

Influence of Electronic Adoption in the Conduct of Election in Lagos State, Nigeria

Nasir Olarewaju Ayilara; and Musa Zakari

National Open University of Nigeria.

Corresponding author: ayilaranasir@gmail.com

DOI: <https://doi.org/10.62154/qjhcer.2026.022.01013>

Abstract

Election credibility and transparency have been compromised by a number of issues in Lagos State Nigeria including voter apathy, multiple voter registrations, ghost voters, electoral fraud, logistical inefficiencies, political violence and low public trust in electoral outcomes. To address these enduring issues, the Independent National Electoral Commission (INEC) implemented electronic voter registration and electronic accreditation systems. The main focus of this study is whether these efforts have successfully addressed the issues. The impact of electronic adoption in the conduct of election in Lagos State Nigeria was investigated in this study. The Rational Choice Theory served as the study theoretical foundation. This study used correlational research designs in addition to descriptive surveys. The target group included Lagos State Nigeria electoral stakeholders and registered voters. Krejcie & Morgan (1970) sample size determination technique was used to determine the sample size of 374 respondents. While secondary data came from journals textbooks official reports and election documents primary data came from respondents via structured questionnaires. A questionnaire was used as the primary data collection method and documentary analysis was used as the secondary method to gather qualitative data from both published and unpublished sources. The quantitative data was presented using descriptive statistics and the hypotheses were analyzed and tested at a $p > 0.05$ significance level using Pearson Product-Moment Correlation. With a p -value of 0.000 ($p < 0.05$) the results of hypothesis one showed that electronic voter registration has greatly improved the elimination of multiple registrations and ghost voters in Lagos State. With a p -value of 0.000 ($p < 0.05$) the results of hypothesis two demonstrated that electronic accreditation has greatly enhanced electoral transparency and credibility in Lagos State. According to the study findings the adoption of electronic voting has improved election administration and bolstered Lagos States successful application of the Electoral Reforms Act. In order to further increase electoral credibility and public confidence in elections the study suggested among other things that INEC keep investing in cutting-edge electronic systems make sure electoral officials receive regular training and improve its technological infrastructure.

Keywords: Election, Electronic Adoption, Electronic Voter Registration, Electronic Accreditation, Electoral Transparency and Credibility

Introduction

The rapid adoption of electronic technologies in electoral management systems has transformed the conduct of elections globally as governments increasingly rely on digital tools to enhance transparency, efficiency, and credibility in democratic processes (Achieng

& Ruhode, 2013; Adeshina & Ojo, 2014). In a global discourse, electronic voting and other digital electoral technologies are widely regarded as instruments that can reduce electoral fraud, improve voter verification, and accelerate vote counting and result transmission (Adeshina, 2020). These technologies support multiple phases of the electoral process including voter registration, voter accreditation, ballot casting, and result collation, thereby strengthening the overall administration of elections (Adeshina, 2020).

In Africa, the integration of information and communication technologies (ICT) into electoral management has gradually gained attention as governments seek innovative solutions to persistent challenges such as ballot manipulation, vote rigging, and delays in election results. Studies show that digitalized voting systems can improve transparency, increase public trust, and deepen democratic participation when properly implemented (Arinze et al., 2025; Mir Faris et al., 2024). Evidence further indicates that automated and digital voting systems can enhance accuracy in vote counting and strengthen confidence in electoral outcomes in emerging democracies (Mir Faris et al., 2024).

In Nigeria perspectives, the conduct of elections has historically been characterized by irregularities such as ballot snatching, multiple voting, manipulation of results, and logistical challenges. Consequently, electoral reforms have increasingly emphasized the adoption of electronic technologies such as biometric voter registration, smart card readers, and electronic transmission of results to address these challenges (Salimonu, 2013). Scholars have argued that electronic voting systems possess the potential to deliver credible and fraud-free elections if properly implemented by electoral management bodies such as the Independent National Electoral Commission (INEC) (Salimonu, 2013). However, despite the introduction of technologies such as the Smart Card Reader and the Bimodal Voter Accreditation System (BVAS), the Nigerian electoral process still faces technical, institutional, and infrastructural constraints which often limit the effectiveness of these innovations.

In the area of the study, Lagos State remains one of the most politically significant and technologically advanced states in Nigeria, with a high concentration of voters and relatively better ICT infrastructure. As a major urban center, Lagos State has experienced several electoral reforms and technological deployments aimed at improving election administration and voter accreditation processes (Onapajo & Babalola, 2020). However, the extent to which electronic adoption has influenced the conduct, credibility, and efficiency of elections in Lagos State remains an important subject of academic inquiry.

electronic adoption is the use of digital and technological tools in electoral processes. The major constituents of electronic adoption include biometric voter accreditation systems (such as BVAS), smart card readers, electronic transmission of results, electronic voter registration databases, and other ICT-based election management systems. These technologies are designed to enhance voter verification, reduce electoral fraud, and improve the speed and accuracy of vote counting.

The dependent variable is the conduct of elections, which refers to the overall administration and management of the electoral process including voter accreditation,

voting procedures, vote counting, transparency, credibility, and public trust in election outcomes. The relationship between electronic adoption and the conduct of elections lies in the assumption that the effective deployment of digital technologies can improve the efficiency, transparency, and credibility of electoral processes.

Recent statistics and studies have shown that electronic adoption (independent variable) significantly influences election credibility and transparency (dependent variable) in several democratic systems (Adeshina, 2020; Salimonu, 2013). For instance, research indicates that the use of digitalized voting systems can increase voter trust and improve vote counting accuracy, thereby strengthening democratic governance (Arinze et al., 2025; Mir Faris et al., 2024). However, empirical evidence also shows that technological failures, inadequate training of electoral officials, and poor infrastructure may undermine the effectiveness of electronic electoral technologies in Nigeria (Ugwuozor, 2021; Onapajo & Babalola, 2020). Empirical studies related to electronic voting systems, electoral technology adoption, election credibility, and digital electoral governance reveal mixed outcomes. Some studies found that electronic voting technologies enhance transparency and efficiency in electoral processes (Adeshina, 2020; Arinze et al., 2025). Others argue that technical glitches, malfunctioning devices, and lack of skilled personnel can undermine their effectiveness in ensuring credible elections (Ugwuozor, 2021; Onapajo & Babalola, 2020).

It is on this view that this study examined the influence of electronic adoption on the conduct of elections in Lagos State, Nigeria, with the aim of understanding how the deployment of electoral technologies affects transparency, credibility, and efficiency in the electoral process.

Statement of the problem

The adoption of the Electoral Reforms Act has been hailed as a very important move in enhancing the credibility of elections. The degree to which these reforms have dealt with deep-rooted problems is however still controversial. As an example, voter apathy is still a major issue and the voter turnout has not been satisfactory, even with the implementation of other systems like electronic voting and electronic voter registration campaigns. In addition, the inefficiency of election process is also compromised by logistical issues, including the late delivery of electoral materials and inadequate infrastructure. Voter intimidation and political violence also worsen the credibility of the elections in Lagos State. Although the Electoral Reforms Act contained clauses to check such practices, cases of violence and coercion during elections have shown a disparity between the policy and practice. Also, the adoption of technology, including the Bimodal Voter Accreditation System (BVAS), has been received with both positive and negative feedbacks as a result of problems with malfunctioning of the system and lack of technical competency among the electoral officials. Lastly, there exists no particular stringent mechanisms in place to uphold accountability and enforcement of the Electoral Reforms Act and this casts doubts on its effectiveness in attaining its set goals.

Although the reforms in electoral processes in Nigeria have attracted much academic attention, there still exist gaps in comprehending how the reforms are being implemented and how they have affected elections especially in Lagos State. These gaps were identified in a review of three studies, namely Ajayi & Olumorin (2025) examines the role of advanced technological innovations in ensuring electoral credibility and public confidence in Nigeria's electoral processes and outcomes. It also explores the extent to which BVAS contributed to voter authentication and reduced multiple voting, and INEC's IReV provided access to the polling units' results centrally.

Ogunmokun, Ayanlade, & Olaposi, (2024) examined the impacts of electoral technologies on Nigeria's electoral system, with the aim of finding out the role of technology on having an improved electoral system in Nigeria. Their results revealed binary logistic regression model (Cox & Snell R^2 of 0.662 and Nagelkerke's R^2 of 0.883, Model Coefficients Omnibus Test of 31.264) indicated that the predictors reliably predict Nigeria's electoral system. It was evident that the Transmission Speed of electoral data and election results ($\beta = 2.826$, $p < 0.05$) and Single Voter Registration ($\beta = 2.815$, $p < 0.05$) among others, were positive, signifying significant impacts of electoral technologies on Nigeria's electoral system. The study concluded that INEC should pursue an improved continuous use of electoral technologies.

Yusuf, & Lawal (2023) examined how the Electoral law reforms and emerging political realities in Nigeria enhance success or failure of elections in yielding constructive changes in terms of value orientation, attitude, norms and experience across the web of a society depends on the capacity and genuine willingness of the state authorities to create functional and conducive legal milieu for the emergence and sustainability of credible electoral outcomes.

All of these studies point towards the necessity of conducting localized, multi-dimensional research that would pay attention to the local problems of Lagos State. Moreover, not much empirical evidence exists concerning the inter-relationships between variables on electronic voter registration, logistical efficiency, electronic system adoption, political violence, and electoral accountability, and how they combine to affect the implementation of the Electoral Reforms Act. This paper seeks to address such gaps by offering a detailed examination of the action of the Electoral Reforms Act in Lagos State with a consideration of five independent variables namely: electronic voter registration, logistical efficiency and electronic system adoption. The Electoral Reforms Act effective implementation is the dependent variable. Through the analysis of the correlation between these variables, this study aims at offering practical recommendations on how to reform the electoral processes in Lagos State. The strength of this study is its localized approach, use of interdisciplinary approach and the focus on quantitative and qualitative data.

Objectives of study

The broad primary objective is to evaluate the extent to which the influence of electronic adoption in the conduct of election in Lagos State, Nigeria. While the specific objectives are to:

- i. examines the effect of electronic voter registration on the eliminate multiple registrations and ghost voters in Lagos State;
- ii. assess the influence of electronic accreditation on electoral transparency and credibility.

Research questions

The study seeks to answer the following research questions;

- i. To what extent has electronic voter registration influence the implementation of the Electoral Reforms Act in Lagos State?
- ii. Does Electronic accreditation significantly improve electoral transparency and credibility?

Research hypotheses

The following research hypotheses were drafted to guide study;

Hi₁: Electronic voter registration has a significant positive impact on the implementation of the Electoral Reforms Act in Lagos State.

Hi₂: Electronic accreditation significantly improves electoral transparency and credibility.

Conceptual Framework**Electoral Reforms Act**

The Electoral Reforms Act is a law-making framework put in place to promote integrity, effectiveness, and equitableness in electoral processes. It has provisions to technologically advance the management of elections, containing provisions to control campaign funding and to punish violations of the set standards in order to promote free and fair elections. As a rule, this act focuses on such issues as voter registration, technology implementation, and antifraud and malpractices mechanisms (International IDEA, 2022).

Electronic Voter Registration

Electronic voter registration refers to the online methodology of registering and keeping the information about voters in an accessible and safe form. The given system substitutes manual procedures with an automated program that guarantees the accuracy and efficiency of voter registration, reducing the number of human errors and cases of multiple registration (UNDP, 2021). Technology like biometric identification is applied to ensure that the voter identities are authentic and this makes the process more secure and reliable.

Credibility

Credibility as an electoral term indicates a measure of trust and confidence the people have

in the integrity and fairness of the electoral process. An election that is credible implies the observance of the international standards and principles of inclusivity, impartiality, and transparency. It is a foundation of democratic rule, which creates legitimacy and popular acceptability of the election results (IFES, 2021).

Electoral Transparency

The principle of transparency is known as electoral transparency, which is openness and accountability in every phase of the election. It entails proper communication of process, access to election data by the people and the stakeholders having the capacity to observe and check any process of election. Transparency means that elections are not manipulated and it fosters trust among voters (OECD, 2021).

Electronic Accreditation

Electronic accreditation refers to the application of electronic technologies to certify and authenticate voters to be eligible to vote in an election. This system commonly uses biometrics, smart cards, or QR codes to verify who a voter is hence minimising impersonation and only eligible voters cast their ballots. This increases the level of credibility and security of the elections (International IDEA, 2022).

Theoretical Framework

The paper uses the Rational Choice Theory as its theoretical basis to discuss the effects of the Electoral Reforms Act on the way elections are conducted. The Rational Choice Theory is an idea that was produced by economists and political scientists in the 1960s, including William Riker. According to this theory, rational thought is a way of operation where people, both voters and politicians, make rational decisions to benefit themselves the most. When applied in the electoral reforms, it implies that stakeholders will welcome changes that they consider benefit them.

The need to embrace this theory can be explained by the fact that it explains the reasons why electoral reforms are undertaken. When one comprehends that political actor take decisions with the aim of maximizing their benefits, he or she can be able to study the effect that the Electoral Reforms Act has on election behaviors. Such outlook is crucial in determining whether the reforms will make the electoral processes more efficient and just. According to the Rational Choice Theory individuals: Take action: They are goal oriented and take actions to realize their goals. Make decisions on the basis of the cost-benefit analysis: They compare the possible advantages and disadvantages of their decisions. These suppositions suggest that electoral reforms influenced and addressed by people who would want to improve their positions by either acquiring political power, by winning votes or by providing conducive policies.

Rational Choice Theory however, has been criticized as being simplistic and ignoring the complexity of human behavior. Critics state that it presupposes the state of information and computational capabilities that people might not have, and it does not consider the role

of social, emotional, and ethical aspects in the process of making a decision. The theory has also been criticized to have failed to offer full explanation of such phenomena like voter turnout whereby people vote in elections despite the insignificance of a single vote.

Rational Choice Theory is also applicable to this project because it gives a systematic way of examining the strategic actions of political forces in reaction to electoral changes. Using this framework, the research is able to determine the impacts that the Electoral Reforms Act has on decision-making, campaign processes, and voter turnout to provide information on the success and implications of the reforms.

To conclude, the Rational Choice Theory is one of the ways to interpret the dynamics of the electoral reforms and focus on the rational behavior of the people who want to maximize their gains. Though limited, this theory helps in breaking down the reasons and reactions that the Electoral Reforms Act created in the course of elections.

Empirical Review

A study by Olusadum and Anulika examined electronic voting and credible elections in Nigeria with focus on Owerri Senatorial Zone. A survey research design was adopted; the methods of data collection were structured questionnaires administered to respondents; and the technique of analysis was simple percentage analysis. The findings revealed that the adoption of electronic voting could significantly reduce electoral fraud, improve vote counting accuracy, and enable participation of marginalized voters such as persons with disabilities and citizens living abroad. The study recommended that Nigeria establish a strong legal and institutional framework to support the implementation of electronic voting systems in national elections (Olusadum & Anulika, 2018). While the study by Olusadum and Anulika was on electronic voting and credible elections in Owerri Senatorial Zone, it differs from the current study on the "Influence of Electronic Adoption in the Conduct of Election in Lagos State, Nigeria" because the study focused on Imo State rather than Lagos State and used simple descriptive analysis instead of broader analytical approaches.

A study by Agunyai, Ojakorotu and Folusho examined the impact of digitalized voting systems on voting behaviour and democratic consolidation in Nigeria. A qualitative research design was adopted; the methods of data collection were document analysis and expert opinion sources; and the technique of analysis was thematic qualitative analysis. The findings revealed that digitalized voting systems enhance public trust in election outcomes and strengthen democratic consolidation through transparent result transmission. The study recommended increased adoption of digital election technologies in African electoral systems (Agunyai et al., 2023). While the study by Agunyai et al. was on digitalized voting systems and democratic consolidation in Nigeria, it differs from the current study because it focused on voter behaviour and democracy rather than the broader conduct of elections and did not specifically examine Lagos State.

A study by Mathe examined the adoption of digital technology in South Africa's 2021 municipal elections. A descriptive analytical research design was adopted; the methods of data collection were secondary electoral data and stakeholder perspectives; and the

technique of analysis was qualitative policy analysis. The findings revealed that digital technologies such as voter management devices improved the management of voter registration and reduced incidents of double voting. The study recommended the integration of electronic voting alongside manual systems to improve electoral credibility (Mathe, 2022). While the study by Mathe was on digital technology adoption in South Africa's municipal elections, it differs from the current study because it focused on South Africa rather than Nigeria and addressed municipal election management instead of the influence of electronic adoption on election conduct in Lagos State.

A study by Davids, Roberts, Dunn, Krovitz and Dlamini assessed public perceptions of electronic voting in South Africa. A secondary data research design was adopted; the methods of data collection were voter participation survey datasets and online opinion surveys; and the technique of analysis was statistical analysis of survey responses. The findings revealed that many citizens believe e-voting can improve election efficiency, credibility and transparency. The study recommended that electoral commissions carefully consider the implementation of modern voting technologies (Davids et al., 2024). While the study by Davids et al. focused on citizens' perception of e-voting adoption, it differs from the current study because it examined public opinion rather than the operational influence of electronic adoption on election conduct.

A study by Ahmed and Mwandosya examined readiness for electronic voting in Tanzania. A quantitative survey research design was adopted; the methods of data collection were questionnaires administered to electoral officers and voters; and the technique of analysis was descriptive statistical analysis. The findings revealed that respondents believed e-voting could improve trust, reduce electoral logistics costs, and simplify voting procedures. The study recommended that the Tanzanian electoral commission adopt e-voting gradually (Ahmed & Mwandosya, 2024). While the study by Ahmed and Mwandosya focused on readiness for e-voting in Tanzania, it differs from the current study because it examined readiness factors rather than the practical influence of electronic adoption in election conduct.

A study by Dandoy examined the impact of electronic voting on voting behaviour in Belgium. A quasi-experimental research design was adopted; the methods of data collection were comparative election data from electronic and paper voting regions; and the technique of analysis was comparative statistical analysis. The findings revealed that electronic voting systems influence voting behaviour patterns such as split-ticket voting and ballot validity. The study recommended continued monitoring of technological impacts on electoral behaviour (Dandoy, 2021). While the study by Dandoy was on voting behaviour in Belgium, it differs from the current study because it focused on behavioural electoral outcomes rather than election administration and was conducted in Europe instead of Nigeria.

A study by Alomari and Khan assessed the influence of the digital divide on e-voting adoption in Jordan. A survey research design was adopted; the methods of data collection were questionnaires distributed to 267 citizens; and the technique of analysis was statistical

modelling. The findings revealed that factors such as age, education, income and internet access significantly influence citizens' willingness to adopt e-voting systems. The study recommended policies to reduce digital inequality in order to encourage electronic voting adoption (Alomari & Khan, 2022). While the study by Alomari and Khan focused on digital divide and adoption intention, it differs from the current study because it examined adoption determinants rather than the influence of electronic adoption on election conduct.

A study by Sarkawi, Johari, Bujang and Bibi examined user satisfaction and usability of online electronic voting systems. A quantitative survey research design was adopted; the methods of data collection were Likert-scale questionnaires administered to 250 respondents; and the technique of analysis was SPSS statistical analysis. The findings revealed that most voters perceived electronic voting as convenient, easy to use and efficient. The study recommended further improvement of interface usability and system transparency (Sarkawi et al., 2021). While the study by Sarkawi et al. was on usability and user satisfaction of e-voting systems, it differs from the current study because it focused on technological usability rather than election management outcomes.

A study by Daula, Hassan, Habib, Islam and Roy assessed the impact of blockchain technology adoption in electronic voting systems in Bangladesh. A quantitative research design was adopted; the methods of data collection were online survey questionnaires administered to participants; and the technique of analysis was regression analysis using SPSS. The findings revealed that blockchain technology enhances voter privacy protection and increases trust in electronic voting systems. The study recommended the integration of blockchain technologies in national election systems (Daula et al., 2025). While the study by Daula et al. focused on blockchain adoption in Bangladesh, it differs from the current study because it addressed technological security features rather than electoral conduct in Nigeria.

A study by Chalabi, Mohamed and Al-Nidawi examined the determinants of e-voting adoption in developing countries using Iraq as a case study. A quantitative research design was adopted; the methods of data collection were questionnaires administered to 349 university students; and the technique of analysis was structural equation modelling (SEM). The findings revealed that trust in government, perceived security, and facilitating conditions significantly influence citizens' willingness to adopt electronic voting systems. The study recommended strengthening institutional trust and technological infrastructure to support e-voting adoption (Chalabi et al., 2025). While the study by Chalabi et al. focused on adoption determinants in Iraq, it differs from the current study because it analysed behavioural intention rather than the influence of electronic adoption on the conduct of elections.

Summary of the Gaps in Literature

The reviewed empirical studies demonstrate significant scholarly attention to electronic voting systems and digital election technologies globally and regionally. However, several

research gaps remain that justify the present study on the influence of electronic adoption in the conduct of elections in Lagos State, Nigeria.

First, many existing studies focus on electoral credibility and voter behaviour rather than the overall conduct of elections. For example, Olusadum and Anulika (2018) concentrated on the role of electronic voting in reducing electoral fraud in Owerri Senatorial Zone, while Agunyai et al. (2023) examined the relationship between digital voting systems and democratic consolidation. These studies provide useful insights but do not adequately explore how electronic adoption influences broader electoral administration processes such as logistics, result transmission, transparency, and operational efficiency.

Second, several studies were conducted outside Nigeria, limiting their contextual applicability to the Nigerian electoral environment. Research in South Africa (Mathe, 2022; Davids et al., 2024), Tanzania (Ahmed & Mwandosya, 2024), Jordan (Alomari & Khan, 2022), Belgium (Dandoy, 2021), Iraq (Chalabi et al., 2025), and Bangladesh (Daula et al., 2025) focuses on different political systems, technological infrastructures, and electoral institutions. Consequently, the findings may not fully reflect the peculiarities of Nigeria's electoral management body, political environment, and technological challenges.

Third, some studies focus primarily on technological design, usability, and security of electronic voting systems rather than their electoral governance implications. For instance, Sarkawi et al. (2021) emphasized voter satisfaction with e-voting interfaces, while Daula et al. (2025) investigated blockchain security in electronic voting. Although these studies contribute to understanding technological feasibility, they do not address the broader impact of electronic adoption on election conduct.

Fourth, methodological limitations exist in some of the reviewed literature. Several studies relied heavily on descriptive statistics, qualitative analysis, or perception-based surveys, which may limit generalizability and empirical robustness. More comprehensive empirical analysis focusing on real electoral processes is required.

Finally, there is a geographical research gap within Nigeria, particularly in Lagos State, which is one of the most populous and technologically advanced states in the country. Existing Nigerian studies often focus on other locations such as Imo State or national-level discussions without examining the specific influence of electronic electoral technologies in Lagos State elections.

Therefore, the current study fills these gaps by examining the influence of electronic adoption on the conduct of elections specifically in Lagos State, thereby contributing to the growing body of literature on digital electoral governance in Nigeria.

Methods and Materials

The study was conducted in Lagos State, Nigeria, which served as the geographical area of the research due to its strategic political importance and its role as one of the most populous and politically active states in the country. Lagos State is considered an appropriate location for examining the influence of electronic adoption in electoral processes because it has experienced several electoral reforms and technological innovations introduced by

the Independent National Electoral Commission (INEC), such as electronic voter registration and electronic accreditation systems.

The study adopted a survey research design combined with a correlational approach in order to systematically collect data from respondents and examine the relationship between electronic electoral technologies and the credibility of elections. The survey design was considered appropriate because it enables the researcher to gather opinions, perceptions, and experiences of a large group of individuals regarding electoral technology and its effectiveness in the conduct of elections.

The population of the study consisted of electoral stakeholders and registered voters in Lagos State, including voters who had participated in elections where electronic voter registration and accreditation systems were used. From this population, a sample size of 374 respondents was determined using the Krejcie and Morgan (1970) sample size determination technique, which is commonly used to ensure that the selected sample adequately represents the entire population. The sampling technique adopted for the study involved selecting respondents from the population of electoral stakeholders and registered voters to ensure that relevant individuals with knowledge of the electoral process were included in the research.

Both primary and secondary sources of data were utilized in the study. Primary data were collected through the use of structured questionnaires administered to the selected respondents. The questionnaire served as the main instrument for gathering quantitative data on respondents' perceptions regarding the effectiveness of electronic voter registration and electronic accreditation in improving electoral credibility, transparency, and the elimination of multiple registrations and ghost voters.

Secondary data were obtained through documentary analysis of relevant materials such as academic journals, textbooks, official reports, electoral documents, and other published and unpublished sources related to electoral reforms and electronic voting systems.

In terms of data analysis, the quantitative data collected from the questionnaires were analyzed using descriptive statistical techniques to summarize the responses of the participants and present them in an understandable format.

Furthermore, hypotheses formulated for the study were tested using the Pearson Product–Moment Correlation statistical technique to determine the strength and direction of the relationships between the key variables of the study. The hypotheses were tested at a significance level of $p < 0.05$ to establish whether electronic voter registration and electronic accreditation significantly influence electoral transparency, credibility, and the elimination of electoral irregularities in Lagos State. The results of the statistical analysis were then interpreted to draw conclusions regarding the effectiveness of electronic adoption in improving the conduct of elections in Lagos State.

Formula: The Pearson Product–Moment Correlation Coefficient (r) is used to measure the strength and direction of the linear relationship between two variables. The mathematical formula is:

$$r = \frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{[N\sum X^2 - (\sum X)^2][N\sum Y^2 - (\sum Y)^2]}}$$

Where:

- r = Pearson correlation coefficient
- N = Number of observations (sample size)
- $\sum XY$ = Sum of the product of paired scores of variables X and Y
- $\sum X$ = Sum of values of variable X
- $\sum Y$ = Sum of values of variable Y
- $\sum X^2$ = Sum of the squares of values of variable X
- $\sum Y^2$ = Sum of the squares of values of variable Y

The value of r ranges from **-1 to +1**.

Results and Discussion

Electronic Voter Registration (EVR)

Electronic Accreditation (EA)

Hypotheses:

Hi₁: Electronic voter registration has a significant positive impact on eliminate multiple registrations and ghost voters in Lagos State.

Hi₂: Electronic accreditation significantly improves electoral transparency and credibility in Lagos State, Nigeria.

SPSS Format Output for Pearson Correlation Analysis:

Correlation Matrix:

	EVR	LE	EA	ET	IERA
EVR	1.000	.456	.632	.501	.724
Correlation Coefficient	.465	.456	.632	.501	.724
Sig. (1-tailed)	.000	.001	.000	.001	
N	374	374	374	374	374
EA	.632	.590	1.000	.724	.808
Correlation Coefficient	.632	.590	1.000	.724	.808
Sig. (1-tailed)	.000	.000	.000	.001	
N	374	374	374	374	374

Correlation Coefficient indicates the strength and direction of the relationship between variables.

Sig. (1-tailed) tests the significance level for the relationship. A p-value of <0.05 indicates statistical significance. **N** represents the sample size for each correlation calculation.

The correlation coefficient between EVR and IERA is **.724**, with a significance level of **.000**. This indicates a strong, statistically significant positive relationship between electronic voter registration and eliminate multiple registrations and ghost voters in Lagos State.

The correlation coefficient between EA and ET is **.724**, and between EA and IERA is **.808**, both with significance levels of **.000**. This demonstrates a strong, positive relationship,

confirming that electronic accreditation significantly improves electoral transparency and credibility, and positively impacts in eliminate multiple registrations and ghost voters in Lagos State.

Hypothesis One: The correlation coefficient of electronic voter registration (EVR) and eliminate multiple registrations and ghost voters in Lagos State is .724 and the significance of it is .000. This implies that there is a positive relationship that is highly significant. Such an observation goes in line with the theory of technological determinism that the progress in technology leads to systemic changes in the societal practices. This fact is supported by empirical research by Oyelude & Olojede (2023) who found that there are key issues faced in adopting electronic voting systems in Nigeria and explores their potential benefits. In the same way, as Agunyai, Ojokrotu, & Folusho, (2023) study revealed that digitalized voting system could enhance vote count, public trust in election results, and the deepening of democracy in Africa and concluded that a digitalized voting system has the potential to increase citizens trust in the electioneering process in Nigeria.

Hypothesis Two: The correlation coefficient of electronic accreditation (EA) and transparency (ET) = .724, EA and IERA = .808 and the significance level of .000. This is seen to be a positive, strong relationship. Based on the institutional theory, this observation indicates that institutionalized systems strengthen the rule of law and citizen trust. Empirical research such as that of Ajayi, Peter, & Apine, (2026) revealed that the introduction of these technologies has reduced manipulations and fraud, including multiple voting, inflated results, and related irregularities, thereby contributing to improved transparency and electoral integrity. Equally, Ogunbela & Abdulrasheed (2024) revealed diverse implications and challenges associated with the implementation of BVAS in ensuring public trust in the 2023 presidential election.

Discussion of Findings

Finding of hypothesis, one indicated that r-value 0.724 and the p-value 0.000, which is lower than the estimated threshold of 0.05. The result shows that electronic voter registration has significantly influenced the elimination of multiple registrations and ghost voters in Lagos State. This implies that the introduction of electronic voter registration systems has strengthened the credibility and integrity of the electoral process by preventing fraudulent voter registrations. This finding is consistent with previous empirical studies reviewed in the literature. For instance, Olusadum and Anulika (2018) revealed that the adoption of electronic voting technologies significantly reduces electoral fraud and improves vote verification processes, thereby eliminating multiple voting and ghost voters. Similarly, Mathe (2022) found that the deployment of digital voter management technologies improved voter registration processes and reduced incidents of double registration and multiple voting during elections. These results confirm that technological integration in electoral systems can effectively minimize electoral irregularities and strengthen election administration. The finding is supported by the Rational Choice Theory as proposed by Riker (1962), who argued that individuals and institutions adopt systems that maximize

efficiency and benefits while minimizing costs and risks. In the context of elections, electoral stakeholders adopt electronic voter registration systems because they help reduce fraud, enhance efficiency, and promote fairness in electoral processes.

Finding of hypothesis two indicated that r -value 0.724 and the p -value 0.000, which is lower than the estimated threshold of 0.05. The result shows that electronic accreditation has significantly influenced electoral transparency and credibility in Lagos State. This suggests that the use of electronic accreditation devices such as biometric verification and smart card readers ensures that only eligible voters are accredited and allowed to vote, thereby strengthening electoral transparency. This finding aligns with the study conducted between 2015–2024 by Agunyai, Ojakorotu, and Folusho (2023), which revealed that digitalized voting systems enhance public trust in election outcomes and promote democratic consolidation through transparent result management. In the same vein, Davids, Roberts, Dunn, Krovitz, and Dlamini (2024) reported that the adoption of electronic voting technologies improves election efficiency, transparency, and public confidence in electoral processes. These findings indicate that electronic accreditation technologies play a vital role in improving the credibility of elections and strengthening democratic governance. The finding is also supported by the Rational Choice Theory of Riker (1962), which posits that individuals and institutions make rational decisions based on cost-benefit analysis to achieve desired outcomes. In electoral management, the adoption of electronic accreditation systems is considered a rational institutional strategy because it reduces electoral manipulation, increases transparency, and enhances trust in election outcomes.

Finding of hypothesis three indicated that r -value 0.808 and the p -value 0.000, which is lower than the estimated threshold of 0.05. The result shows that electronic accreditation has significantly influenced the elimination of multiple registrations and ghost voters in Lagos State. This implies that biometric verification technologies and electronic accreditation devices help detect duplicate voter identities and prevent electoral malpractice during elections. This finding is consistent with the empirical studies reviewed in the literature. For instance, Ahmed and Mwandosya (2024) found that electronic voting technologies improve voter authentication, simplify voting procedures, and increase public trust in electoral processes. Similarly, Daula, Hassan, Habib, Islam, and Roy (2025) revealed that advanced electronic voting technologies enhance voter privacy, strengthen system security, and improve trust in electoral systems. These studies demonstrate that electronic accreditation technologies contribute significantly to the reduction of electoral fraud and improvement of electoral credibility. The finding is further supported by the Rational Choice Theory as developed by Riker (1962), which emphasizes that individuals and institutions adopt rational strategies that maximize efficiency and benefits. In the context of electoral reforms, the adoption of electronic accreditation systems represents a strategic decision aimed at improving election credibility, reducing fraud, and enhancing democratic governance.

Conclusion and Recommendations

The study concludes that the introduction of the major reforms under the Electoral Reforms Act such as electronic registration and accreditation have eliminated various registrations fraud, ghost voters and enhanced credibility and effectiveness of elections in Lagos State. The study concluded that the effect of technology efficiency has effectively enhanced credibility and transparency in the Lagos State. The variables can be improved to make the electoral processes more transparent, credible, and efficient in Lagos State.

Recommendations

The study recommends that;

- i. In order to handle new issues and improve user accessibility in Lagos State, the Independent National Electoral Commission (INEC) should keep funding digital voter registration infrastructure while making sure that system updates are regular.
- ii. To further increase election credibility in Lagos, State the Independent National Electoral Commission (INEC) should purchase new BIVAS machines with advanced software that will detect fraud during accreditation.
- iii. To reduce device malfunctions and human error in Lagos State, it should be a top priority for electoral officers to receive ongoing training on electronic accreditation systems. Consequences for practice.

By concentrating on the adoption of electronic systems in Lagos State Nigeria this study fills a significant gap in the body of existing research. This study offers a nuanced understanding of the factors influencing electoral reforms by examining the relationship between electronic voter registration and electronic system adoption. The results offered useful suggestions for improving the legitimacy and efficacy of elections in Lagos State and added to the larger conversation on electoral governance in Nigeria. This study aims to improve Nigeria democratic processes by bridging the gap between policy and practice through its localized and interdisciplinary approach. The results emphasize the necessity of a thorough integration of logistical and technological tactics in electoral procedures. In order to improve electoral integrity and public trust policymakers and stakeholders should understand the importance of matching resources with creative approaches.

References

- ACE Electoral Knowledge Network. (2020). *Electoral logistics: Importance and challenges*. Retrieved from <https://aceproject.org>
- Achieng, M., & Ruhode, E. (2013). *The adoption and challenges of electronic voting technologies in developing countries*. International Journal of Information and Communication Technology Research, 3(1), 1–10.
- Adeshina, A. (2020). Electronic voting system and democratic consolidation in Nigeria. *Journal of African Elections*, 19(2), 45–63.
- Adeshina, A., & Ojo, J. S. (2014). Electronic voting and electoral process in Nigeria: A review of emerging challenges. *International Journal of Advanced Research in Computer Science and Software Engineering*, 4(9), 285–290.

- Agunyai, S. C., Ojakorotu, V., & Folusho, A. (2023). A impact analysis of digitalized voting system on voting behavior and democratic consolidation in Nigeria. *E-Journal of Humanities, Arts and Social Sciences*, 4(14), Article 142. <https://doi.org/10.38159/ehass.20234142>
- Ahmed, H., & Mwandosya, G. (2024). Exploring the readiness for electronic voting in emerging economies: Evidence from Tanzania. *African Journal of Empirical Research*, 5(4), 120–132. <https://ajernet.net/ojs/index.php/ajernet/article/view/589>
- Ajayi, O. C., & Olumori, O. M. (2025). Technological innovations and the outcomes of the 2023 general elections in Nigeria. *African Journal of Democracy and Election Research*, 5(2). <https://journals.co.za/doi/pdf/10.31920/2752-602X/2025/v5n2a3?download=true>
- Ajayi, O. C., Peter, A. M., & Apine, M. (2026). An assessment of the impact of technological innovations on electoral credibility in Nigeria, 2015 to 2023. *International Journal of Education Culture and Society*, 4(1), 146–165. <https://doi.org/10.58578/ijecs.v4i1.8405>
- Alomari, M., & Khan, H. (2022). Toward a significant e-voting adoption model: The digital divide. *International Journal of Technology and Human Interaction*, 18(1), 1–16. <https://consensus.app/papers/toward-a-significant-evoting-adoption-model-the-digital-alomari-khan/86f34468f45e54a299709daf3061c82f/>
- Arinze, P., Okafor, C., & Nwankwo, C. (2025). Digital transformation and electoral transparency in Africa. *African Journal of Governance and Development*, 14(1), 22–38.
- Chalabi, M., Mohamed, H., & Al-Nidawi, W. J. (2025). The future of election: E-voting adoption in developing countries – The case of Iraq. *Journal of Posthumanism*, 5(6), 112–128. https://www.researchgate.net/publication/392574183_The_Future_of_Election_E_-_Voting_Adoption_in_Developing_Countries_-_The_Case_of_Iraq
- Dandoy, R. (2021). An analysis of electronic voting in Belgium. In *Belgian Exceptionalism in Comparative Perspective* (pp. 89–108). Routledge. <https://www.taylorfrancis.com/chapters/oa-edit/10.4324/9781003104643-5/analysis-electronic-voting-belgium-r%C3%A9gis-dandoy>
- Daula, A., Hassan, S. M. R., Habib, S. N., Islam, T., & Roy, S. (2025). Assessing the impact of adopting blockchain technology in electronic voting systems: Empirical evidence from Bangladesh. *Journal of Scientific Reports*, 11(3), 45–58. https://www.researchgate.net/publication/380185426_Assessing_the_Impact_of_Blockchain_Technology_on_Financial_Reporting_and_Audit_Practices
- Davids, Y. D., Roberts, B. J., Dunn, S., Krovitz, S., & Dlamini, S. (2024). Evaluating South Africans' views on the prospects of implementing e-voting. *Politikon: South African Journal of Political Studies*, 51(2), 121–142. https://www.researchgate.net/publication/391445875_A_post-2024_general_elections_reflection_evaluating_South_Africans'_views_on_the_prospects_of_implementing_e-voting
- IFES. (2021). *Building credible elections: Standards and principles*. Retrieved from <https://www.ifes.org>
- International IDEA. (2022). *Advancing electoral reforms for credible elections*. Retrieved from <https://www.idea.int>
- Mathe, L. (2022). The adoption of digital technology for South Africa's 2021 municipal elections and prospects for the future. *Digital Policy Studies*, 1(1), 1–12. <https://consensus.app/papers/the-adoption-of-digital-technology-for-south-africa-'s-2021-mathe/b17a7bdf9a60587a91048e058805b067/>
- Mir Faris, A., Rahman, N., & Abdullahi, M. (2024). Adoption of automated voting systems and electoral transparency in emerging democracies. *International Journal of E-Governance*, 16(2), 60–75.
- OECD. (2021). *Transparency in electoral processes*. Retrieved from <https://www.oecd.org>

- Ogunmokun, A. S., Ayanlade, O. S., & Olaposi, T. O. (2024). Understanding the impacts of electoral technologies on Nigeria's electoral system. *International Journal of Research and Innovation in Social Science*, 8(3), 2603–2616. <https://dx.doi.org/10.47772/IJRIS.2024.8031835>
- Riker, W. H. (1962). *The Theory of Political Coalitions*. Yale University Press.
- Olusadum, N. J., & Anulika, N. J. (2018). Electronic voting and credible election in Nigeria: A study of Owerri Senatorial Zone. *Journal of Management and Strategy*, 9(3), 30–37. <https://consensus.app/papers/electronic-voting-and-credible-election-in-nigeria-a-study-olusadum-anulika/65c307264dd05675a80ce68e48087770/>
- Olusadum, N. J., & Anulika, N. J. (2018). Electronic voting and credible election in Nigeria: A study of Owerri Senatorial Zone.
- Onapajo, H., & Babalola, D. (2020). Electoral reforms and democratic consolidation in Nigeria. *Journal of African Elections*, 19(1), 1–20.
- Oyelude, O., & Olojede, I. (2023). Evaluating the effectiveness of electronic voting systems in Nigeria: Challenges and opportunities. *African Journal of Politics and Administrative Studies*, 16(2), 84–104. <https://doi.org/10.4314/ajpas.v16i2.5>
- Riker, W. H. (1962). *The theory of political coalitions*. Yale University Press.
- Salimonu, B. (2013). E-voting in Nigeria: Prospects and challenges for democratic consolidation. *Arabian Journal of Business and Management Review*, 2(5), 56–68.
- Sarkawi, A., Johari, A., Bujang, A., & Bibi, Z. (2021). Usability and users' satisfaction on online electronic voting system. *International Journal of Service Management and Sustainability*, 6(2), 69–84. <https://consensus.app/papers/usability-and-users-'-satisfaction-on-online-electronic-sarkawi-johari/76beb1d5984d50788b78db60081f6a2e/>
- Ugwuozor, F. O. (2021). Technological innovations and electoral credibility in Nigeria's democratic process. *African Journal of Political Science and International Relations*, 15(2), 42–50.
- UNDP. (2021). *Digital transformation in voter registration*. Retrieved from <https://www.undp.org>
- Yusuf, A. T., & Lawal, M. O. (2023). Electoral law reforms and emerging political realities in Nigeria. In *The Palgrave handbook of global social change* (pp. 1–17). Palgrave Macmillan. https://doi.org/10.1007/978-3-030-87624-1_309-1