Election, Technology and Voter Turnout in Nigeria’s Fourth Republic: A Study of 2015 Kwara Gubernatorial Election

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Abstract
In the recent time, the introduction of technology into the management of electoral process has become a popular practice among democratic countries, especially in Africa. This cannot be disconnected from the argument that technology helps not only in delivering free, fair and credible elections but also that it serves as a means to increase voter turnout. Nigeria’s election management body, the Independent National Electoral Commission, introduced Smart Card Readers (SCRs) and Permanent Voter Card (PVC) during the 2015 elections with the aim of enhancing both the integrity and legitimacy of the elections. Despite this, official report from INEC showed that only 38% of registered voters cast their votes in the 2015 Kwara state gubernatorial election, a figure that represents the lowest in the history of governorship election in the state since democratic rebirth in 1999. This paper investigates the impact of technology on voter behaviour during the 2015 gubernatorial election. Adopting descriptive research design and mixed method of data collection, the paper finds that there is significant relationship between introduction of technology and voter turnout during the election.

Keywords
Election, technological innovation, voter turnout

Introduction
In all democratic systems, election is a fundamental element of any consensus-based democratic society owing to its crucial functions. Democracy without election therefore is at best a pseudo-democracy. Election remains the bedrock of any democratic setting. However, as important as election is to

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representative democracy, robust voter turnout goes a long way in determining its fairness and credibility. Among other researchers, Norris (2003) and Antonio (2015) argue that election technology is essential in conducting a credible election and increase voters’ turnout. This is because elections in some parts of the world have been marred by irregularities such as rigging, violence and consequently low voter turnout. This explains why the adoption of different technological innovations in conducting elections across different political systems in the world is becoming popular either for voter registration, voter accreditation and authentication or vote counting. Technology is therefore slowly helping the world’s democracies increase transparency, facilitates turnout and reduces the cost of running elections whilst increasing integrity and security (Antonio, 2015: 111).

Since 2000, for instance, USA has been using combination of different technological tools like Punch Card Machine, Optical Scanner System, Diebold Machine and Level Machine among others to conduct its elections (Charles, Adebiyi and Sofoluwe, n.d). Similarly, they find that in India, Electronic Voting Machine (EVM) which was developed from indigenous technology has been a major technological gadget used in conducting elections in the last two decades. Coming to Africa, no fewer than 25 sub-Saharan African countries (such as Sierra-Leone, Democratic Republic of Congo, Zambia, Malawi, Rwanda, Senegal, Somaliland, Mali, Togo, Ghana among others) have already held elections employing a biometric voter register (Piccolino, 2015). Also, while reacting to a senate section which questioned the legality of card reader machine in Nigeria, Jega (INEC Chairman) stated that Nigeria was not the first country to introduce smart card reader into election but were used in Ghana, Kenya and other African countries (Daily Trust, 2015). Though, the use of technologies is not an end in itself it assists in the various aspects of electoral administration (ACE project, n.d).

In its bid to ensure high level of voter turnout and election credibility in Nigeria, the electoral umpire in the country, INEC, embarked on some technological innovations and reforms prior to 2015 general elections. These included the introduction of biometric register of voters, advanced fingerprints identification system, Smart Card Readers and the full application of Permanent Voter Card. Although, SCR was strongly criticized by many stakeholders who questioned its legality and prophesized its failure, for instance, Senator Victor Ndoma-Egba alleged that the use of the card readers violates the electoral law (Daily Trust, 2015). He substantiated this with section 52(2) of the Electoral Act 2010 (as amended). Also, citing the same section of the Electoral Act, Peters (2015) criticized that the use of the card reader is illegal. Adding to this criticism, Governor Aliyu of Niger state observed that given the experience of Nigerians with the identity card registration, the possibility of the failure of the system could not be ruled out (The Guardian, 2015), notwithstanding these criticisms, INEC went ahead to conduct the 2015 general elections with full application of the technologies.
The basic rationale for this application is that experiences have revealed that low voter turnout, multiple voting, and impersonation are parts of the major setbacks of many elections in Nigeria’s fourth republic Okolie (2005), Oladotun and Rafiu (2015:12), Aremu and Aluko (2016) and Cletus(2017). The Kwara state gubernatorial elections since 1999 are not exempted. In 1999 Kwara state gubernatorial election, only 59.9% of the total registered voters (947,814) turned out for the election. Even though it steadily increased to 63.4% of 995,882 total registered voters and 65.8% of 1,293,852 total registered voters in 2003 and 2007 respectively, voter turnout in 2011 drastically declined as just only 45.2% of 1,115,665 registered voters cast their votes on the Election Day.

Indeed, while commenting on the election, former Chairman of INEC, Professor Attahiru Jega, lamented thus:

that there exists voters apathy in Nigeria is no longer contentious. Voters’ turnout in the just concluded general elections had provided a scientific and empirical evidence of voters’ apathy and disinterestedness of sections of the electorates in elections…. (The Nation, 2011).

Kwara state therefore, ahead of the 2015 general elections, received 1,171,975 and 3,670 Permanent Voters’ Cards and Smart Card Readers respectively. Surprisingly, the outcome of 2015 gubernatorial election revealed that out of 1,142,267 registered voters in Kwara state, only 434,354 voters which represents 38% of them turned out on the Election Day (INEC report, 2015: 153). Therefore, despite the introduction of technological innovation, turn out of voters during the 2015 governorship election in the state represents the lowest level of turnout recorded in the state since 1999. It is against this background that this paper seeks to assess the effectiveness of the technological innovations in the gubernatorial election, examine their relationship with the level of voter turnout and predict level of voters’ turnout in future gubernatorial elections in the state. This study is therefore significant because earlier researches examined other variables that may be responsible for the dismal turnout like ethnicity, religion, voter behaviour, voter apathy political violence, godfatherism, political behaviour etc. For instance, while Faeren (2015) studied Voter Apathy and voter turnout in the 2015 general elections: the Benue state experience, Anthony and Callistus (2017) work focused on the ethnicity, religion and voter’s behaviour: the experience of 2015 presidential election in Nigeria. Thus, this paper contributes to extant knowledge on the association among election, technology and voter behaviour in Nigeria.
Conceptualizing Election, Voter Turnout and Election Technological Innovation

Election

Election is a process and one of the cardinal features of a representative democracy. In fact, nowadays, the internationally recognized barometer for assessing the quality of democracy is the quality of election being conducted by a political system. Etymologically speaking, the word election was derived from a Latin verb “Elegere”, meaning to pick out, or to choose. However, it is important to note that scholars have traced the origin of election to the development of Jefferson Republican of 1800 and Conservative Party of 1832 in U.S.A and Great Britain respectively. Apart from the party politics origin of election, another school of thought believes that the idea of election came about because of the failure of direct democracy to be practicable in the modern city-states thereby representative democracy which allows electioneering became globally accepted (Olaniyi, 2017). Be that as it may, election as a concept in political science does not have a generally acceptable definition.

Obakhedo (2011: 101) argues that election is an integral part of a democratic process that enables the citizenry determine fairly and freely who should lead them at every level of government periodically and take decisions that shape their socio-economic and political destiny; and in case they falter, still possess the power to recall them or vote them out in the next election. The basic tenet upon which this conception is premised is that the sovereign power of the state is vested in the hands of the citizens who use this popular sovereignty to recruit or sack leader into or from public offices. According to Bassey and Samuel (2011), elections are technical means of ensuring popular participation in government.

In other words, it is a process by which people of different social classes in a democratic society are given opportunity to determine who should govern them and the kind of policies expected from him/her. This is because the judgemental power of the electorates is done by subjecting campaign promises and manifestoes of candidates and their political parties into scrutiny prior to the Election Day. Nwolise (2007: 155), Aremu and Aluko (2016) explains that election is a process of selecting the officers or representatives of an organization or group by the vote of its qualified members. Thus, unlike the aforementioned definitions that restrict the scope of election to public offices and state alone, they argued that election can also take place in any organization of people where members who satisfy the electoral requirements will be elected by other members of that organization.

From the foregoing definitions, it shows that, election is premised on people who have roles to play in determining the governance of the state. This is usually done by turning out to vote during the election. This is because the extent at which an election is regarded free and fair is an explanatory factor for the level of voter turnout. The importance of election in liberal/representative
democracy cannot be overemphasized. Elections are means to an end, and that end is democratic governance and a democratic society (Sagay, 2008:1). He opines that elections are part and parcel of the democratic process, and as the right to democratic governance has become established as a human right, so too has the right to regular, free and fair elections. Put simply, there can be no representative democracy without free, fair, credible and valid elections. Indeed, elections constitute the threshold or doorway into a democratic, stable and progressive society because of the functions they perform in liberal democracy. These functions of election according to Waldemar (2013) include delegation of political representation, selection of the political elite, legitimisation of those in power, control over authorities, ensuring political accountability, creation of political programmes and recreation of the image of public opinion.

As important as elections is to liberal democracy, free, fair and credible election is crucial to democratic consolidation and voter participation. The election would be credible, when rules, regulations and laws governing the electoral process will be followed by and ultimately, the credible candidate will be freely and fairly elected to represent the electorate (Mollah, 2016). He posited that indicators of free and fair elections include an effective legal framework, equal voting rights of universal adult franchise, direct and secret voting system, election commission would be independent, security of voters must be ensured before and after election, the fair play of election administration, access to media and election observer in election process, free speech and association, counting votes accurately and impartiality of acting government. If all these indicators are observed, Mollah argues that electorates will be willing to participate in electoral process and in extension leads to high level of voter turnout. Invariably, the absent of all or some of these indicators lead to political apathy which is dangerous to democracy.

**Voter Turnout**

Perhaps, an appropriate premise upon which this discourse should commence is the conceptualization of voter turnout (as a dependent variable in the work). This is because the concept is a victim of definitional pluralism and there have been significant misconceptions of voter turnout with political participation.

According to McLean and McMillan (2009), voter turnout is the proportion of the registered electorate who vote in a given election. Voter turnout is the extent to which eligible voters use their vote on Election Day (Abdurashid, 2016: 17). According to Sakah (2015: 3), it is the percentage or voting age population (or the percentage of registered voters) who actually came out to vote in an election. Voter turnout refers to the participation in the voting by the people of a democratic state, or in any political, social organization (Cletus, 2015). In a nutshell, voter turnout as defined by these scholars shows that it is
an integral part of election in any democratic setting as it refers to the ratio of eligible citizens that vote on the Election Day. High voter turnout is desirable in any democracy and if it is low, the legitimacy of the government remains questionable.

The measurement of voter turnout varies from one scholar or country to another. As posited by Abdurashid (2016: 17) it is measured as the percentage of votes cast at an election, including invalid votes. This is otherwise known as total vote method (Reynolds, 2012). According to Reynolds (2012), another means to determine voter turnout is the method used by the United States Census Bureau. This technique relies on what is known as the voting age population or VAP. As the name implies the Voting Age Population is the total number of people in a given area older than the area’s voting age. To arrive at a voter turnout figure the number of votes cast is divided by the voter population, which will obviously yield a percentage. However, the official turnout figures published by the Independent National Electoral Commission (INEC) are calculated using the total number of vote cast in an election to divide the total number of registered eligible voters for the election.

According to Huntington (1993) cited in Cletus (2017), African countries recorded high voter turnout following the wave of democratization in the continent from the mid-1980s. However, Nigeria, Egypt, Mali and Cote d’Ivoire were exceptions. In 2001, Nigeria, with 50.3% was one of the countries that had the lowest level of voter turnout in the world. Cote d’Ivoire (37.0%) and Mali (21.3%) have the least. Nigeria was ranked 157th of 169 countries based on level of voter turnout (cited in Cletus, 2017).

Voter turnout in major African democracies has remained high while the Nigeria democracy has continued to under-perform (Cletus, 2017). He asserted that results from South Africa parliamentary elections indicates that in 2014, the country recorded 73.48% voter turnout, in 2009 (77.30%), 2004 (76.73%) and 1999 (89.28%). However, since 2001, voter turnout in Ghana has significantly increased. For instance, according to Pinto, R.L., Gratschew, M., and Sullivan, K. (2001) cited in Cletus (2017), in 2012, while 80.15% of the total registered voters participated, in 2008 (72.91%) and 2004 (85.12%). In Nigeria, voter turnout in elections has been declining with the lowest being the 2015 election which recorded just 43.65% of voter turnout and a much lower voting age turnout (32.11%).

In 2003, Nigeria recorded 69.08%, in 2007 the level of turnout was 58% declining by 11.08%, in 2011 it was 53.68% with 4.32% decline from 2007 and in 2015 it was 43.65% dropping by 10.03%. Thus from 2003 to 2015, voter turnout in Nigeria decreased by 25.43% with the highest decline (11.08%) occurring in 2007. It is not unconnected with this gradual decline in voter turnout following each election in Africa perhaps lends credence to the finding of Kuenzi and Lambright that suggests that voter turnout in African democracies decline as more elections are held (Cletus, 2017).
In his study, Cletus (2017) observed that efforts have been made to identify factors of low voter turnout in Nigeria. He posited that there has been little attempt to define the relative degree of the influence these factors exact on voter turnout particularly in the 2015 election. Studies indicate that many Nigerians are not dedicated to the electoral process for the reason that the political and governance system does not encourage mass participation due to undemocratic tendencies such as rigging, deception, manipulation, sentiments, money politics, ignorance, corruption, unemployment, violence, lack of political interest, low information about election, socio-demographic factor, and political violence (cited in Cletus, 2017). In addition to these, Ibrahim, Liman and Mato (2015) posit that fear of insecurity, economic situation, expectation and political socialization of the electorates among others have been determinant factors for their voting behaviour and political participation. More often than not, political elite marginalization of the populace is explained to be another major factor for the low voter turnout in Nigeria election (Omodia, 2009). He opines that this factor not only limits people participation but also problematic to democratic consolidation in the country. In their study focusing on 1999-2011 elections in Nigeria, Taiwo and Ahmed (2015) assert that male dominance of politics, unemployment, poverty and low level of education are responsible factors for low voter turnout in the country.

**Election Technological Innovation**

Technology has been viewed and defined by different scholars and researchers. According to Reisman (2006) cited in Sazali, Raduan and Suzana (2012: 70), technology is the development and application of tools, machines, materials and processes that help in solving human problem. In other words, technology is the application of scientific knowledge to solve well-defined human problems in the society. Innovation on the other hand is a word derived from *innovare* which means ‘to make something new’. In other words, it is replacing old product with new ones with the aim of continually updating or improving them. Therefore, technological innovation is the process in which new tools, machine, materials or processes are developed and applied to replace existing ones in order to solve human problems.

<table>
<thead>
<tr>
<th>Year</th>
<th>Voter turnout</th>
<th>Total vote</th>
<th>Registration</th>
<th>VAP Turnout</th>
<th>Voting Age Population (VAP)</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>43.65%</td>
<td>29,432,083</td>
<td>67,422,005</td>
<td>32.11%</td>
<td>91,669,312</td>
<td>181,562,056</td>
</tr>
<tr>
<td>2011</td>
<td>53.68%</td>
<td>39,469,484</td>
<td>73,528,040</td>
<td>48.32%</td>
<td>81,691,751</td>
<td>155,215,57</td>
</tr>
<tr>
<td>2007</td>
<td>58%</td>
<td>NA</td>
<td>61,567,036</td>
<td>NA</td>
<td>71,004,507</td>
<td>131,859,73</td>
</tr>
<tr>
<td>2003</td>
<td>69.08%</td>
<td>42,018,735</td>
<td>60,823,022</td>
<td>65.33%</td>
<td>64,319,246</td>
<td>129,934,91</td>
</tr>
<tr>
<td>1999</td>
<td>52.26%</td>
<td>30,280,052</td>
<td>57,938,945</td>
<td>57.36%</td>
<td>52,792,781</td>
<td>108,258,35</td>
</tr>
</tbody>
</table>

*Source: Cletus (2017)*
In the democratic world today, technological tools are finding their ways into electioneering 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 data base management systems, optical scanning and geographic information systems. Thus, those technological tools and machines used during elections are known as election technology.

According to Shariff and Adamu (2015), past elections in Nigeria had witnessed the desperate bid for political power by some stakeholders with vested interests in the Nigerian electoral process. Some of these stakeholders engaged in all forms of electoral malpractices including multiple voting, impersonation, manipulation and falsification of results which had led to legal actions, electoral conflicts and violence. The consequent of these in the view of Alebiosu (2015) is that the electoral malpractices make the citizens to lose confidence in the electoral process which invariably contributes to low voter turnout. Also characterizing the electoral process in the Nigerian fourth republic as stated by Iwu (2008) is that between 2002 and 2007, electoral process in Nigeria were largely seen as human oriented and human-based activities, even though, the period witnessed the acquisition of information and communication technology by the Independent National Electoral Commission (INEC) foe its operations. He stated further that one vital component of the technological innovation in the electoral process was the introduction of biometric based voter registration.

More often than not, the major technological innovations experienced in the Nigeria 2015 general elections were the Smart Card Readers (SCRs) and the Permanent Voter Card (PVC). While the latter successfully replaced Temporary Voter Card (TVC), the former is a technological device set up to authenticate and verify, on Election Day, PVC (issued by INEC) by reading information contained in its embedded chip. In the case of Nyesom v. Peterside & Ors, the Supreme Court sees smart card reader machine as a technological device set up to authenticate and verify, on Election Day, PVC issued by INEC. SCR machine is designed to read information contained in the embedded chip of the permanent voter’s card (PVC) issued by INEC to verify the authenticity of the PVC and also carry out a verification of the intending voter by matching the biometrics contained from the voter on the spot with the ones stored on the PVC. Hence, both PVC and SCRs were Siamese twins in the 2015 general election.

The Smart Card Reader uses a highly secure cryptographic technology that has ultra-low power consumption, with a single core frequency of 1.2GHz and an Android 4.2.2.—Operating System. It has a 3200mAh battery, which can last for about 12 hours in continual usage when fully charged. The device hibernates when not in use to save and lengthen the battery life. The INEC staff operating the Card Reader is required to scan the PVC of each voter to verify its authenticity before allowing the voter to get accredited. It takes an average of 10 to 20 seconds to authenticate a voter.
Also, Alebiosu (2015) while arguing on the fundamental basis for the deployment of the technologically-based device in the 2015 general elections by INEC observed that it was to prevent electoral fraud; to allow the electorates votes to count; to reduce litigations arising from elections; to authenticate and verify voters; to protect the integrity and credibility of the election; to build public confidence; to ensure free, fair and credible election; to audit results from polling units across the federation; and to ensure transparency and accountability.

In spite of the laudable objectives and goals aimed to achieve, it generated debate among 2015 general election stakeholders before, during and after the poll (Alebiosu, 2015). Socio-political sentiment that followed the introduction of these technologies can be override. The political allegation of the card readers being designed to favour a political party turned out to be completely baseless and unfounded as we have seen before and after the elections even though, it generated war of words between the People Democratic Party (PDP) and the All Progressive Congress (APC). This unsubstantiated statement led to the invasion and destruction of the APC Data Center in Lagos and subsequent arrest of the supplier of the card readers by the Department for State Security (DSS). However, the government agency had to apologize to APC after the invasion.

Apart from the socio-political sentiment and allegations levied by some stakeholders, legal stand of the technology was another major debate between INEC and some stakeholders like politicians, political party, legislators and civil society organization - the Society for Advancement and Protection of Public Rights (SAPPR). They argued that the introduction of the technologies especially Card Reader by INEC was illegal. The most quoted law by the critics of the technology are Sections 49 and 52 of the Electoral Act 2010 (as amended). However, Falana (2015) and Banire (2015) among other commentators justified the adoption of Card Reader and as such not illegal. According to Jega, section 52(2) of the electoral Act quoted by the Senate Leader, Senator Victor Ndoma-Egba, only prohibited the use of electronic voting machine. He added the section 49 of the same law required that any person intending to vote must submit themselves for accreditation….. ‘we are on solid legal ground’ (Daily Trust, 2015).

In his study on the impact of deployment and use of technology in the 2015 electoral process in Nigeria, Amana (2016) observed that several writers have identified and highlighted some negative and positive impacts of the deployment on the electoral process. According to him, the negative impacts were the undue delay in the electoral process and low turnout of voters. Positively, it reduced election rigging and snatching of ballot boxes from polling units, enhanced speedy and accurate accreditation of voters and finally, with PVC, there was reduction in electoral fraud of multiple registrations and multiple voting.
Theoretical Framework

This paper adopted modernization theory since the central argument of the theory is on the socio-political development and progress of the society. The introduction of technological innovation (Permanent Voters Card and Smart Card Readers) by Independent National Electoral Commission during the 2015 general elections therefore, did not only show an advancement in the Nigerian electoral system but also a way of achieving effective democracy and more participation of citizens in the electoral process. Many scholars have written on the relationship between development and democracy, however, modernization theory is one of the models that primarily concern with the relationship between the two. The scholars include Marquis de Condorcet, Talcott Parsons, W.W Rostow, Samuel p. Huntington and Seymour M. Lipset.

The theory argues that democratization is an integral and inevitable part of modernization because the spontaneous changes in socio-economic and political aspects of societies are products of technological advancement. Modernization is a phenomenon of change and development. This is as a result of technological involvement in governance process so as to achieve a desirable political and economic growth within the political space. The primary reason for modernizing the existing governance structure is to make life easier for the populace and to enhance rapid growth and development in the polity.

However, they caution that people’s response to the new technology goes a long way in determining those changes. These responses may be positive or negative. If it is positive, people will react favourably to the new inclusions and technology changes. The resultant effects will be good governance and prompt service delivery in the state. If the response is negative, the people will kick against the government’s new inclusions and technology in favour of the old system. This will result into the maintenance of the old statuesque and development in the polity will be stagnated.

Methodology

This research utilises a mixed method of qualitative and quantitative research methods. Also, descriptive research design was adopted. This research design was chosen in order to have a clear picture of the phenomena on which data was collected. The data for this study include secondary and primary data and mixed method of data collection was used. The secondary data comprise journals, newspapers, library materials, INEC reports and the internet. Since the researchers wanted to get the opinion of voters (primary data), quantitative method through questionnaire was utilised. The quantitative method therefore helped the researchers to obtain responses from a large sample from the population of this study. The population for the study consisted of the entire group of eligible Kwara voters (above 18) across Kwara Central Senatorial district. This political district was chosen through purposive sampling.
technique because it is the largest contributor of voters among the three senatorial districts in the state.

Random sampling technique was used in administering questionnaire. Closed questionnaire which contained two sections (section A focuses on biodata of the respondents while section B covers questions on the effectiveness and relationship between the two variables) were administered to 120 sample size at peer group meetings, assemblies, in the four local government areas that make up the senatorial district on equal basis. Quantitative (chi square) method of data analysis was used. Chi square was used in assessing the relationship between the technological innovations (PVC and SCR) and the level of voter turnout in the 2015 Kwara state gubernatorial election.

**Technological Innovation and Voter Turnout in Kwara State 2015 Gubernatorial Election**

**Presentation of Results**

This section presents the results of the field survey on technological innovation and voter turnout in Kwara state 2015 gubernatorial election using Microsoft Excel to generate graphs for the results of the respondents. However, this was done in line with the research objectives.

**Background Demographic Information**

**Table 1:** Characteristics of the Sample in Ilorin West, Ilorin East, Ilorin South and Asa Local Government Areas of Kwara Central Senatorial District

<table>
<thead>
<tr>
<th>ASSEMBLIES</th>
<th>Ilorin West</th>
<th>Ilorin East</th>
<th>Ilorin South</th>
<th>Asa</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Characteristics</td>
<td>F</td>
<td>%</td>
<td>F</td>
<td>%</td>
<td>F</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>19</td>
<td>63</td>
<td>22</td>
<td>73</td>
<td>21</td>
</tr>
<tr>
<td>Female</td>
<td>11</td>
<td>37</td>
<td>8</td>
<td>27</td>
<td>9</td>
</tr>
<tr>
<td>Age (yrs)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 – 24</td>
<td>7</td>
<td>23</td>
<td>12</td>
<td>40</td>
<td>6</td>
</tr>
<tr>
<td>25 – 30</td>
<td>8</td>
<td>27</td>
<td>4</td>
<td>13</td>
<td>10</td>
</tr>
<tr>
<td>30 and above</td>
<td>15</td>
<td>50</td>
<td>14</td>
<td>47</td>
<td>14</td>
</tr>
<tr>
<td>Highest edu. attainment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary</td>
<td>9</td>
<td>30</td>
<td>8</td>
<td>27</td>
<td>5</td>
</tr>
<tr>
<td>Secondary</td>
<td>5</td>
<td>17</td>
<td>7</td>
<td>23</td>
<td>10</td>
</tr>
<tr>
<td>Tertiary</td>
<td>2</td>
<td>7</td>
<td>4</td>
<td>13</td>
<td>12</td>
</tr>
<tr>
<td>No formal education</td>
<td>14</td>
<td>47</td>
<td>11</td>
<td>37</td>
<td>3</td>
</tr>
</tbody>
</table>

*Source:* Field Survey, 2017

The table above shows the characteristics of the respondents. In the sex distribution, male respondents (63, 73, 70 and 53%) constitute the major number of responses from Ilorin west, east, south and Asa local governments. Also, 49 respondents are in the range of 30 years and above, 36 of them are
between ages 20 and 24 and 35 respondents which represent 29% are between ages 25 and 30. This shows that most of the respondents are 30 years and above. Finally, on the level of education, while 27% have primary school education, 28% have secondary school education, 18% have tertiary education and 28% didn’t attend any formal school.

**Objective 1:** To assess the effectiveness of the technological innovations in the gubernatorial election

<table>
<thead>
<tr>
<th>Items</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>PVC and SCR sped up voters accreditation process</td>
<td>50.80%</td>
</tr>
<tr>
<td>PVC and SCR eliminated voters accreditation error</td>
<td>49.20%</td>
</tr>
<tr>
<td>Voting process was interesting with the technological innovations</td>
<td>77.50%</td>
</tr>
<tr>
<td>INEC officials operated the devices very well</td>
<td>80%</td>
</tr>
<tr>
<td>How effective were PVC and SCR during the gubernatorial election?</td>
<td>50.80%</td>
</tr>
<tr>
<td>PVC and SCR speed up voters accreditation process</td>
<td>49.20%</td>
</tr>
</tbody>
</table>

**Objective 2:** To understand if there is relationship between the technological innovations (PVC and SCR) and the low level of voter turnout in the 2015 gubernatorial election in Kwara state

<table>
<thead>
<tr>
<th>Items</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>There was delay in the distribution of PVC</td>
<td>48%</td>
</tr>
<tr>
<td>Poor timing for the introduction of SCR</td>
<td>50%</td>
</tr>
<tr>
<td>People didn't trust the technological innovations</td>
<td>40%</td>
</tr>
<tr>
<td>More voters would have voted without the introduction of PVC and SCR</td>
<td>49%</td>
</tr>
</tbody>
</table>

**Source:** Field Survey, 2017
**Objective 3:** To predict level of voter turnout, using the devices, in future gubernatorial elections in the state

Will you like to vote with PVC and SCRs in the 2019 gubernatorial election in Kwara state?

![Pie chart showing 84% Yes and 16% No]

**Source:** Field Survey, 2017

**Chi Square analysis of the relationship between the technological innovation and the low level of voters’ turnout in the 2015 gubernatorial election in Kwara state**

<table>
<thead>
<tr>
<th>Items</th>
<th>Agree</th>
<th>Disagree</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>There was delay in the distribution of PVC</td>
<td>72</td>
<td>48</td>
<td>120</td>
</tr>
<tr>
<td>Poor timing for the introduction of Card Reader</td>
<td>50</td>
<td>70</td>
<td>120</td>
</tr>
<tr>
<td>People didn’t trust the technological innovation</td>
<td>80</td>
<td>40</td>
<td>120</td>
</tr>
<tr>
<td>More voters would have voted without the introduction of PVC and SCR</td>
<td>75</td>
<td>45</td>
<td>120</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>277</strong></td>
<td><strong>203</strong></td>
<td><strong>480</strong></td>
</tr>
</tbody>
</table>

**Source:** Field study, 2017

To get the Expected variables = Row total x Column total / Grand total

\[
\begin{align*}
\frac{120 \times 277}{480} &= 69.3 \\
\frac{120 \times 203}{480} &= 50.8 \\
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\frac{120 \times 203}{480} &= 50.8 \\
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\frac{120 \times 203}{480} &= 50.8
\end{align*}
\]
**Expected variable = E**

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</table>

\[ X^2 = \sum \frac{(O - E)^2}{E} \]

\[
X^2 = \frac{(72 - 69.3)^2}{69.3} + \frac{(48 - 50.8)^2}{50.8} + \frac{(50 - 69.3)^2}{69.3} + \frac{(70 - 50.8)^2}{50.8} + \]

\[
\frac{(80 - 69.3)^2}{69.3} + \frac{(40 - 50.8)^2}{50.8} + \frac{(75 - 69.3)^2}{69.3} + \frac{(45 - 50.8)^2}{50.8}
\]

\[ X^2 = 0.1 + 0.2 + 5.4 + 7.3 + 1.7 + 2.3 + 0.5 + 0.7 \]

\[ X^2 = 18.2 \]

**Testing of Hypothesis**

**Ho** = There is no significant relationship between technological innovation and the low level of voter turnout in the 2015 gubernatorial election in Kwara state

\[ \infty = 0.05 \]

\[ Df = (r - 1)(c - 1) \quad Df = (2 - 1)(4 - 1) \]

\[ Df = 1 \times 3 = 3 \]

**Significant Value (CV) = 7.815**

**DECISION RULE:** if \( X^2 > CV \), reject Ho; if \( X^2 < CV \), accept Ho

**INTERPRETATION:** Since \( X^2 \) is greater than CV, we reject the Ho. Therefore, there is significant relationship between technological innovation and the low level of voters’ voter turnout in 2015 gubernatorial election in Kwara state

**Major Findings**

The results from survey conducted revealed that both the Permanent Voters Cards (PVC) and the Smart Card Reader (SCR) improved the accreditation process, eliminated accreditation errors like impersonation, and most electorates found the voting process interesting as the technological devices were effectively operated by INEC officials in the 2015 gubernatorial election
in Kwara state. Therefore, a large percentage (49.2%) of respondents believed that the technological innovations were fairly effective. The survey further shows that there is a significant relationship between the two variables – technological innovation and the low level of voters’ turnout in the gubernatorial election. This was attributed to factors like late distribution of PVC and voters’ lack of trust in the devices. Even though, a large number of respondents (58.3%) opined that SCR was timely introduced but asserted that more voters would have turned out for the gubernatorial election without its usage. Finally, it was also discovered that 81% of the sample population now have trust in the technological innovations introduced by INEC as they showed interest in casting their votes with the PVC and SCR in future gubernatorial elections in Kwara state.

Based on findings generated from the survey conducted by the researchers on the assessment of technological innovations and voter turnout in the 2015 gubernatorial election in Kwara state, we recommend that there should be continuous voter registration (CVR) and early distribution of Permanent Voter Cards in the state to ensure high voter turnout. Kwara voters in rural areas should be given adequate political education by INEC, political parties and civil societies on the use of the technological innovation and the benefits of their turnout in electing legitimate governor in the state. Finally, INEC should ensure that its conduct and activities in future gubernatorial elections are transparent particularly with the use of technological facilities like the Smart Card Reader in order to clear the mistrust of some electorates on the technologies.

**Conclusion**

From the case study and the survey of this study, the researchers can generalise that technological innovations (PVC and SCRs) introduced by INEC prior to the 2015 general elections were effective in the 2015 gubernatorial election in Kwara state. Findings from the study also show that eligible voters in Kwara state prefer to use them in subsequent governorship elections. This is a positive effect of modernisation theory which has the effects of technological acceptability and resultant growth of the political economy of the state.

However, technological innovations can contribute to low voter turnout if proper measures are not put in place. Such measures include prompt political awareness on the uses and effects of the new technologies and the sensitization of stakeholders such as the legislatures and the judiciary for an inclusive policy development. Therefore, we advocate for continuous voter registration (CVR), early distribution of PVC by INEC, transparency in the use of Card Readers, and sustained and aggressive political education for Kwara voters by political parties, electoral body and civil society organizations on how critical their turnout is to the legitimacy of election into all elective public offices.
References


