**THE ROLE OF ICT TOOLS IN THE FIGHT AGAINST CORRUPTION AND INSECURITY IN NIGERIA**

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**(ST/CS/ND/21/163)**

**A SEMINAR PRESENTED TO THE DEPARTMENT OF COMPUTER SCIENCE, SCHOOL OF SCIENCE AND TECHNOLOGY, FEDERAL POLYTECHNIC, MUBI, ADAMAWA STATE, NIGERIA**

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**Abstract**

*Information and Communication Technology and citizens plays an increasing role in governance, promoting transparency and accountability to tackle corruption. Access to information concerning governance of the state allows individuals to exercise their political and civil rights in election processes; challenge or influence public policies; monitor the quality of public spending; and demand accountability. Access to information and transparency are thus prerequisites for democracy as well as a key tool in the fight against corruption. Information and Communication Technology (ICT) can support democracy and human rights by enabling and expanding citizens’ social mobilization. A better informed and active citizenry, who can put pressure on national institutions to be accountable and responsive to citizens’ needs and priorities, is a fundamental component of a functioning democracy. This paper seeks to discuss the role of information and communication technology as a means of tackling corruption in Nigeria.*

***Keywords: ICT, governance, corruption, insecurity.***

## Introduction

Corruption exists in all sectors of society. It damages a country’s development by undermining faith in public institutions, increase costs for firms and discourage both foreign and domestic investments. According to Transparency International’s (2009) report corruption is a growing challenge for the business sector both in the developing and industrialized countries. At the level of the individual firm, it raises transaction costs and introduces reputational risks, as well as opens up for extortion. Regardless of sector and level of transactions, corruption hampers development (Bansal, 2013).

Civil society organizations in developing countries are demanding greater transparency as a key component in fighting corruption and empowering people living in poverty. Increased transparency is often dependent on political will, and civil society around the world is actively challenging their governments to open up systems to public scrutiny. When governments do not have the capacity and/or the will to launch administrative reforms to remove the opportunities for corruption, adding external pressure on officials by increasing the risk of exposure might be a workable alternative. External pressure involves both a revitalization of mass media and empowerment of private citizens. Blurton (2019), in his work examined and discussed extensively political corruption in Nigeria from a historical point of view with heavy concentration on political developments in the country before independence and the activities of Nigerian nationalists in relations with the colonial masters.

Information and Communication Technology is a widely defined term that has several meanings across different sectors. Though, essentially, it is used as an umbrella term to refer to the use of communication devices (such as radio and cellular devices, satellite devices and channels, computers, amongst others) and utilities (programs) to manage information (acquisition, dissemination, processing, storage and retrieval).In lay terms, National Security could refer to a state of absence of everything and anything that could be a threat to peace, progress, development and tranquillity within a society. Thus, ICT has consistently been proven a powerful double-edged sword with a capability for both overwhelming good and devastating evil, all depending on the skills and values of the user(s) in harnessing its powers in either or both directions. There is general agreement among historians that insecurity have been the core cause of bloodshed in Nigeria and the world at large (Mijah, 2016).

## Literature review

Information communication technology (ICT) is not a magic bullet when it comes to ensuring greater transparency and less corruption; ICT has a significant role to play as a tool in a number of important areas.

1. ICT can improve transparency in the public sector by increasing the coordination, dissemination and administrative capacity of the public sectors’, as well as improve service delivery by employing user-friendly administrative systems.
2. ICT facilitates the collection of digital footprints and complete audit trail which increase the opportunity to hold individuals accountable and ultimately increase the possibility to detect corrupt practices.
3. ICT can facilitate the work of civil society organization working towards greater transparency and against corruption by supporting a mix of methods of campaigning on transparency and educating citizens on what corruption is about and their civil rights.
4. ICT can facilitate information sharing and social mobilization and ultimately provide digital platforms where citizens can report incidents anonymously.

### Positive result of Automation in Nigeria 2015

Nigeria and Nigerians has witnessed a drastic change in the electoral system of the country, the role that card reader played could never be forgotten in the history of Nigeria’s democratic system. Without the involvement of technology (automation) the election would not have been such a miraculous. In Delta state governorship election there was inconsistency and unclear disparity between numbers of accredited voter recorded by the card reader to the central data collation system and the records of Delta State INEC office which shows that the number of accredited voters was 1,017,796 In contrast to card reader’s record which reported 709,700 which reflect a difference of 30, 8096 ghost accredited voters (Smith, 2015).

### Nigerians and use of Internet

According to predicted report generated by internetlivestats an estimation have been made that Nigeria has about 178,516,904 people and 37.59% of the country’s population were approximately 67,101,452 internet users as at 2014, according to their report, currently the number of internet users is almost raised to 82,426,117 i.e. 46.17% out of 178,516,904 people living in the country which made Nigeria ranked 8th in position in the number of people with internet access in the world. Meanwhile Nigeria has experienced a rapid growth in the number of people that uses internet when compared with 78,740 number of internet users as in the year 2000 that is 0.06% of the then population (122,876,727) (Mijah, 2015)

### Corruption in Law Enforcement Agencies and other sectors

Corruption had its way to penetrate into law enforcement agencies, which made it hard to crack and demolished by government’s effort, it was gathered that higher ranking officers were found guilty of looting public funds. The case of John Yusuf Yakubu for lootingN32.8 billion police pension funds hits the front page of almost every newspaperin Nigeria, precisely on 23rd of January 2013. Leaving thousands of police pensioners in starving due to lack of transparency in the board’s operation (Jimoh, 2013).

Similarly, on Tuesday 17th of November, 2015 the office of the presidency orders the arrest of former NSA (rtd) Col Sambo Dasuki and others who were involve in the arms scam, the president took the decision based on the interim report of 13committee members inaugurated to investigate financial transactions for NSA office from 2007 to date. It was gathered that over a billion dollar had been looted in the name of arms acquisition, for fighting insurgency in the country. All these happen as a result of lack of transparency in financial transaction (David, 2017).

### Impact of ICT in tackling corruption

The ICT stands for Information and Communication Technologies and is defined as a “Diverse set of Technological tools and resources used to communicate, and to create, disseminate, store and manage information” (Blurton, 2019). According to Adewoyin (2019), Information communication technology is the new communication and computing technology used for creating, storing, selecting, changing, developing, receiving and displaying many kinds of information. ICT classified into three groups namely: (i) those that process information e.g. computer (ii) those that disseminate information e.g. communication i.e. electromagnetic devices and system and (iii) those for presentation of information e.g. multimedia.

ICT can serve goals other than sustainable economic growth and public welfare: given the primacy of governance in underpinning development effectiveness, one of ICT’s most important applications to tackle corruption is in e-government. Fighting Corruption with ICT has great potential to act as democratic media and the use of ICT in e-government is a major focus.

Helpfully, Bansal (2013), identify eight kinds of ICT interventions that hold potential for preventing, detecting, analyzing, and addressing corruption:

1. *Transparency portals:* Platforms that offer timely publication of key government documents online.
2. *Open data portals:* Platforms that provide free access to data sets in machine-readable formats.
3. *Service automation:* Platforms that replace discretionary processes.
4. *Online services:* Platforms that allow citizens to self-serve for public service access.
5. *Online right-to-information request:* A Platforms that allows citizens to file right-to-information request.
6. *Crowd sourced reporting:* Platforms that allow citizens to report corruption or grievances and publicly share data on reports and trends.
7. *Online corruption reporting:* Platforms that allow citizens to report corruption or grievances.
8. *Issue Reporting:* Platforms that allow citizens to report problems with public services.

The first four ICT Interventions are usually government-led (Intervention 1 and 2 seek primarily transparency reforms; intervention 3 and 4 aim at automating transaction with government reforms) The other four are generally civil society led. (Interventions 5 and 6 seek transparency reforms; interventions 7 and 8 aim at transaction reforms.) Civil society also plays an important role in anticorruption theories of change around many government-led ICT interventions.

### e-Government

E-government brought the governance services closer to the citizens through the use of technological platforms such as pervasive computing and facilitating access to governmental services and crucial information. Most of the governance initiatives place a barrier between citizen and those officials who intend to extract bribe from them. Computerized procedures additionally allow tracking decisions and actions and thus serve as an additional deterrent to corruption. In India and the Philippines, documents related to public procurement must now be made available on-line. Cambodia enhanced the use of information technology to provide administrative services (Bansal, 2012).

### Use of Website to post Financial Status/operations for Transparency

For the first time, Nigerian National Petroleum Corporation (NNPC) announces its intention to make its activities duly available on their official website for public scrutiny. A weekly broadcast of issues concerning the cooperation will be posted online, Dr Emmanuel Kachikwu, the Group Managing Director (GMD) added that “contracts will be made open to the public and we will choose the best module that works for us and that helps us save money” published on Leadership newspaper (Kachikwu, 2015).

Alegbe (2015), similarly Nigeria will move forward when revenue and non-revenue generating institutions engage in posting their activities on their official website at both federal, state and local government level. E.g. Federal Inland Revenue, our Tertiary institutions and others.

## ICT tools for Enhancing Security

Some ICT tools can be used to enhanced security such as:

### Close Circuit Television (CCTV)

CCTV plays a significant role in protecting the public and assisting the police in the investigation of crime. The UK is one of the most watched countries in the world. It is estimated that there are five million CCTV cameras in use today, and this number is likely to rise in the future (Gill, 2006). Even though the exact number of CCTV systems deployed in the UK is unclear, *“the extent of CCTV coverage and the government’s funding of new systems have increased dramatically over the last decade,”* yet there is little substantive research evidence to show that CCTV works (Mijah, 2016).

Social perceptions and attitudes towards security have changed, and over time society has become increasingly security conscious. This change has also been a result of the mass media coverage on crime. People have changed their views as a result of terrorism, gun crime, child abductions, etc. And have adopted a more proactive role in ensuring their own safety. One way this has been achieved is through investment in CCTV systems. Security is now considered essential for the protection of both people (e.g., within businesses and for the general public) and their property. With the rise in crime in Nigeria especially in the North East and South-South where terrorism and kidnapping are issues disturbing the peace of the region. There is need for CCTV to be deployed (Mijah, 2016).

### Online Vehicle Registration

Vehicle Registration in Nigeria began over 100 years ago and the records have been essentially manual which in turn has not help to raise the efficiency of general automotive services in recent years. Today, computer has been discovered as a very efficient instrument, which has played a very significant role in adequate management of information. However, computerization has helped in many areas of life and due to vehicle owners, the thought of computerization of this operation becomes of great important in order to wipe out the manual data processing system from which many problems have originated (Mijah, 2016).

Electronic road control is one of the main schemes established by Singapore government to control road traffic where only licensed and registered vehicles are allowed in the road. Vehicles movement is controlled due to the installation of gantries which determined and sensor the movement of each vehicle that pass by for the day. With the help of this system the government also introduces the electronic road pricing scheme. ERP is an Electronic Road Pricing System used in managing road. Based on a pay-as-you-use principle, motorists are charged when they use priced roads (Mijah, 2016).

Some benefits of ERP system are:

1. Minimizes traffic volume.
2. Record of each vehicle passed for the day.
3. Optimizes usage of the road network.
4. No human error.
5. ERP is reliable and fully automated system operates 24 hours.
6. Its central computer system ensures gantries are always working properly (Mijah, 2016).

### Sim Registration

A SIM, *Subscriber Identity Module*, is the removable circuit board found in a modern cellular phone. It carries the network identity information and is a type of *smart card* which can also be found on payment cards (EMV), ID cards and so on. A smart card is basically a small computer, providing a safe and controlled execution environment (Ajijola, 2012).

However, it meant that the user got one phone number for each physical phone, making replacement a big problem. In order to avoid this in the GSM networks, the authentication and user identity functionality was placed on a removable smart card. This smart card type was called a *Subscriber Identity Module* (SIM). The smart card command set as defined by the ISO standard was extended to make it possible for the SIM to perform user interaction. Examples of such commands are the ability to display text on the phone’s display, get user input and sending/receiving SMS (Mijah, 2016).

The Nigerian Communications Commission (NCC) embarked on a nationwide SIM Card Registration Project which commenced on March 28th 2011. This was necessitated by the fact that in 2008, security agencies approached the Commission to assist them in resolving crimes perpetrated through the use of telephones in which criminal elements could not be identified with the number of the phones that they use (Mijah, 2016).

The objectives of SIM Registration exercise were:

1. To assist security agencies in resolving crime and by extension to enhance the security of the state.
2. To facilitate the collation of data by the Commission about phone usage in Nigeria
3. To enable operators to have a predictable profile about the users on their networks
4. To enable the Commission to effectively implement other value added services like Number Portability among others.

The Nigerian President Muhammadu Buhari spoke in a joint press conference with the visiting South African president, Mr. Jacob Zuma at the presidential villa Abuja, He gave the reason why the Nigeria National Communication NCC, fined the MTN network provider. He said: “This is the first time I will personally as a president be making a public comment about it. The concern of the federal government is basically on the security and not the fine imposed on MTN. You know how the unregistered GSM are being used by terrorists. “And between 2009 and today, at least 10,000 Nigerians were killed by Boko Haram. That was why NCC asked MTN, Glo and the rest of them to register GSM. Unfortunately, MTN was very, very slow and contributed to the casualties” (Buhari, 2016).

### GPS Driver’s License

A GPS tracking unit is a device that uses the Global Positioning System to determine the precise location of a vehicle, person, or other asset to which it is attached and to record the position of the asset at regular intervals. The recorded location data can be stored within the tracking unit, or it may be transmitted to a central location database, or internet-connected computer, using a cellular (GPRS), radio, or satellite modem embedded in the unit. This allows the asset's location to be displayed against a map backdrop either in real-time or when analyzing the track later, using customized software. Some systems will store the data within the GPS tracking system itself known as passive tracking and some send the information to a centralized database or system via a modem within the GPS system unit on a regular basis known as active tracking (McCahill & Norris, 2003).

GPS tracking System is one of the most rapidly growing technologies around the world. Most developed countries have focused on the GPS technologies in resolving some of their inherent security problems. Global Positioning System (GPS) is increasingly being adopted by private and public enterprise to track and monitor humans for location-based services (LBS). A location-based service (LBS) is information or entertainment service, accessible with mobile devices through the mobile network and utilizing the ability to make use of the geographical position of the mobile device. LBS can be used in a variety of contexts, such as health, indoor object search, entertainment, work, personal life, etc. LBS include services to identify a location of a person or object, such as discovering the nearest banking cash machine or the whereabouts of a friend or employee. LBS include parcel tracking and vehicle tracking services (Blurton, 2019).

### Explosive Device Detectors

Nowadays a lot of attention is being paid to the development of methods and instrumentation for the detection of explosive devices. Initiated explosives have already killed thousands of people and injured several tens of thousands worldwide not only Nigeria, Infrastructural facilities, like railway stations, airports, undergrounded railways, security offices, electricity, water supply, etc. are preferred targets involving up to thousands of people. Assuming, the methods will be found to early detect explosives by means of sensors (Blurton, 2019).

Vapor detection refers to gas-phase molecules emitted by a solid or liquid explosive. The concentration of explosives in the air is related to the vapor pressure of the explosive material and to other factors, such as the duration of the presence explosive material in the given location, its packing, temperature, air circulation in the location, etc (Adewoyin, 2019).

**Advantages**

1. Use of Smart weapons
2. Use of Robots
3. When we observe network centric battlefield management
4. Surveillance for real time combat
5. Force multipliers.

**Disadvantages**

1. Sharing of data
2. Global Position System (GPS)
3. Smart weapon
4. Bomb disposal

## Conclusion

This paper focus on possible technological innovative ways to help Nigeria government to leverage corruption in various ministries, agencies, and particularly one of the arms of government i.e. judiciary, It has also been suggested based on the research conducted by the authors that Nigeria should embark on e-government thereby automating the financial transactions to reduce human involvement on governmental transactions for effective auditing and analysis. Using ICT could also facilitate the investigation for financial crimes usually monitored by EFCC and other agencies that engaged in fighting corrupt practices. The studies suggested an integration or linkage of databases of related agencies to allow for quick access and retrieval of bio data of the citizens.

The current security situation in Nigeria is totally not acceptable by the citizens. With the latest technology advancement and applications all over the world, a lot can be achieved and monitored such as CCTV to monitor movement and visuals to what is going on in a certain location, National identity can also be used to controlled and know the number of people living in a particular location where each and every member of the society have to uniquely be identified and can be tracked with National Identity card he is holding which is GPS enabled

## Recommendation

Base on the paper reviewed, it was gathered that to fight corruption in Nigeria an alignment with telecommunication service providers is highly needed to achieve possible implementation and utilization of tools, machineries or computer system to fight corruption.

Nigeria Communication Commission may enforce a standard for linking (Subscriber Identification Module) SIM Card with National identification card, and Number of SIM card to be acquired by the citizen should be limited at most three (3) SIM cards per single User.

Similarly for reporting corruption to be genuine as anticipated, the use of website has limited security, whereby email address is required as a means of identification to share one’s bribe and corruption experiences, to overcome corrupt reporting problems a mobile phone application might be the alternative option which will be designed to allow user to register with his phone-number, so the details about user is accessible by corruption report receiving officers at the other end. For verification, before moving forward to investigate the cause and abuse associated.

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