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INFORMATION AND COMMUNICATION TECHNOLOGY AND CRIME CONTROL IN CALABAR METROPOLIS, CROSS RIVER STATE, NIGERIA

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Abstract:
The purpose of this study was to examine the role of ICT to crime control in Calabar Metropolis, Cross River state, Nigeria. Two null hypotheses were formulated based on the identified major variables – Closed-circuit Television (CCTV), and Mobile phone. The study was sustained on technology determinism theory and diffusion of innovation theory. The research design adopted was cross sectional survey design. Data for testing the hypotheses were generated using a 24-item questionnaire titles "questionnaire on ICT and crime control" (QICTCC). Data were collected from 537 respondents through multi-stage sampling techniques from the two local governments that make up Calabar Metropolis. The generated data were statistically tested using Pearson product moment correlation coefficient. The test hypotheses revealed that there is a significant relationship between CCTV, mobile phone, and crime control in Calabar Metropolis, Cross River State, Nigeria. It was concluded that information and communications technology plays an important role in crime control. The study recommended among others that: the government should install Closed circuit television (CCTV) cameras on public highways and in shopping malls and parks. CCTV operations will help to remotely monitor premises without having to have police officers engaged in long-term operational surveillance. It will help in emergency response, patrol management, individual and vehicle tracking and gunshot detection. In addition, the government should make larger allocation of resources, particularly financial, to the research and development of the technologies that will make a significant contribution to fighting crime and improving the workings of criminal investigation in the future.

Keywords: information and communication technology, CCTV, mobile phone, crime control

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1. Introduction

The world today is witnessing and experiencing significant changes in terms of technology, and information technology is at the centre (Garicano & Heaton, 2010). Data innovation has changed the global society into a little village through the creation of linking channels all over the world (Yalcinkaya, Calantone & Griffith, 2007). People, organisations, and national government now use data advances to keep a track of advances in the security sector. These new innovation advancements have enhanced and improve the ability of organisations and society, and have led to enormous improvements among organisations and the general society (Flangan, 2010). Today, information and communication technology provides analytical power that is necessary for conducting trade, managing businesses and providing security at global level with much ease, to coordinate world-wide network of trading, carrying out businesses and security in society It has have revolutionized every aspect of human endeavours (McQuail, 2005; Ukwayi, Igwe-Okomiso, Angioha, 2018). Crime has always been issues at all levels, globally, regionally and nationally. The Institute for Economics and Peace (IEP) compiled a Global Peace Index (GPI) for 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; levels of violence and crime within the country and external relations such as military expenditure and wars (Global Peace Index, 2014; Institute for Economics and Peace, 2014). The GPI ranks 162 countries, covering 99.6% of the world's population. Disturbingly, Nigeria ranked 151 out of 162 countries, and Cross River, which Calabar Metropolis is a part of ranks 7th in the country (Global Peace Index, 2014). The current security challenges' facing Calabar Metropolis is deeply embedded in its socio-political and economic institutions over the years.

The heartless, incessant crime been perpetuated by criminals on residents, and business in Calabar metropolis should serve as a tipping point for security policy restructuring in the local government (Ikoh, Agba& Nwosu, 2010; Ukwayi, Okpa, Adewoyin, Angioha, Udom, 2017). Ukwayi, Angioha and Ayi (2018) argued that crime takes place in both urban and rural areas. The existing security frameworks and practices in Calabar metropolis are not designed to defend against the threat posed by sophisticated and armed criminals (Wargo, 2004; Ukwayi & Igwe-Okomiso, 2018). There is lack of smart security system in many resident and business organizations to secured critical assets. Most big business organizations and residents in Calabar metropolis uses an array of human quads positioned at the gates, bugler proof door and windows, and perimeter wall. Human security guards have no stored log rather depend on their subjective memory. Social prejudices make security staffs vulnerable to crime. This study is aimed at investigating the role of Information and communication technology in crime control in Calabar Metropolis, Cross River State, Nigeria.

In order to achieve this, the following questions were raised to guide this study;

1) What is the relationship between CCTV and crime control in Calabar Metropolis, Cross River State, Nigeria.
2) What is the relationship between mobile phones usage and crime control Calabar Metropolis, Cross River State, Nigeria?

1.1 Objectives of the study

The general objective of the study is to investigate the role of information and communication technology in crime control in Calabar Metropolis. The specific objectives include:

1) to examine the relationship between CCTV and crime control in Calabar metropolis, Cross River State, Nigeria;
2) to examine the relationship between mobile phones usage and crime control in Calabar Metropolis, Cross River State, Nigeria.

1.2 Statement of hypotheses

The following hypotheses were raised by the researcher for this study and are stated in null forms:

a) There is no significant relationship between CCTV and crime control in Calabar Metropolis, Cross River State, Nigeria.
b) Mobile phones do not have any relationship with crime control in Calabar Metropolis, Cross River State, Nigeria.

2. Literature Review and Theoretical Framework

2.1 Information communication technology and crime control

Information is the key word in crime detection and this information must be accurate and easily available. ICT has a huge role to play in this. For Africa to succeed in the fight against crime it needs a comprehensive adoption of ICT. Zack (2009) posits that, to nip any evil plan in the bud, information about such intent must be available to map out strategies to prevent the occurrence. That, even when these crisis, disasters, or chaos occurred in the society, accurate and timely information always help to proffer solution to ameliorate the situation. When it comes to information, Zack (2009) stresses that the ICT has it all. That, there is more information on computers and other ICTs than one could ever possibly digest. Studies on crime have consistently found that the quality of information collected is crucial factors for the outcome of the investigation on the crime (Burrows, 1986; Eck, 2008; Horvath & Meesig 1996). Muhammed–Nasiru and Kasimu (2012) maintain that in addition to improving the quick delivery of information and crime management, computer and telecommunication technology can improve both the quality and quantity of information reported. Technology enables the existing news industry and security agencies to deliver its news and findings in real time, and largely increased the quantity of information that can be made available. Surette (2007) is of the opinion that technological transformations have created new opportunities and risks for

crime and victimization, and for surveillance and crime control. For example, close circuit television cameras, information gathering, and data processing have transformed how people perceive and negotiate their social worlds with caution and reserve. Danziger and Kraemer (1985) examined the effects of computing on the performance of security agencies and found that more than 80% of detectives experienced information benefits from computing, and nearly two thirds of detectives indicated that computers assisted them in some of their arrests and clearances. The study is on the impact of computer systems on the productivity of detectives, but this focuses on the impact of ICT on crime prevention.

Braga and Pierce (2004) analysed the impact of the Integrated Ballistic Identification System (IBIS) in the Boston Security agencies Department and showed that the IBIS system significantly improved the productivity of the Boston Security agencies Department's Ballistic Unit, and it was associated with a six fold increase in the monthly number of ballistic matches. The study only focused on one ICT equipment. Nunn (1994) examined the impact of mobile digital terminals (MDT) on the recovery rates of motor vehicle thefts. He argued that the MDT system would increase the number of vehicle checks conducted by patrol officers; and as the number of checks increased, the probability of identifying and recovering stolen vehicles should also increase. He found that the post-MDT recovery ratio was higher than the pre-MDT ratio in each of the MDT cities; the change in post-MDT ratios in the MDT cities exceeded that of non-MDT cities; and the presence of MDT technology was significantly associated with higher percentages of motor vehicle thefts recovered, controlling for the total level of thefts. Sanders (1977) also examined MDT's impact on crime control and investigative services and found that MDT significantly improved effectiveness of the security agencies. In another study about MDTs, Ioimo and Aronson (2003) analyzed whether the records, investigations, and security agencies administration bureaus derive measurable benefits from mobile computing. They used agency data and survey responses collected from a medium-sized security agencies department and reported that computing improved the rate of recovery of stolen vehicles. Marshall (1998) analyzed the impact of cellular digital packet data (CDPD) technology on officers' performance. Two cars from six local law enforcement agencies were equipped with CDPD technology and tested for 10 days. Researchers found that, although the test group worked less than the control group, they made 18.94% more arrests/citations than the control group.

2.2 Closed Circuit Television (CCTV) camera and crime control

Closed Circuit Television Cameras (CCTV) have become a highly significant security measure in crime prevention (Gill & Spriggs, 2005). Closed-circuit television (CCTV) surveillance cameras serve many functions and are used in both public and private settings. The prevention of personal and property crime is among the primary objectives in public space. Coleman and McCahill (2010) state that cameras around us do not only function as a crime preventing tool by law enforcement officials. In

addition, they are used as social ordering strategy or social orchestration metaphor tool to adjust and to control the behaviours of people. They argue that being watched by the cameras constantly create a perception that citizens have to control and adjust their behaviours. In this context, media has a key role in legitimizing the widespread functioning of CCTV cameras accepted by the public by stating that cameras are vital to provide secure and safe society without questioning them (Koch, 2010) As an intervention targeted at crime, CCTV is a type of situational crime prevention (Clarke, 1995). According to Clarke and Hormel's (1997) classification of situational crime prevention, CCTV is viewed as a technique of "formal surveillance." In this regard, CCTV cameras are seen to enhance or take the place of security personnel. It is argued that CCTV (especially if well publicized) may prevent crime because potential offenders are deterred by their increased subjective probability of detection. Also, CCTV may increase the true probability of detection, may increase pedestrian usage of places and hence further increase the subjective probability, may encourage potential victims to take security precautions, and may direct police and security personnel to intervene to prevent crime (Armitage, Smyth & Pease, 1999).

Recent literature illustrates the importance of CCTV that makes it possible for shop owners, business managers and the police to deter and respond to incidents of crime alerted by such technology (Fletcher, 2011; Gill & Spriggs, 2005; Welsh & Farrington, 2003; Beck & Willis, 1999; Shapland, 1995). A major function of CCTV surveillance is that of storing images of incidents of crime and anti-social behaviour as to facilitate post incident analysis during investigations (Gill & Spriggs, 2005). Armitage (2002) and Tilley (1993) state that the effective use of CCTV surveillance is mostly related to: deterrence, efficient deployment, self-discipline, presence of capable guardian and detection. Welsh and Farrington (2008), Armitage (2002) and Tilley (1993) argue that CCTV surveillance may deter crime because it makes potential offenders more aware of an increased risk of identification and apprehension. CCTV may deter crime due to an increase in the likelihood of offenders being caught (Tilley, 1993). In fact, this is in line with the rational choice theory, which states that rational beings choose to commit a crime after weighing its possible costs and benefits (Becker, 1968).
Sarno (199) found that CCTV had a significant impact on reducing fear of crime in the boroughs of London. Brown (1995) indicated that CCTV is an effective tool in reducing fear of crime among public in the case study of Birmingham, UK. Welsh and Farrington (2008) present a comprehensive systematic review and meta-analysis of 41 quasi-experiments whose follow-up periods ranged between 3-60 months. Their findings indicate that surveillance cameras reduced crime by on average 16%. However, this result was mainly driven by a large crime decline in car parks. No significant desirable effects were found in other public settings. Some of the included studies also found spatial displacement (i.e. crime increases in areas adjacent to the experimental condition), but others found no such effects or even diffusion of benefit (i.e. crime decreases in adjacent areas). Gill and Spriggs' (2005) seminal study of 13 video surveillance projects in the UK. Although the study found a 'relatively substantial

reduction' of police reported crime in six of the projects, only two of these reductions were statistically significant and the authors argue that one of the two may be explained by the presence of confounding variables. Similarly, victimization surveys found no statistically significant changes in crime (Gill and Spriggs, 2005).

Using camera installation sites and randomly selected control sites, Caplan, Kennedy and Petrossian, (2001), assessed the impact of CCTV on the crimes of shootings, auto thefts, and thefts from autos in Newark, N.J., for 13 months before and after camera installation dates. Findings revealed that Strategically placed cameras were not any different from randomly placed cameras at deterring crime within their view sheds; there were statistically significant reductions in auto thefts within view sheds after camera installations; there were significant improvements to location quotient values for shootings and auto thefts after camera installations. There was no significant displacement and there was a small diffusion of benefits, which was greater for auto thefts than shootings. The study focused on only crimes such as robbery and auto theft, but did not focus on crimes such rape, mugging and kidnapping. Welsh and Farrington (2009) studied Public Area CCTV and Crime Prevention: An Updated Systematic Review and Meta-Analysis. The study examined 93 studies on surveillance systems to see how effective they are at reducing crime and deemed 44 to be sufficiently rigorous for inclusion. Many of the studies were based in the United Kingdom, while others were in U.S. cities such as Cincinnati and New York. The analysis found that surveillance systems were most effective in parking lots, where their use resulted in a 51% decrease in crime. Systems in other public settings had some effect on crime, a 7% decrease in city centers and in public housing communities, and a 23% drop in public transit systems but the results were not statistically significant. When sorted by country, systems in the United Kingdom accounted for the majority of the decrease; the drop in other countries was insignificant. The study concludes that while surveillance cameras can be effective in specific contexts such as parking lots and public-transit systems, the potential financial and societal costs require greater research. The study only focused on how CCTV prevents crime but not how it can be used to solve crime. The study also only focused on the findings of other studies.

McLean, Worden and Kim, (2013) in their study titled here is looking at you: An Evaluation of Public CCTV Cameras and Their Effects on Crime and Disorder. The study examine the impacts of public surveillance cameras on crime and disorder in Schenectady, N.Y., a medium-sized city in the North-eastern United States and assessed camera impacts by analyzing monthly counts of crime and disorder-related calls for service that occurred within each camera's 150-foot view shed as an interrupted time series, with the interruption at the time that the camera in question was activated. The study also analyzed counts of incidents between 150 and 350 feet of cameras to assess displacement effects and diffusion of benefits. The study further estimated camera effects on counts of only incidents in public location street crimes. Findings suggest that cameras have had effects on crime, even more consistent effects on disorder, and that the visibility of cameras is associated with its impact on crime and disorder.

2.3 Mobile phones and crime control

Mobile technology has become a powerful crime-fighting tool. Mobile phones contain call history, contacts, text messages, web browser history, email, a Global Positioning System and other location information that police and law enforcement agencies find valuable (Angrist & Jorn-Steffen, 2007). Evidence from cell phones can help investigators piece together motives and events and provide new leads (Cohen & Felson, 2000). Mobile phones have become a regular part of criminal investigations because they are now owned by most people and provide information about a person's whereabouts and a person's contacts (Sherman, 1995). Spelman (2006) argued that Mobile phones provide additional surveillance of motivated offenders, which is a form of increased guardianship for suitable targets of crime. The presence of mobile phones increases the likelihood of punishment along a number of different margins. Unless law enforcement personnel happen to be located in close proximity to a crime, the first step toward punishment involves reporting the crime (Cooper, Ek, Heasman & Stewart, 2007). Data from the 1980s in the U.S. indicates that the police made an immediate arrest in less than 3% of serious crime calls for service (Sherman, 1995). Choules, (2012), argued delayed reporting and the attendant information loss might increase sources of doubt, leading to more difficulty in building an effective prosecution and reducing the chances of convictions. Mobile phones, however, allow for quicker reporting of crimes and, in some cases, real time communication of details about the crime and the criminal. In an environment where phones are ubiquitous, the cost of reporting approaches zero, negating all the problems of delay discussed above (Evans & Owens, 2007).

The perceived risk of apprehension could increase among motivated offenders when they notice potential targets are carrying a mobile phone. As technology has improved to allow the transmission of photographic images, identification, apprehension, prosecution, and conviction all presumably become even more likely. Such technology lowers the cost victim's bear in reporting crime (Evans & Owens, 2007). Felson, (2002), is of the opinion that Mobile phones provide the average citizen with the ability to effortlessly contact the police and provide exact coordinates for a crime, perhaps increasing the provision of timely reports of criminal activity to the police. Hall (2009) is of the opinion that mobile also allows bystanders to provide details of crimes at a very low cost. In some instances, a victim's phone may inadvertently provide clues that help identify a criminal. Similarly, for some crimes, the perpetrator's mobile phone can provide evidence as well. The near-universal adoption of mobile phones makes these devices less likely to produce negative externalities noted in other investments in private security, like burglar alarms and security fences, that displace crime to other targets. The use of mobile phones to deter crime is also consistent with a Becker model and a routine activities theory of crime. Mobile phones increase surveillance. When motivated offenders converge in time and place with suitable targets the average level of guardianship of those targets increases with the presence of a mobile phone (Mailley, Garcia, Whitehead & Farrell, 2008). This is particularly true in the case of assaults and rapes committed by strangers, where a potential victim is no

longer completely isolated and can contact the police for assistance. An increased level of guardianship of potential victims raises the costs of crimes to motivated offender (Whitehead, Mailley, Storer, McCardle, Torrens & Farrell, 2008). An added benefit of mobile phones is that their deterrent benefit does not require additional supply of public expenditures to criminal justice.

2.4 Theoretical framework

2.4.1 Technology determinism theory

The theory is associated with Smith and Mark (1994). The theory posits that expansion in social cultural standards; social structure as well as historical events are driven by technology. The theory views technology as a key governing force in the social system, it belief that social progress is motivated by technological innovation. In addition, the theory asserts that technical forces determine both social and cultural change. According to technological determinists, particular technical developments, communication technologies or media, or most broadly, technology in general are the prime antecedent causes of change in society, and technology is seen as the fundamental condition underlying the pattern of social organization (Chandler, 1995). Technological determinism has been defined as an approach that identifies technology or technological advances, as the central casual element in the process of societal change. The theory is used to explain how technology influences man's transition in life. Technological determinism is a concept that defines a set of calms made about the relationship existing between technology and the social system. The assumption of the theory is that technology shapes relations. Also, the theory states that social change, development and growth are the product of technology. Meaning, that technology dictates user behaviour and action (Green, 2001). This implies that technology is the driving force of any meaningful change in the society.

Most interpretations of technological determinism share two general ideas: that the development of technology itself follows a predictable, traceable path largely beyond cultural or political influence, and that technology in turn has "effects" on societies that are inherent, rather than socially conditioned or produced because that society organizes itself to support and further develop a technology once it has been introduced. Strict adherents to technological determinism do not believe the influence of technology differs based on how much a technology is or can be used. Instead of considering technology as part of a larger spectrum of human activity, technological determinism. The theory has implication for this study. Adequate provision of ICT equipment has the capacity to boast the crime prevention and also police officers to effectively discharge their duties. Security equipment such as CCTV, walkie-talkie, facial recognition and GPRS, influence the prevention and control of crime. Based on the thesis of the theory, social problem such as armed robbery, kidnapping, arson, fraud, cybercrime among others can be contend through adequate supply of functional ICT equipment. This will bring about growth and development. Based on this theory

the rate of crime can be determined by the quality and quantity of ICT equipment .The theory has been criticised for reductionism and simplicity of social issues.

3. Methods

The design adopted for this study is the cross sectional survey design. Cross sectional survey design was adopted because data were collected at a particular point in time from the selected sample and their responses were used to describe and explain the characteristics of the entire study population. The choice of this design derives from its relative importance in the collection of accurate information from respondents at greater efficiency. The study was carried out in Calabar metropolis, of Cross River State, Nigeria. Calabar Metropolis is the capital of Cross River State. The population of the study consists of both men and women who reside in Calabar metropolis. The population of the study also involved members of the Nigerian police ICT. According to NPC (2006), the population of Calabar metropolis stands at 179,392. According the data gathered from the police command headquarter, Zone 6, the population of the ICT unit of the zonal head quarter (zone 6) is two hundred and fifty-one (251).

The sample size used for this study is 537 respondents comprising both male and female who will be selected from the area under investigation. Also the respondents included police officers from the ICT department of zone six. The sample comprises all members of the wards that make up Calabar Metropolis Local Government Area; the samples are business owners, residents and police officers in the Local Government Area who reside in the study area. This study adopted the multi stage sampling technique. Multistage sampling refers to sampling plans where the sampling is carried out in stages using smaller and smaller sampling units at each stage. In stage 1, Calabar metropolis was divided into strata according to the two local government areas that make up the metropolis (Calabar south and Calabar Municipality). In stage 2, the two local government areas was further divided into strata according to the ward each local government. Calabar South has eleven (11) wards and municipality has ten (10). From these wards, the researcher will purposely select 4 wards. The wards are ward 7, 4 (Calabar Municipality), 3 and 11 (Calabar South). The researcher purposively selects these wards because businesses are located and where crime always takes place. In stage two, the researcher purposively select 4 streets each from the four different wards selected in stage 1.

The selected streets are highlighted in table 1. The researcher purposively selected these streets because these areas are places where crime is rampant. In the final stage, the researcher randomly selected 24 respondents each from each street selected. The selected respondents included business owners, and residents in the area. In selecting the officers of the police force from the ICT department, the researcher purposively selected the 153 officer. The purposive sampling technique was adopted because all the officers are never on duty at the same time, hence the researcher distributed the instrument of data collection to the officers that were on duty when the

researcher visited the command. The instrument used for this study is the questionnaire. The method of data analysis is Pearson Product Moment Correlation. Each hypothesis were analysed and tested at 0.05 level of significance.

Table 1: Selected streets sampled from the study area

S/N	Wards	Local Govt. Area	Selected Areas
1	Ward 7	Calabar Municipality	Murtala Muhammed H/way, Parliamentary Rd, Esam Abasi, Ikot Effiong
2	Ward 4	Calabar Municipality	Big Qua, Mariam way, Atekong Junction, IBB way.
3	Ward 3	Calabar South	Watts, Target, Nelson Mandela, Offiong Street
4	Ward 11	Calabar South	Anantigha, Ekpo Abasi, New Airport, Bassey

Source: Field survey, 2018.

4. Data Presentation

Out of the 537 administered questionnaires for this study, only 495 returned questionnaires were properly filled without missing values and mutilation, therefore the said number was used for the data analysis. The Statistical Package for Social Sciences (SPSS) Version 21 was used to perform frequency count, percentages, mean, standard deviation, and Pearson product moment correlation coefficient.

5. Test of hypotheses

5.1 Hypothesis one

There is no significant relationship between CCTV and crime control in Calabar Metropolis, Cross River State, Nigeria. In this hypothesis, the independent variable is CCTV while the dependent variable is Crime Control. To test the hypothesis Pearson product moment correlation was used to analyse the data. The result is presented in Table 2. Pearson product moment correlation (r) was used to test the relationship between CCTV and crime control in Calabar Metropolis. The result in Table 2 reveals that the calculated r – value of 0.678* is greater than the critical r-value of 0.195 at .05 level of significance with 493 degree of freedom. The correlation coefficient is a standardized measure of an observed effect, it is a commonly used measure of the size of an effect and that values of ±.1 represent a small effect, ±.3 is a medium effect and ±.5 is a large effect. With this result, the null hypothesis which states that, there is no significant relationship between CCTV and crime control in Calabar Metropolis, Cross River State, Nigeria is rejected. This implies that, there is a significant relationship between CCTV and crime control in Calabar Metropolis, Cross River State, Nigeria.

5.2 Hypothesis two

Mobile phone does not have any relationship with crime control in Calabar Metropolis, Cross River State, Nigeria. The independent variable Mobile phone while the dependent variable was crime control. Pearson product moment correlation was adopted to test this hypothesis and reported in Table 3. Pearson product moment

correlation was used to test the relationship between Mobile phone and crime control in Calabar Metropolis, Cross River State, Nigeria. The result in Table 3 reveals that the calculated r-value of 0.635* is greater than the critical r-value of 0.195 at .05 level of significance with 493 degree of freedom. The correlation coefficient is a standardized measure of an observed effect, it is a commonly used measure of the size of an effect and that values of ±.1 represent a small effect, ±.3 is a medium effect and ±.5 is a large effect. With this result, the null hypothesis which states that, Mobile phone does not have any relationship with crime control in Calabar Metropolis, Cross River State, Nigeria is rejected. This implies that, Mobile phone have a significant relationship with crime control in Calabar Metropolis, Cross River State, Nigeria.

Table 2: Pearson Product Moment Correlation of CCTV and Crime Control

Variables	N	M	SD	r. value	Sig.
CCTV	495	18.08	3.28		
				0.678*	0.00
Crime Control	495	16.51	4.40		

**significant at 0.05 level, df = 493, critical r 0.195.

Table 3: Pearson Product Moment Correlation of Mobile Phones and Crime Control

Variables	N	M	SD	r. value	Sig.
Mobile Phones	495	16.58	3.40		
				0.635*	0.00
Crime Control	495	16.51	4.40		

**significant at 0.05 level, df = 493, critical r 0.195.

6. Discussion of Findings

6.1 CCTV and crime control

This first finding of this study reveals that there is a significant relationship between CCTV and crime control in Calabar Metropolis, Cross River State, Nigeria. This result is positive because, the result shows that having useful CCTV is associated with a significantly increased prevention and detection rate of crime. Results from the field also revealed that having a working CCTV has helped in the reduction of shoplifting. Also, results gathered from the questionnaire distributed revealed that having CCTV mounted in major establishment has helped reduce the rate at which business establishment are been targeted by criminals. The result of this study aligns with that of Armitage (2002), Tilley (1993), Sarno (1999), Brown (1995), Gill and Spriggs' (2005), Caplan, Kennedy and Petrossian, (2001), Welsh and Farrington (2009) and McLean, Worden & Kim, (2013). Armitage (2002) in his study state that the effective use of CCTV surveillance is mostly related to: deterrence, efficient deployment, self-discipline, presence of capable guardian and detection. Sarno (1999), on his own argued that CCTV had a significant impact on reducing fear of crime in the boroughs of London. Brown (1995), in a study in Birmingham, United Kingdom, maintains that CCTV is an effective

tool in reducing fear of crime among public. Welsh and Farrington (2008) presented a comprehensive systematic review and meta-analysis of 41 quasi-experiments whose follow-up periods ranged between 3-6 months.

6.2 Mobile phone and crime control

The findings with respect to this hypothesis showed that Mobile phone have a significant relationship with crime control in Calabar Metropolis, Cross River State, Nigeria. This result is because that the calculated r-value of 0.635* is greater than the critical r-value of 0.195 at .05 level of significance with 493 degree of freedom. This result implies that mobile phone helps in the control and prevention of crime in the study area. Findings also gathered from respondents revealed that with the help of mobile phones would be crime victims could prevent been robbed as with his or her mobile phone, the person can call the police for help. The findings of this study are in collaboration with that of Spelman (2006), Hall (2009), and Choules, (2012).

7. Conclusion and Recommendations

7.1 Conclusion

Based on the result of the study, the researcher concludes that information and communications technology plays an important role in crime prevention and control. It has become quite clear that with the increasing rate of crime in Calabar and with the sophisticated methods that criminals perpetuate their crime, without the use of advance technologies, crime will be impossible to deal with. Crime today is borderless in nature and this makes criminal investigations more complicated for law enforcement authorities. To effectively tackle crime, leaders need to learn from the steps taking by most developed countries in using ICT combat crime.

7.2 Recommendations

Based on the research problems, the aims and results of the study, the following recommendations are considered necessary:

The government should install Closed circuit television (CCTV) cameras on public highways and in shopping malls and parks. CCTV operations will help to remotely monitor premises without having to have police officers engaged in long term operational surveillance. It will help in emergency response, patrol management, individual and vehicle tracking and gunshot detection. Larger allocation of resources, particularly financial, should be made by the government to the research and development of the technologies that will make a significant contribution to fighting crime and improving the workings of criminal investigation in the future. The Nigerian government should introduce a training program to teach the Nigerian security agencies on how to use more sophisticated biometric technology that will help the in their investigation of crime**.** The government of Cross River State should show higher

commitment in equipping security agencies with ICT security system to fight crime in the state.

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