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Securing Credible Elections in Africa through ICT: An Appraisal of Nigeria

Ameen A. I Abdulkadir[1]

Abstract: This work examined the impact of Information and Communication Technologies (ICTs) in the conduct of credible elections in Africa with particular reference to Nigeria, which is no doubt, the largest democracy on the African continent. Many African countries have been challenged with the inability to conduct free, fair and credible election, hence the introduction of ICTs to serve as pathway to credible elections. The objectives of the study include; appraise the extent to which ICTs enhance credible electoral process in Nigeria; identify the strengths and possible weaknesses of the devices in the conduct of election. The study engaged interpretative case study for its research methodology. The interpretative method relies on analogical deductions and re-analysis of literature from secondary sources to generate new findings. Findings from this work show that, before the deployment of ICTs especially the sophisticated ones to secure electoral process, election has always been a monument of fraud and festival of violence. However, with the introduction of these technological innovations, it has been revealed that more strengths are inherent than weaknesses. It is therefore recommended that improved infrastructure particularly energy should be given priority to facilitate effective use of the equipment, because most polling stations particularly those in the rural areas complained of lack of electricity to power the gadgets. Also, electoral bodies should always have alternative (Plan B) in case an initial approach or facility fails. This is in addition to test-running all equipment before the election proper to make the election result credible and acceptable to the citizens.

Keywords: Election; Voters; Credible; Information Communication Technology (ICT)

Background Statement

Election occupies a central place in the understanding of democracy. However, there is no definitional consensus about the term election as it is a matter of intellectual supposition, hence the conceptualization of election in different ways by different scholars based on their ideological orientation and social value. One common

[1] PhD, Department of Politics and Governance, Kwara State University, Malete, Nigeria, Address: P.M.B 1530, Nigeria, Corresponding author: ameeniyi @ gmail.com.

attribute about the various definitions is *ability to make choice among different alternatives.* That is why scholar like Shively (1997, p. 185) sees election as complex process that involves a choice between candidates or a choice whether or not a particular policy is to be followed.

Also, MacKenzie (1954, p. 8) defined election as the ritual of choice and that individual participates as a chooser in a social act which gives legitimate authority to the person chosen. Competitive elections facilitate choice, dialogue, accountability, transparency and legitimacy (Hague & Harrop, 2010). Laconically, election is a practice in which people choose and influence those who govern the state. Election denotes the heart of democracy, because without it, there cannot be democracy (Bratton, 1998, p. 52).

It is against this backdrop that government of independent nations, particularly democratic ones made periodic election their *stock in trade* considering its importance in entrenching democracy. In fact, the rate at which democratic societies are now attaching values to election is seen in the amount of human and material resources deployed for it. In recent time, election problems and challenges are even solved and addressed with the deployment of Information Communication Technology (ICT), in which most times have over bearing influence on budgets of smaller countries particularly in Africa.

As observed by the former UN Secretary General in his 2009 statement to the UN General Assembly, Secretary General Ban Ki Moon expressed his concern that "…some of the poorest countries in the world, Africa in specific, have chosen some of the most expensive electoral processes and technology…" This to us is in realization of the importance of free, fair and credible election and the need to be up to date with current trends and methods of facilitating it.

The advent of Information and Communications Technologies (ICTs) into the electoral process has sparked both interest and concern among voters, as well as other stakeholders in election across the globe. Hardly would one see any electoral management bodies (EMBs) around the world today without engaging the use of new technologies with the aim of improving the election process (Jega & Hillier, 2012, pp. 1-12). These technologies vary depending on the resources, nature and dynamics of each society. It is not uncommon therefore, to see the use of basic office automation tools such as word processing and spreadsheets to more sophisticated data processing tools, such as data base management systems, optical scanning and geographic information system. Other ICTs in use include, those that automate the recording and/or counting of votes cast as well as those that verify voter eligibility and voter authentication (Laverty, 2011). Some of these tools which have been in use for some times had their strengths and weaknesses inherent, which will be examined in earnest.

While most governments across Africa deployed these technologies *ab initio* as a way to facilitate voting and to increase voters' participation in elections, many of these countries including Nigeria have made ceaseless efforts to update these technologies with a view to ensuring the credibility of the democratic process as well as the reliability and acceptability of elections results.

Review of Literature

Overview of ICT based election across selected African countries

The study reviewed conduct of electoral process with the use of ICT in five countries across the five sub-regions in the African continent. The 21st century has so far witnessed many important elections on the African continent with powerhouses like Nigeria, South Africa and Egypt holding national and local elections respectively. Also, old autocratic States; Tunisia and Algeria after the Arab spring, South Sudan, Power sit tight Mugabe's Zimbabwe, Ghana, Uganda, as well as the recent comic relief in the Gambia had all witnessed their election at one time, level or the other. Even though many critics have questioned the genuineness of African election but at least we can boldly say that we have come out and voted, and that remains the cardinal principle of democracy. Sometimes we voted in our choice, other times our choice wasn't declared the winner and in rear occasions we were assisted by the international community to force out defeated politicians who will not ordinarily want to vacate office as it was experienced in Gambia under exiled president Yahya Jammeh. All these elections provide opportunity for the development of democracy and freedom for the continent (Farid, 2008).

Research however reveals that all of these elections were conducted with the use of an ICT equipment or the other. This is because the term or acronym ICT has a wide definition or scope. Any device, be it radio, television, mobile phone, or iPad can be grouped under ICT. Classically, ICT equipment like radio, television and telephone had been in use to facilitate election processes since their invention especially in the aspect of communicating messages to the masses. Thus, the rate at which these technologies are mobilized for electoral processes differ from one country to the other especially on the African continent considering the values, institutions, resources (human & material) at the disposal of each country.

Kenya

For instance, in Kenya, the year 2011 marked a significant upturn in Kenya electoral system as ICT innovations were engaged from the beginning to the end. Although ICT had been part of Kenyan election, but more or less as an instrument of mobilization and communication between politicians and electorates. It is on record

that President Kenyatta boasted of over 150, 000 fans on his personal Face book wall (INTERMEDIA, 2017).

However, the strategic importance of ICT was not optimized by the Kenyan election management body as the 2007 post-election violence which consumed over 1,300 people was triggered during the collation of results which was done manually (Standard Media, 2011), as the manual system of recording results at polling stations was not only slow but prone to manipulation which was contested by opposing parties, thence, igniting conflict. This fact was supported by the chairman of the defunct Electoral Commission Samuel Kivuitu who expressed dismay at the delays by some returning officers to send in results (kivuitu, 2007). From the 2007 Kenyan experience, it is obvious that democracy goes beyond voting but extends to the counting process and announcement of the results (standard media, 2011).

It is an attempt to depart from this setback that made Kenya to embrace a new frame work for its subsequent elections with very strong commitment from relevant authority. The Chairman of the rebranded Kenyan's Independent Electoral and Boundaries Commission (IEBC), Ahmed Isaack Hassan said Kenya was prepared to embrace electronic voting and transmission of results to tallying centers in the General Election to enhance transparency. This according to him was to avoid mistake of the past, that is, manual relaying of results. To this effect, the IEBC Act 2011 laid emphasis on the use of appropriate technology by the commission in the performance of its duties. Section 44 provides that the commission may use such technology as it considers appropriate in the electoral process, including mechanisms for electronic voting (IEBC Act, 2011).

Thus, this makes a huge difference in Kenya and its electoral process and was attested to by the National Constitutional Referendum as well as electronic voter's registration and transmission of results. The country had undergone an Election Integrity Enhancement Program through ICT in preparation for the August, 2017 General election. This it initiated in 2015 with the signing of MOU with a Korean ICT consultant (A-Web, 2015).

South Africa

Elsewhere in South Africa, the country is a bit ahead of most African countries in the deployment of ICT for election. Although the achievement was not on a platter of gold, because the country had equally experienced poor electioneering processes in the past especially in the 1994 election, it however, learnt from the shortfalls and improved upon it. For instance, the 1994 election which was the first multiparty election conducted by the Independent Electoral Commission encountered problems such as; inability to register all eligible voters, delays in receiving results from polling stations, long queues of voters, low level of transparency in the electoral

process, tedious counting process, poor communication with rural areas, and general disorganisation of the electoral process (Mutula, 2008).

However, subsequent elections starting from the 1999 parliamentary and presidential elections were improved upon with the use of more sophisticated Information and Communication Technologies (ICTs) to manage the electoral process. During this period, ICT was used to conduct voter registration, vote, relay ballot collection and verification, and relaying of results of the elections throughout the country. The hardware and software used included; satellite-enabled wide area network, plus connection to fax machines; these were used to enable people in rural areas to participate in the electoral process (Mutula, 2008). In addition to that, Bar code readers enabled authenticity of voters to be verified, registered and subsequently have their votes counted at a fast rate. It is also on record that Geographical Information System (GIS) was used to draw up boundaries around the districts, while an election center with a set of heavy-duty servers was linked to a central call center to collect and display results to the public (Diamond, 2010). All these were done in connection to satellite-based communication which was linked with telephone, fax and other communication gadgets.

Gambia

Contrary to what is obtainable in South Africa and other parts of Africa, the engagement of ICT in electoral process is bellow board. In fact, the country is still living in the primitive age if we are to rate it based on its exploit in ICT driven election. Gambia a very small African country of approximately 1.4million people staged its election on the continent. The country though small in terms of human and material resources made the whole world and its power wielders stood on their feet. This was occasioned by the decision of former President Yahyah Jammeh not to hand over power after 22years in office and subsequently defeated by his Successor Adama Barrow.

About 880,000 Gambians were eligible to vote in the last election which was conducted under a complete communication blackout, including social media platforms (VOA, 2016). The Gambian government under Jammeh deliberately shut down all communication facilities including the internet, this was very easy because government has the monopoly of telecommunications which it sells to the people. So where do we go from here? Seem to be an end of discussion on Gambia electoral process and ICT given the fact that the principal motivator of ICT -driven election is not even interested in it. This we want to attribute to Jammeh's attempt to rig the election and to deter external influence that could sneak in through his citizens' communication with the outside world.

Meanwhile, the country did not fail in improvising its own native (African) technology to conduct the election. The locally devised method (voting with marbles) is expected to find solution to the problem of fraud and illiteracy of most electorates. At a press conference in the capital, Banjul, the Independent Electoral Commission (IEC) displayed three metal drums representing the three presidential candidates contesting the election; Yahyah Jammeh, Adama Barrow and Mama Kandeh (France-Presse, 2016). In this case, voters enter a private area that is demarcated where they drop a marble into one of the three drums that are painted with the party colours and logos, and a bell rings confirming a vote has been cast.

As observed by Gambian IEC vice-president, Malleh Salam "It's unique and we are very proud of it, the system allows illiterate Gambians to vote more easily, while ensuring only one vote is cast per person". Sawdust or sand is sprinkled on the bottom of the barrel so that no second sound is heard (France-presse, 2016). Even though latest ICT equipment was not in use in the Gambian election, the country tried its best to secure the credibility of the electoral process through it homegrown technology.

Ghana

Another African country where there is very strong tolerance for democratic values in theory and practice is Peoples Republic of Ghana. Though, Ghana had been in the democracy business for long it was however, late in embracing ICT, especially those that are connected to delivering speedy, stress free and credible election. For the first time, the Ghanaian Electoral Commission (EC) in 2012 introduced biometric data capturing where citizens of age 18 and above were verified and duly registered to vote. The 2012, exercise was a pace setter for future elections in Ghana as the country successfully deployed modern gadgets to coordinate its election. Twenty-six thousand (26, 000) electronic voters verification devices were deployed to different polling centers across the country, this is in addition to other back up devices (Apentsui et al, 2015, p. 5). Also, gadgets and facilities such as thumb scanners, laptops, digital cameras and official website for the people to access authentic information were provided by the Ghanaian EC. All these were done to make the election credible and acceptable to all parties.

In essence each election in Ghana recorded significant improvement in the process, with new digital technologies playing its part, especially mobile telephony, system for transmission of voter results to EC head office for collation using electronic means among others (Ahiabenu, 2016:2-5). The 2016 Ghana's election is a testimony as ICT innovations anchored the electoral process on, before and after the voting days.

Egypt

One African country that came up with surprises in its approach to ICT driven election is Egypt. Despite being a new comer in Democratic Practice, the country's attempt at securing the electoral process was far more sophisticated and advanced than many other African countries that are old hands in democracy.

In the 2012 Presidential and Parliamentary elections for instance, Egypt through its High Elections Committee (Al-lajnatul 'ulya Lil intijabaat) deployed biometric Tablets to secure the voting process (Gamal, 2012). 2000 biometric Morpho Tablets with Morpho front and back-office applications were deployed in the different stages of the election process, including voter registration and ID card verification to determine eligibility to vote (Perala, 2015).

Morpho Tablet is a mobile biometric solution which can be used for a large-scale enrolment or registration purposes. It is a versatile touch screen device, which captures biometric data (fingerprints and face) to verify the identities of users. As portable as an android phone it is easily deployed to the field, has the ability to read contact and contactless smart cards and communicates through Bluetooth, Wi-Fi and cellular networks. In fact, Egypt was the first country on earth to use such technology for its election (Bouverot, 2014).

Theoretical Insight

This study adopts the Cybernetics Communication Theory. American Mathematician, Norbert Wiener coined this theory in his book 'Cybernetics' published in 1948. Cybernetics model of Communication is a theoretical tool for analyzing the role of Information and Communication Technology in human endeavours. According to Garuba (2003), cybernetics is the study of the operation of control and communications system. It is interconnectivity between biological system and man-made machinery. The 21st century has been globally conceived as the Jet Age. This conception was premised on the weight thrown behind the vitality of computer technology, an important index for measuring the level of development in this century.

The exceeding convolution of the world has made the use of Information Communications Technology for administrative purposes a necessity. This underpin why countries of the world, including underdeveloped ones in Africa deploy information-communication technologies to assist in executing certain task in governance, election inclusive. Thus, making cybernetics theory a basis for understanding electoral process, and a reason the Nigerian political system has ventured into the use of ICT as a means to an end in developing the pace of politics and the efficiency of administration and governance in the country.

Meanwhile, the theory has its limitation in the fact that, the communication channel is operated and handled by human being who are subject to comprise and could easily be influenced to manipulate the system. The theory is however perfect for this study because it justifies the basis for the adoption of ICTs in electoral process in Africa and Nigeria in specific.

Discussion and Findings

While these technologies opened up new frontiers and offer great possibilities for Africa's electoral process, it is not impossible to see some disadvantages. But before we talk about the strengths and weaknesses, let's quickly take a cursory look at what ICT driven election is like in Nigeria, the study area. In the case of Nigeria, the country started its exploit into ICT driven election in 2007. The then chairman of Nigeria's electoral management body, Maurice iwu said;

A remarkable and distinctive feature of the elections scheduled for the 14th and 21st April, 2007 is the use of computerized voters register that incorporate the photograph of every voter in addition to other details...This measure coupled with others such as the electronic transmission of the result of poll from the polling stations to the coalition centers etc will help to check multiple voting and other election malpractices (Iwu, 2007).

From the above statement, it's evident that the country attached importance to credible election, it however, resolved to ICT to aid its course. To this effect, the 2007 election witnessed the deployment of more ICTs into core electoral process. It is on record that 13,000 integrated data capturing systems were mobilized by INEC in 2006 voters' registration exercise; 22,000 Direct Data Capturing (DDC) machines, and 18,000 devices for revalidation of voters' register for electorates who would be eligible on or before 13th February, 2007, thus paving way for the registration of over 61 million voters with 40,000 DDCs (INEC, 2007). This according to INEC was to make the election more credible, speedy and fraud free.

In spite of the robust technological arrangements, the 2007 election was in did a monument of fraud, where rigging was openly accepted (Ogbaudu, 2011). Former President Olusegun Obasanjo was reported to have said that the election would be a *do or die affairs* (Sahara Reporters, 2007), while his successor UmaruYar'adua admitted that the election that brought him in was rigged (Nigerian Tribune, 2007). This was attested to by the numbers of re-run elections and candidates whose victory were invalidated by Election Petition Tribunals and the Law Court as most of the robbed Candidates during the exercise sought redress and reclaimed their victory. Below is an illustration of some of the disputed cases;

Table 1. Cases of Fraudulent Declaration of Governorship Election Results, and Reclaim of Mandate.

S/No	State	Contestants	Events	Verdict of the Election Tribunals
1	Edo	Adams Oshiomhole of ACN vs. Oserheimen Osunbor of PDP	Osunbor was declared the winner, while Oshiomhole petitioned to Election Tribunal to challenge the declaration	Adams Oshiomhole of ACN was declared the rightful winner. The Tribunal ordered that the candidate be sworn in as the duly elected Governor
2	Ondo	Segun Mimiko of Labour Party vs. Segun Agagu of PDP	Segun Agagu, incumbent Governor, was declared the winner, while Mimiko went to Election Tribunal to challenge the declaration	Segun Mimiko of Labour Party was declared the rightful winner. The Tribunal ordered that the candidate be sworn in as the duly elected Governor.
3	Ekiti	Kayode Fayemi of ACN vs. Segun Oni of PDP.	Segun Oni was declared the winner, while Kayode Fayemi went to Election Tribunal to challenge the declaration	Kayode Fayemi of ACN won the legal battle. The Election Tribunal ordered that Fayemi be sworn in as the duly elected Governor.
4	Osun	Olagunsoye Oyinlola (PDP) vs. Rauf Aregbesola (ACN)	Oyinlola was declared the winner, while Aregbesola went to Election Tribunal to challenge the declaration	Rauf Aregbesola of ACN won the legal battle. The Election Tribunal ordered that Aregbesola be Sworn in as the duly elected Governor.
5	Anambra	Chris Ngige of PDP vs. Peter Obi of All Progressives Grand Alliance	Ngige was declared the winner, while Obi went to court to challenge the declaration. Obi lost the battle at the lower court but he appealed to the higher court	The Court of Appeal declared Peter Obi of APGA the rightful winner and ordered that the candidate be sworn in as the duly elected Governor.

6	Delta	Great Ogboru (ACN) vs. Emmanuel Uduaghan (PDP)	Uduaghan was declared the winner, Ogboru petitioned to Election Tribunal to seek redress. It was observed that both parties massively rigged with obvious indication of electoral malpractices	The Election Tribunal cancelled the entire exercise and mandated INEC to conduct fresh election for the state within 9 months from the date of the judgment. Uduaghan of PDP won in the run-off.

Source: Nwagwu, E.J. (2011). Elections and Party Politics in Nigeria: Lesson after 50 years. Nigeria at Fifty: Issues, Challenges and Agenda, Vol. 2. Enugu: Timex Enterprises.

Meanwhile, in 2011, there were no much modifications in the electoral process in relation to ICTs as most of the ICT innovations used in 2007 were incorporated into the 2011 election. Even though a new chairman had emerged at the helm of affairs of the Independent National Electoral Commission(INEC), Nigeria's electoral Management Body in person of Attahiru Jega, a Professor of Political Science, the commission built on existing stride in previous election in 2007, but with more advancement in its handling style given the background of Attahiru Jega as a social scientist and a political scientists to be specific contrary to the background of former INEC Boss Maurice Iwu who was a professor of pharmacology. During this period the nation witnessed prosecution of more electoral offenders as well as effectiveness in the numbers of polling units as 99% of the 119, 973 polling units were active compared to 76% in 2007 (TMG, 2015). Also, over 73 million voters were duly registered and acknowledged by INEC (IDEA, 2015). These achievements were largely attributed to improved logistics aided by ICTs.

In 2015 and 2019 elections however, the stage was different as the country witnessed an unprecedented advancement in the deployment of ICT for its election. Additional Polling units were created by INEC, New Permanent Voter's Card (PVC) were introduced to replace the old ones, more voters were registered yet Nigeria was able to manage the sudden increase in the figures and units of election related logistics and prerequisites. It does this by adopting some of the latest technologies on earth. Little Wonder the Former United States Envoy to Nigeria, Mr James Entwistle, was humble and objective by admitting that Nigeria's PVC was better than that of United State noting that his country's PVC does not have biometric. He said,

"I am very impressed by the decision of INEC to use technology in this election. The Permanent Voter Cards are very high-tech. They are higher tech than my voter card from the state of Virginia in the US. My voter card does not have biometric. It does not have my fingerprint. The high-tech gives the process more integrity; I congratulate INEC on taking the part of High-tech. I think we need to come and study it so that we can use it in my country" (Entwistle, 2015).

In addition to the above feat, the country did introduce Card Reading Machine to detect fake, stolen, purchased and cloned Voters Card intended to be used by politicians to rig the election in favour of their party or candidate(s). In fact, the Smart Card Reader (145, 000 in number) was the point of attraction and the most unique IT innovation in the 2015 general election which generated both intellectual debates among academics as well as street side argument among the citizens in the nook and cranny of the country. Some even described the Card Reader as the White man's witch craft, for having the potential to detect counterfeit voters both in the cities and even far away in the villages and hamlets (Ladan, 2015).

Strength and Weaknesses

1. The strength and advantages of using ICTs for an electoral project are numerous. Not only does it helps to prevent identity fraud, but also reduces paperwork and saves human energy.

2. Facilitates faster operations and reduces voting times and queues for registering voters.

3. It also generates reliable statistics by separating actual voter turnout from ghost voters.

4. The Process increase infrastructure for the society, e.g the introduction of Geographic Information System (GIS) to rural communities in South Africa.

5. It equally improves the level of accountability in African political setting as citizens now have better opportunities of holding their leaders accountable on various communication platforms including the social media. With a broad band and a camera phone, activities of politicians before, during and after election become easy to monitor and expose to the outside world, thus serving as deterrence.

6. Voter violence and other tricks of the ruling parties have been drastically reduced with the aid of micro surveillance equipment as little as a pen. This was part of the reasons why incumbent presidents in places like Nigeria, Ghana and other African countries loss their re-election.

However, the following weaknesses or shortfalls have been attributed to ICTs especially with regards to election in Africa.

1. The innovation is too advanced for most African settings especially at the grass root level where voter education and literacy level is very low.

2. Inappropriate or untimely introduction of technology needs to be carefully

considered as this has put some African countries at the risk of delivering credible election. For instance it was the Zinox computers, an indigenous computer company that bailed Nigeria's INEC out during the 2007 election with the supply of over 20, 000 laptops at the last hour. Imagine if there was no zinox computer in Nigeria then, the whole election would have ended up as a national embarrassment.

3. The introduction of these ICT facilities in poor African countries also contributed to drain of resources, considering the huge cost expended on these facilities.

4. As good as the system is, it is not vindicated from technical hitches which could affect true electoral process. Some voters were denied opportunity to exercise their franchise in Nigeria's 2015 election for instance, simply because the thumb print machine couldn't recognize their fingers. These happened mostly to aged people, farmers and artisans in which sensation in their thumbs has reduced as a result of using it for their craftwork.

Findings

Findings as distilled from this work show that, prior to the deployment of ICTs especially the sophisticated ones to secure electoral process in the continent, election has always been a monument of fraud and festival of violence. However, with the advent of these technological innovations, it has been revealed that more strengths are inherent than weaknesses. This is because the technology has not only charted a new course for democratic practice in Africa by exposing fraud and abuses but it went ahead to navigate the relationship between political leaders and their citizens. In essence citizens are better mobilized for electoral process as they exhibit confidence that their vote will count while politicians too are cautious of their actions with the fear of future elections. This type of relationship promotes good governance, one of the tenets of democracy.

Another discovery from the work is that, critical success factor of the process depends largely on the moral and financial commitment of governments of African countries. All African countries where the election is ICT driven is generously supported by government, because the project appears not to gain the financial backing of individual or corporate establishments since it is not profit oriented. In addition, the innovation recorded huge successes as it contributed profusely to smooth running of electoral process, hence the acceptance of election results by large percentage of stakeholders.

Conclusion and Recommendations

1. For more successes to be recorded there is need for more coordinated use of experts like; human resource managers, technology service providers, government official and intelligent minds from the academia to rub minds consistently on challenges and way forward on upcoming elections.

2. Government should gear up its commitment by allocating more funds to election related agencies at regular intervals. It shouldn't wait till the next election in 4,5 or 6 years to come.

3. Partnership should be established with other countries and election managers who have better experience of the initiative.

4. Improved infrastructure particularly energy should be given priority to facilitate effective use of the equipment, because most polling stations particularly those in the rural areas complained of lack of electricity to power the gadgets.

5. Electoral bodies should always have alternative (Plan B) in case an initial approach or facility fails. This is in addition to test-running all equipment before the exercise proper.

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