THE DETERMINANTS OF ELECTRONIC VOTING ADOPTION: INDEPENDENT NATIONAL ELECTORAL COMMISSION OF NIGERIA EMPLOYEES’ PERSPECTIVE

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Abstrak


Kata kunci: Penerimaan E-voting, Penggunaan teknologi maklumat, Konteks organisasi, Pemodelan persamaan struktur
Abstract

The trend in the technological development has made the use of information technology and supporting devices mandatory in virtually all aspects of life. Yet the development of an Information system can be rejected by users due to several factors, that can be costly if left unsolved. This study investigates the determinant factors that can influence the successful adoption of electronic voting technology in the organisational context using the managerial and operational staff of the electoral commission for the data collection thorough a survey study. Based on previous studies on adoption of technology, four key determinants factors or variables i.e. Technological Readiness, Organisational Readiness, Environmental Factors, and Perceived Benefits were identified from theories of Diffusion of Innovations, Technology-Organisation-Environment framework, and Iacovou et al. (1995) model to develop a model of organisational adoption of electronic voting technology. Past studies in the area of technology adoption have equally identified other important factors that can influence adoption of technology such as user participation in system development and ICT training and Skills. The study extend the model with these two factors and tested for mediation and indirect effects in the model relationships using ICT training and Skills being a critical factors in the success of any information technology adoption, especially in the developing countries such as Nigeria as shown from previous studies. The proposed model consists of eleven hypothesized structural relationships-direct and indirect. A total of 500 questionnaires was distributed for this study between the two major categories, i.e. Managerial and operational staff. A Partial Least Structural Equation Modelling method of analysis was use to investigate the causal, mediating and moderating relationships between the latent variables. The results showed that all the determinants factors positively influence the electronic voting technology adoption success. Based on the results obtained, a model of information technology adoption known as E-voting adoption is proposed. The theoretical and practical implications were finally discussed, while necessary suggestions on future research were recommended.

Keywords: E-voting adoption, Information technology adoption, Organisational context, Structural equation modelling.
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Salimonu Rasheed Ishaq
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Glossary of Terms

**E-voting Technology** refers to the use of computers and other related equipment for votes casting in an election with the aims of increasing voter’s participation, reducing the costs of elections and improving the accuracy of the election results.

**IT Adoption** IT Adoption refers to the application of Information and Communication Technologies (ICT) tools including computer hardware, software, and networks required for connecting to the internet in order to provide operational, managerial, and decision making supports in an organisation or to the users.

**IT Innovations** is the use of information technology in a creative ways to make organisation or users more efficient in order to improve the relationships between technology initiatives and the business or information technology goals.
List of Abbreviations

ACE  Administration and Cost of Elections
AVE  Average Variance Extracted
CB-SEM  Covariance-Based Structural Equation Modelling
CD  Compact Disk
CR  Composite Reliability
DOI  Diffusion Of Innovations
DRE  Direct Recording Electronic
DV  Dependent Variable
EAD  Electronic Voting Adoption
EF  Environment Factors
FIMIX-PLS  Finite Mixture- Partial Least Squares
GWIS  Government Wide Information System
ICT  Information Communication Technology
ICTSKILL  ICT Training and Skills
INEC  Independent National Electoral Commission
IPMA  Important Performance Matrix Analysis
IS  Information Systems
IT  Information Technology
IV  Independent Variable
IVS  Internet Voting Systems
KMO  Kaiser Meyer-Oklin
LV  Latent Variable
MGA  Multi Group Analysis
MOBS  Modified Open Ballot System
NNPIT  Nigerian National Policy for Information Technology
OBS  Open Ballot System
OMR  Optical Mark Recognition
OR  Organisational Readiness
OSBS  Open Secret Ballot System
OSVS  Optical Scan Voting System
PB  Perceived Benefits
PCA  Principal Component Analysis
PLS-SEM  Partial Least Squares Structural Equation Modelling
SBS  Secret Ballot System
SMART  Speed, Moral, Accountable/Accurate, Responsive and Transparent
SPSS  Statistical Package for Social Science
TOE  Technology Organisation Environment
TR  Technological Readiness
UPSD  User Participation in Systems Development
VIF  Variance Inflation Factor
VVPAT  Voter-Verified Paper Audit Trail
CHAPTER ONE
INTRODUCTION

1.1 Background of the study

Paper voting (non-electronic voting) technology, the oldest and most popular voting system used by democratic countries the world over, has not been able to establish the voter’s intents and to accurately translate the intents into a final tally or count in a convenient way for voters due to the scale and complexity of election. This has brought about decline in the voters turnout and apathy towards elections in most democracies (Burmester & Magkos, 2003; Merighi & Ravaioli, 2009). This has equally led to vote manipulation, ballot stuffing, ballot snatching, and outright vote stealing, among others, in most developing democracies, especially on the African continent (Folorunsho, Ogunseye, Okesola & Olaniyan, 2010).

The adoption and implementation of E-voting technology into the conduct of elections in some developed democracies such as United States of America, India and Brazil has reduced voter’s apathy, improved voters turnout during elections, and ensured, to a greater extent, the accuracy of vote count (Avgerou, Ganzaroli, Poulomenakou, & Reinhard, 2009). The adoption of E-voting technology by developing democratic countries is not only expected to prevent, but also eliminate problems of ballot stuffing, ballot snatching, votes and voters records manipulations, among others (Umonbong, 2006; AlJa’am, Alkhelaifi, Al-Khinji & Al-Sayrafi, 2009; ACE Electoral Knowledge Network, 2011).
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