

The Role of Technology in the Management of Electoral Challenges in Nigeria's Fourth Republic

¹Daniel GODWIN, ²Enemaku U. IDACHABA

1,2 Department of Political Science, Faculty of the Social Sciences, University of Ibadan Toru-Orua, Bayelsa State, Nigeria.

ABSTRACT

Elections in Nigeria's fourth republic have been marked by series of electoral malpractices and fraud as evidenced in the number and outcome of litigations that follow each round of elections. The most recent, are the controversies and litigations that followed the 2023 presidential election. As a way of dealing with this problem, the Independent National Electoral Commission in 2011, introduced technology into the registration segment of the electoral process, and has progressively introduced innovative technology to curb the menace of electoral fraud and to ensure electoral integrity. The paper examined the contributions of the technological innovations used by INEC in the 2015, 2019 and 2023 general elections. Digital Governance theory served as the framework, while a qualitative desk research design was adopted for the study. Data were mainly sourced from secondary sources. Findings revealed that the Automated Fingerprint Identification System, the Permanent Voter Card and the Smart Card Reader used in 2015 and 2019, and the Bimodal Voter Accreditation System as well as the Result Viewing Portal used in 2023 have collectively contributed in raising the sanity of voter register thereby reducing cases of multiple registration; enhancing more accurate voter identification; and increased the level of citizen confidence on the process. This paper therefore, argued that the gradual integration of technology into the electoral process is the most potent way of curbing the intractable menace of electoral malfeasance in Nigeria. It concludes that the most potent threat to technological opportunities is the 'human factor'.

KEYWORDS:

Nigeria, Electoral Management Problem, Opportunities and Threats, Integrating Technology.

Introduction

Elections in Nigeria's Fourth Republic have been characterized by a series of electoral malpractices and frauds (Yahaya, 2019). This is evidenced in the number and outcome of litigations that follow each round of elections. The most recent are the controversies and litigation that followed the 2023 presidential election. As part of the response from the state in dealing with the problem of electoral fraud, the Independent National Electoral Commission (INEC) introduced the use of technology into the electoral process in 2011, particularly, the registration segment. INEC has continued to introduce innovative technology to curb the menace of electoral fraud and ensure electoral integrity in Nigeria. The integration of technological innovations in the electoral process in Nigeria was carried out through a series of reforms in the electoral acts, giving it legal

backing. For example, the use of Direct Data Capture Machines for voter registration in the 2011 general elections has a legal framework imbedded in the repealed 2010 Electoral Acts. As part of the preparation for the 2011 general elections, INEC deployed over 132,000 Direct Data Capture Machines (DDCMs) for the registration of prospective voters (Yakubu, 2017). The introduction of the DDCMs was essentially to reduce the incidence of multiple registrants in the voter register. Similarly, in preparation for the 2015 and 2019 general elections, INEC upped its game by introducing the Automated Finger Print Identification System (AFIS), meant to improve on the register used in 2011. The AFIS allows for the accreditation of voters through a Smart Card Reader, as Temporary Voters' Cards (TVCs) were replaced by Permanent Voters' Cards (PVCs) (Ayeni and Esan, 2018). Effectively, the 2015 and 2019 general elections were conducted using the Smart Card Reader (SCR). In the 2023 general elections, INEC further introduced the Bimodal Voter Accreditation System (BVAS) and the result viewing portal, otherwise known as the IReV. No doubt, there have been conflicting positions on the marginal improvement in the outcome of the elections conducted with these technological innovations. For instance, the 2015 elections recorded low election petitions compared to the previous ones. The election tribunals in 2015 received a total of 297 petitions, compared to 506, 1270, and 731 in the 2003, 2007, and 2011 polls, respectively (Nwangwu, 2015). The 2019 presidential election that saw Major General Muhammadu Buhari (retired) of the APC returned by the INEC as the winner was not without legal challenge. The runner-up, Alhaji Abubakar Atiku of the PDP, rejected the result and proceeded to court, where he challenged the outcome. Incidentally, the number of lawsuits nationwide that greeted the 2019 general elections soared to 766 (Yahaya, 2019). It is on this premise that the paper examines the contributions of the technological innovations used by INEC in the 2015, 2019, and 2023 general elections. With a view to projecting the inevitability of integrating technology into the electoral process and as a path to securing and ensuring that votes count. A qualitative desk research design was adopted for the study. Data were mainly sourced from secondary sources such as archival data banks, researched article in journal and other relevant sources. The paper was divided into seven sections: introduction, conceptual clarification, theoretical framework, the dynamics of electoral problems in Nigeria, technology and elections in Nigeria, threats to the integration of technological innovation in the electoral process, and conclusion.

Conceptual Clarification

In this section, we attempt to clarify a few concepts used in the study.

Election

Elections are viewed as an indispensable process in a democracy. It serves as a medium through which citizens exercise their sovereign political right to choose among several alternatives. It's a process that allows citizens to select their own political representatives. According to Dickerson, et al. (1990), cited in Nwokeke and Juyum (2011), elections are viewed as a post-mortem exercise with the aim of

investigating the records of public office holders whose actual performance may have little to do with promises made when they were previously elected. In its basic form, it suggests a process of peaceful transition from one political administration to another devoid of fraud and malpractice. In a liberal democracy, an election ensures that the choice of the people is protected, not shortchanged, and emerges as the winner (Jinadu, 1997). Procedurally, elections identify very clearly the procedure that allows members of a state to choose their representative in public office.

Electoral Management Problem

The Nigerian electoral process is characterized by several kinds of electoral problems. Hence, the electoral management problem can be conceptualized here as the gamut of unprofessional and unethical activities displayed by political actors during elections. They include, but are not limited to: rigging, fraud, falsification of results, threats, violence, and hate speech, among others. It involves fraudulent management of pre-election, election, and post-election activities, which may include illegitimate registration of voters, wrong collation of election results, stealing and grapping of ballot boxes, and deliberate alteration of election results. Other problems that may be associated with electoral management are the monetization of elections and the outright manipulation of electoral laws. That is, any action that violates the provision of the electoral act that guides the conduct of an election is considered an electoral management problem. For Nwabueze (2003), cited in Nwokeke and Juyum (2012), an election management problem refers to any electoral manipulation committed with a corrupt, fraudulent, or sinister motive to influence the outcome of an election in favour of a particular candidate.

Technology

There are a gamut of definitions of technology in the literature, depending on the writers' preferences. However, we shall be guided by a functional definition of the concept of technology. According to Kumar, Kumar & Persaud (cited in Wahab, Rose & Osman, 2012), technology is made up of two major components: first, the physical component, which consists of products, tooling, equipment, blueprints, techniques, and processes. The second is the know-how component, which consists of management, marketing, production, quality control, reliability, skilled labour, and functional areas. In this restricted definition by Kumar et al., technology is perceived as an instrument drafted to achieve a particular purpose. For Grubler (2003:20), technology involves manufactured tools or equipment used for the enhancement of human proficiencies. In his view, technology surpasses artifacts to include things that are made, and more specifically, how they are made—knowledge. In the context of our conceptual operationalization, the classification of technology by Carroll (2017) is apt. He categorized technology based on the intention or purpose of adoption, which he termed primary and secondary intentions. The primary intention involves the deployment of technology to achieve a task or solve a particular problem. On the

other hand, the secondary intention suggests when a deployed technology solves problems other than the ones intended. Taking a cue from Carroll's definition, technologies are deployed by EMBs to enhance their proficiency and solve the problems associated with electoral administration.

Election Administration

Election administration here refers to the different activities put together by electoral management bodies to execute any election. It involves all the activities before, during, and after the conduct of elections (Tobi & Oikhala, 2018). Ajayi (2007) extended the definition to include all activities as proposed by the election management bodies in line with the existing rules and regulations to guide the conduct of elections. The purpose of election administration is achieved when precise and accurate results are produced. The expectation is such that there should be no question about the credibility of the election.

Theoretical Framework

The study is guided by Digital Governance theoretical framework. Digital governance is interchangeably used as electronic governance, transformational governance, or e-governance (UN E-Government Surveys 2022). However, while digital governance connotes comprehensive digital strategies and structures taken by the government to cater for its citizen concerns, e-government focuses on the type of technological device used to actualize the ideals of government. More specifically, e-governance involves the digitization of governance processes to improve service delivery through the application, integration, and use of modern technology. The aim of digital governance is to use technological tools to enhance the management and organization of governments' services in response to contemporary needs (Digital Government Services, 2023). Thus, e-government is a framework through which government services are made available to citizens in a convenient, efficient, and transparent manner (IGI Global). The key word here is the enhancement of transparency. Nigeria's electoral process has been marked by fraud and malpractice (Yahaya, 2019). This has occasioned palpable worries about the outcomes of elections and whether they will reflect the true wishes of the electorate (Adejumobi, 2018). Again, to further exacerbate the fears, there are the flawed electoral processes that give room for the dominance of the ruling parties and the lack of neutrality from the Election Management Body. Thus, beyond the ritual of mere elections, there is concern for the democratic content of the elections—concern for the quality of the elections (Grömping and Martinez-i-Coma, 2015). According to Ibeanu (2022), two prominent issues have been at the center of the debate about quality elections in Africa, namely, the impartiality and the efficiency of election management bodies. As a result, there have been several efforts by both state and non-state actors towards combating the menace of electoral fraud in Nigeria. For instance, since the Fourth Republic, there have been several attempts to reform the Electoral Act to accommodate procedures that will reduce electoral fraud. One of the measures recommended and adopted was the integration and adoption

of technology. Digital technologies have been favoured as an inevitable solution to the problem of election quality in Nigeria. Technology has been perceived as the antidote to the twin problems of human interference and inefficiency. Put differently, technology has become a panacea to electoral fraud in Nigeria. Increasingly, concepts like 'digital democracy', 'election technology', and 'digital elections' are now common in the literature. Beginning in 1994 in South Africa, several other countries in Africa have adopted and integrated technology into their electoral processes. Today, technology has been integrated in areas of voter registration, preparation of election plans, procurement, logistics, and, in some cases, voting (Ibeanu, 2022). In addition, digital technologies have emerged as a preferred tool for political participation, especially during elections. The social media, as well, plays a prominent role in citizen mobilization and engagement during elections, especially with the expansion of broad-band penetration in Nigeria.

The Dynamics of Electoral Problem in Nigeria

The history of elections in Nigeria is soiled with various forms of democratic malfeasance. This has been the case, irrespective of administrations, whether democratic or military. It was reported that the 1959 parliament election was alleged to be marked by some elements of fraud. It was on this note that Luqman (2009) asserted that the history of election malpractice in Nigeria dates back to independence. Since independence, the conduct of elections in Nigeria has been greeted with a gamut of problems. In some cases, it has led to the termination or end of republics. Electoral fraud accounts for the repeated coups in the nation's political history. For instance, the events that led to the first military coup on January 15, 1966, partly had their foundation in the outcome of the 1964 general elections. After the elections, particularly those of the Southwest, there were several allegations of manipulation that led to the rerun of 1965. It was reported that electoral officers connived with politicians purportedly favored by the federal government to deter voters loyal to the opposition from filling their allocated nomination papers (Nwokeke and Jayum, 2011).

Events leading to the 1983 general elections suggested that the sanity of the election was in doubt. For instance, the report by the National Institute for Policy and Strategic Studies (NIPSS) just before the elections predicted that the integrity of the election appeared to be compromised by the actions of the incumbent party. The report went further to make reservations about the integrity of the 1959 and 1979 general elections. Following the resilience on the part of citizens, the Transition Monitoring Group (TMG) more recently observed that:

While elections in Nigeria have demonstrated how the political elites at all levels, perpetrated many illegalities in order to maintain their hegemony in politics and in the control of state machinery, the patriotism and resolve of citizens to enthronedemocracy has been vividly demonstrated (TMG, 2007: 6).

For the 1959 and 1964 elections, they were held under the control of the colonial state and the military with a strong desire for a free and fair election. Hence, the history of the Nigerian electoral system has been described as follows:

Election debacles have always been our bane: it truncated the first republic, eventually leading into 30-month civil war. Although we managed to come off it in one piece, echoes and scars of that war, as well as cries and allegations of marginalization, remain with us to this day" (The Nation Newspaper).

It was observed that:

From 1993, the electoral system in Nigeria has been successful in its exploitation of the citizens and its massive rigging of polls of 2003 and 2007 which put chief Olusegun Obasanjo and Alhaji Umaru Yar'Adua, both of the People Democratic Party (PDP) in power (*The Nation Newspaper*).

In view of the history of electoral fraud in Nigeria, elections in the country have often been associated with political tension, crisis, and violence (Adekanye, 1990: 2; cited in Ibrahim, 2007:3). The second sequence of elections in the fourth republic was conducted in 2003. The general elections of 2003 were marked by contention and litigation. This is due to the level of malpractice that accompanied it. The report by observers suggests huge fraud in several parts of the country (TMG, 2003: 120; cited in Ibrahim, 2007:3). For instance, the European Union observers' report highlighted the widespread electoral malpractice in a number of states in the Middle Belt, the South East, and the South (European Commission, 2003: 42; cited in Ibrahim, 2007:3). The various electoral malpractices and high incidents of electoral violence that marked the 2003 general elections revealed the institutional weaknesses associated with the electoral system of the country.

In respect to the 2007 general election, it was observed that:

The irregularities were so numerous and so far-reaching that the election was a charade and did not meet the standards required for democratic election (TMG, 2007; cited in Collier and Vincente, 2010:6)

Sadly, the menace of electoral fraud and its attendant implications have continued to surge rather than abate. Electoral fraud has been consistent since the general elections of 1959 (Songi, 2009). Songi's observed that as the 2007 general election approached, assassinations of party leaders and political opponents became common. The situation was not different from the experience of the 2003 general elections. For instance, between June and August 2006, three gubernatorial candidates were assassinated. Some of these killings were associated with the handiwork of godfathers who used money and violence to control the political process.

The European Union Election Observation Mission to Nigeria reported that:

We feel extremely disappointed that things were worse in 2007 than they were in 2003. The 2007 state and federal elections fell far short of basic international and regional standards for democratic elections. The elections were marred by a very poor organization; lack of essential transparency; widespread and procedural irregularities; substantial evidence of fraud; widespread voter disenfranchisement; lack of equal conditions for political parties and candidates and numerous incidents of violence (Quoted in Daily Independent, Tuesday, May 10, 2011)

The hallmark of election outcomes and the legitimacy of the elected government are functions of transparency, freeness, and fairness in the electoral process (Ajayi, 2007:142). When the result and outcome of elections are marred by fraud, the consequence becomes the subversion of the democratic process rather than its consolidation, which usually leads to political conflicts (Kurfi, 2005, cited in Ibrahim, 2007). Hence, citizens become disinterested in voting and participating in the democratic process, which ultimately poses a serious threat to the democratic evolution of the country. The 2015 and 2019 general elections had their own share of irregularities. This partly prompted the review of the 2010 Electoral Act, which was repealed and replaced by the 2022 Electoral Act by the National Assembly.

Lack of transparency and other intractable problems that characterized elections in Nigeria necessitated the integration of technology into the electoral process (Ajiboye et al., 2013). Elections in Nigeria have been described as a war (Jega, 2012), leaving the security sector with the daunting task of law enforcement. During elections, the security sector is stretched beyond its limits. Some of them are bought by fraudulent politicians to deliberately compromise the electoral process in their favor. The option left for aggrieved contestants is the judiciary. The experience with the Nigerian judiciary is often one of corruption, impunity, delayed judgment, and weak rule of law. For instance, the ICG noted in 2011 that no one in Nigeria has been convicted of an electoral offense since independence (International Crisis Group, 2011). Hence, the need to think outside the box. At this point, it becomes necessary to leverage the opportunities that technology provides.

Election Administration and the Integration of Technology

The integration of technology into the electoral process offers a new paradigm in the administration of elections globally. The traditional manual process of conducting elections is facing an existential threat as it is gradually going into extinction. Increasingly, countries are at various stages of integrating technology into their election administration and management processes (IFES, 2013). Countries such as Belgium, Brazil, Canada, Estonia, Finland, and France Germany, India, Ireland, Italy, Kazakhstan, the Netherlands, Norway, Romania,

the Philippines, Switzerland, the United Kingdom, and the United States of America have integrated technology into their electoral systems with some success. For instance, Brazil became the first country to fully migrate to electronic voting. In 2000, it became the first country to have a complete electronic voting system and has continued to sustain it. Brazil first developed and tested its electronic voting machine in the 1996 elections in Santa Catarina, after which it was used in the 1998 national election. Interestingly, it has been the sole voting method since 2000. Brazil has consistently improved the operational system of the machines. Perhaps this effort is responsible for the strong success it has recorded. The introduction of technology in Brazil's electoral administration was necessitated by economic and fraud-prevention factors (Lin & Espinoza, 2007; IDEA, 2011). In the United States of America, election administration is complex and requires the concerted efforts of federal, state, and local officials. As a result, election administration and voting system implementation in the U.S. are decentralized. This decentralization of the voting process accounts for the diversity of pro-technological voting systems adopted in each election jurisdiction (Franklin & Myers, 2012). With the 2002 Help America Vote Act, the United States has tilted more and more towards machine voting, some of which happened without any trail of paper (IDEA, 2011).

Gerlach and Gasser (2012) identified two potential benefits of technology in the voting process. These benefits can be useful to Nigeria's electoral system and ameliorate the menace of electoral problems in Nigeria.

The first involves securing the political rights of the people. The facilitation and integration of technology into the electoral process will bring about the needed democratic simplicity and convenience. More importantly, the integration of technology into the electoral process has the capacity to increase the implementation of the people's democratic rights by expanding the scope of citizens' involvement and participation. This has more benefits for people with disabilities. The option of casting a ballot online can prove to be a major improvement in their capacity to exercise their political rights. Secondly, the quality of the votes: It is argued that an increase in voter turnout also brings a corresponding increase in the quality of participation. If this is so, then it depends on a number of factors. For instance, technology will ensure that votes are counted electronically. In that case, the risk of human errors is significantly reduced, and the level of accuracy is improved. Thirdly, the reduction in cost and the increase in the level of legitimacy of the vote come with the use of technology in elections.

Technology allows for the biometric capture of the physical features of voters, such as fingerprints, iris scans, and facial scans, among others; they go side by side with the demographic data of voters, mainly for the purpose of identification (Holtved 2011). The contribution of biometric data such as fingerprints and facial features helps to ensure clean voters' registers by removing multiple registrations and multiple votes (Gelb and Diofasi, 2016). For instance, the International Institute for Democracy and Electoral Assistance (IDEA 2017: 10) has argued

that 'a credible voter register confers legitimacy on the electoral processes. It can therefore be concluded that the integration of technology into the electoral process will uphold the principle of 'one man, one vote'. In addition, it will improve the credibility of elections and the democratic electoral process at large. TurqueMude has noted that this is yielding results already in most of Southern Africa's countries (Mude, 2022). He noted that there is a relative success in the application and integration of technology within the region. However, another point to note is that the success of an election also depends on a host of political and administrative processes that, if ignored, may scuttle the outcome of the election. A good example here is the finish and outcome of the Nigerian 2023 presidential election. There were high hopes for both the electoral management body and other related agencies, but the electoral management body dashed the hope of Nigerians against the backdrop of technological glitches by the end of the process. It was indeed a poor finish from the electoral management body. It was on this note that the GENKEY Report (2016:4) submitted that technological application in the electoral process in the African context is usually undermined by poor quality of data. The problem of poor data capture begins at the registration stage and manifests throughout all stages of the election process. This has resonated in a number of African countries; however, it is worth mentioning that electoral technologies are foreign and relatively new to Africa, or, to be specific, Nigeria (Ibeanu, 2022; Mude, 2022). So, technical hitches or glitches could be envisaged, but not in a proportion that would invalidate the outcome of elections.

IDEA (2011) noted that the following are the key strengths of integrating technology into the electoral process: rapid vote counting; minimal human error; efficiency in the handling process; convenient voting; increased participation and turnout; fraud prevention in polling stations; transmission and tabulation of results; increased accessibility; potential long-term cost savings, among others.

The Use of Technology in Nigeria's Elections

Essentially, INEC introduced technological innovations to improve the administration and execution of general elections. Examples of some of the technologies introduced in recent times include the Bimodal Voter Accreditation System (BVAS) and the INEC Results Viewing Portal (IReV). The BVAS's role was to first biometrically verify voters to authenticate that the holder of the card is the original owner, and secondly, electronically transfer a photo of the polling unit result to the IReV, an online portal controlled and administered by INEC. The complementary innovation of both the Bimodal Voters Accreditation System (BVAS) and the INEC Result Viewing Portal (IReV) works through a portable technological device that is digitally designed to read the fingerprints of prospective voters captured during voter registration. The device also has facial recognition capability that can compare the features of voters with those of INEC's database. The BVAS has an inbuilt camera with the capacity to capture polling unit-level results for onward transmission to the INEC's collation center

online (IReV). IReV is an online portal built for the general public to access results in real time. It is built in such a manner that anyone interested can access results from the various polling units in PDF format.

Since the 2019 general elections, IReV has served as a major enhancement to the electoral process in Nigeria. Specifically, towards the 2023 elections, INEC regularly reassured Nigerians and the world that the measures it has employed to make the poll more credible are trustworthy, dependable, and will be upheld. This singular assurance by INEC restored the already crumbling confidence that the people had in INEC and the entire process of electioneering in Nigeria. The massive financial investment in technology by INEC further increased the confidence of the voters. This was also followed by a number of press briefings by INEC, restating its confidence in the acquired technology. INEC strongly told Nigerians that the acquired technology has the ability to enhance transparency in the process and the general outcome of the election. This came at a time when Nigerians were urgently looking for a change in the trend of electioneering and had been victims of electoral fraud over and over again. Now technology has offered to answer the question of free, fair, and credible elections. To be sure on the 2023 general elections and the use of technology, Sulleiman (2022) observed that “free, fair, credible, and verifiable elections supported by technology that guarantee transparent accreditation and uploading of polling unit results for citizens to view in real-time on election day” is the way forward. The aim is that technology will improve the pervasive falsification of votes at polling units, the inflation of both accredited voters and collated results. It was also expected that technology would reduce computational errors, the issue of swapping result sheets, and poor recording by INEC staff (Itodo, 2022). There were indeed high hopes for technology before the 2023 general elections. However, these hopes were not completely realized due to INEC's administrative ineptitude, which they blamed on technological glitches.

Technological Opportunities and Election Administration in Nigeria

One of the fundamental things necessary for a credible election is a good voter register. In recent times, countries have relied on biometric voter identification technology to build a good voter register. Ghana in 2012 and Kenya in 2013 built their voter registers with biometric technology (Gelb and Diofasi, 2019). Nigeria's experience with technology began in the 2011 general elections. The Independent National Electoral Commission secured 232,000 direct data capture machines and distributed them to polling units nationwide. INEC recorded 73.5 million registered voters in 2011. This was enhanced and followed by the biometric Permanent Voter Card (PVC) in the 2015, 2019, and 2023 elections. Through technology, Nigeria achieved three critical tasks: identification, registration, and verification of voters (Abodunrin et al., 2018). Together, this feat marginally improved the trust deficit and reliability of the electoral outcomes (Munya, 2022). INEC This deployment marked the first time such modern technology was used in the voter accreditation process in Nigeria (Yusuf and

Akuva, 2020). There has been a lot of praise for this technology. However, it did have its shortcomings, which necessitated the introduction of the BVAS.

Technology provides the opportunity for voter identification through biometric identification. In the 2011 general elections, INEC deployed a temporary voter register (TVC), while between the 2015, 2019 and 2023 general elections, Permanent Voter Card (PVC) was deployed for the accreditation of eligible voters. Electronic identification was carried out at two levels: the verification and authentication of voters. The latter involves swiping the Permanent Voter Card against the card reader to verify if the voter is the legitimate holder of the card and that the polling unit information in the PVC corresponds with the details of the polling unit. It also enables the polling officials to determine if the PVC is genuinely issued by the commission. To complement the verification process, the Commission deploys a new technology popularly called Z-pad in the legislative bye-elections conducted beginning in 2020. Z-pad is a new digital technological innovation that will serve as a secondary means of achieving full biometric accreditation of voters using facial image support for fingerprint authentication by Smart Card Readers at polling units (Channels Television, 2020). While the later, involves matching the fingerprint of the PVC holder with the biometrics stored in the chip. Impressively, the card reader records the number of PVCs verified, authenticated, or declined with all the details of the voters. This information can be used to audit polling unit results and also determine whether accreditation figures have been altered or falsified. This was used in the 2015, 2019, and 2023 general elections.

Technology provides the opportunity for accreditation through biometric accreditation. Technology had approved the accreditation of voters with the introduction of the Smart Card Readers (SCR) beginning with the 2015 elections. The Smart Card Reader is a technological device set up to authenticate and verify the permanent voters' card (PVC) issued by INEC. The device uses a cryptographic technology that has ultra-low power consumption with a single-core frequency of 1.2 GHz and an Android 4.22 operating system. In other words, a card reader is designed to read information contained in the embedded chip of the permanent voter's card and also carry out a verification of the intending voters by matching the biometrics of the voters with the ones stored on the PVC (Engineering Network Team, 2015).

Technology provides for more effective result management. The commission also came out with some innovative technologies, such as e-TRAC, ERMT (Electoral Risk Management Tool), EOSC (Electoral Operation Support Centre), e-collation and e-transmission, and the Result Viewing Portal (IReV). The e-TRAC and the IReV systems are platforms that enable ICT and interested parties to monitor results from polling units to the final collation center. The **e-collection system** is another device that serves for electronic tabulation of votes cast using an online form for result validation. The **e-transmission system** involves the electronic movement of election results from the PU using the SCR to a centralized database system where the collation of such results is done.

In 2011, the Commission conducted fresh voters' registration using DDC machines, made use of the Automatic Fingerprint Identification System (AFIS) to de-duplicate about 850,000 multiple voters' registrations from the voter register, and finally made use of the Temporary Voters Card (TVC) to conduct the elections (INEC, 2011). In 2015, the Commission further purged the voter register of multiple voter's registrations using AFIS and introduced PVC and SCR for the accreditation procedure, and this was the magic wand that dealt a serious blow to politicians who want to indulge in multiple voting. The idea saw the SCR configured to read only a valid registrant of a specific polling unit. In all the off-cycle elections between 2015 and 2019, as well as the 2023 general elections, the commission mandated the accredited data to be transmitted to the back-end server of the commission from each polling unit using SCR at the close of the poll. It also deployed Elections Technology Support (ETS) to validate each PU result entered and the scanning and photographing of EC8As presented at the Registration Area (RA) Collation Centre for all the PUs in the assigned RA, and subsequently uploaded the SCR accreditation data. In order to increase the transparency of the election process, the Electoral Commission leveraged a new technology called Z-pad, using a camera on the tablet to take pictures of the polling unit result sheets (EC8A) and upload them to a dedicated portal (INEC Result Viewing-IReV). This will enable all those interested in viewing the results to do so in real-time (Channel Television, 2023).

Technology, Challenges and Election Administration

Like in all the post-1999 general elections, the 2023 general elections were not in any way different. If anything, it was worse compared to the previous elections. This outcome can be attributed to the nature and character of the Nigerian political system. The Nigerian political space is riddled with corruption as a result of the democratic deficit occasioned by authoritarian practices. The introduction of BVAS and IReV was meant to minimize electoral malpractices but has appeared illusory in ending the problem of election malpractice in Nigeria. Russel and Zamfir (2018:4) had argued that digitalization of the electoral process is not a watertight solution to electoral malpractices and does not result in instantaneous solutions to electoral fraud in a corrupt political environment. Russel and Zamfir argument summarizes the Nigerian experience that has rendered the reliance on digital technology in election management less useful in consolidating democracy. Since 1999, the political space has been dominated by political elites who have insistently violated fundamental principles associated with liberal democracy, such as competitive elections, the rule of law, political freedom, and respect for human rights. The 2023 general elections have further diminished the already feeble confidence and trust Nigerians had in the National Independent Electoral Commission to organize competitive elections devoid of ruling class interference. The influence of the ruling class during elections has remained a huge challenge to Nigerian politics and its governance system. Before the 2023 elections, INEC announced that more than 93 million voters had

registered to vote, which represents the highest registration in Nigeria's political history. When compared to 2019 (84 million), Nigerians showed a hike in interest in participating. Ironically, the number of votes released by INEC, especially for the presidential election, was the lowest in more than 40 years, especially when compared to the number of registered voters. According to INEC, 24 million voters voted in the 2023 presidential election, representing less than 30 percent of registered voters. In 2019, valid votes were 34.7 percent of the total expected votes. Worse still, in 2023, Bola Tinubu was returned as president elect by INEC with about 10.08 percent of all eligible voters. Technology would have served to provide clarity and bridge this trust gap. But INEC retracted and reneged on its promise. As of March 5, 2023, one week after the election, only 92 percent of the results were found on IReV, with some of them mutilated. The unanswered question is: why was there such a drop between the number of registered voters and people who turned out to vote? INEC owes Nigerians the answer to this question. INEC failed to deliver on its promises to ensure a credible election and has remained the biggest threat to election administration in Nigeria.

The PVC is a contactless smart card issued by INEC to registered voters to exercise their franchise. It has a chip that stores the biometrics, biodata, and photograph of the voter. The PVCs were produced to be the only device to be presented at polling units for voting. Its deployment has, however, attracted some level of controversy, as there were indications of its failure during the accreditation exercise, especially during the 2019 general elections. The failure of some PVCs to pass the verification test led to the disenfranchisement of some eligible voters, which suggests that they were denied the right to vote. This has implications for the results that were produced by such elections. The 2019 Manual of Election Technology listed factors that could be responsible for PVC failure: direct exposure of PVC to sunlight; exposure to extreme heat or flame; exposure to machine wash; re-lamination; crimping, bending, biting, or twisting, among others. Unfortunately, not too many people are aware of these factors.

On the other hand, in the 2015 general elections, there were certain contradictions around the permanent voters' card and the Smart Card reader device. It was alleged that the PVC was used as an instrument for excluding voters. To be sure, INEC was accused of using the dissemination of PVCs to suppress voters in some parts of Nigeria, particularly in the South East. Nnaji (cited in Agbu 2015) showed evidence of INEC deliberately favouring one region against another. He cited the case of South East vs. Jigawa State. Similarly, the proportion of PVC collected also raised concern. For instance, some states in the North East Region troubled by terrorists and some of their residents displaced had higher PVC collection rates than the highly populated and relatively peaceful states. The allegation of using the PVC to suppress voters was equally extended to the stronghold of the frontline political parties (Tobi, 2020).

On the smart card reader, for example, there were reported cases of the SCR failing to capture the fingerprints of many voters on the February 23 and March 7, 2019, polls. To cite an instance, it was reported that the presidential candidate of

the Young People's Party, Professor Kingsley Moghalu, and the then Speaker of the House of Representatives, Yakubu Dogara, experienced complications with the smart card reader in capturing their fingerprints (Nigeria Civil Society Situation Room, 2019). As a result, the INEC central server could not be relied upon to account for the total number of voters accredited, and therefore, it became difficult to ascertain whether or not there were irregularities. This incidence led to the cancellation of votes in many parts of the country in 2019 (Isuwa, 2019). The implication of the preceding shows that the smart card reader has not successfully functioned as a device for voter accreditation in 2019. However, there was a marginal improvement in the use and delivery of the smart card reader in the 2023 general election. The problem that dented the 2023 election was IReV. There was a grand failure with the IReV, as INEC appeared to be ill-prepared for it. The confidence and integrity of the 2023 general election were built on the IReV. Unfortunately, when it matters most, INEC fails and then makes excuses.

Another threat is the Smart Card Reader (SCR). No technology can give 100 percent accuracy, as human factors, technical errors, atmospheric conditions, and even culture could play a role in diminishing the potency of the technology. Bhalla (2012) observed that biometric voter registration is not a “silver bullet” for eliminating fraud and electoral malfeasance. It is impossible to check whether a registrant is under the age of 18, is a citizen, or is eligible to vote in a specific constituency using biometrics.

The technical incapacity of poll officials has also emerged as a threat. The poll workers are a crucial component of election administration. Administration of any election requires huge numbers of personnel, and no electoral commission can have the required numbers of personnel as its permanent staff. Therefore, recruitment and adequate training for polling officials on the handling of election technology become imperatives to achieve the desired results. Proper training can boost the technical capacity of poll workers in handling the election system devices on Election Day, as well as mitigating the challenges associated with the new technology, while inadequate training of election officials could compromise the integrity of the process. In the 2019 and 2023 general elections, there was a lack of proficiency in the handling of the smart card reading machines during the accreditation process.

Conclusion

Technology is a human-made instrument to achieve a specified task. Therefore, the integration of technology in the conduct of elections in Nigeria should not be seen as an end in itself but as a means to an end. In this study, the end is to achieve a credible election. It therefore follows that, if properly implemented and administered, election technology has shown the capacity to enhance voter registration, identification, the voting process, and vote counting. Technology has demonstrated the capacity to rule out identification-related malpractices that enhance multiple voting. The study has revealed that the use of technologies like

the Automated Fingerprint Identification System, the Permanent Voter Card and the Smart Card Reader used in 2015 and 2019, and the Bimodal Voter Accreditation System as well as the Result Viewing Portal used in 2023 have collectively contributed to raising the sanity of the voter register, thereby reducing cases of multiple registration, providing more accurate voter identification, and increasing the level of citizen confidence in the process. The integration of technology into the electoral governance system is emerging as a global response to electoral fraud, and as such, Nigeria is not left behind. However, apart from technology related concerns like inadequate training of manpower, high cost of technology, and inadequate infrastructure, there are a number of other factors that are still undermining the conduct of credible elections in Nigeria. While efforts aimed at addressing problems associated with the malfunctioning of technological devices are critical, attention should also be paid to other aspects of the electoral process, such as the conduct of internal party democracy, to ensure that they are transparent, inclusive, and democratic. Lack of compliance with the rules of the game by elites and the increasing rate of vote-buying should also be checked. Apart from a downward review of the prohibitive expression of interest and nomination fees to permit the participation of not just the *money bags* but all those who are interested. More efforts should be made to ensure that there is strict compliance with existing regulations on campaign financing. This will collectively enhance the credibility of the electoral process in Nigeria. The paper concluded that the most potent threat to the benefits of technology in electoral management in Nigeria is the willingness and forthrightness of the electoral management body.

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