Is COVID-19 threatening electoral democracy in Uganda? Readiness to accept "scientific voting" (electronic voting) amidst the COVID-19 pandemic

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Abstract

Purpose – *The purpose of this paper is to assess the readiness of Ugandans to accept electronic voting under the restrictive conditions of the COVID-19 pandemic.*

Design/methodology/approach – *A semi-structured questionnaire, built on a five-point-Likert scale with responses ranging from 1 – strongly disagree to 5 – strongly agree was used to get quantifiable data from four main electoral stakeholders i.e. the policymakers, urban and semi-urban youth, rural voters and government officials. These stakeholders were purposively and conveniently selected because of the influential roles they play in promoting electoral democracy in Uganda. Using a cross-sectional survey design, the authors adopted correlational and quantitative research designs to collect and analyse data. Data was collected from a maximum sample size of 384 as recommended by Krejcie and Morgan (1970) from which 252 useful responses (65.6% response rate) were obtained. Using a statistical package for social scientists version 21.0, the authors performed a Pearson correlation coefficient to determine the relationships between study variables and linear regression analysis to predict the readiness of the stakeholders to accept e-voting more especially under the constraints caused by the COVID-19 pandemic.*

Findings – *There was a positive significant relationship between perceived usefulness (PU) and attitude towards adoption, perceived ease of use and attitude towards adoption, attitude and readiness and finally trust propensity and readiness. The regression results show that 65% of the variations in readiness to adopt e-voting can be explained by perceived ease of use, PU, trust propensity and attitude towards adoption. Attitude towards adopting e-voting accounts for the highest variations in the model followed by trust propensity and finally PU. However, perceived ease of use was found to be insignificant.*

Research limitations/implications – *The study was limited to only PU, perceived ease of use, trust propensity, attitudes towards using/adoption and readiness to accept e-voting amidst the COVID-19 strict conditions. In Africa, electoral democracy can be influenced by a number of factors such as finances, education levels, sectarianism, voter rigging, perceived risk, political and economic environment. These were not taken into consideration yet they would affect the stakeholders' attitudes and perceptions which would directly or indirectly affect the adoption of electronic voting.*

Practical implications – *Given the low levels of technology infrastructure in the country, there is a general low uptake of technology-oriented systems. The internet reach is low and quality is poor whilst the radio and televisions network is limited to a few urban settings, poor quality technology systems such as the recently acquired voter biometric systems and the constant government actions to switch off the internet and social media whenever there are contentious political issues. These inadequacies together with the restrictive COVID-19 conditions have compromised the participation of stakeholders which dents the stakeholders' readiness to accept e-voting which consequently compromises electoral democracy in the country. Therefore, government, electoral observers, the international community and civil society organizations need to accelerate the technology infrastructure development in the country, training and development of technical skills and competences, as well as mass mobilization on the use of technology-oriented platforms aimed at promoting electoral democracy. The country should come up with ICT policies and regulations that encourage the use of ICT in areas that promote democracy. These may*

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include; the use of an easy e-voting system such as emails and voting via the post office. Also, Lawmakers, civil society organizations and the international community should make it punitive for anyone who disenfranchises people through internet disconnection, denial of access to broadcast, print and online media. These interventions will restore peoples' attitudes and perceptions towards electronic voting, consequently increasing their levels of participation in the electioneering process.

Originality/value – *The Ministry of Health, the Uganda Police Force and other security agencies have come out strongly to enforce the COVID-19 standard operating procedures which among others include the banning of political gatherings, processions and meetings of any kind. As a remedy, the Electoral Commission is encouraging political parties, electoral candidates, voters and other stakeholders to use technology-oriented systems such as mobile phones, broadcast and print media, the internet and others to reach out to the electorate. With the government in full control of all these electronic, print and broadcast media, having previously switched them off during the 2011 and 2016 polls consequently disenfranchising many people from their democratic rights, it remains unknown the extent to which the electorate is ready to accept and appreciate scientific voting more so during this time when restrictions against COVID-19 are not making it any better for the voters and other key participants to carry out their political and civil activities.*

Keywords *Ntale, Uganda, Elections, Perceived usefulness, Readiness, Attitudes, 2021 Elections*

Paper type *Research paper*

Introduction

The COVID-19 pandemic has affected the political systems of several countries. According to Flinders (2020) and the International Institute for Democracy and Electoral Assistance report (2020), at least 56 countries have delayed national or regional elections, consequently leading to the suspension of political and legislative activities, isolation of multiple politicians, blocking of civil and constitutional rights of people to assemble and interact as they make the choice of their leaders. These countries so far include; Libya, Ghana, Germany, UK, Iran, Singapore and many others. However, countries like Uganda find themselves in a situation where if they have to postpone elections, a state of emergency must be declared and the incumbent president must be replaced by the speaker of parliament for a period of one year (Presidential Elections Act, 2010). This position has been widely rejected by the sitting government saying that if political competitors adhere to the COVID-19 standard operating procedures (SoPs), elections can go on amidst the COVID-19 pandemic (The Independent, 1 July 2020). Therefore, the Government of Uganda has proposed "scientific elections" to allow citizens to perform their constitutional rights of electing their leaders every after five years as a way of avoiding internal conflicts that may arise if Ugandans do not hold elections as constitutionally mandated. Some countries such as Burundi, Malawi, France, Singapore and South Korea have conducted their elections whilst adhering to some of the SoPs as set out by World Health Organization (WHO). This gives confidence to Ugandans that they can still hold elections amidst the presence of the COVID-19 pandemic.

Whereas the WHO SoPs are scientifically aimed at minimizing the spread of the virus, they are very restrictive to mass gathering of people. This means that open campaign gatherings, campaigns trails and meetings are not allowed, as the COVID-19 virus spreads faster in such environments. This, however, gives undue influence to the incumbent leadership, as they are the only ones to communicate and execute government policies and distribution of food and other relief services to different communities while leaving out political competitors in offering alternative paths to the social problems affecting their societies (Krimmer *et al.*, 2020). Indeed, Goodman and Pepinsky (2020) found out that the majority of people in different countries supported their incumbent leaders during the first three months of the pandemic when the entire World was under a total lockdown.

In the United States of America, Donald Trump's support hiked during the first three months of the pandemic while in Uganda and elsewhere, presidents were the most listened to leaders since people didn't know what to do and were purely relying on the directives from the incumbent leaders. This in a way increased the leaders' support in the first months of the pandemic.

To solve this impasse, governments have proposed "scientific electronic voting" which refers to the electronic management of the entire electoral process right from nominations, political campaigns, actual casting of the ballots and the dissemination of results to the stakeholders (Abu-Shanab *et al.*, 2010). It involves the use of computers or computerized equipment, radio and television sets for communication, phones, biometric voter registers and the registration process, social media use and other technology tools aimed at aiding different stakeholders to achieve their intended electoral objectives (Qadah and Taha, 2012). This new trend is in line with the transition from traditional democracy to e-democracy. As elections represent the highest level of democracy, where citizens choose their leaders and representatives, e-voting has been listed among the key fields of e-democracy (Keith, 2004; Nu'man, 2012). Merging technology with the election process to facilitate voting and solve the problem associated with the manual casting of votes is already an existent reality and several countries are using or testing different types of electronic voting systems (Germann and Serdült, 2017).

According to Xenakis and Macintosh (2005), technology is used to improve peoples' health, education, welfare and general standards of living. It is expected that its admission to the democratic system will increase participation, improve the voting processes, enhance citizens' convenience and improves transparency and accountability in the electoral democratic dispensation. For this to be achieved, there is a need for a well-trained electorate on the usefulness of the technology systems in providing transparency and trusted electoral results (Musiał-Karg and Kapsa, 2020). However, this is refuted by Solvak and Vassil (2018) on the ground that mere e-voting cannot increase stakeholders' participation if their attitudes have not been positively appraised to appreciate the electronic method of voting. One of the most important and complicated issues related to e-voting is gaining citizens' trust; trust has different aspects that should be taken into account so that it can remain strong and will not collapse because of small problems. Therefore, it is important to know the factors that drive people to trust e-voting (Cetinkaya and Cetinkaya, 2007).

Uganda is one of the countries that have not yet fully embraced this technology. Since Independence, Uganda has been using the manual voting framework where the voter picks the ballot paper from the presiding officer and proceeds to mark it in secrecy at a table, uses a tick or a thumbprint against the symbol or photo of the candidate of his choice and folds it, then proceeds to the voting box and inserts the ballot paper in the box. After this, the voter goes to the presiding officer responsible for marking the voter's thumb with indelible ink to show that he has already voted. The voter then leaves the polling station and waits for the counting and the eventual dissemination of the votes. All these processes are manually executed (The Electoral Commission, 2009). However, this voting framework is associated with a number of problems which among others include; multiple voting, poor tallying of results, voter intimidation and bribery, theft of the ballot boxes, inaccurate results, ballot stuffing which sometimes result into beating and incarceration of voters, violence and death of people and destruction of property (Cunningham *et al.*, 2021). The manual system is synonymous with lack of data secrecy, inability to carry out remote voter identification, lack of audit trails and transparency. According to Swamy (2003), these kinds of flaws are common in developing countries and are usually meted out by the government to silence the opposition and keep themselves in power despite their increasing unpopularity due to their failure to address peoples' concerns.

Five years back, the Uganda Electoral Commission announced a new voter registration system by a German firm called Muhlhbauer High Tech International ahead of the 2011 presidential and parliamentary elections (Bailur, 2009), a biometric system intended to do away with manual-based voting. This biometric system worked along with other hardware and software tools such as computers, projectors, display screens and many others. However, the hardware and software technologies failed to achieve their intended

objectives because of their regular technical failures, inadequate technical skills and competencies of the operators, hence making the whole idea of electronic voting susceptible and questionable (Wolf *et al.*, 2017). Similarly, the use of electronic voter machines in the 2014 Namibian elections ended in the high court by the opposition candidates accusing the government and the Indian manufacturers of technical flaws which compromised the security and integrity of the elections (Cooper, 2014). In contrast, the introduction of the electronic voting system in Nigeria's elections has been applauded by several scholars and international observers for minimizing electoral malpractices and steering the country back to its democratic path (Iwuoha, 2018).

Despite the successes registered elsewhere, it is not known whether the introduction of e-voting systems will reduce the irregularities that continuously mar Uganda's elections. Whilst manual voting is synonymous with problems, it is little known how the decision to go electronic voting was arrived at and which stakeholders were involved in this decision-making? Are there national standards about electronic voting? Is there a legal framework that regulates electronic voting and all its associated components? Is the proposed technology robust enough to cover both supervised and non-supervised environments? Was there a pilot voting carried out and if so, what were the results? Is there free and fair discussion on political issues among all the stakeholders? Without a clear response to these questions coupled with the non-democratic COVID-19 restrictions which discourage political gatherings and consultations, it remains unknown as to whether the stakeholders' attitudes and perceptions will positively be aligned to electronic voting.

This study, therefore, extended the technology acceptance model (TAM) by Davis (1989) to examine the readiness to accept and adopt e-voting technology in a low developed country. The TAM was originally introduced and studied as a means of understanding how users adopt and use new technology by evaluating the factors that influenced the decision to accept a new technology (Davis *et al.*, 1989). TAM is based on the belief "that perceived ease of use and usefulness can predict attitudes towards technology" (Lederer *et al.*, 2000). Perceived usefulness (PU) of technology and perceived ease of use of technology combine to create an attitude about the technology thereby influencing decisions of whether stakeholders may adopt the technology or not.

Literature

E-voting

According to Essex and Goodman (2020), electronic voting refers to the use of electronic means to either aid or take care of the electoral process starting from the registration of voters, to the actual casting of the ballots to the final counting of votes and dissemination of results. There are a number of tools used during this process and that there is no single tool that works in isolation of others to deliver a transparent election, rather, a number of standalone and or interconnected electronic voting devices such as computers, cameras, projectors, display screens, vote recording, data encryption and transmission systems are inter-connected to receive, analyse, display and transmit results in a timely manner. According to Krimmer *et al.* (2020), the purpose is to speed up ballot collection, counting, analysis, faster publication of results and general reduction of voter-related costs such as payment for election staff, supervisors and observers. Further justifications for electronic voting were suggested by Baguma and Eilu (2015) and Musiał-Karg and Kapsa (2019), who found out that electronic voting can potentially increase citizens' electoral participation in countries with low voter turnout such as those in Estonia and in some parts of sub-Saharan Africa. Whilst remote electronic voting through the internet and mobile phones is deemed to be cost effective, improves the voting process, enhance citizens' convenience and increase citizens' electoral participation in countries with low voter turnout (Nu'man, 2012; Wikstrom, 2012; Svensson and Leenes, 2010), least developed nations have largely not adopted e-voting in managing the election process. Whilst developed nations have

appreciated the electronic voting processes for its undue influence in promoting transparency and consequently democracy, it is yet not known why there is a slow pace and interest in adopting the same in developing nations given the numerous irregularities associated with paper voting systems. Whilst some scholars such as Alvarez and Hall (2010) attribute this problem to the autocratic governance systems of most of the developing nations, the lack of readiness to accept/adopt sophisticated voting methods among the electoral stakeholders should not be underestimated. Some developing countries such as Uganda, Kenya, Ghana, Tanzania and Rwanda which have adopted the electronic voting systems have not been able to achieve the anticipated benefits such as increased voter turnup, avoidance of vote rigging and other problems. This may be attributed to inadequate resources to invest in robust electronic voting systems, inadequate training on the use and appreciation of the electronic voting systems, lack of transparency in the use of these systems and other security-related problems.

Technology acceptance/adoption

Many theories have been advanced to explain the rate of adoption of new technology. These include the theory of reasoned action (TRA) (Fishbein and Ajzen, 1975), TAM by Davis (1989), theory of planned behaviour (TPB) (Ajzen, 1991), TAM 2 (Venkatesh and Davis, 2000) and TAM 3 (Venkatesh, 2003), diffusion of innovation theory (Rogers, 1995), Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh *et al.*, 2003) and UTAUT 2 (Venkatesh *et al.*, 2012).

The TRA was advanced by Fishbein and Ajzen (1975) that predicts the behaviour of an individual as a facet of behavioural intentions which, in turn, emanates from attitudes and subjective norms. However, Ajzen (1991) modified TRA by adding a perceived behaviour control variable that became known as the TPB. However, this model cannot be applicable in predicting the acceptance/adoption of e-voting. On the other hand, diffusion of innovation theory suggested by Rogers (1995) asserts that once a new product or innovation exists, adoption does not happen simultaneously, hence, there exists innovators, early adopters, early majority, late majority and laggards. Five factors that influence the adoption of innovation have been cited by many scholars and researchers of diffusion theory. These include relative advantage (usefulness of innovation or new product is superior to existing substitute), compatibility (innovation being perceived as consistent with existing values, past experiences and the needs of the potential consumer), complexity (the degree to which an innovation is perceived as relatively difficult to understand or use), triability (trying out or testing an innovation on a limited basis) and observability, explained as the degree to which the results of an innovation are visible, imagined or observed by the consumer (Schiffman and Kanuk, 2009).

In another dimension, TAM by Davis (1989) focuses on attitude explanations of intention to use a specific technology or service (Lule *et al.*, 2012). Actual system usage here is dependent on attitudes towards using it whilst perceived ease of use and usefulness affect the attitude. Thus, a number of studies have been carried out to assess e-voting adoption in various countries and have yielded mixed and interesting results.

Perceived usefulness and attitudes towards use/adoption

PU has been defined as the degree to which a person believes that using a particular system would enhance his or her job performance (Davis, 1989). Before thinking of adopting any system, potential adopters assess the consequences of their adoption behaviour-based on the ongoing desirability of usefulness derived from the innovation (Das, 2020). In fact, information system adoption research suggests that a system that does not help people perform their jobs is not likely to be received favourably, and therefore, the potential users would develop a negative attitude towards that system. Venkatesh *et al.*

(2003) also looked at PU in terms of the performance expectancy. PU is recognized as having a strong positive effect on attitude, intentions, and therefore, the readiness of adopters to use, accept or adopt a new innovation.

Pikkarainen *et al.* (2004) applied the TAM in Finland and they found PU as a determinant of attitude, intention and actual behaviour, which encouraged the users of the twenty first century to be ready to accept e-voting and to use more innovative and user-friendly self-service technologies that give them greater autonomy in performing voting processes and obtaining information on voting perceptions. Mensah (2016) also suggested that PU is an important factor in determining readiness to accept and adopt any technology including e-voting acceptance. As a consequence, the greater the PU of e-voting services, the more likely the positive attitude towards usage and subsequently the higher the readiness to adopt and accept e-voting (Polatoglu and Ekin, 2001). Taylor and Todd (2005) found that for business environments, PU had a strong direct effect on an individual's attitudes and intention to use an information technology (IT) innovation like e-voting. Lopez and Manson (2007), in their study, found that PU is a powerful medium for improving acceptance and utilization of innovative e-voting technologies. PU in the TAM model strongly emphasizes the extent to which a system adds to the consumer's job performance (Davis *et al.*, 1989). In this context, PU involves the dominant features of the e-voting systems which can be accessed at any time no matter where the voter is and how well voters believe that e-voting can be integrated into their daily voting activities (Sattabusaya, 2006). When this belief increases, the voter's attitude towards using e-voting and the readiness to accept and adopt e-voting systems becomes more positive. The main reason people are ready to accept e-voting systems is that they find the systems useful to their voting processes and helpful in accomplishing their tasks.

Perceived ease of use and attitude towards using/adoption

According to Davis (2009) perceived ease of use is the extent to which a user believes a system is easy to learn or easy to use. Perceived ease of use is also widely understood as the degree to which a person believes that using a particular system would be free of effort (Dholakia and Dholakia, 2004). It may include the degree of complexity of a system and effort expectancy by the user. Perceived ease of use is believed to contribute towards positive attitudes and performance, whilst the lack of it can cause frustration, negative attitude, and therefore, impair the adoption of innovations (Davis, 1989; Venkatesh, 1999; Venkatesh and Davis, 2000). In an e-voting acceptance context perceived ease of use can be the degree of ease the users encounter when they use the e-voting technology. Derived from TAM perceived ease of use is one of the determinants of attitude towards use/adoption. Perceived ease of use has proven to have significant effects on PU and attitudes towards using or adopting new technology. The easier it is for a user to interact with a system, the more likely he or she finds it useful (Thong *et al.*, 2004). In the digital libraries setting, Hong *et al.* (2002) submitted that digital libraries need to be both easy to learn and easy to use. Yusoff *et al.* (2009) in their study found out that there was a significant and positive relationship between perceived ease of use and attitudes to use a new innovation. Lee *et al.* (2000) assert that perceived ease of use has a strong positive effect on attitude towards adopting or using an e-voting system. They looked at perceived ease of use in the ease of the voter obtaining information, ordering, using service and overall ease of use. Once the above aspects have been considered by an online voter, then the voters perceive online voting as an important process and develop a positive attitude towards it and their readiness to accept/adopt it increases.

Attitude towards using and readiness to adopt or accept

Despite the importance of attitude in predicting an individual's behaviour, research on IT adoption has largely neglected the role of attitude in explaining technology acceptance

behaviour (Tao *et al.*, 2020a, 2020b). In cases where research has done this, contextual factors usually deny researchers from generalizing the study results. In this study, we call attention to the role of attitude in explaining the readiness to accept new technology, in this case, e-voting technology. In line with earlier studies, readiness to accept/adopt has been used as a surrogate or proxy to actual adoption or acceptance. Indeed, earlier studies indicate that attitude towards a system fully mediates the effects of PU and perceived ease of use on intentions and readiness to accept a new technology when the attitude is strong, whereas it partially mediates the effects when the attitude is weak (Makmor *et al.*, 2019).

According to Kimea *et al.* (2019), PU and perceived ease of use are major beliefs that influence attitude towards system use and eventually lead to actual system use (or readiness to use the actual system in situations where the system has not been fully experienced). Borrowing from the Theory of Reasoned Action (TRA), TAM also emphasizes the fact that attitude towards a technology plays a big role in determining the behavioural intentions (and therefore, readiness) to use, accept or adopt the technology.

Behavioural Intention to use is defined as a measure of the likelihood that a person would adopt the application, hence, it could be a good indicator of user readiness. Whilst TAM uses actual usage to represent a self-report measure of time or frequency of adopting the e-voting acceptance (Davis *et al.*, 1989), in a practical point of view it is not easy to obtain an objective measurement of an individual's intention to participate in an e-voting behaviour. Nonetheless, several research studies have shown that both theoretical and empirical support exists for the powerful correlation between intention to participate in a behaviour, readiness to accept behaviour and actual behaviour (Dabholka and Bagozzi, 2002). Thus, a number of scholars have supported the fact that the attitudes and intentions and to use new technology is related to the readiness to accept the new technology.

Trust propensity and readiness to accept e-voting

Trust propensity is defined as the extent to which the user can trust the system (Abu-Shanab *et al.*, 2010). According to Morgan and Hunt (2005), trust exists when one has confidence in the system's reliability and integrity. Trust can, therefore, be looked at as the belief that a system is reliable and will fulfil what it was intended for with a high degree of integrity. Trust plays a significant role in determining the people's acceptance of new products and services including computer-based systems (Randell and Ryan, 2005). Thus, systems that are trusted have got higher chances of being accepted, let alone attracting the users' commitment to the systems. Customers will, therefore, be ready to accept a system if they have high trust in the system. Actually, in the urban areas where internet connectivity is high, mobile phone ownership is well spread, and therefore, technology awareness and usage in people's daily lives is also relatively high, the problem may not be accepting the new technology of e-voting, but rather the assurance that the new technology can be trusted. Thus, such aspects of trust such as security, privacy, usability, reliability, audit and verification and user expectation are paramount in determining readiness to accept a new system (Tsohou *et al.*, 2020). Therefore, creating an environment of trust gives people more assurance about the system and resultantly increases the people's readiness to accept the system.

Conceptualization

This conceptualization is based on Davis (1989) and extended by incorporating the construct of trust propensity suggested by Nu'man (2012) as being key in the adoption of e-democracy systems. PU, Perceived ease of use and trust propensity are the independent variables, attitudes towards using/adoption are the mediating variable whilst the dependent variable is readiness to accept/adopt e-voting. This study used readiness to accept as a proxy to acceptance for practical reasons. Studies were done in other countries where

e-voting has not been fully adopted – just like in Uganda have used surrogate/proxy variables to acceptance/adoption. For example, Abu-Shanab *et al.* (2010) used "intention to use" as a surrogate/proxy to actual usage or adoption. Readiness to accept is a good gauge of intentions and yet intentions, according to the TRA (Ajzen and Fishbein, 1985), later extended by the theory of planned behaviour (Ajzen, 1991) are likely to result in actual behaviour which is acceptance/adoption in this study. The model demonstrates that PU, perceived ease of use and attitude towards using or adopting the e-voting system leads to readiness to adopt or accept the e-voting system. In other words, people would adopt/accept e-voting if they have a positive attitude towards the system, perceive it as useful and easy to use. PU and perceived ease of use influence attitude towards adoption which, in turn, influence readiness to adopt/accept the system. The model also suggests that the trust that the users have in the system (trust propensity) equally determines the readiness to accept/adopt a new system (Figure 1).

Methodology

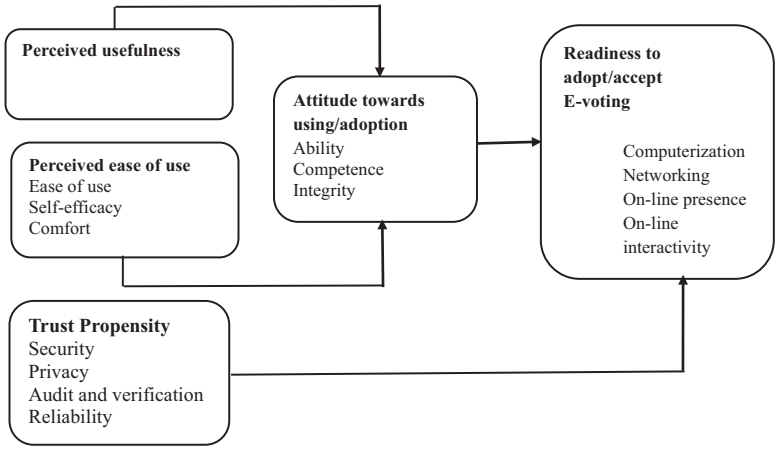
Research design

This study undertook a cross-sectional survey design. Cross-sectional surveys collect data to make inferences about a population of interest at one point in time. An attempt to use electronic voting in the 2011 and 2016 general elections did not achieve the desired effect. It was, therefore, important that we capture peoples' perceptions on their readiness to accept and adopt e-voting more so during this time of COVID-19 pandemic where the use of technology has been over emphasized as a way of minimizing the spread of COVID-19 but at the same time used to curtail dissent by government agencies. The cross-sectional survey design largely used quantitative approaches where correlation and regression approaches were used to investigate the relationships between the variables of the study.

Study population

Uganda's total population currently stands at 45,741,007 million people [Uganda Bureau of Statistics (UBOS) Statistical Abstract, 2019]. Out of this, 17,658,527 million people are above 18 years old and are registered voters with Uganda's Electoral Commission

Figure 1 Conceptual framework



Source: Davis *et al.* (1989); Nu'man (2012)

(Electoral Commission Report, 2020). In total, 70% of the registered voters are youth, between 18 and 40 years old whilst only 30% are above 40 years old. The youthful group lives mainly in urban and semi-urban areas and is considered to possess some level of technical competence in the use of technology-related tools than those from rural areas (Tukundane *et al.*, 2015). Therefore, using purposive sampling techniques, we selected different groups of interest to this study (the urban and rural youth, government officials, policymakers and the rural voters) from which we conveniently selected our study participants.

Sample size

The need for a representative statistical sample in empirical research has created the demand for an effective method of determining sample size. Therefore, the use of Krejcie and Morgan's (1970) sampling method was to ensure that every member of the sample is fully represented because as the population increases the sample size increases at a diminishing rate and remains relatively constant at slightly more than 380 cases. This study used the maximum sample size of 384 as recommended by Krejcie and Morgan and was increased by 40% to a total of 538 to provide for the non-response rate, as well as the unusable questionnaires.

Sampling method

Given that the subject of this research is a new and even ambiguous concept for Ugandan citizens, deciding on and selecting the appropriate sample had to be done with caution. Nu'man (2012) contends that when a new technology is introduced to people in any country, it is not expected that the whole population would accept and adopt it right away, but readiness levels would vary across the different groups. Acceptance normally begins with a smaller group, which then encourages others to participate. In line with Nu'man (2012), the sample was to be purposively selected to include the groups of society who are expected to use technology or who are currently using technology similar in some way to e-voting or the groups who play an essential part in affecting the public opinion and conveniently depending on willingness to participate. These included youth mainly from urban and semi-urban areas – mostly university students who make up the young educated generation expected to be closer to and more familiar with technology and to have the curiosity to use new technologies, government employees/political leaders (members of parliament, local council leaders and ministers in government – these are opinion leaders who play a big role in shaping the readiness to accept e-voting), journalists (these can support or destroy the e-election by their opinions, which often influence people). The point of this selection is that these groups could affect public opinion and could be the starting point for support of e-voting and a few semi-illiterate and illiterate people from both urban and rural areas of Uganda.

Data sources and instruments

Primary data was mainly collected from respondents through a self-administered semi-structured questionnaire. Self-administered questionnaires involve questioning, guided by identified themes in a consistent and systematic manner interposed with probes to elicit more elaborate responses. As observed by Bazeley (2009), researchers interested in generating explanations grounded in reality about a given phenomenon usually chose self-administered questionnaires to elicit such responses. To elicit high quality responses, respondents were guided through the questionnaire during the data collection process. The questionnaire contained mainly closed ended questions and a few open-ended questions all in line with the study objectives. The respondents answered the questions based on the extent to which they agree or disagree with the statements in the questionnaire.

Measurement of the variables

A pre-coded semi-structured questionnaire built on a Likert scale with responses ranging from 1 – strongly disagrees to 5 strongly agree was used to get the quantifiable data from individual respondents. All the study constructs were measured using the scales developed by earlier scholars. Specifically, the study constructs were operationalized and measured as follows:

PU was measured on a multi-dimensional scale covering overall usefulness as suggested by Howcroft *et al.* (2009), Ki Soon and Lee (2007), Aldás-Manzano *et al.* (2009), Littler and Melanthiou (2006), Yousafzai *et al.* (2008), Sattabusaya (2006). We asked questions such as "The use of e-voting technology is more cost effective/economical", "E-voting gives the flexibility to conduct voting anywhere any time".

Perceived ease of use is the degree to which a person believes that using a particular system would be free of effort. The overall perceived ease of use was measured on a multi-dimensional scale covering Self efficiency, discomfort and ease of use as suggested by Chong and Druckman (2010), Davis (2009), Pikkarainen *et al.* (2004). We asked questions such as "In my opinion, e-voting system can be easy and simple to use", "In my opinion, e-voting can be faster to use" and "It can be easy for me to remember how to conduct e-voting".

Attitude towards using technology is a subjective or mental state of preparation for action. The overall attitude towards using technology was measured on a multi-dimensional scale covering ability, Competence and Integrity as suggested to by Pikkarainen *et al.* (2004), Japura and Fink (2005). Readiness to accept/adopt e-voting was measured using a multi-dimensional scale covering accessibility, usability, intention and performance as adopted from Jaruwachirathanakul and Fink (2005), Pikkarainen *et al.* (2004), Chen *et al.* (2004), Cheng and Warfield (2005) and Venkatesh *et al.* (2008). Trust Propensity, defined as the extent to which the user can trust the system was measured in terms of security, privacy, audit and verification and reliability as suggested by Hoffman *et al.* (2006) and later adopted by Nu'man (2012). To get feedback from the respondents, we asked questions such as "I am assured of the security of my vote with e-voting", "With unique authentication methods for each voter, e-voting can improve the security of the election process".

Validity of the instruments

Validity of the instrument was obtained by talking to experts both academicians and practitioners in the field. These were required to comment on the relevance of the questions/items in the instrument and later a content validity index (CVI) was calculated.

Reliability of the instruments

The research instrument was examined for its reliability by using Cronbach's alpha co-efficient. Cronbach alphas below 0.6 were taken to be un-reliable (Nunnally, 1976). Results of the reliability test are shown in Table 1 (Table 1 goes here).

Table 1 The Cronbach's alpha co-efficient and a CVI

Variable	*No. of items*	*Cronbach's alpha*	*CVI*
Perceived ease of use	6	0.743	0.889
PU	6	0.726	0.85
Trust propensity	14	0.825	0.92
Attitude	4	0.927	0.86
Readiness	4	0.899	0.90

Source: Primary

Data processing and analysis

The copies of the questionnaires collected were checked for completeness, consistence and usability and later entered in the statistical package for social scientists version 21.0 for analysis. The data was cleaned and edited in preparation for analysis. Simple frequencies, cross-tabulations, descriptive and inferential statistics were run. Pearson's correlation coefficient was used to establish the relationships between PU, perceived ease of use, attitude towards using, perceived propensity and readiness to e-voting acceptance. Regression models were used to determine the overall significance and explanatory power of the model.

Findings

Respondents' characteristics

Table 2 shows that the majority (62%) of the respondents were men which point to the fact that men have more interest and participation in elective politics than women. The majority of the participants (64%) were single perhaps indicating that youth were more interested in elections than older people. In terms of education levels, the majority (35%) were certificate holders, implying that the participants had a fair understanding of the questions asked and had higher chances of exposure to technology. In total, 90% of the respondents are

Table 2 Characteristics of the respondents

Variable	*Categories*	*Count*	*(%)*
Gender	Male	157	62
	Female	95	38
	Total	252	100
Highest level of education	Certificate	89	35
	Ordinary Diploma	69	27
	Bachelors	62	25
	PGD	8	3
	Masters	22	9
	PhD	2	1
	Total	252	100
Use of any form of electronic technology before	Yes	233	96
	No	19	4
	Total	252	100
Age group	18–25	121	48
	26–30	76	30
	31–35	29	12
	36–40	13	5
	41–45	7	3
	Above 46	6	2
Marital status	Total	252	100
	Married	77	31
	Single	161	64
	Divorced	8	3
	Cohabiting	6	2
	Total	252	100
Whether the respondents had heard about electronic voting?	Yes	181	72
	No	71	28
	Total	252	100
Whether e-voting was perceived as a better alternative to the manual ballot paper	Yes	59	23
	No	193	77
	Total	252	100
Whether the respondents would use e-voting if it was introduced	Yes	215	85
	No	37	15
	Total	252	100

between 18 and 35 years old further pointing to the interest of the youth in participating in elections. It may also indicate that given their youthful age, they would have more interest in adopting to the use of technology in the process of choosing their leaders than the older people. We also found out that the majority (93%) of the people have used electronic technology like e-banking, mobile money among others. This could mean that if the government introduced e-voting, it would not face so many challenges if they trained the masses on how to use it, as they have interacted with similar technologies before. As to whether the respondents had heard about electronic voting, the majority of respondents (72%) confirmed that they had heard of it. This means that it would not be something new in the ears of the users if the government introduced this technology. However, when asked whether e-voting was a better alternative to manual ballot paper voting, only (23%) said it was a better alternative. The majority felt it was not a better alternative. This indicates that the respondents perceived shortcomings with e-voting and most of these were linked to perceived levels of trust and security. Finally, despite the perception of e-voting as a "not better" alternative, the majority of the respondents (85%) showed interest and confirmed that they would use e-voting if introduced. This could, however, be explained by the fact that the respondents would not fight government plans (Table 2 goes here).

Correlation analysis

A correlation analysis aimed at establishing the degree to which the variables are related was undertaken using the Pearson (r) correlations coefficient as indicated in Table 3.

The results indicate a positive significant relationship ($r = 0.464^{**}$, $p < 0.01$) between PU and attitude towards the adoption of e-voting. This implies that when eligible voting citizens find e-voting cost effective or economical, time saving, flexible on an anytime anywhere basis and quick in releasing results, their attitude towards the e-voting system will increase. Thus, when PU increases, the attitude towards the adoption of e-voting will increase. This was in line with the research findings of Choi and Kim (2012).

Perceived ease of use was found to have a positive significant association ($r = 0.464^{**}$, $p < 0.01$) with attitudes towards the adoption of e-voting. This signifies that when eligible voting citizens find e-voting technology with an easy-to-use interaction interface and are able to remember their authentication details and how to vote online with ease, it will consequently increase their attitudes towards e-voting. Thus, as perceived ease of use increases, attitudes towards the adoption of e-voting will increase positively.

Attitude towards adopting e-voting and readiness to accept it were strongly correlated ($r = 0.780^{**}$, $p < 0.01$). When attitude towards adopting e-voting is positive and increases, then readiness to adopt it increases as well. This implies that when citizens have a positive believe and attitude in the e-voting system, they will be ready to adopt it.

Finally, the results show a strong significant association between trust propensity and readiness to adopt e-voting ($r = 0.623^{**}$, $p < 0.01$). Thus, when there is trust assurance in e-voting, high level of transparency, proper use of audit trail that assures voters their votes

Table 3 Correlation analysis results

Variables	*PU*	*Perceived ease of use*	*Trust*	*Attitude*	*Readiness*
PU	1.000				
Perceived ease of use	0.543**	1.000			
Trust	0.475**	0.531**	1.000		
Attitude	0.464**	0.464**	0.591**	1.000	
Readiness	0.495**	0.473**	0.623**	0.780**	1.000

Note: **Correlation is significant at the 0.01 level (two-tailed)
Source: Primary

are recorded correctly, recounting and auditing votes without compromising the integrity of elections and advanced encryption to ensure confidentiality of the overall system, then readiness to adopt e-voting will increase colossally.

Regression results

We carried out a hierarchical regression analysis to determine the effect of the voters' attitudes, PU, perceived ease of use and trust propensity to voters' readiness to accept electronic voting/scientific elections (Table 4 goes here).

In Model 1, the confounding/demographic variables that are likely to influence readiness to accept e-voting (that is prior use of other forms of e-technology, age and education level of respondents) were entered. The results indicate that these variables did not have a significant effect on readiness to accept e-voting (as indicated by their non-significant Beta values), neither did they significantly predict it (R^2 = 2.4). Model 1 is not statistically significant (sig. = 0.302, F = 1.217).

In Model 2, attitudes towards e-voting was entered and the results indicate that it is a significant predictor of readiness to accept e-voting (β = 0.775; $p < 0.001$). The R^2 increased to 61.4%. Thus, attitudes towards e-voting account for a 61.4% increase in readiness to accept e-voting. Model 2 is statistically significant (sig. = 0.000, F = 64.943).

In Model 3, PU was entered and the results indicate that it is a significant predictor of readiness to accept e-voting (β = 0.169; $p < 0.001$). The R square increased to 63.5% (an R^2 change of 2.1%). Thus, PU accounts for a 2.1% increase in readiness to accept e-voting. Model 3 is statistically significant (sig. = 0.000, F = 60.599).

Perceived ease of use was entered in Model 4 and the results indicate that it is a significant predictor of readiness to accept e-voting (β = 0.085; $p > 0.05$). The R square increased to only 63.9% (an R^2 change of 0.5%). This means that perceived ease of use accounts for only a 0.5% change in readiness to accept e-voting. Nonetheless, Model 4 remains

Table 4 Hierarchical regression results

Demographic characteristics and variables	*Model 1 Beta sig.*	*Model 2 Beta sig.*	*Model 3 Beta sig.*	*Model 4 Beta sig.*	*Model 5 Beta sig.*
Constant	0.202	0.101	0.187	0.160	0.273
	0.587	0.667	0.418	0.487	0.223
Prior use of e-technology	0.299	0.080	0.001	0.008	0.041
	0.212	0.597	0.996	0.957	0.775
Age	0.002	0.001	0.001	0.005	0.015
	0.968	0.972	0.976	0.895	0.665
Education level	0.091	0.058	0.045	0.047	0.060
	0.088	0.088	0.177	0.158	0.061
Attitude		0.775	0.702	0.679	0.591
		0.000	0.000	0.000	0.000
PU			0.169	0.132	0.102
			0.000	0.009	0.037
Perceived ease of use				0.085	0.025
				0.080	0.601
Trust propensity					0.224
					0.000
F	1.217	64.943	60.599	53.868	53.558
Sig. *F*	0.302	0.000	0.000	0.000	0.000
R	15.5%	78.4%	79.7%	80%	81.6%
R^2	2.4%	61.4%	63.5%	63.9%	66.6%
R^2 change	2.4%	59%	2.1%	0.5%	2.6%
Adjusted R^2	0.4%	60.5%	62.4%	62.8%	65.3%

statistically significant, as the other variables entered earlier are significant predictors (sig. = 0.000; $F = 53.868$).

When trust propensity was entered in Model 5, it came out as a significant predictor of readiness to accept e-voting ($\beta = 0.224$; $p < 0.001$). The R^2 in Model 5 increased to 66.6% (a change in R^2 by 2.6%), implying that trust propensity accounts for a 2.6% increase in readiness to accept e-voting. Model 5 is statistically significant (sig. = 0.000, $F = 53.558$).

Overall, the hierarchical regression table shows that the independent variables (attitudes towards e-voting, PU, perceived ease of use and trust propensity) explain 66.6% of the variance in readiness to accept e-voting. In the final model attitudes towards e-voting, trust propensity and PU are the only significant predictors of readiness to accept e-voting ($\beta = 0.591$, $p < 0.001$; $\beta = 0.224$, $p < 0.001$ and $\beta = 0.105$, $p < 0.05$, respectively). As indicated by the Betas, attitudes towards e-voting have the strongest effect on readiness to accept e-voting, followed by trust propensity and then PU.

Discussion

The relationship between perceived usefulness and attitudes towards the adoption of e-voting

The results indicated that there existed a positive significant relationship between PU and attitude towards the adoption of e-voting. This implies that when eligible voting citizens find e-voting cost effective or economical, time saving, flexible on an anytime anywhere basis and quick in releasing results, their attitude towards the e-voting system will increase. Thus, when PU increases, the attitude towards the adoption of e-voting will increase.

PU has been defined as the degree to which a person believes that using a particular system would enhance his or her job performance (Davis, 1989). Before thinking of adopting any system, potential adopters assess the consequences of their adoption behaviour-based on the ongoing desirability of usefulness derived from the innovation (Chau, 2004). During the research, the respondents were talking of how they have to travel to their respective villages to vote and they said it was so inconvenient and costly. They indicated a favourable attitude on e-voting because they perceived it as useful in terms of saving time, flexibility and being cost effective. According to Venkatesh *et al.* (2003), PU was looked at in terms of performance expectancy. So, the voters' attitude towards e-voting adoption was as a result of what they expected out of the e-voting system. Tan and Teo (2000) also suggested that PU is an important factor in determining readiness to accept and adopt any technology including e-voting acceptance. As a consequence, the greater the PU of e-voting services, the more likely the positive attitudes towards usage and subsequently the higher the readiness to adopt and accept e-voting (Polatoglu and Ekin, 2001). PU in the Technology Acceptance (TAM) model strongly emphasizes the extent to which a system adds to the consumer's job performance (Davis *et al.*, 1989). In this context, PU involves the dominant features of voting systems which can be accessed at any time no matter where the voter is and how well voters believe that e-voting can be integrated into their daily voting activities (Sattabusaya, 2006). When this belief increases, the voter's attitudes towards using e-voting and the readiness to accept and adopt e-voting systems becomes more positive. The main reason people are ready to accept to e-voting systems is that they find the systems useful to their voting processes and helpful in accomplishing their tasks. This means that the Government of Uganda can prepare Ugandans towards accepting e-voting through emphasizing the use of the usefulness of the system to the masses.

The relationship between perceived ease of use and attitudes towards the adoption of e-voting

Perceived ease of use was found to have a positive significant association with attitudes towards the adoption of e-voting. This signifies that when eligible voting citizens find

e-voting technology with easy-to-use interaction interface and are able to remember their authentication details and how to vote online with ease, it will consequently increase their attitudes towards e-voting. Thus, as perceived ease of use increases, attitude towards the adoption of e-voting will increase positively. When conducting this research, it was discovered that the voters had extensive knowledge on the use of PIN codes on their mobile money systems and they had also undergone the biometrics scanning of fingerprints during the National Identity exercise in 2014. This made them perceive the e-voting system as easy to use because of the earlier interaction with the use of similar technology. Perceived ease of use is believed to contribute towards positive attitude and performance, whilst the lack of it can cause frustration, negative attitudes, and therefore, impair the adoption of innovations (Davis, 1989; Venkatesh, 1999; Venkatesh and Davis, 2000). In an e-voting acceptance context perceived ease of use can be the degree of ease the users encounter when they use the e-voting technology. Derived from TAM perceived ease of use is one of the determinants of attitudes towards use/adoption. It has proven to have significant effects on PU and attitudes towards using or adopting new technology. The easier it is for a user to interact with a system, the more likely he or she finds it useful (Thong *et al*., 2004). Yusoff *et al.* (2009) in their study found out that there was a significant and positive relationship between Perceived ease of use and attitudes to use a new innovation. Lee *et al.* (2000) assert that perceived ease of use has a strong positive effect on attitudes towards adopting or using an e-voting system. They looked at perceived ease of use in the ease of the voter obtaining information, ordering, using service and overall ease of use. Once the above aspects have been considered by an online voter, then the voters perceive online voting as an important process and develop a positive attitude towards it and their readiness to accept/adopt it increases.

The relationship between attitude towards adopting and readiness to adopt e-voting

Attitude towards adopting e-voting and readiness to accept it were strongly correlated. This implies that when the attitude towards adopting e-voting is positive and increases, readiness to adopt it increases as well. This implies that when citizens have a positive belief and attitude in the e-voting system, they will be ready to adopt it. Earlier studies indicate that attitude towards a system fully mediates the effects of PU and perceived ease of use on intentions and readiness to accept a new technology when the attitude is strong, whereas it partially mediates the effects when the attitude is weak (Morris and Dillon, 1997; Teo *et al*., 1999). While conducting this research, it was seen that the respondents who had a positive attitude towards e-voting, were ready to adopt it. The attitudes were based on the PU, perceived ease of use and trust propensity. According to Davis (1986), PU and perceived ease of use are major beliefs that influence attitude towards system use and eventually lead to actual system use (or readiness to use the actual system in situations where the system has not been fully experienced). Borrowing from the TRA, the TAM also emphasizes the fact that attitudes towards technology play a big role in determining the behavioural intentions (and therefore, readiness) to use, accept or adopt the technology. Therefore, the Government of Uganda can prepare Ugandans to accept e-voting through changing their attitude positively towards the system.

The relationship between trust propensity and readiness to adopt e-voting

The results show a strong significant association between trust propensity and readiness to adopt e-voting. Thus, when there is trust assurance in e-voting, high level of transparency, proper use of audit trail that assures voters their votes are recorded correctly, recounting and auditing of votes without compromising the integrity of elections and advanced encryption to ensure confidentiality of the overall system, then readiness to adopt e-voting will increase colossally. According to Morgan and Hunt (2005), trust exists when one has confidence in the system's reliability and integrity. Trust can, therefore, be looked at as the

belief that a system is reliable and will fulfil what it was intended for with a high degree of integrity. In fact, during the research process, the respondents were interested to know whether the security of the system was to ensure the security of their vote. Trust plays a significant role in determining the people's acceptance of new products and services including computer-based systems (Randell and Ryan, 2005). Thus, systems that are trusted have got higher chances of being accepted, let alone attracting the users' commitment to the systems. This means if the people of Uganda are to be prepared for e-voting, the government and other stakeholders should invest in the technology system that ensures maximum security of the voters and their votes, transparent and auditable to ensure trust among the voters and other stakeholders.

Theoretical implications

The decision to adopt any election-related technology should be consultative based on the benefits it provides to the collective needs of society. Whereas it is commonly known that electronic voting is useful in the democratic electoral process, it is little known whether the key stakeholders we consulted accept and approve its use. Due to this limited knowledge on stakeholders' consultations, we may not, therefore, wonder when the stakeholders' attitudes and perceptions are not positively aligned to the electronic voting system. With COVID-19 restrictions, the stakeholders had no say in the introduction of the proposed technologies but above all, the proposed technologies were an alternative to restrict open campaigns and meetings yet the government had full control of these technology platforms – switching them as they wanted and restricting the opposition candidates from meeting the electorate from time to time.

Adopting a technology under circumstances of unfair and imbalanced political and social environment points to glaring gaps in the TAM of Davis (1989) which seems silent about whether or not such environment may promote and appraise the stakeholders' perceptions and attitudes towards the adoption and use of the technology. Rushing to introduce the technology and train the personnel on the use of it may not necessarily improve peoples' perceptions towards it if the democratic environment whether there is a pandemic or not is not improved. In this study, it is evident that the theory lacks merit in promoting electoral transparency in a non-democratic environment where the adoption of technology is used to favour the incumbent leaders whilst restricting political views and competition from the opposition candidates. Therefore, TAM or other models that cater for historical, cultural and existing contextual circumstances should be explored to appraise peoples' perceptions and attitudes in situations of non-democratic rule and pandemics such as the COVID-19.

Practice implications

The adoption of electronic voting creates new stakeholder groups in the electoral process. These stakeholders bring on new knowledge, experience, create jobs and improve peoples' lives. These groups include information and communications technology vendors whose purpose is to supply, configure, maintain and commission the required hardware and software, certification bodies, academia and IT experts, foreign and local observers, civil society organizations and many others. These groups should not be partisan, be properly trained and certified to promote transparency, expertise and reliable election results for the promotion of electoral democracy.

There is a need to define and publicize the electronic voting standards for the implementation of the system. Such standards may include; the standard technical specifications for the required hardware and software, certification of personnel and systems, acceptable language, accessibility for people with disabilities and many other international and national standards which the electronic voting system may need to comply with. For example, the local standards should be in conformity with international standards

on such issues as data processing, data protection, electronic transactions, usability, accessibility, security and project management to provide local and international quality and transparent considerations. With less trust in the personnel and technology, inadequate broad participation, technology and the partisan electoral managers, lack of transparency, audit trails and the general technology-related issues, national standards in conformity with the international practice will help in providing the overall principles that can help in guiding the development of electronic voting technologies and its legal framework that regulates them. These will improve the perceptions and attitudes of the voters thereby increasing electoral participation, hence, improving electoral democracy.

However, the success of the electronic voting system does not only lie in having a good technology system, national and international standards, as well as trained personnel. The success lies in the actors' active participation, full enjoyment of the political space characterized with free and fair political competition, respect for divergent political views and respect for the citizens' decision.

Conclusion

The focal point of this study is the readiness to accept/adopt e-voting, based on PU, perceived ease of use, trust propensity and attitudes towards adoption. The findings are largely consistent with the extant literature that can be used in other countries to test the adoption of technology. In regard to the predictor variables, attitude towards adoption was found to explain the greatest variation in readiness to adopt e-voting when compared to the rest of the variables. This means that the attitudes that stakeholders hold onto the technology, its importance and the outcome form a great deal to its adoption. Therefore, given the inadequate investment in electronic voting systems that would guarantee transparency, trust, auditability and accountability to the citizenry, it is quite evident that peoples' attitudes and perceptions towards electronic voting will be negatively evaluated, a consequence that affects political involvement, and therefore curtailing electoral democracy. On the other hand, trust propensity which is the degree to which users of technology hold confidence in the system's reliability, competence and integrity exhibited the second highest predictive power in this study. Additionally, PU had the third highest beta coefficient and finally perceived ease of use which is the degree to which users find a technology either complex or easy to use was the weakest predictor variable in this study with the least beta coefficient. The above results signify that the government should put more emphasis on positively changing attitudes of eligible voters, then focus on increasing the voters' trust in the system, later focus on the PU of the service and finally build an easy to use of the e-voting system. This will highly increase the levels of readiness to accept e-voting.

Recommendations

Shaping and strengthening stakeholders' perceptions and attitudes require that substantial amounts of effort intended to positively change stakeholders towards the proposed technology systems be implemented and sustained for as long as people still vote for their leaders. Changing peoples' perceptions and attitudes is a slow process that requires serious training and development of individuals, groups and societies to understand the use and importance of the proposed technologies, trust the technology and the conduct of Electoral Management Bodies in managing elections, as well as trusting the ultimate outcome of the proposed systems.

Given the limitations of the computer misuse Act of 2011 in covering electoral-related offenses, it is highly recommended that a more specific but all-inclusive electoral legal framework intended to cover and guide the electronic electoral systems and processes be enacted to further create positive perceptions and attitudes towards the electronic voting. In German, voters had positive feelings about the electronic voting systems only to find out

that it was not legally and constitutionally accepted which made people lose their positive evaluation of the system.

However, greater effort should be put to creating a competitive environment in which all stakeholders participate freely in political and civil activities without constraint from the state. This is the foundation upon which electoral democracy is built without which all other strategies such as training of stakeholders on different technologies and enacting good laws may not produce transparent and trusted election results which may plunge the country into violence, destruction of property and peoples' lives.

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