore predicted this in 1964, the cost of ICT is still high for the citizens due to the general per capital GDP. There is low ICT infrastructure and access to the internet is very expensive. Citizens are charged by use thus an average Ghanaian uses the internet only to read and send email and rarely use for other purposes. Using the internet for business and e-government services would be very expensive for majority of citizens. Although there is growing ICT programs and interest in these programs, there is still lack of IT experts in the nation which would demand the use of expatriate, costing the nation fortunes. Besides poor infrastructure and lack of IT experts, people are very resistance to changing the way they do business. Hence acceptance or adoption of e-government services could be a problem. Privacy and security concerns together with lack of effective ICT regulatory bodies would hinder the acceptance of e-government services.

Table 2: SWOT Analysis Matrix

Strengths

- Thriving Democracy
- Well-developed infrastructure of communication and data transmission network in the cities
- High number of ICT programs
- High number of students in ICT related programs
- Incorporation of ICT in early education programs
- Cheap and professional IT labor force

Opportunities

- Outbursts of IT programs with potential to supply IT labor
- IT services provided by media companies
- Citizenship in government operations
- Decrease in Computer hardware and software products
- Availability of alternative IT network infrastructures
- Fair Information Practice Act can be used to address privacy concerns
- Oil production

Weaknesses

- Digital Divide problems
- Resistance to change
- Small percentage of IT users
- Weakly developed IT infrastructure
- Relatively high price for internet access
- Shortage of the qualified IT specialists
- Shortage of the public access to internet
- Slow data transmission
- Lack of national data on citizens
- Low computer literacy of public and municipality servant
- Shortage of IT regulatory base
- Data security problems
- Data privacy problems

Threats

- “Brain drain”
- Lack of funding for e-governance projects

4.3 Opportunities

In recent times, several ICT institutions have been established and various tertiary institutions are increasing the offering of ICT related programs to develop the IT skills and knowledge. The students graduating from these institutions and programs present growing and potential IT human assets for deploying e-government applications. In addition several tertiary level institutions have been established with several of such institutions offering technology related courses such as management information systems, computer information systems and information systems. Government can tap IT labor from such institutions. It may be important for the Government to invest in the education of ICT graduates so that there are enough personnel with requisite to work on e-government projects to reduce the exorbitant costs that external consultants and contractors may request. Government should facilitate the establishment of ICT consultancies that would provide research and technical services for the e-government projects. Using local IT labor and foreign organizations with ties to the nation is important because it will

facilitate the systems development process because of their understandings of the processes and culture. The continual decrease in computer hardware and software costs as well as availability of wireless network systems provide opportunity for less endowed nations to take advantage of the internet facilities to provide e-government services. Ghana could use some of the revenue of the recently oil fields to support e-government initiatives.

4.4 Threats

Because of the poor remuneration and lack of jobs, Ghana has observed continual outflow of talents to the developed nations. All kinds of industries and professions have suffered this fate. Thus, although there is growing ICT programs and interest, relatively poor salary of ICT experts could threaten growth of IT professionals if they have to leave to other nations for "greener pastures". In addition to this, lack of funding and investment for ICT and e-government projects and programs provides a challenge. Ghana is a developing country with a low per capital income and this means that a lot of projects are competing for scarce resources that the government can provide. Thus resources are dedicated to areas like health and education to the detriment of ICT and e-government projects.

5. CONCLUSION

The paper presents a SWOT analysis of electronic government implementation in Ghana, a nation in Africa that has won international reputation for its democratic performance since 2000. We have presented the strengths, weaknesses, threats and opportunities that the nation can review as they consider electronic government implementation. Research has shown that governments south of the Sahara can effectively optimize investments in ICT, health and education to improve development. Electronic government implementation is one of the important ICT strategies that the government can consider. The ability of the nation to implement electronic government can enable the government streamline its operations and provide effective and efficient services and thereby reduce government spending while improving its social economic development in general. The understanding of the strengths, weaknesses, threats and opportunities can enable governments effectively implement e-government systems which could then lead to the benefits that e-government promises. The research findings may be useful for governments in nations that have similar context as the country studied in this paper. The research also contributes to understanding research on e-government on the neglected continent.

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