



ISSUES AND CHALLENGES OF ELECTORAL DATA MANAGEMENT IN NIGERIA ELECTORAL PROCESS

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Electoral data management Various researchers add to the literature on elections, their method, and malpractice through interpreting qualitative secondary data (Ebirim, 2013; Ighodalo, 2012; Osinakachukwu and Jawan 2010; Idowu, 2010 and Herreros, 2006). "Elections are a way of choosing representatives of the population in various public offices within the political system," according to Ighodalo (2012). He noted that Elections are critical aspects for democratic governance of modern political societies They are thought to be a tool for democratic decision, mobilization, and transparency. Elections are intended to smooth the transition from one civilian dictatorship to another and make it easier to legitimize sitting regimes in the modern democratic paradigm, which has become the most common mode of democracy in today's globalization period. Odusote (2014:31) has rightly posited that electoral data management is a pillar of democracy because it gives effect to the right to govern by consent, Herreros (2006) sees election as a way of selecting 'good types' of politicians who would pursue the common good instead of their factional interests. Dickerson (et al, 1990) defines election as a post mortem of the record of those in office, whose performance may have little to do with promises made when they were last elected" (cited in Idowu, 2010:54). He further stated that election is often confused as electoral process. As a result, he defines electoral data processing as both pre- and post-election operations that make a vote either unlikely or irrelevant. As a result, the procedure entails the registering of political parties, voter registration, electoral dispute resolution, swearing in of election winners, and so on wil l. It is the people's mandate to choose who should govern them in a free and fair 'election. Meanwhile, the democratic process refers to the laws and procedures that govern the conduct of elections. As a result, elections help to form and promote democracy. Democracy, on the other hand, is regarded as the safest system of government because of its philosophy of fostering people's eering. As a result, the electoral mechanism is a fundamental concept of western democracy. In a democracy, elections are extremely important because they are a means for citizens to assert their authority and leadership succession. "Elections have significance for most people only in a political sense when they contribute to the majority of voters choosing policy makers," writes Jibrin (2009:33). Elections and democracy are therefore inextricably linked". Osinakachukwu and Jawan (2010:130) said it is a process of checkmating a ruler that is popularly accepted and ejecting an unpopular leader, mainly through voting. "This method shuns mutiny and chaos in a system hence it reflects peaceful hand-over from one administration to the other so long as the process is devoid of election rigging" It has been suggested that in order for elections to succeed, a well-defined, capable, reasonably neutral, and non-partisan electoral body should be created. There is a need for an independent judiciary that can read electoral laws and make decisions on electoral matters. Mass media devoid of influence from the politicians should be instituted together with police force that will help supervise the conduct of an election. Indeed one of the major element of electoral process is to ensure an election is free and fair and the result of the election must reflect the wishes of the people. As a result, any action that obstructs the

administration of an election qualifies as "subversion of people's sovereignty." Using the cultural relativism analytical paradigm Idike (2014) examines the issues and prospects of e-voting in Nigeria in terms of proper electoral data control. He describes electoral data management as a dynamic mechanism that includes both positive and bad intentions. Particularly in emerging democracies where general elections are often marred by culturally hued electoral malpractices. In the case of Nigeria, the fact is that the democratic process is marked by a culture of electoral malpractices. Long-term conflicts or political violence are amicably settled in a federal environment where elections are free of crises. A structure like this improves the chances of political prosperity, security, growth, and government continuity. However where elections are synonymous with violence, thuggery, intimidation, rigging, ballot box snatching and stuffing and other forms of electoral malpractices, they bring to question the very essence of democracy and compromise the nation's security. Electoral Malpractice Ebirim (2013) sees electoral malpractice as a process by which the rule and regulations that govern the conduct of election are manipulated to favour specific interests. It is achievable through numerous tactics and strategies including outright rigging and falsification of electoral result. In the case of Nigeria, the political process is marred by a culture of voting irregularities. In a federal climate devoid of emergencies, long-term tensions or political violence are amicably resolved. This type of arrangement increases the likelihood of democratic stability, peace, development, and government longevity. Election rigging according to Nwabueze (2005 cited in Ibrahim, 2009) refers to electoral manipulations which are palpable illegalities committed with a corrupt, fraudulent or sinister motive to influence an election in favour of a candidate (s) by way such as illegal voting, bribery, treating and undue influence, intimidation and other form of force exerted on the electorates, falsification of results, fraudulent announcement of a losing candidate as the winner (without altering the recorded results). Electoral malpractice has become an increasing problem in incipient democracies that Research on Humanities and Social Sciences.

Electoral data processing has been a major problem for the Nigerian political spectrum since independence, and it has infiltrated our current or modern-day politics.

I developed two models of potential solutions to the issues and challenges of electoral data management as a masters student of political science under the tutelage and mentorship of Prof. Bolaji Omitola..

These models are :

- 1 . Political solution
- 2 . ICT solution

POLITICAL SOLUTIONS TO THE ISSUES AND CHALLENGES OF ELECTORAL DATA MANAGEMENT IN NIGERIA

- Youths should take an active role in election activities and collaborate with other community organizations to defend their mandate.
- All levels of government should work more proactively with the private sector to build more opportunities for our teenagers, reducing their exposure to election violence.

- Programs of sensitization and education should be implemented.
 - The government should encourage and inspire young people both morally and financially by offering low-interest, short-term loans to help them start their own businesses (ICT Training).
 - The federal and state governments should established more mechanisms for reducing the proliferation of arms in the country because availability of arms fuels election violence (Report of the workshop on Youths, 2006). Good Governance and Electoral Laws Reforms: The underlying problem of political instability is the lack of good governance. Hence, to resolve political instability, accountability, social justice, transparency, rule of law, gender equality and due process must guide governance and leadership. The media and civil society groups have a role in this regard to advocate for these qualities until a desirable state is achieved. Electoral laws reforms would also be necessary, as buttressed by the Electoral Reform Bill, (2010).
- (1) An independent judiciary to interpret the electoral laws.
 - (2) An honest, competent non-partisan electoral body to manage the elections.
 - (3) A developed system of political parties.
 - (4) A general acceptance by the political community of the rules of the game.

Electoral standards which contribute to uniformity, reliability, consistency, accuracy and overall professionalism in electoral data management should have these standards:

1. Constitutional provision that provide the foundation for the key elements of electoral frame work including electoral rights and the basic principles of the electoral system.
2. Electoral law that guides the conduct of the elections including the powers of the electoral management bodies and governmental bodies.
3. The election administration must demonstrate respect for the law; be nonpartisan and neutral; transparent; accurate, professional and competent and must be designed to serve the voters.
4. The electoral management bodies are established and operate in a manner that ensures the independent and impartial administration of elections.
5. Voters registers are maintained in a manner that is transparent and accurate and protects the rights of qualified citizens to register, and prevents the unlawful or fraudulent registration or removal of persons through the use of ICT .

Despite the political reforms of the government, there is other variable or model that will allow for the wholesale implementation of credible electoral data management in Nigeria electoral processes, is the use of adequate INFORMATION , COMMUNICATION TECHNOLOGY (ICT).

THE USE OF ADEQUATE ICT AND THE WAY FORWARD

Information Technology (IT Solutions and The Way Forward Automating an election process, while relying on state-of-the-art in computer and ICT technologies, can significantly mitigate many of the factors that would hamper a healthy progress of an electoral data management process is for automated e registration processes to be fully acceptable and available nationwide , several issues must be authenticated/validated, Security, robustness, performance and correctness. West African Journal of Industrial and Academic Research Vol.5 No. 1 December 2012 133 Given the short history of e-registration systems across the world and the inherent limitations in the scope of implementation, it is very difficult to measure the success or failure of any or all of the issues mentioned above. In addition, any voting process is bound by regulations and cultural values that characterize the different casualties involved. Hence, the example of one country may not directly suit the example of another. As a result, it is highly recommended to build a simulation model whereby an e-registration system can be evaluated and various attributes adequately assessed before one is deployed. According to Mohammed, Khwasaneh, Omar Al-jarrah and Barakat in their work, they introduce a simulation model, where the main factors which directly contribute to the success of a registration process are discussed. The simulation parameters can be changed based on the peculiarities of any entity. The main components of the architecture of the model are shown in figure 1. This is a client/server webenabled architecture. Fig.1 :Client and Server-side software systems The server side hosts the central database for the voting as well as the candidate population (registration). The server also collects basic statistics related to an ongoing election process (some statistics can be turned on or off based on the needs and requirements of each election unit). Besides the main functional properties of a registration | voting system, the e-voting system must cater for several essential non- functional requirements. Of utmost importance are the requirements for correctness, robustness, coherence, consistency, performance and security.

The server side hosts the central database for the voting as well as the candidate population (registration). The server also collects basic statistics related to an ongoing election process (some statistics can be turned on or off based on the needs and requirements of each election unit). Besides the main functional properties of a registration | voting system, the e-voting system must cater for several essential non- functional requirements. Of utmost importance are the requirements for correctness, robustness, coherence, consistency, performance and security. The client side represents a voting station, where voters cast their votes. Note that the hardware on the client side includes 10 devices for verification and authentication (e.g., images scanners, ID card readers, finger print reader, etc.) In addition to that, two more requirements are necessary. In order to reduce the traffic rate on the network links, a local database at the client side is required to host the data which pertains to the local voting center. This database (DB) is a rather dynamic one, in the sense that the data stored in its tables may vary over the election time period. The size of the local West African Journal of Industrial and Academic Research Vol.5 No. 1 December 2012 134 DB at any voting center is only a small fraction of the global DB at the server side. The use of a local DB enhances the performance of the voting process. However, this approach creates a synchronization problem, which he also addressed in this work. The alternative is to use one centralized DB. The voter does not have an insight on how his/her vote is translated and/or tallied. In a paper-based election, the ballot is filled out by the voter and dropped into a sealed box by the voter himself/herself. Voters are counted in the presence of candidates or their representatives. The identification of a voter is done via a card reader which reads off his/her official ID card and retrieves the voter record from the local DB (on the client side) or loads the record from the

central DB if it is not already in the local one. Records are loaded dynamically from the central DB to the local DB's either on demand or on a pre-fetch basis. The voter record includes, amongst others, a biometric description of the voter in question. This could be fingerprint authentication method (other methods can be added to the mode). The voter will be rejected if his /her fingerprints do not match the stored record. In order to reduce false rejections, we store for each voter several copies of his/her fingerprints are stored as an encoded text in order to reduce false rejections, we store for each voter several copies of his/her fingerprints taken at different time periods. Fingerprints are stored as an encoded text in order to reduce storage consumed by images. This dual process should guarantee that no voter can falsely impersonate another. Note that the use of fingerprints or any other scanned image directly impacts the message size and hence the performance of the network. Hence, a distributed database approach is preferable over a centralized approach. The accuracy and correctness of the evoting process can be further jeopardized if the same voter casts two or more voters, or a vote is not properly added to the overall count of the right candidate. Such mishaps may come about as a result of synchronization conflicts at the central DB level. In order to prevent two or more voters per voter, we use a "voting status flag" in the voter record. This flag is initialized to FALSE. The voting status flag is set to TRUE in the central DB whenever a voter identity is verified (before authentication takes place). If the authentication fails, the flag is reset to FALSE. If the voter leaves the station without completing a vote, the flag is also reset to FALSE; thus allowing the voter another chance to try again and cast his/her vote. If the voter successfully completes the voting process, the flag remains set to TRUE. Note that even if the result of the vote is not committed to the central DB in due time, the flag in the voter's central record is set to TRUE, thus eliminating the possibility of another attempted voting by the same voter, or by someone who carries a counterfeit ID card. This requires that whenever the record of a voter is accessed for identification, even when the record is found at the local DB, the flag on the central record must be checked. If it has already been set to TRUE, the voter is denied access and his/her attempt fails to go through. If two people carrying the same ID card (one is authentic while the other is counterfeit) attempt to vote simultaneously, the first one to access the record will set the flag to TRUE, load the record and prevent the other one from accessing the record. Of course, if the one with the counterfeit card obtains the record first, the vote cast will fail at the next authentication step. It is possible that a record gets loaded into two different voting centers due to block transfer from the central DB into local DB's. When a voter attempts to access the record from any of the stations, the client will verify the central record flag. If it has been set to TRUE, access is denied; otherwise it sets the flag to TRUE and access is granted. Note that simultaneous requests to the same record will be synchronized by the DB query serialization process (only one query may access any table at any given time). This mandatory check of the flag in the central DB will add extra overhead on the network. This overhead is already included in reflected into the ensuing simulation. Another synchronization resolution is required when a vote is to be tallied into the record of a candidate. If candidates are being selected by several voters at the same time, then a certain assignment plan needs to be put in place so that all votes will be tallied (no misses) and added to the candidate's record. Again, we use a "COUNT" flag/muted for the candidate's record. The COUNT flag is initially set to FALSE. When the record is selected by a voter, the flag is set to TRUE until the record count is updated, then the flag is reset to FALSE. All votes for the same candidate will be queued until the flag is reset to FALSE. In order to improve the 'hit' performance, a counting semaphore COUNT can be used instead. West African Journal of Industrial and Academic Research Vol.5 No. 1 December 2012 135 Fig. 2: Voting Process Flow Chart A copy of the vote will be printed only when the vote is successful and the candidate's record is updated. This requirement, initially made for

transparency purposes, provided a final test for the accuracy and correctness of the process, especially in the presence of thread hang-ups. Figure 2 shows a flowchart of the voting model. Communication using computer has brought a revolution in the world of information technology, particularly in the field of personal computer (PC). A Network is a way or means of transmitting or receiving (exchange) information from one or more sources. It provides the means for locating and transporting information. In computer networking, the origin of information request utilizes the services of a network to locate and return the information. This is done with addresses. The address identifies the network resources. There are two popular architectures for networking, hierarchical and peer. The entire computer network can be classified into two broad categories (however, elaborate categorization exists), they are LAN (Local Area Network) and WAN (Wide Area Network). The benefit of computer networking includes, but not all; file sharing, sharing of peripheral devices such as printers, fax machines and scanners, manufacturing process control, data management, web browsing as well as voice and video communication. This means that data can be used by all INEC applications. Data is input only once, thereby eliminating input errors from multiple entries of the same data. The INEC server should be installed at the INEC Headquarters (Abuja Server) which link to the units, wards, local governments.

WAN (Wide Area Network). The benefit of computer networking includes, but not all; file sharing, sharing of peripheral devices such as printers, fax machines and scanners, manufacturing process control, data management, web browsing as well as voice and video communication. This means that data can be used by all INEC applications. Data is input only once, thereby eliminating input errors from multiple entries of the same data. The INEC server should be installed at the INEC Headquarters (Abuja Server) which link to the units, wards, local government and states. The diagram below show the major areas of INEC e-Voting system Sequel to these lapses and setbacks associated with manual registration system, that triggered my interest to develop or devise an electronic registration and voting system that will reduce to the barest minimum (if not eradicate) election rigging and other related electoral malpractices. e-registration and evoting is only practice in Nigeria by the media that is virtual. Fig. 3: Architecture of the E-voting System The IT-Based solutions; we introduced an e-voting system that controls the following:

- Central, In-house database
- Data is input only once
- Real-time reporting of all transactions from various units, wards, local governments and states
- Direct availability of all data to external applications via web programming. Every transaction made in the system is summarized and place into a transaction log. You can view every time in the same details it was input into the system.
- The relational database is common to all INEC applications and locations in the thirty six states of the federation

Summary and Conclusion The Government of Nigeria should do the following

a) Emphasize accountability and prosecute former corrupt political office holders.

b) Remove the 'immunity clause' from the Constitution and institute a viable social security regime

c) Ensure capacity building for the Police and other security agencies as well as increased cooperation in the area of small arms proliferation.

d) Ensure the Electoral Reform Bill is review again to see the grey areas before 2015 Elections.

- e) The International community should pressure Nigeria to intensify the anticorruption fight by avoiding selective justice.
- f) The media and civil society groups should pressure Nigerian government to ensure that accountability, social justice, transparency, rule of law, gender equality and due process are adhered to.
- g) Proper education on the use of ICT tools to fore stall riggings, multiple votes etc .

CONCLUSION:

Nigeria is in a critical dilemma in its political history. The country has witnessed poor political leadership as a result of flawed elections and electoral data management. The electoral standards which contribute to uniformity, reliability, consistency, accuracy and overall professionalism in elections have been abandoned in Nigeria elections. But there is now a real possibility to conduct credible, free and fair elections and equally be an adequate and accurate electoral data management in Nigeria electoral processes with the new elections, electoral law and a credible, respected and radical leadership of Commission (INEC). INEC has a responsibility to rise up to the challenge by keeping faith with its vision, mission and principles. In addition, all stakeholders including citizens must perform their roles to make Nigeria the actual giant of Africa that is worth emulating.

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