

Assessing the factors influencing intention to use e-government in Tanzania: the perspective of trust, participation and transparency

Factors
influencing
intention to use
e-government

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Abstract

Purpose – This research involves empirical evidence from the Tanzanian context to find out whether participation, trust and transparency have a significant impact on the acceptance of e-government systems.

Design/methodology/approach – The research employs a survey of 153 respondents followed by structural equation modelling-variance based (CB-SEM) analysis using PLS 4. The conceptual framework was developed by extending the technology acceptance model (TAM) with additional constructs before testing it in quantitative research.

Findings – Results of the model show that the perceived ease of use (PEU) had neither a significant relationship with behaviour intention nor with perceived transparency, while all the other relationships were found to be significant.

Research limitations/implications – Among others, this research provides theoretical underpinnings to the area of acceptance of technologies as well as providing areas for future research and policy implications.

Practical implications – The study presents the relationships involving transparency, trust and participation in e-government systems by the citizens and how they can potentially influence intention to use e-government systems.

Social implications – The regulatory authorities, mobile service operators and government can use this research to enhance decision-making and governance towards effective use of mobile phone technology in accessing government services.

Originality/value – This research delivers a refined, extended model of TAM that comprises extra constructs, namely, trust, transparency and participation. This model provides the basis for upcoming research in the area of technology acceptance, e-government and in behavioural science.

Keywords E-government, E-government practices, TAM, UTAUT, TRA, Smart PLS 4, Trust, Transparency, Participation

Paper type Research paper

1. Introduction

Numerous facets of human life have been affected by the ongoing evolution of technology. It has altered how citizens and government agencies operate in several different ways. Researchers find that the e-business revolution's change forced government agencies and information technology (IT) providers to collaborate to ensure that the delivery of government services to the citizens is also impacted (Abubakr & Kaya, 2021).

E-government can be defined as the use of information technology in general, and e-commerce in particular, to give people and organizations more convenient access to government information and services, as well as to deliver public services to people, business

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partners and suppliers, and those working in the public sector (Abubakr & Kaya, 2021; Owusu, Akpe-Doe, & Taana, 2022; Yonazi, 2013). The transformations of delivering e-government services cut across various sectorial services of the governments (Solomon & van Klyton, 2020). Examples of e-government systems and practices include the political sector where the voting process has shifted to e-voting, the health sector where there are multiple automations in delivering services and fields of agriculture, entertainment, transportation and other government services where various improvements are seen (Owusu *et al.*, 2022).

The implementation of e-government services is typically dependent on important factors including policies, plans, legislation and accessibility (Abubakr & Kaya, 2021; Owusu *et al.*, 2022). In such situation, the nations must be prepared for electronic government for the technology to be utilized properly (Lynn *et al.*, 2022). The sophistication brought about by better computing service delivery has also revolutionized how technologies are incorporated into user settings. Determining if the e-government operating environment is prepared to adopt the technology is crucial.

In Tanzania, the use of the government electronic payment gateway (GePG) and the interconnection of various public sectors, including the Business Registration and Licensing Agency (BRELA), National Identification Authority (NIDA) and Tanzania Revenue Authority (TRA), have been made possible by the recent improvement of e-government systems. While there are constant investments in e-government, there are fewer attempts made to identify the barriers to adoption in the contexts where it is now used. Making educated decisions about best practices to embrace and use e-government in Tanzania and analogous contexts would likely be made easier with the identification of the challenges. The goals of e-government in any nation can only be achieved if various factors are investigated on whether they influence its acceptance by the citizens and there are minimal challenges associated with its adoption (Twizeyimana & Andersson, 2019).

Tanzania acknowledged the advantages of electronic government by including it in the National ICT Policy (2003), which was later updated in the National ICT Policy, 2016. The nation's national e-government plan was subsequently formed in 2009 to foster trust, willingness and confidence among citizens to invest in e-government. The creation of an e-government body to regulate and oversee all e-government efforts in Tanzania was one of the additional initiatives. After performing a survey and situational analysis of governmental activities, the agency subsequently developed an e-government strategy from 2013 to 2018. An accomplishment of e-government in Tanzania is the creation of a National Identity (ID) system for citizens, a government job portal and expanded methods for collecting taxes (Yonazi, 2013). This agency has recently been transformed into e-government Authority, having the mandate of overseeing compliance and administration of ICT in Tanzanian public sectors.

The main objective of this research is to investigate the relationship between key factors influencing the acceptance of e-government through a survey. This research lays a foundation for upcoming studies on technology acceptance and provides justifications for decision-making on the formulation of areas such as policy, regulations and service improvement to ensure that citizens are satisfied with how the current level of automation offers improved governmental service delivery. While other aspects of ICT are influenced by various factors, it is essential to test whether participation, trust and transparency have potential impact on the intention to use e-government. These constructs are important, especially in the usage of e-government; because the citizens need to trust the information and authenticity of the information, there is a need of openness in the way government operates and the need of trust. The next sections of this article are organized as follows. Section 2 discusses the e-government concepts, and section 3 which discusses the formulation of study hypotheses and conceptual framework. Section 4 discusses the methodology, and section 5

presents the results and discussions. Section 6 provides a critical discussion, and section 7 provides conclusions and future works.

2. E-government

The e-government is a result of pressure to rethink how to provide effective services to citizens has increased due to the improvement of services through the Internet, e-commerce and e-business in the private sector (Silcock, 2001; Twizeyimana & Andersson, 2019).. To ensure that ICT tools and applications are successfully used to support seamless transactions, government agencies and individuals struggle to keep up with the pace of continuous advancements. Since governments must empower individuals rather than merely serve them, citizens are referred to as customers of governments from an e-government perspective (Ndou, 2004; Owusu *et al.*, 2022).

The areas where the actions associated with providing e-government services are as follows: government-to-government (G2G), government-to-business (G2B), government-to-citizen (G2C) and government-to-employee (G2E), and (Nkwe, 2012). The payment of taxes, the payment of water and energy bills, the renewal of permits and the application for specific benefits all fall under this category of interactions between residents and their governments. While the government-to-citizen (G2C) sector makes it easier for citizens to contact the government, the government-to-government (G2G) sector serves as the hub of e-government where different government sectors communicate with each other (Chan *et al.*, 2010).

There are two groups of factors that have an impact on e-government. The first category is on a personal level and is based on how citizens' perceptions of e-government services are influenced. Using theories like the theory of reasoned actions (TRA) (Awa, Ukoha, Emecheta, & Nzogwu, 2012) and the technology acceptance model (TAM) (Davis, 1989), users tend to believe that perceived usefulness (PU) and perceived ease of use (PEU) are among the dominant beliefs that influence the intention to adopt or use the e-government (Nkwe, 2012). One of the recent studies that assessed the factors that influence acceptance of e-government was performed in Jordan. The factors included *perceived ease of use*, level of education, privacy, security and trust (Munyoka, 2020). Several obstacles may prevent governments from offering citizens trustworthy services. Lack of knowledge about the e-government programme, inadequate IT infrastructure, lack of qualified personnel and training programmes, lack of policy and regulations for e-use, cultural differences, lack of leadership and management support, lack of partnership and collaboration, resistance to change to e-systems, lack of strategic plans and shortage of financial resources are some of the notable obstacles or challenges mentioned in the literature (Al-Shboul, Rababah, Al-Shboul, Ghnemat, & Al-Saqq, 2014; Chan *et al.*, 2010; Ndou, 2004; Nkwe, 2012).

3. Hypotheses formulation and conceptual framework

This study extends the TAM, which postulates that when users or individuals are subjected to a piece of technology, several factors affect their choices for how and when to use it. (Davis, 1989; Yueh, Lu, & Lin, 2015). The fundamentals of TAM lie in two main measures which are *perceived usefulness* (PU) and *perceived ease of use* (PEU). PEU describes the amount to which the system will liberate users from the effort, whereas PU refers to whether the technology will enhance or improve the user's *job performance* (Davis, 1989). The TAM has proven to be one of the reliable and consistent models in the literature and has been utilized successfully as an extension of many technology acceptance models (Lindsay, Jackson, & Cooke, 2011; Venkatesh & Davis, 2000).

Few of the previous studies that used TAM as a benchmark included the context of maternal preschool teachers in acceptance of mobile phones where they found that *perceived usefulness* (PU) of the technology and *perceived ease of use* (PEU) tend to statistically influence

the *behavioural intention* (BI) (Byomire & Maiga, 2015). PU is primarily influenced by PEU since it indirectly affects technology adoption intentions and, ultimately, technology usage. Behavioural intention is an individual's readiness to perform a given behaviour (Davis, 1989). In most cases, various factors tend to influence users of a particular technology to intend to use it in the near future (Mushi, 2020).

The correlations that were investigated using TAM in earlier research that are similar to this one are also adopted since this study adopts to extend TAM. In the context of e-government services, *perceived ease of use* is an internal conviction that the systems can be used to provide feedback and concerns smoothly and without limitations and barriers. If users understand how to use e-government sites or platforms to obtain and use essential information, then they will perceive that social media saves time and is useful. Consequently, *perceived ease of use* is expected to be positively correlated with *perceived usefulness* (Chawla & Joshi, 2019).

Additionally, since it suggests that the service provider was competent in the system's development, an easily understandable system might foster confidence among users (Nguyen, Nguyen, Huynh, Vrontis, & Ahmed, 2023). In other words, people will be less sceptical about the quality of the services and more willing to use them when they know how to use e-government systems and receive useful e-government services.

Citizens will avoid using e-government systems if they find it challenging and confusing (Akram *et al.*, 2019). The amount of effort users put into the platform will also probably affect their intention to participate (Karunia, Budiaji, Suzana, Dewi, & Prasetyo, 2023). Thus, in terms of intent to participate in e-government systems, *perceived ease of use* is a crucial factor.

Through citizens' commenting and communicating on the government sites, they eventually participate in e-government services without travelling to government offices, thereby serving cost and time (Munyoka, 2020). As a result, *perceived usefulness* may substantially impact citizens' participation in e-government systems (Nguyen *et al.*, 2023). Based on the discussed justifications, the following hypotheses are posited.

- H1. Perceived ease of use (PEU) of e-government systems will positively influence the citizens' behaviour intention (BI)
- H2. Perceived ease of use (PEU) of e-government systems will positively influence the citizens' perceived usefulness (PU)
- H3. Perceived usefulness (PU) of e-government systems will positively influence the citizens' behaviour intention (BI)
- H4. Perceived ease of use (PEU) is positively related to participation in e-government sites.
- H5. Perceived usefulness (PU) is positively related to participation in e-government sites.

According to Farwell, Shier, and Handy (2019), transparency can be thought of as a composite construct made up of various elements, including external accessibility and active disclosure. Although it has been defined in a variety of ways, most definitions prioritize visibility. A good working definition of transparency starts with "*the availability of information about an actor that allows the other actors to monitor the workings or performance of the first actor*" (Meijer, 2013, p. 430).

Governments can encourage openness by actively publishing information about their plans and actions and then making it available to the public so they can access, follow and assess it. When government information is made available to the general public, transparency in government is seen from the perspective of the citizen. Even if information is available, citizens will not believe there is transparency in government until they are properly informed about its actions and decisions. Transparency requires the

sharing of details about major decision-making processes, how they work and how well they perform. Unrestricted access to information from government agencies fosters transparency and increases the public's confidence that the government is acting in a trustworthy manner (Farwell *et al.*, 2019). As a result, numerous initiatives are made at the government level to promote administrative transparency, which raises public confidence in the government (Mansoor, 2021).

According to a fairly popular definition put out by Rousseau, Sitkin, Burt, and Camerer (1998), "trust is a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behavior of another". According to Mayer, Davis, and Schoorman (1995), this concept is based on a cross-disciplinary collection of works on trust (such as the willingness to be vulnerable).

Fiduciary trust, mutual trust and social trust are three major conceptual characteristics of trust in governance that Thomas (1998) highlights. Despite having different conceptual approaches, all of these experts concur that transparency and information are key factors in explaining how people develop trust in their governments. However, prior research does not go into great detail as to why having more knowledge promotes more trust in the government. The current study argues that citizens will only trust the government if they know what the government is doing, unlike previous studies that did not clarify the link between transparency and trust in government (Grimmelikhuijsen, 2009). Public trust in the government is considerably increased by the timely provision of pertinent information to the public via online platforms (Lee & Porumbescu, 2019). Taking into consideration that Tanzania has citizens who have considerably low exposure to sophisticated systems, there is high possibility of having doubts on the reliability and security of their information. As a result, trust is likely to be a potential aspect to be considered on acceptance of e-government systems.

Negative information, or information that suggests the government is acting against the public interest, can increase the likelihood of loss of trust in their government, thereby reducing public confidence in government sectors (Grimmelikhuijsen, 2009).

Welch *et al.* (2005) discuss a positive relationship between perceptions of transparency and trust in government, but they do not test this relationship in their study. Increased government transparency can restore trust in government (Halachmi & Greiling, 2013) because government transparency will increase citizens' estimates of the probability of gain associated with the establishment of fiduciary or institutional trust by informing people about how government works for them.

Participation is among the important aspect in e-government acceptance. Citizens can indirectly participate in e-government services without physically visiting government offices by posting comments and communicating on social media. Therefore, people might be able to accomplish their e-government service goals in less time and for less money (Alzahrani, Weerakkody, & Al-Karaghoul, 2018). Therefore, perceived utility may have a significant impact on how often citizens utilize social media platforms (Khan, Umer, Umer, & Naqvi, 2021). It is therefore necessary to investigate if the perception of Tanzanian citizens towards using e-government systems has a significant impact.

The following hypotheses are also posited.

- H6. Perceived transparency (PTN) positively influences perceived trust (PTR)
- H7. Perceived ease of use (PEU) positively influence perceived transparency (PTN)
- H8. Perceived trust (PTR) positively influences perceived participation (PPT)
- H9. Perceived usefulness (PU) positively influences perceived participation (PTN)

The illustration of the formulated hypotheses is seen in the conceptual framework in Figure 1.

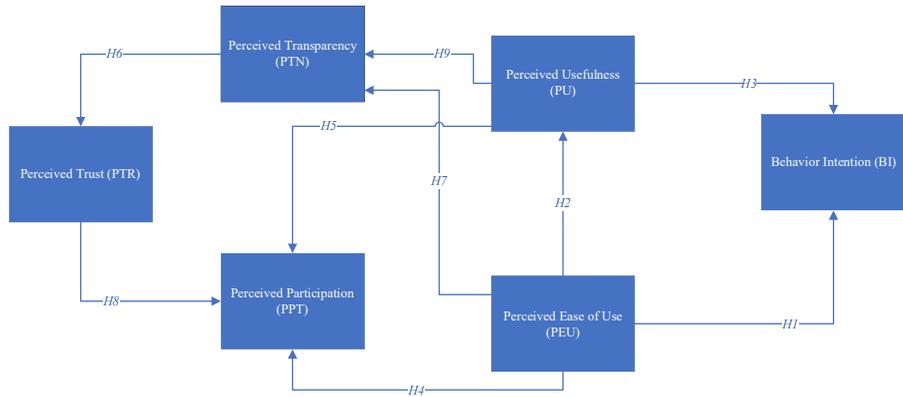


Figure 1.
The conceptual
framework of the
research

Source(s): Author

4. Methodology and data collection

This research involved a sample of 153 respondents in Tanzania who have experience on using or accessing e-government sites. Since the official language in Tanzania is Kiswahili, the questionnaires were translated from English to Kiswahili through linguistic experts to ensure the accuracy of the translation process; another linguistic expert translated the Kiswahili version back to English to see if the original and final English versions have the common meaning. The data collection took around 20 days. The total number of questionnaires distributed were 170, of which only 159 were filled up, indicating a response rate 93.5%. Three questionnaires were incomplete and 3 were incorrectly filled up by respondents. The sample consisted of 80 males and 119 females.

The sampling method used was random because the majority of Tanzanians are already using e-government systems in various contexts, leaving the majority of the respondents eligible for producing reliable results. Some of the questionnaires were sent to the respondents online and the rest were administered manually. In some circumstances, extra efforts were employed to convince respondents to allocate time to fill the questionnaires.

The Smart PLS 4 was opted in this research over AMOS because the main target was primarily to predict the indicators by means of the components expansion (Hair, Matthews, Matthews, & Sarstedt, 2017). The instruments developed for this effort was a survey form with 23 items developed by following the information systems research methods and a multiple-item Likert scale was utilized for assessments (Lee, Lee, & Kwon, 2005). Constructs were subject to measurements with the use of the Likert scale, as suggested from related prior research, where 1 denotes 'strongly disagree' and 7 denotes 'strongly agree'. As all survey respondents were Swahili speakers, survey forms had to be accurately translated from English into Swahili dialect. Back translations were therefore performed, an approach that is broadly applied in various cross-cultural surveys (Brislin, 1970).

Regarding data analysis, the approach was based on the structural equation modelling-variance based (SEM-CB) method using partial least squares (PLS) to examine the research models of this study. The analysis consisted of two phases which involve evaluations of current measurement models and evaluations of current structural models after carrying out descriptive analyses. This two-stage analytical approach comprising a measurement model and a structural model evaluation is better than a one-step evaluation (Hair, Anderson, Babin, & Black, 2010). The measurement models describe the measurements of constructs, and structural models define the relationships among constructs in structural models (Hair *et al.*, 2017).

This study employed structured equation modelling (SEM), and the analysis was performed using partial least square (PLS 4) (Awang, 2015). The questionnaire was tested for reliability by using Cronbach's alpha, where the acceptable levels of alpha are 0.8, and higher is considered good, any value above 0.7 is satisfactory and it is unacceptable if it is less than 0.5 (Burgess, 2001). The outliers were assessed using squared Mahalanobis distance (D^2) (Cook, 1977). The multivariate normality of the data sets was assessed by investigating the deviation of variances and covariance from the centroid (DeCarlo, 1997). In the case of model fitness, the absolute fit was assessed using chi-square (χ^2), incremental fit through the confirmatory fit index (CFI) and the parsimonious fit was assessed by chi-square/df (χ^2/df). Unidimensionality was assessed using the criteria proposed by Awang (2015), which asserts that it is achieved when each of the items has a factor loading of value greater than 0.5. The construct reliability was assessed using Cronbach's alpha (Tavakol & Dennick, 2011).

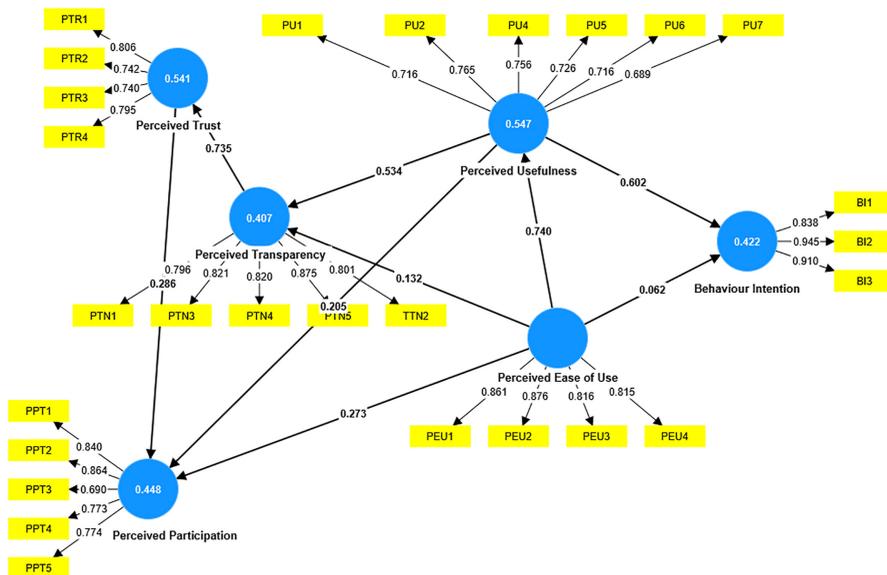
5. Results and discussions

The structural model consisting of five constructs and 23 measurement items was modelled in Smart PLS 4 as seen in Figure 2. It was then tested for reliability and validity before proceeding to further steps of analysis. It can be seen that all the factor loadings are greater than 0.5, indicating that the model has attained a unidimensionality condition.

The model's construct validity and reliability parameters are shown in Table 1. As can be observed, the model is legitimate and reliable to give results for path analysis because all Cronbach's alpha values are above 0.8, and the composite reliability (ρ_c) values are above 0.7.

The results of the heterotrait-monotrait ratio of correlations (HTMT)-based discriminant validity.

Validity assessment are shown in Table 2. Because each construct in the PLS path model has the strongest connections with its indicators, the results demonstrate that all values are less than 0.9, indicating that the model is reliable (Henseler, Ringle, & Sarstedt, 2015).



Source(s): Author

Figure 2.
Structural model of
the study

Construct	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Behaviour intention	0.88	0.884	0.927	0.808
Perceived ease of use	0.864	0.874	0.907	0.76
Perceived participation	0.851	0.878	0.892	0.625
Perceived transparency	0.881	0.889	0.913	0.677
Perceived trust	0.772	0.774	0.854	0.595
Perceived usefulness	0.823	0.828	0.871	0.531

Source(s): Mushi, R.

Table 1.
Construct reliability and validity parameters

Relationship	Heterotrait-monotrait ratio (HTMT)
Perceived ease of use → behaviour intention	0.569
Perceived participation → behaviour intention	0.486
Perceived participation → perceived ease of use	0.671
Perceived transparency → behaviour intention	0.724
Perceived transparency → perceived ease of use	0.589
Perceived transparency → perceived participation	0.845
Perceived trust → behaviour intention	0.801
Perceived trust → perceived ease of use	0.734
Perceived trust → perceived participation	0.686
Perceived trust → perceived transparency	0.88
Perceived usefulness → behaviour intention	0.76
Perceived usefulness → perceived ease of use	0.864
Perceived usefulness → perceived participation	0.671
Perceived usefulness → perceived transparency	0.73
Perceived usefulness → perceived trust	0.764

Source(s): Author

Table 2.
Discriminant validity

The analysis on how powerful the model is on testing the hypotheses was performed using Q^2 , and the results are seen in Table 3. The results show that all values are above 0, indicating that the model is strong enough to be able to predict the relationship between the constructs.

The results on the path analysis are seen in Table 4 where all hypotheses and their associated p-values are indicated. The snapshot of the final model is also illustrated in Figure 3.

5.1 The direct influence of perceived ease of use on perceived usefulness (H2)

This study hypothesized that *perceived ease of use* had a direct influence on the *perceived usefulness* of mobile phone technology among employees. This was also supported by some studies in the context of the acceptance of mobile phone technology (Gallego, Luna, & Bueno, 2008; Kwon & Chidambaram, 2000). The results of this study in Table 4 show that the relationship was statistically significant. That means this hypothesis is supported. This study, therefore, suggests that the more an employee perceived that e-government systems are easy to use, the more they perceived that the systems are useful to them when accessing government services.

5.2 The direct influence of perceived usefulness on behaviour intention (H3)

The relationship between *perceived usefulness* and *behaviour intention* by Tanzanian citizens was also accepted as seen in Table 4, where hypothesis H3 was found to be statistically significant. This suggests that the perception of the usefulness of e-government systems amongst citizens influences their intention to use it in future.

5.3 Direct influence of perceived ease of use on behaviour intention (H1)

This study posited that whenever a citizen perceived that e-government systems are easy to use, it will eventually influence their intention to use them in the near future. The results of this study *rejected* this hypothesis as seen in Table 4, with P = 0.635, indicating that the more ease the e-government systems are likely, more the citizens intend to use e-government technologies, tools and software in the near future. This finding differs from the majority of previous research probably due to the contextual usage of e-government practices being too familiar to the Tanzanians. The fact that citizens are already using ICT on other e-commerce applications makes them feel that there is nothing special which can affect their knowledge or

Construct	Q ² predict	RMSE	MAE
Behaviour intention	0.24	0.9	0.674
Perceived participation	0.208	0.91	0.741
Perceived transparency	0.251	0.889	0.656
Perceived trust	0.307	0.849	0.691
Perceived usefulness	0.528	0.702	0.549

Source(s): Author

Table 3. Q² predictive relevance

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	p-values
Perceived ease of use → behaviour intention	0.062	0.046	0.131	0.475	0.635
Perceived ease of use → perceived participation	0.273	0.273	0.129	2.12	0.034
Perceived ease of use → perceived transparency	0.132	0.13	0.156	0.85	0.395
Perceived ease of use → perceived usefulness	0.74	0.747	0.041	18.185	0
Perceived transparency → perceived trust	0.735	0.744	0.045	16.18	0
Perceived trust → perceived participation	0.286	0.297	0.128	2.23	0.026
Perceived usefulness → behaviour intention	0.602	0.621	0.11	5.463	0
Perceived usefulness → perceived participation	0.205	0.204	0.145	1.412	0.158
Perceived usefulness → perceived transparency	0.534	0.543	0.136	3.936	0

Note(s): SE, standard error, ***p < 0.05

Source(s): Author

Table 4. Path analysis results

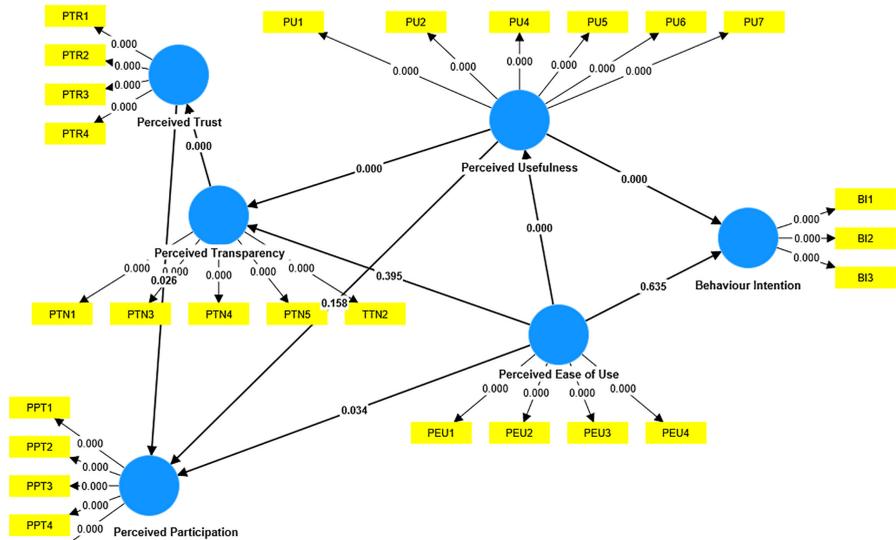


Figure 3.
The final model of the study

Source(s): Author

exposure to e-government. As a result, it has no impact to their intention to use e-government tools and techniques in the future.

5.4 Direct influence of perceived ease of use on perceived participation (H4)

This study hypothesized that the perceived ease of use would have a positive significant relationship with the citizens’ participation in e-government systems. The results of this research as seen in Table 4 show that the relationship has been accepted, with $P = 0.034$. This implies that the more citizens perceive that the e-government systems are easy to use in accessing governmental services, the more they feel that they can participate in governmental activities.

5.5 Direct influence of perceived ease of use on perceived transparency (H5)

It was posited in this research that the perceived ease of use would have a direct influence on the perceived transparency. This relationship was rejected, with $P = 0.395$. In this case, there is no guarantee that the easier usage of e-government systems will guarantee the feeling of transparency among the governmental activities in Tanzania.

5.6 Direct influence of perceived transparency on perceived trust (H6)

This study hypothesized that perceived transparency would have a positive significant relationship with the citizens’ trust in e-government systems in Tanzania. The results of this research as seen in Table 4 show that the relationship has been accepted, with $P = 0.00$, indicating that the hypothesis was supported by the results. This implies that the more citizens perceive that there is transparency in the actions of governmental officials, the more they are likely to trust the services that are offered through the e-government channels.

5.7 The direct influence of perceived usefulness on perceived transparency (H7)

One of the proposed hypotheses was that perceived usefulness has a positive significant relationship with the citizens' perception of transparency on how services are offered to them. The results of this research as seen in Table 4 show that the relationship has been accepted, with $P = 0.00$, indicating that the hypothesis was supported by the results. This implies that the more citizens perceive e-government systems are useful in accessing the services of their government, the more they feel that there is transparency in the services offered through the e-government channels.

5.8 The direct influence of perceived usefulness on perceived participation (H8)

This study hypothesized that perceived usefulness would have a positive significant relationship with the citizens' perception that they participate in making governmental decisions and operations. The results of this research as seen in Table 4 show that the relationship has been rejected, with $P = 0.158$, indicating that the hypothesis was not supported by the results. This implies that there is no guarantee that if the e-government systems are perceived to be useful, it lead to feelings of participation among the citizens in their government.

5.9 The direct influence of perceived trust on perceived participation (H9)

It was posited in this research that the perceived trust would have a direct influence on the perceived participation. This hypothesis was supported by the results of 0.026. This implies that the more the citizens trust their government systems to deliver the services to them, the more they feel that they should participate in their governmental operations in one way or another.

6. Critical discussions

The acceptance of e-government systems has been crucial in recent years as the technology is becoming more applicable in the way governments deliver services to the citizens. It is essential to study the aspects surrounding the usage of e-government from multiple perspectives to provide room for key stakeholders to maximize its usage. Participation, transparency and trust are among the key aspects that citizens tend to think about whenever they are subjected to the use of e-government systems, platforms or tools to access services from the governments. This research provides a wide picture of such dimensions and how they relate to the factors of TAM through literature and empirical study. The results of this research provide a solid background to the theoretical platforms and the basis for policy and regulations pertaining to the usage of e-government by citizens in Tanzania and other countries with similar contextual settings.

7. Conclusion and future works

This research provides insights into e-government technology acceptance by Tanzanian citizens. It employed a survey involving 153 respondents where TAM was extended by trust, participation and transparency before testing the hypotheses. The results have shown that perceived ease of use has no significant impact on transparency and intention to use e-government systems and perceived usefulness has no significant impact on citizens' participation in e-government sites. The results of this research provide the basis for adjusting policy and regulations and a platform for researchers and scholars in the area of technology acceptance. Further research may focus on the assessment of acceptance of

current technologies such as artificial intelligence and blockchain and their impact on the way citizens access governmental services.

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