

# INFLUENCE OF INSTITUTIONAL CAPABILITIES ON INDEPENDENT ELECTORAL AND BOUNDARIES COMMISSION (IEBC) VOTER REGISTRATION (VR) PERFORMANCE IN TURKANA EAST CONSTITUENCY, KENYA

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**Abstract:** This study determined the influence of institutional capabilities on the performance of voter registration of IEBC, Turkana East Constituency, Kenya. Specific objective for the study was to establish the influence of technology and transport on the performance of voter registration in Turkana East Constituency. The study was anchored on the Rational Theory of Voter Turnout and Abraham Maslow's of hierarchy of needs and reviewed scholarly documents to get related review on literature. The study adopted census as research design which is descriptive in nature, non-bias, accurate, convenient for small population and captures of qualitative and quantitative data. The study area was Turkana East Constituency, which had 68 registration centres used for registration of voters exercises and 71 polling stations used for polling during an election and a total of 15,620 registered voters. The Target population consisted of 148 temporary and permanent Electoral officials who took and take part in voter registration exercise. Structured questionnaire and interviews were used for data collection. In the findings, 90.3% stated that the use of technology largely influenced the performance of VR. In this regard, the study recommended that the government should partner with the electoral body to ensure procurement of high-quality ICT equipment, recruit competent, qualified and experienced staff who use ICT equipment diligently to ensure enhanced voter registration performance.

**Keywords:** Influence, Institutional capabilities, voter registration, performance, IEBC.

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## 1. INTRODUCTION

### Background to the study

The electoral process in many democracies starts with voter registration and the validity, credibility and fairness of the process is determined by the performance of all processes (Independent Electoral and Boundaries Commission, 2014). According to Fowler (2013), the performance of Voter Registration is largely influenced by institutions tasked with formulating policies, funding, and implementing related laws, rules and regulations. Ansolabehere & Konisky (2005) observed that the registration system lowly performed in developed economies because of the institutional challenges that largely influenced voter turnout and hence electoral outcomes. Some of the institutional factors affecting the performance of voter registration in most democracies include short registration timelines that does not favour busy people, lack of

enough funds, political interference, mobility challenges, hostile working environment, voter registration apathy, use of technology and staff competence among others.

In the United States, the introduction of Same-Day Registration or Election Day Registration, which was made possible by improved technology, has placed the most states in the forefront regarding voter registration performance (Highton, 2004). Root & Kennedy (2018) added that enacting the National Voter Registration Act of 1993, which also provided that automatic voter registration will be done immediately and automatically after acquisition of Driver's licence made it easier for many youths to be enlisted in the voter register.

In spite of the improvement in technology, competence in registration officials and the improvement in the allocation of funds, United States suffers a myriad of challenges affecting voter performance. According to the Pew Centre on the States (2012), more than 2.75 million people are registered in more than one state; 1.8 million deceased are still listed as voter, more than 24% of the population eligible to vote are not registered, 12 million registered people were registered with wrong addresses, and the cost of registering and maintaining a voter register in United States is 12 times higher than in Canada per voter. This according to the survey by Pew Centre on the States (2012) was attributed to failure of technology, incompetence in voter registration officials, political interference and mismanagement of public funds.

Since the start of voter registration in Kenya, the electoral body has been facing a myriad of challenge that have been negatively influencing the performance of voter registration. In 2011 before the start of voter registration, the electoral body had targeted 90% of eligible people to register as voters, but at the end of the registration period, only 65% had registered. By 30<sup>th</sup> June 2013, the electoral body attained 65.9% different from 90% target that had been set; a year later, registration targets went down to 60.6% an indication of declining performance in voter registration (Independent Electoral and Boundaries Commission, 2014). According to the Post election evaluation report (2017), continuous voter registration at constituency IEBC offices and Huduma Centers only captured 98,755 voters in 2013-14 and 2014-15. According to the report, each County Assembly Ward, CAW was allocated at least four kits with two other extra kits per ward to cater for breakdown. In the Mass Voter Registration exercise, I, MVRI, held in 2016 from February to March, 5,753 BVR kits were deployed across 290 constituencies with each County Assembly Ward, CAW, allocated at least four kits, which saw the IEBC attaining only 36% of the voter registration target of 4 million.

According to IEBC voter registration statistics given in 2017, Turkana County had a total of 191,435 voters and among this, Turkana East had the lowest figure in the register accounting for 15,620 while Loima, Turkana West, Turkana South, Turkana North and Turkana Central Constituencies had 29,103, 31,416, 33,422, 34,008 and 47,466 voters respectively. This was an indication that the performance of Voter Registration in Turkana East Constituency was low compared to other constituencies in Turkana County. Compared to 2017, voter registration in Turkana East constituency was 11,066. (Voters with biometric data 11,062 and without or non biometric 4 only) in 2013 Register. In 2017 voters registered /captured in the Voters register were 15,620. As from 8<sup>th</sup> August, 2017 and 26<sup>th</sup> October, 2017 elections. Turkana East constituency is among those with lowest number of voters compared to other 290 constituencies across the country. (It is the second last in registered voters in the country.)

**Table 1: Constituencies with low number of total registered voters**

Constituency	Total number of registered voters	Polling stations
Lafey	14, 321	36
Turkana East	15, 620	71
Lamu East	18, 234	45
Banissa	18, 476	53
Eldas	18, 676	49
Tarbaj	19,699	50

Source: IEBC-Registered Voters per Constituency-2017

From the information given by table 1, it is clear that voter registration in Turkana East is low compared to the mentioned constituencies considering that Turkana East had the highest number of polling stations compared to Tarbaj, Eldas, Banissa, and Lamu East and Lafey constituencies. This therefore calls for scholarly research inquest to establish the rationale behind low voter registration in Turkana East constituency.

**Statement of the problem**

Kenya like most emerging economies has a liberal democratic system that allows voting as a way of determining its leadership or making any democratic decision. Low voter registration performance particularly in Turkana East is a problem that denies constituents their democratic right as well as enhances their quality of lives through good leadership and governance. Low voter registration performance according to the audit by KPMG in 2017 was attributed to human resource capabilities, inadequate and delayed funding, use of new technology not learnt and practiced for some time, power back-up problems, poor internet connectivity in some registration areas, and mobility to some designated registration centers or places among others. These challenges have lowered voter registration performance to an extent that if intervention strategies will not be implemented, they will compromise the credibility and fairness of elections in Turkana East Constituency. It is for this reason that this paper seeks to undertake an evaluation on institutional capabilities influencing voter registration performance of IEBC, in Turkana East Constituency, Turkana County, Kenya.

**Purpose of the study**

The purpose of this study was to investigate institutional capabilities influencing performance of voter registration of Independent Electoral and Boundaries Commission in Turkana East Constituency, Turkana County, Kenya.

**Objectives of the study**

- i. To determine how technology influence Voter Registration Performance of Independent Electoral and Boundaries Commission in Turkana East Constituency, Turkana County
- ii. To assess the extent to which availability of transport influence Voter Registration Performance of Independent Electoral and Boundaries Commission in Turkana East Constituency, Turkana County

**Research Questions**

- i. How does technology influence voter registration performance?
- ii. To what extent does availability of transport influence voter registration performance?

**Delimitations of the study**

There are other institutional factors influencing the performance of voter registration, but this study focused on two, (technology and transportation), which might not be the only institutional capabilities.

**Limitations of the study**

This study was based in Turkana East and it is expected that eligible voters were invited to take part in the study, some of the registration officials and civil rights groups; it was not easy to collect data in a short time due to sparse population, tough terrain, hostile environment and unpredictable weather conditions given scarce resources. In order to deal with this problem, the researcher got assistance from the local leaders in order to provide security and guidance for the success of this study.

**Significance of the study**

It is hoped that the study provides insights on the performance of voter registration not only in Turkana East constituency but also in the whole country. IEBC will use findings of this study to institute and implement intervention strategies to curb the dwindling voter registration performance in Turkana East constituency and other constituencies across the country. Ministry of interior and coordination of national government might use the findings of this study to collaborate with IEBC in improving voter registration performance by improving security in hostile areas and work with its leadership at the lowest cadre to improve mobilization and voter education, which are vital in improving voter registration performance.

**Assumptions of the study**

The study was based on the following assumptions:

There was cooperation and truthfulness in answering the questions presented in the questionnaire. Voter Registration performance is uniform in all constituencies across the counties and the country at large, because the management is done by one IEBC.

Intervening variables had zero effect on the findings of this study.

## 2. LITERATURE REVIEW

### Concept of Voter Registration Performance of IEBC

According to Independent Electoral and Boundaries Commission (2018), voter registration aims at establishing the eligibility of a voter to take part in an electoral process. It entails the collection of bio-data from an eligible voter or the enlisting of information regarding an eligible voter into the voter register to allow him/her take part in a democratic process. Most democracies are shifting from manual or paper work voter registration to biometric voter registration, which is less of paper work (Holtved, 2011). It is among the first step in the electoral cycle in most democracies and in this case, its performance should be as high as possible to guarantee a free, fair and credible election (Harris & Windt, 2017). There are several levels of voter registration that include continuous and periodic voter registration, special group registration some of which are done via the internet (on-line) while others are done when an eligible voter presents himself at the registration centers for the exercise. The performance of voter registration is determined by a number of factors including low cost for creating and maintaining the register per voter, absence of political interference in the voter registration process, available of relevant materials and resources, use of biometric technology in the capture and identification of voters, wider-coverage voter education, and above all adequate funds that is disbursed timely (Holtved, 2011). Whenever these all these factors are considered registration of voters should attain at least 95% of the targeted population. Iwuoha (2019) noted that the ideal situation where the performance of voter registration should be considered high is that where the electoral managing body is allocated all budgetary requisition from the exchequer, it hires competent human resource, it uses digital technology in its operations to reach a wider population and attains a performance of at least 87% of the total population.

### Theories of Voter Registration

#### Rational Theory of Voter Turnout

According to the rational theory of voter turnout, which was based on the Down's idea that posits that individuals will vote if the expected utility derived from voting is higher the expected utility from not voting. In this case, the difference between a product of the utility derived from voting and the probability that voting will yield an expected outcome and the difference from the cost and benefit of voting determines the decision to vote. See the equation below,

$$R=(B*P)- C+D$$

Where B is the utility gained from getting a preferred outcome

P is the probability that an individual vote will yield a preferred outcome

C is the cost of voting

D is the positive of voting

Relative to the rational theory of voter turnout, voter registration performance is largely determined by the decisions eligible voters take present themselves at the registration centers to be enlisted in the voter register. Compared to the voting turnout equation, the decision of an eligible voter to present himself/herself for registration is determined by the utility derived from registration including the probability that registration will yield the desired outcome after the electoral process, see the equation below

$$R=(B*P)- C+D$$

Where Voter Registration Turnout

B is the utility gained from getting a preferred outcome

P is the probability that an individual voter registration will yield a preferred outcome at the end of the electoral process

C is the cost incurred in voter registration

D is the positive benefit of voter registration

### **Technology and Voter Registration.**

According to Evrensel (2010), South Africa has not yet fully embraced the use of biometric voter registration; however, based on a research conducted in Africa to evaluate the state of voter registration among the African Countries, South Africa use “zip-zip” barcode reading machine, which collects the information about an eligible voter by reading it on the National Identification. Since its introduction, the Independent Electoral Commission of South Africa has confirmed that the use of “zip-zip” barcode reading machine reduced the cost of the electoral process and improve electoral credibility especially for the 2009, municipal, provincial and national were high. The study by Evrensel (2010) only focussed South Africa’s use of “zip-zip” barcode and its influence on the performance of voter registration. Compared to the study by Evrensel (2010), this study will not only consider use of technology that include (software and hardware management), availability of transport (units of movement, distance coverage, number of kits dispatched, and terrain) availability of funds (adequacy and timely dispatch) and human resource capacity.

Iwuoha (2019) conducted a study in Nigeria with an aim of establishing the influence of ICT on election and specifically focusing on dynamics in rural areas. In his study, the researcher established that people in rural are lack relevant voter and civic education to equip them with information needed to be good citizens. Further, Iwuoha (2019) determined that misconceived perceptions about use of biometric technology instilled fear among many eligible voters forcing many to shy away from turning up for voter registration. Relative to the study by Iwuoha (2019), this study will focus in Kenya and specifically on institutional factors influencing voter registration and not use influence of ICT in voter registration in rural areas.

The introduction of biometric voter registration in Ghana in 2012 to every polling station aimed at improving performance of registration and enhance credibility of the electoral process. However, according to Golden, Kramon & Ofori (2014), biometric voter registration kits were used but power problems, internet connectivity challenges and machine malfunctioning especially when an observer was not present were common during voter registration period an indication that some of the machines were tampered with at the control centre. Effah & Debrah (2018) also conducted a descriptive study in Ghana with an aim of establishing relationship between biometric technology and voter registration. In their findings, the researchers noted that the introduction of biometric voter identification and verification failed in 2012 because of the voter registration machines lacked real-time internet connectivity with the server at the national centre, a move that hindered the transfer of information from registration centres to the national centre. According to Effah & Debrah (2018), some of the voters registered during this time lacked in the main register because of the failure in the voter registration kits, internet connectivity among other technical related problems. The study by Kramon & Ofori (2014), and that by Effah & Debrah (2018) only focused on influence of ICT or use of technology on voter registration in Ghana; this study will be focused in Kenya and specially in Turkana West Constituency where lower voter registration was experienced. Notably, the study will focus on human resource capacity, use of technology, availability of funds and transport.

In their study conducted in several countries in Africa to determine digital dilemmas facing voter registration and indeed the electoral process, Cheeseman, Lynch & Willis (2018) indicated that most African countries have been able to address technological challenges related to verification and identification of voters because of the introduction of biometric voter registration used in capturing, verifying and identifying voters. Most challenges associated with more than one registration, or transfer to different registration stations were fixed by the introduction of digital technology. Cheeseman, Lynch & Willis (2018) study is contrary to Effah & Debrah (2018) and Golden, Kramon & Ofori (2014), who noted that the introduction of biometric voter registration kits did not enhance the electoral process and instead it brought about technological related challenges, most of which compromised the credibility of the electoral process. Relative to Golden, Kramon & Ofori (2014), Schueller & Walls (2017), and Schuller & Walls (2017). also elucidated in their study that internet connectivity problems in some countries in sub-Saharan Africa has been the cause for the failure to achieve voter registration targets and election malpractices, a move that has seen an increase in post-election skirmishes and other political related conflicts.

### **Availability of Transport and Voter Registration.**

Evrensel (2010) conducted a study in South Africa to determine the performance of voter registration in rural and urban areas and asserted that movement of fragile biometric voter equipment affected the usability of some of them because of the tough terrain voter registration officials went through in the search for eligible voters. The study by Evrensel (2010)

considered the influence of transport and technology on voter registration in Africa; however, the failed to consider institutional factors influencing voter registration performance in Kenya and specifically on constituencies that posted low voter registration as considered performing lowly.

In 2018, USAID assessed the level of electoral preparation by the electoral body in the Democratic Republic of Congo, DRC. The researchers used survey research design method that supports the use of questionnaires and focus group discussions as research instruments. In their findings, the researchers noted that during voter registration, the Independent National Electoral Commission of DRC dispatched few registration materials to serve a large population of eligible voters. In order to reach the large populations, the officials had to walk by foot carrying registration materials, conduct a house-to-house exercise for them to reach daily targets. The rationale behind it is that the majority of people targeted then were youths, women and persons with disability some of whom rarely move unless the voter registration exercise is brought closer to them. The report by USAID in 2018 focussed on electoral preparation by the electoral body in DRC but relative to that, this study will consider institutional factors influencing voter registration performance in Turkana East Constituency, Kenya.

In Uganda, political competition sometimes turns chaotic and the country leadership, which largely influence the operations of the Electoral Commission have an upper hand (Wolf & Bakken, 2016). Before the voter registration period, the electoral body conduct assessments to determine the quantity of resources they will need to avoid failure of the exercise; however, in some registration centres, the electoral body dispatched one BVR kit, which would serve 7 other neighbouring registration centres, a move that forces the registration officers to board motorcycles because of their convenience and lost cost to reach the wider group being targeted. Unlike the study by Wolf & Bakken (2016), this study will not be based in Uganda, but Kenya; further, it will consider the influence of use of technology, human resource capacity, availability of transport and funds as institutional factors influencing voter registration performance.

Babeiya (2013) conducted a study in Tanzania to assess the voter register and the question of inclusion and exclusion. The researcher largely used interviews, observation checklists and secondary data and in his findings, the researcher found that Tanzania like any other sub-Saharan country experience unpredictable weather condition and considering the rough terrain in some of the regions, registration officials have to walk to traverse the fields, cross rivers, climb hills, go through forested paths to access eligible voters. In such cases, the electoral bodies in respective countries have failed to achieve targets especially if they work with tightened budgetary allocations.

In Kenya, in 2017, in the MVR II, the IEBC adopted a BVR kits distributed criteria where distance in square kilometres was key in determining how many BVR kits would be distributed in a CAW. Implicitly, some of the registration centres would share a BVR kits and its movement is outlined in the kit movement schedule that was publicized at strategic places (Independent Electoral and Boundaries Commission, 2018). Even so, most of the registration clerks had to move either via foot, on motorcycles or hire vehicles to reach eligible voters, which to a larger extent takes time because of distance of separation between registration centres (Harris & Windt, 2017).

### 3. RESEARCH METHODOLOGY

#### Research design

This study adopted census as research design because the population was well defined and small. Further, the study is descriptive in nature and non-bias, a move that prompted the researcher to opt for census as a research design. The rationale behind the adoption of descriptive research was that it could be used to cover a small geographical area and derive conclusion. Census provide detailed information regarding all element considered in a group and is the best to investigate behavior, characteristics and other elements in a group. It is important to note that this study was still descriptive in nature and that it considered preliminary and exploratory studies to allow researchers to gather information, summarize, present, and interpret them for the purpose of clarification (Orodho, 2002).

#### Target population

The constituency has three CAW namely Kapedo/Napeitom, Katilia, and Lokori/Kachodin, According to the statistics given by the National-Government Constituency Development Fund, NG-CDF (2015), the constituency has a population of 90,468 covering an area of 11,307.1 square kilometers. This study targeted electoral officials especially who were or are involved in voter registration and included Registration Officer, Deputy Registration Officer, former Voter Registration Assistants, and former voter registration clerks. The County Elections Manager and County ICT Officer also took part in the study.

**Table 2: Target Population**

Respondents	Target Population
County Elections Managers	1
County ICT officer	1
Constituency Registration Officer	1
Deputy Constituency Registration Officer	1
Voter Registration Assistants	20
Voter Registration Clerks	124
<b>Total</b>	<b>148</b>

**Sample size**

The sample size for this study was the same as the target population because of the choice of census as a research design. Lavrakas (2008) notes that there is no need to sample when the researcher considers census as a research design.

**Research instruments**

Researchers prefer using methods that provide high accuracy, generalizability, and explanatory power, with low cost, rapid speed and maximum management demands and administrative convenience (Kothari, 2009). This study considered using structured questionnaire and interview structures as research instruments.

**Validity of the instruments**

Validity for this study was done through consultations with the supervisors, and lecturers from the Department of Open Learning programmes. In such a case, data was collected on a proportion of the sample considered and experts, and supervisors gave feedback to the researcher that led to confirmation of validity.

**Reliability of the instruments**

Reliability is a measure of the degree to which a research instrument yields consistent results or data after repeated trials (Mugenda & Mugenda, 2003). In order to establish the reliability of the questionnaire, the researcher collected data then enter the data in SPSS where Cronbach's Alpha was determined. According to Tight & Huisman (2015), a Cronbach's Alpha value of over 0.7 indicates that the reliability is high and the research instrument can be used to derive accurate conclusion for the study. In the findings the following was realized and the Cronbach's Alpha observed was 0.851 indicating that the research instrument would give 85.1% accurate data upon the use of the research instrument to collect data on the same population.

**Data collection procedure**

The researcher administered questionnaires to former voter registration clerks and voter registration assistants who responded to the questions and organize on how to return duly filled questionnaires to the researcher.

Qualitative data was collected by holding face-to-face interviews with County Elections Managers, County ICT officer, County Registration Officer, and Deputy Registration Officers. They responded to the open-ended questions in the interview schedule and the researcher noted down some of the responses to be used in analysis.

**Data analysis techniques**

Firstly, qualitative data collected by noting down some of the responses during the interview were be summarized, organized and presented in themes and sub-themes using a technique called thematic analysis. After analysis, the qualitative findings were presented in a table. The analyzed data complemented that collected using questionnaires.

Secondly, the researcher coded the questionnaires and enter the quantitative data collected in the SPSS Version 22 software, where descriptive statistics was determined. Descriptive statistics involved the analysis of data in terms of frequency, percentages mean and standard deviation. Analyzed descriptive findings were presented in tables too because they were easy to read, interpret and understand.

#### 4. RESULTS AND DISCUSSIONS

##### Technology and Voter Registration

**Table 3: Does technology influence performance of Voter Registration?**

	Frequency	Percent
Yes	130	90.3
No	14	9.7
Total	144	100.0

In the findings presented in table 3, 130 (90.3%) stated that the use of technology largely influenced the performance of VR. On the other hand, 14 (9.7%) observed that use of technology did not influence performance of VR.

**Table 4: Influence of use of technology on Voter Registration**

Indicator	Strongly agree		Agree		Undecided		Disagree		Strongly disagree	
	F	%	F	%	F	%	F	%	F	%
The software used in VR is complex and makes data collection hard	117	81.3	2	1.4	0	0.0	25	17.4	0	0.0
Time taken to train on use of ICT is short and hard to understand usability of BVR kit	109	75.7	16	11.1	0	0.0	19	13.2	0	0.0
BVR runs short of power regularly and backup plans are rarely found at Registration centres	71	49.3	51	35.4	0	0.0	22	15.3	0	0.0
BVR kits keeps hanging and develop faults during the registration process	49	34.0	61	42.4	0	0.0	34	23.6	0	0.0
Replacement of faulty components takes long or rarely happen	22	15.3	111	77.1	0	0.0	8	5.6	3	2.1

In the findings presented in table 4, 117 (81.3%) and 2 (1.4%) respondents strongly agreed and agreed respectively that the software used in VR was complex and that it made the process of data collection hard. On the contrary, 25 (17.4%) disagreed that the software used in VR was complex and that it made the process of data collection hard. In another case, 109 (75.7%) and 16 (11.1%) of the respondents strongly agreed and agreed respectively that the time taken to train on the use of ICT equipment was short and that it made it hard to understand the usability of BVR kit. On the other hand, 19 (13.2%) disagreed that the time taken to train on the use of ICT equipment was short and that it made it hard to understand the usability of BVR kit. Regarding power, 71 (49.3%) and 51 (35.4%) respondents strongly agreed and agreed respectively that BVR kits ran short of power regularly and backup plans were rarely found at the Registration Centres.

**Table 5: Mean and Standard Deviation of influence of Technology on voter registration**

Indicator	Mean	Standard Deviation
The software used in VR is complex and makes data collection hard	1.01	.117
Time taken to train on use of ICT is short and hard to understand usability of BVR kit	1.12	.324
BVR runs short of power regularly and backup plans are rarely found at Registration centres	1.39	.530
BVR kits keeps hanging and develop faults during the registration process	1.53	.501
Replacement of faulty components takes long or rarely happen	2.02	.752

In table 5, consider 1, 2, 3, 4, and 5 as Strongly agree, agree, undecided, disagree and strongly disagree. In table 5, there was an average response where respondents strongly agreed that the software use in VR was complex, time taken to train on use of ICT equipment was short, BVR ran short of power regularly, and BVR kit kept developing fault during the registration process. In another case, majority of respondents agreed that replacement of faulty components took long or rarely happened.

#### Availability of transport and Voter Registration

**Table 6: Does availability of transport influence performance of Voter Registration?**

Responses	Frequency	Percent
Yes	110	76.4
No	34	23.6
Total	144	100.0

In table 6, 110 (76.4%) respondents stated that availability of transport units influences performance of VR. On the other hand, 34 (23.6%) observed that availability of transport units did not influence performance of VR.

**Table 7: Influence of availability of transport on performance of Voter Registration**

Indicator	Strongly agree		Agree		Undecided		Disagree		Strongly disagree	
	F	%	F	%	F	%	F	%	F	%
The unit of transport is sometimes shared and it's an inconvenience especially during reporting to RC and back to the office	105	72.9	17	11.8	0	0.0	20	13.9	2	1.4
The distance of coverage between neighboring RC is large and much time is lost travelling	78	54.2	66	45.8	0	0.0	0	0.0	0	0.0
It is expensive for RO to organize for their own means of transport, this lowers morale and hence performance	113	78.6	10	6.9	0	0.0	21	14.6	0	0.0
Limited number of units of transport influence accessibility to registration materials/equipment during replenishing	41	28.5	90	62.5	1	0.7	12	8.3	0	0.0
Supervising the registration exercise becomes problematic considering transport challenges.	21	14.6	98	68.1	1	0.7	14	9.7	10	6.9

In table 7, 105 (72.9%) and 17 (11.8%) respondents strongly agreed and agreed respectively that the units of transport were sometimes shared and it was an inconvenience especially during reporting to the RC and back to the constituency office. On the contrary, 20 (13.9%) and 2 (1.4%) disagreed and strongly disagreed respectively that the units of transport were sometimes shared and it was an inconvenience especially during reporting to the RC and back to the constituency office. Apart from that, 78 (54.2%) and 66 (45.8%) respondents strongly agreed and agreed respectively that the distance of coverage between neighboring RC was large and much time was lost travelling hence influenced the performance of VR. Still on means of transport, 113 (78.6%) and 10 (6.9%) strongly agreed and agreed respectively that it was expensive for VRO to organize for their own means of transport, this lowered morale of VRO and hence performance of VR. On the other hand, 21 (14.6%) of the respondents disagreed that it was expensive for VRO to organize for their own means of transport, this lowered morale of VRO and hence performance of VR.

Regarding transportation of registration materials during the exercise, 90 (62.5%) and 41 (28.5%) of the respondents agreed and strongly agreed respectively that limited number of units of transport influenced accessibility to registration materials/equipment during replenishing. Nevertheless, 12 (8.3%) of the respondents disagreed while 1 (0.7%)

respondents gave neutral views on the issue that limited number of units of transport influenced accessibility to registration materials/equipment during replenishing. On the issue of supervisory movement, 98 (68.1%), and 21 (14.6%) respondents agreed and strongly agreed respectively that supervising the registration exercise became problematic considering transport challenges. Different from that, 14 (9.7%) and 10 (6.9%) disagreed and strongly disagreed respectively that supervising the registration exercise became problematic considering transport challenges.

**Table 8: Mean and Standard Deviation of influence of Transport on Voter Registration**

Indicator	Mean	Standard Deviation
The unit of transport is sometimes shared and it's an inconvenience especially during reporting to RC and back to the office	1.12	.324
The distance of coverage between neighboring RC is large and much time is lost travelling	1.46	.500
It is expensive for RO to organize for their own means of transport, this lowers morale and hence performance	1.07	.255
Limited number of units of transport influence accessibility to registration materials/equipment during replenishing	1.89	.785
Supervising the registration exercise becomes problematic considering transport challenges.	1.92	.843

In table 8, consider 1, 2, 3, 4, and 5 to represent strongly agree, agree, undecided, disagree and strongly disagree respectively. In table 8, the majority of respondents strongly agreed that the unit of transport shared was an inconvenience and therefore influenced VR, the distance covered between the neighboring RC and the constituency office was far therefore much time was lost during travel, it was costly for an RO to organize for personal transport, limited number of transport units made replenishing of materials and supervision difficult therefore influencing negatively the performance of voter registration.

## 5. DISCUSSION

Based on the findings, over 90% of the respondents stated that the use of technology improves the performance of VR. Categorically, the respondents noted that software used, time taken to train on the usability of ICT equipment, power management of ICT equipment, and replacement whenever they develop faults all influence the performance of VR. Easy usability of the software used determine the time a VRO will take to register a voter. Further, the time taken to train on the usability of ICT equipment largely determines the ability of VRO to undertake VR roles especially those related to use of BVR kit and related devices. Power management of computer and other ICT equipment dictates the length of time a person uses and hence the performance in terms of the number VRO has registered per a given time. The use of technology in voter registration is a move meant to improve performance of the exercise as well as make the process easier.

According to the DCRO,

*“.....Thorough training and use of simulation using BVR kits will help in improving performance of VR....”*

The County ICT officer,

*“.... Procure and supply enough high-quality ICT equipment, maintain and update them to avoid faults, hanging and other system errors, this will enhance the VR process.... Regular usability of technology by staff will help in improving their experience hence enhanced performance”*

Quantitative findings coincided with qualitative findings, which showed that the situation regarding performance VR in the study area.

Limited number of transport units in a remote area hampers supervision of VR exercise indicating that a registration center of CAW can accumulate problems or challenges, which takes long to detect and address because of low supervision. Rough terrain, and sparsely distributed population makes it hard to move in search of the potential voters to be registered. In an event that VRO considered private means of transport then it will mean that they had to pay high costs to avoid the inconvenience that came with shared transport unit.

In the interviews, the CRO and the DCRO stated,

“.....Ready and available transport units help in movement of registration of materials, VRO, and even supervisory visits are easily conducted hence improved VR performance.....Large area of coverage should be reduced by deploying many transport units, this helps in operating and moving conveniently hence improved performance of VR....Available means of transport helps in registering large numbers of voters because VRO can move and locate voters.....”

## 6. CONCLUSIONS

The usability of technology and specifically on BVR kits was low because of the low level of experience and qualification. A significant number of ICT equipment deployed by IEBC were faulty or lacked all the components, which meant that the majority needed replacement. There is no proper maintenance, update and repair of ICT equipment thereby posing a technological challenge during the registration exercise.

Tough and rugged terrain, sparse population and harsh weather are some of the unavoidable challenges influencing the performance of VR. Transport units in the study area were limited and that costly, a move that largely influenced the performance of VR. There is little or no supervisory visits conducted to evaluate the exercise and address some of the challenges faced.

## 7. RECOMMENDATIONS

### Recommendations for Policy and Practice

The government in collaboration with the electoral body should regulate the quality and quantity of ICT equipment procured and disbursed to ensure that all CAW's and registration centres are well-equipped with facilities needed. There is the need for the electoral body to train its officials on the proper use of BVR kit usability to improve efficiency and hence performance of VR.

There is the need for the electoral body to engage or hire enough transport units necessary to facilitate movement of personnel and registration materials to and from the registration centre. Proper planning and allocation of the right transport units in a tough terrain is crucial to ensure effective transport especially during the voter registration exercise.

## REFERENCES

- [1] Ansolabehere, S., & Konisky, D. (2005). The Introduction of Voter Registration and Its Effects on Turnout. *Political Analysis*, 14(1), 83-100
- [2] Babeiya, E. (2013). Voter Registers and the question of inclusion and exclusion in Tanzania's multiparty elections: Learning from observers' revelations. *Journal of African Studies and Development*, 5(5), 99-112
- [3] Cheeseman, N., & Lynch, G., & Willis, J. (2018). Digital Dilemmas: the unintended consequences of election technology. *Journal of Democratization*, 25(1), 1397-1418
- [4] Effah, J., & Debrah, E. (2018). Biometric Technology for Voter Identified: The Experienced in Ghana in: *The Information Society*, 34(2), 104-113
- [5] Evrensel, A. (2010). *Voter Registration in Africa: A Comparative Analysis*. Johannesburg: Electoral Institute for Sustainability of Democracy in Africa.
- [6] Fowler, A. (2013). Five Studies on the Causes and Consequences of Voter Turnout. *Doctoral Dissertation*, Harvard University.
- [7] Golden, M., Kramon, E., Ofori, G. (2014). *Electoral Fraud and Biometric Identification Machines Failure in a Competitive Democracy*. Paper Presented at the 2014 Annual meeting of the American Political Science Association.
- [8] Harris, A., & Windt, P. (2017). Overcoming barriers to voter registration: A field of experiment in Kenya. *Doctorate Dissertation*. New York University
- [9] Highton, B. (2004). Voter Registration and Turnout in the United States. *Perspectives on Politics*, 2(3), 507-515

- [10] Holtved, O. (2011). Biometrics in Election, Georgia: De-duplication of voter register and verification of voter identity using biometrics. USAIDS. Retrieved on 22<sup>nd</sup> June, 2019 from: [https://www.ifes.org/sites/default/files/biometrics\\_in\\_elections\\_2011\\_0.pdf](https://www.ifes.org/sites/default/files/biometrics_in_elections_2011_0.pdf)
- [11] Iwuoha, V. (2019). ICT and Elections in Nigeria: Rural Dynamics of Biometric Voting Technology adoption. *Africa Spectrum*, 53(3), 89-113
- [12] Kothari, C. R. (2006). *Research Methodology: Methods and Techniques*. New Delhi: New Age International (P) Limited Publishers.
- [13] Kothari, C.R., (2009). *Research Methodology, Methods and Techniques*, Nairobi: Act Press.
- [14] Koul, L. (1997). *Methodology of Educational Research*. Vikas Publishing House PVT Ltd New Delhi.
- [15] Lavrakas, P. (2008). Census: Research Design. *Encyclopedia of Survey Research Methods*. DOI: <https://dx.doi.org/10.4135/9781412963947.n61>
- [16] Mugenda, O. M. & Mugenda, A. G. (2003). *Research Methods: Quantitative and Qualitative Approaches*. ACTS Press. Nairobi.
- [17] Orodho, A. J (2003). *Essential of Educational and Social Science Research Methods*. Nairobi: Malosa publishers.
- [18] Root, D., & Kennedy, L. (2018). Increasing Voter Participation in America: Policies to Drive Participation and Make Voting More Convenient. *Centrefor America Progress*. Retrieved on 14<sup>th</sup> June, 2019 from: <https://www.americanprogress.org/issues/democracy/reports/2018/07/11/453319/increasing-voter-participation-america/>
- [19] Schueller, M., & Walls, M. (2017). *Report by the International observers on the 2016 Voter Registration Process in Somaliland*. London: Progressio, People Powered Development
- [20] Schuller, M., & Walls, M. (2017). Report by International Observers on the 2016 Voter Registration Process in Somaliland. Progressio. Retrieved on 22<sup>nd</sup> June, 2019 from: [https://www.ucl.ac.uk/bartlett/development/sites/bartlett/files/progressio\\_voter\\_registration\\_process\\_in\\_somaliland\\_final\\_170317.pdf](https://www.ucl.ac.uk/bartlett/development/sites/bartlett/files/progressio_voter_registration_process_in_somaliland_final_170317.pdf)
- [21] Tight, M., & Huisman, J. (2015). *Theory and Method in Higher Education Research*. New York: Emerald Group Publishing
- [22] Wolf, P. (2017). Introducing Biometric Technology in Elections. International Institute for Democracy and Electoral Assistance. Retrieved on 24<sup>th</sup> June 2019 from: <https://www.idea.int/sites/default/files/publications/introducing-biometric-technology-in-elections-reissue.pdf>