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Interrogating the Cost of Digital Technology and Trust in Elections in Africa: The Nigerian Perspective

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Abstract

The adoption of technology in electoral democracy in Africa has been on the increase. The introduction of technology has its positive consideration but it also comes with cost and trust implications, which is a paradox. This study is a descriptive work which made use of both qualitative and quantitative analysis. Election administration theory was adopted. To improve on the use of digital technologies, Africans should be mindful of the failure of digital checks and balances that often render an electoral process even more vulnerable to rigging than it was before. In designing new systems for election management, this article argues that Africans should look inward and integrate the new technologies into relevant environmental and cultural settings in order to reduce the cost while improving on the trust of electorates.

Keywords: elections, digital technology, democracy, cost, voting

Résumé

L'adoption de la technologie dans la démocratie électorale en Afrique est en pleine croissance. L'introduction de la technologie a ses aspects positifs, mais elle s'accompagne également de coûts et de problèmes de confiance, ce qui constitue un paradoxe. Cette étude est un travail descriptif qui a utilisé une analyse qualitative et quantitative. La théorie de l'administration électorale a été adoptée. Pour améliorer l'utilisation des technologies numériques, les Africains doivent être conscients de l'échec des contrôles et des équilibres numériques qui rendent souvent un processus électoral encore plus vulnérable à la fraude qu'il ne l'était auparavant. Dans le

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cadre de la conception de nouveaux systèmes de gestion des élections, cet article soutient que les Africains doivent faire un examen interne et intégrer les nouvelles technologies dans des contextes environnementaux et culturels pertinents afin de réduire les coûts tout en améliorant la confiance des électeurs.

Mots-clés : élections, technologie numérique, démocratie, coût, vote

Introduction

The crux of every true democracy is achieving a free and fair election. In the last two decades, there has been an astounding global craze in the deployment of digital technologies in the conduct of elections - a trend that is pellucid in Africa and Asia. Obviously, the twenty-first century is truly the golden age of technology where technology has revolutionised so many aspects of our lives and humanity including the conduct of elections. The United States of America, for instance, introduced their voting technology in the late nineteenth century to make elections more accurate, while in 2002 the US congress passed the Help America Vote Act (HAVA) and created the U.S Election Assistant Commission to distribute nearly US\$ 3 billion in federal funds to update state and local voting systems. In Africa, roughly half of all national-level elections now involve the use of digital equipment of some form, most notably biometric voter registration/identification and electronic results transmission (Cheeseman, Lynch and Willis 2018). In the words of Lord Malloch-Brown, many of the democratic challenges faced around the world are the same for rich and poor countries alike. As of 2013, thirty-four of the world's lowand middle-income countries had adopted biometric technology as part of their voter identification system like in Ghana, Mali, Mozambique, Zambia, Sierra Leone, Cameroon, Kenya, Malawi, Rwanda, Senegal and Mauritania varying degrees of successes in improving transparency in their elections. Nigeria has equally had a history of poorly conducted elections which in most cases ended in violence and loss of lives. This has created profound scepticism amongst the citizens about the utility of the entire electoral democracy. During the 2015 election in Nigeria, there was the deployment of biometrics to identify, register and verify voters and this initially brought trustworthiness and reliability. In 2007, M2SYS technology (Which is a global biometric identification management company that provides biometric identity management software and hardware) provided the Nigerian government with 10,000 fingerprint scanners and biometric software to help register over 20 of 71 million voters for their biometric voter registration exercise. The cost of these items alone, the registration process and the cost of the entire electoral process in Nigeria have been overwhelming.

Between 1999 and 2018, the Nigerian Independent Electoral Commission (INEC) received N730.99 billion as budgetary allocations. In 1999, the electoral expenditure started at N1.5 billion, increasing to N29 billion in 2002, N45.5 billion in 2006, N111 billion in 2010, and coming down to N87.8 billion in 2014. In 2019, President Muhammadu Buhari also presented a budget of N242 billion for the elections. Painfully, most of the huge funds spent in these elections by INEC are unaccounted for; neither are they reflected in the system, as the elections are often poorly conducted. The 2015 Afrobarometer survey report on the Nigerian election record reported that Nigerians held mixed views of INEC. Almost twothirds (64° per cent) of the voters believed that INEC was 'ready to conduct credible free and fair election' but overall trust in the institution was limited, with only 35 per cent saying they trust INEC 'somewhat' or 'a lot' (Daniel, Mbaegbu and Lewis 2015). Elections, obviously, are important and indispensable elements of modern representative government and for democratisation. This is because elections are a formal decision-making process by which a population chooses an individual to hold public office and make a fundamental contribution to democratic governance. Accordingly, 'elections are so clearly tied to the growth and development of representative democratic government that they are now generally held to be the single most important indicator of the presence or absence of such government' (Nnoli 2003). The main questions remain: why does the procurement and use of these expensive digital technologies not guarantee more trust from the electorate? Do Nigerians still have confidence in the electoral authorities and the quality of the electoral process?

ICT-driven elections and not ICT-aided elections where huge resources are invested in the procurement of the ICT equipments making the cost of elections high have become the norm in Africa. This study problematised the cost of the use of digital elections in modern day democracies in Africa, while evaluating the impact of adoption of digital technology in electoral management on the integrity of electoral outcomes and seeking to answer why, despite digitalisation of electoral management, the integrity of electoral outcomes has not been enhanced and such outcomes still remain contested in many African countries, while also suggesting possible ways of improving on African elections to achieve true and robust democracy.

Methodology

The data for this article was derived from a descriptive research that utilised both primary and secondary data. Primary data were collected through in-depth interviews with selected key respondents based on purposive sampling technique. In all, thirty respondents (comprising ten INEC officials and twenty electorates) were interviewed and they all differently participated in three Focus Group Discussions (FGDs). The selected sample was based on expertise, active and non-active participation in the political process in Nigeria. Survey method was applied where FGDs were conducted with some key INEC officials and in-depth case studies from some selected zones in the country on the happenstances during the elections. The cost variables were identified and sources of funding for the elections were cross-tabulated with the election budgets and cost management practices of INEC between 2011 and 2019 when digital technology was introduced into the electoral process in Nigeria. This was supported by the fact that the Cost of Registration and Elections (CORE) examines the cost management practices, such as procurement arrangements for equipment, services and supplies.

The CORE project equally uses two analytical tools to examine election costs: case studies which provide dynamic analysis of election finances, while the survey results reported the baselines and quantifications. The Afrobarometer surveys were utilised in eliciting more concrete information on elections conducted across Africa. Afrobarometer is an African-led, non-partisan research network that conducts public attitude surveys on democracy, governance, economic conditions, and related issues across more than thirty countries in Africa. Their data have been a valuable resource for Africa's development. Drawing from recent Afrobarometer survey data covering more than thirty countries across Africa's main geographical regions, we found that Africans want open elections and, for the most part, think they are getting them. More importantly, popular support for elections is the perceived freedom and fairness of the balloting process (Bratton and Bhoojedhur 2019). The information produced by Afrobarometer is expected, at the end of the day, to be helpful to policymakers, analysts, activists, investors, donors, teachers and scholars, as well as average Africans who wish to become more informed and engaged citizens. Deductive and content analysis was utilised for data analysis.

Theory of Electoral Administration

Election administration, according to this theory, is analysed as a mechanism through which elites can manipulate the political system to maintain power and ensure elite renewal. It is also the administrative procedure used for casting votes and compiling the electoral register and a key site of struggle between elites and citizens for power. Electoral administration is just one set of electoral institutions subject to rule-making – the procedures used to allow citizens to register and cast their votes. Jean-Jacques Rosseau in 1712 in his concept of the 'social contract' postulated that sovereignty not only originates in the people but it continues to stay with them in the civil society. People give their consent to vest their sovereignty in the 'general will' which represents their own higher self. Again, there has been an enormous international investment in elections and electoral management round the world, as the professionalisation of elections has been set as a priority by key commissions such as Kofi Annan's Global Commission on Elections.

The European Instrument for Democracy and Human Rights spent approximately €307 million on over 700 projects relating to democracy promotion between 2007 and 2010, much of which was spent on electoral assistance. In Nigeria, managing elections by INEC has been faced with a hurricane of interests from politicians, Electoral Commissions and also the public. Hence instead of the frontiers of democratisation expanding, elections are seem to have become a tool used to limit the democratic space (Ake 2000). The Nigerian government equally has been spending incredible sums of money to fund INEC in the administration and conduct of elections but the elections are always marred with a lot of irregularities. Delivering well-run elections is therefore important to ensuring that public money is spent well.

Problems with the delivery of elections are not uncommon and found in established democracies alongside electoral autocracies and transitioning democracies (Toby 2020). The performance of electoral management bodies in the conduct of elections can make the difference between an election that is accepted with an orderly transition of power and an election result that is challenged with ensuing problems of violence or societal instability. Defects in electoral management and their widespread reporting can quickly ebb away at public confidence in democratic institutions. And studies have revealed that in a number of high profile elections, administrative errors in election administration can compromise faith and trust in democratic institutions. Moynihan (2004), suggested that some high technology solutions to election administration may be error prone. Even though the Nigerian government is relying so much on electronic voting, they should be wary of the fact that electronic voting systems have been criticised for being 'unsafe' or prone to hacking. If this is the case then such election administration could compromise the integrity of the election. As Massicotte, Blaise and Yoshinak (2004) note, there is 'no unique way to conduct free and fair elections'. On that note, Alvarez and Hall (2006) suggest that problems with the implementation of election administration can be understood through a principal–agent approach.

It is of note that electoral cost, fraud, violence and rigging, no matter the yardstick, normally negate the norms and values of democracy and hence do not advance electoral democracy and trust by the electorate (Afolabi 2011). Rousseau, Sim, Ronald et al. (1998) see trust as a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behaviour of another. Levi (1998) points out the perception that government is untrustworthy is a function not only of its failure to fulfil promises but also of evidence that government agents distrust those from whom they are demanding cooperation and compliance. According to Yang (2005), in order to improve on citizens. He argues further that trust is not a piece of knowledge that can be imparted, but has something to do with habit, mindset and root.

Literature Review

Nature and Cost of Elections in Nigeria

Searching for an effective electoral process has taken a long time in Nigeria and been an integral part of the transition to democracy. Today, many electoral management bodies (EMBs) around the world have resorted to the use of new digital technologies with the aim of improving on their electoral processes. These technologies range from the use of basic office automation tools such as word processing and spreadsheets to more sophisticated data processing tools, such as database management systems, biometric voter registration machines, optical scanning and geographic information systems (ACE project, 2018). It has been observed that most technological solutions cost significantly more than the equivalent manual processes that they replace. In Nigeria, the nature, costs and type of elections conducted in recent times are creating a kind of scepticism among Nigerians about the essence of electoral democracy.

The electoral history of Nigeria since independence in 1960 has been on a persistent downturn accompanied by huge human and material losses in the electoral process. Equally, conducting elections in Nigeria has been high-cost coupled with political instability fuelled by an electoral process in crisis. The situation is such that both the politicians and the electorates have continued to perpetuate the worst forms of political processes which are characterised by incidences of political violence, snatching of ballot boxes, electoral malpractices, rigging both at political party levels and General Elections, and vote-buying. For instance, the problems associated with the first post-independence national election of 1964 and the 1965 Western Region election culminated in the 15 January 1966 coup which was characterised by a wide range of violence and killings. Subsequent elections in Nigeria have not fared better. Okonjo (1974) has provided one of the most compelling accounts of the historical processes of state formation in Nigeria. This account locates the dynamics of the character of politics in the post-independence years in at least two sets of interrelated factors. The first was the deep division and tension between the colonial administrators on the relationship that should exist between the North and the South after the amalgamation of the two protectorates in 1914. The second was the desire of the British to secure and preserve the Nigerian nation state as a safe haven for British economic and political interests in the postcolonial years. To these two, we must add a third dynamic which originated from the interaction between the first two - the failure of the colonialists to produce an indigenous ruling class with the economic credentials needed to support and push its envelope of political power after independence in 1960.

The 1979 elections that saw the emergence of Mallam Shehu Shagari as a civilian president was criticised by international observers as having been also massively rigged. The 1983 election, four years later, was marred by corruption, political violence and polling irregularities; resulting to another military regime seized power citing electoral malpractices as one of its reasons for overthrowing the civilian government. The 1999, 2003 and 2007 elections, three elections conducted during this period of ten years of Nigeria's democracy, were criticised by many as being far from free and fair. In fact, the election of April 2007 was conducted by the then electoral body, INEC. Perhaps the freest and fairest election in the history of Nigeria was the 12 June 1993 election where late Moshood Abiola emerged the winner but was later annulled by the then Nigerian President, General Ibrahim Babangida. During those periods, INEC, a body established for conducting elections in Nigeria had employed a number of innovative approaches to improve election management in the country. As years passed by, INEC introduced more sophisticated approaches including the use of modern

technologies in order to meet international standards. In recent times, there has been an outstanding and remarkable increase in the use of digital technologies in the conduct of elections, especially in Asia and Africa.

In Africa, roughly half of all national-level elections now involve digital equipment of some form, most notably biometric voter registration/ identification and electronic results transmission (Cheeseman, Lynch and Willis 2018). The newly introduced digital technology is seen and believed to be a fix, and able to compensate for the state's weaknesses, shun malpractices and achieve free, fair and credible elections. But the extent to which that has been achieved is still questionable. Consequently, it is most appropriate to call attention to the processes and the tools of managing elections in Africa and Nigeria in particular. An examination of the character of elections in Nigeria must thus deal with these issues, not simply in a theoretical sense but more in terms of the way in which they have functioned over the period. It is particularly important in this regard that such an examination deals with not one but all elections that have occurred in the context in order to discover underlying dynamics and thus to be sure that in suggesting the way forward, it deals, not with symptoms but with causes (Iyayi 2004). Analysis of official documents of INEC's budgetary allocations has shown that the elections cost have been soaring since the country's return to democracy in 1999. From 1999 to 2018, INEC had received a total of about N730.99 billion as budgetary allocations from the federal government (Abdallah 2018). The pre-election phases and election management costs are always enormous. In the 2019 election alone for instance, a total of about N189.2 billion was the expended on INEC alone while most Nigerian citizens are living on less than one dollar a day.

'Core' Cost of Elections in Nigeria 2011–19

Nigeria with UNESCO's 2020 estimated population of about 200 million is the most populous black nation in the world. The enormous land mass covering up to thirty-six states and 774 local government areas makes the cost of conducting elections very high. Also, the absence of a liberal culture and the intense competition for state power, with election-related violence, increase the cost of elections. Electoral cost is used to mean the main expenses that go into election preparation and execution. This include: voter registration, boundary delimitation, the voting operation, counting and transmission of results, dispute adjudication, voter education and information, campaigning by political parties and candidates, and vigilance or oversight by party representatives and domestic or international observers. It differs from country to country depending on the make-up of the economy. Election costs entail fixed costs which are the category of costs that are concerned with the expenditure on the ordinary functioning of an electoral administration; these costs are incurred independently of the occurrence of elections in a given year. Then we have the variable costs which include those related to the actual conduct of elections. Almost the entire budget for a specific election consists of variable costs. A distinction is also made in the literature between integrity costs and core costs (CORE Project). This distinction may be essential for an adequate understanding of the funding of elections. Integrity costs are generally concerned with expenditures on things like the security arrangements for registration and polling places. They are those costs, over and above the core costs, that are necessary to provide safety, integrity, political neutrality, and a level playing field for an electoral process. They may also include funding for international personnel serving as part of the electoral administration; tamper-resistant electoral materials necessitated by a low level of trust among contenders; long-term electoral observer missions; intensive voter education campaigns; and election publicity and so on. Then those costs routinely associated with carrying out elections are designated as core costs. They have to do with voter lists, voting materials, competence among polling officials, voter information, and organisational and logistical arrangements. Core costs are assumed to be fixed while the integrity costs are incurred when special and often unexpected expenses are required to ensure that the process works efficiently. The CORE Project evaluates budgets of EMBs in order to identify budgeting practices and techniques that influence cost control and transparency and identifies the revenue sources for funding the administration of election processes. Some cost effectiveness can be expected in political party finance by filling the legal vacuum prevailing in so many countries on issues such as expense limits and disclosure regulations (Lopez-Pintor and Fischer 2005).

Core costs as a whole tend to increase rather than decrease independently according to the degree of democratic consolidation especially in the areas of personnel and advanced technology. One main cause of this in emerging democracies is the sheer institutionalisation of a permanent professional electoral administration, which in most countries is a bureaucratic organisation in the form of an Electoral Commission independent of the executive branch. We are going to discuss the core costs of some election years between 2011 and 2019 in Nigeria when the use of digital election started.

Attributes	Core costs	Diffuse costs	Integrity costs
	Core costs are the type of cost that covers the basic costs of the election. For instance the basic costs of voter information, printing of ballot papers, voting, counting, and transmission of the results. The core costs are usually identifiable in the budget of the EMB or other authorities responsible for other electoral tasks during the election. Again, it may be difficult to integrate and quantify the core costs if they are split between several agencies.	Diffuse costs are the costs of those support services for electoral events provided by other agencies. These include services like the police, voter data provided by civil registration agencies, logistical support provided by the government, such as transportation and venue, statistical IT services, and payment of teachers and other support staff and polling officials. It may not be possible to separate other election related costs. They may equally be difficult to quantify as they are often contained within the general budgets of several agencies.	Integrity costs can be categorised into those additional costs made to ensure the integrity of the fragile electoral processes. These include the use of security measures like the indelible ink and tamper- proof containers, external processing of electoral registers, and special security papers for printing ballot papers. Election- related costs of international peace keeping missions. Political equity costs such as funding of party campaigns, and media monitoring.

Table 1: Attributes and examples of electoral core, diffuse, and integrity costs

Source: http://aceproject.org, accessed 5 July 2019

A Breakdown of the Various Costs of General Elections in Nigeria 2011–19

No.	Amount	Expended on	
1	N66.3 billion	Recurrent expenditure	
2	N56.6 billion	Capital expenditure	
Total	N122.9 billion		

Table 2: 2011 General Election in Nigeria

Source: Idowu (2011)

In the 2011 General Election, a total of N122.9bn was spent on the conduct of the election but initially, N131.4 billion was budgeted. The breakdown is in Table 2 above.

This was a budget for 73.5 million eligible voters where N33.5 billion was budgeted to be used in the procurement of Permanent Voters Cards (PVCs). But in 2012, N 2.6 billion was finally approved for the production. The figure in the above estimate includes both direct and indirect expenses. The direct costs include voter registration (including the purchase of 132,000 direct data capture (DDC) machines), voting operations (materials, logistics and training), the counting and transmission of results, and voter education and information (Anaro 2011).

No.	Amount	Expended on
1	N15.6 billion	Presidential/Governorship runoffs
2	N14.1 billion	Honorarium for ad hoc staff
3	N10.5 billion	For electoral hazards
4	N8 billion	For ballot papers
5	N6 billion	Ad hoc staff training
6	N5 billion	For ballot boxes
Total	N59.2 Billion	For INEC budget alone

Table 3: 2015 General Election budget

Source: Daniel, Mbaegbu and Lewis (2015)

From Table 3, a total of N108.8 billion was approved for the conduct of the 2015 General Elections. The INEC expenditures are included in Table 3.

No.	Amount	Expended on
190.	Amount	Expended on
1	N80 million	Procurement of ballot boxes
2	N65 million	Ballot papers for 29 governors
3	N28 million	Payment for election workers
4	N35 million	For printing of ballot boxes
5	N4,361,970	For printing of result sheets
6	N1 billion	For printing of stickers, t-shirts and pamphlets
7	N850 million	For eventualities
8	N500,000.00	Procurement of kits and accredited election observers
9	N630 million	To monitor primaries across the country
10	N4.2 billion	National security advisers
11	N12.2 billion	Department of state services
12	N3.5 billion	Nigerian immigration services
13	N1000 per day	For feeding 2.7 million workers nationwide

Table 4:	The 2019	General	Election	budget
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Source: Akinkwuotu and Aluko (2019)

This is the breakdown of 2019 General Election expenditures. A total of about N242,445,322,600 billion was approved.

These figures vary according to different versions of reports. But it has been observed that the 2019 General Election had an increase of about N69 billion compared to the 2015 election budget. This expenditure was widely criticised by the head of Transparency International, Musa Rafsanjani, where he said that the expenditure was so high irrespective of the fact that most of the facilities used for the 2015 elections ought to be utilised.

Analysis

Nigeria, with an estimated population of about 200 million people, is an enormous land mass covering thirty-six states with 774 local government areas. This expansiveness make the cost of conducting elections high with so many implications. Again, the absence of a liberal culture, ethnic cleavages and intense competition for state power, and election-related violence increase the cost of election in the country. The high costs of these elections are often justified on the basis of initial high costs of putting infrastructure and personnel into place. The Nigerian government, for instance, approved the above tabulated estimated sums for the INEC expenditures alone between the year 2011–19 when GDP was worth US\$ 397.30 billion in 2018, annual GDP growth rate -13.77 per cent, and GDP per capita

\$2,396.30. This is quite ironical. Due to logistics problems, the first scheduled 2019 Presidential Election was postponed for one week and this postponement is estimated to have cost the economy \$2.2 billion. The report said Nigeria's election agency spent about \$625 million in the country's 2015 General Elections. In Kenya, for instance, the 2007 post-election mayhem saw growth rates fall from 7.1 to 1.7 per cent in 2008. Despite holding one of Africa's most expensive polls in 2017, the economy also shed 1 per cent of GDP due to disputes and prolonged electioneering (Dahir and Kazeem 2019). Nigeria's \$625 million was spent on funding expenditure that included information technology systems and infrastructure; maps and voter lists preparation; training for returning officers and field and special events staff. Taking a comparative analysis of other developed countries with less population, Canada, for instance, spent \$375 million on electoral expenditure where 17.5 million voted. The United Kingdom spent about £113 million during its 2010 parliamentary elections in which 45.6 million voted. £28.6 million was the cost of distributing candidates' mailings, and £84.6 million for the conduct of the poll (Abdallah 2018). These figures expose the amount of money lost across the world only for the conduct of elections by the electoral management bodies.

It is a paradox that irrespective of the huge sums spent on elections in Africa, the integrity of electoral outcomes has not been enhanced and such outcomes still remain contested.

Nigerian Constitution and Election Financial Regulatory Framework

The framework governing political campaign finance in Nigeria is the Electoral Act. According to section 91(2) and 91(3) of the Electoral Act, the maximum election expenses to be incurred by a candidate at a presidential and governorship election shall be one billion naira only in elections. But the extent this Act is adhered to is questionable in the Nigerian electoral system. The Nigerian elections are regulated by the 1999 Constitution (as amended) and the Electoral Act of 2010 (as amended). However, the political regulation has been repeatedly defined and redefined since the 1999 transition to civil rule. By 2019, the country had several versions of the Electoral Act, viz. 2002, 2006 and 2010. The Electoral Act 2006, drawing on section 226 and 227 of the 1999 Constitution, expands the functions of INEC to include:

- conduct of 'voter and civic education',
- · promotion of 'knowledge of sound democratic election processes', and
- conduct of 'any referendum required to be conducted pursuant to the provision of the 1999 Constitution or any other law/Act of the national Assembly'.

INEC is funded directly by a federation account under the current procedure of funding the Commission directly from the consolidated Revenue Fund. The Commission is able to prepare its budget for approval, and thereafter it is disbursed directly to the Commission through the Independent National Electoral commission fund (INEC Fund) which was introduced in the 2006 and 2010 Electoral Acts. It is the establishment of this fund that helps the Commission to directly manage the usage of these funds. But in order to ensure adequate financial accountability, the Commission's budget is presented to the relevant committees of the National Assembly. This committee is also mandated to report to the office of the auditor general of the federation at the end of the year (Electoral Act, 2010). In the area of procurement of electoral materials, they are also expected to comply with the due process requirements through the Bureau of Monitoring, Prices and Intelligence Units (BMPIU). INEC, in turn, is expected to submit a report to the National Assembly.

Above all, it has been observed that the cost of politics is increasing by the day and is in upward trend when compared with the First Republic in Nigeria. INEC acknowledged this development when they reviewed the legal limits of election expenses because the amounts specified in the Electoral Act 2006 were doubled in the Electoral Act of 2010. This poses a question on the essence of electoral regulatory frameworks.

Summary

In essence, this work is novel given the fact that Nigeria and many other countries of the world have resorted to the use of digital technology as the preferred mechanism of conducting elections. Although the use of digital technology is supposed to guarantee electoral integrity, it is dependent on the limits of the technology deployed because these technologies can fail and are prone to being compromised. It is equally true that technology has revolutionised almost all aspects of our lives, like services, lifestyles and living standards but the issue of elections has been left behind especially in the aspect of boosting adequate participation and reduction of cheating in our electoral process.

In the 2011 General Election in Nigeria, the cost of the election was quite high. For instance INEC received a whopping N87.7 billion (\$576.9 million) for the registration of about 70 million voters over a period of three weeks using biometric devices. During former Goodluck Jonathan's campaign, Abbah, Abdulhamid, Agbese et al. (2011) noted that the average cost of hiring the helicopter for his campaign was about N1.5 million per hour. The President's campaign team rented the helicopter for trips costing

an average of N20 million for each day it was used for the campaign (Buchanan and Sulmeyer 2016). The television and radio advertisements, where a three-hour live coverage on the National Television Authority (NTA) alone costs up to N10 million, a full-page colour advertisement on a national daily costs N450,000–N500,000, while the *Guardian Newspaper* put the cost of a wrap-around advertisement at N25 million. These things come under the core costs and are spent almost on a daily basis during the election period. Pat Utomi (a former Presidential aspirant of the Social Democratic Mega Party, SDMP) had complained that President Jonathan's campaign cost about N100 million a day. This is taxpayers' money which could have been used for developmental purposes. These patterns of expenditures are repeated in every election year.

The 2019 General Election conducted in Nigeria employed the use of digital technology but declaration of results in some states as inconclusive. To buttress this point, in some voting centres, it was reported that the card readers malfunctioned and were unable to identify voters. There were also outright abuses of their usage in some areas. These experiences suggest that these technologies are liable to increase popular suspicion of manipulation, and encourage complacency towards traditional forms of election oversight. Unfortunately, the country was deprived of the opportunity of taking advantage of this successful achievement to launch itself on the road to true democracy by the class that is interested in perpetuating itself in power (Abubakar 2015). In essence it can be seen that the concept of elections or the vote and the processes associated with it are seen to lie at the heart of a system of representative democracy. The other elements are the guarantee of civil and political liberties and the existence of an institutional arrangement or government whose function it is to maintain the aforementioned elements through, among other things, the rule of law (Iyayi 2004). As an index of the culture of politics in a context, these benchmarks also indicate that the integrity of the electoral process has major implications for the level of economic and social development that are possible or attainable in that context (Fayemi, Jaye and Yeebo 2003). As Ake (2001) had pointed out, both the failure of development and the failure to put development on the agenda in Africa are largely attributable to political conditions and lack of proper management of our elections.

Analysis so far presented in this article shows that, elections are generally expensive globally. This is common during election periods where the incumbents, individual contenders and emerging political parties embark on a spending spree as they try to impress voters and the public with big promises and their commitment to their welfare. Many years ago, and especially from 2002 when the prospect of the 2003 elections emerged on the horizon, many voices expressed great hopes that given the historical experiences of the past, the incumbent governments in power would work to ensure that the elections would be conducted in such a way that they would lead to a strengthening of the prospects of representative democracy in Nigeria. Literature shows that politicians and political parties renege and renounce on their macroeconomic commitments and promises aftrer elections. They tend to expand the economy during election campaigns by pumping a lot of money into it in an attempt to woo myopic, illiterate and poor voters, although the long-term results are sub-optimal. This behaviour and actions in the end might provoke inflation when they are financed by deficit budgeting (Krause 2005). This situation is further aggravated by the cost of elections. Again in poor and most developing countries, a lot of the spending during election seasons goes into vote buying, ostentatious expenses like erecting expensive bill boards, printing of party dresses, party posters, settling rivalries and other unnecessary campaign processes. These usually involve the use by incumbents of public resources to gain an advantage over opponents in an intense competition for power. The introduction of digital technology into election management in Nigeria, for instance the use of card readers, the biometric system and a host of other new inventions as means of achieving these, strives for entrenchment of a true democracy. The experience of the 2019 General Election in Nigeria was not quite encouraging. But technology is not always the problem; the problem lies in having the right administrative system. A good administrative system will bring about good management of the entire system. Trust has to equally be there for it to be productive because this is a terrain which we don't have control of. Finally, we should also be conscious of the African environment, and develop our own knowledge production that will suit our environment instead of expensive imported technologies.

Recommendations

Nigeria's democracy is nascent, having emerged from more than three decades of military rule, which eroded many of the society's liberal values. The nature of the liberal culture has created intense competition among various ethnic groups and parties for control of state power and election-related violence, thereby increasing the cost of elections. In the light of the above, therefore, this work makes the following recommendations.

Irrespective of the above challenges facing the adoption of digital technology in our electoral systems, Nigeria must find ways of surmounting

these challenges and improving on the electoral systems. First, there must be a provision for enforcing the Electoral Acts. In Nigeria, the Uwais Commission had recommended the establishment of an electoral offences commission where electoral offenders can be punished to reduce electoral malpractices like flagrant violations of campaign spending limits as enshrined in the Electoral Act. For instance, in 2014 when twenty-one Governors donated N1.05 billion to their party ahead of the 2015 elections (David, Manu and Musa 2015), Section 91(2) of the Act reads:

An individual or other entity shall not donate more than N1 million to any candidate.

Sub-section 10 of the same section adds that a presidential candidate

who knowingly acts in contravention of this section commits an offence and on conviction is liable to a maximum fine of N1 million or imprisonment for a term of 12 months or both (Electoral Act, 2010).

There is flagrant and reckless abuse of this section of the Electoral Act not only in Nigeria but across Africa. This makes its enforcement of the regulatory laws very necessary and urgent.

In the area of the use of digital technology in our elections, it is pertinent to know that cyber or digital elections offer some new and interesting possibilities in the conduct of our elections in Africa especially in the area of transparency, credibility and success of our elections. Irrespective of its cost, it is still far better than our previous manual electoral processes. There is high cost and vulnerability in the use of digital technology across the world. This stems from the fact that while cyber operations probably are more scalable than other previous efforts at electoral manipulations, election manipulation is less scalable than other kinds of cyber operations. Therefore:

• Nigeria and most African countries are undoubtedly playing from an underprivileged terrain. But above all, an improved e-voting pattern should be enhanced irrespective of being pernicious and negative in appearance and other shortcomings. The first issue is bridging the digital divide in order to bridge the gap between the urban and the rural areas. At the same time, there exists also the fear that there is an existing risk of hackers manipulating a voting machine in favour of a particular candidate. This is an obvious attack on integrity. The risk of the tabulation system has been already demonstrated in some cases. Like in Ukraine in 2014, where attackers deleted key files from the Election Commission's vote tallying computers a few days before the election forcing officials to rely on backups (Clayton 2014). Also, the 2013 hackers in the US caused the Associated Press's Twitter account to report that there had been a bombing in the White House and President Obama had been injured. These are challenges associated with the use of digital technology.

- For an e-voting system to survive, adequate network is always a barrier, especially in rural areas. There should be an alliance between the government and network providers on improving network services which will go a long way to reducing the costs of procuring electoral materials. Like it was said previously, the high cost of elections is justified on the cost of putting infrastructures and structures in place (like ballot boxes, excessive campaigning, registration costs etc.).
- Again, research has shown that more states have switched over to optical scanning systems after a wake of voting machine failures in 2000. This is also recommended for African countries because this is a situation where a voter marks a paper ballot that also serves as evidence for later verification. The major challenge in this area is that registration of digital technology is still very low in some parts of Africa. Paradoxically, some critical elections, such as Great Britain's referendum on leaving EU, were counted entirely by hand (Domonoske 2016).
- Another new invention is the use of 'Instavibe' in our electoral process. Instavibe is easy, mobile, incredibly fast live opinion gathering for groups of any size if we are to credibly take on the more ambitious projects. As voting becomes a frequent and functionless part of people's lives, it may lead to entirely new forms of election and decision-making process. Above all, Africans must explore a new pattern that will suit our peculiar environment and system, reduce the enormous cost and boost our nascent democracies. These investments in technology must be owned locally while our legal framework should be strengthened to enable us know where and how these technologies can be applied in our electoral process to reduce contention, lack of trust, and questioning.

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