A CITIZEN-CENTRIC FRAMEWORK FOR ASSESSING E-GOVERNMENT EFFECTIVENESS

Annastellah Sigwejo
Cape Peninsula University of Technology
South Africa
sigwejo@nacte.go.tz

Shaun Pather
Cape Peninsula University of Technology
South Africa
pathers@cput.ac.za

ABSTRACT
In a quest to offer better services to both citizens and businesses throughout Africa, efforts to adopt e-government projects are gaining momentum. As a result of this, there is a need for effective measurement of delivery and quality of such e-services. Currently, there are several metrics applied to measure and rank the e-readiness of various African countries. However, while these measures have provided a source of comparative analysis between different e-government projects, they are far from being perfect. For example, most of these measures are diverse and difficult to compare, since they assume ‘one size fits all’ and ignore differing environmental, cultural and contextual factors of various countries. Further criticisms of these measures are that they are ‘first generation metrics’ designed for developed countries, as opposed to developing countries.

This paper addresses the problem that there is a need for suitable evaluation strategies for understanding and measuring the effectiveness of e-government services in order to improve the management thereof, and thereby attain the best possible value for citizens. The objective of this study was to investigate and develop a framework, for evaluating the effectiveness of e-government services in a typical developing country. Tanzania was chosen as the context for this study: as a typical developing African country, its early phase of e-government development provided an optimal case for this study concerned with the useful and effective evaluation of e-government services.

The findings indicate the key dimensions to consider when evaluating the effectiveness of e-government services. These dimensions are synthesised into an e-government citizen satisfaction framework (ECSF). The framework demonstrates how citizen and government imperatives should be amalgamated to evaluate the effectiveness of e-government service. The findings further support the call to increase monitoring and evaluation of all ICT projects within government.

KEYWORDS: e-government evaluation; information system evaluation; service quality; evaluation dimensions; citizen-centric

1. INTRODUCTION
The development of e-government services worldwide has been greatly facilitated by the rapid advance in information and communications technology (ICT) (Deng, 2008; Lee, 2010). Government agencies are searching for better ways to efficiently deliver government service. As a result, a number of governments have transformed from government-centred service delivery to citizen-centred service delivery (Al-Sobhi et al., 2010; Lufunyo, 2013). In the world today, almost all governments are employing e-government as a tool for transforming service delivery and for better interaction with citizens. e-Government has been identified as one of the most efficient vehicles for appropriate, transparent and inclusive participatory decision making (Bwalya, 2009). Furthermore, two-way communication between government and citizens facilitates greater efficiency (Gauld et al., 2010). As a result, in terms of service delivery, e-government adds value by providing suitable access, widening coverage of services, and eradicating distance; it is also time and money saving...
As observed by the United Nations, implementing e-government has been treated as an effective way of creating public value (United Nations, 2003). At the same time though, there has been some critique that the majority of e-government projects in developing countries fail (Dada, 2006).

Thus, the implementation of e-government in the current era is obligatory for the government to function in this information age. The needs of people, global competition and new demands of the information age are critical issues, particularly in developing countries. Accordingly, in order to enhance e-government services, various developing countries have launched strategic plans which, according to Ismail (2008), are normally undertaken and implemented following the essential step of e-readiness evaluation. However, these plans are not a guarantee of uptake of use of e-government services, especially in developing countries which currently have a lower broadband-internet penetration level.

As efforts to adopt e-government projects gather momentum in the quest to offer more efficient services to citizens and businesses, strategies for assessing their effectiveness and measuring the delivery and quality of services (for example, Alanezi et al., 2012) are critical. Currently, there are several metrics applied to measure and rank a country’s e-readiness. While these measures have provided a source for comparative analysis between various e-government projects, they are far from being perfect. Most of these measures are diverse and difficult to compare as they assume a ‘one size fits all’ application and ignore differing environmental, cultural and contextual factors, both within countries and between countries. Another criticism of these measures is that they rely on first-generation metrics designed for developed countries. For example, the United Nations (UN) e-government ranking is based on a capacity dimension that concerns readiness of the country (e-readiness), a willingness dimension which concerns e-participation, and a dimension for capturing the potential for e-government that is already in place (Koh et al., 2008; United Nations, 2008). For developing countries, particularly in Africa, rather than just adopting these existing indicators, it seems far more logical to re-evaluate and customise the indicators, establishing which ones are important and suitable for a typical African e-government service environment. Consequently, there is a need to develop more African-appropriate e-government metrics, emerging from consideration of African environmental, cultural and contextual factors. The call for African specific models of evaluation has been made previously, for example, by authors such as Bwalya (2009) who argued for tailor-made conceptual models for Zambia and similar environments in the SADC countries.

In addition, even with widespread acceptance of the importance of providing public services in an electronic manner (Verdegem and Verleye, 2009; Belanche et al., 2009), there is a dearth of knowledge about the determinants of citizens’ adoption and use of online public services. In other words, not enough attention has been given to the citizens of e-government services in consideration of their expectations and experiences. Certainly, to date, many studies in this regard have focused on well-known adoption models such as the Technology Acceptance Model (TAM) or the Theory of Planned Behaviour (TPB) (Wu and Chen, 2005). Consequently, little consensus exists about what motivates citizens to make use of existing electronic public services. There is a need, thus, for an empirical evaluation of the antecedents of African citizens’ intention to use online public services, as this awareness would be key for encouraging citizens to use and thereby benefit from the ease and efficiency of online services.

proposes a conceptual model which, it is posited, offers balanced e-government adoption criteria. Others such as Kaisar and Pather (2011) and Alanezi et al. (2012) propose service-quality oriented models, which focus on the web-site interface. Thus whilst there are a number of proposed models for evaluating e-government services, the validity of these evaluation models for presenting the association between the various constructs has not yet been tested empirically in developing countries. Many of the existing models tend to focus on just one or two elements of an e-government programme. Moreover, these models were designed based on evaluation dimensions derived from developed countries, which may differ from those of developing countries. Hence, dimensions for evaluation based on those of developing countries are imperative for the successful evaluation of e-government service. More so there is a need for a more holistic set of evaluation dimensions rather than a narrow focus. Such evaluation should clearly indicate failure, as well as suggest remedies for successful e-government services implementation.

In light of the foregoing, this article is an extension of ideas on evaluation in the field of government electronic services in the context of a developing country, viz. Tanzania. Following global trends, the government of Tanzania launched the Public Service Reform Programme (PSRP) in 2000 with the aim of offering quality services to its citizens, efficiently and effectively, and with the highest standard of courtesy and integrity (Lufunyo, 2013). In line with this, great amounts of funding have been invested in e-government projects in Tanzania.

Currently, some studies have been done on e-government adoption, e-government security, and e-government implementation in Tanzania, for example those of Kaaya (2003) and Yonazi et al. (2010). However there is still no evidence of how citizens have benefited from these initiatives. Approaches for the holistic assessment of e-government service in Tanzania, which incorporates a citizen perspective, in particular, are lacking. The paper thus reports on the development of an e-government citizen satisfaction framework (ECSF) from citizens’ perspective. The framework shows how citizens and government imperatives should be amalgamated to assess the effectiveness e-government service. Furthermore, the article is supportive of the Tanzanian government’s move to focus attention on the monitoring and evaluation of all ICT projects in the country.

The paper commences with an overview of the Tanzanian e-government context. This is followed by a review of existing research on the evaluation of e-government and e-government systems, and their associated challenges. Thereafter the research methods are outlined, followed by a discussion of the findings, which leads to the proposed framework. In conclusion, the role of the ECSF is discussed and implications presented.

2. TANZANIAN E-GOVERNMENT CONTEXT

Tanzania is an east African country lying immediately south of the equator and covering an area of 945 087 km². It has a population of about 44.9 million people of whom 12% are Internet users (United Republic of Tanzania, 2013). The country’s gross national income (GNI) per capita was estimated at US$570 (2011)\(^1\). Table 1 below summarises the main Information Society Indicators about Tanzania.

\(^1\) http://www.worldbank.org
Table 1: Information Society Indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet user per 100 inhabitants (2013)</td>
<td>4.40</td>
</tr>
<tr>
<td>Fixed broadband Internet subscribers per 100 inhabitants (2013)</td>
<td>0.11</td>
</tr>
<tr>
<td>Internet host computers (2012)</td>
<td>26,074</td>
</tr>
<tr>
<td>Mobile cellular subscriptions per 100 inhabitants (2013)</td>
<td>55.7</td>
</tr>
</tbody>
</table>


As indicated in Table 1, the country Internet uptake level is low and less than 1% for broadband subscribers. However, government remained committed in its intention to reduce the digital gap. In this respect, substantive efforts have been made: the liberalisation of the telecommunications sector has realised significant achievements in transforming the country into a new information society; the waiver of all taxes on electronic equipment, computers and allied equipment; and the construction of an ICT infrastructure development programme that includes the national ICT backbone project, as well as on-going investment in school computing facilities and the government’s continuing support of ICT industry growth. The laying of a national fibre optic cable network (National ICT Broadband Backbone) in parallel with the upgrade of the national ICT infrastructure and improved bandwidth in the country is a further example of the country’s commitment to the digital age.

On the back of addressing the country’s advancement toward the Information Society, the public sector in Tanzania has experienced a massive process of reform over the past two decades. The primary justification for this reform is grounded in awareness of the need to be increasingly responsive to citizens’ needs. These reforms are clarified through the tightening up of accountability, promoting efficiency and effectiveness, introducing participative decision making and adopting customer-focused practices in Ministries, Departments and Agencies (MDAs) and Local Government Agencies (LGAs).

Tanzania, like many other African countries, is implementing these reforms in line with e-government objectives. The government adopted an e-government strategy through its National Information and Communication Technology Policy (NICTP) which, among other emphases, includes the provision of efficient and effective services to citizens, increased responsiveness to the needs of the citizens and the introduction of participatory decision making.

While there are several e-government projects currently being implemented in Tanzania as part of public reform programmes, the outcomes thus far still fall short with regard to the provision of necessary and sufficient conditions for the success of e-government projects. So, in spite of nearly two decades of efforts for extensive reforms in the public sector for improved service delivery, the results are not impressive.

The e-government projects were supposed to result in modification of the working habits of civil servants towards being more responsive and efficient in their public delivery endeavours. Likewise these projects are intended to bring about intended benefits to citizens from varying perspectives of service delivery. However there is no evidence at hand which allows for an assessment of the effectiveness of e-government projects. The current situation appears to paint a bleak picture in terms of the anticipated successful implementation of these programmes.

Consequently, several pertinent questions arise: Why are these e-government projects, in line with planned reforms, not successful? What is amiss in these e-government projects? To what extent, if any, are the e-government projects contributing towards improved service delivery within the country?
The literature is replete with information and examples and case studies of how to adopt and implement e-government programmes (Colesca and Dobrica, 2008; Yonazi et al., 2010) as well as reasons underlying adoption (e.g. Tan et al., 2013). However, minimal attention has been given to the evaluation of the effectiveness of e-government services, and even less so from the perspective of a country’s citizens.

The evaluation of e-government service effectiveness from the demand side is necessary, as it provides a foundation for understanding the needs of the citizens as well as identifying the benefits to them. Unfortunately, like many other ICT projects, there have been no appropriate evaluation strategies designed for evaluating e-government service effectiveness (Sharif et al., 2010).

The absence of such evaluation strategies as applicable to overall e-government strategy from the citizens’ perspective inhibits a government's awareness of and ability to assess problems relating to uptake, use and benefits of e-government services. Governments are thus challenged to improve e-government services and enact measures that will realise the intended benefits. In other words, if a government doesn’t know how its citizens are feeling, what they are needing, or how they are experiencing a particular e-government service, the government will be unable to improve that service.

A coherent framework for the evaluation of effectiveness of e-government services is therefore required for improving e-government practices in Tanzania. Moreover, the fact that e-government concepts and effectiveness measures emerged from industrialised developed countries (Heeks, 2003) means that existing strategies of e-government success in those countries must be interrogated from the unique perspective of developing countries in Africa, such as Tanzania, and amended accordingly.

In summary, the crux of the research problem underpinning the study reported in this paper is that no suitable framework exists for understanding and measuring the effectiveness of e-government services in a developing country. Based on this the underlying aim of the study was to investigate the key components of e-government which, when viewed holistically from the perspective of citizens within a developing country, provide a basis on which the success of e-government may be evaluated in Tanzania.

3. Literature Review

At the outset it is important to consider the concept of e-government which generally encompasses a broad definition. It is a concept not just limited to use of the Web or Internet-based applications in government. Instead, it embraces all uses of information communication technologies (ICTs), such as primary computer and networks, as a means to deliver services to all government constituents (Heeks, 2006), delivering convenient access to government services and information (Grönlund and Horan, 2005). Advocates of e-government promise better government through improved quality services, cost savings, more effective internal processes, wider political participation and the creation of public value (Grimsley and Meehan, 2007). It is the notion of public value which is critical to this study.

Given the underlying research problem, and the notion of public value, two key issues in the literature warrants attention. The first concerns the importance of a citizen-centric approach to e-Government. The second concerns that of e-government and the approaches to its evaluation. Both of the latter are honed in on in the remainder of this section.

3.1 Citizen-Centric E-Government Service

Citizen-centric government service delivery has become a trend for most governments. Governments are turning their focus to service delivery through the eyes of their citizens, whereby the needs and expectations of citizens come first (Gupta, 2008). In other words, the
citizen-centric model is an emerging one that considers citizens to be at the centre and offers them a single interface to access all (or a range of) government services. As citizen-centeredness is a primary concern of this study, the research problem zeroes in on this concept. The study focuses on investigating the key components for evaluation of the effectiveness of e-government services while capturing the citizens’ perspectives and levels of satisfaction in a developing country, Tanzania. Several researchers (Alshawi and Alalwany, 2009; Irani et al., 2005) highlight the need for evaluating e-government services through a distinctly citizen-centric concept. This study, based on a citizen-centric concept, is designed to provide insight into citizens’ expectations as this information is exceptionally important to the uptake of e-government services.

Citizen-centric e-government acts more as a transformation tool which provides new government models based on citizen-focused feedback (Schelin, 2003). It is argued by some scholars that for e-government capabilities to be fully realised, government must fully transform from agency-centric to citizen-centric (see Figure 1).

Instead of starting out by asking what services government agencies can provide, governments must start with what the citizens really need. In other words, there has to be a distinct shift from an "agency centric" model to a "citizen centric" model (Yong, 2004).

![Figure 1: A shift from an “agency centric” model to a “citizen centric” model (Yong, 2004)](image)

Citizen-centric e-government services are designed to deliver increasingly cost-effective, personalised and relevant services to citizens, but also serve to enhance the democratic relationship and build better democratic dialogue between citizens and their government, which then enhances the practice of citizenship within (cc:eGov, 2007).

The citizen-centred approach advocates the provision of citizen-oriented services, that is, services that meets the citizens’ demands and expectations. In other words, governments will provide services and resources custom-made to the actual service and resource needs of the citizens, including government employees and others (Bertot et al., 2008; Jin-fu and Duo, 2009). A high quality of government service delivery systems implies that governments will gain economies of scale, reduce costs, and offer technology-enabled user services. Citizen-centred service is viewed as the ideal manifestation of e-government as it demands information integration across department lines, government units, and even organisations across various sectors (Chen, 2010). Having said that, citizens themselves are not required to know the structure of government and its departments; rather, the government must link its various departments one to another to increase both the efficiency and effectiveness of government services for citizens (Chen, 2010).

The efficiency of the service is facilitated through citizen utilisation and the public value of its effectiveness. In the process of e-governance, efficiency is demonstrated by cost benefits, whereas effectiveness is a result of efficient processes to construct service portfolios that offer individual and public value. To manage the transformation of efficiency into
effectiveness requires organisational behaviour and proper management of relationships with citizens (cc:eGov, 2007). However, the challenges remain for the government in question to properly investigate and understand the needs and expectations of its citizens. Adoption and use of new services is still rather limited in most countries, particularly in the developing world (Deursen et al., 2006; Van Dijk et al., 2008; Kunstelj et al., 2009; Bertot and Jaeger 2008; Ebbers et al., 2008) and require some stimulation to provoke greater uptake (European Commission, 2007). Low uptake becomes problematic as greater efficiency and returns on investment are only possible with a widespread use of the e-government services (Norris and Moon 2005; Jaeger, 2003). Up until this point, e-government services have primarily been guided by supply-side factors (Bertot and Jaeger, 2006; Reddick, 2005; Kunstelj et al., 2009). Governments are only starting to develop their portfolio of services by creating online services (van Dijk et al., 2008; Lee-Kelley and Kolsaker, 2004) and mainly, still, doing so without any consideration of the demand side.

Another issue is technology. Governments often consider the technological possibilities rather than the citizens’ (users’) needs in determining the design of government online services. Much more attention is given to technology than to the real needs and expectations of citizens (Bertot and Jaeger, 2008; van Dijk et al., 2008; Ebbers et al., 2008; IPTS, 2004; Pieterson and Ebbers, 2008; Reddick, 2005). For effective and efficient public services, understanding of citizens’ needs, seeking to discover and meet their expectations, is essential. These can only be determined through the evaluation of service effectiveness, where the objective of government is not technological, not self-serving, but rather to meet the practical expectations of delivering efficient and effective services that meet the social expectations of the countries’ citizen, and that increase citizen engagement and government literacy. To get to that point, evaluation of e-government service effectiveness through a citizen-centred lens is absolutely essential (Jaeger and Bertot, 2010).

Thus citizen-centric e-government service evaluation approaches are of great significance, and particularly so in developing countries, as they still lag behind already developed countries with more sophisticated technologies and more connected citizenry. It helps to know the needs and expectations of the citizens who are actually using e-government services to increase engagement of citizens in government operations. With today’s levels of ICT penetration, where new innovations occur in rapid succession (Verdegem and Verleye, 2009), more consideration into the investigation of the citizens’ perspective towards e-government services is desperately needed.

3.2 E-Government Evaluation Approaches

In the broad ICT for development, literature questions have prevailed as to whether current evaluation paradigms are appropriate (Gomez and Pather, 2012). From an e-Government perspective, evaluation has been reported by a number of prior researchers as being difficult, complex and vastly underrated (Jones et al., 2007). Despite this difficulty, several researchers and practitioners of e-governments have attempted to evaluate e-government services using a variety of approaches. Most of the evaluation approaches targeted very specific aspects of e-government initiatives. The existence of a variety of models for evaluating e-government is evidence of this specificity (Osaman et al., 2011).

An analysis of literature on various evaluation models included that of Coursey and Norris (2008) who attempted to examine different e-government models to discern whether or not they are accurate and useful for understanding the actual development of e-governments. Their results indicate that existing models are not accurately describing the development of e-government.
Other e-government evaluation attempts include the research of Baum and Maio (2000), Hiller and France (2001), Layne and Lee (2001), Ronaghan (2001), and Wescott (2001), which intended to learn about and predict the growth of e-government.

In addition, Esteves and Joseph (2008) claimed that the evaluation of e-government initiatives is a significant topic of research. However, lack of formal methods for monitoring and evaluating e-government initiatives leads to a significant slowdown of country-level e-government development, particularly in developing countries (Kunstelj and Vintar, 2004, p. 131). Throughout the literature, it is indicated that there are a number of studies which attempted to evaluate e-government services. However, very few were conducted in developing countries. Thus, it is critical to establish a clear and helpful means for evaluating e-government services in the context of developing countries in order to understand e-government in those countries and ensure its development in the most citizen-friendly ways. Since there are vast differences among cultures, structures, social norms and economics between developing countries and developed countries, the dimensions for evaluation are necessarily going to be different.

3.3 E-Government Evaluation Approaches Which Incorporate a Citizen Focus

Citizen’s needs and expectations for social changes will remain the driver for better government service delivery through the use of ICTs. Therefore, many governments have embarked on plans for delivery of citizen-centric e-government services, both to understand the needs and expectations of citizens and to provide the services demanded.

With citizen-centric e-government service as an area of concern for government, (Chen 2010) the reviewing of e-government evaluation approaches that are citizen-based is clearly worthwhile, since these provide a clearer understanding of what the citizens’ expectations are. Table 2 below lists several citizen-based evaluation approaches that have been developed thus far.

<table>
<thead>
<tr>
<th>Context</th>
<th>Finding/Model/Dimensions</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web-based e-government</td>
<td>Developed a theory model for evaluating the performance of e-government services. The model serves also to understand the success or failure of e-government portals in serving citizens.</td>
<td>Wang, et al., (2005)</td>
</tr>
<tr>
<td>services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government website</td>
<td>Evaluation Instrument: Security and privacy; Usability; Content; Services; Citizen participation; and Features.</td>
<td>Middleton (2007)</td>
</tr>
<tr>
<td></td>
<td>Develop tool to evaluate website.</td>
<td>Eschenfelder and Miller (2007)</td>
</tr>
<tr>
<td></td>
<td>Proposes a socio-technical toolkit for evaluation of e-government websites that address issues of openness and trust in e-government systems.</td>
<td>Eschenfelder and Miller (2005)</td>
</tr>
<tr>
<td></td>
<td>Develop an Instrument (multi-item) known as e-GovSqual for evaluation of website service. Website design; Navigation; Communication; Site aesthetics; Information quality; and Security.</td>
<td>Kaisara and Pather (2011)</td>
</tr>
<tr>
<td>E-services</td>
<td>Reference Process Model (RPM)</td>
<td>Tsohou et al. (2012)</td>
</tr>
<tr>
<td></td>
<td>Four Dimensional Quality Framework (C2ST): Coordination, Control, Sharing, Transparency.</td>
<td>Corradini et al. (2009)</td>
</tr>
<tr>
<td></td>
<td>MAQM: to evaluate the portal and e-service quality by users in an adaptive manner. MAQM (Model for Adaptive Quality Measurement) comprises different ontologies including concepts regarding quality aspects, questions and questionnaires, portal characteristics and problems encountered by users while using the portal.</td>
<td>Magoutas and Mentzas (2009)  / Magoutas et al. (2010)</td>
</tr>
</tbody>
</table>
3.4 Summary

The literature underscores the point of departure of this study viz. that there is a lack of perspective in the broader e-government literature on how to evaluate e-government information system effectiveness in developing countries. The importance of the evaluation

<table>
<thead>
<tr>
<th>Context</th>
<th>Finding/Model/Dimensions</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-government services</td>
<td>Proposes an evaluation model based on AHP technique. Assess in an objective manner the change in service quality as a result of e-Government project implementation.</td>
<td>Ray and Rao (2004)</td>
</tr>
<tr>
<td></td>
<td>Proposes holistic (COBRAS) evaluation Framework; Cost; Opportunity, Benefit; and Risk, Analysis for satisfaction.</td>
<td>Osaman et al. (2011)</td>
</tr>
<tr>
<td></td>
<td>Develops a framework for evaluation-led design of e-projects that complements traditional approaches to IS evaluation. The framework is based upon Moor’s concept of public value.</td>
<td>Grimsley and Meehan (2007)</td>
</tr>
<tr>
<td></td>
<td>Develop e-GovQual multi-item scale evaluating e-government service quality, using four factors: Reliability; Efficiency; Citizen support; and Trust.</td>
<td>Papadomichelaki and Mentzas (2012)</td>
</tr>
<tr>
<td></td>
<td>g-CIS: Customer Satisfaction Index for E-government (g-CSI) model is an integrated model of: National Customer Satisfaction Index (NCSI) in Korea and American Customer Satisfaction Index (ACSI). Based on this model Perceived Quality (Information, Process, Customer, Service, Budget Execution, and Management Innovation) and User Expectation will lead to user satisfaction, which is the moderator for user complaints and other outcomes such as: trust; and reuse</td>
<td>Kim et al. (2005)</td>
</tr>
<tr>
<td>Public value of e-government</td>
<td>Proposes an evaluation framework for evaluating e-government public value. Framework comprises with four dimensions; Delivery of public service; Achievement of outcomes; Development of trust; and Effectiveness of public organizations.</td>
<td>Karunasena and Deng (2009)</td>
</tr>
<tr>
<td>Evaluating multi-dimensional web-based e-government</td>
<td>Multi-Dimensional Web-based e-government evaluation strategy in four major classes: Usability; User feedback; Usage data; and Web and Internet performance data</td>
<td>Wood et al. (2003)</td>
</tr>
<tr>
<td>E-government initiatives</td>
<td>Devises EGOVSAT model to evaluate citizen’s satisfaction with e-government services. The model comprises with three factors: Utility; Efficiency; Customisation.</td>
<td>Horan and Abhichandani (2006)</td>
</tr>
<tr>
<td>Government services</td>
<td>Expectancy-Disconfirmation Model (EDM): Party Identification (Party ID); Political Ideology; Trust; and Expectations.</td>
<td>Motgeson (2012)</td>
</tr>
</tbody>
</table>

An analysis of the studies in Table 2 indicates that the studies have mainly targeted only one particular aspect of e-Government in a certain context. For example, the research undertaken by Wang et al., (2005) focused only on how citizens can get information, while Motgeson’s (2012) study was mainly focused on the citizens’ expectations and levels of satisfaction with the government service. These studies can be considered as helpful benchmarks, even though they were conducted in developed countries.
of e-government has also repeatedly been bypassed by the literature. This is substantiated by Kamatula (2012) and Sharif et al., (2010) who posited that e-government services are rarely evaluated; hence, many have advocated the need for better monitoring and thorough evaluation of e-government projects. We do recognise that the evaluation of e-government services is an important and complex organisational process. The traditional approach to e-government systems evaluation has limited relevance to the role of ICT in driving the Information Society agenda. While many studies in this arena have previously concentrated on the financial aspects of e-government systems, this is just one approach to evaluating the effectiveness of e-government systems and is insufficient for the needs of this project. There are many success measures identified by studies in IS effectiveness. As a consequence of this diversity of options, it is not possible to frame appropriate effectiveness metrics based solely on a literature review. The same applies to this study: the identified problem cannot be effectively answered using effectiveness metrics based solely on the existing body of knowledge.

3.5 A Conceptual Framework for E-government Evaluation

Key elements inherent in the various models and frameworks, and the literature at large, point to the underlying importance of understanding user expectations of e-government services. At the same time these expectations of service will have to be underpinned by the necessary facilitating conditions which have an effect on the user (or citizens) intention to use and reuse (continue use) the service. Through literature analysis, the following elements were identified as being important in undertaking evaluation of the effectiveness of e-government.

<table>
<thead>
<tr>
<th>E-government Service Effectiveness Dimensions</th>
<th>Description</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service expectations</td>
<td>Service expectations (the term expectations is derived from the service quality literature) is the product of performance expectations and use behaviour of e-government services.</td>
<td>Venkatesh et al., (2003); Parasuraman et al., (1988)</td>
</tr>
<tr>
<td>Skill or expected effort to use e-government system</td>
<td>Measures the degree to which an individual perceives that an e-government system will be easy to use.</td>
<td>Venkatesh et al., (2003)</td>
</tr>
<tr>
<td>Facilitating conditions</td>
<td>Product of organisational culture, legal environment infrastructure and initiatives towards using e-government services.</td>
<td></td>
</tr>
<tr>
<td>E-government legal environment</td>
<td>Regulations and policies pertaining to the use of e-government services.</td>
<td></td>
</tr>
</tbody>
</table>

2 “Expectation” is desire or want of citizen, that is what they feel the government (service provider) should offer

The Electronic Journal of Information Systems in Developing Countries
www.ejisdc.org
The following table outlines the dimensions of e-government service effectiveness:

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Description</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructure for e-government</td>
<td>ICT-related infrastructure that consists of multichannel services that must be provided to related stakeholders for accessing the e-government services.</td>
<td>Venkatesh et al., (2003); Quirchmayr et al., (2003)</td>
</tr>
<tr>
<td>Intention to use</td>
<td>Intention is an immediate predictor of behaviour.</td>
<td>Verhagen et al., (2006); Venkatesh et al., (2003); Ajzen, (1991); Davis, (1989); DeLone and McLean (2003)</td>
</tr>
<tr>
<td>Use</td>
<td>Use of e-government services depicts a citizen’s behaviour. It is determined by an attitudinal dimension viz. Intention to use a service. Use thus affects the degree of User Satisfaction.</td>
<td>DeLone and McLean (2003); Saberwal et al., (2004); Bokhari (2005)</td>
</tr>
<tr>
<td>Citizen satisfaction</td>
<td>Citizen satisfaction may be defined as the extent to which citizens believe the services available meet their requirements (service-need fit). It is a means of measuring citizens’ options of the e-government service.</td>
<td>DeLone and McLean (2003); Ives and Olson (1984)</td>
</tr>
</tbody>
</table>

The foregoing resulted in the formulation of the following model:

![Figure 2: Study Conceptual Framework](image)

The framework depicted in Figure 2 serves to provide a foundation for the evaluation of user satisfaction with the service encounter. Use and user satisfaction are widely accepted and used as surrogate measures of IS success (Bokhari, 2005). In an e-government context these two dimensions are conceptually closely related because it’s assumed that to be satisfied, one should, as a minimum, use the service. In this proposed framework, citizen satisfaction with e-government services is expected to provide an indication of e-government service effectiveness. Hence, it is anticipated that strengthening of service expectations and
the broadening of facilitating conditions for e-government systems will favour the effectiveness of e-government service in Tanzania.

In terms of the proposed model: the performance of e-government systems, the skills or expected effort required to utilise e-government systems, and the benefits of using an e-government system collectively determine citizens’ service expectations. This in turn is a determinant of citizens’ intention to use and as a result, actual use and consequently citizen satisfaction. Parallel to this, e-government’s legal environment, infrastructure for e-government systems and organisational efforts will determine the facilitating conditions, further determinants of a citizen’s intention to use the service, use and eventually citizen satisfaction.

The conceptual model suggests how citizen satisfaction of e-government service in Tanzania would be determined. This will be through matching Service Expectation from the citizen side with Facilitating Conditions from the government side, which enables the use of the services from the government.

4. Research Approach

The assumption behind the investigation in this research is that the application of technology in an e-government service context is a social science construct. It is an embedded system that represents both its technical form and the process to which it is applied (Orlikowski and Lacono, 2001). Understanding the interaction between the social science and technical influences of the usage of e-government (ICT) (as interpreted by the researcher from the context of citizens’ perspectives and government official’s perspectives) thus is a central feature of this investigation. The interpretive paradigm was thus an ideal underpinning for the investigation as according to Walsham (1993) it aims at generating an understanding of the context of IS, whereby IS influences and is influenced by the context.

The adoption of the interpretive paradigm implied a selection of qualitative methods for conducting research. Qualitative research defines phenomena in words instead of numbers, and has as its centre the goal of developing an understanding of human systems (Corbin and Strauss, 1998; Hull, 1997; Saveny and Robinson, 2004; Wiersma, 2000). It includes an investigation process by which the researcher gradually makes sense of a social phenomenon by constructing, comparing, replicating, categorising and classifying the objects of study (Miles and Huberman, 1994). Multiple qualitative data gathering techniques were thus employed, and these included interviews and focus groups.

4.1 Research Methods

Based on the nature and aim of this research, the broader group of study informants which were initially selected, are defined as follows. The two groups of research populations were 1) government officials who were knowledgeable of e-government services and had in-depth understanding of the government business operations; and 2) citizens who were users of the e-government services. Based on the above, the following specific categories of study informants were identified:

- managers or directors of ICT or IT who oversee operations and have either direct or indirect responsibility for the e-government services;
- IS or IT managers involved in the development, maintenance and support of e-government services in Tanzania; and
- citizens who used e-government services, grouped according to the service used.

This group of informants was subsequently extended to include four consultants who had experience with e-government. As compared with private sector service experience, these consultants presented a broader range of e-government experience, assisting the researcher to more fully understand e-government and e-government services in Tanzania. Table 4.1
provides an overview of the informants who participated in the study.

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of respondents</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOVERNMENT OFFICIALS:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Directors of ICT</td>
<td>14</td>
<td>12.7</td>
</tr>
<tr>
<td>IS/IT Managers</td>
<td>13</td>
<td>11.8</td>
</tr>
<tr>
<td>IS/IT Officers</td>
<td>4</td>
<td>3.6</td>
</tr>
<tr>
<td>E-GOVERNMENT USERS</td>
<td>79</td>
<td>71.9</td>
</tr>
<tr>
<td>Total Participants</td>
<td>110</td>
<td>100</td>
</tr>
</tbody>
</table>

Access was gained to the government of Tanzania. Given the research aim three specific services that are being provided by the government electronically and have been run for at least one full year were considered: 1) the Centralised Admission Service (CAS), a service provided by the Tanzania Commissions for Universities (TCU); 2) Customs Systems, run by the Tanzania Revenue Authority (TRA); and 3) the Land Management Information System service, offered by the Ministry of Land Management and Human Settlements.

### 4.1.1 Interviews: Government Officials

In-depth interviews were targeted, and focused directly on the subject: e-government services. These ‘conversations’ were a very useful technique to collect large amounts of contextual data which provided for immediate follow-up and clarification. Further, the data was collected in a natural setting, facilitating a discovery of the nuances of a culture (Marshall and Rossman, 1999; Yin, 2004).

Given the multidisciplinary nature of the study, it was very important to have a degree of systematisation of questioning (Marshall and Rossman, 1999). The interviews were conducted using the conceptual framework (Figure 2) as a basis to formulate the interview guide. The conceptual framework depicted the key issues underpinning the phenomenon identified within the research problem domain and also synthesised the relevant literature in the context of this study. This consequently provided a set of topics to guide the interviews. However, because of the in-depth nature of the interviews, the respondents had the opportunity to expand and provide detailed explanations where they felt it necessary. The elements of the conceptual framework simply served as the basis for framing initial questions, and then for further probing questions. This helped in managing and directing the interviews to the relevant issues that concern this study. According to Krauss et al., (2009 p. 248) “the researcher must, through his or her deep understanding of the topic, be able to pose questions that will allow both the researcher and the respondent to explore the topic together”. All the interviews were conducted at the interviewees’ premises so as to maximise convenience for the interviewees.

The time allotted for each interview was approximately 60 minutes although in some cases the interview took longer. In all interviews, the researcher initiated the conversations by introducing herself, followed by a brief explanation of the research aim, followed in turn by the asking of questions (Appendix A). All respondents in all cases cooperated in providing sufficiently detailed answers to each question. All the interviews were recorded, transcribed and prepared for analysis.

### 4.1.2 Focus Groups: Citizens

Focus group discussions were conducted with citizens who were users of the Tanzanian e-government services. Participants of the focus groups were drawn from the users (citizens) of each selected service: Central Student Admission services (CAS), Customs Services, and Land Management Information Services (LMIS). As shown in Table 4.2, 96 users (citizens)
of three selected services were chosen. Focus group discussion questions were developed based on the conceptual framework and at the beginning of each group, the participants were advised of the topic aim and the information required from them. Participants were divided into smaller discussion groups (of 4-6), and given between 30-40 minutes for discussion. A focus group guide was also provided to each group to facilitate discussion. A joint group discussion was then convened, and each group was asked to present their observations for discussion. This approach not only allowed participants to actively participate in the discussion, but it also facilitated thorough discussion and constant probing. The average duration of the focus group discussions were 120 minutes. A more detailed description of focus groups is illustrated in Table 4.2 below. These focus groups were conducted during the first quarter of 2013.

<table>
<thead>
<tr>
<th>Service</th>
<th>Groups</th>
<th>No. Users</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Student Admission Service (CAS)</td>
<td>3</td>
<td>25</td>
<td>26</td>
</tr>
<tr>
<td>Custom Services</td>
<td>5</td>
<td>32</td>
<td>33.3</td>
</tr>
<tr>
<td>Land Management System (LMIS)</td>
<td>4</td>
<td>21</td>
<td>21.9</td>
</tr>
<tr>
<td>Mixed Users</td>
<td>2</td>
<td>18</td>
<td>18.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>14</strong></td>
<td><strong>96</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

4.1.3 Documentation

The documents collected for this research included the following: government policy and procedure documents, e-government strategy plans, annual reports, e-government project reports, and several other publications related to the phenomenon under study. These were collected to validate the respondents’ perceptions. In addition, internal reports, including budget reports and minutes from government officials, as well as government web-sites were studied to complement interviews and focus group data.

4.2 Data Analysis

Data analysis was conducted as follows:
- Interview and field notes were transcribed;
- Transcripts were compared with field notes, relevant information was drawn from government websites and any documentation provided by the respondents;
- Transcripts were verified for accuracy by replaying the recording and comparing it with the verbal interview;
- The transcripts were subjected to qualitative coding.

Coding of the data was undertaken according to three coding procedures, advocated by Strauss and Corbin (1990), viz. Open coding, Axial coding and Selective coding. The coding process was facilitated using Qualitative Content Analysis software (Bytheway, 2014). The initial framework for e-government evaluation (Figure 2) guided the coding process. The software was used for management of data and to code, analyse and relate emerging themes. This software provided a flexible way of comparing concepts and their relationships in the process of determining the dimensions necessary to develop an evaluation framework. Importantly, it allowed the deconstruction of transcripts into chunks (i.e. word segments) for analysis of text, then into denotata, the abstract ideas that link to a category or meaning unit.

5. Findings

The conceptual framework was used to organise the outcomes of the qualitative analysis to help in understanding the various dimensions, their inter-relationships and their influences on the citizens, for the purpose of utilising government electronic services and their satisfaction therewith. The outcomes are summarised in
Table 6. The table presents the two key dimensions under which the findings were organised: Citizens’ Expectations (citizen-related dimensions) and Facilitating Conditions (government-related dimensions). The dimensions are described to the extent to which each dimension was determined to be influential on e-government success.

<table>
<thead>
<tr>
<th>Table 6: Dimensions for E-Government Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dimension</strong></td>
</tr>
<tr>
<td><strong>Citizens’ Expectations</strong></td>
</tr>
<tr>
<td>Performance</td>
</tr>
<tr>
<td>Service quality</td>
</tr>
<tr>
<td>Interoperability</td>
</tr>
<tr>
<td>Ease of use</td>
</tr>
<tr>
<td>Awareness of existing system</td>
</tr>
<tr>
<td>Inadequate expertise to manage e-government</td>
</tr>
<tr>
<td>Trust</td>
</tr>
<tr>
<td>Benefits</td>
</tr>
<tr>
<td><strong>Facilitating Conditions</strong></td>
</tr>
<tr>
<td>Infrastructure</td>
</tr>
<tr>
<td>Access limitation</td>
</tr>
<tr>
<td>Dimension</td>
</tr>
<tr>
<td>---------------------------------</td>
</tr>
<tr>
<td>Multichannel delivery of e-government services</td>
</tr>
<tr>
<td>Coordination</td>
</tr>
<tr>
<td>Commitments of management</td>
</tr>
<tr>
<td>Government process change towards a citizen-centric mode</td>
</tr>
<tr>
<td>Legal and policy</td>
</tr>
<tr>
<td>Funding</td>
</tr>
</tbody>
</table>

5.1 The E-government Citizen Satisfaction Framework (ECSF)

![E-government Citizen Satisfaction Framework (ECSF)](image)

Figure 3: E-government Citizen Satisfaction Framework (ECSF)
The development of the E-government Citizen Satisfaction Framework (ECSF) is rooted in the literature review, the consequent conceptual framework, the empirical data, and the resultant dimensions identified in Table 6.

Based on the ECSF it is proposed that e-Government services can be evaluated in terms of two key components or broad dimensions: Citizens’ Expectations and Facilitating Conditions. The latter are direct determinants of citizens’ intention to use. E-government service use should flourish if citizens’ expectations, facilitating conditions, intention to use and system use, are appropriately managed, as this will result in overall user satisfaction. From the findings, out of two key components, five key dimensions of e-government effectiveness were established, elaborated upon below.

5.2 Citizens’ Expectations

Citizens have high expectations of services that are being offered by government, as they believe these will aid in meeting their needs and improving their quality of life. They expect that with the government offering services electronically, economic benefits will be derived, so they anticipate savings in money and time, allowing them to attend to other productive activities. The findings suggest that while e-government services in Tanzania seem to be progressing, their capabilities with regard to electronic service delivery are lagging far behind citizens’ expectations. This is supported by MORI (2002) and Van Ryzin (2004) who indicate that in respect of the benefits of using e-services, expectations of users serve as a comparative indicator to measure service performance at the actual time of use. If the experience surpasses the expectations that users have of the services, then there will be high user satisfaction. These are dynamics that influence utilisation of e-government services. Hence, to encourage citizens to utilise e-government services, governments need to understand the citizens’ needs and expectations and meet these expectations by providing e-services which, at a minimum, match their expectations, but should aim to exceed them.

Hence, citizen expectations are a key effectiveness dimension that has direct bearing on citizens’ intention to use, actual use, and eventual satisfaction with, e-government services. The citizens’ expectation dimension is comprised of two sub-dimensions: functionality of e-government services and motivation to use e-government services.

Functionality of e-government services is defined as the extent to which e-government services are expected, by citizens, to perform. Thus it is measured by the performance of the services, which signifies how quickly a service request can be completed. Citizens tend to base expectations of e-government on their experiences in the business environment, which is advantageous, given that entities in this sector have been early adopters of electronic channels. As with business, citizens expect to carry out all transactions or to access all government services at a single access point. This is because of the high cost of accessing the Internet. If all services can be accessed from one access point, people will spend less time on the Internet and hence the cost will be reduced. Therefore, there is an expectation of interoperability. All services from different agencies or departments should be harmonised such that they work seamlessly with each other, so that it is quick and easy for citizens to access several services, if not all, at a single point with minimal operations required.

Another component that made up citizens’ expectations is service. Service is related to various aspects that explain the extent to which citizens are confidently utilising government ICT-based services. The issues identified in respect to service include the availability of the services and the ease of accessing the e-service at any point in time. The expectations regarding services also influence the utilisation of e-government.

Motivation to use e-government services is the second sub-dimension of citizens’ expectations. It has a direct impact on a citizen’s intention to use e-government services and
consequently, user satisfaction. Motivation is a precursor to citizens’ utilisation of e-government services. Citizens will want to utilise the e-government service because it is perceived that they will benefit or achieve value outcomes. Thus, this study defines motivation to use the service as a perception of citizens that e-government services will result in attaining value outcomes, such as improved job performance, better pay or even promotion. Motivation to use e-services encompasses trust in e-government, ease of use, perceived benefit and adequate expertise to manage e-government (refer to Table for detailed definitions of each).

5.3 Facilitating Conditions

Facilitating conditions encompass the combination of factors, including environmental issues that enable the use of e-government services to be accessible and easy to accomplish. This is aligned with the description by Venkatesh et al., (2003), which is the degree to which citizens expect that government and technical infrastructure is there to enable the use of the system. Facilitating conditions are defined as the extent to which enabling infrastructure and government preparedness support the use of e-government services. This comprises two sub-dimensions. First, enabling infrastructure is the ICT infrastructure, including Internet penetration, multichannel delivery and accessibility. All these jointly support the use of e-government services and directly influence intention to use, use and reuse, and consequently, user satisfaction. Secondly, government preparedness is the extent to which the government is ready to serve its constituents in this digital era. It explains the attitudes of citizens with regards to the preparedness of government to deliver services electronically. With rapid technological advancements becoming a driving force of change, governments must be prepared to deliver services to citizens and other stakeholders electronically. Citizens are more likely to utilise the e-government services if they are convinced that the service provider (government) is ready and able to serve them electronically. This is considered a direct influence on intention to use, because it includes the administrative buy-in of top management, the extent to which the service is coordinated on the government side, as well as the adequacy of processes, policies, and standards.

5.4 Intention to Use E-Government Service

The foregoing four key dimensions, when viewed holistically, provide a basis by which the success of e-government may be assessed through citizens’ perspectives. These four dimensions jointly determine citizens’ intentions to use and use e-government services. Citizens’ intention to use e-government systems is one of the new emerging behaviours, particularly in developing countries.

The advance of electronic service delivery in the private sector could be among the motivating factors. Recently, there has been an increase in mobile technology penetration, especially in Africa. M-Commerce, for example, is gaining prominence, given the constantly descending device costs. The private sector has already been innovating and taking advantage of the boom in mobile communication infrastructure in developing countries to deliver services. M-Pesa, for example, is provided by telecom companies like Vodacom, to send and receive money through mobile phones. Such trends are likely predictors of future citizen behaviour. This dimension has been applied in diverse contexts such as technology acceptance to measure users’ behaviour towards the system. Intention to use represents the desire to utilise e-government services. Hence intention to use e-government services is a good indicator of future citizens’ use of e-government service, ultimately leading to user satisfaction.
5.5 Use of E-Government Service

The actual use of an e-government system, usually via a web interface, reflects a particular behaviour on the part of citizens. Intention to use an e-Government system is an antecedent to system use. Thus use of e-government service is another important dimension of effectiveness for e-government services. Citizens in the main use the online service in their private capacity. Government, as a service provider, has to learn to attract and retract the citizens by keeping them interested with e-government service. This can be done through targeting services for different citizens groups and keeping track of their preferences. Hence, the attraction and retraction of the citizen leads to continued use of e-government services ultimately leading to citizen satisfaction. It is important to note that use and user satisfaction are widely considered to be interlinked (Bakhori, 2005).

5.6 Citizen Satisfaction

Having discussed all identified components for e-government service success, the citizen satisfaction dimension represents the overall citizen satisfaction with e-government use. User satisfaction is a surrogate measure of e-government service effectiveness. Based on the preceding dimensions of the proposed model, use of e-government services should result if citizens’ expectations, facilitating conditions, and intention to use are all appropriately managed. To increase the use of e-government services in any country, government should strive for a bottom-up user-centered design approach in the development of G2C e-government services. This will effectively ensure that services meet the needs and expectations of citizens. This in turn will influence citizens’ desire to use government electronic services, ultimately resulting in user satisfaction.

5.7 Application of the E-government Citizen Satisfaction Framework (ECSF)

Given the current prevalence of advances in telecommunications and associated networks, there are probably very few government agencies which do not offer any type of electronic service whatsoever. Whilst many agencies have yet to offer a complete array of electronic services, most have been offering at least some kind of online service, even if it is just static websites with information made available. What is clear, however, is that an increasing number of governments are committed to rolling out even more interactive e-services, and thus evaluation of these, especially from the customer or citizen perspective, is vital, as it helps the relevant government agency to assess its progress in delivery.

The ECSF in the first instance provides a framework which provides a coherent understanding of how governments may achieve effectiveness in delivering e-services to its citizens. Given the underlying research objectives which informed the development of the ECSF, governments should be guided by the multi-dimensions of the framework to guide both planning, implementation and ongoing evaluation of the e-government service.

Primarily the objective of the E-government Citizen Satisfaction Framework (ECSF) is to provide a framework for governments to assess the effectiveness of their e-government services. The ECSF is a generic framework that can potentially be extended to multiple instruments that may then be used to evaluate e-government effectiveness through a citizen-centric perspective. The ECSF has been designed in such a way that practitioners are at liberty to select individual dimensions and apply these for a more detailed assessment of their e-government environment. As such, it provides a basic framework through the citizen expectation and facilitating conditions dimensions.

The framework, when necessary, can be adapted to fit the characteristics of a particular aspect of e-government. However, it is important to note that the value of the ECSF is to provide a holistic perspective of those dimensions of e-government which, when considered together, provide an integrated view of success.
6. **CONCLUSION**

A comprehensive literature review of prior work confirmed a need to develop a framework for evaluating e-Government effectiveness. The research, based on analysis of its empirical data, contributes to the field of e-government by presenting a framework for assessing the effectiveness of e-government service success based on citizens’ perspectives. The framework encompasses citizens’ expectations, which accommodate the functionality and the motivation to utilise the e-government services, as well as facilitating conditions, which encompass both enabling infrastructure and government preparedness.

This is a holistic, complete and multi-perspective approach to assess the effectiveness of e-government and its application in this empirical study of evaluating e-government service effectiveness in Tanzania, offering a degree of confidence in its applicability and practicality as a framework to understand the potential impact of e-government services. E-government researchers using this framework for assessing e-government effectiveness will facilitate a more integrated analysis of this complicated phenomenon and avoid partial and inadequate understandings that arise from studies focusing on only a specific aspect or dimension.

To the current body of knowledge, this research adds not only the synthesis of dimensions for e-government effectiveness from the citizens’ perspectives but also introduces a holistic perspective for assessing e-government success.

The outcomes of this research have imperative practical implication for implementing e-government services in Tanzania. The e-government citizen satisfaction framework (ECSF) developed in this research will enable government to conduct evaluations of e-government service in the country and establish an overarching strategy for monitoring and evaluating e-government systems.

To the arena of e-government, the research has contributed a framework that bridges the gap between the government and citizens who are the users of the e-government services in Tanzania. Closing this gap will widen the scope of e-government systems evaluation to include multi-dimensions which embody citizens’ perspectives. To managers and project sponsors, this framework contributed a foundation to build on by considering citizens’ expectations and facilitating conditions when conducting e-government project evaluation.

Finally, given that this research was conducted in the context of developing countries, the approach posited by this study serves as a template for e-government evaluation in this context. Further, the approach taken in this study exposes ways to benefit from evaluations of e-government services for success and to motivate utilisation of services by citizens. Furthermore, it provides a basis for obtaining efficiency and returns on investment of e-government systems.

7. **REFERENCES**


The Electronic Journal of Information Systems in Developing Countries

www.ejisdc.org


APPENDIX: INTERVIEW QUESTIONS

A. Interview questions to government executives/ ICT managers in departments that deliver online services

| Q1 | What is your involvement in e-government? |
| Q2 | Would you please tell me why this department opted for online services? |
| Q3 | What progress has been made to date in the delivery of online services in your organisation? |
| Q4 | Are citizens’ requirements properly embodied in e-government initiatives in Tanzania? Explain |
| Q5 | What do you believe are the necessary conditions to ensure successful e-government? |
| Q6 | What do you understand by service quality management? How is this relevant to the online service your department supports? |
| Q7 | From the point of view of your organisation would you describe the (name of service provided online) a success? |
| Q8 | From your own personal point of view would you regard (name organisations) online service a success? |
| Q9 | How should government measure the success of its e-government programmes? 9.1 Is there a single measure of success of e-government programmes? |
| Q10 | In your view, how do citizens perceive this government department? |
| Q11 | How does your department provide for (citizens) to provide their comments, views, or needs for the services? |
| Q.12 | What are the reasons why citizens use your online service? |
| Q.13 | Do you believe that citizens are satisfied with the online services you provide? Explain. |
| Q14 | What must the (organisation) do to sustain the quality of e-services? |
| Q15 | Are there specific aspects of the e-government programme which has not been discussed today – that you would like to discuss? |

B. Focus Groups: Citizens

Question One: “The Internet is becoming essential to every day life.”

- In your view how can the Internet be of benefit to you, you family and your community?

Question Two: “Our government has implemented a number of services which can be accessed via Internet”

- Describe the services you are aware of.
- What are your views about Government providing services via the Internet? Do you support this way of service delivery?

Question Three: Think about the times you have used an e-Government service

- Before you used the service:
  - What motivated you to use the service?
  - What did you expect from this experience?
- After you used the service:
  - What did you feel about the service you used?

Question Four: Compare your experience to an “ideal” situation

- What would you expect government to be doing differently?

Question Five

- Are there any benefits from using e-government services? What are they?
- Provide examples of how you, your family or community have benefited.

Question Six

Any thing else that we have not discussed today regarding e-Government in Tanzania – which you feel is important to share with the group?