User Participation Approach to Key Attributes of E-Government Implementation in Developing Countries: A Case of Tanzania

Sumaya, M. Kagoya[1] and Ulingeta O.L. Mbamba[2]

ABSTRACT

Many nations have adopted Information and Communication Technologies in a bid to involve citizens in electronic participation with its associated copious benefits mostly witnessed in developed countries. Despite the fact that innumerable scholars have explored numerous factors influencing e-government implementation, less have examined the influence of user-participation attributes and top management support in successful implementation of e-government in developing countries like Tanzania. Therefore, to bridge this knowledge gap, this study assessed key attributes for e-government implementation success in Tanzania from a user-participation perspective. Explicitly, it assessed e-government success using user-participation attributes, top management support, ICT infrastructure and IS attributes. Quantitative data congregated from top government technocrats in the Ministry of Finance e-government departments, were analyzed via Partial Least Squares Structural Equation Modeling. Findings revealed that user-attributes and top management support were significantly related to e-government implementation success and Information and Communication Technology Infrastructure-attributes and Information System-attributes were insignificant.

Key words: *User participation, Key Attributes, E-government Implementation, Developing Countries, Tanzania*

INTRODUCTION

E-government development has been reported as stimulating business process change, increasing internal efficiency of service delivery to reduce public spending, improving levels of information sharing and interoperation, improving innovation and competitiveness, enhancing social inclusion, greater transparency and accountability, greater proximity to citizens, and 24/7 e- service delivery (Schopf, 2020; UN E-Government Survey, 2018). E-government is a global trend, with many countries actively pursuing e-government strategies as it aids in e-project success via high-quality user interaction with the government (Patibandla & Sethi, 2018). E-government acts as one shop centre of e-services and deleting logs in the digital road (European e-Government Action Plan, 2016-2020) and reaping benefits jotted above, evident in MDCs leading in e-government implementation like Denmark, Singapore, Netherlands and Korea and Africa like Tanzania, Uganda are lip frogging (UN E-government survey, 2018).

E-government is an interesting term with no permanent definition but it simply refers to the utilization of ICTs by the government to deliver services to the citizens, business and government departments (United Nations, 2018). Similarly, United Nations (termed it as a government) defined e-government as a government that make use of ICT to alter its internal and external business

[1]Sumaya, M. Kagoya - Lecturer at Makerere University Business School–Uganda Corresponding author: thumakago@gmail.com/skagoya@mubs.ac.ug)
[2] Ulingeta O.L. Mbamba - Professor at the University of Dar es Salaam Business School-Tanzania
Business Management Review: Volume 24, Number 1, Pages 87-107, ISSN 0856-2253 (eISSN 2546-213X)

relationship (UNDESA, 2016). In this study, e-government refers to the ability of the nation to incorporate ICTs in its daily operational activities without interruptions throughout the year while dealing with citizens, businesses and government itself to reap the overwhelming benefits.

In democracies, citizens being the end-users are presumed to be important stakeholders in that they can participate either directly or indirectly through elected representatives in the formation, adoption and implementation of the laws and policies that affect them. User participation thus is a fundamental part of the e-government relationship in democracies (Li & Shang, 2020; Jacobs, 2014). In this study, user participation refers to users/citizens at the lower levels, having a maximum degree of power (or control) which guarantees them to participate directly and actively in e-government implementation. They should be in full charge of e-government implementation policy and managerial aspects, and be able to negotiate the conditions under which the government may change them, all, with aim of achieving successful implementation of e- government in Tanzania.

However, despite real-world advances in e-Government implementation, active user participation is lagging (Joseph, 2015; Bryson *et al.,* 2013; Kagoya, Gilbert, 2020). User participation in E-government in developing countries is seen as a means of successful e- government implementation, via proper use of user attributes, IS and ICT infrastructure attributes. It also aids to strengthen the performance of government and public administration for economic and social development in a given nation (Joseph, 2015, Kagoya *et al*., 2019). According to the literature reviewed, few studies have examined the key factors for successful e-government implementation in Developing Countries and scanty from the user participation point of view, and none considered top management support as a key exogenous variable in the Tanzanian context (by the time this study was conducted). This has not only created a knowledge gap in e-government implementation but also widened the digital divide, which has hindered the realization of the potential benefits (Raj *et al.,* 2020; Kagoya & Gilbert, 2020; ITU, 2014). This perhaps is due to the complexity of the technology involved, and ineffective public administration (Peter, 2016; Abdelghaffar & Magdy, 2012). Other challenges are; limited capacity, and poorly-trained personnel, inadequate top management support, constraints imposed by providers' capacity, and the limited uptake of e-government by citizens and their less active participation in e-government projects in the developing countries, Tanzania inclusive (Sichone & Mbamba, 2017; Nabafu & Maiga, 2012; Schuppan, 2009). More so, these challenges of digitization are often overlooked when it comes to e-government implementation (Mutula, 2013).

Despite user participation becoming a routine part of government policy-making, there is nonetheless a growing sense that most developing countries' governments are unresponsive or not representative of many segments of the public or perhaps even the majority (Jacobs, 2014). Racial minorities and the poor continue to feel disciplined by policies in which they are central stakeholders and which are superficially intended to empower them (Fording, Richard, Joe., & Sanford., 2011; Alexander, 2012; Moynihan *et al*., 2015). In this study, top management support was incorporated in user participation study for e-government implementation due to the key role it plays in e-government implementation projects and yet prior studies have ignored it (Muller & Skau, 2015, UNCTAD, 2013). In line with the above, Mihret and Yismaw (2007) echoed that "no matter the expertise and experience, working tools and staff an organization may have, without top management support, its key activities cannot be robust. On the contrary, in this study, top

management support refers to the assistance rendered by top leaders to enable the staff who are the end users to actively participate in e-projects for e-government implementation success.

This paper employed three theories; namely; stakeholder theory being the main one, UTAUT and IS success theory, where by each complemented the other in explaining the variables in this study. The stakeholder theory, being the primary theory of this study, is backed by Svendsen (1998) who contended that the case for a competitive edge as an outcome of effective stakeholder engagement: as paradoxical as it sounds, one way to succeed in a highly competitive globalised economy is to co-operate with users of the e-government project and in most case are the citizens. Barki and Hartwick (1994) suggest that mere user participation implies but not limited to: the behaviors, assignments, and activities that users or their representatives perform during the ISD process.

This study dealt with active participation in e-government projects, out of which, users can be motivated to accept and trust the systems while dealing electronically thus resulting in the successful implementation of e-projects (Venkatesh *et al*., 2012). The central claims for an integrated approach to stakeholder engagement, arguably Centre primarily on benefits to the organization essentially on the view that incorporating stakeholder views in decision-making processes, enhance organizational performance and commitment (Simmons, 2003; Bergmans, Elam, Kos, Polic, Simmons, Sundqvist & Walls, 2007). UTAUT and IS success theories supplemented the stakeholder theory since it not sufficient enough to explain all the variables especially the ICTI and IS- related variables which can be explained well respectively.

More so, many researchers over the globe such as Mensah and Adams (2020), Kagoya and Gilbert (2020), Joseph (2015), Elkadi (2013), Ziemba, Papaj and Zelazny (2013), Al-Naimat *et al*. (2013), as well as, Heeks (2006), undertook a number of empirical studies in regard to, but not limited to e-government theories, principles, and frameworks. Their studies mainly focused on macro level Government to Government (G2G) and paid little attention to micro-level (G2C), where user directly participate in government projects using ICT (e-participation) to get e-services (Alexander, 2012). Correspondingly, some authors reveal that, for successful implementation of e-government, user participation is one of the key success factors which must not be ignored (Mutula, 2013; Nabafu & Maiga, 2012, Wood-Harper *et al*,. 2004), hence, the need to reduce this gap by proposing a model for user participation in successful e-government implementation in Tanzania Therefore, this study aimed at examining the role of user participation in e-government implementation in Tanzania through the use of quantitative method and PLS SEM used for data analysis as it was suitable for this data given the small sample size and its prediction capabilities, among other benefits (Ringle *et al*., 2015; Hair *et al*., 2017).

LITERATURE REVIEW

Theoretical Literature

Stakeholder Theory

Researchers have defined the concept of stakeholder differently with their perspectives depending on different views of their roles. For instance, stakeholders have been defined as groups of constituents who have a legitimate claim on the firm (Hill & Jones, 1992), participants in corporate affairs (Ackoff, 1974), those that will be directly impacted by the decisions (Friends & Hickling, 1987), and those who hold a stake about the decisions made by the organization (Eden & van D H., 1993; Wagner, 1993).

It should be recalled that stakeholder theory the primary theory supporting user attributes and top management attributes as stakeholders in successful e-government implementation. It is in line with Mumford (1983), one of the early researchers in supporting the active involvement of end-users as a component of effective information systems development and implementation, using essentially the stakeholder concept in this domain. It has been suggested that end-users (citizens) in addition to managers are very crucial towards successful system implementation like e-government, hence, the reason why this study used stakeholder theory, which will help in establishing the role of user participation in successful e-government implementation in Tanzania.

IS Success Models

The IS success models (such as those of DeLone & McLean, 1992; 2003) seek to provide a deeper understanding of IS success by identifying the relationship among the six critical dimensions of success along which IS are commonly assessed. The IS success dimensions cover information quality, system quality, service quality, system usage intentions, user satisfaction, and net system benefits (Urbach & Müller, 2012; Delone & McLean, 2003, 2016). Researchers, such as Peter *et al*. (2008) use the model to understand these model's dimensions. The model for IS success is interpreted as follows: a system can be evaluated in terms of system, information and service quality; these features affect the subsequent use or intention to use and user satisfaction. By using the systems, users derive certain benefits. The net benefit will then influence user satisfaction and the further use (user participation) of the IS. Bharati and Chaudhury (2006) used the theory to study product customization on the web; Seen *et al*. (2007) evaluated IS acceptance and success and Chae (2007) examined the IT value. Other researchers who used the theory include Urbach *et al*. (2008) as well as Trkman and Trkman (2009).

UTAUT is remarked as a reflection of an individual's internal schema of beliefs (Brown *et al*., 2010). It has been cited in scientific papers and is considered one of the powerful theories in contemporary IS research. It was developed by Venkatesh, Morris, Davis and Davis (2003) who examined eight competing models of technology acceptance to formulate a unified model that mixes elements from the models. The models are: Theory of Reasoned Action (TRA), Technology Acceptance Model (TAM), motivation model, Theory of Planned Behavior (TPB), TAM/TPB combined PC utilization model, innovation diffusion theory and social cognitive theory. This theory (UTAUT) was developed to modify the TAM model and to provoke some of the limitations of using multiple models posed by researchers. UTAUT theorizes that an individual's behavioural intention to use technology, is influenced by performance expectancy, effort expectancy, social influence, and facilitating conditions (Carter & Weerakkody, 2008; Venkatesh *et al*., 2008; 2003). AlAwadhi and Moris (2008) used UTAUT to explore factors that determine the adoption of e-government services in Kuwait as one of the developing countries. Yang and Lee (2007) studied ICT adoption and they stress that critical factors of adoption differ from country to country. Abdelghaffar and Magdy (2012) are also among the proponents of the theory. ICT adoption forms the basis of user participation in e-government activities. Variables identified in the three theories (Stakeholders', UTAUT and IS Success) form basis in understanding the study under review because most of the study items were interpreted from the elements of these theories.

Empirical Literature

User participation is a term used synonymously with user involvement in information systems (Alarabiat *et al.,* 2021; Glomsås *et al.,* 2021). It refers to the behaviors and activities that users (active participation) or their representatives (passive participation) perform in the system

development process (Benítez- Martínez, Hurtado-Torres & Romero, 2021; Barki & Hartwick,1994; Doll & Torkzadeh, 2004). Quite several authors reveal that user participation attributes like education levels, willingness, ICT skills, awareness, experience, attitude; are vital in emerging issues like e-government implementation (Guenduez *et al.*, 2019; Al-Athmay, 2013).

Prior studies reveal that, support from the top leaders in any country is vital for e-project and may facilitate user participation in e-projects (Lee, 2021; Kagoya & Gilbert, 2020). The support can be in terms of funds, donations, budget allocations for e-services, ICT infrastructures to name it and this is supported by the literature below: E-government projects necessitate, proper resource mobilization, appropriate financial management, efficient budget allocation, efficient record management, all of which, cannot be obtained without top management support (Kagoya & Mbamba, 2019; Erin, 2018; Al-Rashid, 2010; Esteves & Joseph, 2008). For e-government projects which are large, complex, multi-phases and expensive, their implementation success and sustenance need support from not only smart but effective top leadership and management. To achieve this, top managers give credit, nurture creativity and support team members in taking calculative risks (Erin, 2018).

The use of ICT has several challenges such as how users and the community at large participate in using such services. United Nations (2016) indicates some advancement in the use of ICT in most countries; however, there are differences between and among countries due to encountered challenges. The challenges are caused by inequality and inaccessibility to technology. Tanzania is among the countries facing ICT challenges. Mwantimwa (2019) and Magayane, Mokua and Lanrong (2016) indicate that Tanzania experiences problems in usability, security, access, infrastructure, personal initiatives as well as characteristics and cost in using established electronic services. Furthermore, the e-government baseline study shows that there is a low level of applying ICT services in Tanzanian public sectors. The low-level of usage might be attributed to how users read and understand the language of the Internet (United Republic of Tanzania, 2016).

While exploring status, opportunities and challenges for e-government transformation in Tanzania, Lupilya (2015) found several hindrances for e-government success. These hindrances were grouped in - reluctant towards accountability and transparency; misconception of innovation and technology as well as the problems related to reliability of technology itself. Similarly, to supplement these strategies, Tanzania envisaged being a role model user of IT to promote governance (United Republic of Tanzania, 2012). Several websites (for example www.wananchi.go.tz) have been developed for citizens to participate in governance (Saebø, 2012). However, even with such developments, unsuccessful IT implementations have been reported (United Nations, 2016).

Additionally, prior literature assert that some government officials chiefly the old people described by one CIO as-Born Before Computers (BBC) in Tanzania, and elderly people some in other developing countries such as Uganda, fancy traditional face-to-face contact rather than electronic means, implying that they suffer from technophobia. These findings suggest the existence of a cultural barrier and resistance to change; and also confirm findings that Tanzanians preferred paper-work rather than electronic ones (Saebø, 2012). E-government implementation where users directly participate in, intensify control of e-project systems via some actors, thus concentrating power and ownership among the users (Saebø, 2012, while citing Schuppan, 2009). Related to this, Guenduez *et al*. (2017) contends that one of the requirements for smart e-government among

others is participants, technology, data, processes, product, and services which should be integrated comprehensively.

Similarly, Masele (2019), in his study in e-business adoption in SMEs in Tanzania, found out that, if a firm is to adopt ICTs, the technology behind it has to be easy to use since it is intended for the end-users, which inculcate an individual/user's self-efficacy to use Green eBusiness, drivers that influence intention to use. More so, the presence of facilitating conditions was seen to vital as they motivate the new adopters, while, the existence of coercive pressure is vital to reinforce the "green" behaviours related to the use of IT and eBusiness in general. These findings are in support of facilitating conditions from top management support to aid users to participate easily in e-service with self –efficacy, if the technology implemented is easy to use.

Despite the fact that preceding literature accentuated (stressed) and some acclaimed factors for e-government implementation (Mensah & Adams, 2020; Masinde & Mkhonto, 2019; Nilssen, 2018; Sichone & Mbamba, 2017; Al-Naimat *et al.,* 2013; Guenduez, *et al.,* 2018; Kagoya & Gilbert, 2020), very few have mentioned about the user participation approach. For instance, Kagoya & Gilbert (2020) under took a study on the e-readiness assessment framework for Uganda and recommended that citizen participation in e-government project should be supported by the government to improve the level of e-readiness among Ugandan citizens. Limited literature on user participation approach to e-government implementation has continued to be one of the key major challenges. Hence, the need to ascertain the real contextual based E-government implementation success factors in Developing Countries. This motivates this paper to examine user participation approach to E-Government implementation in Developing Countries like Tanzania. Also based on the fact that countries vary significantly in the level of economic, social, political, cultural aspects, technological and infrastructure level, e-government level, e-participation level and human resource development, there is need to establish key factors for individual countries than just copying and pasting those applied in most developed countries without editing and this explains the massive failure of such e-projects implemented in developing countries to date. More so, to reduce this vacuum, this paper is supported by stakeholders' theory where users and top managers who are part of the stakeholders in the e-government projects, coupled with UTAUT theory which reflects on individual belief to participate in e-government implementation. The literature reviewed was a foundation for the hypotheses in this paper which include:

> ***H_1**: User attributes positively influence successful e-government implementation.*
> ***H_2**: IS attributes positively influence successful e-government implementation.*
> ***H_3**: ICT infrastructure related attributes positively influence successful e-government implementation.*
> ***H_4**: Top management User participation positively influence successful e-government implementation.*

RESEARCH METHODOLOGY

The study used a cross-sectional questionnaire survey in a five point Likert scale to gather data from users of electronic services (staff) from e-government departments in the Ministry of Finance who were conveniently and purposively sampled. The cross-sectional survey has been found to be robust for effects of relationship studies in previous information systems studies such as Teo *et al*. (2003), Liang *et al*. (2007), and Wolf *et al*. (2009). A cross-sectional study is appropriate when

the overall objective is to establish whether significant relations exist among variables understudy. The choice of the aforesaid Ministry is that her respondents are exercising government electronic operations (United Republic of Tanzania, 2014). Thus, Dar es Salaam city in was included. Prior information to this city was obtained to know respondents who were using the systems for their inclusion in the study. The survey tool covered questions related to the user participation (including their attributes, IS attributes as well as ICT infrastructure that can affect usage); top management support; and e-government implementation success. The construct validity of the scale was tested to measure variables that are theoretically being measured. To ensure this, the study employed questions used in previous research, though modified to fit the context of the current study. Variable items were adapted from Fan and Yang (2015). Adopting the questions ensures more efficiency for validity and reliability (Badi *et al.,* 2020) than developing new questions, provided that the researcher can still collect the data needed to answer research questions and meet the objectives (Saunders *et al*., 2009). Reason being that the questionnaire is already tested for validity. The variables used were drawn from theories and empirical studies related to the study's problem. The study was able to gather 51 questionnaires out of 150 which were distributed to the Tanzanian respondents and were analyzed using partial least squares structural equation modeling (PLS-SEM), with the aid of SmartPLS 3 to form user participation model to capture the relationship among variables.

Data analysis involved descriptive, discriminant validity, convergent validity and composite reliability tests (Hair *et al*., 2017). After being satisfied with preliminary tests, factor analysis was run to confirm the study variables (Yong & Pearce, 2013). PLS-SEM is a single systematic statistical technique for testing and estimating causal relationships amongst latent variables (Sarstedt *et al*., 2017).

PLS- SEM was preferred for this study since its more suitable for explanatory research and shares the modest distributional and sample size requirements of ordinary least squares regression (Chin, 2010). Further, PLS-SEM has been extensively applied in information systems research. In a study on the use of PLS-SEM in Management Information Systems Quarterly (MISQ), out of the 109 SEM based articles published from 1999 through to 2011, 65 (60 percent) of the articles applied PLS-SEM (Ringle, Sarstedt, & Straub, 2012). Lastly, PLS-SEM was preferred as no assumptions are made for variables distribution while ensuring optimal prediction accuracy (Chin, 1998). PLS is useful if the research model is complex having a large number of variables' indicators, moderators and small samples (Hair *et al*., 2010, Ringle *et al*., 2015). Furthermore, PLS is said to be robust against multicollinearity problems (Cassel *et al.,* 2000).

FINDINGS AND DISCUSSION

Demographic characteristics

All the respondents were Tanzanians in the ministry under study. The majority of the respondents were male (30) and 21 were female. Out of 51 respondents, 5 were managers, 20 were supervisors and the rest (26) were the majority perhaps because managers are usually few and too busy most of the time, therefore tend to delegated their juniors to answer questionnaires on their behalf where need be.

For the age characteristic, those below 21 years were 4, the majority of the respondents were in the age group of 31-40 years (35), followed by those between 21-30 years (16). Business activities are characterized and categorized into Finance and Accounts (38), Human Resources were the

minority (5) and others were 8. Education Level First Degree were the majority 33, followed by postgraduate (11), secondary level with ordinary having the least number of (4) and advanced level with 3. On the issue of work Experience, the majority were between 5-10 years were 25, followed by those below 6 years who were 12, then 16-25 years were 10 and the minority 4 were above 35 years.

Data quality

Regarding data quality issues, this was done to illuminate what was unclear in the actual data which results in biasness and insignificant results in case they did not meet the multi variate assumptions (Szakos *et al.,* 2020; Mandhani *et al.,* 2020; Hair *et al.,* 2017). On the issue of missing data, the researchers conducted a thorough checkup of all questionnaires to certify that all questions were answered very well to obtain reliable and detailed information (Majeed *et al.,* 2020). Additionally, using SPSS, conduct little's missing completely at Random (MCAR) test was done and findings envisaged no missing data and the expected Maximum estimates (EME) was not computed (Ringle *et al.,* 2020).

Outer Loadings results

Findings for outer loadings are presented in Table 1. Outer loadings represent the absolute contribution of an indicator to the definition of its latent variable (Garson, 2016). The manifest variables with outer loading of 0.70 or higher are considered highly satisfactory, and items with loadings less than 0.40 – unacceptable; (Hair *et al*., 2017; Hulland, 1999) suggests such items be dropped. This study aimed at obtaining the best results by focusing on items, which were highly satisfactory. The study, therefore, dropped items ISA1, ISA2, ISA6 and ISA8 from the IS attribute construct; items TMS4, TMS8 and TMS9 from top management support; while items ICT2, ICT5, ICT7, ICT9 and ICT10 were removed from the ICT infrastructure construct to meet the suggested values.

Table 1: Outer loadings

ITEM CODE	EG	ICT	ISA	TMS	UA
EGS1	**0.862**				
EGS4	**0.914**				
EGS6	**0.844**				
EGS7	**0.825**				
ICT1		**0.831**			
ICT3		**0.801**			
ICT4		**0.826**			
ICT6		**0.781**			
ICT8		**0.757**			
ISA3			**0.859**		
ISA4			**0.854**		
ISA5			**0.79**		
ISA7			**0.832**		
TMS1				**0.735**	
TMS2				**0.814**	

TMS3				**0.841**	
TMS5				**0.864**	
TMS6				**0.871**	
TMS7				**0.777**	
UA1					**0.785**
UA2					**0.828**
UA3					**0.917**
UA4					**0.895**

Source: Data field computations using SmartPLS 3

Data Validity and Reliability

Internal consistency reliability

Table 2 indicates the results on validity and reliability measures using Cronbach's alpha test, composite reliability and the average variance extracted and values depicted above, are larger than 0.6, so high levels of internal consistency reliability have been demonstrated among all three reflective latent variables. Findings on Cronbach's alpha values were all at an acceptable level as they were above recommended threshold of 0.7, that is, above 0.85. Likewise, as shown in Table 2, computed AVE values and the composite reliability scores for the latent variables exceeded the suggested thresholds (Hair *et al*., 2010). The composite reliability values were above the recommended 0.70 level and the computed AVE (Average Variance Extracted) values - above 0.6, confirming the convergent validity of the measurement model. Although, all these results confirm the internal consistency and reliability of data as asserted by Wong (2013), erstwhile (prior) literature has advocated for the use of Composite Reliability as a replacement of the habitual Cronbach's alpha (Sarstedt, *et al.*, 2017; Hair *et al.*, 2017; Bagozzi & Yi, 1988). From Table 2, such values are shown to be larger than 0.6, so high levels of internal consistency reliability have been demonstrated among all three reflective latent variables. In this paper, the aim of testing for convergent validity was to establish the degree to which blocks of indicators vehemently congregate/converge/unit in their representation of the given constructs they were meant to measure.

Table 2: Data Validity and Reliability

	Cronbach's Alpha	**rho_A**	**Composite Reliability**	**Average Variance Extracted (AVE)**
EG	**0.884**	**0.89**	**0.92**	**0.742**
ICT	**0.859**	**0.863**	**0.899**	**0.639**
ISA	**0.855**	**0.86**	**0.901**	**0.696**
TMS	**0.901**	**0.904**	**0.924**	**0.67**
UA	**0.879**	**0.887**	**0.917**	**0.736**

Source: Data field computations using SmartPLS 3

Discriminant Validity

A test for discriminant validity using Fornell-Lacker criterion was conducted by assessing indicators' cross-loadings (Table 3). The table presents constructs' factor loadings and cross-loadings. The results indicate that each indicator loads higher on its own than on the other constructs; signifying the discriminant validity as each indicator is well correlated with the

construct it is connected to (Wong, 2013). Precisely, it can be comprehended that all of the indicators in the Table above have individual indicator reliability values that are much larger than the minimum acceptable level of 0.4 and above the preferred level of 0.7. It should be noted that, the justification for performing discriminant validity was to measure the extent to which the constructs were distinct from one another by empirical standards (Chin, 2010).

Table 4: Discriminant Validity using Fornell-Lacker Criterion

	EG	**ICT**	**ISA**	**TMS**	**UA**
EG	0.862				
ICT	0.626	0.8			
ISA	0.595	0.687	0.834		
TMS	0.679	0.761	0.754	0.818	
UA	0.632	0.666	0.539	0.492	0.858

Source: Data field computations using SmartPLS 3

Multicollinearity Assessment

Table 5 envisages collinearity assessment, which was assessed using the variance inflation factor (VIF) values of the research model as recommended by Hair *et al*. (2010). This assessment was needed to ensure assumptions for SEM are met for model fit and further interpretation. The results for collinearity assessment indicate that the VIF values are within the acceptable range of less than five, implying that there is the absence of collinearity problem. These results were obtained after omitting other items to attain the recommended thresholds. Three e-government success items and two user participation (UA5 as well as UA6) indicators were omitted.

Table 5: Collinearity Statistics

Item code	**VIF**
EGS1	**2.556**
EGS4	3.412
EGS6	**2.273**
EGS7	**2.05**
ICT1	**2.241**
ICT3	**1.906**
ICT4	**2.214**
ICT6	**1.946**
ICT8	**1.522**
ISA3	**2.364**
ISA4	**2.477**
ISA5	**1.598**
ISA7	**2.151**
TMS1	**2.205**
TMS2	**2.355**
TMS3	**2.816**
TMS5	**2.873**
TMS6	3.129
TMS7	**2.815**
UA1	**1.786**

UA2	**2.194**
UA3	3.367
UA4	**2.754**

Hypotheses Testing
The summary of the tested hypotheses is presented in Table 5.

Table 5: Significance testing results of the PLS-SEM (UPEGI) model path coefficients

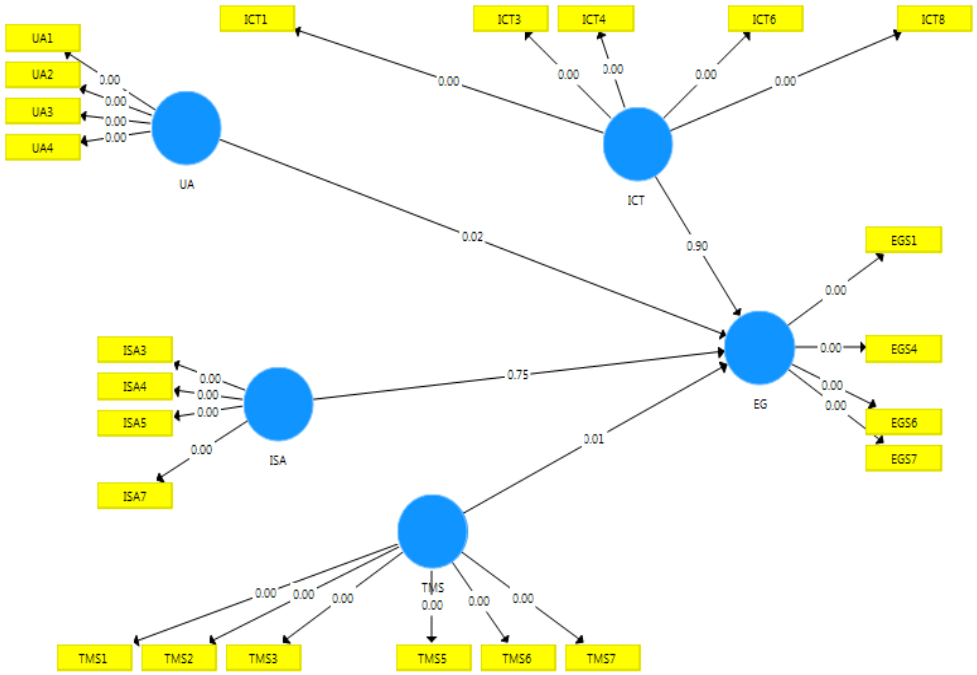
	Path Coeffficients-Mean, STDEV, T-Values, P-Values				
Path model	Original Sample (O)	Sample Mean (M)	(STDEV)	T Value(|O/STDEV|)	P V
ICT -> EG	-0.022	-0.014	0.173	0.126	**0.9**
ISA -> EG	0.045	0.066	0.14	0.324	**0.746**
TMS -> EG	0.469	0.455	0.173	2.712	***0.007**
UA -> EG	0.391	0.374	0.167	2.34	***0.02**

Source: Field data 2019 attained using SmartPLS3.0

Testing results of $H_{1,}$ & H_4 (significant) and H_2 & H_3 (insignificant)
From the above table the results indicate that only two variables are significant (UA &TMS), hence implying that there is a significant positive relationship (UA -> EG) between user attributes and E-government implementation (PV= **0.02**), thus in compliance with *H_1: User attributes positively influence successful e-government implementation in Tanzania. Correspondingly*, there is a significant positive relationship (TMS -> EG) between Top management support (TMS) and E-government implementation (PV= 0.007) which conforms to *H_4: Top management User participation has a positive influence on successful e-government implementation in Tanzania.* Conversely, path models of two first two variables in the table above (ICT -> EG and ISA -> EG) are insignificant hence contradicting with *H_3: ICT infrastructure related attributes influence successful e-government implementation; and can be re stated as $H_{3:}$ ICT infrastructure related attributes had a negative influence on successful e-government implementation in Tanzanian context.* This implies that despite the merits of ICT infrastructure as asserted by prior studies, given the changes in time and every changing technology, without top management and user participation attributes, ICTI does not lead to successful e-government implementation.

Lastly, results in Table 5 show that the T-value for user attributes (UA=2.34) and Top Management Support (TMS=2.712) were above 1.96 and therefore, user attributes and Top Management Support sessions are significant key success factors in *successful e-government implementation in the Tanzanian context.*

Figure 1: The User Participation E-Government Implementation (UPEGI) Model for Tanzania (Smart PLS results of the reflective-formative main effect UPEGI model)



Source: Data field computations using SmartPLS 3 (researchers' contribution, 2019)

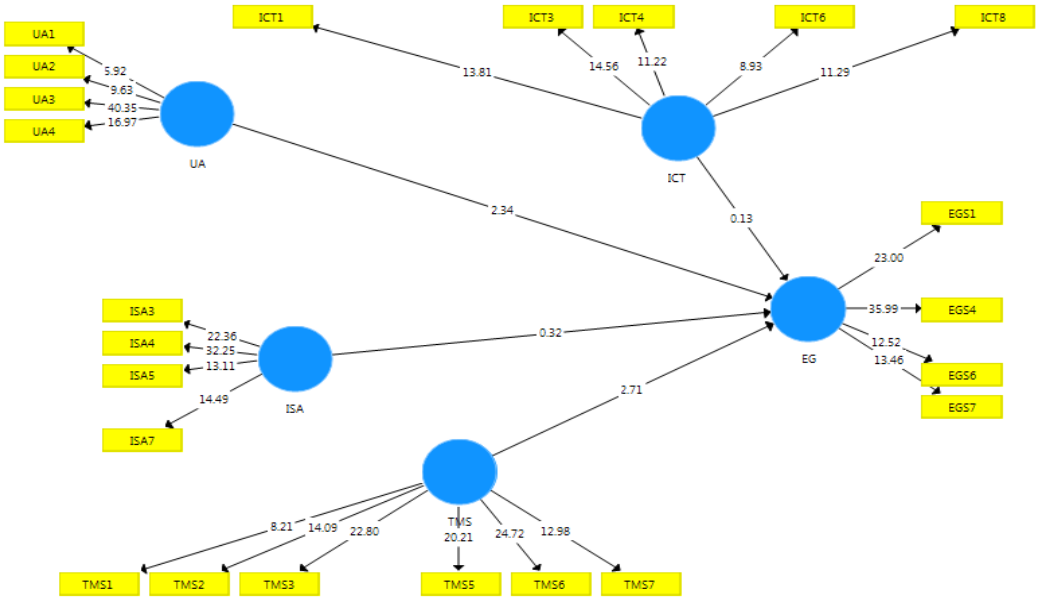
Hypotheses testing results after bootstrapping formulating the UPEGI model

Figure 1 provides the results for variables' relationships in the UPEGI model. Findings indicate that the relationships of e-government success to ICT and ISA are not significant (p= 0.90, p= 0.75), implying that ICT infrastructure and IS attributes do not influence success in e-government. The findings show further that the relationships of e-government success to TMS and UA are significant (p= 0.01, p= 0.02), that is, top management support and user participation influence success in E-Government. It should be recalled that before addressing the study objectives by hypotheses testing; the study assessed data validity and reliability, as well as performing different tests such as confirming indicators' outer loadings and collinearity statistics.

Inner model path coefficient sizes and significance (Inner loading results)

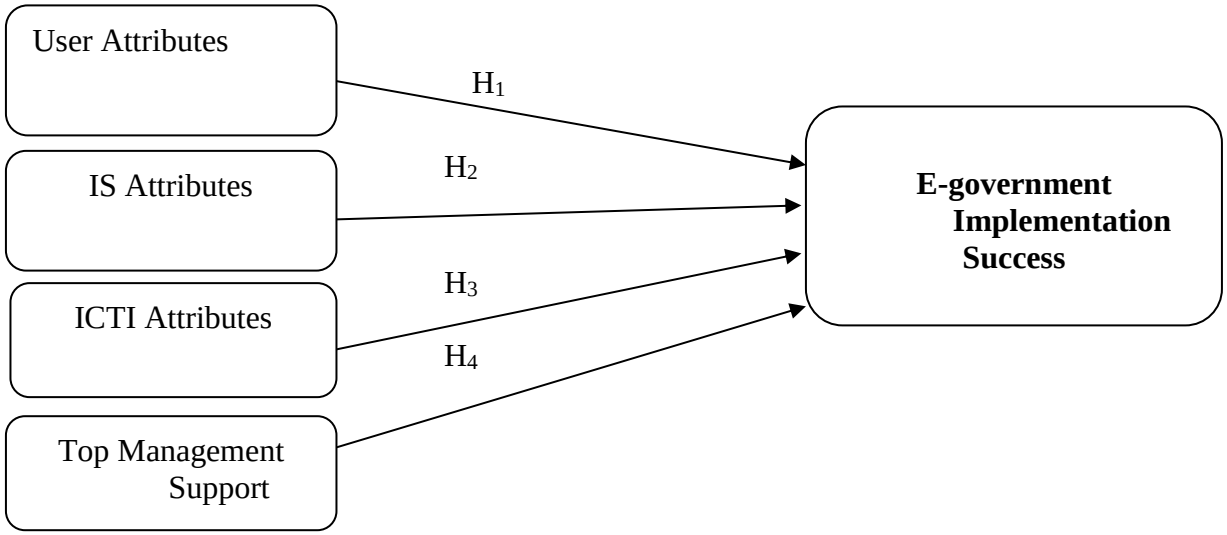
Results from Fig 2 showing the inner model suggest that, TMS has the strongest effect on EGI (2.71), followed by UA (2.34), ISA with (0. 32) and lastly ICT infrastructure/ICTI (0.13). The hypothesized path relationship between UA and EGI is statistically significant and the hypothesized path relationship between TMS and EGI is statistically significant. Nevertheless, the hypothesized path relationship between (ISA and EGI) and that (ICTI and EGI) are not statistically significant. This is because their standardized path coefficients (0.32 and 0.13) are slightly above the standardized 0.1. Thus, we can conclude that: UA and TMS are equally high strong predictors of EGI, compared to ISA and ICTI in the Tanzanian Context.

Figure 2 Envisaging the Inner loading results



Source: Data field computations using SmartPLS 3

Figure 3: The User participation in E-government Implementation (UPEGI) Model for Tanzania



Source: Researchers' contribution (2019)

The UPEGI model obtained after testing the hypotheses in the field, envisages the authors' contribution to the field of e-government implementation in developing countries like Tanzania. It indicates that in the Tanzanian context, user attributes (H_1) and top management support (H_4) (the user participation approach), are the exogenous variables with a statistical positive influence on e-government implementation success. This also implies that the other two variables omitted in the model, were insignificant. *That is to say; H_2: IS attributes do not influence successful e-*

government implementation in the Tanzanian context and also H_3: ICT infrastructure related attributes do not influence successful e-government implementation in the Tanzanian context.

CONCLUSION

This paper was intended to model key success factors for e-government implementation in Developing Countries precisely Tanzania. Specifically, it assessed the influence of UA, ISA, ICTI, and TMS on E-government implementation in the Tanzanian Context. In that quest, it reviewed empirical and theoretical literature on e-government implementation from the user participation approach. Three theories were used, two (UTAUT and IS success theory) on technology adoption and IS success and one (stakeholder theory) on user attributes and top management support. The reviewed literature managed to help set the founding base from which this study could execute its objectives by deriving variables, which formed the developed model. E-government success is influenced by several factors and different authors have tried to research in this area using different contexts. This study assessed e-government success using user participation, top management support, ICT infrastructure and IS attributes. It was found that ICT infrastructure and IS attributes were insignificantly related to e-government implementation success. Contrary to the previous studies (such as United Nations, 2014) which show the importance of these variables to e-government success; the study under review found peculiar results which might be subject to mandatory systems exercised by the government institutions in a studied area. Besides, the results could be caused by unawareness of system users as commented by the United Republic of Tanzania (2016) and variations in time plus respondents (Kagoya *et al.*, 2019). Furthermore, the results indicated that top management support and user participation were significantly related to e-government implementation success. The results on significant relationship conform to the previous findings (Twizeyimana & Andersson, 2019; Damian *et al*., 2014; Mutula, 2013), suggesting that the success of e-government requires user participation in using e-government services. Besides, top managers play a significant role in e-government success especially enhancing efficient operations (Müller & Skau, 2015; Wirtz *et al*., 2014).

STUDY IMPLICATIONS

Firstly, the results indicate users' participation in electronic services as a key factor to the success of e-government implementation as advocated by the stakeholder theory. On the other hand, the results indicate that ICT infrastructure attributes and IS attributes are not supportive to the e-government success, implying that the arguments of the IS success theories are not helpful in this aspect. Nevertheless, the study found the importance of top management support in e-government activities, such as leadership, processes are undertaken as well as support in facilities (measured by TMS5= IT processes are well defined to support government activities, TMS6= Top management solicit for donations to aid e-projects implementation, and TMS7= Top Management provide free e- service awareness campaigns via Internet usage training). The arguments found on top management support are aligned with those of UTAUT especially the variable - facilitating conditions. For this aspect, the explanation of UTAUT (Venkatesh *et al*., 2003) best fits the results of this study. Moreover, the measured items are valid and reliable for usage in future similar studies. More so, the e-government project managers in Tanzania can improve user participation levels in e-government implementation by understanding the relationships among User attributes (UA), on one hand, and Top Management Support (TMS), Information System Attributes (ISA) and ICT Infrastructure Attributes (ICTI) on the other. Through a survey of the top government officials in the Ministry of Finance and the subsequent structural equation modelling in SmartPLS3, the important predictor factors that lead to successful e-government implementation

are identified. In this research, key success factors to e-government implementation are found to be user attributes and top management support, with PVs of (0.02 & 0.01) respectively and the Tanzanian government should not overlook them.

RECOMMENDATIONS AND LIMITATIONS

Assertively, more attention should be given to user participation by ensuring awareness of e-services, motivation so that the operators and all involved actors apply willingly the developed electronic systems. Thus, government officials in e-government projects as well as policymakers should focus on these users' concerns for proper involvement. These concerns were assessed as UA1, UA2, UA3 and UA3. that enjoyment and users' motivation for active participation should be coupled with appropriate top management support as users depend on the decisions made at the top management level in e-government projects and their support in all aspects related with e-government project (whether facilities or proper processes), not only from design to implementation but also after these phases. This is intended for monitoring and evaluation purposes, which is vital in improving e-government projects for proper functioning to ensure their continuity and sustainability.

Finally, considering the studied area, this research suggests the influence of ICT infrastructure and IS attributes on e-government implementation success be looked at in the future due to peculiar results which might be caused by a low understanding of some areas of the studied research. Additionally, the scope of this study was limited to four variables (user participation, top management support, ICT infrastructure and IS attributes) that were assessed for e-government implementation success. Further studies can be done by identifying other variables (such as social influence left by this study from informed theories like UTAUT) relevant for e-government. This study used a quantitative method; other studies may use qualitative or mixed methods to see whether there are similarities or differences in the findings obtained. This study was conducted in Tanzania; a similar study can be applied in other contexts with similar settings like Uganda with top management as a moderator between user participation and successful e-government implementation to compare and contrast results that can be applied in other developing countries or emerging economies. Additionally, this study used PLS-SEM for data analysis given the small sample size and being one of the latest quantitative tool good in the prediction of accuracy causal relationships (Sarstedt *et al.*, 2017; Hair *et al.*, 2017); future studies may employ other data analysis methods.

REFERENCES

Alexander, M. (2012). The New Jim Crow: Mass Incarceration in the Age of Color Blindness, New York: New Press.

Abdelghaffar, H., & Magdy, Y. (2012). The Adoption of Mobile Government Services in Developing Countries. *International Journal of Information and Communication Technology Research, 2*(4), 333-341.

Ackoff, R. L. (1974). *Redesigning the future*. New York: Wiley.

Alarabiat, A., Soares, D., & Estevez, E. (2021). Determinants of citizens' intention to engage in government-led electronic participation initiatives through Facebook. *Government Information Quarterly, 38*(1), 101-117.

AlAwadhi, S., & Morris, A. (2008). The Use of the UTAUT Model in the Adoption of E-government Services in Kuwait. *41st Hawaii International Conference on System Sciences,*1(11). UK: Loughborough University.

Al-Athmay, A. (2013). E-government in Arab Countries: Status and Challenges. *Global Journal of Business Research, 7*(5), 79- 98.

Al-Naimat, A. M., Abdullah, M. S., & Ahmad, M. K. (2013). The Critical Success Factors for E-government Implementation in Jordan. *Proceedings of the 4th International Conference on Computing and Informatics*: 391-398. Sarawak, Malaysia: University Utara, Malaysia.

Al-Rashidi, H. (2010). Examining Internal Challenges to E-government Implementation from System Users Perspective. *European and Mediterranean Conference on IS*. West London: Brunel University.

Badi, S., Ochieng, E., Nasaj, M., & Papadaki, M. (2020). Technological, organizational and environmental determinants of smart contracts adoption: UK construction sector viewpoint. *Construction Management and Economics*, *12*(2), 1-19.

Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, *16*(1), 74–94.

Barki, H., & Hartwick, J. (1994). Measuring User Participation, Use Involvement, and User Attitude. *Management Information Systems Quarterly*, *18*(1), 59-82.

Benítez-Martínez, F. L., Hurtado-Torres, M. V., & Romero-Frías, E. (2021). A neural blockchain for a tokenizable e-Participation model. *Neurocomputing*, *423*, 703-712.

Bharati, P. & Chaudhury, A. (2006). Product Customization on the Web: An Empirical Study of Factors Impacting Choice Board User Satisfaction. *Information Resources Management Journal*, *19*(2), 69 – 81.

Brown, S., Dennis, A., & Venkatus, V. (2010). Predictinng Collaboration Technology Use: Integrating Technology Adoption and Collaboration Research. *Journal of Management Information Systems*, *27*(2), 9-53.

Bryson, F., John, M., Kathryn, S., Quick, Carissa, S. S., & Barbara, C. Crosby. (2013). Designing public participation processes. *Public Administration Review*, *73*(1), 23–34.

Carter, L., & Weerakkody, V. (2008). E-government Adoption: A Cultural Comparison. *Information Systems Frontiers, 10*(4), 473-482.

Cassel, C. M., Hackl, P., & Westlund, A. H. (2000). On the measurement of intangible assets: A study of the robustness of partial least squares. *Total Quality Management*, *11*(7), 897–908.

Chae, H. (2007). IS Success Model and Perceived IT Value. *Proceedings of the 13th Americas Conference on Information Systems (AMCIS 07).* USA: Keystone, CO.

Chin, W. W. (2010). How to Write Up and Report PLS Analyses. In V. E. Vinzi, W. W. Chin, J. Henseler, & H. Wang (Eds.), Handbook of Partial Least Squares (pp. 655–690). *Springer Berlin Heidelberg*. Retrieved from http://link.springer.com/chapter/10.1007/978-3-540-32827-8_29.

Chin, W. W. (1998). Issues and opinion on structural equation modelling. *MIS Quarterly*, *22*(1), 7–16.

Damian, I. P. M., Segundo, J. E. S., & Merlo, E. M. (2014). SWOT Analysis of the Services Provided by e-government Sites in Brazil. *Procedia Computer Science*, *33*(0), 130-135.

DeLone, W., & McLean. (1992). Information Systems Success: The Quest for the Dependent Variable. *Information Systems Research, 3*(1), 60-95.

DeLone, W., & McLean, E. R. (2003). Model of Information Systems Success: A Ten-Year Update. *Journal of Management Information Systems, 19*(4), 9-30.

DeLone, W., & McLean, E. R. (2016). Information Systems Success Measurement. *Foundations and Trends in Information Systems, 2*(1), 11-16.

Doll, W. J., Ziaodong, D., Raghunathan, T. S., Torkzadeh, G., & Weidong, X. (2004). The Meaning and Measurement of User Satisfaction Instrument. *Journal of Management Information Systems, 21*(1), 227-262.

Eden, C., & van der Heijden, K. (1993). *The Relationship between Stakeholder Analysis and Scenario Planning.* (Paper Presented in the Strategy Seminar, at the London School of Economics), Strathclyde Business School.

Elkadi, H. (2013). Success and Failure Factors for E-government Projects. *Egyptian Informatics Journal*, *22*(1), 165-173.

Erin, P. (2018). Five factors that lead to project implementation success. Accessed on https://project-management.com/five-factors-that-lead-to-successful-projects/

Esteves, J., & Joseph, R. (2008). A Comprehensive Framework for the Assessment of E-government Projects. *Government Information Quarterly*, *25*(5), 118-132.

European e-Government Action Plan (2016-2020). Accessed at: https://ec.europa.eu/digital-single-market/en/european-egovernment-action-plan-2016-2020.

Fan, J., & Yang, W. (2015). Study on E-Government Services Quality: The Integration of Online and Offline Services. *Journal of Industrial Engineering and Management*, *8*(3), 693-718.

Friend, J., & Hickling, A. (1987). *Planning Under Pressure: The Strategic Choice Approach. Oxford*: Pergamon Press.

Fording, R. C., Soss, J., & Schram, S. F. (2011). Race and the local politics of punishment in the new world of welfare. *American Journal of Sociology*, *116*(5), 1610-57.

Garson, G. (2016). *Partial least squares: Regression & structural equation models.* Asheboro: Statistical Associates Publishers.

Glomsås, H. S., Knutsen, I. R., Fossum, M., & Halvorsen, K. (2021). They just came with the medication dispenser -a qualitative study of elderly service users' involvement and welfare technology in public home care services. *BMC health services research, 21*(1), 1-11.

Guenduez, A. A., Mettler, T., & Schedler, K. (2017). Smart Government–Participation und Empowerment der Bürger im Zeitalter von Big Data und personalisierter Algorithmen. *hmd praxis der wirtschaftsinformatik, 54*(4), 477-487.

Guenduez, A. A., Mettler, T., & Schedler, K. (2019). Beyond Smart and Connected Governments: Sensors and the Internet of Things in the Public Sector. In: Ramon, G.-G. J., Pardo, T. A., & Mila, G. (eds.), *Beyond Smart and Connected Governments: Sensors and the Internet of Things in the Public Sector*. Springer.

Guenduez, A. A., Singler, S., Tomczak, T., Schedler, K., & Oberli, M. (2018). Smart government success factors. *Yearbook of Swiss Administrative Sciences, 9*(1), 96-110.

Hair, J., Black, W., Babin, B., & Anderson, R. (2010). *Multivariate Data Analysis* (7th edn.). Upper Saddle River, NJ: Pearson Prentice Hall.

Heeks, R. (2006). Health Information Systems: Failure, Success and Improvisation. *International Journal of Medical Informatics, 75*(2), 125-137.

Hill, C. W. L., & Jones, T. M. (1992). Stakeholder-agency theory. *Journal of Management Studies*, *29*(7), 131-154.

Hulland, J. (1999). Use of partial least squares (PLS) in strategic management research: A review of four recent studies. *Strategic Management Journal*, *20*(2), 195-204.

ITU. (2014). ICT Facts and Figures. *ICT Data and Statistics Division*, ITU, Place des Nations, Geneva, Switzerland.

Jacobs, L. R. (2014). The contested politics of public value. *Public Administration Review*, *74*(4), 480-494.

Joseph, S. (2015). *Development and Validation of A framework for E-government Readiness Measurement*. Durban University of Technology, Durban, South Africa.

Kagoya, S. M., & Gilbert, M. (2020). An E-government Readiness Assessment Framework for Ugandan Ministries. *Orsea Journal*, *10*(1), 1-20.

Kagoya, S. M., & Mbamba, O. L. (2019). Key Attributes to E-government Implementation in Uganda. A case study of Ugandan Ministries. Paper presented at *15th ORSEA conference* 2019- Uganda.

Lee, M. R. (2021). *Leading virtual project teams: Adapting leadership theories and communications techniques to 21st century organizations*. CRC Press.

Li, Y., & Shang, H. (2020). Service quality, perceived value, and citizens' continuous-use intention regarding e-government: Empirical evidence from China. *Information & Management*, *57*(3), 103-117.

Liang, H., Saraf, N., Hu, Q., & Xue, Y. (2007). Assimilation of Enterprise Systems: The Effect of Institutional Pressures and the Mediating Role of Top Management. *MIS Quarterly*, *31*(1), 59–87.

Lupilya, E. C., & Jung, K. (2015). E-Government Transformation in Tanzania: Status, Opportunities, and Challenges. *The Korean Journal of Policy Studies*, *30*(1), 147-184.

Magayane, A. A., Mokua, J. K., & Lanrong, Y. (2016). Evaluation of the current status of Egovernment implementation in Tanzania : Government websites perspectives. *ACSIJ Advances in Computer Science*, *5*(2), 47–55.

Majeed, S., Zhou, Z., Lu, C., & Ramkissoon, H. (2020). Online tourism information and tourist behaviour: A structural equation modelling analysis based on a self-administered survey. *Frontiers in Psychology*, *11(2)*, 599-705.

Mandhani, J., Nayak, J. K., & Parida, M. (2020). Interrelationships among service quality factors of Metro Rail Transit System: An integrated Bayesian networks and PLS-SEM approach. *Transportation Research Part A: Policy and Practice*, *140*(3), 320-336.

Masele, J. J. (2019). Modelling Green eBusiness Adoption among Small and Medium Tourism Enterprises in Tanzania. *The African Journal of Information Systems*, *11*(3) , 4-20.

Masinde, M., & Mkhonto, M. (2019, March). The Critical Success Factors for e-Government Implementation in South Africa's Local government: Factoring in Apartheid Digital Divide. In *2019 IEEE 2nd International Conference on Information and Computer Technologies (ICICT)* (pp. 220-228). IEEE.

Mihret, D., & Yasman, A. (2007). Internal audit effectiveness: An Ethiopian Case Study. *Managerial Auditing Journal*, *22*(5), 470 – 484.

Moynihan, D., Herd, P., & Harvey, H. (2015). Administrative burden: Learning, psychological, and compliance costs in citizen-state interactions. *Journal of Public Administration Research and Theory*, *25*(1), 43-69.

Müller, S. D., & Skau, S. (2015). Success Factors Influencing Implementation of E-government at Different Stages of Maturity: *A Literature Review.* Denmark: Aarhus University.

Mumford, E. (1983). Participative systems design: Practice and theory. *Journal of Occupational Psychology*, *4*(1), 47- 57.

Mutula, S. (2013). E-government Divide: Implications for Sub-Saharan Africa. *Information Ethics for Africa*: Cross-Cutting Themes, *13*(2), 59-69.

Mwantimwa, K. (2019). ICT usage to enhance firms' business processes in Tanzania. *Journal of Global Entrepreneurship Research*, *9*(1), 46 -58

Nabafu, R. & Maiga, G. (2012). A Model of Success Factors for Implementing Local E-government in Uganda. *Electronic Journal of e-Government*, *10*(1), 31-46.

Nilssen, M. (2019). To the smart city and beyond? Developing a typology of smart urban innovation. *Technological forecasting and social change*, *142(10)*, 98-104.

Patibandla, M., & Sethi, R. (2018). An analysis of public-private partnerships in infrastructure of provision of public goods through e-governance in India. *IIM Bangalore Research Paper*, (564).

Peter, S., Delone, W., & Mclean, E. (2008). Measuring Information Systems Success: Models, Dimensions, and Interrelationships. *European Journal of Information Systems, 17(2)*, 236-263.

Raj, A., Dwivedi, G., Sharma, A., de Sousa Jabbour, A. B. L., & Rajak, S. (2020). Barriers to the adoption of industry 4.0 technologies in the manufacturing sector: An inter-country comparative perspective. *International Journal of Production Economics, 22(4)*, 107-126.

Ringle, C. M., Sarstedt, M., Mitchell, R., & Gudergan, S. P. (2020). Partial least squares structural equation modelling in HRM research. *The International Journal of Human Resource Management, 31*(12), 1617-1643.

Ringle, C. M., Sarstedt, M., & Straub, D. W. (2012). Editor's Comments: A Critical Look at the Use of PLS-SEM in "MIS Quarterly". *MIS Quarterly*, *36(*1), iii–xiv.

Ringle, C. M., & Wende, S., & Becker, J.-M. (2015). SMARTPLS 3. Boenningstedt: SmartPLS GmbH.

Sæbø, Ø. (2012). *E-government in Tanzania: Current Status and Future Challenges*. Norway: University of Agder.

Sarstedt, M., Ringle, C. M., & Hair, J. F. (2017). Partial least squares structural equation modelling. *Handbook of market research*, *26*(1), 1-40.

Saunders, M. L., & Lewis, P. & Thornhill, A. (2009). *Research methods for business students, 4*th edit, Pearsons Education, Harlow, England.

Schopf, J. C. (2020). The Governance Effects of Korea's leading e-Government websites. In *Open Government: Concepts, Methodologies, Tools, and Applications* (pp. 2040-2057). IGI Global

Seen, M., Rouse, A., & Beaumont, N. (2007). Explaining and Predicting Information Systems Acceptance and Success: An Integrative Model. *Proceedings of the 15th European Conference on Information Systems.* Switzerland: St Gallen.

Sichone, J. & Mbamba U.O.L. (2017). The Influence of Administrative Aspects and Users' Attributes on E-Government Implementation Success in Tanzania. Users' Perspectives. *International Journal of Business Management Review*, *5*(9), 39-50.

Schuppan, T. (2009). E-Government in developing countries: Experiences from sub-Saharan Africa. *Government Information Quarterly*, *26*(3), 118-127.

Svendsen, A. (1998). *The Stakeholder Strategy. Profiting from Collaborative Business Relationships.* San Francisco: Berrett-Koehlert Publishers Inc.

Szakos, D., Szabó-Bódi, B., & Kasza, G. (2020). Consumer awareness campaign to reduce household food waste based on structural equation behavior modelling in Hungary. *Environmental Science and Pollution Research*, *9*(2), 1-10.

Fording, Richard C., Joe, S., & Sanford F. Schram. (2011). Race and the Local Politics of Punishment in the New World of Welfare. *American Journal of Sociology, 11*(6), 1610-1657.

Teo, H. H., Wei, K. K., & Benbasat, I. (2003). Predicting Intention to Adopt Inter-Organizational Linkages: An Institutional Perspective. *MIS Quarterly, 27*(1), 19–49.

Trkman, M., & Trkman, P. (2009). A Critical Analysis Using Delone and Mclean Model. *Online Information Review, 33*(6), 1087-1102.

Twizeyimana, J. D., & Andersson, A. (2019). The public value of E-Government–A literature review. *Government Information Quarterly, 36*(2), 167-178.

UNCTAD. (2013). *Executive Summary of the E-government Strategy*. Ethiopia: Ethiopian Ministry of Information and Communication Technology.

UNDESA. (2016). *E-Government in Support of Sustainable Development.* Doi: 10.1016/S1369-7021(02), 00629-6.

United Republic of Tanzania. (2016). *National Information and Communication Technology Policy*. Dar es Salaam, Tanzania: Ministry of Works, Transport and Communication.

United Nations. (2014). *E-government for the Future We Want.* Department of Economics and Social Affairs. New York: UN.

United Nations. (2016). *UN E-government Survey 2016: E-government in Support of Sustainable Development.* New York: UN - Department of Economic and Social Affairs.

UN E-Government Survey. (2018). Accessed on January, 30, 2019 at https://publicadministration.un.org/egovkb/Portals/egovkb/Documents/un/2018-Survey/E-Government%20Survey%202018_FINAL%20for%20web.pdf.

United Republic of Tanzania. (2012). *Institutional Capacity Building for Successful E-government. Models of Institutional Frameworks, African Region: Tanzania Perspectives. DSM: Ministry of Communication, Science and Technology*.

United Republic of Tanzania. (2014). *How e-government contributes to inclusive and sustainable development: Tanzania experience.* Dar es Salaam: E-government Agency.

Urbach, N., Smolnik, S., & Riempp, G. (2008). A Methodological Examination of Empirical Research on IS Success: 2003 - 2007. *14th American Conference on Information Systems (AMCIS).* Toronto: Ontario, Canada.

Urbach, N., & Müller, B. (2012). The updated DeLone and McLean model of information systems success. In Y. K. Dwivedi & *et al*. (Eds.), *Information Systems Theory: Explaining and Predicting 1 Our Digital Society, 1*(3), 1–18). Springer.

Venkatesh, V., Chan, F. K. Y., & Thong, J. Y. L. (2012). Designing e-government services: Key Service Attributes and Citizens‟ Preference Structures. *Journal of Operations Management, 30*(1–2), 116-133. doi: http://dx.doi.org/10.1016/j.jom.2011.10.001.

Venkatesh, V., Brown, S., Maruping, L., & Bala, H. (2008). Predictying Different Conceptualization of Systems Use: The Behavioral Intention, Facilitating Conditions and Behavioral Expectation. *MIS Quarterly, 32*(3), 483-502.

Venkatesh, V., Morris, M., Davis, G., & Davis, F. (2003). Users' Acceptance of Information Technology: Toward a Unified View. *MIS Quarterly, 27*(3), 287-294.

Wirtz, B. W., Mory, L., Piehler, R., & Daiser, P. (2014). Measuring E-government Portal Management on the Local Level: Results from a Survey of Public Administration Officials. *International Public Management Review, 15*(2), 1-31.

Wolf, M., Vykoukal, J., & Beck, R. (2009). Innovating Mindfully with Service-Oriented Grids - The Role of Organizational Mindfulness in Turbulent Environments. *DIGIT 2009 Proceedings.* Retrieved from http://aisel.aisnet.org/digit2009/6.

Wagner, I. (1993). A Web of Fuzzy Problems: Confronting the Ethical Issues. *Communications of the ACM, 36*(4), 94-101.

Wang, H., & Hou, J. (2010). Perspectives, Skills and Challenges for Developing A successful E-government. *Paper presented at International Conference on Advanced Management Science* (ICAMS), *3*(1), 242-245. IEEE. http://dx.doi.org/10.1109/ICAMS.2010.5553248.

Wood-Harper, T., Ibrahim, O., & Ithnin, N. (2004). An Interconnected Success Factor Approach for Service Functional in Malaysian Electronic Government, *Sixth International Conference on Electronic Commerce*, ACM.

Wong, K. K. (2013). Partial least squares structural equation modeling (PLS-SEM) techniques using SmartPLS. *Marketing Bulletin, 24*(1), 1-32.

Yang, K. H., & Lee, S. G. (2006). Comparison of the ICT Adoption Pattern: In the case of Korea and the USA. *La Crosse: Department of Management Information Systems, School of Business Administration, University of Wisconsin*. *한국경영정보학회: 학술대회논문집*, 545-550.

Yong, A. G., & Pearce, S. (2013). A beginner's guide to factor analysis: Focusing on exploratory factor analysis. *Tutorials in quantitative methods for psychology, 9*(2), 79-94.

Ziemba, E., Papaj, T., & Zelazny, R. (2013). A Model of Success Factors for E-government Adoption. *Issues in Information Systems, 14*(2), 87-100.