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FACTORS CONTRIBUTING TO FAILURE OF EGOVERNMENT PROJECTS IN DEVELOPING COUNTRIES: A LITERATURE REVIEW

Student :Agalomba, Christine Afandi
Examiner: Anders Avdic
Supervisor: Karin Hedström

ABSTRACT

The purpose of this paper is to review current literature in the area of egovernment failure in developing countries from 2008 to 2010. Other objectives are; to establish gaps in research field, to identify themes addressed and give recommendations. The study is qualitative using the literature review method where 18 papers have been reviewed and established failure factors categorized under the three archetypes of failure. Some themes established in the literature that have led to failure are culture, privacy and security tied with trust, monitoring and evaluation and calls for more focus on development objectives in egovernment projects.

A recommendation to Practitioners is to focus more on development objectives in implementation of projects. While researchers there is more room for research on failure of egovernment projects in developing countries and particularly Africa. Culture as an emerging theme and the issue of development are worthy to note for further empirical research in the future.

Keywords: Failure, egovernment, developing countries, literature review

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1. Introduction

Egovernment is the use of ICTs by the government to bring about the envisioned efficiency and effectiveness and other benefits in its operations with various stakeholders it seeks to address (Gichoya, 2005; Ndou, 2004).

This study is motivated by lack of current published literature review which therefore hinders the progress in the field simply because review articles are key to giving direction to any field of study (Webster & Watson, 2002).

There are previous literature reviews on failure factors in egovernment conducted slightly over four years ago by Dada (2006) and seven years ago by Ndou (2004).

This study aims at contributing to research in this field by reviewing and analyzing literature with the main objective being to identify the reasons for failure of egovernment projects in developing countries.

2. Literature review

Most egovernment scholars unanimously agree that egovernment is a new field which is multi disciplinary, with various areas to focus on. This research is in the area of egovernment failure in developing countries and constantly refers to Heeks (2002), Ndou (2004),Aichholzer (2004), Lam (2005), Gichoya (2005), Dada (2006), Grönlund et al. (2005), and Mutula (2008). Richard Heeks research is probably ground breaking on egovernment and the phenomenon of failures in Africa and other developing countries. Heeks (2002) apart from stating that generally there is few research conducted on failure of egovernment in developing countries and focusing on reasons for failure more than 'action and behaviour'; the greatest barrier he found in writing his paper *Africa: Promise and Practice* was '…lack of evidence.

Even aid donors, who should be committed to monitoring and evaluation, rarely seem to produce reports' (Heeks, 2002, p.103).

It's worth noting that three years after Heeks (2002) assertion, Grönlund et al. (2005) have produced a report exploring the egovernment e-readiness and climate of six developing countries- Bangladesh, Indonesia, Egypt, Rwanda, Uganda and South Africa and summarizing effective ways in which Swedish Development Agency as a donor can chip in implementing successful egovernment initiatives.

However, Grönlund et al. (2005) report does not focus on particular specified empirical studies in egovernment but an overview of the egovernment profile and progress. In that sense then Heeks (2002) is probably right regarding scarcity of reports from donors on the progress of the projects they pump millions of dollars annually.

Dada (2006) shares the same view with Heeks (2002) and expresses in his literature review that 'There is scope for further research in both the areas of success and failure of egovernment in developing countries and undoubtedly as more real-world cases come forth, so will new interpretations' (Dada ,2006, p.8).

While Gichoya (2005, p. 183) holds credence to the call for more research on egovernment in general in Africa by stating that 'research needed to identify challenges, good practice and solutions for successful implementation.'

Other scholars (Ndou, 2004; Dada, 2006) in their research call for new approaches in not only addressing the issue of failure in egovernment and but also reaping the maximum benefits of egovernment.

Dada (2006, p.8) on the other hand while deliberating on the best practices that can act as a catalyst for success poses rhetorically, 'the question remains is whether the technology must

be changed by designers to fit the context, or whether the norms, structures, mindsets and work systems that constitute the context must be changed to fit the technology which is considered to reflect 'best practice''.

2.1.1 Summary

Therefore in summary it can be seen that there is scarcity of published research by scholars on egovernment failures in developing countries and particularly Africa. In addition, there are calls for the next generation of researchers to focus more on solutions to egovernment failures in Africa and developing nations.

A such this paper addresses the gaps identified above by first contributing knowledge in the field of egovernment in developing countries that as we have seen is scarce by conducting a literature review, secondly, the paper categorizes the literature in the three archetypes of failure (Heeks, 2003), then emerging themes are established, gaps identified and recommendations made.

2.1.2 Research question

1) What reasons have led to failure of implemented egovernment projects in developing countries?

2.1.3 Objectives

1) To identify the reasons for failure of egovernment projects in developing countries. 2) To establish gaps in research and field. 3) To identify themes/issues in the research field 4) To give recommendations.

2.2 EGOVERNMENT IN DEVELOPING COUNTRIES

2.2.1 What is egovernment?

Governments are held accountable with a barrage of expectations to shoulder from citizens who are aware of their right to quality and prompt service delivery. In meeting this expectations the governments have had to look for ingenious ways to deliver the promise; and one of this ways is egovernment. Egovernment is;

> 'the use by government agencies of information technologies (such as Wide Area Networks, the Internet, and mobile computing) that have the ability to transform relations with citizens, businesses, and other arms of government. These technologies can serve a variety of different ends: better delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management. The resulting benefits can be less corruption, increased transparency, greater convenience, revenue growth, and/or cost reductions' (World Bank, 2001).

The goals of egovernment are to facilitate efficiency and effectiveness of government operations thereby meeting expectations of citizens. They are and not limited to; '1) cost reduction and efficiency gains, 2) Quality of service delivery to business and customers, 3) Transparency, anticorruption, accountability, 4) Increase the capacity of government, 5) Network and Community creation, 6) Improve the quality of decision making, 7) Promote use of IT in other sectors of society', (Ndou, 2004; Lam, 2005). Overall egovernment aims to 'centralize and make a cohesive and seamless set of government services to users' (Lam, 2005, p. 511).

2.2.1.1Developing country

For the purposes of this study a developing country is one that is not ranked as a very high human development country, but rather falls in the three subsequent categories of – (High, Medium and Low) in the recent 2010 world rankings by the United Nations Development Programme's Human Development Report released on November 4, 2010.

Table 1: United Nations E-government survey with country development ranking and Human Development Index (HDI) ranking

Country	HDI ranking 2010	Index 2010 EGOV	Position 2010	Index 2008 EGOV	Position 2008
South Africa	MD-110	0,4306	97	0,5115	61
Kenya	LD-128	0,3338	124	0,3474	122
Namibia	MD-105	0,3314	125	0,3445	126
Botswana	MD-98	0,3637	117	0,3647	118
Cambodia	MD-124	0,2878	140	0,2989	139
India	MD-119	0,3567	119	0,3814	113
Indonesia	MD-108	0,4026	109	0,4107	106
Sri Lanka	MD-91	0,3995	111	0,4244	101
Yemen	LD-133	0,2154	164	0,2142	164
Jordan	HD-82	0,5278	51	0,5480	50
Kuwait	HD47	0,5290	50	0,5202	57

The table above indicates the Human Development ranking (HDI) and for each development country included in the literature review. The table also indicates the United Nations Egovernment survey index and ranking for 2008 and 2010.

2.3 Failure of egovernment

With egovernment initiatives having taken off around the world, the question on everyone's lips is no longer how egovernment will benefit the citizens but rather, has it delivered on the myriad promises? This then has triggered immense interest from scholars (Heeks, 2003: Heeks, 2005; Dada, 2006; Gichoya, 2005; Ndou, 2004) and has led to empirical research and literature studies with diverse aims among them evaluating the outcome of the projects.

The researchers have focused on areas such as the successes of egovernment and reasons for failure of the egovernment projects launched while some of the studies go further and provide a prescription for the egovernment failure malady.

Approximately 85 per cent of implemented egovernment projects are a failure (Heeks, 2005). Heeks (ibid, p.52) has categorized egovernment project failures into two- Total failure that account for 35 per cent and partial failure that accounts for 50 percent. According to Heeks (2005) total failure means that the project was abandoned or never implemented while on the other hand partial failure indicates that goals of the project were not realized with significant unpleasant outcomes. Gartner (cited in Sang, 2008) states that more than 60 per cent of all egovernment initiatives either fail or fall short of expected outcomes.

2.3.1 What causes egovernment failure in developing countries?

Failure can be described as the absence of success; when goals and objectives are not realized after the implementation of a given project.

2.3.1.1 Two differing views on cause of failure

From the literature study it is apparent that there are two different schools of thought about what could be the likely cause of failure in developing countries. The first one states that failure is as a result of developing countries seeing egovernment as some sort of messiah to solve all their problems (Ciborra, 2005). The remedy advanced by this line of thinking is that first governments should work on putting in place the infrastructure necessary to facilitate egovernment implementation (Ciborra, 2005). A study conducted in Cambodia on *the contribution factors and challenges to the implementation of egovernment* warns that success in egovernment will be a mirage if the country does not address the countries basic needs first (Sang et al., 2009).

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The second school of thought has been advanced by Heeks (2003) and states that failure can be attributed to a gap between the design such as technology and reality on the ground of the implemented project in developing countries. We shall focus on this line of thinking that I totally agree with and which is also the conceptual framework upon which this research is built. However, before we proceed, it is worthy to note that there those who cite the gap model as being simplistic (Dada 2006; Hedström & Grönlund). Nevertheless, there are studies that have used this gap analysis model (Hwang & Syamsuddin, 2008; Dada, 2006; Heeks, 2003).

2.3.2 The three archetypes of failure

Heeks (2003) archetypes of failure is based on the contingency model which 'recognizes that there are situation-specific factors for each egovernment project which will determine success and failure and, hence, strategies for success' (Heeks, 2002, p. 105).

Thus one can see that if as Heeks (2002) states the gaps lead to failure due to a mismatch. Conversely, the opposite in this sense is equally true. That to achieve success then one has to work on reducing the already identified gaps that led to failure initially a view also held by (Gichoya, 2005). That project implementers can come up with effective strategy to address the notion of failure if they envision success by identifying the reasons for failed projects and learning from them, by designing strategies that are effective in countering this failures which is the objective of this paper.

3. METHOD

3.1 Approach

The study is qualitative (Lindlof, 1995). The literature review covers studies published on factors that have led to failure in egovernment from 2008 to 2010.

A literature review is a critical analysis of a segment of a published body of knowledge through summary, classification and comparison of prior research studies, reviews of literature and theoretical articles (Webster & Watson, 2002). Published work is important and that it is how the significance of academic research work is materialized (Levy & Ellis, 2006).

Literature reviews are important because they aid the advancement of a discipline by accumulating past endeavors, giving a summary of major issues and dissemination of knowledge compiled from a large number of individual studies (Evans & Kowanko, 2000).

Literature reviews help to collect already published knowledge in a given discipline and give the picture in real time of whether the field is saturated and hence need for a shift and focus on other areas; or whether there are gaps to be addresses in addition to building theories and frameworks (Webster & Watson, 2002).

In carrying out a literature review gaps are identified in the research that need to be covered, indicates what others have done on the topic in the field of research, and helps to avoid re-inventing the wheel and to critique their work (Knopf, 2006).

3.2 Material

A guiding conceptual model, a set of competing models and a point of view about the phenomenon under discussion were adopted for the purposes of this study (Webster & Watson, 2002).

The author in searching for relevant papers for the study used the topic words 'failure in egovernment and developing countries', then a combination of key words were used to retrieve papers from online journals and the world wide web such as 'egovernment failure factors', failure, developing countries and egovernment' 'challenges, egovernment Africa, Asia' 'challenges implemented egovernment projects' and so forth.

Accessing data and information for the study was through the Örebro university library online journals database, Google search engine and web of science for citations. A total of 38 papers were retrieved.

3.3 Data collection

The retrieved papers were carefully read particularly the method, results, discussion and abstract sections in order to pick the suitable papers for the study. The papers were further filtered the papers by year, only remaining with papers published between 2008 and 2010.

In total 18 papers from both various journals and conferences have been used in this study. This review examined nine papers from four Asian countries-India, Cambodia, Indonesia, Sri Lanka, three papers from three Middle East countries- Jordan, Kuwait and Yemen; and six from four African countries – South Africa, Botswana, Namibia and Kenya.

3.4 Data analysis

Analysis of the results has been done at two levels. First, categorization of the failure factors was done under the three archetypes of failure- Hard-Soft gaps, Private-public gaps and country context gaps (Heeks, 2003, p.5).

Then, further sub categorization; where the author read all the factors in each of the three already established gaps by Heeks (ibid) stated above, with the objective of categorizing them into common themes. Under Hard-Soft gaps fourteen themes were established, under private-public gaps themes three were established while in country context five themes were established. The author informed by the concept of 3 archetypes of failure (Heeks, 2003, p.5) read and re-read all the 18 papers and subjectively was able to extract from the papers:

1. Factors that influence access and use of egovernment services in developing countries. Such factors include skills, culture and values. The description best fits and was placed under the Hard-Soft Gap.

2. Factors that influence access and use of egovernment services in developing countries which specifically results when- systems and realities designed for and suitable for the private sector are introduced in the public sector were derived- The description best fits and was placed under the Private-Public Gap.

3. Factors that influence access and use of egovernment services in developing countries that resulted when off shelf solutions were imported from one country with a different context where they were perceived to be a success to a developing country with a totally different context- expecting to replicate success only to get negative results. The description best fits and was placed under the Country-Context Gap.

The next step was to read through all the factors gathered in each of the 3 archetypes again. The author discovered that even though the factors were from different countries written in different words; most could be represented by a suitable common word.

The several common words derived by this thinking were then used as subheadings headings to the factors earlier identified under each of the 3 archetypes in the presentation of the results. These common words are what the author terms as themes in this particular study.

For instance under the Hard-Soft gaps: The following factors-Lack of government support in India, Lack of political leadership support and will in Cambodia and Government support lukewarm in Botswana. The common word subjectively established by author was government support/politics which then became a theme.

While under the Private-Public gaps for instance: The following factors: Lack of financial support for local services and kiosk operators in India, limited financial support in Indonesia and lack of allocated budget for egovernment deployment /limited government resources in Jordan.

The common word subjectively established by author was lack of financial support which then became a common theme. The common word chosen is informed by the fact that egovernment projects undertaken even though public were modeled on the lines of private project reality and or design, hence the shortfall in the funds reserved by the government.

Themes as identified and used in the presentation of results make it easy at a glance to get a quick idea about what the factors clustered under are all about. They also assist in the presentation of results as they act as subheadings. In addition, they could be used for comparison purpose which was not part of the scope of this study.

4. RESULTS

4.1 Hard- Soft gaps

Hard- Soft gaps are created when those designing egovernment systems fail to put into consideration factors that facilitate access and use of services in developing countries such as values, culture, skills (Heeks, 2003; Dada, 2006).

Government Support/politics

Lack of government support (Gorla 2008) and even from private institutions In India; lack of continued support for egovernment services in India(Best & Kumar, 2008); Lack of political leadership support and will in Cambodia(Sang et al., 2009); Lack of support from stakeholders in Cambodia (Richardson 2008); Variation in support among leadership this is attributed to the lack of high priority and need of egovernment at present in Cambodia (Sang, 2008);Issue of leadership support in South Africa (Matavire et al., 2010); government support lukewarm in Botswana (Mutula & Kalaote); government support lacking in Sri Lanka(Ali et al., 2009).

Technology/environment

Dusty environment led to the difficulty to operate computers in India (Gorla, 2008); Difficulty in adopting new technology(Gorla, 2008); Lack of adequate technological support for the kiosks in India (Best & Kumar ,2008); Lack of technical equipment and expertise in Cambodia (Sang et al., 2009); Hardware problem in Indonesia/Sulawesi(Hwang & Syamsuddin, 2008); weak technical architecture in Yemen (Abdullah & Al-Hagery,2010); Lack of computerized systems in management of information systems in most agencies and institutions to support the decision makers and various beneficiaries in Yemen Abdullah &

Al-Hagery ,2010); inadequate technological infrastructure including inadequate data systems in South Africa (Nengomasha et al., 2010); technical and server malfunctions in Kuwait (AlAwadhi & Morris, 2009).

Stakeholders

Conflict among stakeholders on design, platform, technology, role and participation in Cambodia (Sang et al., 2009a); stakeholders sidelined as government dominates in Indonesia (Hwang & Syamsuddin, 2008); Infighting among key stakeholders who are the major government agencies involved in Kenya (Bernadi, 2009); Citizens as main users sidelined in South Africa (Matavire et al., 2010).

Skills and Training

Difficulty in imparting knowledge to first time users in India (Gorla, 2008); low literacy in Cambodia (Sang et al., 2009); Low rate of literacy in Cambodia (Sang, 2008); Lack of skills (Sang, 2008); limited IT skills and training , lack of computer literacy in Jordan (Elsheikh & Cullen, 2008); eliteracy skills development needed in South Africa (Maumbe, Owei & Alexander, 2008);training needed to counter underdeveloped institutional and human capacity including leadership in South Africa (Nengomasha et al., 2010); Low ICT literacy rate in Sri Lanka (Ali et al., 2009); Low level of knowledge in using computer in Yemen (Abdullah & Al-Hagery, 2010).

Process/Management

Non-standardized process across districts leading to integration difficulties in India (Gorla, 2008); values of competing political coalitions in Cambodia (Richardson, 2008);lack of institutional framework supporting egovernment in Jordan (Elsheikh & Cullen, 2008); Concern over lack of focus on development objectives in South Africa (Maumbe et al.,

2008); Task coordination a problem in South Africa (Matavire et al., 2010); project fragmentation(Matavire et al., 2010); poor records management in Namibia (Nengomasha et al., 2010); Lack of coordination with egovernment initiatives scattered around different ministries in Sri Lanka (Ali et al., 2009);government lacks administration system that contain many elements and procedures that can be automated within the network system in Yemen (Abdullah& Al-Hagery, 2010) policies not being carried out to the end in Kenya (Bernadi, 2009); holding to complex government traditional system and way of doing things in Yemen (Abdullah & Al-Hagery, 2010).

Acceptance

People not accepting project until benefits are understood in India (Gorla, 2008);lack of user acceptance to new technology in Indonesia (Hwang & Syamsuddin, 2008); Problem of acceptance that can be attributed to cultural and linguistic issues in South Africa (Maumbe, Owei & Alexander, 2008);reluctant to accept egovernment as an alternative method of service delivery in Sri Lanka (Ali et al., 2009).

Access

Service provision not fully online and accessible through internet in Cambodia (Furuholt & Wahid, 2008); need for diversifying access to physical infrastructure in South Africa (Mutula & Mostert, 2010).

Monitoring and evaluation

Mechanism of monitoring and evaluation absent in South Africa (Mutula &Mostert, 2010).

Privacy/security and Trust

Citizens are weary of government collecting information i.e. health, education, employment, property ownership, income and also connected, they are scared of cases of increased cyber crime in Cambodia (Sang et al., 2009a); privacy and security concerns leading to low trust and confidence from citizens in Jordan (Elsheikh & Cullen, 2008); lack of trust in Kuwait (AlAwadhi & Morris, 2009).

Limited Service

Limited services provided due to poor infrastructure in India (Gorla, 2008);limited functionality- only agricultural information in India (Gorla,2008); use of open software limited in Botswana (Mutula & Kalaote, 2010); economic and social situation limits information development and expansion of its use in Yemen (Abdullah & Al-Hagery, 2010); poor service delivery in South Africa (Mutula & Mostert, 2010).

Data/Information

Little rural data were readily available for planning purposes in India (Gorla, 2008); lack of new and relevant content in India (Best & Kumar, 2008); problem with data integration and integrity vertically and horizontally between government agencies in Indonesia (Furuholt & Wahid, 2008).

Culture/equity

Cultural norms make women shy from using the internet in Cambodia (Sang, Lee, & Lee, 2009a); equity between men and women as regarding acquisition of language, literacy and vocational skills this then creates barriers in access for women to ICT services Cambodia (Sang et al., 2009a);cultural issues impeding progress of ICT in education in Cambodia (Richardson, 2008); Cultural and social issues where less considered are issues of traditions,

customs, values, orientation and attitude- culture, geography, literacy, gender, segregation, religion(Elsheikh & Cullen 2008); the tradition of face to face communication favoured and thus hindering use of ICT , also design of systems not considering the language, religion and gender of people(their culture is a setback) in Kuwait (Al Awadhi & Morris, 2009); language barrier to those who want to use mother tongue in Sri Lanka (Ali et al.2009).

Law/policies

Lack of clear legal status of the government functioning regulations, laws, for online transactions (Sang et al., 2009a); Government not yet developed well defined ICT policy and strategies (Sang et al., 2009a); Lack of clear policies that support ICT in education and this has partly contributed to another problem of failure to institutionalize ICT education reform in Cambodia (Richardson, 2008); lack of an enabling legal framework for egovernment deployment in Jordan (Elsheikh & Cullen, 2008); IT enactment not consistent across the health information system (Bernadi, 2009); government yet to put in place an enabling open software policy to harness the potential of the software in Botswana (Mutula & Kalaote, 2010).

Awareness/motivation

Benefits not understood by citizens or employees due to lack of awareness in Indonesia (Hwang & Syamsuddin, 2008); lack of citizen awareness and participation as the people have limited idea of what egovernment is in Jordan (Elsheikh & Cullen, 2008); health workers motivation is low as they could not see benefits of system in Kenya (Bernadi, 2009);lack of awareness where benefits are not spelt out in Kuwait (Al Awadhi & Morris 2009); awareness needed in South Africa (Maumbe et al., 2008); lack of awareness has led to low perceived value of information technology in South Africa (Matavire et al. ,2010); awareness among

government officials is low in Botswana (Mutula & Kalaote, 2010); lack of awareness led to low interest in making use of available services in Sri Lanka (Ali et al.2009).

4.2 Private- Public gap

The private-public gap occurs when systems and realities designed and suitable for the private sector are 'shoehorned' in the public sector setting (Heeks, 2003).

Lack of financial support

Lack of financial support for local services and kiosk operators in India (Gorla, 2008); lack of adequate institutional partnerships for delivery of services in India (Best& Kumar, 2008); limited financial support in Indonesia (Furuholt & Wahid, 2008); lack of allocated budget for egovernment deployment /limited government resources in Jordan (Elsheikh & Cullen, 2008); piece meal donor support in Kenya (Bernadi, 2009); financial constraints in Sri-Lanka (Ali et al., 2009); high financial costs in Yemen (Abdullah & Al-Hagery, 2010).

Skilled staff problem

Lack of skilled personnel to offer the services in India (Gorla, 2008); due to poor pay IT staff prefer private sector to government sector in Cambodia (Sang et al.,2009); Lack of qualified public sector skills in Cambodia (Sang et al., 2009a) ; hard to retain government staff due to uncompetitive pay (Sang et al., 2009a); high turnover rate of government staff in Cambodia (Sang, 2008); appropriate skills lacking in government staff in Indonesia (Hwang & Syamsuddin, 2008); limited staff with programming and technical skills in Botswana (Mutula & Kalaote, 2010); few technical staff qualified in field of information in Yemen (Abdullah & Al-Hagery, 2010).

Paradigm shift

Considered from business rather than public service side in Indonesia (Hwang & Syamsuddin, 2008); NPM model for the integration of health information system in Kenya (Bernadi, 2009). Paradigm shift leading to resistance in change with negative attitude and lack of teamwork in Sri Lanka (Ali et al., 2009);

4.3 Country context gap

Country context gaps are created as a result of seeking 'quick fixing solutions' thus getting off the shelf solutions and importing it to another country which has a different context (Heeks, 2003).

Electricity

Lack of adequate power supply in India led to a halt in system operation (Gorla, 2008).

Internet connection

Internet connection not available in all office with frequent disconnections as the system uses dial up connection where the lines during the day are busy in India and low level of internet penetration (Gorla, 2008).

Pricing/high/telecom cost

Local phone calls are expensive in Jordan hence low internet diffusion (El sheikh & Cullen, 2008); telecom pricing high in South Africa (Maumbe et al., 2008); cost of telecommunication services relatively high in Sri Lanka (Ali et al.,2009); weak and low level of coverage of fixed telecommunication networks services leading to high cost in use in Yemen (Abdullah & Al-Hagery, 2010).

Infrastructure/ disconnections

Outdated infrastructure in India (Gorla, 2008); operations interrupted due to telecom network disconnections(Gorla, 2008);poor infrastructure(Gorla, 2008);inadequate finance to acquire up to date infrastructure in India (Gorla, 2008); poor ICT infrastructure in Cambodia (Richardson, 2008); poor ICT infrastructure in Cambodia (Sang, 2008); limited infrastructure in Indonesia (Furuholt & Wahid, 2008); telecommunication infrastructure constraints in Jordan (Elsheikh & Cullen, 2008); technology constraints that is lack of powerful island-wide telecommunication infrastructure in Sri Lanka (Ali et al.,2009); lack of infrastructure in Yemen (Abdullah & Al-Hagery, 2010).

Digital divide

Digital divide as regards access to ICT infrastructure, literacy, information and media in Cambodia (Sang et al., 2009a); digital divide that is low ownership of personal computers and disparities in internet access stemming from lack of financial resources, necessary skills, poverty, language limitations, less well educated in Jordan (Elsheikh & Cullen, 2008).

5. DISCUSSION

5.1Discussion of Results

The literature review on factors that have led to failure of egovernment projects in developing countries presents a number of things as presented in the results section. The author categorized failure factors identified from the literature study under archetypes of failures; Hard- Soft gaps, private-public gaps and country context gaps (Heeks, 2003).

Heeks (2003) assertion was supported as the study confirms that all the reasons for failure are as a result of a gap between the design and the reality in egovernment projects in developing countries. Previous literature study with similar conclusions states 'In general, the major

problem is seen to be the gaps that exist between the design and the reality of the system' (Dada, 2006 p.8).

The Hard-soft gaps dominate with the process and management theme taking the lion's share of failure factors. This implies that the greatest constrain on egovernment projects in developing countries covered by this study are in the process and management category. Furuholt & Wahid (2008) add that non-technical reasons for failure in the management category weigh down egovernment projects.

Most of the themes are similar to those established in previous literature reviews by Dada (2006) and Ndou (2004) while others are not. This could be attributed to new methods, ways and innovation in egovernment implementation and the new challenges. These themes are; privacy and security, culture (includes gender disparity in access of and use of ICTs, tradition, religion, segregation), monitoring and evaluation and call for more focus on development objectives.

Culture is particularly a critical emerging theme in developing countries as the results indicate and will need to be urgently addressed. Cultural norms make women shy from using the internet in Cambodia and disparity between men and women as regarding acquisition of language, literacy and vocational skills has created barriers in access for women to ICT services Cambodia (Sang el al., 2009a).

Privacy and security is an interesting phenomenon since as the study shows citizens are skeptical of the intentions of the government, and distrust means users give the egovernment services a wide berth. For instance citizens are weary of government collecting information i.e. health, education, employment, property ownership, income and also connected, they are also scared of cases of increased cyber crime in Cambodia (Sang et al., 2009a).

Egovernment in itself is a means to an end which in developing countries is the wider goal of achieving development. Development thus referring to 'a positive change in peoples' life's situation (Hedström & Grönlund, 2008). However, there is concern over lack of focus on development objectives in South Africa (Maumbe et al., 2008).This then means that there isn't any positive change in peoples' lives to show for the incurred costs of implementing egovernment in this particular scenario.

Another theme is monitoring and evaluation meant to check/measure if the goals and objectives set before implementation of egovernment projects are followed through and attained or not. Mechanism of monitoring and evaluation is absent in South Africa (Mutula & Mostert, 2010). And evaluations if any are conducted only when the technical system is under construction which is when development is commencing (Hedström & Grönlund, 2008).

The study found that the private-public gap failure is dominated by the high government staff turn over to the private sector .Previous research confirms this findings attributing this to uncompetitive pay (Dada, 2006; Ndou, 2004).With most of the remaining staff lacking appropriate skills and shortage of resources hence no training (Hwang & Syamsuddin, 2008).

The results from the study show that the country context gaps are mainly to do with digital divide, infrastructure that is old, poor inappropriate, internet and connectivity, speed and its diffusion and the high costs incurred as a result. Dada (2006) established the same in his study and states that one of the benefits of egovernment in developing countries could be the transfer of information and online transactions however lack of infrastructure in most developing countries leads to high telecom costs defeating the purpose.

Also, even if the infrastructure is available, there is the issue of digital divide (Sang et al, 2009a; Elsheikh & Cullen, 2008). There is need for government to first put in place the infrastructure for citizens to have access if egovernment is to succeed (Dada, 2006).

The study establishes that there is scanty research in the area of failure factors. This review examined nine papers from four Asian countries, three papers from three Middle East countries and six from four African countries.

Dada (2006) proposes more scope for research with more case studies while Heeks (2002) states that there need not just be research that enumerates failures and challenges of egovernment as is the case in this field of research but for other scholars to move a notch higher from 'factoral analysis' to ways of tackling failures and specifically calls for 'actions and behaviour' and not 'conditions' (Heeks, 2002, p.104).

A study on comparison on sub-Saharan Africa's egovernment status with developed and transitional nations states 'providing an accurate comparative picture of egovernment in sub-Saharan Africa /…/ difficult because most egovernment studies hardly cover most countries in Africa (Mutula, 2008, p.235).

5.2 CONCLUSION

This research confirms the notion of failure which is attributed to the gap between system of technology and different context on the ground. The Hard-soft gap is the most prevalent with management and process theme causing the most strain on projects.

5.3 Recommendations

5.3.1 Government and practitioners

Governments implementing projects in developing countries should focus more on development objectives.

5.3.2 Future research

More research needs to be conducted on failure of egovernment projects in developing countries and particularly Africa. Culture as an emerging theme and the issue of development are worthy to note for further empirical research in the future. A limitation to this study was lack of access to articles that were relevant due to subscription limitations.

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APPENDIX I

List of 18 references used in literature study

Author(s)	Country	Title of paper
1.Gorla,N. (2008)	India	Hurdles in rural e-government projects in India: lessons for developing countries
2.Best, M. L. and Kumar, R. (2008)	India	Sustainability Failures of Rural Telecentres:Challenges from the Sustainable Access in Rural India (SARI) project
3. Sang, S., Lee, J.D., Lee, J. (2009)	Cambodia	A study on the contribution factors and challenges to the implementation of E-government in Cambodia
4. Sang, S., Lee, J.D., Lee, J. (2009)	Cambodia	E-Government challenges in Least Developed Countries (LCDs): A Case of Cambodia
Richardson., W. (2009)	Cambodia	ICT in Education Reform in Cambodia: Problems, Politics, and Policies Impacting Implementation
5.Sinawong, S. (2008)	Cambodia	The influential Factors and Challenges in Implementing E-government in Cambodia
6.Bjorn, F. and Fathul, W. (2008)	Indonesia	Egovernment challenges and the role of political leadership in Indonesia: the case of Sragen
7.Hwang, J. and Syamsuddin, I. (2008)	Indonesia	Failure of E-Government Implementation: A case study of South Sulawesi
8.Ali et al. (2009)	Sri Lanka	The Impact of National Culture on E-Government Implementation: A comparison case study
10.Al Awadhi, S. and Morris, A. (2009)	Kuwait	Factors Influencing the Adoption of E-government Services

11.Elsheikh, Y., and Cullen, A. (2008)	Jordan	e-Government in Jordan: challenges and opportunities
12. Al-Hagery, M., A., H.(2010)	Yemen	Basic criteria for the purpose of applying E-Government in the Republic of Yemen
13.Bernadi, R. (2009)	Kenya	IT Enactment of New Public Management: the Case Study of Health Information Systems in Kenya
14.Mutula,M.,S. and Mostert, J. (2009)	South Africa	Challenges and opportunities of e-government in South Africa
15.Maumbe et al. (2008)	South Africa	Questioning the pace and pathway of e-government development in Africa. A case study of South Africa's Gateway project
16.Rangarirai et al. (2010)	South Africa	Challenges of eGovernment Project Implementation in a South African context
17.Mutula, S. and Kalaote, T.(2009)	Botswana and South Africa	Open Source Software deployment in the public sector: a review of Botswana and South Africa
18. Nengomasha et al. (2010)	Namibia	Electronic Government Initiatives in the Public Service of Namibia

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Appendix II

Figure 1: The three archetypes of failure as extracted from Heeks (2003, p.5)

Hard-Soft Gaps. How do we think about ICTs? Often in terms of machinery and engineering, rationality and objectivity. Many e-government systems get designed according to these notions. The trouble is, many government organizations do not adhere to these 'hard' ideas. In reality, they are dominated by 'soft' factors: people, politics, emotions and culture. When a hard e-government design meets a soft reality, there is a large gap, and a strong likelihood of failure.

Private-Public Gaps. Despite the best efforts of some, the public sector remains fundamentally different from the private sector. Yet too many IT firms, IT consultants, government officials' et al. forget this. They pick up an information system designed for the private sector. Then they try to shoehorn it into a very different public sector reality. This is a classic case of square pegs and round holes. The large design-reality gap generates lots of heat and noise, not much light and, ultimately, plenty of failure.

Country Context Gaps. It sometimes seems only the first half of 'Think Global, Act Local' gets remembered. Governments, donors and consultants seeking quick fixes for development try to pull solutions off-the-shelf from other countries. But New Delhi is not New York, and Lusaka is not London. So there is often a large design reality when you try to introduce in a developing/transitional country an egovernment system designed in and for an industrialized nation. Partial or total failures are the frequent result. *Source: Heeks (2003, p.5)*