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# The Analysis of the use of Smart Card Reader (SCR) and Credible Elections in Nigeria 2015

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This study provided the analysis of the use of smart card reader (SCR) and credible elections in Nigeria 2015. The study was conducted in Makurdi Local Government Area of Benue State. Four objectives were set to achieve and 1 hypothesis formulated. The population for the INEC included all the 207 INEC staff in Makurdi Local Government Area. The sample for the study was 180 respondents. Data was collected with the use of researcher's constructed questionnaire. Data collected was analyzed using descriptive statistics; arithmetic mean and standard. Inferential statistics; chi-square was employed to test hypothesis. Findings for the study revealed a significant Chi-square calculated (X-cal) of 2.71 and the chi-square tabulated (X-tab) of 2.69 (p=2.71>2.69). This was an indication that smart card reader has credibility on the conduct of the 2015 general elections in Nigeria. The study concluded that the evolution of smart card reader technology marks the significant development of electoral systems in many counties. It was recommended that all Nigerians should accept the use smart card readers in the conduct of elections at all levels. Both INEC and Adhoc staff should be properly trained on the use of smart card readers to eliminate the challenges experienced in the 2015 general elections.

Key Worlds: Smart Card Reader (SCR), Credible Elections.

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## INTRODUCTION

Election is the process whereby an electoral chooses, by voting, officers either to act on its behalf or represent it in an assembly with a view to governing or administering. An electorate refers to a class of citizens entitled (by a law course) to vote in an election, by whatever procedure (Santon, 1983).

Elections provide for a bare minimum of political participation, perhaps the only act of participation for the vast majority of the governed, and therefore create a feeling of belonging and a degree of responsibility for government decisions. Elections could be seen as institutionalized procedures for the choosing of office holders by some or all the recognized members of a society. So an electoral system exists to provide the electorate with opportunity and the right to choose their representative and maintain contact with them. Hence, for an electoral system to be democratic, it must provide for equal electorate and the freedom by that electorate to make a real and meaningful choice devoid of coercion or intimidation (Eminue, 2005). In effect, 'election would be deemed to be democraticand hence good if it is free and fair and not based on patronage of any kind.

Therefore, elections in Nigeria though seen as a means of controlling the government; within context of electorate's participation reveal a rather disturbing 'state' that has called for serious concern. Duru (2002) noted that, indeed the Nigerian electoral process since independence has gained an unenviable reputation for fraudulent practices. This situation has forced many to see elections in Nigeria as a mirage or a mere 'selection'; selection in the sense that the electorate are left out of the entire system, owing to the fact that elections are conducted with or without the full participation of the electorate, who are supposed to choose those who rule over them. The organization of elections in Nigeria have often been carried out without due involvement of the people. The system operates in a way that suggests a total disregard and misapplication of democratic ethos. Thus, the outcome has always been manipulated in favour of candidates of the powerful few. This is unfair and shameful, given the democratic system we opted for. It better telling the people that the leaders would be 'selected' so that they would not bother to queue up in the scorching sun. But allowing them to vote and later turning things upside down is the height of betrayed that must be resisted. It is in the light of the above, that the independent Electoral Commission introduces the smart card reader in the electoral processes to reduce the high level of mal-practice.

The smart card reader is an electronic device which is use to detain the atelicity of one's permanent voters card. The smart card reader was the most highly contentious and the real issue in the 2015 general elections in Nigeria. The smart card reader was a critical component in the 2015 general elections. It was used for the first time in Nigeria's electoral process and it remains one of the greatest innovative technologies in the 2015 general elections.

The smart card reader is a technological device setup to authenticate and verify on election day a Permanent Voter Card (PVC) issued by INEC. The device uses a cryptographic technology that has ultra-low power consumption, with a single core frequency of 1.2GHz and an Android 4.2.2. Operating System (INEC, 2015). In other words, the INEC card reader is designed to read information contained in the embedded chip of the permanent voter's card issued by INEC to verify the authenticity of the Permanent Voter's Card (PVC) and also carry out a verification of the intending voter by matching the biometrics obtained from the voter on the spot with the ones stored on the PVC (Engineering Network Team, 2015).

The ability of the card reader to perform the above described functions as well as keeping a tally of the total numbers of voters accredited at the polling unit and forwarding the information to a central database server over a Global System for Mobile (GSM) network makes the card reader most welcome at this point in time in the nation's electoral history (Engineering Network Team, 2015). Card reader also helps in maintaining credible electoral system.

Electoral system is a process by which citizens of a given democratic entity elect representative to handle their machinery of government. This is done through vote casting. According to Beetseh & Akpoo (2014), electoral system is only one factor in the evolution of a party system, but the effects of different electoral system can be found in the structure, ideology, the pattern of the party interaction and the members of the parties that compete in the political system. An electoral system consists of more than the method of counting votes cast by the voters. A full description of an electoral system would include such factors as the extent of franchise that is, who is entitled to vote? It would include the rules relating to the candidates and parties, and those regulating the administration of election, especially the provision against corruption.

According to Beetseh & Akpoo (2015), electoral system is the institutionalized arrangements by means of which an election is conducted and the purpose of the election fulfilled the term according to Hague and Harrop (2013) covers the legal and practical realities of voter registration and election administration as well as the prices rule for translating. This study therefore provides an in-depth analysis of the use of Smart Card Reader (SCR) and credible elections in Nigeria using the 2015 general elections as case study.

## STATEMENT OF THE PROBLEM

Elections in Nigeria are usually characterized by thuggery and violence. This is as a result of malpractices experienced during election. The search for credible elections has been a major source of concerned to Nigerian. Elections in the past were done through the use of manual accreditation and this creates room for massive manipulation of election results by the ruling party. The resultant effect of this menace is poor governance as contestants who claim to emerge winners feel they bought votes by their money, as such, no meaningful development is recorded.

It was at this background that the Independent Electoral Commission under the leadership of Prof. Jega introduced the use of an electronic device called Smart Card reader (SCR) which was use in the 2015 general elections which seem to have provided some credibility in the electoral process. It is in the light of the above, that this research paper intent to analysis the use of Smart Card Reader (SCR) and credible elections in Nigeria in electoral process.

## **OBJECTIVES OF THE STUDY**

The broad objective of the study is to analyze of the use of Smart Card Reader and Credible Elections in Nigeria in 2015 general election. The objectives of this paper are;

1. To identify the reasons for use of Smart Card Reader (SRC) in Nigerians 2015 general Elections

2. To ascertain the credibility of the Smart Card Reader (SCR) in Nigerians 2015 general Elections

3. To find out the challenges of using the Smart Card Reader (SCR) in Nigerian's general elections

4. To profound solutions to the challenges experience in the use of smart card readers in Nigeria's 2015 general elections

#### Hypotheses

 $H_1$ : There is no credibility in the use of Smart Card Reader (SCR) in Nigerians 2015 general Elections  $H_2$ : There is credibility in the use of Smart Card Reader (SCR) in Nigerians 2015 general Elections

## MATERIALS AND METHODS

This study is conducted in Makurdi Local Government Area. Makurdi is the capital of the of Benue state in Nigeria. The city is located in central Nigeria along the Benue River and holds the base for the Nigeria Air Force's MIG 21 and SPECAT Jaguar aircraft squadrons. Makurdi had an estimated population of 500,797. Makurdi is home to Benue State University and the Federal University of Agriculture (The World Gazzetteer, 2007).

The population for this study includes all the 207 INEC staff in Makurdi Local Government Area. The sample size of 180 respondents was selected for the study using simple random sampling technique.

Data was collected with the use of researcher's constructed questionnaire. Instrument for the study was validated by two experts in College of Agricultural and Science Education, University of Agriculture Makurdi. The Cronbach Alpha Coefficient of 0.82 was found to be reliable for the items.

Data collected was analyzed and presented in tables using descriptive statistics; arithmetic mean and standard. Inferential statistics; chi-square was employed test hypotheses.

#### **DISCUSSION OF RESULTS**

In table 1, the result revealed that all respondents rated the items with mean above 2.50 which is the bench mark. They agree that card reader is the best option to curb electoral malpractices (3.22), it will boost Nigerians confidence in the process (3.200), failure to use it may cause postponement of elections (2.57), further delay with the elections will be violating the constitution's laws (3.32), people want it (2.80), other countries have used it and it worked (2.57) and it has shown it will work (2.32). This indicates that INEC had enough reasons for using card readers to conduct the 2015 elections.

The findings of this study confirms with the study conducted by Sanjay and Ekta (2011) on the title analysis of Electronic Voting System in Various Countries in M. M. University, Mullana, India. The study revealed that smart card reader eliminates the possibility of invalid and doubtful votes which, in many cases, are the root causes of controversies and election petitions. It makes the process of counting of votes much faster than the conventional system. The smart card also reduces to a great extent the quantity of paper used thus saving a large number of trees making the process eco-friendly. It reduces cost of printing almost nil as only one sheet of ballot paper required for each polling unit.

In table 2, respondents agree that this device was part of the registration and authentication of duly registered voters with mean rating of 2.87, the card reader had been promoted by INEC as an anti-electoral fraud (2.78), the device and was introduced to enhance the integrity of the voting process (3.23), dissuade multiple voting (as only duly accredited and verified PVC holders could vote) (3.18), the card readers were also programmed to work for specific polling units (3.15) and infused some level of transparency and credibility into Nigeria's electoral process (2.72) respectively. This is an indication that card readers ensure credibility in the 2015 general elections in Nigeria.

This result is similar to a report made by Dr. Ekumen, Emmanuel on Recounting the Card Reader Experience in Thisday Newspaper of 23<sup>rd</sup> April, 2015. According to the report, the use of card reader machines for the 2015 general elections has proved that INEC could conduct credible elections with minimal complaints. The use of card readers for elections is highly commendable because it has helped reduced election fraud like multiple registrations and multiple voting. With the card readers, the true identities of card holders were matched with the details contained in their permanent voter's cards (PVCs), during accreditation and the process helped in reducing fraudulent accreditation that marred electoral processes in the past.

Result in table 3 shows the problems experienced by the use of smart card reader in the 2015 general elections in Nigeria. All respondents agree that during the election, card readers had possible battery failures to power the device (2.56), timeliness issues in verifying PVC holders (2.54), many voters could be covered within the accreditation process (2.73), the card readers could not access names of voters beginning from alphabets A

## **PRESENTATION OF RESULTS**

S/N	ltem	SA	Α	D	SD	Ν	Mean	Std. Dev.	Remarks
1	It is the best option to curb electoral malpractices	96	37	34	13	180	3.20	0.99	Agree
2	It will boost Nigerians confidence in the process	66	39	45	30	180	3.20	0.99	Agree
3	Not using it may cause another postponement								-
4	Any further delay with the elections will be violating the	42	63	31	44	180	2.57	1.09	Agree
	constitution's laws	105	41	22	12	180	3.33	.93	Agree
5	The people want it	72	33	42	33	180	2.80	1.16	Agree
6	Other countries have used it and it worked								U U
		33	72	40	35	180	2.57	1.00	Agree
7	It has shown it will work	33	54	32	61	180	2.33	1.13	Agree

Table 1: Mean responses on the reasons for use of smart card reader

Source: Field survey, 2015

Table 2: Mean responses on the credibility of smart card reader

S/N	ltem	SA	Α	D	SD	Ν	Mean	Std. Dev.	Remarks
8	This device was part of the registration and authentication of duly registered voters	69	44	42	25	180	2.87	1.00	Agroo
9	The card reader had been promoted by INEC as an	09	44	42	25	100	2.07	1.09	Agree
10	anti-electoral fraud The device and was introduced to enhance the integrity of the voting	66	39	45	30	180	2.78	1.12	Agree
11	process Dissuade multiple voting (as only duly accredited and verified PVC holders could	102	38	20	20	180	3.23	1.03	Agree
12	vote) The card readers were also programmed to work for specific polling units	96	36	32	16	180	3.18	1.02	Agree
13	Infused some level of transparency and credibility into Nigeria's electoral	97	33	30	20	180	3.15	1.06	Agree
	process	60	45	39	36	180	2.7167	1.12996	Agree

**Source:** Field survey, 2015

S/N	ltem	SA	Α	D	SD	Ν	Mean	Std. Dev	Remarks
1	Possible battery failures to power the device	29	76	40	35	180	2.55	0.98	Agree
2	Timeliness issues in verifying PVC holders	27	53	36	64	180	2.54	1.09	Agree
3	Many voters could be covered within the accreditation process	57	48	46	29	180	2.74	1.07	Agree
4	The card readers could not access names of voters beginning from alphabets A to E, which eventually deprived them from voting		10	10	20	100	2.7 1		, gi oo
		55	44	47	34	180	2.67	1.10	Agree
5	Inability to capture the biometrics from finger tips	00		00	00	400	0.07	4.40	-
~	lune auden erentunisen.	90	38	26	26	180	3.07	1.10	Agree
6	Irregular capturing	23	82	40	35	180	2.52	0.94	Agree

Source: Field survey, 2015

Table 4: Mean responses on the solutions to challenges of smart card reader

S/N	ltem	SA	Α	D	SD	Ν	Mean	Std. Dev.	Remarks
15	Verify if minimum system requirement is met	49	38	20	73	180	2.55	1.26	Agree
16	Verify the reader's status under Device Manager								-
4 -		61	50	27	42	180	2.72	1.16	Agree
17	Try other USB ports	58	61	33	27	179	2.84	1.04	Agree
18	Change the drive letters	65	52	47	15	179	2.93	0.98	Agree
19	Confirm your memory card can appear as a drive letter	54	39	51	35	179	2.63	1.11	Agree
20	Install Card Recovery on your computer	87	44	24	24	179	3.08	1.07	Agree
21	Do not remove memory card during photo saving and viewing	84	39	36	20	179	3.04	1.05	Agree
22	Do not change memory card when the camera is								-
23	on. Stop taking/viewing new	88	41	30	20	179	3.10	1.04	Agree
	pictures on battery low.	54	45	44	36	179	2.65	1.11	Agree
24	Try inserting a different card	50	42	17	70	179	2.50	1.26	Agree

Source: Field survey, 2015

 Table 5: Chi-square result on the use of smart card reader and credibility of elections

Variable	Х	X-cal	X-tab	Df	Remarks			
Smart Card Reader	3.2	2.71	2.69	9	Significant			
Credibility	3.17							
*Significant at 0.05								
Source: Field survey, 2015								

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to E, which eventually deprived them from voting (2.67), inability to capture the biometrics from finger tips (3.07) and irregular capturing (2.52). This means there problems associated with the use card readers in elections.

This result is also in line with the observation of Alebiosu (2015) who outlined the Challenges of Smart Card Reader in the 2015 General Elections in Nigeria. Alebiosu observed that in spite of the assurances given by INEC to address the issues that aroused with the card readers after its test-run in twelve states of the federation, the 2015 general elections witnessed the inability of the device to deliver effectively in a large number of polling units especially in the Presidential and National Assembly Elections.

The level of awareness among the electorates about the card reader was poor. A large number of Nigerians especially the electorates in rural communities are completely unaware of the device. Many of these categories of people have neither seen nor heard about the card reader until the Election Day. These categories of people have no information on the role of the card reader in the elections. There was a lot misconception about the device. To some of the electorates, the card reader was a voting device. This inadequate information dissemination and poor sensitization of the electorates on the card reader led to some poor human relations and uncooperative attitudes between some of the illiterate electorates and election officials.

The training given to the ad hoc and INEC staff on the use of the card reader was inadequate. Majority of the Presiding Officers and Assistant President Officers I in the polling units were not effectively trained on the proper use and handling of the card reader. In most cases the venues provided by INEC for their training were crowded and not conducive such that most of the trainees did not properly receive the instructions on the use of the card reader. There were imperfect practical demonstrations of how the card reader would properly be effective. In some cases two card readers were provided for a class of hundred trainees.

A large number of the trainees did not have the opportunities of operating the device. In some few cases, those that received training were replaced with those that have no proper idea of the effective use of the device. All of these led to the poor handling of the card reader during the elections to the extent that the protective film of some the card readers were not removed thereby leading to the impossibility of the device to detect thumbprints in some cases.

Card reader breakdown was also witnessed during the elections. Some of devices malfunctioned on the day of election. Though, INEC had provided back-up in case of any card reader breakdown. However, some of the back-up failed to also function. For instance, five 17 card readers were deployed for use at the polling unit of the

Presidential Candidate for PDP in Bayelsa State yet none of them functioned. Similarly, the card reader at the polling unit of the Vice-Presidential Candidate of APC was non-functional.

A number of the smart card readers were not smart to function effectively. A few of the card readers were unable to function due to blank screen, non activation of the Subscriber Identification Module (SIM) card in the device and low battery. Some INEC officials according to Ekumen (2015) attributed the failure of the card readers to INEC engineers who could not decode the inbuilt security installation in the card reader. The security code in the card reader is reportedly designed to update the time and date of voting. One official claimed that the cards were initially programmed for February 14 that with the postponement to March 28, some of the cards readers had not been re-programmed.

In table 4, all items had mean ratings above 2.50. Verify if minimum system requirement is met (2.55), verify the reader's status under Device Manager (2.72), option to try other USB ports (2.84), change the drive letters (2.93), confirm your memory card can appear as a drive letter (2.63), install Card Recovery on your computer (3.08),do not remove memory card during photo saving and viewing (3.04), do not change memory card when the camera is on (2.65), stop taking/viewing new pictures on battery low (2.65) and try inserting a different card (2.50) were agreed by respondents to be options for handling card readers. This means there are solutions to solving card reader problems during elections.

Table 5 shows the chi-square result on the credibility of elections. The Chi-square calculated (X-cal) was 2.71 and the chi-square tabulated (X-tab) was 2.69 (p=2.71>2.69) with a degree of freedom 9. This is an indication that smart card reader has credibility on the conduct of the 2015 general elections in Nigeria. The null hypothesis which states that there is no credibility in the use of Smart Card Reader (SCR) in Nigerians 2015 general elections which states that here is credibility in the use of Smart Card Reader (SCR) in Nigerians 2015 general elections is rejected and the alternative hypothesis which states that here is credibility in the use of Smart Card Reader (SCR) in Nigerians 2015 general elections is therefore upheld.

This finding confirms with a study conducted by Alebiosu (2015) on Smart Card Reader and the 2015 General Elections in Nigeria in Federal University Wukari, Nigeria. This paper therefore examines the debate and the role of the card reader in the 2015 general elections. The paper also looks at the challenges and impact of the card reader on the election. The paper argued that considering the massive electoral fraud witnessed in general elections since Nigeria's independence, the card reader should be used for future elections.

The paper also revealed that despite the challenges that confronted the operation of some of the smart card readers during the 2015 general election, a significant impact of the device usage was observed after the elections. First, the use of the card reader led to the increase and reinforcement of public confidence and trust in the electoral process. This public confidence is dependent on the integrity of an election which the 2015 general election appears to possess.

Majority of Nigerians after the elections believed that their votes could count and as such their will could be respected in future elections; and this has reinforced the legitimacy of Nigerians in the democratic process. Secondly, electoral fraud was reduced. Inflation of the number of voters present and multiple voting at polling stations were reduced. The device checked the undemocratic attitude of politicians in polling booth electoral malpractices.

Thirdly, election litigations were minimized. There was a departure from the past where every election outcome is being contested at the election tribunal. Most of the candidates that lost in the 2015 general election did not challenge the outcome. In fact, some of the major contenders that did not win in the election embraced and congratulated the winners. For instance, the PDP presidential candidate immediately congratulated the APC presidential candidate, the winner of the presidential election. This attitude also happened across many states of the federation in the governorship and house of assembly elections and national assembly elections.

In addition, electoral conflicts and violence was very minimal as the election was seen to be transparent and credible due to the use of the card reader. The usually excessive and pointless attacking and degrading between the election winners and losers in past electoral contest was significantly reduced. In view of the minimal level of electoral fraud due to the use of the card reader, tensions were reduced among the political gladiators, and as such, electoral conflict and violence was grossly diminished in the 2015 general elections outcome compare to past elections in Nigeria.

The paper further stressed that Nigeria's democratic capacity has increased and its democratic institutions strengthened. Nigerians and Nigeria's democratic institutions now understood the knowledge needed to have a free and fair election in order to deepen the democratic process. Consequently, subsequent general elections in Nigeria should gradually continue to be technologically driven.

## CONCLUSION

The introduction of technology has resulted to incremental development in Nigerian electoral process. An example of incremental development is the gradual replacement of manual voter register with smart card reader. The evolution of smart card reader technology marks the significant development of electoral systems in many counties like USA. The use of technologies by INEC is as a result of electoral malpractices experienced in past elections which lead to poor governance in the country.

#### RECOMMENDATIONS

Based on the findings of this study, the following recommendations are made:

- 1. All Nigerians should accept the use smart card readers in the conduct of elections at all levels.
- 2. Both INEC and Adhoc staff should be properly trained on the use of smart card readers to eliminate the challenges experienced in the 2015 general elections.
- 3. INEC should insist on the use trained personnel in smart card reader. There should be no substitution of electoral personnel by politicians during elections.
- 4. Proper electricity to power smart card battery be put in place in all polling units across the country
- 5. Electorates should be given proper orientation on the use of smart card readers

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