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**E-VOTING SYSTEM ADOPTION AND ITS IMPACT ON
VOTER TURNOUT IN NIGERIA**



SABO AHMAD

UUM
Universiti Utara Malaysia

**DOCTOR OF PHILOSOPHY
UNIVERSITI UTARA MALAYSIA**

2016

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VOTER TURNOUT IN NIGERIA**

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UUM
Universiti Utara Malaysia

**A Thesis submitted to the Ghazali Shafie Graduate School of
Government, Universiti Utatra Malaysia in fulfilment of the
requirements for the Doctor of Philosophy
Universiti Utara Malaysia**

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ABSTRAK

Sistem pengundian sedia ada menggunakan kertas undi di Nigeria sedang berhadapan dengan pelbagai cabaran. Antaranya termasuklah pengundian berganda, pengundian oleh pengundi di bawah umur, ugutan terhadap pengundi, kesilapan atau pemalsuan keputusan pilihanraya. Kesan daripada sistem pengundian yang bermasalah boleh membawa kepada sikap ketidakpedulian politik dan menjejaskan bilangan pengundi keluar mengundi. Oleh itu, kerajaan merancang untuk memperkenalkan sistem e-pengundian untuk tujuan memperkukuhkan sistem pilihanraya supaya bebas, adil dan boleh dipercayai serta meningkatkan bilangan pengundi keluar mengundi. Walau bagaimanapun, sistem e-pengundian boleh menjadi penyelesaian kepada masalah bilangan keluar mengundi yang rendah jika ia dapat mempengaruhi para pengundi untuk mengambil bahagian dalam pilihanraya. Oleh itu, kajian ini bertujuan untuk meneliti faktor-faktor yang mempengaruhi penggunaan teknologi e-pengundian dan kesannya terhadap peratusan keluar mengundi. Kajian ini membangunkan satu model penyertaan dalam pilihanraya melalui sistem e-pilihanraya dengan menggabungkan teori-teori Pilihan Rasional, Difusi Teknologi, Model Trust dan konstruk Self-efficacy. Dengan menggunakan kaedah gabungan temuduga separa berstruktur dan survei, data dikumpulkan daripada pengundi, pegawai-pegawai pilihanraya dan parti politik di tiga buah negeri di bahagian timur laut Nigeria. Dengan menggunakan pendekatan PLS-SEM, model kajian menunjukkan pengaruh pembolehubah sifat-sifat teknologi, pembolehubah keyakinan dan kecekapan-kendiri komputer sebagai penentu-penentu penting terhadap niat untuk menyertai pilihanraya yang menggunakan teknologi e-pengundian. Tambahan pula, kajian ini mendapati pembolehubah penggunaan dapat mempengaruhi keputusan rasional pengundi untuk mengambil bahagian dalam pilihanraya yang menggunakan teknologi e-pengundian. Antara potensi cabaran bagi penggunaan e-pengundian yang dikenal pasti melalui analisis tematik termasuk cabaran-cabaran institusi, sosio-psikologi, teknologi dan infrastruktur, manakala pengukuhan kerangka institusi, penguasaan teknologi, penyebaran maklumat yang berkesan dan penyediaan kemudahan yang mencukupi telah dikenal pasti sebagai antara langkah-langkah untuk menangani cabaran pelaksanaan e-pengundian. Kajian ini menyumbang kepada teori dan amalan sistem maklumat serta penyertaan dalam demokrasi dan dasar awam. Ia juga menyediakan pembuat dan pelaksana dasar dengan pemahaman mengenai penggunaan e-pengundian untuk melaksanakan perancangan strategik dan membuat keputusan mengenai sistem pengundian yang dikehendaki untuk meningkatkan penyertaan politik.

Kata kunci: e-Pengundian, Teori Pilihan Rasional, Difusi Teknologi, Nigeria.

ABSTRACT

There are numerous problems ascribed to the existing ballot paper voting system in Nigeria. Some of the identified problems include multiple voting, under aged voting, intimidation of voters and miscomputation or falsification of election results. The consequences of the flawed voting system often lead to political apathy as well as decreased voter turnout. Consequently, the government plans to introduce e-voting system in order to enhance free, fair and credible elections as well as improve voter turnout. However, the e-voting system could be a solution to the problem of low turnout if it influences the electorates to participate in elections. Thus, this study is aimed at investigating factors that influence e-voting system adoption and its impact on voter turnout. By blending theories of Rational Choice, Diffusion of Innovation, Trust Model and Self-efficacy construct, the study conceptualized a model of election participation using e-voting system. Using combined methods of survey instrument and semi-structured interviews, data were collected from voters, government officials and political party officials across three States of the Northeastern Nigeria. Using PLS-SEM approach, the model demonstrated significant influence of technological attributes, trust and computer self-efficacy variables as determinants of intention to adopt e-voting system. In addition, the study demonstrated the significance of the adoption variables in influencing voter rational decision to participate in election using e-voting system. Potential challenges of e-voting adoption identified through thematic analysis include institutional, socio-psychological, technological and infrastructural challenges, while strengthening institutional framework, technological proficiency, effective information dissemination and provision of adequate requisite facilities were identified among other remedies to the challenges of e-voting adoption. The study has significant contributions to theory and practice of information system, participatory public policy and democracy. It also provides policy makers and practitioners with the understanding of e-voting adoption for strategic planning and decisions towards the desired voting system.

Keywords: e-Voting Adoption, Intention to Participate in Election, Voter Turnout, Rational Choice Theory, Nigeria.

ACKNOWLEDGEMENT

I begin by expressing my profound gratitude to Almighty Allah, Most Compassionate and Most Merciful who in His infinite mercy and guidance make this academic success a reality. I am highly indebted to my supervisors, Associate Professor (Dr.) Siti Alida John Abdullah and Dr. Rozita Bt Arshad for their unquantifiable contributions at every step of this research work to its successful completion. Their erudite scholarship leaves an indelible mark in the evolution of my educational endeavor. I am also indebted to the Chairperson and members of my Viva Voce Panel namely Professor (Dr.) Kamarudin Ngah (Chairperson); Associate Professor (Dr.) Mohd Rizal Mohd Yaakop (External Examiner); Dr. Mohd Fitri Abdul Rahman (Internal Examiner) for their valuable contributions. It is equally pertinent to appreciate and acknowledge a number of people who in one way or the other contributed to the success of this research work. Appreciation to Associate Professor (Dr.) Samihah Khalil and Associate Professor (Dr.) Ahmad Martadha Mohammed for their immense contributions, especially at the early stage of this work. Special thanks to Madm Asyikin, Mr A Butt, Madm Noor Fatimah Hashim, Mahdi Mansor, Mohd Noor, Nur Atika Zakaria, Siti Nazirah Zainuddin; and all academic and management staffs of College of Law, Government and International Studies (COLGIS) for their support and assistance. Special thanks to staffs of INEC Bauchi, Gombe and Taraba States for their tremendous assistance while collecting the data used in this research.

Special appreciation to my dear father, Alhaj Sabo Jama'are and caring mother, Zainab Bt Hassan for their parenting. I am also grateful to my beloved wives Hassana Bt Usman and Rukka'atu Adam Jibrin; our blessed children, Aishah, Muhammad, Abdurrahman, Zainab and Abdullah for being sources of inspirations. Special thanks to my siblings Hauwa, Aliyu, Umar and Jibrin including the entire members of our family for their moral and financial support. I also thank my friends and colleagues in Nigeria and Malaysia particularly Dr. Aliyu Ahmad Aliyu, Hamisu Ibrahim Alhaji, Dr. Murtala Aminu Ibrahim, Sadiq Launi, Inuwa Abdu Ibrahim, Siraj Ado Jahun and many others too numerous to mention.

DECLARATION

I declare that this thesis is my original work except for the quotations and citations, which have been fully acknowledged. I also declare that it has not been previously and is not concurrently submitted for other degree at the Universiti Utara Malaysia or any other institution.



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DEDICATION

I dedicated this research work to my beloved mother, Zainab Bt Hassan



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LIST OF ABBREVIATIONS

ACE	Alliance for Credible Election
AFIS	Automated Fingerprint Identification System
ASE	Assisted self-efficacy
AVE	Average variance extracted
BelS	Belief systems
BPO	Bureaucratic policy orientation
CFA	Confirmatory factor analysis
CIA	Central Intelligence Agency
CompL	Computer literacy
ConsC	Constitutional control
CSE	Computer Self-efficacy
DDCM	Direct Data Capture Machine
df	Degree of freedom
DigD	Digital divides
DoI	Diffusion of Innovation
DRE	Direct Recording Electronic
DV	Dependent variable
ECN	Electoral Commission of Nigeria
ElecS	Electricity supply
EMB	Electoral Management Body
E-Official	Electoral official
e-Voting	Electronic voting
f^2	Effect size
FCT	Federal Capital Territory, Abuja
FEC	Federal Electoral Commission
FEDECO	Federal Electoral Commission
FRN	Federal Republic of Nigeria
G2B	Government to Business
G2C	Government to Citizens
G2E	Government to Employees
G2G	Government to Government
GAIS	Government administration information system
GDP	Gross Domestic Product
GSGSG	Ghazali Shafie Graduate School of Government
ICT	Information and communication technology
IDEA	International Institute for Democracy and Electoral Assistance
IDT	Innovation Diffusion Theory
IFES	International Foundation for Election Systems

Illit	Illiteracy
INEC	Independent National Electoral Commission
InInf	Inadequate information
IS	Information system
ISE	Individual self-efficacy
ITP	Intention to Participate
IV	Independent variable
i-Voting	Internet voting
MMS	Multimedia Message Service
MPCU	Model of PC Utilization
MVA	Missing value analysis
NAN	News Agency of Nigeria
NCA	Nigerian Communication Act
NEC	National Electoral Commission
NECON	National Electoral Commission of Nigeria
NITDA	National Information Technology Development Agency
NTP	National Telecommunication Policy
NYSC	National Youth Service Corps
OBS	Perceived Observability
OMR	Optical Mark Reader
OSBS	Open Secret Ballot System
OYAGSB	Othman Yeop Abdullah Graduate School of Business
PATU	Perceived Ability to Use
Pc	Composite reliability
PCI	Perceived Characteristics of Innovation
PEOU	Perceived ease of use
PFB	Perceived functional benefit
PLS	Partial Least Square
PLS-SEM	Partial Least Square – Structural Equation Model
P-Official	Party official
PSNet	Public Service Network
PU	Perceived usefulness
Q ²	Predictive relevance
R ²	Coefficient of determination
RA	Relative advantage
RECs	Resident Electoral Commissioners
ReqF	Requisite facilities
RERC	Registration and Election Review Committee
REVS	Remote electronic voting system
SET	Self-Efficacy Theory

TAM	Technology Adoption Model
TechC	Technical capacity
TEI	The Electoral Institute
TEO	Trust in the Electoral Government Officials
TIT	Trust in the Technology
TPB	Theory of Planned Behavior
TRA	Theory of Reason Action
TRB	Perceived Trialability
UN	United Nation
UTAUT	Unified Theory of Acceptance and Use of Technology
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VAP	Voting age population
VIF	Variance inflation factor
β	Standardized path coefficient



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CHAPTER ONE

INTRODUCTION

1.1 Introduction

In Nigeria, e-applications in both private and public sector organizations are at various stage of evolution. Stream of literature have reported instant development of such e-applications. For instance, e-banking has been the most favored private sector with remarkably advanced stage of e-application (e.g. Agwu, Atuma, Ikpefan, & Iyoha, 2014; Agwu & Carter, 2014; Shaikh & Karjaluoto, 2015; DASH & Tech, 2014). Other areas receiving increasing attention include e-commerce (Egbokhare, Ukaoha, & Chiemeké, 2011; Ayo, Adewoye, & Oni, 2011; Gholami, Ogun, Koh, & Lim, 2010).

Inversely to private sector organizations, e-application in public sector also known as e-government is at evolving stage and is only beginning to be researched (Amagoh, 2015). Example of areas receiving attention on e-application in public sector include e-learning (Edewor, Imhonopi, & Urim, 2014; Ayeni & Odion, 2011), e-recruitment (Odumeru, 2012; Omolawal, 2015; Sanusi, & Martadha, 2012; Sanusi & Mohamed, 2012) and e-licencing (Obidinnu, Ekechukwu, & Ejiofor, 2013; Faniran & Olaniyan, 2009). Although recent development of e-voting adoption in Nigeria attracts a stream of literature (Adebayo, Ugiomoh, & AbdulMalik, 2013; Ahmad, Abdullah, & Arshad, 2015a; Ahmad, Abdullah, & Arshad, 2015b; Ayo, Adebisi, & Fatudimu, 2008; Ayo & Ekong, 2008), paucity of emperical study is evident thereby craving for more investiagtion.

The contents of
the thesis is for
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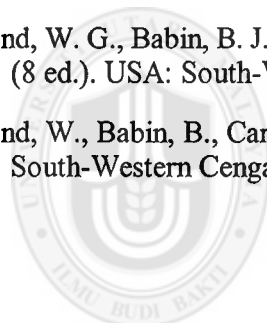
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Appendix A: Adapted Items

Table A1

Adapted Items

Construct/Items	Cronbach α	Composite Reliability	Sources
<p>Participation Intention (ITP)</p> <p>ITP1. I plan to participate in the future election using e-voting system.</p> <p>ITP2. I intend to participate in the future election using e-voting system.</p> <p>ITP3. I expect to participate in the future election using e-voting system.</p>	.88	.82	Lin (2006)
<p>Perceived Trialability (TRB)</p> <p>TR1. Before deciding on whether or not to use the e-voting, I would need to use it on a trial basis.</p> <p>TR2. Before deciding on whether or not to use the e-voting, I would need to properly try it out.</p> <p>TR3. I would be permitted to use the e-voting on a trial basis long enough to see what it can do.</p> <p>TR4. Before deciding whether to use any types of e-voting, I would be able to properly try them out.</p> <p>TR05. I would have a great deal of opportunity to try various e-voting technologies.</p>	.85		Park and Chen (2007); Moore and Benbasat (1991)
<p>Perceived Observability (OBS)</p> <p>OBS1. I believe I would have no difficulty telling others about the results of using e-voting.</p> <p>OBS2. I believe I could communicate to others the outcome of using e-voting.</p> <p>OBS03. I believe I would have no difficulty explaining why using e-voting system may or may not be beneficial.</p> <p>OBS4. I believe the instructions of how to use e-voting is available and visible in many places.</p>		.80	Al-Busaidi (2012); Meuter, Bitner, Ostrom, and Brown (2005)

OBS5. The results of using the e-voting would be apparent to me.			
Construct/Items	Cronbach α	Composite Reliability	Sources
<p>Perceived Ability to Use (PATU)</p> <p>PATU1. I believe to interact with e-voting system is easy for me. PATU2. I believe the e-voting is flexible to interact with. PATU3. I believe it is easy to operate e-voting. PATU4. I believe interactions with the e-voting system are clear and understandable. PATU5. I can easily do my tasks while using the website. PATU6. I believe it is easy to cast vote using e-voting system.</p>			Shareef, Kumar, Kumar and Dwivedi (2011)
<p>Perceived Relative Advantage (RA)</p> <p>RA1. I have a belief that using e-voting enables me to vote more quickly. RA2. I believe that using e-voting improves the quality the election. RA3. I believe using e-voting makes it easier to cast my vote. RA4. I predict using e-voting can enhance accuracy of my voting. RA5. I believe Using e-voting can offer me greater control over my vote.</p>	.90		Moore and Benbasat (1991)
<p>Trust in the Technology (TIT)</p> <p>TIT1. I have a perception that the technology has enough safeguards to make me feel comfortable using it to vote. TIT2. I feel assured that legal and technological structures will adequately protect me from problems using e-voting. TIT3. I trust that vote cast using e-voting will be accurately counted. TIT4. I have a perception that e-voting will be safe enough for voting.</p>		.96	Powell et al. (2012)

TIT5. I should trust the security of e-voting system. TIT6. I trust that vote cast using e-voting will not be tampered with.			
Trust in Electoral Government Officials (TEO) TEO1. I feel that electoral officials act in citizen's best interest. TEO2. I feel fine interacting with the electoral officials since they generally fulfill their duties efficiently. TEO3. I always feel confident that I can rely on electoral officials to do their part when I interact with them. TEO4. I am comfortable relying on the electoral officials to meet their obligations.		.91	(Teo, Srivastava & Jiang 2008 as adapted from McKnight, Choudhury & Kacmar, 2002)*
Trust in Elected Government Officials (TPO) TPO1. I think I can trust elected government officials. TPO2. Elected government officials can be trusted not to interfere in the conduct of election. TPO3. I am confident that the elected government officials relate good with the electoral officials in accordance with election guidelines. TPO4. In my opinion, elected government is trustworthy.	.75		Alomari et al. (2012); Powell, Williams, Bock, Doellman and Allen (2012)
Computer Self-efficacy (CSE) CSE1. I would find it easy using e-voting without having computer skills. CSE2. It is not easy for me to understand benefits of e-voting without having the required skills to use it. CSE3. I have the computer skills which enable me to use e-voting system. CSE4. Having the computer skills will improve my understanding of e-voting system. CSE5. Having the computer skills will enable me to assess the e-voting system.			Alomari et al. (2012)

Appendix B: Questionnaire



University Utara Malaysia (UUM)
College of Law, Government and International Studies
(COLGIS)
Ghazali Shafie Graduate School of Government
(GSGSG)
06010 UUM Sintok, Kedah Darul Aman

Dear Respondent,

For more than a decade, elections in Nigeria is characterized with irregularities of different shapes and magnitudes including multiple voting, under aged voting, miscalculation of results, intimidation of voters, etc. Use of traditional paper voting system is hypothesized to be among other major cause of election problems in Nigeria. The government is therefore planning to introduce electronic voting (e-voting) system in order to enhance free, fair and credible public elections. However, deployment of modern voting technology to replace traditional voting system could be meaningful only if citizens such as your humble self are willing to accept the technology. This study is therefore aim to **examine the factors affecting voters' intention to participate in public elections using e-voting technology**. Attached herewith a self-explanatory survey questionnaire designed to sample your opinion about the proposed government project. Your sincere participation would help to build genuine citizens' opinion that will serve as a guide to policy makers in making strategic decisions concerning the desired voting system. I am therefore soliciting for your cooperation to kindly provide objective answers to all the questions in this survey. The survey is part of Doctor of Philosophy (PhD) study being undertaken by the researcher who is a student at Universiti Utara Malaysia (UUM). Meanwhile, be assured that all the information you provide will be handled with utmost confidentiality and use only for the purpose of this research study. You are therefore advised not to write either your names or names of your organization on the questionnaire, please.

Thank you very much for your anticipated cooperation.

Yours sincerely

Sabo Ahmad

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Note: The survey is broadly divided into Section A and Section B. Section A is subdivided into 5 parts. In each of part I – V, you are required to tick (✓) an appropriate column provided with options from Strongly Disagree-1, Disagree-2, Neutral-3, Agree-4 to Strongly Agree-5. Section B contains demographic information.

SECTION A:

Part I: Perception on Intention to Participate Using e-Voting System

Please tick (✓) between Strongly Disagree-1 to Strongly Agree-5 that matches your view or level of agreement most for each question.

1=Strongly Disagree	2=Disagree	3=Neutral	4=Agree	5=Strongly Agree
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		1	2	3	4	5
A1	I plan to participate in the future election using e-voting machine.					
A2	I intend to participate in the future election using e-voting machine.					
A3	I expect to participate in the future election using e-voting machine.					

Part II: Perception on e-Voting Characteristics

The following statements describe your perception towards e-voting characteristics. Please tick (✓) between Strongly Disagree-1 to Strongly Agree-5 that matches your view or level of agreement most for each question.

		1	2	3	4	5
B1	I have a perception that using e-voting enables me to vote more quickly.					
B2	I have a perception that using e-voting can improve the quality of the election.					
B3	I have a perception that using e-voting will be easier for me to cast my vote.					
B4	I predict using e-voting can enhance accuracy of my voting.					
B5	I have a perception that using e-voting can offer me greater control over my vote.					

1=Strongly Disagree

2=Disagree 3=Neutral

4=Agree

5=Strongly Agree

		1	2	3	4	5
C1	Before deciding on whether or not to use the e-voting, I will need to use it on a trial basis.					
C2	Before deciding on whether or not to use the e-voting, I will need to properly try it out.					
C3	I should be permitted to use the e-voting on a trial basis long enough to see what it can do.					
C4	Before deciding whether to use any types of e-voting, I will be able to properly try them out.					
C5	I would have a great deal of opportunity to try various e-voting technologies.					

		1	2	3	4	5
D1	I have a perception that I will have no difficulty telling others about the results of using e-voting.					
D2	I have a perception that I could communicate to others the outcome of using e-voting.					
D3	I have a perception that I will have no difficulty explaining why using e-voting system may or may not be beneficial.					
D4	I have a perception that the instructions on how to use e-voting will be available and visible in many places.					
D5	I have a perception that the results of using the e-voting will be apparent to me.					

Part III: Perception on Trust in e-Voting System

The following statements describe your trusting perception on e-voting system. Please tick (✓) between Strongly Disagree-1 to Strongly Agree-5 that matches your view or level of agreement most for each question.

		1	2	3	4	5
E1	I have a perception that the technology has enough safeguards to make me feel comfortable using it to vote.					
E2	I feel assured that legal and technological structures will adequately protect me from problems using e-voting.					
E3	I trust that vote cast using e-voting will be accurately counted.					
E4	I have a perception that e-voting will be safe enough for voting.					
E5	I should trust the security of e-voting system.					
E6	I trust that vote cast using e-voting will not be tampered with.					

1=Strongly Disagree

2=Disagree 3=Neutral

4=Agree

5=Strongly Agree

Part IV: Perception on Trust in Government Officials

The following statements describe your perception of trust in electoral officials. Please **tick (✓)** between Strongly Disagree-1 to Strongly Agree-5 that matches your view or level of agreement most for each question.

		1	2	3	4	5
F1	I feel that electoral officials act in citizen's best interest.					
F2	I feel fine interacting with the electoral officials since they generally fulfills their duties efficiently.					
F3	I always feel confident that I can rely on electoral officials to do their part when I interact with them.					
F4	I am comfortable relying on the electoral officials to perform their obligations.					

The following statements describe your perception of trust in elected government officials. Please **tick (✓)** between Strongly Disagree-1 to Strongly Agree-5 that matches your view or level of agreement most for each question.

		1	2	3	4	5
G1	I think I can trust elected government officials.					
G2	Elected government officials can be trusted not to interfere in the conduct of election.					
G3	I am confident that the elected government officials relate good with the electoral officials in accordance with election guidelines.					
G4	In my opinion, elected government officials are trustworthy.					

Part V: Perception on Computer Self-efficacy

The following statements describe your perception to computer self-efficacy. Please **tick (✓)** between Strongly Disagree-1 to Strongly Agree-5 that matches your view or level of agreement most for each question.

		1	2	3	4	5
H1	I would find it easy using e-voting if I have computer skills.					
H2	It will be easy for me to understand benefits of e-voting if I have computer skills.					
H3	If I have computer skills, it will enable me to use e-voting system.					
H4	Having the computer skills will improve my understanding of e-voting system.					
H5	Having the computer skills will enable me to assess the e-voting system.					

1=Strongly Disagree

2=Disagree 3=Neutral

4=Agree

5=Strongly Agree

Part VI: Perception on Ability to Use e-Voting System

The following statements describe your perception regarding ability to use e-voting system. Please tick (✓) between Strongly Disagree-1 to Strongly Agree-5 that matches your view or level of agreement most for each question.

		1	2	3	4	5
J1	I have a perception that interaction with e-voting system will be easy for me.					
J2	I have perception that e-voting will be flexible to interact with.					
J3	I have a perception that it will be easy to operate e-voting.					
J4	I have a perception that interactions with the e-voting system will be clear and understandable.					
J5	I have a perception that I can easily cast my vote using e-voting.					

SECTION B

Demographic Information: Please Tick (✓) Only One option as applicable

1. Gender

i Femal

ii Male

2. Educational Background

i Secondary/Primary Certificate

ii ND/OND

iii Bachelor Degree/HND

iv PhD/MSc

v Nonformal

vi Others (Specify) _____

3. Age

i 18- 25 yrs

ii 26- 35 yrs

iii 36- 45 yrs

iv 46- 55 yrs

v above 55 yrs

vi

Others (specify) _____

4. Residence _____

5. Average Monthly Income

i Less than N18,000

ii N18,000 to N50,000

iii N51,000 to N100,000

iv N101, 000 to N200,000

v above N200,000

vi Others (Specify amount) _____

1=Strongly Disagree

2=Disagree 3=Neutral

4=Agree

5=Strongly Agree

6. Computer Proficiency/skills

- i I can handle basic operation of computer such as Microsoft office
- ii I have advanced skills of computer operations including internet surfing
- iii I am a computer professional
- iv I don't have computer skills
- v Others (explain) _____

7. How many times did you participate in National Election?

- 1 Time 2 Times 3 Times 4 Times Others (Specify) __



UUM
Universiti Utara Malaysia

1=Strongly Disagree

2=Disagree 3=Neutral

4=Agree

5=Strongly Agree



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Universiti Utara Malaysia

Appendix C: Interview Protocol

BRIEF INFORMATION ON THE RESEARCH

Dear (Sir/Madam)

Traditional paper-based voting system is characterized with many irregularities leading to general public dissatisfaction and outcry. e-Voting system is a technological innovation in form of ATM like, Kiosk, Punch card, or through wireless network such as internet, and fixed telephones that can be utilized by the government to overturn problems of paper-based voting system. It could be deploy to enhance free, fair and credible public election and therefore has the potential to increase political participation. However, to introduce e-voting as an alternative replacement to the traditional method of voting requires research study that would help strategic planning.

In order to achieve the desired goals, the researcher is conducting stakeholder interviews for about 30 minutes such as your humble self, who are in a position to provide valuable information on the proposed e-voting projects for current and future plans. In this regards, we would like to invite you to be part of this study, which will assist the researcher to identify potential challenges and solutions to participation in election using e-voting system. It's expected that information gained from this research study will provides the decision makers with better understanding of the challenges for better planning and implementation.

I assure you that all information and identities will remain confidential and treat only for the purpose of this research. Could I ask you please to complete the attached Consent Form prior to our interview?

Thank you in anticipation of your participation.

Yours sincerely,

Sabo, Ahmad

CONSENT FORM FOR INTERVIEWEE PARTICIPANTS

INFORMATION TO PARTICIPANTS:

We would like to invite you to be a part of Doctor of Philosophy study into 'e-Voting System Adoption and its Impact on Voter Turnout in Nigeria'.

This survey is part of Doctor of Philosophy study, being undertaken by the researcher, Sabo Ahmad and supervised by Ass. Prof. (Dr.) Siti Alida John Bt Abdullah and Dr. Rozita Bt Arshad at Universiti Utara Malaysia (UUM). The objective of this study is to explore factors with potential to imposing decrease participation in elections using e-voting system. This study will assist the decision makers to better understand the complexities involved in e-voting adoption in order to ensure current and future plans are in the right direction and according to the citizen's needs. Semi-Structured interviews is part of the primary data collection tools that will be used in this study. The interview will be taped and notes taken with full consent of the participants for accuracy of information. The information gathered will be treated with utmost confidentiality along with the identity of the participants. The anonymity and confidentiality of participants and information collected from them will be ensured through important steps outlined below.

CERTIFICATION BY PARTICIPANT

I, _____ of _____
_____ certify that I am above
18 years old and that I am voluntarily giving my consent to participate in the study 'E-Voting System Adoption and its Impact on Voter Turnout in Nigeria'.

I certify that the objectives of the study, together with any risks and safeguards associated with the procedures listed hereunder to be carried out in the research, have been fully explained to me by Sabo Ahmad, and that I freely consent to participate agreeing with the procedures mentioned below:

- I am participating voluntarily.

- The interview will be audio taped and notes taken.
- The interview will take place in _____
- The information gathered from me will be kept confidential along with my identity.
- The anonymity and confidentiality of information collected from me as participant will be ensured.

I certify that I have had the opportunity to have any questions answered and that I understand that I can withdraw from this study at any time and that this withdrawal will not jeopardize me in any way.

Signed:

Date:

NOTE: If you have any queries or complaints about the way you have been treated, you may contact the Secretary, Ghazali Shafie Graduate School of Government, College of Law, Government and International Studies, Universiti Utara Malaysia (UUM), PMB 06010 Sintok, Kedah Darul Aman, Malaysia, Tel: (+604) 9286601/6613, or email: yus1117@uum.edu.my

SEMI-STRUCTURED INTERVIEW QUESTIONS FOR QUALITATIVE DATA COLLECTION

Note: The main questions are listed below. However, this is a semi-structured interview and it is anticipated that more questions may be asked based on the interviewee responses.

Demographic Information

- Gender: Male/Female Age _____ Marital Status _____
- Education level _____ Computer literacy _____
- Occupation _____ Position _____
- State _____ Residence _____

General Questions

1. How would you describe problems of Nigerian elections in relation to inappropriate method of voting?
2. How would you describe plan by the government to introduce e-voting system in near future elections?
3. How would you describe the proposed introduction of e-voting system in relation to encouraging participation in elections?
4. How would you describe potential challenges to acceptance of e-voting system by the citizens?
5. What in your opinion are possible solutions to the potential problems of the proposed e-voting?



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Appendix D: Demographic Profile of Interviewees

Table F1

Detailed Demographic Profile of the Interviewees

Category	Designation	Gender	Age Bracket	Education Level	Income level	Res	Computer literacy
Voter 1	-	Male	31 – 45	Higher Qualification	High Income	Urban	Basic Computer Skills
Voter 2	-	Male	18 – 30	Lower Qualification	Average Income	Rural	No Computer Skills
Voter 3	-	Female	31 – 45	Higher Qualification	High Income	Urban	Basic Computer Skills
Voter 4	-	Male	46 and above	Higher Qualification	High Income	Urban	Advanced Computer Skills
Voter 5	-	Male	31 – 45	Zero Qualification	Low Income	Rural	No Computer Skills
Voter 6	-	Female	31 – 45	Lower Qualification	Low Income	Urban	No Computer Skills
Voter 7	-	Male	18 – 30	Higher Qualification	Average Income	Rural	Advanced Computer Skills
Voter 8	-	Male	31 – 45	Zero Qualification	Low Income	Urban	Basic Computer Skills
Voter 9	-	Male	18 – 30	Higher Qualification	Average Income	Urban	Basic Computer Skills
Voter 10	-	Male	18 – 30	Lower Qualification	Low Income	Rural	Basic Computer Skills

Category	Designation	Gender	Age Bracket	Education Level	Income level	Res	Computer literacy
Voter 11	-	Female	46 and above	Zero Qualification	High Income	Urban	No Computer Skills
Voter 12	-	Male	31 – 45	Higher Qualification	Average Income	Rural	Advanced Computer Skills
Voter 13	-	Female	31 – 45	Lower Qualification	Average Income	Urban	Basic Computer Skills
Voter 14	-	Male	18 – 30	Higher Qualification	High Income	Urban	Advanced Computer Skills
Voter 15	-	Male	31 – 45	Zero Qualification	Average Income	Rural	Basic Computer Skills
Electoral official 1	Residence Electoral Commissioner	Male	31 – 45	Higher Qualification	Average Income	Urban	Basic Computer Skills
Electoral official 2	Head of Legal Department	Male	46 and above	Higer Qualification	Low Income	Rural	No Computer Skills
Electoral official 3	Head of Logistic and Transport	Male	18 – 30	Higher Qualification	Average Income	Urban	Basic Computer Skills
Electoral official 4	Head of Computer	Female	31 – 45	Higer Qualification	Average Income	Rural	Advanced Computer Skills
Electoral official 5	Head of Operation	Male	46 and above	Higher Qualification	High Income	Urban	Basic Computer Skills
Electoral official 6	Head of Human Resource Mgt	Male	31 – 45	Higer Qualification	Low Income	Urban	Advanced Computer Skills

Category	Designation	Gender	Age Bracket	Education Level	Income level	Res	Computer literacy
Party official 1	Organizing Secretary	Male	18 – 30	Lower Qualification	Average Income	Rural	Advanced Computer Skills
Party official 2	Vice Chairman	Male	31 – 45	Higher Qualification	High Income	Urban	Basic Computer Skills
Party official 3	Women Leader	Female	46 and above	Lower Qualification	Low Income	Rural	No Computer Skills
Party official 4	Youth Leader	Male	31 – 45	Lower Qualification	High Income	Urban	Basic Computer Skills



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Table F2

Interviewees' Response about Challenging Factors with Potential for Imposing Decrease in Voter Turnout using e-Voting System

Respondents	Institutional Challenges					Socio-psychological Challenges				Technological Challenges		Infrastructure l Challenges	
	TEO	TPO	BPO	ConsC	TechC	Illit	CompL	DigD	BelS	InInf	Trial	ReqF	ElecS
Voter1	1	1			1		1		1	1	1	1	
Voter2	1		1			1	1	1		1	1		1
Voter3	1	1		1			1				1	1	1
Voter4		1			1	1		1		1			
Voter5	1		1	1			1		1	1	1	1	1
Voter6		1			1	1		1		1	1	1	
Voter7	1	1	1				1				1	1	1
Voter8					1	1		1	1	1			1
Voter9	1		1		1	1	1	1		1	1	1	1
Voter10	1	1				1	1	1		1	1	1	
Voter11	1	1	1		1	1			1	1			
Voter12						1	1	1		1	1	1	1
Voter13	1		1	1		1	1				1	1	
Voter14	1								1	1		1	1
Voter15		1	1		1	1	1			1	1	1	
E. Official1	1		1	1		1	1			1	1		1
E. Official2		1			1			1		1		1	
E. Official3	1	1		1		1			1	1	1		1
E. Official4		1			1		1				1	1	
E. Official5	1		1							1		1	1
E. Official6		1		1	1	1	1			1	1		

P. Official1	1		1		1	1		1		1		1	1
P. Official2		1		1			1		1		1	1	1
P. Official3	1	1		1		1	1	1		1	1	1	1
P. Official4	1		1	1	1	1	1	1	1	1	1	1	

TEO = Trust in Electoral Government Officials; TPO = Trust in Elected Government Officials; BPO = Bureaucratic policy orientation; ConsC = Constitutional control; TechC = Technical capacity; Illit = Illiteracy; CompL = Computer literacy; DigD = Digital divides; BelS = Belief systems; InInf = Inadequate information; Trial = Trialing the technology; ReqF = Requisite facilities; ElecS = Electricity supply



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Table F3

Interviewees' Response about Remedy to Potential Challenges of Voter Turnout in a Drive to Adopt e-Voting System

Respondents	Strengthening Institutional Framework			EID	ATAV	IIMP	ARF
	EPF	SAL	AII				
Voter1	1	1	1	1		1	1
Voter2	1		1	1		1	1
Voter3	1	1	1	1	1	1	1
Voter4		1	1		1	1	
Voter5	1		1	1	1	1	1
Voter6		1	1	1	1	1	
Voter7	1		1	1		1	1
Voter8			1	1		1	
Voter9	1		1	1	1	1	1
Voter10		1	1	1		1	1
Voter11		1	1	1	1	1	
Voter12	1			1		1	1
Voter13	1	1	1	1		1	1
Voter14	1		1	1		1	
Voter15			1	1	1	1	1
E. Official1			1	1		1	1
E. Official2	1		1	1	1		
E. Official3		1		1		1	
E. Official4			1	1	1		1
E. Official5	1		1	1			
E. Official6		1		1	1	1	1
P. Official1	1		1	1	1	1	1
P. Official2	1		1	1		1	1
P. Official3	1	1		1		1	1
P. Official4	1		1	1	1	1	1

EPF = Effective Policy Framework; SAL = Severe Anti-corruption Law; AII = Absolute Independent of INEC; EID = Effective Information Dissemination; ATA = Appealing Technological Attributes; IIMP = Incremental Implementation; ARF = Adequate Requisite Facilities