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ROLE OF DIGITAL TECHNOLOGY IN ENHANCING LAW ENFORCEMENT EFFICIENCY IN NIGERIA: A STUDY OF SURVEILLANCE AND INTELLIGENCE GATHERING IN IKORODU LOCAL GOVERNMENT AREA OF LAGOS STATE

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Abstract
This paper focuses on the use of digital technology in improving the efficiency of law enforcers in the Ikorodu Local Government Area of Lagos State in Nigeria. The research design of the study is descriptive survey research design where both quantitative and qualitative methods are combined to bring out a holistic analysis of the topic. Structured questionnaires and semi-structured interviews were used to gather data of 286 participants consisting of law enforcement officers, members of the communities, and civil society participants. The results indicate that the degree of uptake of digital technologies including CCTV surveillance, biometric and digital communication tools are moderate with a high difference between security units. The statistical analysis shows that the use of digital technologies and crime detection improvements have a strong positive relationship, as well as response time and intelligence gathering. Nevertheless, the research also notes some of the major challenges, such as insufficient funds, inadequate infrastructure, the lack of technical capacity, and the issue of privacy of data. The authors find that the digital technology has vast potential to improve the effectiveness of law enforcement, but its potential is limited by systemic and institutional constraints. It suggests more funding in digital infrastructures, human resource capacity building, enhanced community policing, and definition of clear rules. Generally, the research highlights the necessity of a balanced and integrated digital policing method that has integrated technological innovation with community involvement and ethical protection.
Keywords: Digital Policing, Law Enforcement Efficiency, Surveillance Technology, Community Policing, Intelligence gathering

1. Introduction

The swift development of digital technology has essentially changed the environment of modern-day policing and security management in the world. Over the past few decades, police forces have become more and more dependent on advanced technology means, such as surveillance cameras and biometric systems, data analytics and real-time communication platforms, to expand their ability to prevent, detect and otherwise react to crime. These innovations have transformed the conventional ways of policing by putting more emphasis on proactive and intelligence-driven models as opposed to reactive ones. According to the literature available, digital technologies make crime mapping, predictive policing, and effective coordination of security agencies possible, which increases the overall effectiveness of their activity (Weisburd, 2014). In addition, the rate at which information is disseminated in the case of emergencies is also high because of the digital communication platforms; this leads to a low response time in volatile situations. As a result, the digital technology has taken the shape of an inseparable element of contemporary security governance.

The introduction of digital technology in law enforcement in Nigeria is becoming more and more popular in the last twenty years, as it is a developing country. Due to the intricate and dynamic security issues such as terrorism, cybercrime, armed robbery, kidnapping, and communal fights, the Nigerian security agencies have started to consider technological solutions to support operational capacity of the agencies in the country. Organizations like the Nigeria Police Force (NPF), the Department of State Services (DSS), the Economic and Financial Crimes Commission (EFCC), and the Nigeria Security and Civil Defence Corps (NSCDC) have over time been embracing the use of digital tools in their policing approaches. They are the

implementation of surveillance systems, the use of forensic data analysis technologies, drones, and digital communication platforms to enhance the process of intelligence collection and crime detection.
Besides institutions, the Nigerian government has established massive digital identification programs including; the National Identity Number (NIN) and the Bank Verification Number (BVN). These biometrics systems are important instruments in keeping track of people, authenticating identities, and facilitating crimes. They have improved the ability of law enforcers to detect suspicious activities and follow criminal networks because they have been incorporated into financial and administrative systems (Akinola, 2019). These trends demonstrate how the significance attributed to digital infrastructure in enhancing the national security architecture is increasing.

On the subnational level, the most notable example of technological driven security innovation in Nigeria is the Lagos State. Being the economic centre of the country and one of the largest and fastest-growing megacities in Africa, Lagos is particularly susceptible to the issues of security that are linked to the high pace of urbanization, population density, and economic dynamics. To counter this, the state government has undertaken major efforts to develop digital security infrastructure by activities like the Lagos Smart City Project and the Lagos State Security Trust Fund. These projects have enabled the implementation of closed-circuit television (CCTV) cameras, improved communication, patrol cars with tracking devices, and centralized offices in various strategic points in the state (Akinola, 2019). These investments aim at ensuring better surveillance, increase in the capability of law enforcement agencies in responding well to security threats and better intelligence gathering.

Regardless of these developments, there is still a question mark over the real possibility of digital policing technologies especially at the grassroots. Although urban centres like Lagos Island and Ikeja have enjoyed a relatively high level of technological infrastructure, semi-urban and peri- urban regions tend to have disproportionate application and even difficulty accessing the inventions. This gap brings up key concerns regarding the inclusion and sustainability of digital policing policies in Nigeria. In particular, it is necessary to investigate the way these technologies are implemented and used on the local levels where the infrastructural, institutional, and socio-economic limitations can become an obstacle to their successful application.

The Ikorodu Local Government Area (LGA) of Lagos State gives a good example of why these dynamics should be explored. Ikorodu is situated in the periphery of the Lagos metropolis, and with its relative cheapness and closeness to other significant businesses, Ikorodu has experienced a high rate of urbanization and population growth. The transformation has come with more economic activity and development opportunities, but at the same time a rise in security challenges has been experienced. Cultism, armed robbery, kidnapping, land disputes, and youth gang violence have become common in the region, where they are considered to be the major threats to the residents and destabilizing the situation in the community (Olaniyan and Asuelime, 2020).

These security concerns that persist in Ikorodu show how old-fashioned policing practices are hindering their ability to cope with the overarching and changing nature of criminality. In this respect, the digital technologies (CCTV surveillance, mobile communication systems, and forensic intelligence tools) can greatly increase the effectiveness of law enforcement. An example is that surveillance cameras might be used to help monitor the high-risk areas in real-time, whereas the digital databases and communication platforms could be used to share intelligence and coordinate the response of security bodies. Nonetheless, it is yet to be seen how well these technologies have become integrated into the local policing practices.
A major impediment of digital policing tool implementation in Nigeria is the problem of infrastructural insufficiency. The inefficiency of surveillance systems and digital communication networks are often limited by unreliable electricity delivery, low access to broadband, and poor technological infrastructure. Poor maintenance culture and absence of technical support in most instances lead to underutilization and inability of installed equipment to operate (Alemika, 2013). Moreover, there is a lack of better trained staff who can work and comprehend digital systems which restricts the possible advantages of these technologies.
Another important source of determinants of the effectiveness of digital policing is institutional. The integration and use of the technological tools may be compromised by weak inter-agency coordination, bureaucratic inefficiency and corruption. As an illustration, inadequate coordination of data exchange among

security forces can lead to the disjointed intelligence and slow reaction to offenses (Odekunle, 2014). Moreover, there is a scarcity of funds and resources which further aggravate these problems because the law enforcement agencies are struggling to maintain and modernize their digital infrastructure.
In addition to operational and institutional implications, there are ethical and legal issues that emerge due to increasing the usage of digital surveillance technologies. Although these tools increase the ability of the state to detect and act on security threats, they activate dangers on the individual privacy and civil liberties. Researchers have highlighted that in the absence of strong law enforcement and control systems, surveillance technologies may be abused in the form of political oppression, data gathering without the consent of the citizens, and abuse of the rights of citizens (Manning, 2018). Expanding digital surveillance in Nigeria should be accompanied by the careful balance between transparency, human rights respect, and community involvement as the level of trust in law enforcement agencies is still rather low.

Considering these complications, it is urgent to conduct empirical studies to explore the purpose and success of digital technology in the local policing environments. Although much of the existing research has viewed the issue of national-level policy and urban securitization measures, very little evidence exists on the application of these technologies on the grassroots level where security concerns tend to be most relevant. The practicality of the technology adoption in places like Ikorodu should be known to uncover the gaps, challenges and the opportunities to improve it.

This paper, therefore, aims at examining the role of digital technology in the efficiency of law enforcement in Ikorodu Local Government Area of the Lagos State. With the emphasis on surveillance systems and the tools used in the intelligence-gathering, the research is expected to measure the level of technology adoption, determine its effects on crime prevention and detection, and determine the obstacles that police agencies encounter in the process of using the tools. The research also takes into account the views of the local residents because it is acknowledged that the community trust and cooperation are essential constituents of effective policing.

The research has an important implication to policy, practice, and scholarship. The policy implications of the findings are that it will be evidence based and can inform investment in digital infrastructure, capacity building and institutional reforms. To law enforcement practitioners, the research will be able to draw the practical issues of challenge and best practice of implementing technology based policing strategies. The scholarly contribution of the research to the existing literature in the field of digital governance and security in developing settings is the provision of a subtle insight into the interplay between technological innovations and local realities.

Moreover, the paper is consistent with the general trends of smart policing and digital governance that exist worldwide. With contemporary cities worldwide embracing smart-city projects and working with technologies to incorporate technological aspects into the delivery of the services available to the citizens, the necessity to assess the efficiency and the consequences of these advancements grows significantly. In Africa, where urbanization and socio-economic differences are distinct issues, these assessments are essential to make sure that the technological progress can be reflected in the actual changes of the social and life quality and safety of the population.

Altogether, it can be concluded that the digital technology has become a revolution in the modern police service which can provide new chances to improve surveillance, intelligence collection, and working efficiency. Attempts to incorporate these technologies into policing have become very promising in Nigeria although in most cases they have been limited by infrastructural, institutional, and ethical issues. The Ikorodu Local Government Area, which has a dynamic socio-economic environment, and has had a long-standing security concern, offers a good context when analysing these issues. The research will help understand technology and its application in this context better, making its outcomes significant to the area of research and the consequences of effective utilization of digital technology in enhancing law enforcement, improving community safety, and promoting sustainable security governance in the country of Nigeria.

2.1 Conceptual Clarifications

2.1.1 Law Enforcement and its Efficiency

Law enforcement is the organized and institutionalized activities carried out by the state to enforce laws, bring order to the society, and protect the lives and properties. It is one of the key pillars of the governance since it forms the basis of stability and legitimacy of the state. Bayley (2006) said that the major aim of the law enforcement is to control the behaviour by enforcing legal norms; hence, facilitating social order and safeguarding the citizens against any security threats. In Nigeria, law enforcement is mostly centralized because the treatment of internal security is the primary duty of the Nigeria Police Force (NPF). It is supervised by the Federal Ministry of Police Affairs and the NPF is run under the Inspector-General of Police.

Other special purpose agencies are involved in the enforcement environment besides the NPF. These are the Department of State Services (DSS), the responsibility of which is to fight the intelligence and counter-terrorism; the Nigeria Security and Civil Defence Corps (NSCDC), that prevents the security of vital national assets and infrastructure; and the Economic and Financial Crimes Commission (EFCC) that battles financial crimes, including fraud and corruption (Alemika, 2013). When combined, these institutions constitute a multi-layered security platform that is capable of dealing with both traditional and novel threats, such as cybercrime, insurgency, and organized crime syndicates.

The concept of efficiency in law enforcement is typically interpreted as the capacity of such agencies to fulfill their goals using the available resources in the most efficient way. Odekunle (2017) understands efficiency as the extent to which law enforcement institutions are able to stop, intercept and react to criminal acts in a fast and efficient way. This is not only the performance of operation but also the administrative competence and planning. It is proposed that indicators of efficiency often consist in crime detection and clearance rates, when it comes to emergency response, the success rate of prosecution, and the trust people have in their policing institutions (Alemika, 2013; Odekunle, 2017).

The issue of efficiency is especially important in Nigeria, where the nation faces a compound security threat, as it is marked with communal warfare, political violence, terrorism, and transnational crimes. Proper response of law enforcement agencies to these challenges will be essential to preserving the stability of a country and keeping human rights intact. Nevertheless, the internal institutional capacity is not the only determinant of efficiency. It is also influenced by wider systemic issues like quality of governance, political will, development of infrastructural development, and cooperation by the populace.

As an example, infrastructural incompetence, like the presence of bad road networks, problematic electricity access, and lack of proper communication infrastructure prevents quick response and even coordination of operations. On the same note, ineffective training and modern equipment may result in diminished efficiency of the staff in responding to highly advanced types of crime. Political interference and corruption also worsen the situation as they increase the lack of accountability and misplacement of resources (Bayley, 2006). This, in turn, implies that the efficiency of law enforcement in Nigeria has to be perceived as a multidimensional phenomenon which captures the interaction between the institutional capabilities and the broader socio-political context.

2.1.2 Digital Technology in Enforcement of the Law

The digital technology has been a significant element in modern law enforcement and has changed how security agencies gather, process and use information. Digital technology in policing is broadly understood to mean the application of electronic devices, systems, and platforms to increase the effectiveness of data management, communication, and operations (UNODC, 2021). These technologies can be presented by a broad variety of applications, such as surveillance systems, biometric identification, geographic information systems (GIS), drones, and digital forensic tools.

Such technologies have become more and more popular among law enforcement agencies across the world to enhance efficiency and effectiveness. According to Ratcliffe (2016), digital tools help police officers control extensive geographical territories, detect criminal activity patterns, and coordinate the actions of different jurisdictions. To illustrate, CCTV cameras can give real-time visual information that can be employed both in prevention and investigation of crimes, whereas GIS mapping can enable agencies to locate

the hotspots of crimes and distribute available resources appropriately. On the same note, biometric systems (e.g., fingerprint and facial recognition) enable the identification and monitoring of suspects, thus improving the results of investigations.

The use of digital technology is also a major transformation of the previous reactive style of policing to being proactive and more intelligence-oriented. Intelligence-led policing is a concept that insists on utilizing data and analysis to identify and preempt criminal acts prior to them happening (Ratcliffe, 2016). By combining databases, analytics platforms and communication networks, law enforcement agencies are able to better prioritize high-risk areas, allocate resources, and make informed decisions on the operations.

In Nigeria, digital technology in policing is still getting momentum especially in large cities like Lagos, Abuja, and Port Harcourt. Traffic surveillance systems, crime map websites, and electronic communication tools are some of the initiatives that have improved communication among the security agencies and response time (Akinola, 2019). Moreover, the digital platforms allow real-time reporting and documenting of incidents thus enhancing transparency and accountability.

Digital technology can also be used toward professionalizing law enforcement. It eliminates chances of manipulation and improves the credibility of the policing organizations by standardization of the procedures and use of digital records (Eze & Ani, 2020). In a world where cybercrime is on the upswing, terrorism is becoming more and more common, and organized criminal gangs increase, the contribution of digital technology to policing is not subsidiary at all, but a key to successful security governance.

2.1.3 Surveillance and Intelligence Gathering

Surveillance is one of the fundamental functions of contemporary policing as it is a scientific process of watching and tracking individuals, groups, or places and identifying and stopping crimes. According to Lyon (2018), surveillance refers to gathering and manipulation of individual information to influence or control behaviour. Surveillance in modern policing refers to the physical as well as the digital aspects.

The methods of physical surveillance are regular patrolling, undercover agents and placement of CCTV cameras at strategic points. Digital surveillance on the other hand is the surveillance of electronic communication like telephone conversations, emails as well as interactions over social media. Urban areas such as Lagos and Abuja have been associated with the augmented use of surveillance technologies in Nigeria such as the city CCTV networks and drone surveillance systems. Such devices come in handy in highly populated neighborhoods where conventional policing arrangements might prove to be inadequate.

Intelligence collection is a supplement of surveillance as it converts raw data into actionable insights. According to Carter (2010), there are three main types of intelligence: human intelligence (HUMINT), which is based on informants and community participation; signals intelligence (SIGINT), which is based on electronic communication; and open-source intelligence (OSINT), based on publicly available information, including media reporting and other sources.

Surveillance and intelligence are in an intrinsic relationship which is synergistic in nature. Surveillance creates data, and then intelligence analysis interprets this data to aid in the making of decisions. As an illustration, a video captured by the CCTV can give a point of identification of the suspect, whereas the intelligence analysis can give patterns, networks, and threats that a person may present. This integration will allow law enforcement agencies to be able to predict and stop crimes.

Intelligence-led strategies have been used in dealing with some security threats in Nigeria such as organized crime and insurgency. Nevertheless, they tend to be ineffective due to insufficient technological infrastructure and lack of coordination between agencies (Alemika, 2013). It is thus important to enhance the relationship between surveillance and intelligence collection to enhance the results of policing.

2.1.4 Digital Technology and Efficiency of Law Enforcement

Application of digital technology in the police has brought a lot of efficiency in the operations of the police in various parts of the world. According to Chan (2001), technology improves the pace, precision, and extent of policing operations such that the agencies are able to assume a proactive approach in preventing crimes. Predictive analytics, GIS mapping, and digital databases are tools that can be used to allocate resources much more strategically and to plan operations in a more effective way (Perry et al., 2013).

These technologies have been related to crime rates and improvement of the security of the people in the developed areas. Nonetheless, in Africa, and especially Nigeria the implementation of digital technology has been biased because of the structural drawbacks, including insufficiency of funds, poor infrastructure, as

well as, a low level of technical skills (Alemika, 2013). In spite of all these, Nigeria has recorded some significant developments in some aspects. An example is the Lagos State, which has set up measures that would improve surveillance and coordination of security agencies. Mobile application, biometric, and drone have enhanced situational awareness and response (Akinola, 2019; Eze and Ani, 2020).
However, the efficiency of these technologies is relative to a number of factors, which include maintenance, training, and cooperation of people. Disadvantages of digital tools can be technical failures, irregular power supply, and lack of capacity building. Also, this might influence the effectiveness of the surveillance systems because it touches on privacy and data protection issues that can diminish the level of trust in the population (Lyon, 2018).

2.1.5 Surveillance, Crime Control and Intelligence Gathering in Policing

The purpose of surveillance is preventive and responsive in controlling crimes. It serves as a preventative measure by making it difficult to commit a crime because the criminal may perceive that he or she could be caught. In their study, Gill and Spriggs (2005) established that the presence of CCTV systems in the United Kingdom led to property crimes and anti-social behaviour. On the same note, Welsh and Farrington (2009) noted that surveillance became the most efficient in conjunction with active monitoring and quick response of police. Surveillance infrastructure in Nigeria has been extended in discussion with security threats especially in large cities. Although such undertakings have shown favourable results, issues like inadequate maintenance and coverage are still present (Aborisade and Fayemi, 2020). The perception of the population is also important, and the issues of privacy and data abuse may influence the adherence to the law enforcement efforts.

The core aspect of policing in the contemporary world is intelligence gathering, which allows undertaking proactive measures and planning. The intelligence cycle, which includes the collection, analysis, dissemination, and implementation, is the aspect that makes sure that the operations are based on evidence and are aimed (Carter, 2010). Nigeria collects intelligence by providing formal and informal intelligence sources, such as security agencies, community informants, and civil society organizations (Alemika, 2013). Digital technologies have improved these processes since there is an opportunity to share data in real-time and use sophisticated methods of the investigation (Eze & Ani, 2020).
Nevertheless, such problems as lack of coordination, corruption and technical inadequacy are still hindering effectiveness. These problems can be solved through institutional reform, building capacity, and enhanced public trust.

2.2 Empirical Review

Empirical research has been consistent in proving the effectiveness of digital technology integration in policing, improving the effectiveness and efficiency of law enforcement and the confidence people place in it. Evidence of this is provided by early research including those by Steven Gill and Angela Spriggs (2005), who showed that Closed-Circuit Television (CCTV) systems play a significant role in deterring and preventing crime. Their results show that surveillance technologies do not only contribute to the detection of the offenders but also enhance the perception of the citizens towards the safety, enhancing the trust of the people in the law enforcement organizations. On the same note, Jerry Ratcliffe (2016) has focused on the success of intelligence-led policing (ILP) when he states that the data-driven initiative can help law enforcement agencies to predict when a crime might happen, allocate the resources strategically, and take proactive measures that would minimize the crime rates.

Outside the Western context, there is now some emerging empirical evidence based on developing nations, including Nigeria, pointing towards the fact that digital tools of crime databases, biometric system, mobile communication tools and surveillance technologies have enhanced the investigative capacity and response time. According to studies conducted by Eze and Ani (2020), or Aborisade and Fayemi (2020), the adoption of such technologies has improved evidence collection, tracking of the suspects, and coordination of the activities of various agencies in the Nigerian policing system. These benefits are however highly limited by the existing infrastructural inefficiencies such as the lack of reliability in supply of electricity, few internet connections, and a lack of technological support. Another vulnerability to the success of the digital policing initiatives is the institutional challenges that undermine the success of the initiative through corruption, limited training, and ineffective policies as implemented.

Notably, the available empirical sources are largely concentrated on such urban hubs as Lagos mainland or Abuja and do not pay sufficient attention to semi-urban areas where social-economic and security processes are distinctly different. Areas like Ikorodu that are characterized by both urban growth and rural settlement models have distinct policing problems which are high population growth rate, informal settlement, and localized criminal networks. In turn, empirical research on the functioning of digital technologies in such hybrid environments is rather scarce. This weakness highlights the necessity of localized researches that reflect the subtle realities of semi-urban policing in Nigeria.

2.3 Theory - Intelligence-Led Policing (ILP) Theory

This work is founded upon the Intelligence-Led Policing (ILP) concept that offers a logical method of crime management by means of the gathering, analyzing, and utilizing of the intelligence data in the decision-making procedures. As it has been stated by Jerry Ratcliffe (2016), ILP transforms policing as an activity into a reactionary system but instead as a proactive and preventive system. It focuses on identifying crime trends, risk analysis, and the application of scarce resources to achieve the maximum need in areas.

The applicability of ILP is especially high within resource-constrained settings, e.g. in Nigeria, where the law enforcement agencies frequently have to work with severe financial and logistical constraints. Focusing on data-driven approaches, ILP makes the available resources more efficiently used, coordination of the operational activities improved, and the targeted actions against the high-risk offenders and crime hotspots promoted. Moreover, the practical application of ILP can be reinforced by integrating data analytics tools, surveillance systems, and communication platforms, which will help to generate information about threats in time and with accuracy.

2.4 Gaps in the Literature

Although more research on digital policing and intelligence-led strategies has emerged, there are still a number of gaps that are critical. To begin with, semi-urban settings have little empirical focus, where the issues of policing are informed by transitional socio-spatial tensions. Second, the available literature tends to follow a nationalized approach, thus failing to consider the differences in the adoption and adoption rates of digital technologies on the local level. This paper has been filling these gaps by specifically dwelling on Ikorodu which is a semi-urban neighborhood that has unique security attributes. The study helps to understand digital policing in Nigeria in a more comprehensive way, and its analysis of the localized effects of digital technologies on the efficiency of law enforcement can add context-sensitive information to policy and practice.

3. Methodology

3.1 Research Design

The research design that is adopted in this study is descriptive survey research design that will help in investigating the role of digital technology in law enforcement in Ikorodu Local Government Area (LGA) in a structured manner. This design has been selected because it is appropriate in gathering the information about the perceptions, attitudes, and experiences of the respondents in a natural environment. Descriptive surveys assist a researcher in describing the existing situation without controlling the variables which gives a true picture of social phenomenon. According to Creswell (2014), this method will assist in organizing the data and its analysis to characterize the patterns and relationships as they arise.

The research is a combination of quantitative and qualitative to provide the holistic picture of the research problem. The quantitative part concentrates on such measures like the degree of technology acceptance and efficiency, whereas the qualitative one examines the issue of challenges in the work, realities in the situation and the knowledge gained. This combination strategy will make the results more robust and comprehensive, especially when it comes to determining the impact of surveillance and intelligence technologies on the effectiveness of law enforcement.

3.2 Population of the Study

The target group is law enforcers, security players and community stakeholders that are working in the Ikorodu LGA of the Lagos State. This involves members of the Nigeria Police Force (NPF), Department of State Services (DSS), the Nigeria Security and Civil Defence Corps (NSCDC) and the individuals of the local vigilante groups. Also included in the population are community residents, market leaders and civil society actors who deal with these security agencies on a regular basis.

Ikorodu offers a good locality to carry out this study because it has a high population with a dynamic security situation. The Lagos State Bureau of Statistics (2023) estimates the population of the area to be more than one million and has a number of police divisions and community policing programs. This variety of actors makes it a proper context to study the intersection of digital technology and law enforcement practice.

3.3 Sample Size and Sampling Technique

Given the size and heterogeneity of the population, the study employs a combination of purposive and stratified random sampling techniques. Purposive sampling is used to select key informants such as divisional police officers, intelligence personnel, and community leaders, based on their expertise and direct involvement in security operations. Stratified random sampling is then applied to ensure that all relevant groups—law enforcement officers, community members, and local security actors—are proportionately represented.

The sample size is determined using Yamane's (1967) formula for finite populations, with a population estimate of 1,000 and a 5% margin of error, yielding approximately 286 respondents. These are distributed as follows: 150 police and security officers, 100 community members and market leaders, and 36 civil society and vigilante representatives. This distribution ensures both representativeness and analytical balance.

3.4 Sources of Data

The research draws on both primary and secondary sources of data. Primary data are collected through structured questionnaires and semi-structured interviews administered to selected respondents in Ikorodu. Secondary data are sourced from scholarly publications, policy documents, government reports, and credible online databases focusing on digital policing, surveillance systems, and intelligence practices in Nigeria.

The combination of these data sources strengthens the validity of the study by allowing for triangulation, as emphasized by Bryman (2016), thereby offering multiple perspectives on the research problem.

3.5 Research Instruments

Two principal instruments are utilized for data collection: a structured questionnaire and a semi-structured interview guide. The questionnaire is designed to capture respondents' views on the use of digital technologies such as CCTV systems, biometric tools, and drones in law enforcement. It includes both closed-ended and Likert-scale questions organized according to the study objectives.

The interview guide, on the other hand, is used to obtain in-depth qualitative insights from selected key informants, including police officers, intelligence analysts, and community leaders. It focuses on operational realities, technological challenges, and innovative practices in digital policing.

3.6 Method of Data Collection

Data collection is conducted in two phases. The first phase involves the administration of questionnaires by the researcher and trained assistants across selected police divisions, markets, and community centers in Ikorodu. Respondents are given sufficient time to complete the questionnaires, which are subsequently retrieved for analysis.

The second phase involves qualitative interviews with approximately 10–15 key informants. Each interview lasts between 30 and 45 minutes and is conducted with the consent of participants, ensuring accurate recording and documentation. Ethical standards, including informed consent and confidentiality, are strictly observed throughout the process.

3.7 Validity and Reliability of Instruments

To ensure validity, the research instruments are subjected to expert review by two scholars in Peace and Security Studies and a senior law enforcement officer with experience in digital policing. Their feedback is incorporated to refine the instruments and enhance their accuracy.

Reliability is assessed using the test–retest method. The questionnaire is administered to 20 respondents in a neighboring LGA, such as Epe, and re-administered after two weeks. The results are analysed using Cronbach's Alpha, with a threshold of 0.70 considered acceptable, in line with Neuman (2011).

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3.8 Method of Data Analysis

The study employs both quantitative and qualitative methods of data analysis. Quantitative data from the questionnaires are coded and analysed using descriptive statistics such as frequencies, percentages, and mean scores. Inferential techniques, including Chi-square tests and correlation analysis, are used to examine relationships between variables, particularly the link between digital technology usage and law enforcement efficiency.

Qualitative data from interviews are analysed using thematic analysis, as proposed by Braun and Clarke (2006). This approach facilitates the identification of recurring patterns, themes, and narratives, thereby complementing the quantitative findings with deeper contextual insights.

3.9 Ethical Considerations

Ethical considerations are central to this study. The research adheres to established ethical principles, including voluntary participation, informed consent, confidentiality, and the right of participants to withdraw at any stage. Participants are fully informed about the purpose and scope of the study, and no identifying information is disclosed in the final report. All data are securely stored and used strictly for academic purposes, in line with the guidelines of Israel and Hay (2006).

4. Findings

This section presents the empirical results of the study using descriptive and inferential statistics. Data collected from 286 respondents were analysed and presented in tables for clarity.

Table 4.1 Demographic Characteristics of Respondents

Category	Frequency (n=286)	Percentage (%)
Police/Security Officers	150	52.4
Community Members/Market Leaders	100	35.0
Civil Society/Vigilante Groups	36	12.6
Total	286	100

The table 4.1 shows that the majority of respondents were police and security personnel (52.4%), followed by community members (35.0%) and civil society/vigilante actors (12.6%). This distribution ensured balanced representation.

Table 4.2 Level of Adoption of Digital Technologies

Digital Technology	Highly Used (%)	Moderately Used (%)	Rarely Used (%)	Mean Score
CCTV Surveillance	38.5	42.0	19.5	3.21
Biometric Systems	41.0	36.4	22.6	3.18
Drones	18.9	29.0	52.1	2.45
Digital Communication Tools	55.2	30.1	14.7	3.60

The results in Table 4.2 indicate that digital communication tools are the most widely used (mean = 3.60), followed by CCTV and biometric systems. Drones are the least utilized technology (mean = 2.45), reflecting limited deployment.

Table 4.3 Perceived Impact of Digital Technology on Law Enforcement Efficiency

Indicator	Agree (%)	Neutral (%)	Disagree (%)	Mean Score
Improved crime detection	68.5	18.2	13.3	3.72
Faster response time	64.7	20.3	15.0	3.61
Enhanced intelligence gathering	70.3	16.1	13.6	3.75
Reduction in crime rates	59.1	25.2	15.7	3.52

The findings in Table 4.3 show strong agreement among respondents that digital technologies enhance law enforcement efficiency, particularly in intelligence gathering (mean = 3.75) and crime detection (mean = 3.72).

Table 4.4 Challenges Affecting the Use of Digital Technologies

Challenge	Strongly Agree (%)	Agree (%)	Disagree (%)	Mean Score
Inadequate funding	48.6	32.2	19.2	3.62
Poor power supply	52.4	30.8	16.8	3.71
Lack of technical expertise	44.1	35.0	20.9	3.58
Poor internet connectivity	50.3	29.7	20.0	3.65
Maintenance issues	46.9	33.6	19.5	3.60

The table 4.4 reveals that poor power supply (mean = 3.71) and inadequate funding (mean = 3.62) are the most significant constraints affecting digital policing.

4.5 Chi-Square Test: Relationship Between Digital Technology Use and Law Enforcement Efficiency

Variable	χ^2 Value	df	p-value	Decision
Technology Use vs Efficiency	18.47	4	0.001	Significant

The Chi-square result ($\chi^2 = 18.47$, $p < 0.05$) indicates a statistically significant relationship between digital technology usage and law enforcement efficiency. This confirms that increased use of digital tools is associated with improved policing outcomes.

4.6 Correlation Analysis

Variables	Correlation Coefficient (r)	Significance (p)
Digital Technology Use & Efficiency	0.62	0.000

The correlation coefficient (r = 0.62) shows a strong positive relationship between digital technology adoption and law enforcement efficiency.

5. Discussion of Findings

The results of the study offer good empirical evidence in the argument that digital technologies are important in improving the performance of law enforcement. The rather high average scores obtained in major indicators, including crime detection, intelligence collection, and response time indicate that the digital tools were viewed as an important part of modern-day policing by a large number of respondents. These findings imply that the combination of such technologies as CCTV surveillance, biometric systems, and digital communication platforms has contributed to the increased efficiency in operations of law enforcement agencies and enhanced the ability to address a security threat.

This conclusion is further supported by other statistical data, especially the Chi-square and correlation tests, which show that there is a significant and positive correlation between the rate of adoption of digital technologies and law enforcement efficiency. This means that the greater the use of the technological tools, the greater the policing outcomes that are measurable. But in spite of these good trends, the results also show a skewed distribution of technological assimilation. The more sophisticated forms of equipment like drones, advanced surveillance systems are not fully used, which means that the access to them, their application, and their performance may vary between units and locations. This disproportional implementation indicates systemic and institutional constraints, which still determine the success of digital policing.

Alongside these discrepancies, the research points at a number of systemic issues that limit the potential of the full use of the digital technology in law enforcement. Among them are insufficient funding, lack of infrastructural support and lack of technical expertise. Lack of dependable power supply and poor internet connection are some of the problems that impede successful implementation and maintenance of digital systems. These issues are enabled by greater developmental limitations in Nigeria where technological innovation can tend to outrun the institutional and infrastructural systems that it needs to be supported. Therefore, the promise of digital policing is not fully fulfilled.

The results also highlight the timeless relevance of human and community elements in the law enforcement. Digital technologies may be effective and relevant in terms of efficiency and the ability to broaden the scope of activities, but they will never be able to take the place of human intelligence, local knowledge, and interaction with the community. Trust, cooperation, and sharing of information between the security agencies and the people they serve are still crucial in ensuring that good policing is in place. This confirms the topicality of the models of community policing, where the importance of partnership and mutual trust as the main pillars of sustainable security is noted.

Additionally, this study findings are aligned with what current literature on digital policing has indicated on the transformative nature of information and communication technologies on contemporary policing. It has been a common agreement among scholars that surveillance and intelligence systems enhance crime prevention, detection and response plans. This theoretical and empirical evidence aligns with the positive relationship in this study in the use of technology and efficiency and therefore supports the value of digital tools as indispensable instruments of policing in modern times.

Nonetheless, there is a risk of equity and inclusiveness in security provision due to concentration of technological resources in some divisions. The imbalanced nature of digital equipment implies that there is an imbalance in the distribution of resources which may cause differences in policing output in various regions. This observation can be seen as an indicator of structural problems at large in the area of security in Nigeria and echoes some of the earlier work that shows that policing is stronger in urban areas than in less-developed or peripheral regions.

Moreover, the paper highlights some crucial ethical issues related to digital policing. Privacy, data protection, and the misuse of surveillance technologies were mentioned as the concerns by the respondents as the result of the lack of the appropriate regulatory framework and the means of accountability. The application of digital technologies can destroy the confidence of the population and the authority of the law enforcement agencies without clear guidelines and control.

Summing up, although digital technologies have been proven to be effective in the context of enhancing the efficiency of law enforcement, their performance depends on facilitating institutional frameworks, equitable allocation of resources, and ethical protection. A middle ground between technological innovation and

community participation and the safeguarding of civil liberties is needed in order to deliver sustainable and inclusive security results.

6. Conclusion

This paper analysed how digital technology has impacted on efficiency in law enforcement in Ikorodu Local Government Area of the Lagos State. This evidence shows that the digital technologies, such as the CCTV, biometric devices, and communications systems have played a key role in enhancing the outcomes of policing, especially in the crime detection, response times, and collection of intelligence. Nevertheless, the paper also indicates that the potential of these technologies is limited by a number of issues, such as insufficient funding, infrastructural shortage, and technical capacity. Moreover, the problem of data privacy and trust in the community is also a huge threat to the sustainability of digital policing programs.

On the whole, the research finds that, although digital technology is a very important resource of contemporary law enforcement, the success of this technology is predetermined by a larger institutional, infrastructural, and socio-cultural environment where it is implemented. The implementation of technology in correlation with community involvement and ethical protection requires a holistic approach to attaining sustainable change in the effectiveness of law enforcement.

7. Recommendations

Due to the results of this paper, a number of recommendations have been suggested in order to reinforce the role of digital technology in making law enforcement efficient in Ikorodu Local Government Area.

To begin with, there is an urgent necessity of more investment into digital infrastructure. Funding should be directed towards acquisition, deployment, and maintenance of modern police technologies by the government and the concerned stakeholders. This involves increasing CCTV surveillance systems, modernizing digital communication systems, maintaining power supply and good internet connectivity. In the absence of these pillars, the usefulness of digital policing tools will be minimal.

Second, technological innovation requires the capacity building so as to amplify the gains. Training programme should be conducted regularly to prepare the law enforcement officers with technical competences to use and administer digital tools. Moreover, this should be supplemented with specialized units comprising of trained experts to supervise the advanced surveillance as well as intelligence systems to ensure professionalism and efficiency in their application.

Third, it is important to enhance community policing. The police departments are advised to enhance closer associations with residents, entrepreneurs, and local watchdogs. Community based intelligence merged with the digital technology will prove highly effective in crime detection and crime prevention. The success of any policing strategy never fails without trust and collaboration between the people and the security agencies.

Moreover, there is a need to establish effective policy and regulatory measures through which use of digital surveillance technologies can be guided. These frameworks ought to deal with data protection, privacy and accountability concerns to curb abuse and protection of the rights of citizens. This will also be achieved by providing clear guidelines to develop confidence in the population on digital policing programs.

The equal sharing of the technological resources is also essential. The modern policing tools should also be availed to all the police divisions in Ikorodu including the underserved regions. This will facilitate equity and security services will not be concentrated in few locations.

Besides that, public awareness and sensitization needs to be carried out to inform the citizens about the advantages and disadvantages of digital policing, and their rights regarding surveillance and privacy of their data. A community with knowledge is most likely to express and aid law enforcement.

Lastly, effective monitoring and evaluation systems must be introduced to constantly review the success of digital policing programs. Periodic reviews will be used to estimate lapses, enhance implementation strategies and accountability. All in all, these recommendations should be implemented to improve the effectiveness, transparency, and sustainability of digital policing, which will help to have a more responsive and secure law enforcement system.

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