ISSN: 4247-5218
Volume 9, Number 2, 2024
International Journal of Advancement in Science and Technology

DIGITAL FORENSIC: THE SOLUTION TO ELECTORAL MALPRACTICE IN NIGERIA

Suleiman Nachanuya and Okorodudu Joseph
Department of Computer Science, School of Applied Sciences & Technology
Delta State Polytechnic Otefe-Oghara, Nigeria

Email: nachanuya.suleiman@iuokada.edu.ng, ighojoseph@gmail.com

ABSTRACT

Nigeria has accelerated its transition from manual (queues, head counts) to semi-electronic voting systems over the last 20 years. This will undoubtedly present several challenges to election officials with limited technical knowledge. The Nigerian electoral experience has included unexpected and unexplained cases in each phase of the election procedure: preparation, screening, verification/fingerprint scan, balloting, result counting/tabulation, and results announcement. Forensics will aid in problem identification, which will aid in effective problem resolution. The Nigerian electoral process is fraught with difficulties. The survey design is used in this study because it allows for a scientific analysis of the variables under consideration. A sample size of 378 was chosen as a representative sample because it falls within the research limit established by the research adviser, as shown in appendix one. The data was analyzed using simple tabulation, frequency, and percentage. The study discovered that there is fiat political apathy among citizens, INEC officials and political party members are interested in the use of forensic analysis, election integrity is a point of contention in Nigeria democracy, and security use incumbent to human activities. According to the findings of this study, the survival of any democracy is linked to periodic elections that allow for mass mobilization or an input in order to ensure legitimacy, obedience, peace, and political instability. As a result, the study recommends, among other things, that political leaders invest in modern science and technology in order to give Nigeria a comparative advantage and position among countries around the world.

Keywords: Forensic analysis, electoral process, liberal democracy, technology.

INTRODUCTION

Trust in the electoral process is critical for reducing voter apathy and increasing turnout. Following credible reports in previous elections of ballot stuffing and paying for votes, the Independent National Electoral Commission (INEC) says it has implemented technologies and other measures to help ensure that this election is free from fraud and corruption.

Hence, it is believed that in the right sense; election is the best option in a liberal democracy for the change or ushering in a government on a designed period of time by the constitution of the said country as it's not just to promote change in leadership but the process also ensures accountability in leadership, thereby allowing participation and transfer of power to the people as the best way to make the sovereign power of the masses known.

According to Igwe (2017), those responsibilities of the masses that include exercising political power in a society with the explicit consent and genuine mandate expressed at regular intervals by the electorate via an open, free, and fair electoral process. By implication, democracy should be a form of government in which the people set the pace, but unfortunately election malpractices such as election rigging, thuggery, arson, and killing

have so far undermined the foundation upon which democracy is built in Nigeria. "Election management is less successful when faced with issues such as ambiguous rules that are easily manipulated, ever-changing ineffective weak institutions where political bigwigs act like gladiators, and thus the electorate is often powerless as they live at the mercy of political stalwarts and political outcomes". And this is as a result of the "Independent National Electoral Commission" not being independent as it should be, but being detected by the political party in power at the time. Political barons with vested interests impose unpopular candidates and use all manner of political gimmicks to sway elections in their favor at the expense of the general well-being of the people.

This however, has made the system very boring, and many people have resorted to staying at home during election season out of fear for their lives. There is clear evidence which depicts the low turnout of Nigerian citizens participating in the election process, all over the country, due to fact that preferred candidates are sabotaged by the existing system of power, or high cost of candidates' registration or even the challenge of electoral violence which will always led to bloodshed.

As rightly stated by Ihonvbere, 1989, which was cited in Adishi (2016), describes the African situation as one of permanent ruler ship, Hobbesian politics, and power struggles. Worse, electoral bodies that should have been neutral and ensured free and fair elections have been biased because they are sometimes used by power brokers to rescue some unqualified candidates at the expense of popular candidates. Such national chaotic miscreant who so believe in rigging elections as the only way out to force in their candidates to emerge victorious in elections, these barbaric act has resulted in pending patriotic Nigerians resort to shun politics and everything that comes with it for the fear of losing their lives. Votes no longer count in recent times because electoral bodies must deliver come rain or shine and no one questions their decision. This negative trend has harmed Nigeria's democracy, undermining the chances of successful elections despite promises from various regimes and governments. It is safe to say that no change has occurred; thus, the application of forensic analysis as a modern tool or technique to achieve election integrity and democratic consolidation is required.

Elections in Nigeria have been suspended or declared inconclusive on numerous occasions in recent years. Even after it is over, there are always allegations of electoral fraud from various sources, including political parties, election observers, journalists, and voters. To name a few, the recently concluded presidential and federal elections in Nigeria on February 23rd, 2023 were marred by allegations of electoral fraud in the media, and the People Democratic Party, Labour Party and the rest of them resort not to accept the results presented by the Independent Electoral Commission but filing a lawsuit against the All Progressive Congress that was announced winner.

Hence, there has and still is the cry of electoral malpractice in the Nigeria since the inception of democracy in the country, where the tribunals and courts that handles most of these cases lacks or ignore the presented evidences of electoral malpractice that were individually and voluntarily retrieved onsite by concerned citizens to properly prosecute election issues, these drives the need for forensic analysis in the Nigerian electoral process (Eneh, 2010). According to Howard and Sheets (2006), forensic analysis emerged in response to the development and rapid growth of frauds and malpractices that are prevalent in all aspects of human activity.

According to Hess and Orthmann (2011), fraud reduction is closely related to fraud investigation and detection through forensic accounting. As a result, little or no work has

been done on the application of forensic analysis in the Nigeria electoral process, a gap that this work seeks to fill.

Literature Review

Electoral malpractices such as rigging have been a major impediment to long-term development. Nigeria has persisted and continues to be at the forefront of electoral rigging, which has resulted in political instability and has impacted all sectors of the Nigerian economy. As with previous elections in Nigeria, this has become an indispensable way of life. Election rigging has become so entrenched in the hearts of corrupt politicians and their supporters that they openly and covertly discuss it, plan for it, and challenge any force that tries to prevent them from engaging in it during elections (Adishi, Anyanabia & Oluka, 2019). Muggah (2013) said the failure of politicians and their supporters to abide by electoral laws and play the game by the rules has partly been responsible for the enthronement of bad leadership and military intervention in politics, over the years.

Election Issues in Nigeria

It is expected that electoral umpire are to manage rapid changes in voting technologies as modern elections are more complex and require training, retraining and proper educative programs unlike the current situation where many election umpire receive minimal or no training towards its main aim. The success of any election depends on efficient planning and its conducts ranging from voters accreditation, voting, collation, counting of votes, and eventual declarations of results (Baird, 2018). This simply expresses that the failure to complete the collation and transmission of results in a timely, transparent, and accurate manner is the main factor that frustrate the public confidence, hence the credibility of the elections, which is so sure the determinant factor to rancor and after election crisis.

According to Emome (2018), electoral fraud disrupts the chain of responsiveness that connects politicians to their people, negating electorate wishes and wearing down the legitimacy of the democratic process, and will provoke violent, post-election restiveness, protest, and demonstration, resulting in the injuries and deaths of many security agents and civilians who may be victims of circumstances or die in the line of duty. Individual uncertainty in the other person's voting decision that follows the lines of familiar negotiating representations may be incorrect when considering vote counts in order to reach an agreement on whether the counts are fraudulent. In light of the foregoing, Oghale (2016) defines electoral fraud as illegal interference with the process of an election, either by increasing the vote share of the preferred candidate, depressing the vote share of rival candidates, or manipulating election outcomes.

As clearly stated by a scholar; "It is safe to say that the Nigeria electoral system has the ability to manipulate the composition of an electorate in order to produce a predetermined result, and one method of doing so is to move a large number of voters into the electorate prior to an election. If not punished, the discovery of fraud can have a negative impact on voters' trust in democracy. When electoral fraud occurs, it becomes extremely difficult to detect because those involved manipulate or conceal it from the public, election observers/monitors, opposition parties, and even the media, using all available tools within their means to achieve their goal. This necessitates the implementation of electoral forensics analysis because the forensic approach uses recorded votes to find irregularities. Electoral forensics has become necessary in the last decade because statistical techniques

can be used to analyze electoral results, similar to how medical autopsies are performed after someone dies under suspicious circumstances (Allen, 2017)".

With more than three decades of military rule, the emergence and practice democratic rule began in Nigeria in 1999, with General Olusegun Obasanjo elected as the President of the Federal Republic of Nigeria, and now is three decades long the drain in the practice of democracy, Nigeria is still challenged with electoral malpractice with predetermined results ahead of each poll.

In a civilized world, the term election is a display of potentials and the rate of its acceptance by the general public, where only the exceptional gets the bid. It is with the above view that election is a competition between icons of integrity, intellectual prowess, humanitarian and patriotism as the duty of nation building can only be their desired responsibility. Political parties and candidates must be able to campaign freely, and voters must be able to vote without fear of illegal influence, violence, or intimidation. Forensic examination is the only reliable way to demonstrate a person's uniqueness to another. Nigeria's election is one of the most contentious in modern history. Religious sentiments and emotions are strongly associated with Nigerian elections. A coalition of civil society organizations has banded together to play an active role in the electoral process in order to promote leadership unity, but this should be replaced with forensic analysis because these elections show only routine voting information incidents during elections, which include violence and security challenges (Alao & Otite, 2012). It is worth noting that election stakeholders are being called upon to address issues because the traditional system has not produced accurate results due to mix-tabulation and a massive amount of data that cannot be accessed.

Technology in itself is ubiquitous, hence fewer but not significant issues will arise; we have seen in recent times where several foreign countries have used forensic science for public benefit where conducting free and fair elections is one. To reason this issue further, elections have long been a source of national concern, and a sovereign nation that we are, the mitigation of irregularities and reoccurring election vulnerabilities should be in urgent effect hence the winning public interest as credible elections are those that are inclusive, transparent, accountable and competitive. To introduce digital forensic analysis in Nigerian elections will significantly reduce electoral fraud and irregularities, as most elections in our country, despite being labeled as democratic, are actually autocratic in nature. Various technologies, such as application software, operating systems, and memory cards, play an important role in the forensic analysis of the Nigerian electoral system by detecting local outliers to the usual patterns of election. The Nigerian government has not provided any effective automated system for reporting and analyzing various types of electoral fraud (Eckert & Sjoberg, 2009)

Every electoral process in a nation is determined by the economic and financial capacity of the party and its candidates; our electoral system has encouraged widespread economic and electoral fraud. Nigeria as the study has been challenged by the lack of electoral accountability combined with corruption, dereliction of duty, canvassing for votes, juveniles voting, impersonation, alteration of voters' cards, unlawful possession of voters cards, campaigning on Election Day, and vote buying. But with the acceptance of digital forensics a general nationwide database and analysis of registered voters will made, and monitored while voting. In some cases, new forensic technologies are quickly adopted while adequate regulation is delayed, resulting in unintended uses and consequences after deployment (e.g., indefinite storage of DNA samples from children in criminal DNA

databanks). To ensure that forensic genetic technologies respect privacy and human dignity, existing knowledge about the opportunities and challenges associated with their adoption must be compiled (Nwachukwu, 2018).

Forensic Analysis and Electoral Issues in Nigeria

Crime practices and its mode of approach are becoming more sophisticated, critical, digital, and organized in recent times, as technology and cyber or digital knowledge advances. This necessitates forensic analysis's role in general crime detection. Thus, as stated by a scholar; forensic analysis can simply be defined as an investigative tool used to determine a true offender of the law in criminal cases involving murder and all forms of fraud (Akpoge, 2015). However, the use of forensic evidence in criminal and civil trials is entirely a normative practice, with Judges sending cases for forensic examinations at their discretion. Neither the Code of Criminal Procedure 1898 nor the Evidence Act 1872 contains any well-founded rules.

The expertise of professionals in the fields of handwriting, finger impressions, foreign law, science, art, and other subjects under a broader interpretation of Section 45 of the Evidence Act, will definitely be needed by Judges in the court of law when such cases are brought. With the establishment of a standard forensic center, relevant evidence finding tools like DNA, saliva, skin, hair, thumb impressions, blood, sperm, and footsteps, ballistics, drug samples, paints, explosives, toxins, chemicals, and other substances will be in its reservoir for analysis. It clear to note that, "it necessitates a different method or procedure to be obtained and presented in court, as the lack of a procedure makes the acquisition and presentation of forensic evidence in our country more questionable and implausible". In most instances, Judges are given complete discretion over whether or not to accept the evidence presented. This demonstrates the practice's shaky existence in our legal system. The advancement of forensic evidence has coincided with the passage of the DNA Act of 2014, (hhunga, 2018).

"However, with such a broad scope of forensic analysis, electoral fraud and investigation can be successfully accomplished in Nigeria, as issues such as double voting, inflation, and a variety of other issues can be easily detected, enhancing trust in the electoral system (Lyn, 2010)".

Conceptual Analysis

Brief History and Development of Fingerprint

Fingerprint collection and cataloguing dates back to 1891, when Juan Vucetich began collecting criminal fingerprints in Argentina (Jain et al., 2003). Biometrics evolved from Alphonse Bertillon's criminal activity identification systems (1853-1914) and Francis Galton's theory of fingerprints and physiognomy. Galton's work led to the application of mathematical models to fingerprints, phrenology, and facial characteristics as part of absolute identification and a key to both inclusion and exclusion of populations (Muggah, 2018).

According to the researcher, biometric systems are the ultimate political weapon of the era and a form of soft control. David Lyon, a theorist, demonstrated how biometric systems have penetrated the civilian market over the last two decades, blurring the lines between governmental forms of control and private corporate control (Lyn, 2010).

Concept of Biometric Technology

A biometric indicator is any measurable human physical or biological feature that is used in an automated or semi-automated identification process. These characteristics are classified as physiological (e.g., height, weight, face, iris, or retina); biological fluids (e.g., sperm, saliva, vaginal smear, blood); and behavioral (e.g. voice, signature or keystroke sequence). Some biometric characteristics remain constant over time, while others change. All biometric features are considered unique, but some are less distinct than others, making them less useful for automated identification. The uniqueness of any biometric feature is also determined by the efficiency of the sampling technique used to measure it, as well as the matching process used to declare a match between two samples (Okeshola & Adeta, 2013). Biometrics is used to establish a strong link between a stored identity and the physical person it represents (Lyon, 2010). Because a person's biometric features are a part of his or her body, they will always be with that person and available to prove his or her identity wherever he or she goes. Lyon goes on to say that biometric data technologies can be used in three ways: (a) to confirm that people are who they say they are, (b) to identify unknown people, and (c) to screen people against a watch-list (Lyon, 2010). Enrolment, storage, acquisition, and matching are the four stages of biometric identification.

In order to facilitate the storage sample and matching processes, the features extracted during the enrolment and acquisition stages are frequently transformed (via a non-reversible process) into templates (Lyon, 2010).

These templates contain less data than the original sample, are typically manufacturer-dependent, and are thus in general incompatible with those of other manufacturers. Templates or full samples obtained in this manner can then be stored in either centralized (e.g., in a database) or decentralized storage (e.g. on a smart card). Because of the statistical nature of the acquisition and matching stages, biometric systems are never completely accurate, but they are very reliable with very little error. The research project evaluates biometric technologies using seven widely accepted criteria: universality, distinctiveness, permanence, collectability, performance, acceptability, and resistance to circumvention. The extent to which each biometric technology meets a specific criterion varies. However, comparing technology based on criteria is only useful after a specific application and a concrete identification purpose have been established. A convenience application, for example, controlling access to immigrants, may tolerate a high error rate.

The Issues of Crime and National Security Management in Nigeria

Governments and national security stakeholders all over the world, from America to Europe and Asia, are racing to come up with ideas to improve security in their countries, as citizens have become preferred targets for terrorists, kidnappers, and criminals worldwide. From the 14th to the 19th of April, 2013, world leaders, agencies, and institutions gathered in Accra, Ghana for the same reason at the International Executive Management Retreat on Security Awareness and Emergency Preparedness for African Institutions. The retreat's goal was to provide African principal officers in charge of national security with a comprehensive, up-to-date body of knowledge and strategies for protecting human, physical, material, and financial resources through intelligence gathering. No country can be socially, politically, or economically comfortable in a situation where its citizens are highly insecure. Citizens, as they constitute the future manpower and leadership of any nation, are the source of any nation's pride and future hope. Institutional reforms are evolving methods of transforming institutions from their current unfavorable state to a desired state. Its goal is to improve

institutions so that they can provide the most beneficial social returns in terms of health, wealth, security, and well-being. Because security is a driving force in any human activity, it is discussed in this work (Eneh, 2010).

Section 14 Subsection (1) of the Federal Republic of Nigeria's constitution (1999) states unequivocally that "the security and welfare of the people shall be a primary objective of the government." Thus, it conceptualized National Security as a collective or public good that governments strive to provide for all of their citizens through good intelligence work, regardless of the amount of resources that individuals and communities contribute through taxation and regardless of the fortune and performance of others (Egwe, 2014). National security refers to the gradual manifestation of positive changes in a country's economic, industrial, political, socio-cultural, and administrative systems, as well as an increase in standard and quality of life. National security entails human endowments, natural, physical, and psychological factors, and it extends beyond having a lot of money. It encompasses all aspects of social behavior, such as the establishment of law and order, resourcefulness in business dealings, honesty in administration, relationship, sophistication, broadmindedness, peace, and an overall positive national outlook, and these cannot be accomplished without proper intelligence for National Security.

Socio-political stability, territorial integrity, economic solidarity and strength, ecological balance, cultural cohesiveness, moral spiritual consensus, peace, and security are the seven (7) fundamental elements of national security (Nte, 2014). National security also has three major aspects: economic and social, political and security, and industrial and administrative. Human resources are the most valuable assets that any nation needs in order to be secure, grow and develop economically, socially, and politically. National security encompasses human capacity, allowing an individual to carry out his or her expected responsibilities without limitations. National security is a multifaceted concept that pervades every aspect of our national life and cooperative existence. After World War II, the concept of "National Security" emerged primarily in America, with a focus on intelligence might. According to Akpoge (2015), security entails a stable, relatively predictable environment in which an individual or group can pursue its end or objectives without disruption, harm, danger, fear, or distress.

When we secure our most cherished values and beliefs, democratic ways of life, institutions of governance and unity, national welfare and well-being, people who are permanently protected, jealously guarded, and constantly improved, we can say that National Security has been attained. As a result, national security includes not only intelligence security, which implies a nation's ability to defend itself and/or deter intelligence aggressors, but it is also used to actualize economic, political, and environmental issues that, if not properly enshrined, threaten a nation in any way (Obi, 2011). The goals of national security are self-preservation or the survival of the nation as a corporate entity; the institution of the state, which includes the entire machinery of government; the security of its core interests; prosperity and economic well-being; and a good international image or prestige. National Security objectives also include the establishment of appropriate political and economic conditions in neighbouring countries that extend far beyond the country's geographical boundaries.

According to Adishi (2016), despite the efforts of the Nigerian government, the country's level of national security has declined, owing to growing poverty, wide income disparities, high unemployment, social dislocation, and the breakdown of societal values, which leads to fraud and insecurity. The institutions established to ensure security are hampered by a

lack of personnel and skills, insufficient funding, inadequate equipment, and a lack of proper orientation and commitment. According to Oghale (2016,), security provides a form of protection by creating a barrier between the assets and the threat. To put it another way, security is the general absence of potential or actual fear of insecurity, which may subvert an individual physically or psychologically, but this is not the case in Nigeria. According to Nwachukwu (2018), security is anything done to keep a person, building, or country safe from harm. There are various types of security, including social, economic, and perceived security. Certain concepts, however, are universal. Threat; vulnerability; vulnerability exploited by a security threat, danger, risk, harm, injury, or loss as extrapolated.

Everyone fears insecurity as a risk factor. It is a bad omen for any country to see insecurity as security collapses (Adishi et al., 2019). Insecurity manifests itself in a society that fails to provide and maintain secure means of livelihood, adequate housing, health care, and the ability to live without fear or threat. It manifests itself in Nigeria today as insecurity, war, rape, robbery, youth restiveness, terrorism, wanton destruction of lives and property, stealing, abduction, prostitution, and thuggery. Insecurity is a global problem, and a recent incident in Nigeria demonstrates that this 'monster' has taken on a frightening and dangerous dimension.

When we secure our most cherished values and beliefs, democratic ways of life, institutions of governance and unity, national welfare and well-being, people permanently protected, jealously guarded, and continuously improved, we can say that national security has been attained (Adekunle, 2011).

Sustaining Fingerprint Biometrics

There are several factors to consider when implementing a biometrics system, and different types of biometric systems are more appropriate for specific contexts and operational purposes. A key consideration is performance, which refers to the speed and accuracy of recognition, both of which can be affected by the environment in which the system operates. Other factors to consider include the system's acceptability by data subjects and the ease with which the system can be duped using fraudulent methods. Iris recognition systems are relatively simple to use, allowing large numbers of people to be processed quickly, but reflection from glasses or cameras can cause issues. An iris recognition system has been found to be an effective method of detecting excluded individuals re-entering the country in the United Arab Emirates (Eneh, 2010). The system caught an average of 30 people per day, and statistical analysis revealed that the likelihood of a false positive match is one (1) in eighty (80) billion. The systems are not cheap, and they require ongoing management to keep the system up to date with new individual data. The United States Visitor and Immigrant Status Indicator (US-VISIT) system is used in the United States to track individuals entering the country by matching fingerprints from their left and right index fingers, as well as a facial image, against a database of banned individuals that contained 2.5 million names in 2007.

Over a three-year period between its implementation in 2004 and 2007, the system checked over 75 million people, resulting in 1,000 people being denied entry (Wrobleski & Hess, 2006). They also state that there is no optimal biometric system and that consideration must be given to how the specific characteristics of a biometric system meet the application demands defined by the biometric system's operational mode and the environmental characteristics of the deployment area.

Biometric System

Biometric systems are based on matching data taken from individuals to an algorithm within the system, and in many cases, human discretion has been removed from the process, which means there is no appeal process built into the system, which can have exclusionary consequences. Individuals with poor eyesight may have difficulty being identified using iris recognition systems; thus, the systems have difficulty recognizing people with glaucoma or cataracts. According to research conducted by The UK Passport Service in 2013, biometrics systems have difficulty enrolling and identifying individuals who fall outside of the normal range. The study discovered that 0.62 percent of disabled people were unable to enroll any biometric data, which, when translated into millions of individuals using a system, could represent a large number of people. Elderly people and people of certain races also had difficulty enrolling data, and these issues could potentially exclude people from society and deny them access to services. Biometrics can provide information other than identification, which raises the question of whether this data could be used to profile individuals. The results of a retinal scan can provide medical information about diabetes or high blood pressure levels for an individual, and this information could be used unethically for economic gain by denying benefits to a person determined to be at risk. Although biometric systems will never be a perfect identification tool, many types of systems disadvantage certain groups, and these issues must be addressed to avoid negative societal and ethical consequences.

Authors such as (Igwe, 2014; Muggah, 2018) have expressed concern that biometric systems may be responsible for social exclusion. Biometric systems then serve to amplify and reproduce pre-existing codes of inclusion and exclusion within social structuring. The configuration of such codes within specific national contexts thus influences how biometrics surveillance is mobilized and experienced. Biometrics systems are a type of social sorting that aims to categorize people for various purposes, such as inclusion and exclusion, acceptance and rejection, worthiness and unworthiness (Igwe, 2014). He went on to describe it as a process of digital discrimination in which personal data is shifted to legitimize the presence or movement of some while rejecting others. The emphasis on the body as a source of information and identification creates new forms of identity that are binary in nature, based on acceptability or denial, and lack any form of subjectivity.

There is no distinction between what is normative and what is practicable in automated interaction; everything that works is norm, and everything that does not work is deviance. Deviance becomes impossible in an efficient socio-regulating package, and the norm becomes a technical rule of action, a neural parameter independent of decision and values. This is likely the most significant change in the history of social control, at least outside of exceptional periods of massive regulatory change, such as wars, revaluations, or major disasters (Alan & Clark, 2013 cited in Emome, 2018).

Emome (2018) identified how automated systems, such as biometrics, differ from previous social control systems in that they treat all prospective users as potential offenders and thus in a uniform manner. Previous systems relied on surveying social spaces to identify potentially dangerous deviations from the norm. One recurring theme is that surveillance is "completely divorced from the social bond," but this viewpoint ignores the cultural, political, economic, and social factors that can influence the operation of biometrics systems.

According to Allen (2017), biometrics systems used in border management in the United States are more than just a means of controlling the movement of bodies across space; they should be understood as a matter of bio-politics, as a mobile regulatory site through

which people's everyday lives can be made amenable to intervention and management. According to Adishi (2016), technological security systems are viewed as automated systems, but they are mediated by social practices and, due to their flexibility, are influenced by human judgments during their creation and operation. When developing the algorithms and software that dictate how a system will impact the individuals processed, human discretion is used, and the experience can have a significant impact on their social mobility and life chances.

The broad social effects and policy implications of digital surveillance are thus contingent and, while malleable, are likely to be heavily influenced by the political, economic, and social conditions that shape the principles underlying their design and implementation (Eckert & Sjoberg, 2009). According to Akpoge (2015), identification systems have historically been embedded in a web of economic interests, political relations, symbolic networks, narratives, and meanings. According to Munilla and Peinado (2007), biometrics added to the "historic categories of exclusion and criminalization,"which included the marginalized and indigenous peoples in Australia because they were the first to be enrolled in emerging biometric systems. One of the major concerns raised about biometrics systems is 'function creep,' which refers to data being used for purposes other than those for which it was originally collected.

Emome (2018) warned that function creep has the potential to erode public trust and undermine trust in biometric processes. The authors defined 'function creep' as a combination of three factors: a policy vacuum, an unsatisfied demand for a specific function, and a slippery slope effect or covert application. When new technologies are deployed without specific policies to guide their operation, policy creep can occur, resulting in stakeholders driving the process based on their own interests. Unsatisfied demand occurs when data is collected for one purpose and then used for a purpose other than the one for which it was originally collected due to an unmet need in another area. Covert inappropriate use of biometric data can occur as a result of gradual minor changes that gradually divert the usage of the information or as a more planned hidden agenda. Biometric systems generate massive amounts of data, some of which is beyond what is required for personal recognition, raising the possibility that the data will be used for unintended or unauthorized purposes. As previously stated, governments are marketing biometrics as a solution to the post-9/11 terrorist threat, but these systems may be flawed in that they rely on stored algorithms to identify threats, making them incapable of monitoring "previously unknown potential terrorists" (Lyon, 2001).

According to Eneh (2010), the political appeal of stricter border controls is that they provide some additional surveillance but have limited impact on terrorism given the macroeconomic pressures and flows under globalization and free trade. Managing the data required to run biometrics systems effectively is a significant challenge, and records may fail to identify potential terrorists. For example, several of the 9/11 terrorists had expired visas, but none were 'targeted for investigation as an absconder. The development of biometrics systems adds another tool to the effort to increase security, but humans have the ability to understand and avoid the technologies. The benefits of technological and other strategic surveillance developments in Western liberal democracies are frequently fleeting and contain ironic vulnerabilities. The logistical and economic constraints on total monitoring, as well as the interpretative and contextual nature of many human situations, system complexity and interconnectedness, leave plenty of room for resistance (Jain, 2003).

The process of developing a technological solution to address security issues will be an ever-changing problem with significant financial implications for governments, and the effectiveness of these systems has not been fully established. The biometric security industry markets its products as solutions to post-9/11 security issues, but many of these systems have not been extensively tested in real-world settings over long periods of time (Lyn, 2010). Biometrics systems must also have 'complex bureaucratic' processes in place to function properly, and more expertise and research in this area is needed. Governments must ensure that cross-border security does not interfere with legitimate international economic activities, which are an important component of globalization. Thus, using the science of forensic analysis, contending election cases can be easily poked as it covers violence, murder cases, result falsification, and all manner of inflations that besiege the Nigeria electoral culture and cycle.

Electoral Challenges in the Application of Forensic Analysis in Nigeria

1. Statistics and Computer Power: It does necessitate a fairly advanced understanding of quantitative methods as well as computing power.
2. Probabilistic Evidence: Unlike direct observation of ballot stuffing and snatching, election forensics does not produce definite proof of fraud.
3. Restricted Methodology: It is restricted if election results are not reported in sufficient detail; particularly if election results are only provided as a summary at the national level.
4. Unskilled Personnel: While forensic analysis is critical to election integrity, the Nigerian government has not taken sufficient steps to consolidate skills among election stakeholders.
5. Lack of political will: Despite the framework of challenges, there is still a lack of supporting legislation and enabling laws that are meant to provide forensic analysis with a solid foundation.
6. The Potential of Forensic Analysis in Nigerian Elections
7. Transparency: It promotes transparency in Nigerian elections, which increases government legitimacy because citizens are aware of the process.
8. Time Saving: It is simple to detect electoral anomalies. Due to its relative perfection, electoral fraud such as double registration, inflated figures, and other anomalies are easily detected and validated in a court of law.
9. Cost Implication: In general, the use of information technology, of which forensic analysis is a component, helps to reduce costs. It could reduce the number of personnel and materials required.
10. Massive Citizen Participation: With the current growth of e governance, the framework of service delivery has been enhanced, making voting faster.

Theoretical Framework

The theoretical debate using technological determinism is centered on emerging trends of technologies that have yielded positive impacts in the monitoring and apprehension of criminals and terrorist activities by law enforcement concepts using forensic science knowledge in obtaining biometric fingerprints; and one of the most widely discussed topics concerns terrorist activities using technology concepts in committing criminal acts and hiding away from law enforcement. The use of technological determinism creates a biometric fingerprint database using forensic and technological identities – "forensic technology" – resulting in a new field of linking criminals and terrorists to crime. Though there is little literature because the field is still developing and because agencies are unable

to release critical information for crime management and terror combat using technological means. Forensic technology is the empirical application of the concept of forensics and technology by government law enforcement agencies using biometric fingerprints to obtain records for investigation in crime management, with the goal of fighting, deterring, and combating crime and terrorism through surveillance. Suspect identities emerge from mobile phone communication, closed-circuit television (CCTV), fingerprints, and facial imageries, from which their profiles can be matched with vital details of information of interest to the police, such as a suspect's family background, including any criminal records, fingerprints, photographs, and so on.

Some blame the failure of the criminal justice system, which includes understaffed police officers, lenient judiciaries, overcrowded prisons, overworked or burned-out probation and patrol officers, for the reasons why people commit crime. Other blames are placed on society and an overwhelming lack of personal and community responsibility and accountability; this includes abusive parents, permissive parents, inadequate educational institutions and incompetency among teachers, a decline in religion, media violence, drugs, and high unemployment rates.

The Classical Theory, developed by the Italian criminologist Cesare Beccaria (1738-1794), holds that people are rational and responsible for their actions; it thus sees people as free agents with free will, which explains why people commit crimes because they choose to. The Routine Activity Theory is also a refinement of Lawrence Cohen and Marcus Felson's classical theory of crime. According to this theory, the volume and distribution of predatory crime in which an offender steals an object is highly correlated with the three variables listed below in our communities.

The availability of suitable targets, such as stores or homes containing easily sold goods. The absence of vigilant guardians, such as a neighbour, homeowner, friend, relative, or security system; and the presence of motivated offenders, unemployed individuals, drug addicts/abusers, and so on (Wrobleski & Hess, 2006, 92).

Cesare Lombroso (1835-1909), an Italian criminologist, proposed another theory of crime causation, the Positivist Theory, which supports biological causation for deviant behaviour by implying that individuals who do not conform to society's laws and regulations are biologically inferior. Thus, biological theorists believe that people's behavioural patterns are determined by their ancestors.

According to Positivist theory, criminals are completely victims of society and their own biological, sociological, cultural, and physical environments. It could be argued that an individual's environment has a positive or negative influence on his or her life, and if negative, it leads to criminal behaviour. In this case, unemployment, which is inextricably linked to poverty, is one of its kinds, with many unemployed individuals venturing into crime due to competitive factors from peers on whom they have no reliance (Wrobleski & Hess, 2006). The researcher rejects the above theories because they do not address the relationship between crime, terrorism, and technology. Thorstein Veblen's (1857-1929) Technological Determinism Theory in policing was used as the theoretical framework for this research study. This theory evolved from systems theory. The theory of technological determinism seeks to explain the assumptions that technology in society determines the evolution of its social structure and cultural values. It articulates the understanding of how technology influences human action and thought, and how changes in technology result in changes in society.

In other words, the theory explains that technology is the primary driver of societal change. In Nigeria, biometric fingerprint database investigation and crime management fall under the purview of this theory.
According to Lyman Beecher, no great advance or advancement has ever been made without controversy. The main function of forensic technology is to help collect, evaluate, analyze, produce, and disseminate timely accurate data as evidence when needed and, in a nutshell, protect the security of individuals' lives and property in the society.

Objectives of the Study
1. To examine the issues of Election and the application of forensic analysis in the electoral process in Nigeria.
2. To examine the challenges of the application of forensic analysis and its prospect in Nigeria election.

Hypotheses of the Study
Against the background of the objectives of the study, the following hypotheses were intended to drive this work.
$H0_1$ There is no significant relationship between forensic analysis and Electoral process in Nigeria.
$H0_2$ There is significant relationship between forensic analysis and Electoral process in Nigeria.
$H0_3$ There is no significant relationship between the challenges of forensic analysis and election process in Nigeria.
$H0_4$ There is a significant relationship between the challenges of forensic analysis and election process in Nigeria.

METHODOLOGY
The survey design is used in this work because it aids in providing a scientific analysis of the variables under consideration. The independent national electoral commission is a large organization in Nigeria that is in charge of organizing, conducting, and announcing election results. The commission is expected to employ 20,000 people, with a total of 18 political parties currently authorized to operate (John, 2018). The multi-stage sampling technique was used for this research work, which involves the use of more than one step or stage in the sampling procedure. INEC employees were divided into different grade levels, and party members were divided into different stakes within political parties. A sample size of 100 was chosen.
The structured Questionnaire titled Digital Forensic: The Solution to Electoral Malpractice in Nigeria was used as the research instrument for this study. The questionnaire was distributed to INEC officials and party members, and their responses were graded based on their responses. In conducting this research study, the researcher relied heavily on both primary and secondary data. This entails conducting original research to obtain data for a specific purpose via surveys, observations, and experimentation. These are reprints of relevant professional text books, journals, newspapers, and INEC materials, including published and unpublished articles. Eight (80) questionnaires were retrieved from the one hundred (100) copies of questionnaires distributed. The researcher presented and analyzed

questionnaire data and developed hypotheses using simple tabulation, frequency, and percentage.

Hypothesis Testing

$H0_1$ There is no significant relationship between forensic analysis and Electoral process in Nigeria.

$H0_2$ There is significant relationship between forensic analysis and Electoral process in Nigeria.

To test this hypothesis, the mind of staff of INEC and political parties were sought through the questionnaire administered and was analyzed with the means of chi-square statistical text.

Respondent	Frequency	Percentage	Total
Agree	65	60	125
Disagree	15	40	55
Total	80	100	180

The above figure are obtained twelve computation of expected frequency

Fe = $\frac{row\ total \times column\ total}{grand\ total}$

= $\frac{80 \times 125}{180} = 55.5$

= $\frac{80 \times 55}{180} = 24.4$

= $\frac{100 \times 125}{180} = 69.4$

= $\frac{100 \times 55}{180} = 30.55$

Computation of chi-square (x^2)

$X^2 = \frac{(fo-fe)^2}{fe}$

Fo = frequency observed

Fe = frequency estimated

Option	Frequency		Percentage		Total
	Fo	Fe	Fo	Fe	
Yes	65	55.55	60	69.4	125
No	15	24.4	40	31.55	55
Total	80		100		180

The formula for arriving at the calculated value is chi-square

$X^2 = \frac{(fo-fe)^2}{fe}$

= $\frac{(65-55.55)^2}{55.55} = 1.6$

= $\frac{(15-24.4)^2}{24.4} = 3.6$

= $\frac{(60-69.4)^2}{69.4} = 1.273$

= $\frac{(40-30.5)^2}{30.5} = 2.959$

= 9.4

Contingency Table

Fo	Fe	(fo - fe)	$(fo - fe)^2$	$\frac{(fo-fe)^2}{fe}$
65	55.55	9.4	88.36	1.590

15	24.4	-9.4	88.36	3.621
60	69.4	-9.4	88.36	1.273
40	30.55	9.4	88.36	2.897
140	140	Calculated	X^2	11.8
180	180	Calculated	X^2	9.4

Calculated value = 9.4
Where r = number of row, c = number of column, df = degree of freedom
Therefore df = (r - 1)(c - 1)
= (2 - 1)(2 -1) = 1
Table value = 3.84
The value of df = 1 and level of significance = 0.05 is equal to 3.84 in the chi-square table.
Table Rule

Since the calculated value is greater than the table value, reject the null hypothesis and accept the alternative hypothesis i.e. "There is significant relationship between forensic analysis and Electoral process in Nigeria".

DISCUSSIONS

According to debt analysis, there is a great need for the use of forensic analysis because elections in Nigeria are marred by numerous irregularities by stakeholders. This has thrown doubt on the country's election results, necessitating a state of emergency to put things right and restore public trust. The following are the major findings:

i. There are challenges in the Nigeria electoral process;
ii. Hypothesis formulated were rejected, indicating the urgent need for the application of forensic as a modern tool into the fabric of Nigeria election;
iii. Findings show that insecurity is prevalent during election period;
iv. There is fiat political apathy among citizens;
v. INEC officials and political party members are interested in the use of forensic analysis;
vi. Election integrity is a point of contention in Nigeria democracy; and
vii. Security is a human activity.

CONCLUSION AND RECOMMENDATIONS

The expectation of the general public especially the patriotic citizens of Nigeria, is that democracy is the government for the people and by the people. Hence, the confidence of Nigerians should be captured in this regards by creating a truly independent electoral body unlike the current existing one that its activities are determined by the ruling party and the elected president.

This can come into effect if the process to be carried out by this independent body is placed under digital forensic and electronic monitoring by experts who can't be to a large extent compromised, where their services will highly be appreciated financially, morally and security wise.

The designed system should be user friendly, in the sense that voters can vote in the comfort of their homes or anywhere it's convenient for them but that the platform can be accessed by all illegible voters.

Another point to be viewed into play is that, every process ranging from imputation of data (votes), to the collation of results should be displayed digitally via the electoral portal on real time.

REFERENCE

Adekunle, A. (2011). The changing patterns of small and light weapons (salw) proliferation and the challenges of national security in Nigeria. International Security Journal, 1(1), 1-16.

Adishi, E. (2016). Intelligence and national security in Nigeria new democratic governance. University of Port Harcourt, Rivers State, Nigeria.(Unpublished PhD Thesis).

Adishi, E., Anyanabia, E. & Oluka, L. N. (2019). Forensic technology and crime management: Roles, challenges and prospects in Rivers State. Nigeria: Pearl Publishers

Akpoge, D. (2015). Criminology, crime and delinquency in Nigeria (2nd Eds.). Nigeria: Pearl Publishers.

Alao, D. O. & Otite, A. C. (2012). Boko-Haram insurgence in Nigeria: The challenges and lessons. Singaporean Journal of Business Economics and Management Studies, 1(4) 1-15

Allen, D. (2017). Crime and the human mind. New York: Columbia University Press.

Baird, F. (2018). Social problems. New York: Holt, Rinehart and Winston.

Eckert, A. &Sjoberg, L. (2009). Rethinking the 21st century: 'new' problems, 'old' solutions. UK: London, Zed Books Ltd.

Emome, I. (2018). Policing Nigeria in the 21st century. Nigeria: Spectrum Books Ltd.

Eneh, O. C. (2010). Technoscience in Crime Detection and Control: A Review. Journal of Applied Sciences, 10(17)1873-1884.

Federal Republic of Nigeria (2011). Nigerian 1999 Amended Constitution. Abuja: Federal Republic of Nigeria Publications

Hess, K. M; Orthmann, H. C. Cho, H. L. (2011). Introduction to law enforcement and criminal justice (10th ed). New York: Cengage Learning

Hunga, M. O. (2018). Insecurity in gulf of guinea and Nigeria economy. Novena University, Ogume, Postgraduate School, (Unpublished Thesis).

Igwe, E. O. (2017). Nigerian borders and the application of forensic intelligence: Issues, challenges and prospects. Novena University, Ogume, Postgraduate School, Delta State, Nigeria, (Unpublished postgraduate diploma project).

Jain, P. A. (2003). Aggressive behaviour, mental sub-normality. New York: XYY Male Nature Publishers.

Lyn, P. (1960). Crime, justice, and correction. New York: McGraw-Hill.
Muggah, R. (2018). How smart tech helps cities fight terrorism and crime. World Economic Forum. Pp. 34 – 56.

Munilla, L. & Massari, J. (1991). Juvenile Delinquency: Theory, practice and law. St. Paul, MN: West Publishing Company.

Nte, D. N. (2014). An evaluation of the challenges of forensic investigation and unresolved murders in Nigeria. African Journal of Criminology and Justice Studies: AJCJS, 6(1&2), 143-162.