

## **THE APPLICATION OF THE ELECTORAL TECHNOLOGY FOR THE REFORMATION OF NIGERIAN ELECTORAL CYCLES**

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### **Abstract**

Electoral stakeholders in Nigeria always put their hands on deck ensuring the conduct and the outcome of election in Nigeria represent the voting interest of the electorate. To this extent thus, many attempts have been made to reform the Nigerian electoral practices mainly to reduce the incidences of election irregularities for the purpose of improving the conduct of election in the country. Meanwhile, it has come to the knowledge of relevant electoral stakeholders that electoral technology has many roles to play for the improvement of many electoral practices in the country such as voters' registration exercise, accreditation of voters, polling of votes and collation and transmission of election result. To this extent therefore, this paper discussed the introduction of electoral technology largely to improve the conduct of election in Nigeria in more historical fashion. The main objective of the paper is to discuss how the introduction of electoral technology in the conduct of election in Nigeria turn out to be instrumental in providing solutions to the dilemma introduced by traditional voting system using ballot papers. The paper also takes into consideration the justification of electoral reforms using electronic devices ensuring the electoral outcome represent the exact voting interest of the electorate. It is also within the scope of the paper the various forces needed to be considered for the application of electoral technology largely to improve the conduct and the outcome of election in Nigeria. The paper finally concludes that despite the role played by electoral technology in the improvement of the election conduct in Nigeria, more effort need to be put in place to provide a breeding ground for electoral politics to assist in the promotion of the interest of the greatest number.

**Keywords:** Voting Interest, Election Irregularities: Electoral Technology: Traditional Voting System and Outcome of Election

### **Introduction**

It is obvious that several attempts have been made by various electoral stakeholders to improve the conduct of election ensuring that its outcomes represent the voting interest of the electorate in Nigeria (Medoye, and Tukur, 2020). This is not unconnected with the utmost desire of the nation to breed a ground for democratic governance to gain a ground even against all odds (Sabo, Siti, Abdullah & Rozita, 2020). To this extent thus, constitution was amended several times (likewise the Electoral Act was amended many times too) to improve the conduct of election in the country. Similarly, electoral acts were reviewed more often largely to provide room for electoral reformations to address hitches hindering credible conduct of poll. Likewise, conferences, symposiums, seminars and workshops were organized to offer professional recommendations and suggestions to improve the fairness of election conduct (INEC, 2015).

Furthermore, from 1999 to date (year), certain electoral reformations were at various time played significant role in the improvement of the credibility and fairness of election in the country (Narasimhaiah, 2008). To this end, in an attempt to address election irregularities that marred the conduct of 1999 general election in Nigeria, Independent National Electoral Commission (INEC)

conducted electronic voters' registration system largely to have comprehensive data information of potential voters in Nigeria. This alone was not sufficiently adequate to check the widespread cases of electoral fraud in Nigeria particularly in the conduct of 2003 and 2007 general election in Nigeria. This is due to the fact that the conduct and the outcomes of both 2003 and 2007 were condemned by several electoral stakeholders both at the home and in the abroad for being incredible and not at all represent the voting interest and the popular will of the electorate (Sabo, Siti, Abdullah, & Rozita, 2020).

Thereafter, the subject matter of electoral reformation become be more pronounce during the conduct of 2011 general election in Nigeria. This is due to the fact that 2010 Electoral Act that was meant for 2011 general election in Nigeria was also enclosed within it some certain recommendations offered by Uwaisu Electoral Reform Committee. A member of the committee, Prof. Attahiru Jega was appointed to pilot the activities of the country electoral umpire. The nation electoral body under Jega watch introduced the application of many electronic devices to improve the conduct and the fairness of election in Nigeria. For instance, in preparation of 2011 general election in Nigeria, INEC under Jega presented for the first time widely accepted electronic voters' registration exercise by capturing the bio data of every prospective voter in Nigeria (Sabo, Siti, Abdullah, & Rozita, 2020).

Equally, many of these electronic devices such as Card Reader Machine, electronic voters register and permanent voter card were introduced by INEC under Jega watch in the preparation of 2015 election in Nigeria. These devices and electoral reforms aided significantly in the improvement of the credibility and the fairness of election in Nigeria in many instances. Such of these electronic devices include among others: introduction of Smart Card Reader Machine for accreditation exercise and using an electronic device issuing of Permanent Voters Card for voting (Alausa, Wasiu, & Akingbade, 2017: *Electronic Technology*, 2021). More recently, there are numerous electronic devices that were introduced into the country electoral politics. They include among others: Online Voters Registration Exercise; Voter Enrolment Device (IVED); Bimodal Accreditation System (BVAS); Online Electoral Result Transmission Exercise and INECResult Viewing Portal (IREv). This paper is set to discuss how the application of all these electronic devices improve significantly the credibility, acceptability and fairness of election in Nigeria (Aaisha, Anita, Charu & Hiteshyadav, 2012).

### **Conceptual Clarification**

**The Electoral Technology:** The concept of electoral technology is wider and broader in scope and more encompassing than internet voting or e-voting which strictly expresses voting via electronic or internet device. To Akhaine, (2011 p. 12) "electoral technology are electronic devices use in conducting and managing election, beginning from registration (re-registration) of voters; voting procedure; collation/sorting; transmission of results to the declaration of same". It can also be seen as application of computer and other electronic devices in the management of electoral politics with the sole intent of improvement in the fairness of election. To () it can also be expressed as application of technology with the purpose of preventing some certain electoral irregularities. Electoral technology can also be defined as application of the ICT devices during voters' registration, accreditation

exercise, vote casting, counting and collation of result and the transmission of data to central collation center for announcement.

To this end thus, electoral technology is the application of computer, internet and other ICT facilities in the pre and post-election exercises largely to receive, store and transmit accurate electoral data devoid of any irregularities for the purpose of improving the conduct and the fairness of election in a country. It is pertinent that with the application of electronic devices for electoral reformation could easily assist in the compilation of all-inclusive electoral register that contain within it the relevant information of all qualified adult citizens. Likewise, with electronic devices possessed the capacity of detecting and checking multiple and under age voting and help in its prevention. More so, stuffing of ballot box with false votes could be checked and stopped via applying electronic devices. Equally, with application of electronic devices falsification of election result could be easily traced and checked.

**The Electoral Reformation:** Electoral reform is a modification of the complete collection of election administration with a sole intention of breeding a ground of more opportunity for participation in the electoral process that is open, competitive and just (Altman, Perez-Linan., 2002). It can also be seen as “the change in the electoral systems that enhance effectiveness and efficiency in election administration”. To this extent thus, effective electoral reform provides effective chance for the development and enhancement of independence of electoral management body and other institutions involved in the election management like political party administration and a legal system. It also simplifies to guarantee all-inclusiveness, objectivity and financial autonomy of the electoral management body. It is factual that the effectiveness in electoral reform also guarantee transparency, widened franchise and broadened participation and integrity of the entire electoral process (Agbaje, & Adejumobi, (2006).

However, Electoral reforms intricate to a large possible extent three spheres. In the first place it contains within it managerial sphere: that includes the nature of conduct and managing election that involved funding, balloting election time-table, recruiting and training of electoral and other *ad hoc* staff, voters’ registration, technological based voting and logistics. It also includes political domain: The need to ensure that political atmosphere of election is conducive with open process that provides enabling ground for all participants in a manner that accommodates more citizens to participate without fear of intimidation. It also encompasses legal domain: that relates to tinkering with the Electoral Act, Constitution and other laws governing the conduct of election to effect change in the INEC composition, to introduce diaspora franchise and to strengthen the disciplinary measure to adequately discipline the perpetual electoral offenders (Aiyede, 2007).

**The Electoral Cycles:** Electoral process is a multifaceted process that incorporates the decent purposes and required results of election administration, particularly in emerging democracies where elections are often marred by electoral malpractices. In Nigeria, the truth is that the electoral process is immensely characterized by a culture of electoral malpractices. Electoral process relates to the entire cycle ranging from the provision of voter education to the dissolution of the National Assembly. It refers to all the pre- and post-election activities without which an election is meaningless. These

include the registration of political parties, review of voters' register, delineation of constituencies, resolution of electoral disputes, return of elected representatives and swearing-in of elected representatives. Any conduct that threatens the electoral process is a subversion of the peoples' sovereignty (Aiyede, 2007).

### **Theoretical Framework**

To explain the instrumentality of hybrid voting model to diminish to a large possible extent the voters' apathy and improve the credibility and the fairness of the poll using Democratic Theory and Technology Acceptance Theory at this stage of the study is inescapable. In the first place Democracy Theory, as proposed by Franklin (2004) assumes that electoral technology has an impact on improving values such as transparency, accountability and citizen participation in governance. The theory also fundamentally assumed using technology could have the capacity in reduction election electoral irregularities such as stuffing ballot box, multiple voting and proliferation of invalid votes. For this reason, thus, hybrid voting model will go in the same face with theory this is due to the fact that the model was introduced with the intent of improving citizens' participation in the electoral process.

Similarly, Technology Acceptance Theory as postulated by (Gray & Caul, 2020) assumed essentially that how users accept and use technology. The theory was first developed and popularized by Fred Davis in 1989. Others assumptions of the theory are: the degree to which a user believes that a technology will improve their performance and help them to address complex problems: the positive intention of the technology users to adopt technology largely to improve their productive performance and the attitude of the users to accept the positive product of technology for the reduction of human errors. Thus, the introduction of hybrid voting model and its acceptance is inline of the theory assumption of accepting technology to improve performance and reduce human errors in the conduct of election (Gray & Caul, 2020).

### **Application of Electoral Technology in Nigerian Election: A Historical Perspective**

The methods used in registration of voters and conducting elections in Nigeria from 1999 to 2017 range from the use of typewriters to Direct Data Capture Machine (DDCM), Electronic Voters' Register (EVR), Smart Card Reader (SCR) and e-collation. The steps taken by Gen. Abdulsalami Abubakar after the death of Gen. Sani Abacha in June 1998 paved the way for the historic 1999 general election in Nigeria.

The 2003 election witnessed a technological leap with the introduction of Optical Magnetic Recognition (OMR) forms. While still retaining the manual approach as back up, INEC incorporated computerization, using the Optical Mark Recognition (OMR) technology. This involves the compilation on the form EC.1A of the names and particulars of all prospective voters (also known as Prospective Registrants) who present themselves physically for registration at the Registration Centers. The information so obtained is then transferred and shaded on computer readable OMR Forms, which were later scanned into database on completion of field operation, and processed to produce the Register of Voters. Each OMR Form has a unique number, which is assigned to the

registered voter who is then issued with a new Temporary Voters Card (TVC) bearing the same number and his/her particulars including his/her thumbprint (Gberie, 2015).

The build-up to the 2007 general election marked the beginning of a new era in the history of Nigeria electoral system. The procurement of the Direct Data Capture Machines (DDCM) for the registration of prospective voters introduced some level of credibility to the system. DDCM was introduced to eliminate double registration, double voting and other electoral malpractices. The DDCM components include a computer system for capturing and storing voters' information, scanner for taking fingerprints of registrants; camera for taking pictures; back up batteries to forestall power failure, External Hard Disk Drive (HDD) for data backup and printer for printing Temporary Voters Card (TVC) (Gberie, 2015).

The 2015 general election marked yet a new era in the deployment of sophisticated Information Communication technologies in the history of Nigeria elections in addition to existing technologies. Improved Automated Fingerprints Identification System (AFIS) was introduced to identify similar fingerprints on the register used for the 2011 election. The business rule was also applied in addition to further cleaning the register. The business rule required that at least two fingers must be captured for a voter to be included in the register. For the first time, INEC adopted technology for accreditation of voters with the aid of INEC Voters Identification System (IVAS) popularly called the Smart Card Reader (SCR). Temporary Voters' Cards (TVCs) which were issued to voters for the 2011 election were replaced with Permanent Voter Cards (PVCs). The PVC replaced the Temporary Voter Card (TVC) According to INEC, quality, security; durability and cost-effectiveness were underlying factors in the production of the Permanent Voter Cards by INEC (Gberie, 2015).

Interestingly, on the 31st of March, 2017, the Nigerian Senate passed the Electoral Act No. 6 2010 (Amendment) Bill 2017 into law. This bill gives the Independent National Electoral Commission (INEC) the power to conduct Electronic Voting (E-voting). The passage of this Bill in the Senate is a bold, innovative and common-sense step on Electoral Reforms designed to guarantee free, fair and credible elections in Nigeria (Ogbaudu, 2011).

### **Justification of Electoral Technology for the Reformation of Nigerian Electoral System**

Various factors are bound to challenge the performance of the existing traditional paper ballot system of elections in Nigeria, and render it less relevant. Thus, the conduct of election using electronic devices has the followings advantages:

**Reduction in Risk:** Traditional paper ballot election involves movement of people (electorate and electoral officials) and election materials to the polling units and collation center for casting vote, tallying and results (Ogbaudu, 2011). Moreover, communicating election results through traditional means of transportation expose the results to numerous risks such as attack by political thugs, aggrieved party members; or manipulation by the corrupt motivated officials. These constraining factors negatively affect the performance of the traditional paper ballot system and put to question, credibility of its continual adoption. It also open-up a window for e-voting option (Gimpel, &

Schuknecht. 2022). For a simple reason that result is compiled and communicated electronically. Issues bordering around franchise continue to heat Nigerian political discourse.

**Providing Opportunity for Indigenes in Diaspora to Vote:** Furthermore, voting freedom for large number of immigrants living in foreign countries pose serious constrain because they are required to obtain absentee voter identity to enable them cast vote from their foreign host countries (Gimpel, & Schuknecht. 2022). In addition, electoral officials, security personnel on duty during election posted to places other than their polling units find it difficult to exercise their voting rights. Weaknesses of the existing voting system do not support absentee voting. Hence, pockets of agitation from various quarters of citizens within Nigeria and abroad to explore viable voting system that allows voting right for those categories of citizen (Adebowale, 2014). In another dimension, it has been political pressure to adopt new voting system is a major driver to adopting (Gimpel, & Schuknecht. 2022).

**Providing Opportunity for Voters in Conflict Turn Area to Vote:** Moreover, in conflict war turn area, voting using ballot paper that demand electorate to make themselves available in the hours of election before the election officials turn out to be unbearable for fear of been attacked. It is pertinent that voters in a war turn area always fail to perform their civic responsibility due to the insecurity nature of such place. But with development of election technology, there is every possibility for voters to cast their votes using electronic device from the comfort of their home without exposing himself to danger. Likewise, during the conduct of election, students in tertiary institution learning use to go on vocation, whereas majority of them register to vote in their various schools, they therefore find it impossible to cast their vote since they were not register to vote at their various hometown. This could be one of the reason that voting centers in higher institution of learning keep on dry in the hours of election. But, with application of technological device in the conduct of election, one can possibly vote other than the polling unit of his registration.

**Transparency:** Likewise, Inadequate transparent mechanism is the problems of the existing voting system in Nigeria in which electoral officials enjoy overdo privilege to manually collate, count and announce election results. Hence, the method is prone to danger of human error and deliberate manipulations. The susceptibility nature of the method allows electoral officials with corrupt motives and their accomplice to easily rig election at every stage of the process unnoticed. Furthermore, the system allows for multiple voting, voting by non-eligible persons; and intimidation of voters by scaring them away from casting vote or forcing them to vote candidates against their wishes. The above circumstances inspired for exploration of robust election methods through IT (Gimpel, & Schuknecht. 2022). The aforementioned challenges set in augment for the automation of voting process to ensure credible election.

**Error Free Electoral Exercise:** Moreover, adoption of electoral technology has some inherent advantages over paper-based voting in that besides being robust, secured and safe, it decreases voting errors substantially. Gray, and Caul. (2020) confirmed that using e-voting improve the convenience, efficiency and effectiveness of the election process; reduces the cost of organizing election, increased participation and provide an alternative option as it improves the integrity of the election process in general. Limitations associated with accuracy, security and verifiability inherent in the conventional

paper-based methods make e-voting system an appealing option. This is owing to the manual operations of the former concerning casting and counting votes. According to Gray, & Caul. (2020). Modern democracies would maximally benefit from the effective implementation of electronic voting technology. If complemented with traditional methods, the e-voting system increases the chance of counting each vote and broaden the number of potential voters.

**Acceptability:** The voting system that has the acceptance of a massive majority of the electorate tends to be more effective than the one with low acceptance of the electorates (Olaniyi, et al., 2011). "Voting is not a cost-free activity" as the cost of registration, searching for polling booth and travelling on Election Day are tangible costs that entail spending time and effort (Kozakova, 2011). Assessing the tangible cost of voting vis-a-vis immediate benefits of same often guides the decision of the voter to either vote or not. The easier voting becomes for citizens especially among the younger age the more likely they are to participate in elections. Butting or clicking a computer mouse is likely to gain more acceptances. Such voting system increases voters' conveniences and confidence in electoral procedure, and is capable of improving decline of voters' turnout and perceived political apathy (Gray, & Caul. (2020). In view of the forgoing, the question of whether e-voting could be a solution to lack of transparency and accountability; loss of confidence and trust in electoral process and other electoral related problems that define Nigerian electoral system could be answered with a positive nod.

### **Major Factors to Be Considered for Electoral Reformation Using Electoral Devices**

**Legal Framework:** Constitutional provisions or Acts providing legitimacy for the use of e-voting remains obvious challenge to adoption in Nigeria (Ajayi, 2003), nonetheless applauding ICT in the policy document. Paradoxically, the Nigeria Vision 2020 program distinguishes ICT as the central nerve to lift the country to a greater height. The program stressed government readiness to exploit ICT as a strategic transformation lever. Nevertheless, INEC Chairman is unequivocal that Section 52(1) (b) of the Electoral Act 2010 is the major impediment for e-voting adoption (This Day Live, 2012). The impending contradictions depict inconsistent ICT policy that failed to promise well with transition to e-voting. Legal framework as an indispensable condition is a catalyst for INEC and other stakeholders to prepare financial, infrastructural, logistics, human and capital resources required. While it is important to review the constraining electoral acts to allow adoption, it is equally important that such a reform be supported by structural changes in other spheres of the socio-political relations to advance the course of sustainable democracy in Nigeria (Odion-Akhaine, 2020).

**Complementary ICT Infrastructure:** Poor ICT infrastructure as an inherent characteristic of Nigeria, poses serious challenge for applying some of technical devices for election. This is owing to the fact that in developing countries, advanced technologies are often proposed without prerequisite complementary infrastructure. Odion-Akhaine, (2020). Conclude that "The decision to adopt certain systems should be reviewed to take account of the available infrastructure, in addition to issues of power and politics, literacy levels, culture and religion". Challenges confronting Nigerian pre-adoption of e-voting technology include inadequate funding, lack of IT specialist, erratic electricity

supply, growing level of cybercrime and gender imbalance access to ICT (Huntington, & Nelson. 1976). Development of robust technology such as e-voting system is closely associated with electricity supply (Ajayi, 2019). Adequate provision of electricity is required to operate polling place (client) voting machines whereas internet connectivity is required for internet.

**Viable Electoral Management Body (EMB):** From the institutional view point, viable EMB is a major stake in the electoral process saddled with among other responsibilities, organizing election. Robust, transparent and effective EMB as well as honest electoral officials are preconditions for credible election that can enhance public confidence in the electoral process (UN, 2012). As an indispensable stake, EMB involves in the process of selecting electoral system. Basically EMB has tripartite quality to effectively organize and supervise election using e-voting technology. Thus, EMB must be made to be independent in selecting the various type of technologies in various electoral exercises (Ajayi, 2019).

**Technological and Managerial Expertise:** Infrastructures, including hardware and software; their complexity and adaptability are the basic components of technology that can effectively utilize to realize the goal of modern public administration (Brown, 2005). In Nigeria, comprehensive biometric data for identification and monitoring election, a basic requisite for e-voting adoption is lacking (Umoru, 2012). What is more challenging is that whether the country has the required professional technologists capable of handling sophisticated technology. Given the dismal state of requisite ICT facilities, logistics and expertise, some pessimist contests that e-voting is not ripe for Nigeria (Ajayi, 2019).

**Piloting e-Voting Technology:** Application of open and transparent voting system is an essential determining factor for accepting election results and legitimization of the electoral institution. Piloting e-voting system has the potential to enhance trust and confidence of stakeholders that pave way for assessing adoption decision. Piloting involved understanding mandate of the project, legislative backup, developing requirement and technical specification and acquisition of funding required for the implementation. Such atmosphere can generate dialogue and debate among stakeholders and policy makers regarding not only viability of the technology but also feasibility of adoption. By piloting, feedback about cost benefits of e-voting technology can be obtained (Ajayi, 2019).

**Tension from Political Environment:** Electoral technology adoption is determined significantly by political breath prevalent in a society. Political system with ICT proficiency tends to frame favorable policies and conditions for crowd sourcing technology such as e-voting to thrive and flourish. For example, one major implication of e-government phenomenon in Nigeria is the creation of virtual communities where people from diverse sociopolitical background and interest share information within and outside the country through various means of interactions-internet. In such circumstances, technology savvy among the youth, elite and immigrants living abroad are exposed to operational proficiency of modern voting system in various countries Adebayo, & Omotola, 2007).

**Technology Acceptance:** Identification of election technology that meets the public acceptance is as important as the election itself (Burmester & Magkos, 2003). Given the numerous potential benefits of e-voting adoption, the technology is of less important if voters are not willing to accept or use the



technology. That is to say, in planning for the adoption of new technology, the robust nature of the technology is not as important as the risk of accepting it. Therefore, the task is to measure the risk, better understand it and appropriately manage it (Navarra, 2011). In line with this idea, Hall (2012) distinguishes two main procedural strategies for voting technology adoption, namely pre-voting technology adoption and post-voting technology adoption. Pre-voting system adoption concerns mainly with sampling opinion of the stakeholders on perceived preferred voting system through empirical research and piloting.

## **Conclusion**

In conclusion, the paper discusses the centrality of electoral technology for the improvement of electoral credibility in Nigeria. Given the numerous potential benefits of e-voting adoption, the technology is of less important if voters are not willing to accept or use the technology. That is to say, in planning for the adoption of new technology, the robust nature of the technology is not as important as the risk of accepting it. Therefore, the task is to measure the risk, better understand it and appropriately manage it. Moreover, adoption of electoral technology has some inherent advantages over paper-based voting in that besides being robust, secured and safe, it decreases voting errors substantially.

Furthermore, the effective integration of electoral technology in Nigeria electoral cycles requires multifaceted approaches. This involve to a large possible extent investing in electoral infrastructure, promoting digital literacy and ensuring legal support framework supports the adoption of the technology. Moreover, it is essential to address the challenges associated with the adoption of electoral technology, massive voters' education on use to use the electoral technology for actual voting exercise. Ultimately, the strategic application of electoral technology can help to fortify the integrity of the Nigerian electoral process, promoting of more inclusive, transparent and accountable democratic process.

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