



THE IMPACT OF BIMODAL VOTER ACCREDITATION SYSTEM (BVAS) ON THE CONDUCT OF CREDIBLE ELECTIONS IN NIGERIA: A CASE STUDY OF 2023 GENERAL ELECTIONS IN ADAMAWA NORTH SENATORIAL DISTRICT

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ABSTRACT

The research evaluates the Impact of Bimodal Voter Accreditation System (BVAS) on The Conduct of Credible Elections in Nigeria with emphasis on the 2023 General Elections in Adamawa – North Senatorial District. Bimodal Voters Accreditation System is a Technology Innovated by the Independent National Electoral Commission (INEC) deployed to mitigate electoral fraud, enhance integrity and restore public confidence in the electoral process. The study aimed to evaluate the reliability of BVAS Technology during the 2023 general elections, to identify strategies for sustaining Accreditation Technology in future Elections in Adamawa Senatorial District in particular and Nigeria at large and to analyze the advantages and challenges of deploying BVAS in the 2023 elections process particularly in Adamawa North Senatorial District. The study adopted Martin Hagen's E-Democracy Theory and Everett Rogers Information Diffusion Theory to explain the application of BVAS Technology in Nigerian Elections. The research adopted descriptive research design. Both quantitative and qualitative methods of data collection and analysis was utilized. The primary data was collected using self-structured questionnaire and Key Informant Interview (KII). The data collected through questionnaire was tabulated and analyzed using the simple percentage and frequency as descriptive technique. The results show a highly significant impact of BVAS on the credibility of 2023 Elections. Specifically, the BVAS effectively ensured the accuracy of voter accreditation in the 2023 General Elections, enhanced the overall credibility of the elections. It was found out that about 95% of the eligible voters were successfully accredited. But the BVAS was faced with technical issues which includes in ability of the BVAS to verify some voter's cards and inability to recognize either the fingerprint or facial architecture of some voters. It was concluded that, the people showed positive sentiments towards BVAS, indicating a high level of satisfaction with its accuracy, efficiency, and transparency in the electoral process. The research recommended that all stakeholders should provide Continuous Training and Capacity Building; Robust Technical Support and Maintenance; Enhanced Cybersecurity Measures; Stakeholder Collaboration and Feedback Mechanism; Public Awareness and Education Campaigns; Infrastructure and Technological Improvement; Pilot Testing and Incremental Roll-out; Policy and Regulatory Framework and a Reliable Voters.

1.1 Background of the Study

Election is considered one of the most important pillars of democracy across the globe where a democratic system is in practice. An election is a formal decision-making process by which a population chooses an individual to hold a public office (Robert, et al 2011).

It is seen as a political system that is characterized by periodic, and free elections in which politicians organize into political parties and engage themselves in a competitive poll to ensure a standing government, where the political right will enable all adult citizens to vote and be voted for (Jayum and Nwokeke, 2011). However, election management bodies around the world have employed a number of innovations and electoral reforms, some of which are considered best practice to improve the management and conduct of elections to ensure credibility. These innovations and reforms include the use of information and communication technology, adoption of transparent processes in the conduct of elections, amendments to legal framework and improvement of stakeholders' engagement. As a result of these efforts, there is significant improvement and successes recorded by a number of election management bodies in recent times in the way and manner they prepare, organize, administer and conduct elections.

The importance of information and Communication Technology in human societies can never be overemphasize. According to Kroeker (2010), the uses of information and communication technologies in recent times have become inevitable. Research reveals that the usage of ICT in election has eliminated the incidents of multiple registration which had been one of the main political tools for rigging elections by unscrupulous elements (Ejikemejombo, 2015). Although, it was reported that Nigeria is yet to meet up with international standard for the provision of viable, successful and generally accepted electoral system of democracy as a result of poor implementation of the required electronic voting system in the country that entails combining electronic voters register and smart card readers with election result devices that would be Self-auditing and fully equipped with real time facilities (Esan and Ayeni, 2017). It is believed that full implementation of the required electronic voting system in Nigeria would improve election management in the country thereby meeting up with international standard (Toba and Adepembe 2018).

According to The Carter Center and National Democratic Institute for International Affairs (1999), the steps taken by Gen. Abdulsalami Abubakar after the death of Gen. Sani Abacha paved way for the historic 1999 general election in Nigeria. The 2003 elections witnessed a technological leap with the introduction of Optimal Magnetic Recognition (OMR) forms. According Toba and Adebimpe (2018), 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 have enhanced the level of credibility to the electoral system.

The Independent National Electoral Commission (INEC) under the leadership of Prof. Attahiru Jega in 2010 focused on the registration of voters which was in existence, it was discovered to have fallen far short of the level of credibility required for the conduct of free and fair election. The Commission (INEC) took the view that an entirely new register of voters was the irreducible minimum for free, fair and credible election. A more effective Improved Automated Fingerprints Identification System (AFIS) was applied to rid the register of multiple registrants while an Electronic Voter Register (EVR) was generated which was used for the 2011 general election.

Furthermore, the 2015 general elections marked a new beginning in the deployment of sophisticated Information Communication Technologies in the history of elections in Nigeria. Improved Automated Fingerprints Identification System (AFIS) was introduced to identify similar fingerprints on the register used for 2011 election. In 2015, for the first time INEC adopted technology for accreditation of voters with the aid of INEC Voters Accreditation System (IVAS) popularly called the Smart Card Reader (SCR) (Adekunbi,

Ademola and Abangwo, 2019). In order to reduce the human interference associated with the SCR Voter Accreditation process, and to meet up with the international standard, the Nigerian Electoral Management Body introduced Bimodal Accreditation System (BVAS). Though the innovation reported minimal success due to the failure of BVAS to capture voters in some instances but it showed promising potentials as Odinakalu (2021) puts it, the system deserves time to prove itself but INEC will not get too many more opportunities.

It is important to note that despite the deployment of technologies in the history of Nigeria's electoral process, the elections have been criticized with lack of integrity. This has led to a lack of confidence in the electoral umpire due to rigging and other electoral malpractice. The said misconduct led to the sacking of various elected officials by the Court including the Senator Representing Adamawa North Senatorial District and Member Representing Mubi North, Mubi South and Maiha Federal Constituency. It is against the backdrop of the occurrences of electoral misconducts/irregularities and their consequences to electoral process in Adamawa North Senatorial District, that this research was conducted to examine the impact of the deployment of Bimodal Accreditation System in the conduct of credible elections in Nigeria, specifically the 2023 general elections in Adamawa-North Senatorial District.

The main objective of this study is to examine the impact of the Bimodal Voter Accreditation System (BVAS) in the conduct of credible elections in Nigeria, using Adamawa North Senatorial District as a case study. The specific objectives are to assess the impact of BVAS on the credibility of the 2023 General Elections in Adamawa North Senatorial District, to evaluate the reliability of BVAS technology during these elections, to identify strategies for sustaining accreditation technology in future elections in Adamawa Senatorial District and Nigeria at large, and to analyze the advantages and challenges of deploying BVAS in the 2023 election process, particularly in Adamawa North Senatorial District.

2.1 LITERATURE REVIEW

2.1.1 Conceptual Understanding of Election

Election is one of the most important elements of democratic governance (Braton, 2008), particularly in a multi ethnic societies or what Robert Dahl termed as 'plural society' (Dahl, 1998). Recently, researchers around the globe have explored more on the Impact of elections in a democratic system. Several of these empirical studies have shown that in many countries, election is central to the success and promotion of democracy (Igwe & Amadi, 2021). The distribution of power derived from electoral processes is even rather than static as peoples' opinion is reflected through voting as majority emerges the winner (Braton, 2008).

2.1.2 Electoral System

Nohlen (1996) posits that, 'electoral systems determine 'the rules according to which the voters may express their political preferences and according to which it is possible to convert votes into parliamentary seats or in government posts.' Electoral systems are not identical, and the selection of one type of electoral systems depends on two important variables. On the one hand, the content and design of competing electoral systems depend on the sociocultural, historical, geographic, economic and political conditions of a given state. On the other hand, they just constitute one method determining the nature of the prevailing political system, including its inclusivity towards 'groups that had previously been locked in conflict' (Chege, Mukele &

Kabeberi 2007), and also the overall shape of the party system, including the way political parties organize and operate internally (Rakner & Svasand 2007:6). In the established democracies, alternative electoral systems result from the choice by political parties which is predictably based on each alternative system's expected effects, both immediate and long-term, on their electoral self-interests (Benoit 2004).

According to Roberts (1971), electoral system is the institutionalized arrangements by means of which an election is conducted and the purpose of the election fulfilled the term according to Hague and Harrop (1982) covers the legal and practical realities of voter registration and election administration as well as the prices rule for translating.

According to Nwabueze (1993) cited in Onu & Momoh (2005), the electoral system embraces within its ambit, all the institutional procedures, arrangements and actions involved in elections. This includes election observation and verification activities carried out by local or international bodies or both (Onu & Momoh, 2005). It also includes establishment of institutions and structures that will mobilize the masses towards involvement in the electoral process, and provides the rule and regulations that govern the process. The electoral process essentially, is all-encompassing process involving any issues and operations which are also elastic, depending on the type of political system and the level of maturity of the democratic process.

The electoral process can be divided into the constitutional and non-constitutional aspects. The constitutional aspect has issues prescribed in the constitution such as the body responsible for the electoral process and the independence of such a body, while the non-constitutional aspect such as voters' register, procedure at election, electoral offences, etc, are issues, more appropriately covered by acts of the National Assembly. Electoral process should therefore be understood as a defining and regulatory process in the democratic contest. The electoral process in Nigeria, unlike in the advanced democracies of the world, has often been undermined by political contest, fraud and malpractice of varying degree and intensity – a situation that has made national development suffer a severe setback (Udu, 2013) cited in Larry E. U., Joseph O. N. and Ezekwe E. A. (2015).

2.1.3 Electoral Fraud

Electoral fraud is an illegal interference with the process of election that interferes with the mandate of the people. Electoral fraud comes in different forms such as increasing the number of voters for the favoured candidate, under age voting, mass voting by unregistered citizens, snatching of ballot to be stuffed with thumb printed votes by party candidates, snatching of results before or after elections to favour the ruling party candidate, intimidation at the polls using militant gangs or even state security, scaring away of genuine registered voters from exercising their votes in polling boots located in an opposition favored constituency, deliberate one side and improper counting of votes and media manipulation to announce or publish the wrong results and declare the wrong candidates as winners before the proper collection of results by the Electoral Commission (Ugwuala, Kalu and Elechi, 2020).

Electoral fraud has very serious consequences to the electoral process. As puts by Michael, Hall and Hyde (2008), one of the more vital consequences of election fraud may be the negative effect it has on public confidence in the electoral process. This consequence may occur even when no election fraud actually takes place. Simple allegations of fraud can be enough to depress citizen participation and harm the reputation of the institutions charged with administering elections. Such allegations also give politicians the

ability to offer reforms, which may serve either to improve elections or to entrench some bias in the electoral system.

2.1.4 Credible Election

Credible election appears to modern writers as an election that is not only just 'free and fair', transparent devoid of electoral fraud and violence on the poll day, but includes and assessment of both pre-poll and post poll day activities. Credible election is always used interchangeably with clean, acceptable, free and fair elections. These are elections conducted in accordance with the existing electoral rules and in which every contestant is given equal opportunity to win. It is an election conducted without partiality or undue advantages of any party or candidate (Asadu, 2017) cited in (Gabriel, 2019). Credible election is election conducted in a democratically acceptable manner. It must provide for equal electorate and freedom which afford them opportunity to make meaningful choice devoid of intimidation (Eminue, 2001). Thus, election would be seen as credible, if it is free and fair and not based on patronage of any kind. Other specific factors essential for credible elections as discussed by Grariel (2019) are:

- i. **Adequate security:** Adequate security to guard electoral materials, electoral officers and voters is provided in a free and fair election to prevent irregularities that may arise as a result of security lapses. Security enables the voters and official to perform their roles without fear or intimidation.
- ii. **Independent judiciary:** There is in existence independent judiciary to settle electoral disputes. That is disputes arising from allegation of electoral malpractices. Electoral laws For credible elections, there are laws that guide the conduct of the electorate, political parties and electoral officials.
- iii. **Independent electoral management body:** There is an impartial electoral body that conducts elections in line with the existing electoral laws. Members of the electoral management body are non-partisan.
- iv. **Reliable voters' registers:** Voters are registered for election and their names displayed for voters to cross-check their names. The register is periodically reviewed to enable new registration of qualified voters and possibly cleanse the register of deceased voters. For it to be reliable, it should not be inundated with under-aged or ghost voters just to bloat the register for sinister purposes during elections.
- v. **Transparent voting and counting:** For credible elections, the voting system is open and votes are counted immediately after voting in the presence of political party agents, electoral observers, security officials and electorate. The result is announced immediately after counting of votes.

Therefore, It is safe to argue that the potency of elections in serving as viable means of holding governments accountable in any functional democracy depends on whether they are free, fair and credible. To this end, many different yet interrelated factors have been cited by scholars and analysts over the years as constituting the core principles or ingredients of free, fair and credible elections, ostensibly, to put to rest any ambiguity that may becloud the meaning and content of free, fair and credible elections. For example, according to Iwara (2010), a free, fair and credible election must be one; Where franchise is granted to all citizens that are qualified to vote; Where valid votes count; A situation where proxy votes do not count; Where electoral umpires are not biased.

On their own part, Kesselman, Krieger and Joseph (2013), maintained that, for an election to qualify as fair, there must be procedures in place guaranteeing candidates the right to compete, all citizens must be

entitled to vote, and votes must be counted accurately, with the winning candidates(s) selected according to pre-existing rules that determine the kind of plurality or majority required to gain electoral victory.

The life of good governance depends on the type of electoral body put in place. It is believed that electoral body should be able, on the face of a democratic system provide for a free and fair election. An election where the electorates are allowed to cast their vote and the materials for the election provided on time, devoid of intimidation, malpractices and falsification of results (Beetseh, 2013).

2.1.6 Public Trust in Election Systems

Citizen trust in elections is essential for the legitimacy of elected representatives and the regime, especially in regimes with less experience with multiparty elections. Several empirical studies find that citizens who experience fraudulent, violence-ridden, or poorly organized elections are less likely to express confidence in the elected representatives and more likely to engage in anti-regime protests or violence (Rose & Mishler, 2009; Norris, 2014). In other words, incumbents who manipulate elections may run the risk of losing popular legitimacy.

Prior studies show that citizens possess the cognitive capacity to evaluate the quality of elections and develop these evaluations either through personal experience during various stages of the electoral process or information gathered from a variety of secondhand sources, including the media, political parties, and informal conversations (Bratton, 2013). In fact, empirical studies find that citizens' perceptions of electoral integrity are strongly correlated with various independently measured macro-level indicators of election quality, including expert perceptions of electoral integrity (Norris, 2014), the performance of election administration (Bowler, Brunell, Donovan, & Gronke, 2015), and the incidence of electoral violence (Mattes, 2014).

Despite empirical evidence pointing to the collective rationality of citizens in evaluating electoral processes, there are instances where citizens' perceptions, even when aggregated, may be in-congruent with other aggregate-level indicators of election quality. For instance, there have been several elections that experts and international observers characterized as being excessively manipulated but that recorded seemingly high levels of public confidence. One reason for this in-congruence relates to citizens' unwillingness to reveal their true assessments of the election due to fear of repercussions from the government or because expressing such views may be socially unacceptable. A second, and more widely studied, reason is that citizens may place greater importance on specific political or economic factors when assessing electoral integrity. For instance, numerous cross-national studies find that citizens' party affiliation or status as electoral winners or losers remains an important predictor of election integrity assessments (Anderson, Blais, Bowler, & Donovan, 2005).

2.1.7 Historical Analysis of Election Irregularities in Nigeria

Nigeria's history has been criticized with lack of integrity even before independence, and has been perpetuated in successive elections in the country. The colonial processes (1923 to 1954) were blemished by restrictive electoral laws imposed by the colonial masters with the exception of the 1959 general election, which was more welcoming in terms of political participation than the preceding colonial elections (Auwal, 2017). Just like the colonial electoral process, the post-colonial state was also characterized by all sorts of irregularities. Corroborating this, Lawrence (2016) points out that Nigeria's efforts at sustainable democracy have not been successful because of its inability to conduct free, fair and transparent elections and this in

turn retard its effective democratic development. This shows the extent of the Nigeria's quest for credible elections since independence (Lawrence, 2016).

Despite the importance of elections to democracy, Nigeria's aim at achieving credible elections remains a mirage. Both the first and the second republics were overthrown by the military after elections were heavily rigged in 1966, and 1983 respectively. The Third Republic (1993 elections) was stillborn as the time it was annulled by the military regime (Ibrahim and Aturu, 2009). The 1999 to 2023 elections were not excluded from the criticism of electoral fraud, despite efforts made by the electoral body to conduct free and fair elections.

The experience of Nigeria with democratic politics has shown that all the elements necessary for building democracy have been violated with impunity. For example, in the 2003 general elections, Nigerian politicians, most of whom were members of the ruling party, were very comfortably involved in violating election procedures and processes (Kano, 2015). In addition, the 2007 election was not any better than the previous one because during the 2007 elections polling stations in many states opened hours late, closed early or failed to open at all. This represented a fundamental barrier to popular political participation in so many places and most likely disenfranchised many prospective voters. Thus the 2007 elections have been recorded as high in terms of lack of credibility because the country experienced a lot of irregularities and the misconducts during the election (National Democratic Institute Report, 2007).

2.1.8 Common Irregularities in Past Nigerian Elections

The electoral process in Nigeria since independence has gained an unenviable notability for fraudulent practices. This has forced many to see elections in Nigeria as a mere selection. These elections are characterized by serious and blatant cases of electoral fraud such as stuffing of ballot boxes, over-bloated voters' registers, special treatment of voters and election officials, disappearance or destruction of ballot boxes, distortion of results, godfatherism, intimidation of voters and political opponents by law enforcement agents and thugs as well as election related violence, destruction of properties and killing. There is a near general consensus that the integrity of election has been on a steady decline since 1959 (Adeyemo, 2009; Adekunle and Masajuwa, 2016).

Any conflict that arises during campaigns leads to electoral malpractices that create problems for the electoral body. Such problems include the use of hooligans or other persons to disrupt the campaigns; heavy presence of security personnel to intimidate people; Misuses of state resources; Bribery of voters in cash or kind; Use of derogative language against opponents; Use of threats or force or violence to compel people to support or refrain from supporting a political party or candidate; etc. (Nnanta, Eme and Asogwu, 2014).

Lawrence and Adekunle, (2023) outlined the following election malpractices or irregularities; falsification of number of accredited voters at the polling unit, falsification of votes at the polling unit, collation of false results, mutilation of results, computational errors, swapping of results sheets, forging of result sheets, obtaining declaration and result forcefully, making declaration and return while collation is still in progress, and poor record keeping. Ani, Emma and Chinedu (2013) posits that, the common irregularities in Nigerian Elections includes:

1. **Electorate Manipulation:** Most electoral fraud takes place during or immediately after election campaigns, by interfering with the voting process or the counting of votes. However it can also occur far in advance, by altering the composition of the electorate. In many cases this is not illegal and thus

technically not electoral fraud, although it is sometimes considered to be a violation of principles of democracy.

2. **Manipulation of Demography:** In many cases it is possible for authorities to artificially control the composition of an electorate in order to produce a foregone result. One way of doing this is to move a large number of voters into the electorate prior to an election, for example by temporarily assigning them land or lodging them in shanty households. Another strategy is to permanently move people into an electorate, usually through public housing.
3. **Disenfranchisement:** The composition of an electorate may also be altered by disenfranchising some types of people, rendering them unable to vote. In some cases this may be done at a legislative level, for example by passing a law banning convicted felons, recent immigrants or members of a particular ethnic or religious group from voting, or by instituting a literacy or other test which members of some groups are more likely to fail. Since this is done by lawmakers, it cannot be election fraud, but may subvert the purposes of democracy. This is especially so if members of the disenfranchised group were particularly likely to vote a certain way. In some cases voters may be invalidly disenfranchised, which is true electoral fraud. For example a legitimate voter may be “accidentally” removed from the electoral roll, making it difficult or impossible for them to vote.
4. **Intimidation of Voter:** intimidation involves putting undue pressure on a voter or group of voters so that they will vote a particular way, or not at all. Absentee and other remote voting can be more open to some forms of intimidation as the voter does not have the protection and privacy of the polling location.
5. **Changing or inflating the election result:** in some circumstances, figures of election results are being increase from the actual or the actual results are changed completely. The result presented sometimes at the collation centres sometimes have discrepancies with that of the polling unit.
6. **Misleading or Confusing Ballot Papers:** Ballot papers may be used to discourage votes for a particular party or candidate, using design or other features which confuse voters into voting for a different candidate. For example, in the 2007 Adamawa re-run election, between Murtala Nyako of PDP and Ibrahim Bapetel of ACN. The ACN as a party and her candidate criticized INEC for printing a confusing ballot paper that led to invalidation of thousands of their votes.
7. **Ballot Stuffing:** Ballot stuffing occurs when a person casts more votes than they are entitled to. In its simplest form, ballot stuffing literally involves “stuffing” multiple ballot papers into the ballot box. Another method is for voters to cast votes at multiple voting centres, on each occasion claiming that it is their only vote.
8. **Vote Buying:** This is a common phenomenon in Nigeria’s past electoral history. It is called “cash for votes” it’s the monetization or commercialization of the voting process and the conscience of the mostly poor voters. Voters may be given money or other rewards for voting in a particular way, or not voting.
9. **Mis recording of Votes:** Many elections feature multiple opportunities for unscrupulous officials or “helpers” to record an elector’s vote differently from their intentions. Voters who require assistance to cast their votes are particularly vulnerable to having their votes stolen in this way. For example, a

blind person or one who cannot read the language of the ballot paper may be told that they have voted for one party when in fact they have been led to vote for another.

10. Destruction or Invalidation of Ballots: One of the simplest methods of electoral fraud is to simply destroy ballots for the “wrong” candidate or party. This is unusual in functioning democracies as it is difficult to do without attracting attention. However, in a very close election it might be possible to destroy a very small number of ballot papers without detection, thereby changing the overall result. Conspicuous destruction of ballot papers can render an election invalid and force it to be re-run.

2.1.9 Impact of Irregularities on Public Perception

Generally, no government can be considered as legitimate if the electoral process is not free, fair, transparent and peaceful. For it to be legitimate it has to be devoid of manipulative tendencies and transparent to all the stakeholders, which the 2010 Electoral Act as amended stand to safeguard. Nigeria’s history of elections indicates that the electoral process had been marred by irregularities such as ballot snatching, stuffing of ballot boxes, electoral violence, and falsification of election results, political corruption, connivance between politicians and electoral bodies to favor a candidate or a political party and so on (David, Manu and Musa, 2014). These irregularities led to loss of confidence from the part of the people.

2.1.11 Evolution of Electronic Voting Systems in Nigeria

In Nigeria political history, manual voting since independence has failed, as a result of the inherent security and credibility challenges confronting successive elections in Nigeria. Elections are faced with Electoral fraud and violence and this is compounded by the fact that the conduct of free, fair and credible election is always faced with numerous challenges. In continuous search for conduct of credible elections, advanced and developing democracies are shifting from manual conducts of election to electronic system. As a result, countries are increasingly deploying technologies in their elections and Nigeria is not an exception. These have greatly helped to minimize electoral fraud and violence in such countries. The increasing reliance on E-voting among advanced and emerging democracies all over the world demonstrate that credible election is the backbone of democracy.

Registration of voters in Nigeria was done manually in preparation for 1999 elections. Registrant details were written with pen on a form provided by INEC. The filled forms were collected and eventually used for the 1999 general election. There was neither any database of voters nor any technology introduced to minimize double registration, thus the 1999 election registers’ credibility was questionable and was very far from reality. The foundation of any election process is a credible Voters Register. The Voter’s Register is the basis for determining who is eligible to vote and who is not on Election Day (The CC and NDIIA, 1999).

The 2003 elections witnessed a technological leap with the introduction of Optimal 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 of the names and particulars of all prospective voters (also known as prospective Registrants) on the form EC.1A who present themselves physically for registration at the registration Centers. The information 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 (The CC and NDIIA, 1999).

In order to tackle the numerous challenges bedeviling manual conduct of elections in Nigeria, the country is following the footsteps of the advanced democracies all over the world who are increasingly deploying modern Information and Communication Technology (ICT) voting tools, infrastructures and systems in the planning and conduct of elections. According to Toba and Adebimpe (2018), 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.

Electoral Fraud continues to be a very serious problem in Nigeria's election environment which called for technological solution (Eguavon, 2009). Technological approaches towards alleviating electoral fraud such as the use of electronic voting machines, mounting of webcams at polling units and the use biometric tools, go a long way to reduce malpractices during electoral processes. The first Nigerian move in search of a technological solution was the introduction of the Automated Fingerprint Identification System (AFIS) by Independent National Electoral Commission (INEC) in the 2011 general elections (Golden, Kramon and Ofosu, 2014).

The conduct of the 2011 general election was domestically and internationally acclaimed to be credible and a great leap forward from the previous experiences since the 4th Republic. The search light of INEC under the leadership of Prof. Attahiru Jega in 2010 was focused on the registration of voters as it then existed, which was discovered to have fallen far short of the level of credibility required for the conduct of free and fair election. The new Commission took the view that an entirely new register of voters was a minimum requirement for free, fair and credible election. INEC was able to procure and deploy over 132,000 direct data capture machines (DDCMs) across the polling units (PUs) and registration areas (RAs), with a provision for some contingencies. A more effective Improved Automated Fingerprints Identification System (AFIS) was applied to rid the register of multiple registrants while an Electronic Voter Register (EVR) was generated which was used for the 2011 general election. No technology was used for collation of results. Electronic mail was used to transmit results from local government and state offices to national headquarter in Abuja (Toba and Adebimpe, 2018).

The unarguable need for Nigerians to record a free, fair and credible election to sustain the democracy led to introduction of biometric registration in the 2011 election and the use of Electronic Card Reader Machine (ECRM) in the 2015 and 2019 elections. This electronic voting method is expected to reduce political violence and post-election petitions (Amaechi & Ezirim, 2021). Akinpelu & Adenekan observed that in the quest to minimize election fraud and rigging, in 2015, INEC introduced smart card readers for the verification of voters and voting cards.

Furthermore, 2015 general election marked 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 2011 election. INEC adopted technology for accreditation of voters with the aid of INEC Voters Accreditation System (IVAS) popularly called the Smart Card Reader (SCR). Temporary Voters' Cards (TVCs) were replaced with the Permanent Voter Cards (PVCs). Once PVC has

been read and accredited by the SCR, the Voter Identification Number (VIN) is stored in the reader and it does not allow the accreditation of that VIN on that particular reader any longer (Adekunbi, Ademola and Abangwo, 2019).

In 2021, the Nigerian Electoral Management Body introduced Bimodal Accreditation System (BVAS) for voter accreditation and snapping of election results to be transmitted to the INEC Result Viewing Portal.

2.1.12 Technology Adoption in Nigerian Electoral System

Electoral Fraud continues to be a very serious problem in Nigeria's election environment. The historical path of elections in Nigeria is not divorced of electoral misconduct. Elections in Nigeria have not been free and fair and this called for technological solution (Eguavon, 2009). Technological approaches towards alleviating electoral fraud such as the use of electronic voting machines, mounting of webcams at polling units and the use biometric tools, go a long way to reduce malpractices during electoral processes. The first Nigerian move in search of a technological solution was the introduction of the Automated Fingerprint Identification System (AFIS) by Independent National Electoral Commission (INEC) in the 2011 general elections (Golden, Kramon and Ofofu, 2014).

The Smart Card Reader (SCR) as a technological device designed to validate and attest to the authenticity of a permanent voter card (PVC) which holds the bio-data of potential voters on election days has faced some series of challenges that was not envisaged at the stage of development. The challenges as argues by Semshak and Shakira, (2021) are as follows:

1. **Legal Challenge:** Despite the impressive aims of the card reader, it was not without criticisms as there was a legal controversy over the use of the smart card reader in the 2015 general elections between the proponents of the card reader and the antagonists who feels that INEC neither has the legal authority nor capacity to use the smart card reader. As captured by Emmanuel (2016), Sections 49 and 52 of the Electoral Act 2010 (as amended) has been subjected to legal discuss concerning the use of the smart card reader for general elections in Nigeria.
2. **Technical difficulties:** These setbacks vary from incomplete or non-verification of voter's fingerprints even after their PVCs were adjudged valid, slow accreditation procedure because of poor internet services in some areas to poor knowledge of the use of card readers by both INEC officials and voters.
3. **Logistical challenge:** Some of the logistical challenges that hinder the effective use of the smart card readers includes: inadequate power supply and extra batteries to power the smart card readers; and by implication, it will deprive the eligible voters the right to exercise their franchise once the battery that will be used powered the card readers are down. Also, inadequate medium of transportation to transport the adhoc staff and electoral materials to various polling units in time slowdown accreditation process. The processes take longer time hence; some voters will be discouraged from participating in the election.

The challenges if the SCR led to the introduction and deployment of Bimodal Voter Accreditation System (BVAS) in the 2023 general elections.

2.1.13 Bimodal Voter Accreditation System (BVAS) Overview

There is a consensus among scholars (Omorogbe, 2021; Sanni, 2021; Ewepu, 2021) that BVAS is a new device that replaces the Smart Card Reader (SCR) and abolishes incident forms used in previous elections since 2015. The chairman of the Independent National Electoral Commission (INEC), Prof. Mahmood Yakubu, explained that BVAS is an electronic device equipped with a camera, with the capacity to snap polling unit level result and upload same to the INEC Result Viewing (IReV) portal so that citizens can view results as elections are concluded in each Polling Unit. The device as well guards against voting by identity theft where one person uses another person's Permanent Voter's Card (PVC) to vote using the incident form (Yakubu, 2021).

The BVAS has the dual capacity for fingerprint and facial authentication of voters. No voter without a genuine PVC will vote. No voter who has not been successfully accredited electronically using the BVAS will vote (Omorogbe, and Sani, 2021). Similarly, Ewepu (2021) noted that "BVAS is a device for electronic accreditation and transmission or upload of results which is meant to improve the efficiency, transparency and integrity of the entire election process". The device was first deployed by INEC for the Isoko South 1 State Constituency Bye-election in Delta State on September 11, 2021 to replace the Smart Card Reader (Omorogbe, 2021), it was however fully utilized for the conduct of the November 6, 2021 gubernatorial election in Anambra State and subsequent 2023 General Elections.

As puts by Bayo (2022), The BVAS technology was designed to verify Permanent Voter Cards (PVCs), and enable human recognition through a biometric verification mechanism, using fingerprint or facial recognition of voters. The device can also capture images of the polling unit result sheet (Form EC8A) to be uploaded on INEC's Election Result Viewing platform (IReV). IReV is an online portal where results from polling units are uploaded, transmitted, and published for the public to see. The portal also allows members of the public to create personal accounts to gain access to polling units' results uploaded on the platform as PDF files. This enhances the transparency of the electoral process.

2.1.14 BVAS in the Context of Nigerian Electoral Systems

The Bimodal Voting Accreditation System (BVAS) was first introduced in India, Brazil, Estonia, Philippines and was successful while other countries that have unsuccessfully tried or canceled to implement it are; Argentina, United States, Belgium, Canada, Japan, Mexico, France, Peru, Australia, Costa Rica, Finland, Guatemala, United Kingdom, Ireland, Italy, Kazakhstan, Netherland, Germany, Paraguay, Norway, Switzerland, Nigeria, and others (Awudu, 2022). The content analyzed showed that INEC introduced the administration of the Bimodal Voter Accreditation System (BVAS) in the Anambra Saturday 6th November 2021 election as a result of the failure and challenges of the Smart Card Reader, it was administered to first verify the genuineness of PVC and the authentication of the voters during accreditation. The new device was use to replace the smart card reader used in the previous election since 2015 (Awudu, 2022). The BVAS was introduced by INEC in 2021 to improve the credibility of Nigeria's electoral system and prevent electoral fraud, thereby replacing smart card readers (Segun, 2023).

The new device was use to replace the smart card reader used in the previous election since 2015 (Egbegebulem, 2021). Before the deployment of Bimodal Voters Accreditation System, Nigeria had introduced the Smart Card Reader technology in the 2015 and 2019 general elections, to curtail the rate of electoral fraud in Nigeria. But that effort was not enough to overcome the challenges of electoral fraud in the

country. Hence the need to improve on the technological deployments in the elections manifested (Segun, 2023).

The Independent National Electoral Commission (INEC), deploy the Biometric Voter Accreditation System (BVAS) device in the Anambra State Governorship election in bid to test the technology in for the sake of other general elections and how it will affect the elections to get a reliable, credible, free and fair election (Fredrick, 2023). In Anambra State during the 2021 election, a comprehensive audit of BVAS was conducted which prevented possible disenfranchisement of voters and inspired public confidence in electoral technologies being deployed by INEC for future elections.

With the deployment of BVAS, the use of the incident form is abolished. No voter without genuine PVC will vote. No voter who was not successfully accredited electronically using the BVAS will vote (Vanguard, 2021). At the same time, the BVAS is also equipped with a camera. Therefore, it has the capacity to snap Polling Unit level result and upload same to the INEC Result Viewing (IReV) portal so that citizens can view results as election is concluded in each Polling Unit. Therefore, there was no need for the Z-Pad since its functions have been embedded in the BVAS (Erhabor, 2018).

2.1.18 System Malfunctions and Error Analysis

Technology innovation and the deployment of technology into electoral process has been a major factor encouraging citizens to participate in political process, but the deployment BVAS is not without its challenges, it has been observed that the technology has failed in some areas and it is susceptible to manipulations. There have been reported cases of BVAS not capturing older permanent voter card (PVC) or its inability to read some elderly peoples thumb print, this has led to the disenfranchisement of eligible voters. The increasing reliance on e-voting is not without risk of cyber-attacks and manipulation by those entrusted with the technology, “there is a high tendency that cyber-attacks will be focused on both the BVAS and IReV. The objective of a cyber-attack on the BVAS will be to prevent the snapped results sheet from being transmitted to INEC Server. A cyber-attack on the IReV portal may include modification of the results on the portal or the disruption of the IReV Portal from the public. Notwithstanding, the modification of the results sheet may only be possible with the cooperation of a malicious insider, but disruption can be done with or without a malicious insider” (This-Day, 2023).

According to International Republican Institute (IRI) and National Democratic Institute (NDI) Election Observer Mission 2023, the Bimodal Voter Accreditation System (BVAS) generally facilitated the accreditation process of voters, although observers noted that devices sometimes malfunctioned with regards to thumbprint recognition. In a number of cases, the BVAS could not successfully transmit the results of all three electoral contests at the polling unit, and polling staff cited network issues. Citizen observers noted significant administrative improvements in BVAS functionality during the subsequent gubernatorial and state assembly elections.

In the Third Interim statement issued by the Nigeria Situation Room on 1st March 2023, the Situation Room expected that the innovative reforms introduced by the Independent National Electoral Commission (INEC), in furtherance of the new Electoral Act 2022, will lead to efficient and accountable election management. Contrary to the above expectations, the 2023 Presidential and National Assembly elections were marred by very poor organization, severe logistical and operational failure, lack of essential electoral transparency, etc. As a result, the process cannot be considered to have been credible. Given the lack of

transparency, particularly in the result collation process, there can be no confidence in the results of these elections.

Another area of concern to many Nigerians is the inability of the INEC to upload the Polling Unit Election Results in real-time as promised by INEC. The introduction of the IReV portal have instilled confidence in the heart of the electorates, since the system would enhance accountability and transparency in the process. But this inability to upload the result on the IReV portal have made many Nigerians to question the Integrity of the elections. The Electoral Act and the constitution, the governing laws under which the elections were conducted did not impose on INEC the burden of real-time electronic upload of election results. Therefore, legal framework is also part of the challenges of the deployment of BVAS in the 2023 elections (Tope, 2023).

2.1.19 Performance Metrics of BVAS

The deployment of e-voting/BVAS may have its shortcoming as experienced in the just concluded 2023 elections, but there seem to be hope in the horizon as many big wig politicians and political heavy lost election due to the deployment of BVAS. As Iremeka (2023) puts it, the deployment of technologies in the 2023 elections brought about a number of improvements, though some schools of thoughts felt that the technologies, especially BVAS, failed the country despite its achievements. It is on record that for the first time, some sitting governors in the country lost elections in the manner that they did.

The improvement associated with the deployment of the technologies, especially BVAS, was seen in Lagos where, for the first time since 1999, Asiwaju Bola Tinubu lost an election to a party considered to be small. By the same reason, a number of sitting governors failed in their attempts to become Senators in the 10th National Assembly. The first governor that comes to mind is Ben Ayade of Cross River State who lost to Sen. Jarigbe Agom-Jarigbe, the sitting Senator in Cross River North district. Titus Zam of the APC, a former aide to Benue State Governor Samuel Ortom, defeated Ortom in the race for the Benue North-West Senatorial seat. Senator Adamu Aliero of the Peoples' Democratic Party (PDP) was declared winner of the Kebbi Central Senatorial District election. Aliero defeated Governor Abubakar Bagudu, according to the INEC Returning Officer, Prof. Abbas Yusuf-Bazata, who announced the results in Birnin Kebbi. Governor Ifeanyi Ugwuanyi of Enugu State was defeated in his race for the Senate by Okechukwu Ezea of the Labour Party (LP) as Governor Darius Ishaku of Taraba State, the outgoing two-term PDP governor, lost to David Jimkuta. Governor of Plateau State and Director General of the APC Presidential Campaign Council, Simon Lalong failed to win the ticket to the red chamber. The former Chairman, Northern Governors' Forum and a political heavyweight lost to PDP's Bali Napoleon at the Plateau South Senatorial District election. In the same manner, Senator Enyinnaya Abaribe of All Progressives Grand Alliance (APGA) defeated the sitting Governor Okezie Ikpeazu at the Abia South Senatorial election" (Iremeka, 2023).

From the perspective of election watchers and observers these heavyweight politicians would have done everything possible to win the elections if 2023 electoral act did not give INEC the requisite and needed legal backing to insist on the deployment of BVAS as the only legal means of accrediting voter for the 2023 election. The system mitigated the possibility of impersonation and double accreditation by a single voter, thereby by ensuring 'one man one vote' principle which overall changed the narrative of electoral fraud in Nigerian elections.

2.1.20 Public Perception of BVAS

A finding by Apalowo, Osigwe, and Adejumo (2023), indicated that, the public are highly optimistic that the use of BVAS and IReV in Nigeria elections would enhance the election credibility and integrity as well as public confidence in INEC thereby increasing public participation in terms of voting. This finding is similar to Moses (2022), who established that the assent of the new Electoral Act presented a high tendency for a far more credible election in Nigeria. Thus, the respondents were full of praises for the innovation of BVAS and IReV in Nigeria elections. Introducing the BVAS and IReV into the framework for election results management has transformed the public perception of the accuracy and credibility of election results. It is one of the most significant innovations and reforms to Nigeria's electoral process. Therefore, INEC, civil society, and citizens' insistence on using BVAS and IReV for the 2023 elections are justified.

2.1.21 Voter Education and Awareness

Voter education equips the electorates with necessary information that educate them on their right to select the candidate of their choice. It contains vital aspect like when, where to register and vote casting (ECI, 2016). Election Management Bodies (EMBs) organise regular voters' education updates or broadcasts through messages, aired on radio and the print media. The EMBs modify its operation to be in tune with contemporary media trends for example, the maximum use of the internet. Elections cannot be generally said to be credible unless the voters are aware of the right choice. In addition, detailed information on voting methodology should be available ahead of time of Election Day. Voters' education activities could be directed by either the EMBs or other stakeholders like the civil society in disseminating information on what is required of the electorates throughout the electioneering process.

According to a Statement of the Second Joint NDI/IRI Pre-Election Assessment Mission to Nigeria (2022), Voter education started earlier than in the lead-up to the 2019 elections due to the early release of funding to INEC and the timely availability of updated electoral guidelines. Voter education is crucial for the 2023 elections, in part because the BVAS and IReV will be new to most Nigerians. Civil society is playing a critical role in educating voters, supplementing the efforts by the National Orientation Agency (NOA), the organization tasked with voter education as its mandate. NOA is focusing in particular on countering vote buying and raising awareness of mis-and disinformation. Candidate debates organized by media and civil society are unique opportunities for voters to hear about and compare party and candidate platforms. However, not all political parties are participating in debates, hampering their ability to share their platforms with voters in a setting that prioritizes constructive dialogue on issues that Nigerians care about.

A study by Apalowo, Osigwe, and Adejumo (2023) also found that, there is great level of awareness among the public as regard the use of BVAS and IReV in subsequent elections in the country. Furthermore, the empirical findings showed that 93% PVC possession rate among the respondents with 97% of them ready to vote in 2023 General Election. Therefore this study revealed huge level of respondents' preparedness in terms of rate of possession of PVC and their readiness to vote in the 2023 General Election. Consequently, the empirical findings from the test of association indicated the established high possession of PVC among the respondents was significantly depending on the respondents' awareness level of the adoption of BVAS and IReV in elections. Similarly, the study established that respondents' turnout to vote in 2023 General Election significantly depend on their awareness of the adoption of BVAS and IReV in subsequent elections. It explicitly showed that 89% of the respondents without PVC were significantly not

aware of use of BVAS and IReV while 96% of the respondents with PVC were significantly aware of use of BVAS and IReV. The implication of this finding is that, the majority of those with PVC are fully aware of the BVAS and were confident by its deployment in the 2023 elections.

2.2 THEORETICAL FRAMEWORK

2.2.1 Martin Hagen's E-Democracy Theory

The theoretical framework to be adopted in this research is Martin Hagen's E-Democracy and Everett Rogers Information Diffusion Theory. E-democracy, refers to theories which regard computers and/or computer networks as central tools in the working of a democratic political system. An "Electronic Democracy" is any democratic political system in which computers and computer networks are used to carry out crucial functions of the democratic process - such as information and communication, interest articulation and aggregation, and decision-making (both deliberation and voting) Hagen (2000). The voting system in Nigeria have gradually moved from manual system to more advanced technological deployment.

Hagen (2000) explained e-democracy as a strategic tool to strengthen democratic practices using the information and computer technology (ICT). He thinks certain people are usually omitted in the process of making important political decisions of their countries by way of unintended but unsatisfactorily explained disenfranchisement. It can serve affirmative action purpose for the large number of citizens negatively affected by the paper-based voting system. E-democracy theory emphasizes the use of technology, particularly digital tools and platforms, to foster democratic processes, citizen engagement, and participation in governance (Smith, 2018). This theory promotes the idea that electronic systems can enhance transparency, accessibility, and efficiency in electoral processes, leading to more inclusive and credible elections (Jones & Brown, 2020).

This theory will be adopted because of its relevance to application of BVAS in Nigerian Elections. And how the application affects the outcome of the election. The BVAS introduction aligns with e-democracy principles by leveraging technological advancements to streamline the voting process. BVAS likely aimed to enhance transparency and inclusivity in the electoral process through the use of biometric verification and digital accreditation (Smith & Ahmed, 2021).

2.2.2 The Relevance of E-Democracy Theory to Deployment of BVAS

- **Citizen Engagement:** E-democracy theory emphasizes citizen participation through electronic means. BVAS, as part of this paradigm, aimed to engage citizens in the electoral process by ensuring a more transparent, efficient, and technologically advanced system of voter accreditation (Brown & Jones, 2021).
- **Transparency and Accessibility:** BVAS aligned with the principles of e-democracy by enhancing transparency and accessibility. It allowed for a more accurate voter authentication process, potentially increasing confidence in the electoral system among citizens and stakeholders (Smith et al., 2020).

Rogers (1962) on the other espoused the Innovation Diffusion Theory. IDT theory explains how overtime, an idea or product gains momentum and diffuses (or spreads) through a specific population or

social system. The end result of this diffusion is that people, as part of a social system, adopt a new idea, behavior or product. Rogers proposes that five main elements influence the spread of a new idea: the innovation itself, adopters, communication channels, time, and a social system. This process relies heavily on social capital. The innovation must be widely adopted in order to self-sustain (Barber, 1963).

2.2.3 Everett Rogers Information Diffusion Theory

Innovation Diffusion Theory, as proposed by Rogers, explains how and why new technologies spread and are adopted within societies. It highlights five key factors influencing the adoption of innovations: relative advantage, compatibility, complexity, trialability, and observability (Rogers, 2003). According to this theory, the rate of adoption depends on how these factors are perceived by potential adopters. Analyzing BVAS through the lens of Innovation Diffusion Theory helps understand its adoption process. Factors like BVAS's perceived advantages over traditional methods, its compatibility with electoral goals, and its observability in other regions or countries could have influenced its adoption and impact on the Adamawa-North Senatorial District elections (Davis et al., 2019).

2.2.4 The Relevance of Innovation Diffusion Theory and BVAS:

- **Adoption and Implementation:** Innovation Diffusion Theory provides a framework to understand how BVAS was adopted. Factors like its perceived advantages over traditional methods, its compatibility with electoral objectives, and its relative complexity might have influenced its adoption and successful implementation (Rogers, 2003). of which the successful implementation has an overall bearing on the credible elections in Nigeria.
- **Spread of Innovation:** The theory explains how innovations like BVAS spread within societies. BVAS's observability, where its effectiveness was visible in other electoral districts or countries, might have influenced its adoption in the Adamawa-North Senatorial District (Davis & Ahmed, 2019).

2.2.5 Synergy and Relevance

The synergy between these theories lies in how they collectively shape the electoral landscape. E-democracy theory emphasizes citizen empowerment through digital engagement, while Innovation Diffusion Theory elucidates the factors influencing the adoption and diffusion of technological innovations like BVAS in electoral processes. The Electoral Management Body adopted the use of technology to overcome the challenges of electoral fraud in Nigeria Electoral Process. Before the deployment of technology, Nigerian Political history have seen an election being conducted, winners were announced even before the election is being concluded. Votes cast in some polling units is equal to or over the total number of registered voters.

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