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# The Role of Technology in Criminal Investigation in Nigeria: A Case Study of CCTV Cameras in Banks at Imo State

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***ABSTRACT-*** ***Security of lives and properties have remained the fundamental objective of every responsible government since the emergence of every nation state in the world; it is not surprising that there is need to strategize on how to ensure effective security of banks in Nigeria, particularly in Imo state and the southeast region as a whole. There is need for adequate utilization of modern technologies such as Closed Circuit Television (CCTV) cameras as deterrence for crime. This is because of the fact that crime rate is high and criminality, have assumed sophistication in Nigeria. This study has become necessary due to the need for efficient and effective system of crime investigation in Nigeria, especially the Southeast where there is high propensity of violent crimes. Hence, this research: "the role of technology in criminal investigation in Nigeria: a case study of CCTV cameras in banks in Imo state. The researcher having reviewed related literature; will adopt quantitative research methodology and Cross-sectional Survey research design in which questionnaires and structured interview instruments will be used to collect primary data from the targeted population. Krejcie and Morgan, (1970) sample size determination table and formula for population above (100,000) is used to determine the target population among the staff and customers of the selected banks [First Bank (70,000,000 divided by 37= 1,891,000), Zenith Bank (33,000,000 divided by 37=891,891), UBA Bank (45,000,000 divided by 37= 1,216,216) and Fidelity Bank (8,300,000 divide by37=224,324); (Adesola, 2021; Uche, 2023).; UBA Group, 2024; Fidelity, 2024). The sample size for each bank gotten from the above mentioned formula is 55 and the total sample size is 55 x 4=220. Data was collected, presented and analyzed using SPSS 21st version of simple frequency and percentage tables in order to ascertain the research objectives and questions. Findings were made that there is growing awareness of the use of CCTV cameras in the banks and the CCTV cameras aid investigation of crimes committed at the banks in Imo state, Nigeria.***

***Key Words: Technology, Criminal Investigation, CCTV Camera and Bank.***

## I. INTRODUCTION

### 1.1 Background to the Study

The high rate of crime in Nigeria today is no longer news to any one, although it can be blamed on some factors that have been left unchecked for a long time by the government and people of Nigeria. The factors causing increased crime rate include poverty, corruption, unemployment and lack of proper education, which have led to the emergence of dozens of militant groups and terrorists like Boko Haram that have challenged in the most violent form the authority of the Federal and state governments in Nigeria. There is also the growing level of urban crimes including armed robbery, kidnapping, ritual killing, burglary, fraud, cybercrime, human trafficking, drug trafficking, murder, political assassinations, rape, arson, vandalism, arms trafficking, mob action and other social vices. All these have heightened insecurity in Nigeria. According to the Institute of Economics and Peace (IEP) that compiled a Global Peace Index (GPI) for the year 2014 with data collated by the Economist Intelligence Unit (EIU), the GPI is an attempt to measure the relative position of nations' and regions' peacefulness. Factors examined include the levels of violence and crime within the country and external relations such as military expenditure and wars. The GPI ranked 162 countries covering 99.6% of the World's population. Disturbingly, Nigeria ranked 151 out of 162 countries in the year 2014(ISECOM, 2014). In the 17th edition of global peace index of year 2023, Nigeria ranked 144 out of 163 countries globally and 37 out of 44 countries in Africa; while in the 18th edition of year 2024, ranked 147 out of 163 countries (GPI, 2023; GPI, 2024). These are proves that among the committee of nations Nigeria is rated to be one of the most violent countries in the world and regarded as a volatile country to live.

The security forces in Nigeria, especially the Nigerian Police Force are fighting crimes through traditional methods by merely just arresting anyone found at the crime scene for interrogation which is not enough, since in most cases, those who committed the crime may have left the scene long before the police arrive. There is need to adopt technologies that can help in the detection of crimes before or after they are committed in order to ensure easy investigation. In the view of Odili (2013) he posited that, effective policing should be every one's responsibility, the communities, the public, schools etc. should participate. Today technology has made it possible to fight crime with higher precision, greater results, more cost effective strategies and most importantly, in a timely manner. For instance, the celebrated breakthrough in murder case of Cynthia Osokogu in Lagos State, reminds us of efficient crime detection ability exhibited by the Nigeria Police Force in tracking high profile crimes. But there are scores of many unresolved crimes yet to be uncovered by the Nigerian security forces.

In response to the use of technology to fight crime, the Nigerian government during Chief Olusegun Obasanjo's administration introduced the National Identification Project in order to have a national biometric data base for easy identification of individuals in Nigeria. The project did not properly takeoff until the administration of Dr. Goodluck Ebele Jonathan. The Federal government also introduced the Bank Verification Number (BVN) in order to enhance the National Identification Project. Today the BVN is a helping tool for the anti-graft agencies like Economic and Financial Crimes Commission (EFCC), the Independent Corrupt Practices and other related offences Commission (ICPC) and the Police Fraud Unit (PFU) etc. in tracking fraudsters, embezzlement of fund, money laundering acts and cybercrimes (Ifeanyi, 2016).

Odili (2013) further posited that; with a population of over 200 million people, the government cannot manage and control crime without a working national, criminal and biometric database. The biometric data must contain finger prints and DNA data. The Federal Government issued a policy directing communication network service providers to ensure the registration of the identity of their subscribers in their databases which should be forwarded to the National Communications Commission's (NCC) database. This is another step in the right direction to ensure detection of crimes through the Information and Communications Technology (ICT). As a result of this registration Project many criminal activities could be detected through the call, messages and email history of subscribers of various communication networks.

Today in Nigeria, many kidnappers, armed robbers, and other criminals are being detected with the aid of search into their cell phone's call and messages histories. For instance, the arrest of the head of an international criminal syndicate behind thousands of online frauds in a joint operation of INTERPOL and EFCC in Port Harcourt, Rivers state, in June, 2015, through the call history tracking, is a major achievement in this regard(Ifeanyi,2016). Also, Closed Circuit Television (CCTV) Camera is another technology that is being used to detect and prevent crimes in Nigeria. Both the government and the private institutions, especially the banks and wealthy individuals, are exploring the use of CCTV to enhance security. The use of CCTV became prominent in Nigeria when it was instrumental in the detection of perpetrators of armed robbery incident at the Murtala Mohammed International Airport (MMIA) Lagos State in the year 2014, when it was played back on the video wall to a shocked audience comprising senior journalists, senior government officials among others at the Command and Control Centre in Alausa, Lagos State. After some months of painstaking manhunt, the police arrested and paraded the suspects before the public and the media (Olasunkanmi, 2014).

It is on this note that the Central Bank of Nigeria (CBN) has ordered all banks in the country to program their Automated Teller Machines (ATM) in such a way that it would not dispense cash if the user blocks his or her face from the security camera. This is stipulated in the Guidelines on Operation of Electronic Payment Channels in Nigeria, released by the Central Bank of Nigeria. It is stated in the guideline that all ATMs must be fitted with security cameras, in order to detect criminal activities (Chukwudi, 2016).

Every ATM should have cameras that have the capacity to view and record all persons using the machines and every activity at the ATM, including but not limited to: card insertion, transaction selection, cash withdrawal and card taking. However, such cameras should not be able to record

the key strokes of customers using the ATM. Where a surveillance camera is used, it should be kept secret to avoid illegal removal or damage. Where the user of an ATM blocks his face for camera capture, ATM should be capable of aborting the transaction. Also, as part of security measures, the guideline stipulated that ATMs be cited in locations and in a manner that guarantees safety and security of users and confidentiality of their transactions. The guideline on Operation of Electronic Payment Channels also covers the use of point of sale terminals, mobile POS and web transactions. The CBN also issued guidelines on transaction switching in the country (Chukwudi, 2016).

The prevalent security threats in the Southeast of Nigeria today include the following: proliferation of small Arms and light weapons, kidnapping, cultism, assassinations, stealing, armed robbery, car snatching, fraud, adulteration of products, menace of non-state actors/militancy, cattle herders and farmers violent conflicts, drug trafficking, human trafficking and emergence of baby factories. Therefore, intelligence led-policing is required since "good quality" intelligence is the life blood of policing; proactive investigation includes the systematic analysis of records, targeting of suspects movements during planning of criminal activities, their financial dealings associated with other suspected offenders. Although human intelligence sources remain central, new technologies like the CCTV camera is needed, including the interception of communication, planting of listening devices, video surveillance and tracing-tracking devices (Onovo, 2005).

In spite of the efforts so far made to curb crimes in Southeast Nigeria in general and in Imo state in particular, especially with the use of modern technology, crime rate is still on the high side. It is therefore pertinent to study the extent to which the use of CCTV cameras have assisted in fighting crime in banks in Imo state been the center of Southeast Nigeria.

1.2. Statement of the Problem

There is need to strategize on how to ensure effective security at the banks in Imo state and the entire Southeast region of Nigeria. This is because of the high level of crimes committed in the region, especially urban crimes like armed robbery, kidnapping, fraud, cybercrimes, arms trafficking, human trafficking, murder etc. These call for the utilization of modern technologies like the CCTV cameras to aid detection and prevention of crime which will lead to efficiency and accuracy in the investigation of crimes when they occur.

In the past some banks avoid the installation of CCTV cameras because of the cost. Only few commercial banks install it and most times, limited numbers of cameras that may not give adequate coverage of their environment are installed. Banks are expected to go beyond having few cameras that cover only their banking halls and premises. They should have high capacity cameras that can view people from some miles away. The banks are expected to ensure the use of automated teller machines (ATM) that have inbuilt cameras in order to detect criminal activities at the bank like criminals when they are withdrawing or transferring the proceeds of crime and in case of robbery at the ATM point.

1.3. Justification for the Study

This study is necessary due to the need for efficient and effective system of crime investigation in Nigeria, especially in the Southeast region and Imo state in particular. The high rate of violent crimes that are prevalent in the region can only be reduced to the barest minimum if the culprits are always made to face the consequences of their actions within the ambits of the law which will serve as a deterrent to others. This can only be possible when modern technologies like the CCTV cameras are put in strategic public places, especially banks in the region for accurate detection of crimes which will make criminal investigation efficient in order to avoid the victimization of innocent people in crime investigation processes.

In today's world, various crimes are emerging due to the influence of Information Communications Technology (ICT); that made the world to become a global village. The acts or activities of people around the world are echoed to others within minutes through ICT tools, making some of those in other parts of the world wishing to act in the same manner. Nigeria is not left out of this negative impact of globalization, as criminals in the country are also embracing the new trends of committing crimes. Therefore, this research will help to identify how CCTV cameras can make investigation of crimes committed in banks in Imo state, Nigeria easier when the video walls and pictures captured are reviewed.

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It would also, help to discover the level of awareness of the use of CCTV cameras in banks, cases resolved with its aid and how best to deploy the technology for effective and efficient criminal investigation.

1.4. Research Objectives:

The broad objective of the study is to examine the role of technology in criminal investigation in Nigeria: a case study of CCTV cameras in banks in Imo state. The specific objectives of this research are to:

i. Identify the prevalent crimes committed in banks in Imo State, Nigeria.
ii. Evaluate the use of CCTV cameras in investigation of crimes in Imo State, Nigeria.
iii. Examine the level of awareness about the use of CCTV cameras among staff of the banks, customers and the general public.
iv. Identify the limitations to the use of CCTV cameras in banks in Imo state, Nigeria.

1.5. Research Question

From the foregoing, the following questions arise for the purposes of this study:

v. What are the prevalent crimes committed in banks in Imo state?
vi. In what ways have CCTV cameras in banks helped the investigation of crimes committed in the banks in Imo state?
vii. What is the level of awareness about the use of CCTV cameras in banks to enhance investigation in Imo state?
viii. What are the limitations to the use of CCTV cameras in banks in Imo state?

1.6. Research Assumption

This study is based upon the following assumptions:

i. There are crimes committed at banks in Imo state and CCTV cameras can be used to aid the investigation of such crimes.
ii. There are CCTV cameras that can be used to make investigation easy if installed in banks in Imo state.
iii. There is awareness about the use of CCTV cameras in banks in Imo state to enhance investigation of crimes.
iv. There are limitations to the use of CCTV cameras at banks for crime prevention, detection and investigation in Imo state.

1.6. Scope of the Study

The scope of this research is the CCTV technology utilization for the investigation of crimes committed in banks in Imo state from 2014 to 2024, focusing on main branches of First Bank Nig. Plc. United Bank for Africa Plc., Fidelity Bank Plc. and Guaranty Trust Bank Plc. in Imo state.

1.7. Limitations to the Study

A major challenge of the study is that due to the secrecy involved in security matters, it was difficult to collect data from the bank security, staff and other security experts such as the Chief Security Officers (CSOs) of various banks and the Police investigators. But the researcher will rely on the primary data to be collected through the structured questionnaires, crime reports of Nigeria Police Force and other security agencies, various media reports on crimes by print and electronic media concerning crimes in Imo state, Nigeria.

1.8. Operationalization of Concepts

Technology: It is about all innovations in the form of equipment made to aid human activities (example: machines, vehicles, weapons, robotics, electronics etc.).

Criminal Investigation: It means a systematic way of probing or inquiry into a crime incident in order to discover what actually happened.

Bank: It is the financial institution where money is kept and financial transactions are carried out.

Security: This is a situation of peace and safety.

Crime Prevention: This refers to the security operation that is targeted at deterrence. It is meant to ensure that criminals cannot get to their targets and when they eventually do get to the target, they must be apprehended.

2.1 Conceptual Clarification

Investigation: An investigation refers to the process of collecting information in order to reach some goal, for example: a criminal investigation refers to the process of collecting information or evidence about a crime in order to determine if a crime has been committed; identify the perpetrator; apprehend the perpetrator and provide evidence to support a conviction in court (Wilmer, 2010).

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Technology:
In German and other European languages, a distinction exists between technik and technologie that is absent in English, which usually translates both terms as "technology". In the 1930s, "technology" referred not only to the study of the “industrial arts” but to the industrial arts themselves, "technology includes all tools, machines, utensils, weapons, instruments, housing, clothing, communicating and transporting devices and the skills by which we produce and use them. More recently, scholars have borrowed from European philosophers of "technique" to extend the meaning of technology to various forms of instrumental reason (Eric, 2006). Merriam Webster dictionary offers a definition of technology as "the practical application of knowledge especially in a particular area" and "a capability given by the practical application of knowledge". The term refers to high technology or just consumer electronics rather than technology as a whole (Franklin, 2007). The more relevant definition to this study is that of Stiegler (1989) as he defined technology in two ways: as "the pursuit of life by means other than life", and as "organized inorganic matter."

CCTV Camera: Closed-Circuit Television (CCTV), also known as video surveillance, is a technology which entails the use of video cameras to transmit a signal to a specific place, on a limited set of monitors. It differs from broadcast television in that the signal is not openly transmitted, though it may employ point to point (P2P), point to multipoint (P2MP), or mesh wired or wireless links. Though almost all video cameras fit this definition, the term is most often applied to those used for surveillance in areas that may need monitoring such as bars, banks, casinos, schools, hotels, airports, hospitals, restaurants, military installations, convenience stores and other areas where security is needed; “video telephony” is seldom called "CCTV", (Todd, 2012).

Bank: It is the financial institution that is the key driver of the economy. It provides the ‘liquidity’ needed for families and businesses to invest for the future. Banks provide loans and credit means for families to save up before going to college or buying a house. Companies can start hiring immediately to build for future demand and expansion (Kimberly).

Security: According to the Oxford Advance Learners dictionary, security is defined as the activities involved in protecting a country, buildings and individuals against attack, danger etcetera or the Department of a large company or organization that deals with the protection of its buildings, equipment and staff. Also, it defined security to mean protection against the bad that might happen in the future like natural disasters, famine and attacks. Further, the BBC English dictionary defined security as all the precautions that are taken to protect a place and threats to national security. Security is the degree of resistance to, or protection from, harm. It applies to any vulnerable and valuable asset, such as a person, dwelling, community, item, nation, or organization (ISECOM, 2014).

Criminal investigation: This is an applied science that involves the study of facts, used to identify, locate and prove the guilt of an accused criminal. A complete criminal investigation can include searching, interviews, interrogations, evidence collection and preservation and various methods of investigation. Modern-day criminal investigations commonly employ many modern scientific techniques known collectively as forensic science (Charles and Gregory, 1994).

Crime Prevention: Crime prevention refers to the effort to prevent criminal events from occurring in the first place, versus controlling the behaviors of those who have already committed criminal acts (Giles, 2016).

2.2. Literature Review
In the view of Odili, (2013), it is noteworthy that no part of the world has been able to tackle crimes without updated, accurate and timely information; Nigeria with a population of over two hundred million people cannot manage and control crimes without working national, criminal and biometric databases. The biometric must contain fingerprints and Deoxyribonucleic acid (DNA) databases. This means that DNA isolated from blood, hair, skin cells or other genetic evidence left at the scene of crime have helped in apprehending criminals when matched with databases. The days are gone when individuals are identified by just names and photo identity without biometrics. With the biometric and DNA databases, employers can do background checks on prospective job seekers before they are hired. Banks can open accounts for individuals without asking for guarantors since they can query the databases from their computers and get results in

minutes. Nigerian security forces are beginning to explore intelligence gathering enhancement technology. This is because no one can talk of preventing crime without a very efficient intelligence gathering system in place.

Further, new digital technologies as well as an evolving security landscape are forcing the security organizations all over the world including Nigeria to review how they deliver services and what services are appropriate for the future. This is because today's security stakeholders understand there is no "silver-bullet" solution, some forward-thinking forces have embraced operational, technological, organizational and cultural change to help overcome the security challenges of today and prepare for the even greater challenges of tomorrow (Janoowalla, 2016). Today's digital technologies are compressing reaction times and have set the stage for technologies such as social media, mobile and analytics to become game-changing forces for security. While technology alone is not the answer, there is now a growing industry consensus that technology transformation must be part of the overall solution (Julius and Loretta, 2005).

More so, the Nigeria security forces need to continue integrating new technologies into their operations to overcome the security challenges in the country. According to Julius and Loretta (2005); to keep our cities and citizens safe, law enforcement must be armed with the right technology tools as well as the right processes, behaviour and culture to solve or even prevent the toughest crimes at faster rates. The research carried out by 'Accenture', a United Kingdom research group, among citizens of several countries including Nigeria; to understand their views on the greater use of new digital technologies by security forces. It was discovered that many citizens believe the increased use of new digital tools can improve security services and support the adoption of new crime-fighting technologies by security forces (Loretta, 2005; Janoowalla, 2016).

The introduction of surveillance cameras to Stockholm subway stations reduced crime by 25% with 15% at area surrounding the stations where cameras were not used. There is strong anecdotal evidence that CCTV aids in detection and conviction of offenders; indeed UK police forces routinely seek CCTV recordings after crimes. Moreover, CCTV has played a crucial role in tracing the movements of suspects or victims and is widely regarded by antiterrorist officers as a fundamental tool in tracking terrorist suspects. Large-scale CCTV installations have played a key part in the defenses against terrorism since the 1970s. Cameras have also been installed on public transport in the hope of deterring crime and in mobile police surveillance vehicles, often with automatic number plate recognition, and a network of cameras are used to manage London's congestion charging zone (Wilmer, 2010).

CCTV is commonly used for a variety of purposes, including: maintaining perimeter security in medium to high secure areas and installations, observing behavior of incarcerated inmates and potentially dangerous patients in medical facilities, traffic monitoring, overseeing locations that would be hazardous to a human, for example, highly radioactive or toxic industrial environments, building and grounds security and obtaining a visual record of activities in situations where it is necessary to maintain proper security or access controls (for example, in a diamond cutting or sorting operation; in banks, casinos, or airports). CCTV is finding increasing use in law enforcement, for everything from traffic observation (and automated ticketing) to observation of high crime areas or neighborhoods. (Rouse, 2016).

The potential value of public surveillance technology took on new meaning in April, 2013 when investigator identified the two suspects in the Boston Marathon bombing after sifting through video images captured by the cameras. The Boston bombers were apprehended quickly due to surveillance cameras footages. We should have CCTV in public areas because they ensure public safety. Rarely will anyone attempt to harm you when they know their actions are being recorded on camera. The police can identify criminals recorded with cameras. Through CCTV, the police can prevent crimes from happening and quickly solve criminal cases with material evidence (O' Grady, 2011; Tyagi, 2014).

O'Grady,(2011:12) stated that organizations use CCTV to monitor the actions of workers. Every action is recorded as an information block with subtitles that explain the performed operation. This helps to track the actions of workers, especially when they are making critical financial transactions, such as correcting or cancelling of a sale, withdrawing money or altering personal information. Actions

which an employer may wish to monitor could include:

i. Scanning of goods, selection of goods, introduction of price and quantity,
ii. input and output of operators in the system when entering passwords,
iii. deleting operations and modifying existing documents,
iv. implementation of certain operations, such as financial statements or operations with cash,
v. moving goods, revaluation scrapping and counting,
vi. control in the kitchen of fast food restaurants and
vii. changing of settings, reports and other official functions.

Each of the aforementioned operations could be transmitted with a description, allowing detailed monitoring of all actions of the operator. Some systems allow the user to search for a specific event by time of occurrence and text description, and perform statistical evaluation of operator behaviour. This allows the software to predict deviations from the standard workflow and record only anomalous behaviour (O'Grady,2011; Walter and Martin,2009).

2.3. Empirical Review

Ogunleye et al, (2011) in their research title: "A Computer-Based Security Framework for Crime Prevention In Nigeria"; they examined Nigerian government introduction of the use of CCTV cameras in public places and the view of the people about the effectiveness of CCTV as a useful tool of crime prevention in Nigeria. They explored Survey research method with the aid of questionnaire instrument to collect primary data from the respondents. The research findings shows that CCTV is good in detecting and prosecution anyone carrying out crime, it is more easier for crime detection if there is a standby monitoring of the video footage in order to alert security officers covering the area or crime scene and the footage of the CCTV can be used as evidence in court. They recommended for further research into the configuration of CCTV and proper legislation.

The research did not cover the use of CCTV in important institutions such as the banks. It was not specific about the public locations that CCTV can be used for crime prevention. Also, it is more of a public opinion poll about the government introduction of the use of it in public places in Nigeria.

Timilehin, (2022) in his article titled: "The Use of Surveillance Cameras in the Nigeria Business Environment and Legal Implication". He used qualitative research method by descriptive approach to describe the use of closed circuit television (CCTV) cameras utilization by business owners of retail shops, shopping complexes and plazas for deterrence, monitoring of activities, collection and gathering of evidence, record keeping, reduction in chances of theft, improving of employees productivity, prevention of harassment among others. But he pointed out the legal implications on the right of privacy of people and costumers concerning the use of CCTV and its admissibility as evidence in court which is subject to legislative and judicial review.

This is another related study that discusses the use of CCTV in public place for deterrence and aid of investigation but the author focused on the legal liability that might result in the use of the technology. The researcher did not carry out an in-depth study about the New Evidence Act, 2011 section 83 and 84; Laws of the Federation; concern the presentation of electronic evidence in courts of competent jurisdiction. The research paper is an assumption of the author about the legal liability of the use of the technology.

Mansur, (2019) in his research article title: "Closed Circuit Television (CCTV) And Crime Detection In Nigeria: A Conceptual Analysis"; also, reviewed the use of CCTV cameras for crime detection which includes but not limited to provision of surveillance at premises, buildings and public places, deterring people from committing crime. Also, explained some challenges associated with the use of CCTV in Nigeria such as shortage of electricity supply and inadequate expert to effectively manage the devices. Hence, he recommended that the government should procure and install more CCTV across the country and there is need for training and retraining of Nigerian law enforcement personnel on the operation, management and maintenance. The author used qualitative research method by descriptive approach in writing this research paper.

The above reviewed related literature are broad in their scope of research because they did not focus on the use of CCTV in a particular area or institution, instead they are looking at its general use. Their

researches are descriptive review of literatures without collection of primary data from affected respondents through a quantitative research method to discover the true effects and efficiency in the use of CCTV technology for crime prevention, detection and investigation. Hence, this research on the role of technology in criminal investigation in Nigeria: case study of CCTV cameras in banks in Imo state; will explore how CCTV can be used to ensure proper prevention, detection and investigation of crimes in the banks which will throw light on how various institutions both government and non-government organizations can utilize it for security deterrence.

2.4. Review of CCTV Cameras in Types and Capacity

CCTV (closed-circuit television) is a television system in which signals are not publicly transmitted but are monitored, primarily for surveillance and security purposes. CCTV relies on strategic placement of cameras, and observation of the camera's input on monitors somewhere. The cameras communicate with monitors and/or video recorders across private coaxial cables or wireless communication links, they gain the designation "closed-circuit" to indicate that access to their content is limited by design only to those able to see it (Margret, 2016). Older CCTV systems used small, low-resolution black and white monitors with no interactive capabilities. Modern CCTV displays can be color, high-resolution displays and can include the ability to zoom in on an image or track something (or someone) among their features. Talk CCTV allows someone watching it to speak to people within range of the camera's associated speakers (Margret, 2016).

The first CCTV system was installed by Siemens A.G at Test Stand VII in Peenemunde, Germany in 1942, for observing the launch of V-2 rockets. The known German engineers Walter Bruch, Wayne Cox, and Tashara Arnold were responsible for the technological design and installation of the system. In the United States of America the first commercial closed circuit television system became available in 1949, called Vericon. Very little is known about Vericon except it was advertised as not requiring a government permit. Marie Van Brittan Brown invented the home security system. The patent was granted in 1969. Brown's system had a set of 4 peep-holes and a camera that could slide up and down to look through each one. The system included a device that enabled a homeowner to use a television set to view the person at the door and hear the caller's voice, (Todd, 2012).

The earliest video surveillance systems involved constant monitoring because there was no way to record and store information. The development of reel-to-reel media enabled the recording of surveillance footage. These systems required magnetic tapes to be changed manually, which was a time consuming, expensive and unreliable process, with the operator having to manually thread the tape from the tape reel through the recorder onto an empty take-up reel. Due to these shortcomings, video surveillance was not widespread. Video camera recorder (VCR) technology became available in the 1970s, making it easier to record and erase information, and use of video surveillance became more common, in the 1990s, digital multiplexing was developed, allowing several cameras to record at once, as well as time lapse and motion only recording. This increased CCTV technology has been enhanced with a shift toward Internet-based products and systems, and other technological developments (Todd, 2012).

Hence the choice of CCTV as an apparatus for security surveillance in banks will ensure efficiency and reliability in crime detection and investigation. These explain reason for some successes being recorded by the Nigerian security forces in criminal investigation, especially in the southeast region where bank robbery and other urban crimes occur on daily basis.

CCTV Cameras According to Capacities

Video Content Analysis (VCA) is the capability of automatically analyzing video. to detect and determine temporal events not based on a single image. As such, it can be seen as the automated equivalent of the biological visual cortex. A system using VCA can recognize changes in the environment and even identify and compare objects in the database using size, speed, and sometimes colour. (Philip,1997).

VCA analytics can also be used to detect unusual patterns in an environment. The system can be set to detect anomalies in a crowd, for instance a person moving in the opposite direction in airports where passengers are only supposed to walk in one direction out of a plane or in a subway where people are not supposed to exit through the entrances. VCA can track people on a map by calculating their

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position from the images. It is then possible to link many cameras and track a person through an entire building or area. (Philips, 1997).

The picture (a) below show an example of VCA technology:

Fig. 3.1: VCA Technology

Surveillance camera at London Heathrow Airport with a wiper for clear images during rain source: (Wikipedia, 2016).

Facial recognition system: this is a computer application for automatically identifying or verifying a person from a digital image or a video frame from a video source. One of the ways to do this is by comparing selected facial features from the image and a facial database. (Walsh, 2009).

Closed-circuit digital photography (CCDP): Closed-circuit digital photography (CCDP) is more suited for capturing and saving recorded high-resolution photographs, whereas closed-circuit television (CCTV) is more suitable for live-monitoring purposes. However, an important feature of some CCTV systems is the ability to take high resolution images of the camera scene, e.g. on a time lapse or motion-detection basis. Images taken with a digital still camera often have higher resolution than those taken with some video cameras. Increasingly, low-cost high-resolution digital still cameras can also be used for CCTV purposes. Images may be monitored remotely when the computer is connected to a network. (Yesil, 2006).

Internet Protocol Cameras: A growing branch in CCTV is internet protocol cameras (IP cameras). It is estimated that 2014 was the first year that IP cameras outsold analog cameras. IP cameras use the Internet Protocol (IP) used by most Local Area Networks (LANs) to transmit video across data networks in digital form. IP can optionally be transmitted across the public internet, allowing users to view their cameras through any internet connection available through a computer or a phone, this is considered remote access. For professional or public infrastructure security applications, IP video is restricted to within a private network (VPN-Video Private Network), or can be recorded onto a remote server (Mark, 2016).

Wireless security cameras: Many consumers are relying on wireless security cameras for home surveillance. Wireless cameras do not require a video cable for video/audio transmission, simply a cable for power. Wireless cameras are also easy and inexpensive to install. Previous generations of wireless security cameras relied on analog technology; modern wireless cameras use digital technology which delivers crisper audio, sharper video, and a secure and interference-free signal. (Yesil, 2016).

Talking CCTV: In Wiltshire, UK, 2003, a pilot scheme for what is now known as "Talking CCTV" was put into action; allowing operators of CCTV cameras to order offenders to stop what they were doing, ranging from ordering subjects to pick up their rubbish and put it in a bin to ordering groups of vandals to disperse. In 2005 Ray Mallon, the mayor and former senior police officer of Middlesbrough implemented "Talking CCTV" in his area. Other towns have had such cameras installed. In 2007 several of the devices were installed in Bridlington town centre, East Riding of (Mark, 2016).

CCTV, utilizing digital video recorders (DVRs): provides recording for possibly many years, with a variety of quality and performance options and extra features (such as motion detection and email alerts). More recently, decentralized IP cameras, some equipped with megapixel sensors, support recording directly to network attached storage devices, or internal flash for completely standalone operation, (Yesil,2006).

Ten Different Types of CCTV Cameras and Their Purposes

According to Cosmotechph(2014), there are different types of CCTV cameras with different purposes for which they are produced as stated below:

i. Bullet Type Cameras: are designed for capturing images in a fixed area. These cameras are recognized by their thin and cylindrical design. There are also classifications of Ultra Bullet distinguished by their smaller size and cheaper price.

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ii. Dome Camera: named after the shape of their housing are designed for in-store installations. It works in two ways as it is unobtrusive but visible, thus, it warns people that the area is protected by a CCTV network and gives comfort to its clients for its security.
iii. Discreet CCTV: are cameras in disguise, they could look like a fan or any other thing that would not seem suspicious in the area.
iv. Infrared Cameras: are designed for evening lookouts. It captures images with the help of its infrared lighting surrounding its lens.
v. Day and Night Cameras: are used for 24/7 installation, these cameras compensate light conditions with its wide dynamic range to function in glare, direct sunlight, reflections and strong backlight.
vi. Varifocal: Cameras are designed to allow zooming in and out without losing focus on the image.
vii. Network Cameras: allow transmission of images through the internet with controlled bandwidth.
viii. Wireless cameras: are cameras that may or may not be connected to the internet. These cameras use signaling devices to transmit images from camera to viewing area.
ix. PTZ Cameras or pan-tilt-zoom: are cameras that can be moved. There are variations of these cameras that are programmable and are manually controllable. This allows viewers to have more freedom and control on viewing things.
x. High definition cameras: are often used in casinos or high risk establishment with its high resolution lens, capturing images is possible giving viewers a finer detail on taken images.

Recorder

(f)

2.5. Theoretical Framework

This research is analyzed using the rational choice theory propounded by Cornish and Clarke (1985) as they posited that offenders make rational choices and decisions as to who is a suitable target based on the possible gains achievable and the risks to suffer. In viewing crimes according to the opportunities for offenders, Clarke, (2003) concluded with five techniques by which to alter situations in a manner that limits opportunities for offenders. These techniques focus on:

i. Limiting the opportunities for offenders by increasing the effort in carrying out the crime.
ii. Increasing the risk of being apprehended.
iii. Reducing the benefits expected from the desired target.
iv. Removing the possible rationalizations to justify a criminal act.
v. And reducing provocations that tempt or incite offenders.

Applying a cost-benefit analysis to rational decision making about crime, Clarke turned these five categories of altering situations into twenty-five techniques of situational crime prevention that include, but are not limited to, target hardening, controlling access entries, identifying property, and countless other techniques that limit crime opportunities and constrain the decisions of offenders, (Clarke, 2003).

Another aspect of rational choice theory is the fact that many offenders make decisions based on bounded or limited rationality which relates to two aspects of cognitive limitations and extremes in emotional arousal. Therefore, crimes in Nigeria are influenced by opportunity which includes or relate to cost benefits, socioeconomic status, risk of detection, dependent on situation. The opportunities are dependent on the individuals' current surroundings and consequential factors. Clarke,(2003) explained that the theory better analyzed instrumental crimes

rather than expressive crimes. Instrumental crimes involve planning and weighing the risks with a rational mind. Example of instrumental crimes includes: tax evasion, traffic violations, corporate crime, larceny and sexual assault, armed robbery, kidnapping, murder, arson etc. which are typical of crimes prevalent in Southeast, Nigeria.

On the other hand expressive crime includes crimes involving emotion and lack of rational thinking without being concerned about future consequences. Examples can include: non pre-mediated murder such as manslaughter. As a result punishment is only effective in deterring instrumental crime rather than expressive crime (Clarke, 2003).

Assumptions of the Theory

The theory is based on the following assumptions:

i. Offender sees himself as an individual.
ii. The individuals have to maximize their goal.
iii. They are self-interested. That is offenders are always thinking about themselves and how to advance their personal goals
iv. That crime is calculated and deliberate.
v. There is need to eliminate or restrain the opportunity in order to stop the offenders. In this particular assumption, crime prevention is emphasized which technology can be said to be a most relevant system in restraining the opportunity.

The Thrust of Rational Choice Theory

This theory is mainly based on the idea that human being is a rational actor and rationality involves end and means calculations, that people choose behavior either conforming or deviant based on their rational calculations, the central element of calculations involves a cost benefit analysis: pleasure versus pain, choice with all other conditions equal, will be directed towards the maximization of individual pleasure, choice can be controlled through the perception and understanding of the potential pain or punishment that will follow an act judged to be violation of the social good and the social contract, the state is responsible for maintaining order and preserving the common good through a system of laws, the swiftness, severity and certainty of punishment are the key elements in understanding a law's ability to control human behavior.

Criticism of the Theory

Some scholar like O'Grady, (2011) stated three major limitations of the Rational Choice Theory to include:

i. That it assumes that all individuals have the capacity to make rational decision.
ii. That it does not explain why the burden of responsibility is excused from young offenders as opposed to adult offenders.
iii. That the theory does not recognize cognitive inability, for example individuals who lack a rational mind include those with mental disorder.

The use of technology such as CCTV cameras in the banks in Nigeria increases the risk of criminals being apprehended during and after the commission of the crime. This makes the criminal actors to think again before engaging in their criminal acts knowing the consequences that will follow if they are caught. It will also reduce their rationale for carrying out the crime, since they will not succeed in enjoying the proceeds of the crime. This further make it unattractive to the criminals because no man wish to embark on a deadly adventure, this is because they are likely going to get killed by security agents in such criminal operation that is being watched through network of cameras.

## III. METHODOLOGY

The researcher explored the quantitative method to ensure validity and reliability of this study in order to make generalization. These include the design of the study, study population, sampling technique, instruments, method of data collection and method of data analysis.

3.1. Design: The researcher utilized Multi-stage and Cross-Sectional Survey research methods, whereby questionnaire instruments were distributed at a time and used to elicit information from the participants of the targeted population.

3.2. Study Population: The study population is drawn from the customer base of each of the selected bank and divided into 37, states and FCT, Abuja as follows: First Bank (70,000,000 divided by 37= 1,891,000), Zenith Bank (33,000,000 divided by 37=891,891), UBA Bank (45,000,000 divided by 37= 1,216,216) and Fidelity Bank (8,300,000 divide by37=224,324) respectively, making total of

4,223,431;(Adesola, 2021; Uche, 2024; UBA Group, 2024; Fidelity Bank, 2024).

3.3. Target Population, Sampling and Sampling Technique: Multi-Stage Sampling Technique will be used for the study. First the researcher will use Purposive Sampling Technique in arriving at the study area (Imo state) been the central state of the region; aimed at having a general view of the southeast Nigerian population on the role of technology in crime investigation in Nigeria: case study of CCTV cameras in Banks in Imo state. Base on this the following banks were selected for the research because of their large number of customers: First bank Nig. Plc., Zenith Bank, United Bank for Africa (UBA) and Fidelity Bank, Main branches in Imo sate. At second stage the researcher employed simple random sampling technique in which the response of bank customers security officers and staff at Owerri Main Branch of the selected banks are to be sampled as target population for the study as follows: First Bank (70,000,000 divided by 37= 1,891,000), Zenith Bank (33,000,000 divided by 37=891,891), UBA Bank (45,000,000 divided by 37= 1,216,216) and Fidelity Bank (8,300,000 divide by37=224,324) respectively;(Adesola,2021; Uche, eds.; UBAGroup,2024; Fidelity, 2024). Finally, the researcher utilized convenience sampling technique which enabled only people who are at their convenience to participate or respond to the said questionnaire.

3.4. Study Area: Imo state is a state in the southeast region of Nigeria that is bordered by Anambra state to the north, Abia state to the east and Rivers state to the south. It consists of coastal lowlands to the east of the Niger River; an original topical rain forest vegetation and oil-palm bushes. It is one of the most densely populated areas in Nigeria mainly habited by the Igbo people and the state capital is called "Owerri" (Britannica, 2025). The state has an administrative structure of 27 local councils; it lies within latitudes 4*45'N and 7*25'E, it has a total land mass of 5530.49 sq. kilometers and an estimated population of about 4.9 million people who are generally enterprising and hospitable. The state was created in the year 1976 and it was named after Imo River. The state occupies a strategic location as the Heartland of the Eastern region of Nigeria with a Cargo Airport in the capital; Ugwuta Lake for proposed seaport and it is a crude oil producing state (Imo Invest., 2025).

3.5. Sample Size Determination: In other to arrive at the appropriate sample size for this study, the researcher made used of Krejcie and Morgan, (1970) Sample size determination. The total customer number of each bank is divided into 37(states and FCT, Abuja). First Bank (70,000,000 divided by 37= 1,891,000), Zenith Bank (33,000,000 divided by 37=891,891), UBA Bank (45,000,000 divided by 37= 1,216,216) and Fidelity Bank (8,300,000 divide by37=224,324); (Adesola,2021; Uche, eds.; UBAGroup,2024; Fidelity, 2024). Using Krejcie and Morgan sample size determination for population above (100,000) the sample size for each bank is 55 and the total sample size is 55 x 4=220.

3.6. Instruments of Data Collection: Data will be collected using questionnaires and structured interviews. The questionnaire has been developed by the researcher to measure the role of technology in criminal investigation in Nigeria: a case study of CCTV cameras in Banks in Imo state.

3.7. Method of Data Presentation, Interpretation and Analysis: Data will be presented, interpreted and analyzed using simple frequency and percentage distribution of 21st version of Statistical Package for Social Sciences (SPSS). The researcher first ascertained the demographic variables of the participants with clear emphases to sex, age, occupation, bank and educational qualification. Finally, descriptive statistics will be used to ascertain the role of technology in criminal investigation in Nigeria: a case study of CCTV cameras in Banks in Imo state. Using Sample size determination table for known population; aligning with the formula for sample size, for the population of the target population of each bank.

First Bank 70,000,000 divided by 37= 1,891,000 (Adesola, 2021), calculation for sample size determination is stated below:

$$S = \frac{x^2 N P (1 - P)}{d^2 + d (N-1) + x P(1-P)}$$

$$S = \frac{1.96^2 \times 1,891,000 \times 0.5(0.5)}{0.05^2 + 0.05 (1,891,000-1) + 1.96^2 \times 0.5(1-0.5)}$$

$$S = \frac{3.8416 \times 1,891,000 \times 0.05(1-0.5)}{0.525(1,891,000-1) + 3.8416 \times 0.75}$$

$$S = \frac{7,264,465.6 \times 0.75}{99,276.5 + 2.8812}$$

$$S = \frac{5,448,349.2}{99,279.3812}$$

$$S = 54.9$$

$S = \frac{}{55}$

For Zenith Bank Plc., it is 33,000,000 divided by 37=891,891(Uche, Eds.), calculation for sample size determination is stated below:

$$S = \frac{x^2 N P (1 - P)}{d^2 + d (N-1) + x P(1-P)}$$

$$S = \frac{1.96^2 \times 891{,}891 \times 0.5(0.5)}{0.05^2 + 0.05 (891{,}891-1) + 1.96^2 \times 0.5(1-0.5)}$$

$$S = \frac{3.8416 \times 891{,}891 \times 0.75}{0.525(891{,}891-1) + 3.8416 \times 0.75}$$

$$S = \frac{2{,}569{,}716.3492}{46{,}823.2775 + 2.8812}$$

$$S = \frac{2{,}569{,}716.3492}{46{,}826.1587}$$

$S = 54.9$

$S = \underline{55}$

For United Bank For Africa (UBA) Plc., it is 45,000,000 divided by 37=1,216,216 (UBA Group, 2024), calculation for sample size determination is stated below:

$$S = \frac{X^2 N P (1 - P)}{d^2 + d (N-1) + X^2 P(1-P)}$$

$$S = \frac{1.96^2 \times 1{,}216{,}216 \times 0.5 (1-0.5)}{0.05^2 + 0.05 (1{,}216{,}216-1) + 1.96^2 \times 0.5(1-0.5)}$$

$$S = \frac{3.8416 \times 1{,}216{,}216 \times 0.75}{0.525(1{,}216{,}216-1) + 3.8416 \times 0.75}$$

$$S = \frac{3{,}504{,}161.5392}{63{,}853.2212}$$

$S = 54.9$

$S = \underline{55}$

For Fidelity Bank Plc., it is 8,200,000, divided by 37=224,324 (Fidelity Bank, 2024), calculation for sample size determination is stated below:

$$S = \frac{X^2 N P (1 - P)}{d^2 + d (N-1) + X^2 P(1-P)}$$

$$S = \frac{1.96^2 \times 224{,}324 \times 0.5 (1-0.5)}{0.05^2 + 0.05 (224{,}324-1) + 1.96^2 \times 0.5(1-0.5)}$$

$$S = \frac{3.8416 \times 224{,}324 \times 0.75}{0.525(224{,}324) + 3.8416 \times 0.75}$$

$$S = \frac{646{,}322.3088}{11{,}776.01 + 2.8812}$$

$$S = \frac{646{,}322.3088}{11{,}778.8912}$$

$S = 54.9$

$S = \underline{55}$

In this research; questionnaire and structured interview was conducted to collect data in which the structured interview was conducted featuring the police officers guiding the banks, Chief Security Officers (CSOs) and the operation managers of the selected banks in Imo state. This is because they are more conversant with operational use of CCTV system and how it is deployed during investigation. The data collected will be tabulated and frequency distribution used in making inferences.

## IV. PRESENTATION AND ANALYSIS OF DATA

This is the presentation and discussion of the result of this study under the following sub-headings:

1. Presentation of demographic information of respondents
2. Analysis of research questions

### 4.1 Analyses of Respondents' Demographic Data

220 copies of the questionnaire were administered while 200 copies were retrieved which make 90.91% of the sample size, with all being good and used for analysis, 20(9.09%) respondents failed to respond to the questionnaire. The data were processed and analyzed using the Statistical Package for Social Sciences (SPSS), 21st version. The results are presented below.

Table 4.1.1: Distribution by Gender

| Gender | Frequency | Percentage (%) |
|---|---|---|
| Male | 120 | 60.0 |
| Female | 80 | 40.0 |
| Total | 200 | 100.0 |

Source: Field Survey, 2025

The table above shows that majority of respondents are male 120(60%), while females constitute80 (40%). This indicates a male-dominated sample in the study population. 120, 60%>80,40%.

Table 4.1.2: Distribution by Age

| Age Group | Frequency | Percentage (%) |
|---|---|---|
| 21–35 years | 59 | 29.5 |
| 36 years & above | 141 | 70.5 |
| Total | 200 | 100.0 |

Source: Field Survey, 2025

Most respondents 141(70.5%) are 36 years and above, suggesting the participants are relatively mature and experienced individuals. The result reveals that 141 representing 70.5% of the total sample; which constituted the vast majority were aged 36years and above while 59 (29.5%) were

between 21-35years age bracket. CCTV has become more and more common in our everyday lives because it is a highly effective tool for safety and in the fight against crime. It is employed by prisons, banks, urban police forces, corporations, various other organizations and individuals. 141, 70.5%>59,29.5%.

4.1.3: Distribution of respondents by Occupation

Table 4.1.3: Distribution by Occupation

| Occupation | Frequency | Percentage (%) |
|---|---|---|
| Artisans | 20 | 10.0 |
| Business Men/Women | 30 | 15.0 |
| Security Operatives | 50 | 25.0 |
| Public Servants | 60 | 30.0 |
| Bankers | 40 | 20.0 |
| Total | 200 | 100.0 |

Source: Field Survey, 2025

Table 4.1.3 above shows the distribution of the participants by occupation. Public servants are 60 (30%) and security operatives 50 (25%) dominate the sample, followed by bankers 40 (20%), then Business Men/Women 30 (15%) and lastly artisans 20 (10%). This distribution reflects a workforce-oriented population. 60, 30%>50, 25%>40,20%>30,15%>20, 10%.

This implies that various categories of individuals were engaged as respondents in order to evaluate the level of awareness of the use of CCTV system to prevent, detect and investigate crime.

Table 4.1.4: Distribution by Designation

| Designation | Frequency | Percentage (%) |
|---|---|---|
| Security Officer | 40 | 20.0 |
| Business Men/Women | 30 | 15.0 |
| Chief Security Officer | 10 | 5.0 |
| Managers | 10 | 5.0 |
| Bank Staff | 30 | 15.0 |
| Senior Public Servants | 20 | 10.0 |
| Artisans | 20 | 10.0 |
| Junior Public Servants | 40 | 20.0 |
| Total | 200 | 100.0 |

Source: Field Survey, 2025

Table 4.1.4 above represents the distribution of the participants by designation. Security-related roles (Security Officers + Chief Security Officers = 25%) and Junior Public Servants (20%) are strongly represented, showing a balanced occupational combination.

The result in reveals that, out of 200 respondents who responded to the questions, 40 respondents representing (20%) of the total sample were Security Officers and Junior Public Servants, 30 (15%) of the respondents were Bank Staff, Artisans were 20(10%), Business men and women and Chief Security officers/Managers were 10(5%), Senior Public Servants were 20(10%) among the retrieved questionnaires. 40, 20%>30,15%>20, 10%>10,5%.

Table 4.1.5: Distribution by Bank

| Bank | Frequency | Percentage (%) |
|---|---|---|
| Zenith Bank Plc. | 45 | 22.5 |
| UBA Plc. | 50 | 25.0 |
| GTBank Plc. | 48 | 24.0 |
| Fidelity Bank Plc. | 57 | 28.5 |
| Total | 200 | 100.0 |

Source: Field Survey, 2025

Fidelity Bank has the highest respondents at 57(28.5%), while Zenith Bank has the lowest 45(22.5%). This indicates an even spread of respondents across major Nigerian banks. Distribution of respondents across the targeted banks in Imo state shows that: 50(25%) of the respondents were from the United Bank for Africa Plc. Customers and staff, 45(22.5%) were Zenith Bank Customers and staff. Also, 48 respondents that represent (24%) of the respondents were Guaranty Trust Bank Plc. Customers and staff while 57(28.5) of the respondents were Fidelity Bank Customers and Staff. 57, 28.5%>50, 25%>48>, 24%>45, 22.5%.

Table 4.1.6: Distribution by Academic Qualification

| Qualification | Frequency | Percentage (%) |
|---|---|---|
| SSCE | 40 | 20.0 |
| ND | 20 | 10.0 |
| HND | 30 | 15.0 |
| B.Sc | 60 | 30.0 |
| M.Sc | 35 | 17.5 |
| Ph.D | 10 | 5.0 |
| None | 5 | 2.5 |
| Total | 200 | 100.0 |

Source: Field Survey, 2025

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Table 4.1.6 reveals that most of respondents are holders of B.Sc degrees 60 (30%), followed by SSCE 40(20%) and M.Sc 35(17.5%). This indicates that the respondents are generally well educated.40 representing (20%) of the total sample had SSCE Certificate, 20(10%) were holders of ND Certificate, 30(15%) are respondents with HND, 60(30%) and 35(17.5%) had B.Sc. and M.Sc. respectively, holders of Doctor of Philosophy – PhD were 10 (5) of the respondents while 5(2.5%) of the sample size possesses no academic qualifications. 60, 30%>40, 20%>35, 17.5%>10, 5%>5, 2.5%.

## 4.2. SPECIFIC ISSUES / SECTION B

Table 4.2.1: Respondents' Understanding of "Criminal Investigation" (n = 200)

| Response | Frequency | Percentage (%) |
|---|---|---|
| Act of investigating criminal cases | 50 | 25.0 |
| Unraveling the truth of any case relating to criminal acts | 40 | 20.0 |
| Process of identifying the guilt of an accused | 20 | 10.0 |
| Act of enquiry | 20 | 10.0 |
| Process of identifying offender for prosecution | 20 | 10.0 |
| Finding out what took place in a matter | 13 | 6.5 |
| Digging deep | 10 | 5.0 |
| Review of activities surrounding a crime | 10 | 5.0 |
| Fishing out the perpetrator | 10 | 5.0 |
| Use of CCTV camera to detect crime | 7 | 3.5 |
| Total | 200 | 100.0 |

Source: Field Survey, 2025.

The table above reveals that the most common perception of criminal investigation is that it is the *act of investigating criminal cases*50(25%), followed closely by *unraveling the truth of case related to criminal acts*40(20%). Together, these two categories make up nearly half of all responses, showing that respondents largely view investigation as a core process of inquiry and fact-finding. Another 20(10%) of responses emphasize investigation as a tool for legal attribution and prosecution (identifying guilt, identifying offenders, and conducting enquiries). This reflects recognition that investigations are not only about gathering facts but also about linking evidence to legal accountability.

Meanwhile, fewer respondents associated criminal investigation with event reconstruction 13(6.5%), general probing ('digging deep') 10(5%), or specific tactics such as CCTV surveillance 7(3.5%). These findings suggest that while some respondents see investigation in terms of methods or tools, the majority conceptualize it as a purpose-driven process aimed at uncovering truth and supporting prosecution. 50, 25%>40, 20%>20, 10%>10,5%>7, 3.5.

Table 4.2.2: Understanding of "Closed Circuit Television Camera (CCTV)"

| Response | Frequency | Percentage (%) |
|---|---|---|
| Surveillance cameras used for monitoring human activities | 80 | 40.0 |
| Operation and investigation camera for crime detection | 30 | 15.0 |
| It records actual event both present and past | 10 | 5.0 |
| Security tool used to capture events at scene of crime | 15 | 7.5 |
| Use of video camera to transmit signal to a specific place | 20 | 10.0 |
| System of cameras for monitoring environment | 35 | 17.5 |
| Aids potential value of public surveillance technology | 10 | 5.0 |
| Total | 200 | 100.0 |

Source: Field Survey, 2025

Interpretation:
Result presented on table 4.2.2 above revealed that, 80 (40%) respondents viewed CCTV surveillance cameras for monitoring human activities, while 35 (17.5%) described it as a system for monitoring environments. A smaller share 30 (15%) see it as a crime detection tool, 20(10%) refers to it as the use of video camera to transmit signal to a specific place Very few respondents; 15(7.5%) described it as

security tool used to capture events at scene of crime 10(5%) perceive it mainly as a public surveillance technology and 10(5%) see it as tool that records actual event both present and past This implies that, The majority of the respondents largely understood CCTV in terms of its monitoring and surveillance functions rather than as a technical device 80,40%>35,17.5>30,15%>20,10%>15,7.5%>10,5% >10,5%.

Table 4.2.3: Prevalent Crimes in Banks (n=200)

| Crime Type | Frequency | Percentage (%) |
|---|---|---|
| Armed robbery | 115 | 57.5 |
| Stealing | 40 | 20.0 |
| Assault | 20 | 10.0 |
| Malicious damage | 15 | 7.5 |
| Burglary | 10 | 5.0 |
| Total | 200 | 100.0 |

Source: Field Survey, 2025

Interpretation:
Table 4.2.3, presents the prevalent crimes in banks in which Armed robbery 115(57.5%) is the most prevalent crime in banks, followed by stealing 40(20%). Violent and property-related crimes such as assault 20(10%), malicious damage 15(7.5%), and burglary 10(5%); are less frequent. 115, 57.5%>40, 20%>20, 10%>15, 7.5%>10, 5%.

Table 4.2.4: Frequency of Crimes Committed (n=200)

| Response | Frequency | Percentage (%) |
|---|---|---|
| Rarely | 51 | 25.5 |
| Sometimes | 149 | 74.5 |
| Total | 200 | 100.0 |

Source: Field Survey, 2025

Interpretation:
Table 4.2.4 presents the frequency of crimes committed in which most respondents 149(74.5%) reported that crimes occur sometimes, while only 51(25.5%) accept they occur rarely. This indicates that bank-related crimes, though not daily, are fairly common and recurring in the study area. 149, 74.5%>51, 25.5%.

Table 4.2.5: Severity of Crimes (n=200)

| Response | Frequency | Percentage (%) |
|---|---|---|
| Fatal | 40 | 20.0 |
| Loss of properties | 10 | 5.0 |
| Damage of properties | 20 | 10.0 |
| Loss of huge cash | 121 | 60.5 |
| All of the above | 9 | 4.5 |
| Total | 200 | 100.0 |

Source: Field Survey, 2025

Interpretation:
The most severe outcome of bank crimes is loss of huge cash 121(60.5%), followed by fatalities 40(20%), damage to properties 20(10%), loss of properties 10(5%) and all of the options 9(4.5%). 121,60.5%>40,20%>20,10%>10,5%>9,4.5%.

Table 4.2.6: Contribution of CCTV to Crime Investigation (n=200)

| Response | Frequency | Percentage (%) |
|---|---|---|
| Detection of ATM frauds | 15 | 7.5 |
| Cases of handset theft | 10 | 5.0 |
| Aids criminal analysis | 10 | 5.0 |
| Monitor movement inside/outside bank | 90 | 45.0 |
| Recovery of lost phones | 9 | 4.5 |
| It makes investigation faster | 20 | 10.0 |
| Helped reveal major lapses | 20 | 10.0 |
| Determine culpability of an offender | 16 | 8.0 |
| Aids public surveillance | 10 | 5.0 |
| Total | 200 | 100.0 |

Source: Field Survey, 2025

Interpretation:
The greatest contribution of CCTV is monitoring movements inside and outside the bank 90(45%), followed by, aiding faster investigation and exposing major lapses (10% each). Other uses like to determine culpability of an offender 16(8%), detecting ATM fraud 15(7.5%) and handset theft

10(5%) are relatively less recognized; 90,45%>20,10%>16,8%>15,7.5%>10,5%.

Table 4.2.8: Public Awareness that CCTV in Banks Aids Crime Investigation

| Responses | Frequency (n) | Percent (%) |
|---|---|---|
| Yes | 130 | 65.0 |
| No | 70 | 35.0 |
| Total | 200 | 100.0 |

Source: Field Survey, 2025.

Interpretation:
A substantial majority 130(65.0%) acknowledge that CCTV aids crime investigation in banks, indicating widespread awareness of CCTV's investigative value among respondents. This is presented in Table 4.2.8 which revealed that 130(65%) of the respondents to the questionnaire agree that CCTV in banks aid investigation of crime while 70(35%) disagreed. 130, 65%>70, 35%.

Table 4.2.9: Reported Reactions to CCTV Use in Banks

| Responses | Frequency (n) | Percent (%) |
|---|---|---|
| Victims demand CCTV footage ('footprint') | 20 | 10.0 |
| Victims feel helpless without CCTV | 10 | 5.0 |
| Calls for adequate security in banks | 10 | 5.0 |
| Appreciation for technological solutions like CCTV | 10 | 5.0 |
| Customers become more self-conscious of their activities | 25 | 12.5 |
| Increased customer confidence | 110 | 55.0 |
| Helps maintain dignity and respect | 10 | 5.0 |
| Belief that CCTV does not solve anything | 5 | 2.5 |
| Total | 200 | 100.0 |

Source: Field Survey, 2025.

Interpretation:
The dominant reported effect is increased customer confidence (55.0%), followed by heightened self-awareness (12.5%). Collectively, these findings suggest CCTV not only supports investigations but also shapes customer behaviour and perceptions of safety within banking environments. The table 4.2.9 presents that most of the respondents agree that CCTV in banks aid investigation of crime with the following reactions: victims demand for the footprint 20(10%), victims feel helpless without CCTV camera and people appreciate technological inventions like CCTV camera 10(5%), It makes customers to be conscious of their activities 25(12.5%), increased confidence in bank customers 110(55%) and it also help people to maintain their dignity and respect 10(5%) while 5(2.5%) said it do not solve anything. This shows that the knowledge of the use of CCTV and its effectiveness in capturing offenders is gradually spreading among the public in Nigeria; 110, 55%>20, 10%>10, 5%>5, 2.5%.

Table 4.2.10: Limitations to CCTV Use in Banks (Ranked)

| Responses | Frequency (n) | Percent (%) |
|---|---|---|
| Lack of steady electricity supply | 70 | 35.0 |
| High cost of sophisticated CCTV cameras | 50 | 25.0 |
| Vandalism by criminals | 30 | 15.0 |
| Camera capacity (range/clarity) limitations | 30 | 15.0 |
| Shortage of skilled operators | 15 | 7.5 |
| Adverse weather conditions | 5 | 2.5 |
| Total | 200 | 100.0 |

Source: Field Survey, 2025.

Interpretation:
This reflects the frequencies in which Power unreliability 70(35%) and the cost of the CCTV cameras 50(25%) are the primary constraints, with vandalism and technical range/clarity limitations 30(each15%) also notable. Addressing energy reliability, capital costs, and tamper-resistant installations should be prioritized to sustain effective CCTV operations. The Table 4.2.10 presents possible limitations to the use of CCTV cameras in banks in Imo state. The result shows that vandalism ranked first with 30(15%) responses, lack of steady electricity supply 70(35%) ranked second, followed

by the cost of sophisticated CCTV cameras is high 50(25%), capacity of the cameras in length of sight and clarity 30(15%), lack of professionals to operate the cameras 15(7.5%) while the least in the ranking order is weather conditions 5(2.5%); 70, 35%>50, 25%>30, 15%>15, 7.5%>5, 2.5%.

Table 4.2.11: Number of CCTV Cameras by Location

Banking Halls

| Number of Cameras | Frequency (n) | Percent (%) |
|---|---|---|
| 1–3 | 20 | 10.0 |
| 4–6 | 30 | 15.0 |
| 7–9 | 70 | 35.0 |
| 10 and above | 80 | 40.0 |
| Total | 200 | 100.0 |

Banking Premises

| Number of Cameras | Frequency (n) | Percent (%) |
|---|---|---|
| 1–3 | 20 | 10.0 |
| 4–6 | 30 | 15.0 |
| 7–9 | 70 | 35.0 |
| 10 and above | 80 | 40.0 |
| Total | 200 | 100.0 |

Automated Teller Machine (ATM) Points

| Number of Cameras | Frequency (n) | Percent (%) |
|---|---|---|
| 1–3 | 20 | 10.0 |
| 4–6 | 110 | 55.0 |
| 7–9 | 40 | 20.0 |
| 10 and above | 30 | 15.0 |
| Total | 200 | 100.0 |

Source: Field Survey, 2025.

Interpretation:

Across banking halls and premises, the modal category is “10 and above” (40%), signaling dense coverage in core areas. At ATM points, most banks deploy 4–6 cameras 110(55%), suggesting targeted surveillance where cash transactions and customer exposure are highest. The table 4.2.11 revealed that 20(10%) reported banking halls were monitored using 1-3 CCTV cameras, 30(15%) indicated 4-6 CCTV cameras, 70(35%) 7-9 CCTV cameras while 80(40%) indicated 10 CCTV cameras and above. Regarding the number of CCTV cameras in the banking premises, 20(10%) indicated 1-3 cameras for the premises, 30(15%) indicated 4-6 cameras, 70(35%) reported 7-9 and 80(40%) accepted 10 and above cameras respectively. The responses further shows that 20(10%) of those that responded to the questionnaire relating to number of CCTV cameras in the Automated teller machine points reported 1-3 CCTV cameras, 110(55%) indicated 4-6 cameras, 40(20%) indicated 7-9 cameras while 30(15%) accepted 10 cameras and above for the ATM machines points. This implies that, there is need for sufficient number of cameras to ensure adequate surveillance coverage of the banks; 110,55%>80,40%>70,35%>40, 20%>30,15%.

Table 4.2.12: Should Cameras Be Hidden or Exposed?

| Responses | Frequency (n) | Percent (%) |
|---|---|---|
| Hidden | 48 | 24.0 |
| Exposed | 152 | 76.0 |
| Total | 200 | 100.0 |

Source: Field Survey, 2025.

Interpretation:

Most respondents accepted that exposed cameras is better 152(76.0%), likely to enhance deterrence and perceived security. However, a sizable minority 48(24.0%) support concealed camera placement that is useful for minimizing tampering and capturing undistorted behaviour. The table 4.2.12, further showed that out of the 200 respondents that responded to the questionnaires, 48(24%) affirmed that the CCTV cameras were hidden while

158(65.9%) agreed that the CCTV cameras were exposed; 158, 65.9%>48, 24%.

Table 4.2.13: Reported Camera Type/Model in Use

| Responses | Frequency (n) | Percent (%) |
|---|---|---|
| No idea | 60 | 30.0 |
| Internet Protocol (IP) camera | 100 | 50.0 |
| Digital Video Recording (DVR) camera | 40 | 20.0 |
| Total | 200 | 100.0 |

Source: Field Survey, 2025.

Interpretation:
Half of respondents identify IP cameras 100(50.0%), consistent with contemporary, networked deployments; yet 30.0% are unsure, indicating a knowledge gap that may limit informed stakeholder engagement and maintenance. This table 4.2.13 revealed that majority of the respondents; 60(30%) did not know the model of the cameras installed in the banks, 100(50%) reported Internet protocol camera while 40(20%) reported Digital Video recording camera; 100, 50%>60, 30%>40, 20%.

Table 4.2.14: Reasons for Choosing the Camera Type/Model

| Responses | Frequency (n) | Percent (%) |
|---|---|---|
| Best available technology | 60 | 30.0 |
| Good coverage/clarity | 70 | 35.0 |
| Works reliably | 30 | 15.0 |
| Versatile | 40 | 20.0 |
| Total | 200 | 100.0 |

Source: Field Survey, 2025.

Interpretation:
Image performance in terms of coverage/clarity 70(35%) and overall technological merit 60(30%) dominate selection criteria, followed by versatility 40(20.0%) and reliability 30(15%). Procurement decisions appear aligned with operational quality and usability; 70, 35%>60, 30%>30, 15%.

Table 4.2.15: Cooperation Between Bank Officials and Security Agencies on CCTV Data Sharing

| Responses | Frequency (n) | Percent (%) |
|---|---|---|
| Very cordial | 42 | 21.0 |
| Ok (adequate) | 38 | 19.0 |
| Robust | 70 | 35.0 |
| Highly cooperative | 26 | 13.0 |
| Very impressive | 24 | 12.0 |
| Total | 200 | 100.0 |

Source: Field Survey, 2025.

Interpretation:
While over one-third rate cooperation as robust 70(35%), fewer characterize it as “very impressive” 24(12.0%). This distribution suggests collaboration is functional but has room to improve towards consistently high-trust, high-efficiency information sharing. The table 4.2.15 showed that responses on the existing level of cooperation between bank officials and security agents in sharing information recorded by CCTV cameras gave the following acceptance: very cordial 42(21%), ok 38(19%), robust70(35%), highly cooperative 26(13%) while 24(12%) very impressive; 70, 35%>42, 21%>38,19%>26,13%>24, 12%.

Table 4.2.16: Acceptance of CCTV as an Accurate, Efficient and Effective Investigative Tool

| Responses | Frequency (n) | Percent (%) |
|---|---|---|
| Yes | 175 | 87.5 |
| No | 25 | 12.5 |
| Total | 200 | 100.0 |

Source: Field Survey, 2025.

Interpretation:
Acceptance is overwhelmingly high 175(87.5%), reinforcing CCTV’s perceived utility for accurate, efficient and effective crime investigation in banking system. This table 4.2.16 revealed that 175(87.5%) of the total sample agreed on acceptability of CCTV cameras as desirable for accurate, efficient and effective tool for crime investigation in the banks while 25(12.5%) disagreed; 175, 87.5%>25, 12.5%.

4.3 Interview Questions and Responses of Security Experts

4.3.1 Question 1: What do you understand by the phrase criminal investigation?

Respondent A who is a Chief security Officer (CSO) said that criminal investigation is the probe of a crime in order to get evidence that would help to identify the offender(s) for prosecution. Another respondent B who is a senior police officer (SPO) defined criminal investigation as the art and science of unraveling how, who, when and why a crime was

committed in order to ensure justice. Respondent C; an officer of the Department of State Security (DSS) said it is about digging deep to resolve a crime in order to apprehend the offenders.

4.3.2 Question2: What do you understand as Closed Circuit Television Camera (CCTV)?
Respondent A defined it as an electronic garget used to observe an area in order to know the activities of people. The respondent B described CCTV camera as a video surveillance camera that can record and store activities in the environment which is used to observe facilities or targets so that intruders can be detected.

4.3.3 Question 3: What are crimes prevalent in Banks in Southeast, Nigeria?
Respondent A stated that armed robbery and stealing are the major crimes committed in the banks because sometimes armed robbers strike, shooting at the bank premises, collect money from either costumers or from the bank vault and sometimes people steal phones, cash or any removable property in the banks but CCTV cameras help most time to detect the offender when the video is reviewed. Secondly, respondent B explained that armed robbery, stealing and burglary are more committed at the banks in the region because armed robbers attack banks, people including bankers themselves steal various properties that are removable from banks and sometimes thieves brake into the bank premises and the banking hall in the night if they notice that security operatives are not at alert. Respondent C assert that every crime any person can think of; can be committed in the banks because people come to the banks with various motives. To the extent that some rape women in the toilet of a bank since security attention is mainly focused on the money transaction that is always going on in the bank. Some kidnap their victim from bank premises, killings are more occurring at banks either as a result of armed robbery attack or targeted assassination.

4.3.4 Question 4: How frequently are the crimes committed?
Respondent A asserted that it happens 'often' while the respondent B stated that the crimes occur sometimes. Thirdly, respondent C also claim it happens sometimes

4.3.5 Question 5: What is the severity of damages caused by this crimes ?
It was accepted by respondent A who said it used to be fatal because most armed robbery incidents do involve loss of lives. Respondent B explained that the severity is holistic because when crime is committed in banks valuables are lost and sometimes human lives are lost.

4.3.6 Question 6: What ways have CCTV Cameras help investigation of crime in your State?
The respondent A said that in the bank where she works CCTV camera help them to detect how a youth corps member stole the phone of a customer care staff of the bank. Second respondent narrated how CCTV camera displayed the video of armed robbers who robbed a commercial bank at Owerri, Imo state which helped the police in apprehending the armed robbers. Third respondent C stated that due to the awareness of many people about the capacity of CCTV in banks to detect their activities, they are more careful when they are in the banks which helps to limit them from committing crimes in banks.

4.3.7 Question 7: people of the state, are they aware of CCTV cameras in banks: (Yes) or (No)?
Respondent A answered 'Yes', respondent B said 'No' but respondent C answered 'Yes'.

4.3.8 Question 8: Choose the options below that suggest possible limitations to the use of CCTV cameras in banks in your state of residence:
i. Capacity of the cameras in length of sight.
ii. The cost of sophisticated CCTV cameras is high.
iii. Lack of professionals to operate the cameras.
iv. Lack of steady electricity supply.
v. Weather conditions.
vi. Vandalization by criminals.
vii. Record capacity of the CCTV cameras.
viii. Others: (specify)……?

Respondent A stated that all the options can be limitation if not properly managed. Respondent B said that options: i. iv. & vi., are the major limitations. While respondent C chose option vi.(vandalism) and specify that most of the criminals who are aware of the CCTV cameras always cover their faces with mask and other various disguise means to avoid recognition of their identity.

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4.3.9. Question9: How many CCTV cameras does your organization use to monitor the following sections of the bank:

i. Banking hall?
ii. The bank premises?
iii. Automated teller machine points?

Respondent A explained that it depends on the size of the bank building and its premises but the banking hall takes at least six(6) cameras, the premises about four(4) and the ATM points is one(1) for each machine. Second respondent B stated that it is about eight (8) cameras for the banking hall, about six (6) for the premises which are distributed at each corner of the bank building and others to focus on some equipment like the power plant and car park. While each ATM should have one (1) in-built camera plus two (2) CCTV cameras strategically fixed at the ATM points. Respondent C said it is 4 cameras within that banking hall and 4 cameras outside the banking hall.

4.3.10. Question10: Are the cameras hidden or exposed?

First respondent A said that the cameras are always exposed except the one on the ATM which are in-built. Second respondent B stated that the cameras are exposed except the type called 'dome cameras' which are made to look like electric bulbs or adopters so that people will not know it is a camera. Third respondent C, claimed that the cameras are exposed.

4.3.11. Question11: What type or model of CCTV cameras your organization is using and why?

Respondent A explained that it is not the matter of type or model that, what matters is how clear the camera can capture the picture of things around. That the type they are using is called 'Virony CCTV Cameras'. The respondent B stated that the various cameras model exist like Panasonic, Sony, Virony, and Samsung but it is good to purchase camera with quality Lens. The respondent C, explained that CCTV with digital recording system is the best.

4.3.12 Question12: What is the existing level of cooperation between bank officials and security agents in sharing information recorded by CCTV Cameras?

The first respondent A state that the cooperation is fifty-fifty (50/50) which means that it depends on situations and circumstances, that further means that it is not all the information that are made available to the security agents except those that relate to the crime under investigation. Second respondent B explained that information is given to security agents on request through proper legal means like providing a 'court order' to that effect. Third respondent C, said the cooperation is robust.

4.3.13 Question13: Do you accept the use of CCTV Camera as desirable for accurate, efficient and effective tool for crime investigation?

The respondent A said yes; it is a very effective tool to assist investigation of crime. The second respondent B also agree that CCTV is a helpful tool for crime investigation but pointed out that for the sake of proactive response to crime situations it should be always manned by human being, so that such personnel will watch the Monitor screen to detect security breach and alert security personnel. Third respondent C, stated that the CCTV Cameras have really helped to resolve many crimes that are committed in areas where it is installed, but sometimes the offenders are faintly captured or they disguise knowing that CCTV cameras are watching. Therefore, there should be a standby person(s) to watch it in order to alert security operatives or there should be an alarm system connected to it to alert people or the owner of the facility when the video surveillance capture picture of intruders or those tampering with things in the place.

5.1. Findings

From this research the following findings were made as follows:

i. The major crime committed in bank in Imo state is armed robbery,
ii. That the CCTV cameras helps to make investigation of crimes committed in the banks easier,
iii. There is gradual awareness of costumers about the use of CCTV cameras in banks in Imo state,
iv. The limitations to the use of CCTV are lack of steady electricity which leads to the struggle to have alternative electricity system, vandalization by criminals and lack of professionals that can maintain the CCTV system.
v. Most of the cameras used in banks in Imo state, Nigeria are exposed not hidden cameras which makes the criminals who are aware of technology to conceal their identity with face masks.
vi. That people accept the use of CCTV system in the banks as a welcome development.

vii. That CCTV Cameras are deterrence to criminal activities because thieves that recognize the cameras as surveillance tools; avoid to operate there for fear of been detected.
viii. CCTV Cameras are not only useful in the banks alone; they can serve as surveillance tools in the prison facilities in order to prevent jail breaks, to protect critical infrastructures such as oil facilities, laboratories, industrial estates, schools, supermarkets, police and military offices and barracks etc.

5.2. Summary

The need to strategize on how to ensure effective security in banks in Imo state, the Southeast region and Nigeria in general is because of the high rate of crimes in the country, especially urban crimes like armed robbery, kidnapping, fraud, cybercrimes, arms trafficking, human trafficking, murder etc. These call for the utilization of modern technologies like the CCTV cameras to aid detection, prevention and investigation of crimes which will lead to efficiency and accuracy in the investigation of crimes when they occur. Since the major crimes committed in various banks in Imo state are armed robbery and stealing, CCTV cameras have become necessary technology for detection and deterrence. Many armed robbery incidence have been effectively and efficiently investigated with the aid of CCTV cameras captured videos, that made it possible for the security agents to track the criminal identity which led to their apprehension and prosecution in courts of competent jurisdiction. Hence, the CCTV Cameras can be deployed in major cities, industrial estates, public institutions and other public places like markets, mosques and churches etc., for easy detection and investigation of criminal activities.

6.1. Conclusion

Imo state and the southeast geopolitical zone of Nigeria is notable for violent crimes such as armed robbery, kidnapping, rape, ritual killings, assassination, arson, communal clashes, trafficking in person, drug trafficking etc. It is noteworthy that banks have been the major target of criminals because of its relevance in cash flow. Various criminals carry out their heinous activities for the economic benefit which mainly come in form of cash. Bank is the known institution where the cash can be found. Those who assassinate people are paid with cash and they go to the banks either to deposit or withdraw such cash. Kidnappers collect their ransom through bank or deposit their ransom into their bank accounts it can go on like that with other criminal syndicates.

It is important that banks ensure the use of effective technologies that are relevant in crime detection in order to ensure efficient investigation of crimes committed either within or outside the banks. This is the very role CCTV is used to achieve. This research has explored the relevance of CCTV surveillance capabilities in ensuring effective and efficient investigation of crimes committed in banks in Imo state the Eastern Heartland and the central state in Southeast region of Nigeria and discovered that its impact is positive. As a video surveillance technology, CCTV cameras have been used to capture many clips of acts of criminality in which when reviewed, it vividly show the criminals and their manner of criminal activities. Therefore, banks and security agents should synergize in buying into technological innovations such as CCTV surveillance systems that will continue to help to ensure that no criminal goes scot free.

6.2. Recommendations

Following from the findings and conclusion the following recommendations were made as follows:

(i) Security agents should have their surveillance cameras to further support to banks in tracking crimes.
(ii) There should be standby personnel to watch the CCTV video in order to alert security agents for action against suspected criminals.
(iii) There should be adequate cameras in place to ensure adequate coverage of all Conner of the banks.
(iv) There should be no encumbrances in accessing information relating to CCTV record in banks by security agents.
(v) Professionals should be consulted when installing CCTV cameras to ensure proper positioning of cameras and the use of cameras of quality lenses to avoid having unclear photo or video which will defeat the purpose of installation of the CCTV cameras.
(vi) There should be hidden cameras as well as exposed cameras, so that criminals might destroy the exposed cameras without knowing that some are still watching.
(vii) There is need for more synergy between the security agents and bankers to ensure strict surveillance of the banks with CCTV cameras and to always allow the review of CCTV video

record during investigation of crimes committed within the banks and around the environment.

(viii) It would work better if always checked regularly to know if it is functioning properly.

(ix) The Federal and state governments should deploy higher resolution CCTV cameras that has the capacity to view activities taking place miles away, in major cities and critical government infrastructures to check terrorism, banditry, kidnapping, arms proliferation, human trafficking and transnational organized crimes.

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