Proceedings of the 14th European Conference on eGovernment

Spiru Haret University
Faculty of Legal and Administrative Sciences
Braşov, Romania

12-13 June 2014

Edited by

Alexandru Ionas

Spiru Haret University

Braşov, Romania

acpi

A conference managed by ACPI, UK

Proceedings of the 14th European Conference on eGovernment
ECEG 2014

Spiru Haret University
Faculty of Legal and Administrative Sciences
Brasov
Romania

12-13 June 2014

Edited by
Alexandru Ionas
Spiru Haret University
Braşov
Romania

Papers have been double-blind peer reviewed before final submission to the conference. Initially, paper abstracts were read and selected by the conference panel for submission as possible papers for the conference.

Many thanks to the reviewers who helped ensure the quality of the full papers.

These Conference Proceedings have been submitted to Thomson ISI for indexing.

Further copies of this book and previous year's proceedings can be purchased from http://academic-bookshop.com

E-Book ISBN: 978-1-909507-36-4
E-Book ISSN: 2049-1034
Book version ISBN: 978-1-909507-32-6
Book Version ISSN: 2049-1026
CD Version ISBN: 978-1-909507-40-1
CD Version ISSN: 2049-1042

Published by Academic Conferences and Publishing International
Limited Reading
UK
44-118-972-4148
www.academic-publishing.org

Contents

Preface

These proceedings represent the work of authors at the 14th European Conference on e-Government (ECEG 2014).

The Conference this year is hosted by the University Spiru Haret University, Brasov, Romania. The Conference Chair is Prof.dr. Carmen Costea and the Programme Chair is Alexandru Ionas, both are from the University Spiru Haret University in Romania.

ECEG brings together, researchers, Government officials and practitioners in the area of e-Government from around the world. Participants are able to share their research findings and explore the latest developments and trends in the field which can then be disseminated to the wider community.

With an initial submission of 97 abstracts, after the double blind, peer review process there are 30 research papers, 12 PhD papers, 3 Masters papers, 2 non academic and 2 Work in Progress Papers published in these Conference Proceedings. These papers represent research from many countries including Australia, Belgium, Canada, Egypt, Finland, Germany, Greece, India, Iran, Lebanon, Luxembourg, New Zealand, Nigeria, Pakistan, Poland, Romania, South Africa, Spain, Sweden, Switzerland, Taiwan (R.O.C.), Thailand, The Netherlands, Tunisia, Turkey, UK, USA

This will ensure a very interesting two days.

Selected papers will be published in special issues of the Electronic Journal of e-Government (www.ejeg.com) and the Jour- nal of E-Government Studies and Best Practices.

We hope that you have an stimulating conference, and enjoy your time in Romania.

Alexandru Ionas

Programme Chair
May 2014

Conference Executive

Conference Executive

Prof.dr. Carmen Costea, Spiru Haret University, Bucharest, Romania
Prof. Ion Petrescu –Alexandru Ionas, Spiru Haret University, Braşov, Romania
Prof. Joita Tanase, Spiru Haret University, Braşov, Romania
Prof. Cristinel Murzea, Spiru Haret University, Braşov, Romania
Associate professor Eduard Ionescu, Spiru Haret University, Braşov, Romania
Associate professor Ilie Magureanu, Spiru Haret University, Braşov, Romania
Lecturer Camelia Olteanu, Spiru Haret University, Romania

Mini track chairs

Jakob Svensson, Uppsala University, Sweden
Antti Lahtela, Regional State Administrative Agency for Eastern Finland, Finland
Mehdi Asgarkhani, CPIT, New Zealand
Dr Ahmed Imran, University of New South Wales, Australia
Dr Tim Turner, University of New South Wales, Australia

Dr Bulent Acma (Anadolu University, Eskisehir, Turkey); Dr Carl Adams (University of Portsmouth, UK); Prof Carlos Afonso (ESGHT/University of Algarve, Portugal); Georg Aichholzer (Institute of Technology Assessment, Austrian Academy of Sciences, Austria); Dr Soud Almahamid (Al Hussein Bin Talal University, Jordan); Esteve Almirall (Information Systems Department, ESADE , Spain); Professor Paul Alpar (Philipps-Universitaet Marburg, Germany); Prof. Hussein Al-Yaseen (Al-Ahliyya Amman University, Jordan); Dr Nadia Amin (University of Westminster, UK); Miquel Amutio (Spanish Ministry of Territorial Policy and Public Administration, Spain); Darko Androcec (University of Zagreb, Croatia); Dr. Gil Ariely (School of Government, Interdisciplinary Center Herzliya, Israel); Dr Aykut Arslan (Halic University., TURKEY); Medi Asgarkhani (CPIT New Zealand, New Zealand); Charles Ayo (Covenant University, Ota, Nigeria); Dr Paul Baker (Georgia Institute of Technology, Atlanta, USA); Dr Joan Ballantine (University of Ulster, UK); Dr Frank Bannister (Trinity College Dublin, Ireland); Dr Jordi Barrat Esteves (Ro- vira i Virgili University, Tarragona, Spain); Professor Dr Victor Bekkers (Erasmus University, Rotterdam, The Netherlands); Dr Jaro Berce (University of Ljubljana, Slovenia); Dr Egon Berghout (University of Groningen, The Netherlands); Lasse Berntzen (Vestfold University College, Norway); Rodica Bldisel (West University from Timisoara, Romania); Neil Botten (Westminster Business School, London, UK); Elke Boudry (IBBT-MICT-UGent, Belgium); Dr Ramon Bouzas-Lorenzo (University of Santiago de Compostela, Spain); Christian Breitenstrom (Fraunhofer FOKUS, Germany); Robert Brookes (Conwy County Borough Council, Wales, UK); Xavier Busquets (Information Systems Department, ESADE , Spain); Michael Butler (Revenue Commissioners, Ennis,, Ireland); Gulcin Buyukozkan (Galatasaray University, Istanbul, Turkey); Carlos Caldeira (University of Evora, Portugal); Toni Carbo (Drexel University, USA); Dr. Maria Luisa Carrió-Pastor (Universidad Politecnica de Valencia, Spain); Dr Lemuria Carter (North Carolina A & T State University, Greensboro, USA); Dr Walter Castelnovo (Università dell'Insubria, Como, Italy); Dr Akemi Chatfield (University of Wollongong, Australia); Dr Lichun Chiang (National Cheung Kung University, Tainan City, Taiwan); Jyoti Choudrie (University of Hertfordshire , UK); Dr Marie-Therese Christiansson (Department of Information Systems and Project Management, Faculty of Economic Sciences, Karlstad University, Sweden); Dr Duncan Cleary (Revenue Commissioners, Dublin, Ireland); Tom Collins (University of Limerick, Ireland); Marta Continente (Smart Cities, Citilab, Spain); Dr Maura Conway (Dublin City University, Ireland); Leela Damodaran (Department of Information Science, Loughborough University, UK); Dr Olawande Daramola, (Covenant University, Nigeria); Geoffrey Darnton (Requirements Analytics, UK); Mohan Datar (Mumbai University, India); Dr Susana De Juana-Espinosa (University of Alicante, Spain); Dr Martin De Saulles (University of Brighton, UK); Bruno de Vuyst (Vrije Universiteit Brussel ,Belgium, Belgium); Mitja Decman (University of Ljubljana, Slovenia); Dr Ales Dobnikar (E-Government and Administration Processes Directorate, Ministry of Public Administration, Slovenia); Prokopios Drogkaris (Laboratory of Information and Communication Systems Security (Info-Sec-Lab) University of the Aegean, Greece); Dr Vladimir Drozhzhinov (e-Government Competence Centre, Moscow, Russia); Prof Mohamed Dafir Ech-Cherif El Kettani (of University Mohammed V-Souissi, Morocco); Dr Yamaya Ekanayaka (University of Colombo School of Computing, Sri Lanka); Frances Ekwulugo (University of Westminster, UK); Andrey M Elizondo Solano (INCAE Business School, Costa Rica); Marwan Elnaghi (Brunel University, Uxbridge, UK); Dr Yousef Elsheikh (Applied Science University, Jordan); Prof. Dr. Ayman Elzeiny (Elmenfyah University, Egypt); Prof Sara Eriksén (School of Engineering, Blekinge Institute of Technology, Sweden); Prof. Dr. Alptekin Erkollar (ETCOP, Austria); Jose Esteves (Instituto de Empresa Business School, Madrid, Spain); Elsa Estevez (United Nations University International- Institute for Software Technology, Macau SAR China); Dr Alea Fairchild (The Constantia Institute bvba, The Netherlands); Elena Ferrari (University of Insubri, Italy); Marianne Fraefel (Bern University of Applied Sciences, Switzerland); Prof. Roberto Fragale Filho (Universidad Federal Fluminense and Fundacao Getulio Vargas, Rio de Janeiro, Brazil); Dr Julie Freeman (University of Canberra, Australia); Shauneen Furlong (University of Ottawa, Canada); Kieran Gallery (National Centre For Taxation Studies, Kemmy Business School, University of Limerick, Ireland); Professor Jean-Gabriel Ganascia (Laboratoire d'Informatique de Paris VI, University Pierre and Marie Curie, France); Professor Somayajulu Garimella (International Management Institute, New Delhi, India); Dr. Mila Gasco (Institute of Public Governance and Management(ESADE), Barcelona, Spain); Dr Rimantas Gatautis (Kaunas University of Technology, Kaunas, Lithuania); Dr Stephane Gauvin (université Laval, Canada); Dr Jenny Gilbert (University of Bedfordshire, UK); Prof Oliver Glassey (Swiss Graduate School of Public Administration, Switzerland); Marivs Gomez (Open University Catalonia , Barcelona); Dave Griffin (Leeds

Metropolitan University, UK); Mary Griffiths (University of Adelaide, Australia); Dr Kerstin Grunden (Trollhattan University, Sweden); Panos Hahamis (Westminster Business School, London, UK); Martijn Hartog (The Hague University of Applied Sciences / Centre for Research and Development, The Netherlands); Associate Professor Rugayah Hashim (University Technology Mara, Selangor, Malaysia); Associate Professor Paul Henman (University of Queensland, Brisbane, Australia); Patrik Hitzelberger (Centre de Recherche Public Gabriel- Lippmann, Belvaux, Luxembourg); Dr Keith Horton (University of Derby, , UK); Dr Omar Hujran (Princess Sumaya University for Technology, Jordan); Arild Jansen (University of Oslo, Norway); Dr Marijn Janssen (Delft University of Technology, The Netherlands); Carlos Jimenez (Estratic, Barcelona, Spain); Tina Jukic (Faculty of Administration, University of Ljubljana,, Slovenia); Prof Konstantinos Kalemis (National Centre For Local Government And Public Administration, Greece); Georgios Kapogiannis (Coventry University, UK); M.ed Ioannis Karavasilis (Ionian Islands Regional Education admimistration, Greece); Dr. Hasmiah Kasimin (Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia); Dr Christos Katsis (Technological Educational Institution of Ionian islands, Greece); Dr Anjali Kaushik (Management Develop- ment Institute, India); Prof.Dr Turksel Kaya Bensghir (Public Administration Institute For Turkey And Middle East, Turkey); Terence Keefe (Sheffield Hallam University, UK); Dr Samihah Khalil (Universiti Utara Malaysia, Malaysia); Dr Maja Klun (Uni- versity of Ljubljana, Slovenia); Ibrahim Kushchu (Mobile Government Consortium, UK); Dr Konstadinos Kutsikos (Business School, University of the Aegean, Greece); Prof Luc Lagraneur (Laurentian University, Sudbury, Canada); Dr Mohammad Lag- zian (Ferdowsi University of Mashhad, Iran); Antti Lahtela (Regional State Administrative Agency for Eastern Finland, Devel- opment and Steering Unit for the Loca, Finland); Dr Vanessa Liston (Trinity College Dublin, Ireland); Dr Ying Liu (Cambridge University, UK); Prof. Juliet Lodge (University of Leeds, UK); Kristina Lundevall (mCity, Sweden); Jyoti Devi Mahadeo (Univer- sity of Technogoly, Mauritius); Devender Maheshwari (Delft university of Technology, The Netherlands); Zaigham Mahmood (University of Derby, UK); Dr. Gregory Maniatopoulos (Newcastle University, UK); Panagiotis Manolitzas (Technological educational institute of piraeus, Greece); Paul McCusker (Letterkenny Institute of Technology, Ireland); Dr Adela Mesa (Univer- sity of the Basque Country, Spain); Jeremy Millard (Danish Technological Institute, Aarhus, Denmark, Denmark); Peter Millard (University of Portsmouth, UK); Prof Harekrishna Misra (Institute of Rural Management Anand, India); Gianluca Misuraca (European Commission, Joint Research Centre Institute for Prospective Technological Studies, JRC-IPTS, Spain); Dr. Yonathan Mizrachi (University of Haifa, Israel, Israel); Pat Molan (Revenue Commissioners, Limerick, Ireland); John Morison (Queens University Belfast, UK); Bert Mulder (Haagse Hogeschool, Den Haag, The Netherlands); Hilary Mullen (Faculty of Technology, Buckinghamshire Chilterns University, UK); Prof Maurice Mulvenna (University of Ulster, UK); Dr Darren Mundy (University of Hull, UK); Prof Miheala Muresan (Dimitrie Cantemir Christian University, Bucharest, Romania); Emanuela-Alisa Nica (Center for Ethics and Health Policy and , Petre Andrei University from Iasi, Romania); Paul Nixon (The Hague University of Profes- sional Education, The Netherlands); Dr Donald Norris (Department of Public Policy, University of Maryland, Baltimore County, USA); Dr Abdelkader Nouibat (University of M'Sila, Algeria); Mohammad Nuruzzaman (Daffodil International University, Bangladesh); Ass.Prof. Birgit Oberer (Kadir Has University, Turkey); David O'Donnell (Intellectual Capital Research Institute of Ireland, Ireland); Adegboyega Ojo (United Nations University, Macao, China); Dr Mustafa Kemal Oktem (Hacettepe Univer- sity, Ankara, Turkey); Dr Nicholas A. Omoregbe (Covenant University, Nigeria); Eleonora Paganelli (University of Camerino, Italy); Thanos Papadopoulos (Hull University Business School , UK); Dr Ioannis Papaioannou (Computer Technology Institute and Press , Greece); Dr Shaun Pather (Cape Peninsula University of Technology, South Africa); Dr Andrea Perego (European Commission Joint- Research Centre, Ispra, , Italy); Ass. Prof Mihai-Bogdan Petrisor (Faculty of Economics and Business Ad- ministration, Alexandru Ioan Cuza University, Romania); Mick Phythian (De Montfort University, Leicester, UK); Dr. Danilo Piaggesi (FRAMERICAS, United States); Jon Pike (Westminster Business School, London, UK); Joan Miquel Pique (Maurilia Knowledge, Spain); Dr. Nataša Pomazalová (FRDIS MENDELU in Brno, Czech Republic); Adina Popa ("Eftimie Murgu" Univer- sity of Resita, Romania); Key Pousttchi (University of Augsburg, Germany); Dr Devendra Punia (University of Petroleum & Energy Studies, India); Prof Thurasamy Ramayah (Universiti Sains Malaysia, Malaysia); Rajash Rawal (Haagse Hogeschool, Den Haag, The Netherlands); "Prof. Gregory Reinhardt (Australasian Institute of Judicial Administration, Melbourne , Australia); Dr Oliviero Riganelli (University of Milano Bicocca, Italy); Waltraut Ritter (Asia Pacific Intellectual Capital Centre, Hong Kong); Dr Jose Rodrigues (Federal University of Paraiba, Brazil); Sabine Rotthier (Hogeschool Gent, Belgium); Professor Lili Saghafi (Ca- nadian International College, Egypt,); Dr Ilias Said (Universiti Sains Malaysia, Malaysia); Manel Sanroma (Barcelona City Coun- cil, Spain); Prof. Chaudhary Imran Sarwar (Mixed Reality University, Pakistan); Angel Saz (Institute on Public Governance and Management, ESADE, Spain); Albert Serra (Institute on Public Governance and Management, ESADE, Spain); Dr Stanka Setnikar-Cankar (Faculty of Administration, University of Ljubljana,, Slovenia); Dr Jamal Shahin (Vrije Universiteit Brussel, Belgium); Omphemetse Sibanda (University of South Africa, Pretoria, South Africa); Prof. Dr. Carlo Simon (Provadis School of International Management and Technology, Germany, Germany); Massimo Simonetta (Ancitel Lombardia, Milan, Italy); Patrick Sinz (Ethica SAS and Dexxon group , France); Oscar Sovani (lombardia, Italy); Dr sasikumaran Sreedharan (king khalid university, Saudi arabia); Dr Bernd Stahl (De Montfort University, UK); Dalibor Stanimirovic (University of Ljubljana, Faculty of Administration, Slovenia); Prof. Dr. Kamelia Stefanova (University of National and World Economy, Bulgaria); Patra Steffens (Fraunhofer FOKUS, Germany); Simon Stephens (Letterkenny Institute of Technology, Ireland); Dr Alan Strickley (Department for Education, UK); Dr Jakob Svensson (Karlstad University, Sweden); Professor John Taylor (Glasgow Caledonian University, UK); Anil Tete (GGV, India); Doug Thomson (RMIT University, Australia); Prof Milan Todorovic (University Union Nikola Tesla, Serbia); Tim Turner (University of New South Wales, Australia); Dr Joan-Josep Vallbe (Universitat de Barcelona, Spain); Rudi Vansnick (Internet Society of Belgium, Belgium); Dr Mirko Vintar (Institute for Informatization of Administration, Slovenia); Dr Vasiliki Vrana (Technological educational institute of Serres, Greece); Prof. Fang Wang (Business School of Nankai University, Tianjin, China); Dr Stuart Warden (Cape Peninsula University of Technology, South Africa); Diana Wilson (Trinity College Dublin, Ireland); Rob Wilson (University of Newcastle, UK); Dr. Gamel Wiredu (Ghana Institute of Management and Public Ad-

ministration, Accra, Ghana); Professor Les Worrall (University of Coventry, UK); Prof Sunil Kumar Yadav (GNIT-MBA Institute, India); Mete Yildiz (Hacettepe University, Turkey); Dr. Elif Yuksel Oktay (Yalova University, Turkey); Prof Kostas Zafiropoulos (Department of International and European Studies, University of Macedonia, Greece); Dushana Zdravkova (Varna District Court, Varna, Bulgaria); Dr Fang Zhou (American University of Sharjah, United Arab Emirates); Prof Ewa Ziemba (University of Economics, Poland);

Biographies

Conference Chair

Prof.dr. Carmen-Eugenia Costea professor/vicerector at USH Bucharest in charge with International Relations; PhD Supervisor in Business Administration (ASE Bucharest); member in ASE Scientific Council of Doctoral Institute; Chair of Entrepreneurial Education Commission of National Council and Special Ambassador of Romania for Danube Strategy; Founder of Alternative Sciences Association; Associate researcher at the IPE-Romanian Academy (of Sciences). Research interests include: Business administration, International relations, Systems of Business Intelligence, Socio-economic risk management. Awards: 2007 International Peace Award for outstanding in education of Youth United Cultural Convention N.Carolina USA, 2007 Excellence in teaching ASE, Diploma Nicolae Georgescu Roegen Excellence in Research (ASE) Diploma and silver medal 2000 Outstanding intellectuals of the 21st century , IBC Cambridge. Research experience includes, among others, management and scientific activities in: BaSeFOOD "Sustainable exploitation of bioactive components from the Black Sea Area traditional foods"; Physics of Competition and Conflicts, Physics of risk ESF/COST; ASSYST Action for the Science of Complex Systems and Socially Intelligent ICT; NEST General Integration of the Applications of Complexity in Science. International teaching experience: Visiting Professor la OU London; Visiting Lecturer la National Cheng Chi Univ. Taipei; Intervenient at France Business School; Visiting Lecturer UNAM Mexico City; Visiting Scholar UWS Australia.

Programme Chair

Dr Alexandru Ionas holds a PhD in Law and is a professor at and Dean of the Faculty of Legal and Administrative Sciences, Spiru Haret University, Romania. During 2002 and 2008 he was the Head of Public Law Department at Transilvania University of Brasov. His research interests focus on penal law, administration and government. He has led and participated in international re- search projects fighting against crime, coordinating criminal investigations against organised crime, leading the investigation unit monitoring the illicit trafficking between Ukraine and Moldova. He was a counsellor on international relations with the Ministry of Administration and Interior (Ministry of Internal Affairs) – Romanian Government. He is one of the founders of the international organisation Southeast European Cooperative Initiative (SECI) Centre in Bucharest. He is on the list of experts in international cooperation for fighting against organised crime and terrorism in Europe. Although he has a background in law enforcement, nowadays he is involved in the process of administrative territorial reorganisation of Romania.

Mini Track Chairs

Dr Ahmed Imran research emerged from his personal experience that includes e-government and ICT for development. Ahmed had a versatile and challenging experience in the IT sector before his transition to academia. Ahmed's past experience is invaluable for research in understanding and providing rich insight of the context in least developed courtiers. His PhD research gained an in-depth understanding of impediments to eGovernment adoption in LDCs, which led to a process model for successful eGovernment adoption in LDCs. Part of Ahmed's research has been successfully implemented as an applied international research project that received ANU Vice Chancel- lor's award in 2010. Ahmed is also the lead author of the text book "eGovernment Management for Developing Countries".

Antti Lahtela works as a project manager at the Regional State Administrative Agency for Eastern Finland, Development and Steering Unit for the Local Register Offices. His main responsibilities include IT strategy implementation, information management development and enterprise architecture. Additionally, Antti is a Ph.D. student at the University of Eastern Finland with a research topic: Improving IT Service Support and Transition Processes. Areas of interest include government administration and healthcare information management.

Dr. Jakob Svensson is a researcher with a PhD in Media and Communication Studies. Jakob current research revolves around civic communication, political participation and the construction of citizenship through online communicative practices. He is currently involve in a research pro- ject studying relations of power, practices of discipline and surveillance among both outspoken political activists in southern Stockholm. Jakob Svensson is currently holding a position of assistant professorship in Media and Communication Studies at Uppsala University and is the Director of Master Program in Digital Media and Society.

Dr Tim Turner has been involved in the IT industry for over 25 years, with the focus on e-commerce, and particularly e-government, for over 15 years. He has concentrated his atten- tion on assisting governments at all levels to understand how information technology can be used to enhance effectiveness and efficiency. Recently, that focus has shifted to aiding the governments of least-developed countries. He has played significant roles in several of Austra- lia's leading e-government projects and consults to peak government and industry bodies in the e-government arena. Tim has also delivered significant projects in the private sector in information technology generally and electornic commerce specifically.

Gender Differences and Self-efficacy in the Adoption of e-Democracy in Africa

Charles Ayo[1], Victor Mbarika[2] and Aderonke Oni[1]
[1]Department of Computer and Information Science, Covenant University, Ota, Nigeria [2]School of Business, Southern University, Baton Rouge, USA
charles.ayo@covenantuniversity.edu.ng
victor@mbarika.com
ronke.oni@covenantuniversity.edu.ng

Abstract: The issue of gender equality is a very topical agenda of the Millennium Development Goals (MDGs) and is gradually receiving attention among researchers in all spheres of life with a view to bridging the gap. Within the Sub- Saharan Africa (SSA), women are voiceless politically, their population notwithstanding, because they are largely economically and educationally disadvantaged. This paper presents an empirical evaluation of the effect of gender differences and self-efficacy in e-Democracy implementation using an extended technology acceptance model (TAM). Online survey method was employed with questionnaire administered to colleagues on the authors' mailing lists and other recipients on the mailing lists of others in a viral manner to have a reasonable number of respondents. The questionnaire was divided into three sections. The first section consists of demographic profile of respondents, the second section deals with the level of technology usage by respondents, while the third section includes measures of variables to be studied: perceived usefulness (PU), perceived ease of use (PEOU), computer self-efficacy (CSE), attitude (ATT), and behavioral intention (BI). Items of the model's constructs were adapted from existing validated measures, a total number of 339 respondents submitted valid responses and were used for the analysis. To test the formulated hypotheses, a multivariate analytical methodology involving path analysis was used to empirically examine the sets of relationships in the form of linear causal models. Findings revealed that perceived ease of use has a stronger influence on female than male users of e- democracy. Perceived usefulness significantly influence user's attitude while perceived ease of use was found to have a negative effect on attitude. This may be due to high literacy level of the respondents and may be subjected to further research using a different set of population sample. However, self-efficacy was found to have no significant effect on the attitude of both male female users.

Keywords: e-democracy, e-Government, gender, TAM, self-efficacy, e-citizen and feminization

1. Introduction

The need to ensure that democratic arrangements were characterised by gender equality was the main agenda of the Commonwealth workshop on gender and democracy, which took place in Windhoek in 2000. There had been demands by women all over the world for full parity in political representation (Bachelet, 2011). Women appeared to be more populous than men but are often faced with a wide range of constraints to effectively participate in basic democratic exercises. From available statistics, women make up less than 20% of legislatures and less than 5% of ministers (Bachelet 2011). However, the situation has slighted changed in Nigeria. For the first time under the Jonathan administration, women were given about 30% representation in government at the Federal level.

The Internet was reported to have the potential to provide opportunities to traditionally subordinate groups (Herring, 2000). It was further reported that both genders tend to participate equally within chat environments. Also, the computer networks offer the opportunity to connect geographically dispersed women thus facilitating grass root feminist activism (Smith and Balka 1988). The UN Secretary General remarked that political participation of women improves democracy and that gender inequality in decision making remains an impediment to participatory democracy (Ki-moon 2011).

According to Caldow (2004), the use of ICT tools to facilitate, improve and extend democratic activities is referred to as e-democracy. E-democracy is anything that governments do to facilitate greater participation in government and enhance effective governance using digital or electronic means (Colman and Norris 2005). e-Democracy has the potential to create a new form of engagement, deliberation, and collaboration in the political process to make democratic processes more inclusive and transparent (Shirazi *et al* 2010). However, gender differences in technology usage need to be given consideration by both practitioners and academic to realise the full potential of e-Democracy.

The objectives of this paper include to evaluate: the level of awareness of e-Democracy portals in Nigeria; and the effect of gender and self-efficacy on e-Democracy acceptance based on TAM. The rest of the paper is arranged thus: section 2 presents a review of related works; while section 3 presents the background theory of the work. Sections 4 and 5 present the research method and data analysis respectively; while the conclusion to the work is presented in section 6.

2. Review of related works

The issue of gender difference and IT adoption has come under profound discourse among researchers for some years with the established result that gender difference affect the attitude towards IT adoption (Van Slyke *et al* 2002; Ilie *et al* 2005; Nel and Raleting 2010; Li and Kirkup 2007; Rao and Troshani 2007; and Ayo, *et al* 2011). Hafkin and Taggart (2001) recognized IT as a powerful tool to strengthen democracy, particularly it has capability to give voice to women who have been isolated, invisible and without a voice in the developing countries. Also, it was noted to be able to contribute to the political empowerment of women and as platform for networking, social and political advocacy, for enhancing women participation in the polity, and for improving the performance of elected women officials among others.

The major barriers to women inclusion were presented in Melhem and Tandon (2012), which included: access to Information and Communication Technology (ICT); lack of education, technical skills and tailored skills; lack of representation in ICT policy making body; low representation in Sciences and Technology; and lack of permission and empowerment to seek knowledge etc. The concept of feminization of IT occupation was presented by Hafkin and Taggart (2001), which refers to a situation where more women became skilled in IT, gained employment but wages were slashed because it may no longer be considered a specialist skills but merely what women can do. Several theories of women's relationship to technology within different strands of feminization were presented as the liberal approach, the Marxist approach, the Eco-feminist approach, the third-world and subsistence approach, and culture approach (Gurumurthy 2004). The relationships are presented in table 1 below.

3. Background theory

Technology Acceptance Model (TAM) is an information system theory that models how users come to accept and use a technology. Several studies focusing on adoption of information systems have their roots in Technology Acceptance Model (Davis 1989), that was originally designed to foretell user's acceptance of information technology and usage on the job. TAM model has become the most extensively applied model of user acceptance and usage (Ma & Liu 2004). Venkatesh & Davis (2000) claimed that TAM has become a well-known robust, powerful and parsimonious model for predicting user acceptance.

TAM is grounded in the Theory of Reasoned Action developed by Fishbein and Ajzen (1975). TAM speculated that perceived usefulness and perceived ease of use mediate the relationship between external variables, such as system characteristics, development process, training, and intention to use a system (Venkatesh and Davis 2000). The core hypothesis of TAM lies in the intention to use a system which is determined by attitude. Attitude was postulated to be measured with two variables, these are Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). Perceived usefulness and ease of use are user's beliefs on an object and therefore form user's attitude which will, in turn, predict acceptance i.e. intention to use.

Perceived usefulness is defined as "the degree to which a person believes that using a particular system would enhance his or her job performance" (Davis, 1989). Perceived ease of use is defined as "the degree to which a person believes that using a particular system would be free of effort" (Davis 1989).

TAM has been used extensively by many researchers in e-commerce and e-business domain and had also been extended to include other constructs such as Self-Efficacy and Trust amongst others (Wang *et al* 2003; Ifinedo 2007; Hanudin 2007; Adesina *et al* 2008; Ayo *et al* 2011; and Ayo *et al* 2012). Azmi and Bee (2010) investigated the adoption of e-filling system by taxpayers in Malaysia using TAM. Carter and Belanger (2005) also investigated factors influencing individual's intention to use an electronic government service using a model comprising of TAM's construct, diffusion of innovation construct and web trust. Detlor *et al* (2009) and Lopez-Sisniega (2009) have also used the Carter and Belanger's (2005) model to examine individuals acceptance of e-government related services in Canada and Mexico respectively.

3.1 Research model and hypotheses formulation

According to Davis (1989), TAM posits that PU and PEOU are significant factors affecting acceptance of an information system. That is, people tend to use an application to the extent they believe it will aid their performance and free of effort (Davis 1989; Venkatesh and Bala 2008). Therefore, the following hypotheses are proposed:

H1. Perceived usefulness (PU) has a positive influence on citizens' attitude toward e-Democracy acceptance in Africa.

H2. Perceived ease of use (PEOU) has a positive influence on citizens' attitude toward e- Democracy acceptance in Africa.

Self-efficacy is a person's belief in his/her ability to accomplish a given task. Bandura (1982) defined self-efficacy as the "judgments of how well one can execute courses of action required to deal with prospective situations". Bandura (1982) also sees self-efficacy as a person's attitudes, abilities, and cognitive skills to accomplish a given task. According to Compeau and Higgins (1995), self-efficacy beliefs function as proximal determinants of behaviour. Venkatesh and Davis (2000); Igbaria and Iivari(1995), discussed the importance of computer self-efficacy to both perceived usefulness and perceived ease of use. They proved that self-efficacy is positively related to information system (IS) acceptance determinant constructs. Hanudin (2007) found that computer self-efficacy has positive effects on both perceived usefulness and perceived ease of use of Internet banking in Malaysia. Thus, the following hypotheses are further proposed:

H3: Computer self-efficacy has a positive influence on perceived ease of use of e-Democracy implementation in Africa.

H4: Computer self-efficacy will have a positive influence on perceived usefulness of e-Democracy implementation in Africa.

H5: Computer self-efficacy has a positive influence on customer's attitude toward the use of e-Democracy implementation in Africa.

Davis (1993) defined to attitude towards using a system as "the degree of evaluative affect that an individual associates with using the system". According to Jahangir and Begum (2007), attitude is the driver of user's utility, it shows individual preferences, perceptions of usefulness, and credibility of a system. They suggested that attitudes have a strong, direct and positive effect on user's intention to actually use new information system. On this basis, we hypothesized that:

H6: User's attitude has a positive influence on the intention to use e-Democracy/e-government system in Nigeria.

Existing literature reported differences in the adoption of technology and related application between men and women (Venkatesh and Morris 2000; Li and Kirkup 2007; Nysveen *et al* 2005). Research on technology usage between men and women revealed that men tend to exhibit task-oriented attitudes to show that they understand the usefulness of technology than women (Venkatesh and Morris 2000; Minton and Scheneider 1980). Prior studies also revealed that males tend to have more access to technologies than women (Ilie *et al* 2005; Nel and Raleting 2010). The findings of Riquelme and Rios (2010) on mobile banking usage showed that perceived ease of use has a stronger influence on female respondents than male users. This disparity in use and acceptance of technology is liable to cause a gap between the sexes when it comestoe-government and e-democracy acceptance. The literature on the moderating effects of gender on the other factors is rare in e-government domain; nonetheless, the next set of hypotheses is formulated to enhance our understanding in this area. They are as follows:

H7: Gender will moderate the relationship between Perceived Usefulness and citizens' attitude toward e-Democracy acceptance in Africa.

H8: Gender will moderate the relationship between Perceived Ease of Use and citizens' attitude toward e-Democracy acceptance in Africa.

H9: Gender will moderate the relationship between Computer self-efficacy and citizens' attitude toward e-Democracy acceptance in Africa

The proposed research model and hypotheses is as presented in figure 1.

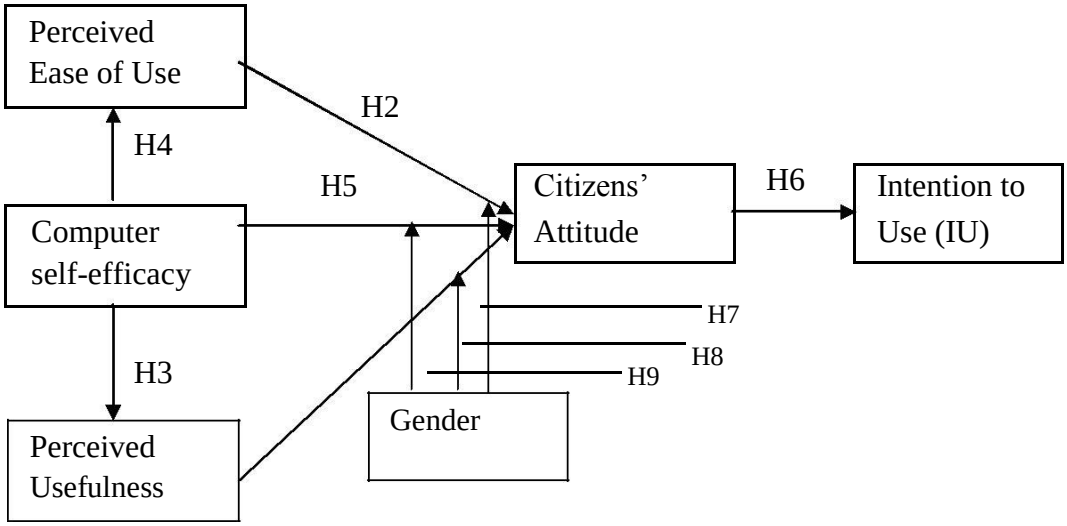

Figure 1: Research model and hypothesis

4. Methodology

Questionnaire was designed and administered to evaluate the level of awareness of e-Democracy portals in some selected countries as well as evaluate the effect of gender differences and self-efficacy in e-Democracy acceptance.

4.1 Data collection

A survey instrument was used to validate the proposed model. The data collection process was conducted twice. The first phase included every individual on the mailing lists (40) of the authors and the mailing lists of every individual so listed on their lists. It presents a form of viral marketing, whereby they were able reach to as many people as possible electronically using Google Form (online survey). A total of 266 respondents submitted valid responses but there were more male respondents than female respondents. In order to have gender balance among the respondents and to facilitate quick response, the phase of data collection employed both electronic and paper-based questionnaire targeting only female respondent. The second phase of data collection spanned a period of 3 weeks. A total of 73 valid responses were received making a total number of 339 valid responses used for the analysis.

4.2 Research instrument

The questionnaire was divided into three sections. The first section consists of demographic profile of respondents. The second section deals with the level of technology usage by respondents, while the third section includes measures of variables to be studied: perceived usefulness (PU), perceived ease of use (PEOU), computer self-efficacy (CSE), attitude (ATT), and behavioral intention (BI). The third section of the questionnaire however, consists of 20 questions; 3 questions on PEOU, 3 questions on PU, 3 questions on ATT, 5 questions on CSE, and 3 questions on BI). The scales used to measure perceived usefulness, perceived ease of use, intention to use, actual use, and self-efficacy were adapted from prior studies (Davis *et al* 1989; Klopping and McKinney 2004; Goodhue *et al* 1995) which established their reliability and validity.

Measurement scale for trust dimension was adapted from Tzy-wen *et al* (2005), Gefen *et al* (2003), and Pavlou (2003). For all model constructs, the participants were asked to indicate their perception on five-point Likert-style responses ranging from 1 = "strongly disagree," 2 =" disagree," 3 = "neutral," 4 =" agree," to 5 = "strongly agree".

5. Data analysis and discussions

5.1 Demographic profile and technology usage of respondents

The frequency distribution of the demographic analysis of the respondents showed that 54.5% of the respondents were male and 45.5% were female. Most of the respondents fell within ages 20-50 years and belongs to the Academics and IT and telecommunication industry. Technology usage assessment of the

respondents showed that almost all the respondents were Internet and mobile phone users. 89.5% of the respondents confirmed that they use Internet at home, 95.3% use Internet at work and only 20.1% indicated using Internet at Cyber cafe. 98.3% of the respondents have mobile phone and 68.4% usually access the Internet on their mobile phone, 14.9% occasionally used their mobile phone to access the Internet while only 17.1 do not access the Internet on their mobile phone at all.

Table 1: Technology usage of respondents

	Frequency	**Percent**
I regularly use Internet at home	325	89.5
I occasionally use Internet at home	26	7.2
I regularly use Internet at work	346	95.3
I occasionally use Internet at work	6	1,7
I use Internet at the Café	73	20.1
I use the Internet onmobile phone	299	82.3
I use the Social media (Facebook etc) to interact with peers]	304	83.7

5.2 Reliability test and correlation analysis

The internal consistency of the entire scale for this research was assessed using Cronbach's alpha. Using SPSS 15.0, reliability test of all the items had an alpha value above the standard guideline of 0.70 Pallant (2004).

Reliability test was carried out for the entire model construct. According to Pallant (2004) reliability is an assessment of the degree of consistency between multiple measurements of a variable. The results of the correlation analysis showed that there is positive significant correlation between PU & ATT, CSE & PEOU, PU & IU, and ATT & IU. There is no significant correlation between CSE & PU, andPU& PEOU as well as ATT and CSE showed negative correlation but not significant. Only PEOU & ATT was observed to have negative significant correlation.

Table 2: Reliability test, correlation matrix, and descriptive statistics

Variables	Alpha	PU	PEOU	CSE	ATT	IU	Mean	Std.Dev.	N
PU	0.830	1					3.803	0.906	
PEOU	0.881	0-.106*	1				2.229	0.794	
		(0.043)							
CSE	0.736	0.014	0.215**	1			3.309	0.793	
		(0.798)	(0.000)						339
ATT	0.805	0.366**	0-.253**	0-.017	1		3.880	0.722	
		(0.000)	(0.000)	(0.761)					
IU	0.832	0.425**	0-.041	0.049	0.701**	1	3.905	0.828	
		(0.000)	(0.447)	(0.369)	(0.000)				

* and ** are indication of level of significance which represents 1% and 5%, respectively

5.3 Hypotheses testing

To test the formulated hypotheses, a multivariate analytical methodology involving path analysis was used to empirically examine the sets of relationships in the form of linear causal models (Hair *et al* 1998). The use path analysis in this research is consistent with approaches used by others in similar studies (Dishaw and Strong 1999; Lee *et al* 2001; Klopping *et al* 2004).

The overall model fit shows that a combination PU, PEOU and CSE explained 17.9% of attitude towards e-democracy. (R^2 = 0.179, Adjusted R^2 = 0.173, df = 3, α=0.222, F = 26.178, Pvalue = 0.000). However, the individual path analysis according to the research model (figure 1), showed that PU is the only construct having positive significant effect on citizens attitude to use e-democracy system. The path coefficient of PEOU to ATT (b =-0.197, p = 0.000) indicates that perceived ease of use has negative significant effect on behavioural

intentions to use e-Democracy systems. Computer self-efficacy was also found to have no significant effect on individual's attitude. Attitude alone explained 37.2% of intention to use e-democracy. The path coefficient of ATT to IU (R^2 = 0.37.2, Adjusted R^2 = 0.371, = 0b.610, p = 0.000) also indicates that ATT significantly influence intention to use e-Democracy system. The path coefficient of CSE to PEOU (b = 0.191 p < 0.00) showed that computer self-efficacy has significant effect on perceived ease of using e-Democracy systems while the regression analysis of the path coefficient of CSE to PU is not significant (b = 0.034, p >0.05). Table 3 shows summary of the hypotheses testing for H1 – H6.

To determine the effect of gender differences in the model, Johnson-Neyman Regions of Significance was used to find the interaction effects in multiple regression (Aiken and West 1991; Pedhazur 1997). This method is used because it is most suitable in situation where there is one continuous predictor and one categorical predictor as the case is in this research. The R^2 of individual path between PU & ATT, PEOU & ATT and CSE & ATT was determined usingscatter plot sorted into two groups and fit line at subgroups. The first group which is Male represented 1 and second which is Female was coded 2.

The individual path analysis for the two groups (Table 4) showed that perceived usefulness mostly influence male's attitude towards e-democracy while perceived ease of use has greater affect on female's attitude to e-democracy. Considering the R^2 for computer self-efficacy (H9), it can be concluded that computer self efficacy does not really no significant effect on attitude towards e-democracy for both male and female users.

Table 3: Path co-efficient and hypothesis testing: non-moderating variables

Hypotheses	Co-efficient	P-value
H1: PU ->ATT	0.272	0.000
H2: PEOU ->ATT	0.197-	0.000
H3:CSE -PU>	0.034	0.519
H4: CSE ->PEOU	0.191	0.000
H5: CSE ->ATT	0.050	0.264
H6: ATT _> IU	0.37.2	0.000

Table 4: Path co-efficient and hypothesis testing: moderating variables

	Male		Female	
Hypotheses	R^2	Correlation	R^2	Correlation
H7	0.004	0.063	0.268	0.518
H8	0.155	0.394	0.112	0.335
H9	0.003	0.055	0.040	0.200

6. Conclusion

This study investigated the factors affecting the intention to use e-democracy in Africa. It presents information regarding gender differences and computer self-efficacy in acceptance of e-democracy in Nigeria. An extended TAM was used to guide the investigation. Computer self-efficacy was incorporated into technology acceptance model (TAM) and the predetermining constructs of TAM (PU and PEOU) moderated with gender was used for this research.

The research's results like several other related research works confirmed the power of the TAM factors for investigating user's acceptance of technological innovations such as e-democracy. Gender differences and computer self-efficacy were issues worthy of attention to both researchers and practitioners in countries where technology adoption and e-democracy implementation is low. The research's results supported previous studies suggesting that perceived ease of use has a stronger influence on female respondents than male users of technology and related applications (e.g. Venkatesh and Morris 2000; Riquelme and Rios 2010). The research's result also supported the proposed positive relationship between perceived usefulness and attitude as proposed by Davis (1989). However perceived ease of use was found to have a negative effect on attitude in this research. This may be due to high literacy level of the respondents as 65.4% of the respondents have post-graduate degree qualification. However, the result showed that computer self-efficacy has a no significant effect on the attitude of both male and female users.

In conclusion, this study suggests that use of the e-democracy depends on usefulness and ease of use especially for women. Government must put up web portals that are rich enough for citizens' online

participatory democracy (e.g. e-consultation, e-petition, e-forum, etc). Also adequate information must always be provided on public matters. E-government/e-democracy system developers need to take into consideration the ease of use of the system by developing systems that are easy to navigate. User's guide could be made available to help new users in accomplishing their task.

References

Adesina A.A., Ayo C.K. and Uyinomen O. Ekong (2008) An Empirical Investigationofthe Level of Users' Acceptance of E-banking in Nigeria: Based on Technology Acceptance Model" *In Proc. of 1st Int'l Conf. on Mobile e-Services.* LAUTECH, Ogbomosho, Nigeria

Anita Gurumurthy (2004) Gender and ICTs – Overview Report, Accessdate: July, 2012, Available at: http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/SHS/pdf/ Gender-ICTs.pdf

Aiken, L. S., & West, S. G. (1991). Multiple regression: Testing and interpreting interactions. Newbury Park: Sage.

Ayo, C. K, Adewoye J. O, and Oni A. A. (2011) Business-to-Consumer (B2C) e-commerce Implementation in Nigeria: The Prospect and Challenges, *African Journal of Business Management*, Vol. 5(13), pp. 5109-5117, 4 July,2011.

Ayo, C. K, Azeta, A. A, and Oluwabusola, O.G. (2010) "An SMS-based Framework for Citizen-Oriented Participation in e-Democracy", *Proceedings of the 15th International Business Information Management Association Conference, pp1234-1238ISBN:. 978-0-9821489--5.*

Azeta AA.., Oyelami M. O. and Daramola J. O. (2007), "An ArchitecturalFramework for Collaboration of Heterogeneous Communication Devices using WAP and Mobile Device Augmented (MDA) Gateway Integration", *Proceedings of The International Conference & Workshop on 3G GSM & Mobile Computing: An Emerging Growth Engine for National Development* -3129 January,2007. pp 71-78

Ki-moon, B (2011) Women's participation crucial for democracies, UN News Centre, Access date: July, 2012, Available at: http://www.un.org/apps/news/story.asp?NewsID=38275

Bandura A. (1982) Self-Efficacy Mechanism in Human Agency, *Journal of American Psychologist*, Vol. 37, No.

2. Caldow J. (2004) E-democracy: Putting Down Global Roots. Institute of Electronic Government, IBM.

Charles K. Ayo, Princely Ifinedo, Uyinomen O. Ekong and Aderonke Oni (2012): "AnEmpirical Evaluation of the Effects of Gender Differences and self-Efficacy on e-Banking Adoption in Nigeria: A modified Technology Adoption Model", In Abel Usoro, Grzegorz Majewski, Princely Ifinedo and Iwara I Arikpo (Eds), Leveraging Developing Economies with the Use of Information Technology: Trends and Tools, IGI Global.

Coleman S. and Norris D.F. (2005) A new agendafor e-democracy, OxfordInternet Institute Forum Discussion Paper No. 4, January 2005.

Coleman, S. and Gotze, J. (2001) "Bowling Together: Online Public Engagement in Policy Deliberation". *Hansard Society*. Retrieved 8th Oct., 2010 [www.hansardsociety.org.uk]

Compeau, D., and Higgins, C. A. (1995) Computer self-efficacy: development of a measure and initial test. Management Information Systems Quarterly, 19(2), 189–212. doi:10.2307/249688

Davis F. D. (1993) User acceptance of information technology: system characteristics, user perceptions and behavioural impacts*. Int. J. Man-Machine Studies*, Vol 38, pg 475 – 487.

Davis, F. D. (1989) Perceived usefulness,perceived ease ofuse, and user acceptance of information technology, *MIS Quarterly*, Vol. 13, No. 3, pp. 318-39.

Dishaw, M. T., & Strong, D.M. (1999) Extending the technology acceptance model with task–technology fit constructs. Information & Management, 36(1), 9–21. doi:10.1016/S0378-7206(98)00101-3

Fishbein, M. and Ajzen, I. (1975)Belief, Attitude, Intention, and Behavior: An Introductionto Theory and Research. Reading, Mass: Addison-Wesley

Gefen, D.E, Karahanna, Straub D.W (2003) Trust and TAM in online shopping: An integratedmodel. MIS Q., 27, (1): 51-90.

Hanudin A. (2007) Internet Banking Adoption Among Young Intellectuals, *JIBC*, Vol. 12, No.3 [online] Available: http://www.arraydev.com/commerce/jibc/

Ifinedo, P. (2007) Investigating the Antecedents of Continuance Intention of Course Management Systems Use among Estonian Undergraduates, *International Journal of Information and Communication Technology Education*, Vol. 3, No. 4, 76-92.

Igbaria, M. and J. Iivari, (1995) The effects of 25. Cuban self-efficacy on computer usage. OMEGA International J. Management Sci., 23(6): 587605-.

Ilie, V., Van, S.C., Green, G. and Lou, H. (2005) Gender Differences in Perceptions and Use of Communication Technologies: A Diffusion of Innovation Approach, *Information Resource Management Journal*, Vol. 18, No. 3, 16-31.

Kang, H. and Dugdale, A. (2010) "A Comparative Study of e-Civil Participationin Australia and South Korea: The Case Study of GetUp! in Australia and the 2008 Candlelight Protest inSouth Korea," Proceedings of 6th International Conference on e-Government.

Klopping I. Mand. McKinney E.I. (2004) Extending the Technology Acceptance Model and the Task-Technology Fit Model to Consumer E-Commerce, *Information Technology, Learning, and Performance Journal*, Vol. 22, No. 1.

Li, N. and Kirkup, G. (2007) Gender and cultural differences inInternet use: A study of China and the UK, *Computers & Education*, Vol. 48, No.2, pp. 301-317.

Ma Q., Liu. L. (2004) The technology acceptance model: A meta analysis of empirical findings. Journal of Organizational and End User Computing , 16 (1),59- 72.

Michelle Bachelet (2011) Democracy and Gender Equality, Access date: July, 2012, Available at: http://www.unwomen.org/2011/05/democracy-and-gender-equality/

Nancy Hafkinand Nancy Taggart(2001) Gender, Information Technology, and Developing Countries: An AnalyticStudy, Access date: July, 2012,Available at: http://onlinewomeninpolitics.org/sourcebook_files/Ref5/Gender,%20Information%20Technology,%20and%20Developing%20Countries-%20An%20Analytic%20Study.pdf

Nel, J. and Raleting T. (2010) Gender Differences in Non-Users' Attitude towards WIG-Cellphone Banking, [online] Retrieved, 22nd March 2011, Available at: http://anzmac2010.org/proceedings/pdf/anzmac10Final00038.pdf

Pavlou P.A (2003) Consumer Acceptance of Electronic Commerce: Integrating Trust and Risk with the Technology Acceptance. Int. J. Electron. Commun., 7:3.

Pedhazur, E. J. (1997). Multiple regression in behavioral research (3rd Ed.). Fort Worth, TX: Harcourt Brace.

Rao S. and Troshani I. (2007)A Conceptual Framework and propositions for the Acceptance of Mobile Services. *Journal of Theoretical Applied Electronic Commerce Research*, Vol. 2, No.2, pp. 61 - 73.

Riquelme, H. E., & Rios, R.E. (2010) The moderating effect of gender in the adoption of mobile banking. *International Journal of Bank Marketing,* 28(5), 328–341. doi:10.1108/02652321011064872

Samia Melhem and Nidhi Tandon (2009) Information andCommunication Technologies for Women's. Socio-economic Empowerment World- Bank Group Working Paper Series, Access date: July, 2012, Available at: http://siteresources.worldbank.org/EXTINFOR MATIONANDCOMMUNICATIONANDTEC HNOLOGIES/Resources/2828221208273252769/ICTs_for_Womens_Socio_Economic_Empowerment.pdf

Shirazi F., Ngwenyama O, Morawczynski O (2010) ICT expansion and the digital divide in democratic freedoms: An analysis of the impact of ICT expansion, education and ICT filtering on democracy. Telematicsand Informatics Issue 27 pg21 – 31.

Smith, Judy and Ellen Balka (1988) "Chatting on a feministnetwork." In C. Kramarae (ed.),Technology and Women's Voices, 82-97New. York: Routledge and Kegan Paul.

Susan C. Herring (2000) Gender Differences in CMC: Findings and Implications, *CPSR Newsletter*, Access date: July, 2012, Available at: http://cpsr.org/issues/womenintech/herring/

Tzy-Wen T, Wen-Hai C (2005) The Role of Trust in Customer Online Shopping Behavior: Perspective of Technology Acceptance Model http://www.casos.cs.cmu.edu/events/conferences/2005/2005_proceedings/Tang.pdf

Van Slyke, C., Comunale, C., and Belanger, F. (2002) Gender Differences in Perceptions of Web-Based Shopping, *Communications of the ACM*, Vol. 45, No. 8, 82-86.

Venkatesh, V., & Davis, F.D. (2000) A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science , 46* (2),186-204.

Venkatesh, V., & Morris, M. G. (2000) Why don't men ever stop to ask for directions? gender, social influence, and their role in technology acceptance and usage behavior. *Management Information Systems Quarterly,* 24(1), 115–139. doi:10.2307/3250981

Venkatesh, V., & Bala, H. (2008) Technology acceptance model 3 and a research agenda onintervention. Decision Sciences, 39(2), 273–315. doi:10.1111/j.1540-5915.2008.00192.x

Wang, Y., Wang, Y, Lin, H. & Tang, T. (2003) Determinants of user acceptance of Internet banking: an empirical study, *International Journal of Service Industry Management*, Vol. 14, No. 5, 501-519.

Challenges and Prospects of e-Elections in Nigeria

Sheriff Folarin, Charles Ayo, Aderonke Oni and Daniel Gberevbie
Department of Political Science and International Relations, College of Development Studies and Department of Computer Science and Mathematics, College of Science and Technology, Covenant University, Ota, Ogun State, Nigeria
sheriff.folarin@covenantuniversity.edu.ng
charles.ayo@covenantuniversity.edu.ng
ronke.oni@covenantuniversity.edu.ng
daniel.gberevbie@covenantuniversity.edu.ng

Abstract: E-governance is a momentous currency in contemporary society, and it manifests in virtually all areas of life, which include, among others, banking, insurance, trade and commerce, and democracy. The deployment of Information Communication Technology (ICT) and Information Technology (IT) devices for democratic governance has been successful in technologically advanced countries, and has inspired countries from the developing South, such as Nigeria to contemplate or commence e-elections for democratic sustainability. The elections regulatory body, the Independent National Electoral Commission (INEC) had contemplated exploring e-elections in the country but later dropped the idea on grounds of unpreparedness. Electoral process or election however, has its several components: voter registration, registration review/update, electioneering campaigns, actual voting, and release of election results. These naturally come with their challenges and have informed a school of thought that based on Nigeria's economic instability, corruption, resources mismanagement, and technologically backward climate, including unstable power supply, e-elections would be far-fetched. The other school of thought however, exhibits hope and optimism. This paper, with data scooped through questionnaire administration and from literature, examines the challenges and prospects as well as the peculiarity of Nigerian electoralsystem and the e-election system, which will be marooned in the general Nigerian politicandl economic climate. Findings show that the prospects are and will always be good for the country, but that the stakes are far too high at a moment of huge infrastructural laybacks of the country. Moreover, not too many people have confidence in the electoral regime, let alone going ahead with such a venture as e-elections. It therefore recommends, among other things, that the nation should develop the sub-sectors of the economy that can sustain e-elections before INEC goes ahead with the capital-intensive enterprise for democratic sustainability in Nigeria.

Keywords: electoral system, e-governance, e-elections, ICT/IT, Nigeria

1. Introduction

Electronic election (e-election) has become the preferred means of determining representatives and political leaders in contemporary and economically advanced democratic systems (Buchsbaum 2004). Like the general electoral process, the e-election system comprises a structured and systemic process that involves registration, revision of voter's register, issuance of voter's identity card, voting, election monitoring, vote-count and release of election results. By e-lection, this network and interplay of stages in an election process is subjected to electronic control, which enhances efficiency, speed, and allows for minimal degree of inaccuracy or distortion by subjective human elements (Chaum, Peter and Schneider 2005).

The electronic election system is a virtual voting process, which is a component of e-governance and e-democracy. E-elections involve the use of virtual means between the politicians and the electorates, with the umpire, the electoral commission setting up the electronic devices for that purpose. Put differently, governance is facilitated by the reduction in "physical baggage" and like a cashless economic system, human elements and sentiments are controlled by emotionless machines for the purpose of efficiency and accuracy (Saltman 2001; 1975). The use of polling booths, ballot boxes and voter's card will thus no longer be required as these will be replaced by use of internet or a website to cast votes.

But is e-election always sacrosanct? There is a school of thought which argues that it is a most preferred means of democratic participation in more sophisticated democracies because of the availability and interplay of a number of favourable factors. These include an enlightened populace, advanced democratic culture, availability of capital, stable power supply, and availability of exotic information and communication technology as well as minimum level of moral corruption. Such technologically advanced countries, including United States, Great Britain, France, to mention few examples, can thus afford to experiment with or sustain e- electoral systems.

On the other hand, it is generally contended that primitive technologies and emerging or recrudescent democracies may not be able to afford this "luxury". Aside that, it is also argued that electronic machines are not independent of human elements who may "garbage in, garbage out" whatever suits their sentiments. Nigeria belongs to the second category of countries with less developed technology and low democratic culture that may have challenges in exploring e-elections. But the on-going attempts by the government and Independent National Electoral Commission (INEC) to experiment with e-voting in the 2015 general elections demonstrates a will to step up to the level of the bigger democracies, which compels our scientific inquest to determining the problems and prospects of the proposed experiment.

2. E-elections and democratic stability: A conceptual and theoretical analysis

The electoral system is a complex whole that involves more than voting. According to Nwabueze, it includes;

> *the suffrage, the registration of voters, delimitation of constituencies, the right to contest elections, electoral competition between rival parties, the body charged with the conduct and supervision of election, the method of electing candidates within the political parties, nomination of candidates, method of voting, the actual conduct of elections, the determination of results, trial and determination of election disputes, electoral malpractices and their consequences (Nwabueze, cited in Sanusi 2013).*

Election is such a complex system so as to de-complicate democratic process and make government legitimate. According to Fagbohun (2013), the complexity is justifiable so long as the process prevents conflict in the choice of leadership and averts popular rejection. This is well explicated by Boix (1999) who describes elections as "the composite of different rules regulating the access of citizens to suffrage, the number and use of votes by voters, the number and size of electoral districts, the introduction of thresholds and bonuses, and the allocation mechanisms used to transform votes into seats."

There is indeed a common perception that elections generally institute democratic stability and progress, hence the election is viewed as the soul of democracy (Jega and Ibeanu 2007). However, the inherent lapses and perceived loose ends in elections that have made elections susceptible to all sorts of human manipulation, including rigging, intimidation of voters, militarizing election centres and polling stations, distortion of voter's register, inflation or deflation of figures, et cetera; have made advanced countries and other troubled nations to opt for electronic or virtual election. This is with the view to salvaging democratic governance and making the process of choosing leaders more generally transparent and acceptable.

Elections incidentally do not encompass all the variants of the mainstream or regular electoral process. Electronic elections start with e-registration and end with e-counting. It does not always proceed into election petitions and tribunals and do not continue with actual governance. In regular elections, election petitions and tribunals are part of the electoral process. However, in more advanced electoral systems, the databank in the electronic machines is useful resource material for references in post-election petitions and litigations.

3. E-voting

E-voting is of two types. There is e-voting through machines located at polling stations which is physically supervised by electoral agent's representatives; and remote e-voting where voting is performed within the voter's sole influence, and is not physically supervised by any electoral or government official (Zissis and Lekkas 2011).

The second type of e-voting is the self-help form, which can also be referred to as i-voting, is what the Nigerian Telecommunication Satellite (NIGCOMSAT) has described as any voting process where an electronic means is used for votes casting and results counting. By this, the RFID Biometric e-voting system ensures the use of a contact-less card system that engenders an offline and online voting system. The system allows for quick and accurate voting electronically. It uses a client and server interface for voters to cast ballots on the client terminal. The e-voting system thus allows for time verification of voting and availability of results almost immediately (NIGCOMSAT 2013). Elections can thus be viewed from anywhere, including offices, shops, moving vehicles, offices, any country; and by use of any such electronic device connected to the internet such as computers, phones and other mobile devices. According to NIGCOMSAT (2013), another benefit of the e- voting (i-voting) system is the "speed in which results can be obtained because results are accurately tabulated almost instantaneously" as well as the fact that it reduces the risk of human and mechanical error and movement restriction.

4. E-registration

The e-voting platform is automatically networked with e-registration. The process involves registration, verification, authentication, voting and tallying. The voters have a registered smartcard with their bio-data, fingerprint and photograph printed on it. By visiting the domain of the electoral agency, a database is accessible to the electoral officials, election observers and the active and inactive electorate (NIGCOMSAT 2013). Immediately the voter casts his vote online or offline, the smartcard is automated invalid while the voter obtains an e-receipt or counterfoil that captures who has been voted for, time and where the vote is cast. This process thus prevents multiple voting or election malpractice as far as voting is concerned.

Electronic voting and its accompaniments thus appear a faster and more secure electoral approach. The fact that elections stabilize democracy and e-elections (an integral part of e-democracy) enhance transparency and fairness thus makes e-elections a critical factor in democratic stability.

It is therefore strongly contended that e-elections, because of its promotion of the cause of self-determination becomes a lever for the often voiceless and "distant" citizens/public to participate in decision-making. This by extension increases transparent and accountable governance, public trust in government and strengthens democracy

5. The challenge of free and fair elections in Nigeria

A major challenge of the Nigerian State since independence has been the inability to evolve a transparent electoral system and conduct free and fair elections (Fagbohun 2013). Elections have been a source of disputations, litigations, violence and political instability for most of the state's existence since 1960 (Oni et al 2013). Indeed, the fall of the First, Second and Third Republics have been attributed to election crisis (Taiwo 2000).

The Western Nigeria election crisis resonated in the entire Nigerian polity as the ruling regional party was in alliance with the government at the centre which recognized and protected the illegitimate Akintola government and which, rather than stem the violence following popular demand for installation of the winner of the elections, imposed a state of emergency in the region (Soyinka 1994: 68).

In 1983, another election year, arson, assassinations and general violence dogged the pre-election, election and post-election periods in the quest to rig, stop rigging and clear the way for some not-so-popular candidates to emerge as winners at various levels. In the ensuing melee, Ondo, Oyo, Niger, Kaduna, and Kano states were engulfed in violence while several others of the nineteen states had their own issues (Taiwo 2000:88).

The Second Republic was dogged with corruption and unpopular federal, state and local governments, which were perceived as illegitimate. FEDECO was popularly alleged to be corrupt and at a point the FEDECO chairman, Ovie-Whiskey became openly partisan, riding on the wings of the ruling party, accused opposition party leaders of plotting to assassinate him (Live NTA Broadcast of September 18 1983). Buoyed by such high level of governmental irresponsibility, the military led by Muhammadu Buhari, struck again and from December 31, 1983, put an end to the Second Republic.

The prolonged transition to civil rule programme of the military under Ibrahim Babangida was replete with experimentations with civil-military interface in government called diarchy. Elections were therefore held for local and state governments but the military would remain at the helm of affairs at the centre. At various points between 1990 and 1992, elections were conducted under a strict military-conceived two-party system. But as the transition neared an end and elections for the ushering in of the Third Republic were held, cancellations followed cancellations on the basis of alleged copious electoral malpractices (Taiwo 2000: 90). While there were indeed malpractices, the military turned out to be the biggest rigger as it later turned out that the Babangida regime was reluctant to let go of power (Taiwo 2000: 91). The 1993 presidential elections were the major albatross of the abortive Third Republic. The election of Olusegun Obasanjo, was however faulted as fraught with malpractices, particularly at the primaries when huge sums of money were allegedly shared among other aspirants and delegates of the Peoples Democratic Party to pave way for Obasanjo.

The 2003 general elections were relatively peaceful, but there reports of irregularities at some stations and areas in the federation (Olatunji 2003). The build-up to the 2007 elections was marred with anxiety and desperation owing to certain inflammatory statement credited to the incumbent president, Obasanjo, who reportedly said that the election (of PDP AND Umar Yar'adua) would be a do-or-die affair. When the PDP eventually won in most states and at the federal level, the credibility of the elections became a questionable issue.

The most critical elections since 1993 were the 2011 polls. This did not owe much to rigging as to the grudges and violent outbursts following disagreement on the emergence of Goodluck Jonathan. The elections were disputed not legally *per se*, but on the streets in the North through arson and killing (*Nigerian Tribune* 2011, Oni *et al* 2013). It was not too long after the elections that a religious sect, Boko Haram, once brought under control in 2009, resurfaced and metamorphosed into a terrorist group that has been menacing parts of the country for four years.

Election malpractices in the Fourth Republic have since 2007 been subject of petitions at elections tribunals and regular courts of law, which have led to upturning by these legal institutions of electoral outcomes. This has been the case in Edo, Ekiti, Ondo, and Osun states. the electioneering season again commences in 2014 and anxiety will naturally envelop the political space. This has continued to fuel the argument for e-elections, which is viewed as having the capacity to reduce human manipulation and increase a high degree of confidence in the electoral system.

A major argument against e-election is that it is more vulnerable to human manipulation than regular voting. According to this school of thought, the computer and electronic devices are the most manipulable devices for election rigging. Despite the strong indications that e-lections might be fraught, there are still contentions that it is a more reliable way of getting a fairer electoral outcome. The arguments for e-election in Nigeria include the fact that the country has to go along the direction of the world in its quest to measure up with the developed democratic ideals. Also, the contention has been that e-election reduces the burden of the 'excess luggage' of electoral materials which are often exposed to theft or seizure by election and party riggers, delivery delays and damages. Such susceptibilities may therefore constitute impediments to free and fair elections.

E-election is also said to reduce cost of conducting elections (Jega, cited in Emmanuel 2012), Overhead and election materials' maintenance cost is prohibitive, but when e-election is the recourse, such costs are reduced because of the emphasis on use of electronic devices rather than engagement of a huge labour force. In addition to this advantage is the argument that elections are timely, transparent and effectively done, which ultimately brings about more acceptable electoral outcomes.

6. ICT/IT, INEC and e-election in Nigeria

The INEC in Abuja under Professor Attahiru Jega had contemplated in 2011 shortly after the general elections, that the next elections would be by e-voting (Jega, cited in Emmanuel 2012: 1). This was prompted probably by the catalogue of election crises and petitions that marked the 2011 exercise. But sometime later in 2012, precisely in August 2012, the INEC Chairman made a *volte face* and declared that e-voting might not come to fruition in 2015 (Jega, cited in Emmanuel 2012: 2).

The commission had jettisoned the idea of electronic voting when it disclosed that permanent voter's card would be made available for the electorate before 2015. INEC had made it clear that e-voting entailed a lot of technicalities, planning and piloting. Jega had explained:

> *We have to do a lot of sampling of existing machines right now; because of that prohibition, we can't even attempt to do it. Now, if that is done in good time, and we are able to explore the possibility and it seems feasible, then obviously at that time we will tell Nigerians that it is feasible, and then maybe we should try it. But right now, we haven't gotten to that stage; right now, what we want is the removal of a major hindrance for INEC to even begin to explore the possibility of electronic voting. But what INEC is trying to do-and then we are really again improving the use of technology in elections-is that as you know we did biometric data registration (Jega, cited in Emmanuel 2012: 2).*

Aside these technical difficulties enumerated above by the electoral commission, there is also the issue of organizational restructuring to meet the challenges of such a sophisticated venture of electronic voting. The commission would require internal reforms, training, motivation and adjustments in the conditions of service for efficiency and effectiveness. These would require six months in the first instance to have a good election management body and be positioned for e-election. Before the e-election platform can be possible, INEC has to be seen as competent, credible, prepared, resourceful and transparent (Jega, cited in Emmanuel 2012: 2).

By the submissions of the INEC, it might require much more than availability of resources and stable power supply to put e-elections in place in the country. It would require internal management, restructuring, motivation, capacity development for acquisition of operation and maintenance skills, and so much more. The INEC as it is presently constituted is another public service structure with staff mobility and motivation not different from what obtains in regular civil or public service. The regular staff learn on the job, move up the position ladder based on number of years and academic qualification, and rely on/join adhoc staff during elections to get the assignments accomplished. Beyond the basic requirements of e-elections therefore, are also fundamental and compulsory orientation and skills change in the electoral body.

It is also important to note that the disclosures of the INEC Chairman gives an insight into what the commission currently looks like internally. Like any other public board or parastatal, INEC staff may be operating within the bounds of available resources. These include tables, chairs, files, folders, papers, pens, electronic appliances, typewriters, and one or two computers on about two or three tables per small office room. Such offices have the computers functioning or not and in some cases, the staff do not know how to use the simple PC. When they can, the power supply is so erratic that the Administrative Officer or Secretaries is bound to solely rely on the antiquated manual typewriter, which is used for the simplest and only task of typing. The commission may therefore not have the capacity or enabling environment to have its own staff and operations electronically stored and updated, let alone have skilled manpower and resources to embark on an elaborate e-voting.

7. Citizens' perception on e-election in Nigeria

Having considered thedifferent perspectives on e-election and the prevailing circumstances as noted by the chair of INEC, this research goes further to investigate citizens position on e-election in the country.

8. Research methods

The study employed survey research method using well structured questionnaire to collect data on individual's perception and challenges of e-election in Nigeria. A total number of 150 copied of the questionnaires were self-administered to respondents in Lagos and Ogun States out of which 136 were duly recovered for analysis. Lagos and Ogun States are appropriate for this study because they are among the earliest politically civilized and vibrant states in Nigeria. All the respondents are within the voting age i.e. 18years and above in different field of work including students. The student respondents are undergraduates of political science and computer and information systems. It is believed this categories of students have adequate knowledge and experience to participate in the survey. To ensure the validity and reliability of the instrument, the choice of methods and variables employed was guided by previous empirical studies. The variables chosen were also subjected to IT experts and political scientists with respect to the adequacy of the variables to cover the basic IT related electoral processes

The quantitative data were analysed using simple percentage and measurement of central tendency. The Statistical Package for Social Sciences (SPSS version 15.0) was engaged for these statistical techniques. These methods are considered appropriate as quantitative tools for analysis in this study based on their ability to demonstrate with statistical accuracy, the extent to which citizens believe e-election will deliver free and fair elections in Nigeria and the ability of Nigerian to embark on credible e-election in the country.

9. Data analysis and discussion

Demographic analysis of respondents The survey respondents consist of 36 (26.5%) females and 78 (72.1%) males. The education qualification and occupational distribution of the respondents is as shown in Table 1. The respondent is representative of voting population.

Table 1: Academic qualification and occupation of survey participants

	Frequency	Percentage
Academic Qualification		
High school	38	27.9
BSc./HND	74	54.4
Post Graduate Degree	18	13.2
Professional certificate	6	4.4
Total	262	100
Occupation		
Civil service	16	11.7
Trading	2	1.5
Education	30	22.1
Manufacturing	6	4.4
IT & Telecoms	48	35.3
Student	34	25
Total	136	100

Source: Researchers' Field work

In the ensuing data presentation and analysis, the word "undecided" stands for respondents that were indifferent to some of the questions asked. Short descriptive analyses of the tables are also presented for clarity purpose.

Table 2: Response on citizens perception and challenges of e-election

Variables	Strongly disagree		Disagree		Undecided		Agree		Strongly Agree	
	F	%	F	%	F	%	F	%	F	%
Perceived Risks and Security Gaps of e-election										
Prone to manipulation and rigging	18	13.2	28	20.6	24	17.6	40	29.1	26	19.1
Reduce the chances of ballot boxes attack	6	4.4	8	5.9	16	11.8	48	35.3	58	42.6
Prevent lose of voter's information during election	4	2.9	10	7.4	22	16.2	62	45.6	38	27.9
Perceived Benefits of e-election										
Reduce risk of mechanical error	12	8.8	14	10.3	16	11.8	78	57.4	16	11.8
Ensure that people's votes are counted correctly.	6	4.4	10	7.4	4	2.9	86	63.2	30	22.1
Accurate than the paper ballot election scheme	4	2.9	6	4.4	14	10.3	74	54.4	38	27.9
Increase voters' comfort and needs	6	4.4	4	2.9	12	8.8	88	64.7	26	19.1
Eradicate subjective count errors in voting	4	2.9	10	7.4	16	11.8	68	50	38	27.9
Enhance to free and fair election	6	4.4	22	16.2	18	13.2	70	51.5	20	14.7
Timely election results	6	4.4	2	1.5	12	8.8	74	54.4	42	30.9
Encourage more people to participate in voting	10	7.4	12	8.8	30	22.1	60	44.1	24	17.6
Government Policies										
Government willingness to finance adoption of e-election in Nigeria	10	7.4	22	16.2	44	32.4	54	39.7	6	4.4
Current policies favour the adoption e-election	12	8.8	40	29.4	42	30.9	38	27.9	4	2.9
ICT Infrastructure andResources										
Nigeria is capable of funding e-election	6	4.4	6	4.4	6	4.4	64	47.1	54	39.7
Lack of infrastructure will hinder e-election in Nigeria	10	7.4	12	8.8	18	13.2	62	45.6	34	25

Source: Researchers' Field work

Perceived Benefits of e-election: a list of factors that might encourage adoption of e-election was included in the questionnaire and the participants were asked to express their level of agreement or otherwise with each of them. The findings presented in Table 2 shows a general believe that e-election will ensure votes are counted correctly, election results will be more accurate than paper ballot, with the potential to eradicate subjective errors and promote timely release of election result. Despite all these positive affirmations, the believe that e-election will encourage more people to participate in voting has the least positive affirmation.

On the issue of policies, 31% of the respondent are undecided about the existence of policies in favour of e-election, 29.4% disagreed to the fact that there are policies in existing favouring e-election. Only 27.9% of the respondent believe that Nigeria can jump start e-election with the current policies in place.

On the subject of security gaps of e-election, respondents also believed that e-election will reduce the plague of loss of voters' information and ballot boxes attack but the issues of election rigging may not be totally solved with e-election. Respondents agreed to the fact that present infrastructure will hinder the successful implementation of e-election and that Nigeria is capable of funding a viable e-election system.

10. Conclusion: The future of e-democracy in Nigeria

E-election or e-voting as has been earlier argued is the direction of popular democracies in contemporary times and Nigeria cannot be an exception. It is a truism that the requirements and the economic, financial and technical conditions are enormous; but when the enormous advantages of the system are placed on a scale of balance with the spare vantages of regular elections, e-elections will be given priority and adopted.

The future of electoral systems is e-elections. This is because it fits the context of the developing world that is faced with insufficient capital or funding for such capital intensive projects as elections. E-elections reduce the cost of elections. The INEC had recently requested the sum of N93b for the 2015 elections, most of which will be spent on overhead, procurement of election tools and logistics (Jega, cited in Tapel, 2013), which is twice the budget of some African countries. But with e-voting in which voters can use their personal tablets and mobile devices at their convenient time and place within the framework of electoral guidelines, such prohibitive cost would have been drastically cut down.

E-lections in Nigeria will also ensure what Clift (2013: 4) has referred to as "greater citizen participation" in elections. Accessibility to the internet is growing in leaps and bounds, even in rural communities. The abundance and cheaper rates of cell and smart phones with internet connectivity enabled by service providers makes e-voting even easier and more participatory, which will leave INEC with only adequate orientation and enlightenment of the general public (rural and urban).

The challenges of e-elections may remain, and surely there will be teething problems when e-elections commence. These include inadequate and evolving capacity of individuals at INEC and voters to understand the rudiments of e-elections and to use complex electronic equipment in the course of voting. Also, because of the peculiarity of the Nigerian crisis of power supply and maintenance issues, adopting e-election might be chaotic at first; but with time, the people will get used to it and embrace the modality for choosing government. E-lections will reduce rigging as the electorate will monitor (track) their votes and monitor with their devices the results as they unfold. In such an age of information revolution, democracy can only be enhanced by maximally exploring information technology to change politics for democratic sustainability in Nigeria.

References

Boix, C. (1999) "Setting the Rules of the Game: The Choice of Electoral Systems in Advanced Democracies", *American Political Science Review*, Vol. 93, No. 3 (September,1999) pp. 609-624.

Buchsbaum, T. (2004) "E-voting: International Developments and Lessons Learnt", *Proceedings of Electronic Voting in Europe Technology, Law, Politics and Society. Lecture Notes in Informatics. Workshop of the ESF TED Programme together with GI and OCG*.

Clift, S. (2013) "E-Democracy, E-Governance and Public Net-Work", retrieved from http://www.publicus.net /articles/edempublicnetwork.html, version 1.1, September 2013 on January 6, 2014.

Chaum, D.; Ryan,P.Y.; andSchneider, S. (2005). "A Practical Voter-Verifiable Election Scheme". *ESORICS'05: 10th European Symposium on Research In Computer Security*. LNCS 3679: 118–139.

Duru, E. J. C. (2002) *The Electoral Process and Democracy in Nigeria*, Calabar: BAAJ International.

Ebegbulem, J.C. (2011) "Credible Elections and Democratic Consolidationin Nigeria: The Moral Imperatives" *Journal of Emerging Trends in Educational Research and Policy Studies* (JETERAPS) 2 (4):246-250.

Ebegbulem, J. C. (2005) "Democracy on Trial", *Daily Champion*, January 25, 2005 11 page

Emmanuel, E. (2012) "Electronic voting not likely in 2015, says Jega", Nigerian ElectionsCoalition, retrieved from http://events.nigeriaelections.org/readMore/1573/electronic_voting_not_likely_in_2015_says_jega_on_January 6, 2014.

Essis, H. E. (1994) "Conditions for Success of Democracy in Africa", in *Democratization in Africa: African Perspective* Vol. I, Benin City: Himand Hima Ltd.

Fagbohun, O. (2013) "Nigeria's Democracy and the Crisis of Political Instability: An Audit theofElectoral System", paper delivered at the June 12 AnniversaryLecture organized by the Political and Legislative Powers Bureau of Lagos State Government in conjunction withthe June 12 Coalitionon 12th June 2013 on the theme Electoral System, the Bane of Political Instability in Nigeria.

NIGCOMSAT (2013) "RFID Biometric e-Voting System", retrieved from http://nigcomsat.com/View/Products/ evotingsystem.aspx on Januray 4 2014.

Nigerian TelevisionAuthority (NTA), Live broadcast of interview with FEDECO Chairman on September 18, 1983.

Olatunji, S. (2003) "Can We Have Freeand Fair Elections", Nigerian Tribune, June 10, 2003, p.1.

Oni, S., Chidozie, F.C. & Agbude, A. G. (2013) "Electoral Politics in the Fourth Republic in the Fourth Republic of Nigeria's Democratic Governance." JournalofDeveloping Country Studies. Vol. 3. No.12.pp:48-56.

Osaghae, E. E. (1994) "Sustaining Democratic Stabilityin Africa", in Democratization in Africa: Hima and Hima Ltd.

Saltman, G. R. (2001) *Effective Use of Computing Technology in Vote-Tallying*, Gaithersburg: US Department of Commerce.

Sanusi, O. (2013) "Election Administration in Nigeria: A Comparative Analysis with the United States of America", retrieved from <cdra.org.ng/home/?page_id=131> on January 7, 2014.

Soyinka, W. (1994) *Ibadan:The Penkelemes Years -Memoir,A 1945-67*, Ibadan: Spectrum Books.

Taiwo, V. (2000) *Nigeria on Gunpowder: The Climax of Misrule*, Ibadan: Omo-adePress.

Tapel, F. (2013) "Jega, INEC Boss Asks for N93Bn for 2015 Elections" Nigerian CommunicationsWeek retrieved from http://www.nigeriacommunicationsweek.com.ng/other-business/jega-inec-boss-asks-forn93bn-for-2015-elections on January 6, 2014.

Zissis, D.; Lekkas(April 2011). "Securing e-Government and e-Voting with an Open Cloud Computing Architecture". *Government Information Quarterly* 28 (2):239–251

The Role of Information and Communication Technology on Transparency, Trust and Good Governance in Nigeria

Daniel Gberevbie[1], Charles Ayo[2], Aderonke Oni[3] and Sheriff Folarin [4]
Department of Political Science and International Relations, College of Development Studies and Department of Computer Science and Mathematics, College of Science and Technology, Covenant University, Ota, Ogun State, Nigeria
daniel.gberevbie@covenantuniversity.edu.ng
charles.ayo@covenantuniversity.edu.ng
ronke.oni@covenantuniversity.edu.ng
sheriff.folarin@covenantuniversity.edu.ng

Abstract: Studies on transparency and trust in public sector management have generated exciting moments amongst scholars and practitioners alike in the area of good governance for development of societies. Furthermore, it has been argued by some scholars that government agencies are more likely to achieve their goals of enhanced performance for the improvement in the living standard of the people, particularly in the provision of adequate social amenities such as clean water, electricity supply, good roads, well equipped hospitals and adequate security protection of lives and properties, where transparency on the part of public officials in the use of public resources, and trust about government agencies on the part of the people are the norms in such a society. Previous studies have hinged on transparency for enhanced performance of government and its agencies on the integrity and perception of the individual employees in carrying out their assignments without taking into consideration the lack of capacity to perform, and the value judgment of such individuals. This present study focuses on the role of information and communication technology (ICT) in the management of government and its activities for enhanced development in the society. The work contributes to our understanding of the relationship between ICT, transparency, trust and good governance as a catalyst for development in Nigeria. With the use of structural equation model, the study empirically analyzed 261 copies of the questionnaire that were administered to respondents in the public and the private sectors of the nation's economy, about their perception on the relationship between the variables under consideration. The findings suggest the importance of ICT as a facilitator of transparency in the management of public resources, including, revenue collection and disbursement of public funds by government officials, as a basis for societal development, than the mere reliance on individual employees' integrity and perception in the management of public resources in Nigeria's quest for development.

Keywords: ICT, transparency, trust, good governance, public resources, Nigeria

1. Introduction

One major challenge that has consistently hindered Nigeria's quest for development is how to adequately manage public resources to bring about the desired enhancement in the living standard of the people, particularly in the area of transparency on the part of government officials. This is based on the fact that as a country with enormous natural resources, such as crude oil and human capital, Nigeria has failed to harness these potentials to her advantage due to mismanagement of resources and lack of accountability by public officials in revenue collection and utilization of the same for the overall good of the people. This situation has created the challenge of distrust of government and its activities in the mind of the people in terms of adequate support for public policies and programmes at the implementation stage, which is required to achieve development in any society (UNDP 2001; Aghalino 2007; Gberevbie 2013).

Nigeria is the sixth largest producer of crude oil in the Organization of Petroleum Exporting Countries (OPEC), with a capacity for over 2 million barrels per day, and a population of 160 million people. In spite of the availability of these enormous natural and human resources, majority of the population still suffers from lack of basic necessities of life such as clean water, electricity supply, good roads, well equipped hospitals and adequate security protection of lives and properties. This situation could be attributed to poor attitude to work on the part of government officials in the public sector, such as absenteeism, corruption, indiscipline, lack of transparency in the proper collection and management of public revenue by government officials, both at the federal, state and local levels. These have created distrust on the mind of the people about government and its activities, and hence could have contributed to the underdevelopment challenges in Nigeria (Amadasu 2003; Jike 2003; Agbo 2012).

According to Shih (2010:99), "institutional trustworthiness needs public employees to be competent, credible and willing to act in the interest of the general public." A government that lacks transparency in its activities, and suffers from the challenge of distrust from the people is not likely to emphasize competence and credibility as criteria for engaging its workforce. For instance, one of the government's own company – Nigerian National Petroleum Corporation (NNPC), that is solely entrusted with the handling of government business in the oil sector, which is the major revenue earner for the country, could not account for the sum of USD 250 million and additional 10 million barrels of crude oil between May, 1999 and December, 2005 due to unethical behaviour on the part of government officials in the oil sector (Aghalino 2007).

The above situation is possible because, most government agencies in Nigeria still rely on individual employees' integrity in the area of accountability in revenue collection and disbursement of public funds to achieve the goals of government in its quest for development. thisIn regard, ICT is seen as a facilitator for proper accountability in the collection of revenue and management of government funds for development in a society (Ugwu, Eze and Ugbene 2012). In recognition of ICT as a vital tool for national development, the Federal Government of Nigeria, in August 2012, put in place a national policy on ICT aimed at producing a framework that would enhance the ability of ICT sector to propel the socio-economic development of the country (FGN 2012:9).

The goals of the national policy on ICT in Nigeria is to utilize ICT in energizing and supporting the various programmes and sectors that contribute to the nation's socio-economic development including: Agriculture, Education, Finance, Health, etc (FGN 2012:26). Emphasizing the importance of ICT for development, Ikponmwosa and Ezomo (2013) argue that ICT enhances revenue collection that helps to overcome the activities of fraudsters and make more funds available to government for development in the society, and hence, improve upon the living standards of the people.

2. Research objectives

The objectives of this study are to examine the relationship between the role of ICT, transparency in revenue collection and disbursement of public funds, trust in government, its policies and programmes on the part of the people, and good governance in Nigeria for development. The paper is structured into five sections. Section one is the introduction. Literature review was carried out in section two. Section three examines the methodology. The results of the study were discussed in section four, while section five is the conclusion.

3. Literature review

3.1 The concept of transparency

The concept of transparency is seen by many as vital to development of any nation. This is because it emphasizes the need for the process of decision making and management of the outcome of such decisions to be open to all in the society. In this regard, transparency is seen by Kim *et al* (2005) as implying that decisions are made and enforced in a manner that follow rules and regulations. Accordingtothem, transparency means that information is freely made available and directly accessible to those who will be affected by it and that enough information is provided in easily understandable forms and media to enable people in such a society to be part of the outcome of such decisions as a basis for societal development (Kim *et al* 2005).

Also, Ekpe (2008) simply sees transparency as having to do with openness, truth and straight forwardness in the running of governmental affairs. The implication of the above on governance is that any information that cannot be made open to the members of the public to access negates the principle of good governance, which ultimately puts question mark on the proper accountability of government and its officials to the people. This implies that transparency enhances good governance, and a vital key for the improvement in the living standard of citizens in a nation. Some scholars have however, argued that although, transparency is widely canvassed as a key to better governance, increasing trust in public-office holders, but it is more often preached than practiced, more often referred to than defined, and more often advocated for than critically analyzed (Castries 2004; Heald 2006). This situation could be due to governmental/organizational secrecy in a number of societies aimed at 'protecting' the country or organization from internal instability (Piotrowski and Van Ryzin 2007; Hasan 2013).

To overcome the challenge of transparency in government and its activities for enhanced performance in a society, some scholars have advocated the deployment of ICT as possible solution in the management of government resources in terms of revenue collection and disbursement of public funds for development (Camp 2006; Ugwu, Eze and Ugbene 2012; Ikponmwosa and Ezomo 2013). According to Camp (2006), as government processes and judgments become increasingly digitalized, transparency of digital systems that implement the processes of government become increasingly important, and hence further promote transparency in government and its activities for enhanced performance.

Margett (2006) however, argues that although, digitalization may make government more transparent, there are barriers to it, such as the uncertainty and unpredictability produced by electronic processes, increased complexity, and difficulty of navigating digital government because of its size or design. The above notwithstanding, the deployment of ICT in the governance of nations has played major roles in the society as a facilitator of transparency in business transactions for good governance. A transparent government is more likely to be trusted by the people in terms of giving it the required support at the implementation of policies and programmes for societal development than the government that lacks transparency. This means that there is a relationship between ICT, transparency, trust and good governance for societal development.

3.2 Good governance and trust

According to the World Bank (2004), governance is the process and institutions by which authority in a country is exercised. On the other hand, Babawale (2007) sees good governance as the exercise of political power to promote the public good and the welfare of the people. He argues that good governance is the absence of unaccountability in government, corruption, and political repression, suffocation of civil society and denial of fundamental human rights. He points out the attribute of good governance in any society to include: accountability, transparency in government procedures, high expectation of rational decisions, predictability in government behaviour, openness in government transactions, free flow of information, respect for the rule of law and protection of civil liberties, and press freedom. On this part, Ekpe (2008) argues that the purpose of good governance is to put in place an enabling environment for political and socio-economic development to place, and to increase the efficiency and effectiveness of development programmes in a society. He points out that the concept of good governance is used to characterize the interplay of the best practices in the administration of a nation for sustainable development. The implication of the above is that openness in the administration of a nation is more likely to engender trust from members of the society towards the government than an administration that lacks openness in its activities, particularly in the area of proper management of resources to provide for the people the required social amenities for quality living.

Trust is seen by Rousseau *et al* (1998) as a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behaviour of another either in an organization or nation. According to Levi (1998), the perception of the people in a country that government is untrustworthy is a function not only of its failure to fulfill promises but also of evidence that government agents distrust those from whom they are demanding cooperation and compliance. In this regard, Shih (2010:98) argues that "public distrust in government causes a legitimacy crisis in governing activities." Legitimacy crisis in governance hinders development in any society. This implies that citizens of a nation are more likely to distrust a government that lacks transparency in its management of public affairs, and hence suffers from legitimacy crisis than a government that enjoys the trust of its citizens.

3.3 ICT, transparency, good governance and trust for societal development

Some scholars have argued that ICT facilitates transparency in the management of organizations or nations in the sense that, it enhances business planning, design, distribution of products and services, revenue collection and risk management for enhanced performance (cited in Ikponmwosa and Ezomo 2013). And transparency on the other hand engenders trust on the mind of the people about government and its activities in a society for enhanced development, which could be facilitated by the deployment of ICT. Emphasizing the importance of ICT for the development of nations, former Secretary-General of the United Nations, Kofi Annan, in a world summit on the Information Society in December, 2003 argues thus:

> *If harnessed effectively, information and communication technologies have the potential to greatly improve our social, economic and cultural lives. They can serve as an engine for development in areas ranging from trade to telemedicine, and from education to environmental*

> *protection. They are tools with which to advance the cause of freedom and democracy. And they are vehicles with which to propagate knowledge and mutual understanding (cited in World Bank Institute 2006:3).*

In this regard, Sein and Harindranath (2004) suggested four different conceptualization of the use of ICTs in national development to include: a commodity to earn foreign exchange; supporting general development activities; driver of the economy; and as directed to specific development activities in a society. Ikponmwosa and Ezomo (2013:61) however, argues that "ICT by itself cannot eradicate development challenges associated with poverty eradication, social inequality and environmental degradation, but it can however, contribute to the realization of development goals by exchange of information and promoting the efficient use of resources."

This implies that government is more likely to achieve its goals of enhanced performance for the improvement in the living standard of the people where transparency, trust, good governance and the effective deployment of ICT in the management of public resources exist. Transparentuse of public resources equals higher level of trust in the government and its activities by the people, which ultimately leads to societal development through the availability of more funds for the provision of required social amenities in the society for better living condition. From the foregoing, we therefore conclude that, there is a relationship between ICT, transparency, trust and good governance in a nation's quest for development.

4. Research questions

The questions that guided this study are:

- To what extent has trust on the part of the people in government and its activities influenced good governance in Nigeria?
- How has transparency in government and its officials impacted positively on good governance in Nigeria?
- What positive influence has ICT on transparency of governance in Nigeria?
- To what extent has ICT positively influenced the performance of government and its officials in Nigeria?
- How has perceived performance on the part of the people about government and its agencies positively impacted on good governance in Nigeria?

5. Research hypotheses

The following hypotheses stated in null form are tested to achieve the overall objective of the study:

Hypothesis 1: Trust has no positive influence on good governance in Nigeria

Hypothesis 2: Transparency in government has no positive impact on good governance in Nigeria

Hypothesis 3: hasICT no positive influence on transparency of governance in Nigeria

Hypothesis 4: ICT has no positive influence on the performance of government in Nigeria

Hypothesis 5: Perceived performance on the part of the people has no positive impact on good governance in Nigeria

6. Methodology

This research employed the survey research method to empirically evaluate factors influencing good governance in Nigeria. Questionnaire was designed with comprehensive information to evaluate the impact of trust, ICT, transparency and performance on good governance in Nigeria and used to test the formulated hypotheses.

The questionnaire was divided into two sections. The first section includes measures of variables to be studied and consists of 25 questions; 5 questions on trust, 5 questions on transparency in government, 5 questions on perceived performance, 3 questions on ICT as it relates to transparency in Nigerian Government, 3 questions on ICT as it relates to performance in Nigeria's public administration, and 4 questions on good governance. The scales used to measure transparency, trust, performance, ICT, and good governance were adapted from prior studies of Hvidman 2013; Kim and Lee 2012, and modified to suit the purpose of this research

For all constructs, the participants were asked to indicate their perception on seven-point Likert-style responses ranging from 1 = ”strongly disagree,” = 2‘ slightly disagree, 3 = “disagree”, 4 = “neutral,” 5 = “slightly agree”, 6 = “agree” to 7 = “strongly agree”. The second section consists of demographic profile of respondents such as age, gender, educational qualification, employment status and average monthly income.

Responses were solicited from citizens within the voting age limit (i.e. 18 years and above). Only paper-based questionnaire was used to facilitate quick response. There were 300 copies of the questionnaire randomly administered within one month, 281 were retrieved, out of which, 21 copies were incomplete and so, not used in the analysis. Data from the remaining 261 copies of completed and valid questionnaire representing 86.7percent response rate were used for the quantitative analysis with Smart PLS 2.0.

7. Results

7.1 Demographic description of survey participants

The demographic analysis of the survey respondents showed that 53.7percent were male and 46.3percent were female. 88.5percent of the respondent are within age 18 – 50years. Eighty percent (80.1percent) of the respondent have at least BSc. degree or its equivalent; Higher Diploma Degree. Only 8.4percent are secondary school certificate holders and the remaining 11.5percent have a form of professional certification or the other. Seventy nine point three percent of the respondents are employed while 20.7 percent are unemployed.

Table 1: Demographic statistics of the respondent

	Frequency	**Percent**
Age		
18-20	30	11.5
21-30	73	28
31-40	75	28.7
41-50	50	20.3
51-60	20	8.8
60+	4	2.7
Total	261	100
Academic Qualification		
High school	22	8.4
BSc./HND	142	54.4
Post Graduate Degree	67	25.7
Professional certificate	17	11.5
Total	262	100
Employment Status		
Employed	207	79.3
Unemployed	54	20.7
Total	262	100
Income (₦)		
50000	32	12.3
50,000 - 100,000	74	28.4
100,000 -150,000	58	22.2
>150,000	52	19.9
No income	45	17.2
Total	261	100

Source: Researchers’ Field work

Validity and Reliability of the Research Instrument

Two tests of validity were conducted on the research instrument: convergence validity and discriminant validity. The convergence validity was evaluated using confirmatory factor analysis (CFA). The discriminant validity was evaluated using cross-loading assessment and the comparison of average variance extracted (AVE) square root and the ϕ (phi)matrix. Table 2, shows the factor-analysis loadings of each item on its respective latent variable. According to Chin (1998), for an item to be retained for further analysis after the initial run, it should have standardized loading not less than 0.707 on its respective latent construct. Six (6) items in the research instrument did not satisfy this condition and were removed. The factor loading of the remaining items that satisfied this condition and retained for further analysis is as displayed in Table 1.

Table 2: Confirmatory factor analysis

Confirmatory Factor Analysis		
Construct	Items	Loading
Trust	Trust4	0.914
	Trust5	0.825
	Trust3	0.840
Transparency	Trans3	0.794
	Trans4	0.852
	Trans5	0.815
Perceived Performance	PP1	0.698
	PR4	0.872
	PR5	0.901
ICT	ICT1	0.838
	ICT2	0.852
	ICT3	0.870
	ICT5	0.907
	ICT6	0.890
Good Governance	GG2	0.863
	GG3	0.851
	GG4	0.780

Source: Researchers' Field work

For the cross loading, all items loaded on their theoretically assigned construct than any other construct. This showed that all the items loaded uniquely on their respective theoretical constructs. Further validation of the discriminant validity of the constructs using comparison of AVE square root and ϕ(phi) matrix (correlation score of each pair of latent variables) of the entire latent construct satisfies the requirement. AVE of the entire construct is above the minimum required value of 0.5 and in no case was any ϕmatrix greater that the square root of AVE of any construct in the model. Table 3 displays the result.

Table 3: Reliability and discriminant validity statistics of research instrument

Construct	Composite Reliability (≥0.8)	Cronbach Alpha (>0.6)	AVE (>0.5)	Trust	Transp-arency	Performance	ICT	Good Governance
Trust	0.8497	0.5573	0.693	0.832				
Transparency	0.8607	0.7568	0.673	0.214	0.820			
Performance	0.8497	0.6588	0.739	0.313	0.385	0.859		
ICT	0.8896	0.8164	0.807	0.039	0.109	0.195	0.898	
Good Governance	0.8712	0.7773	0.693	0.308	0.455	0.512	0.143	0.832

Source: Researchers' Field work

The internal consistency reliability and construct reliability of the research instrument was evaluated using cronbach alpha coefficient (α) and composite reliability (r_c) respectively. Table 3 also displays the r_c of the constructs, the Cronbach alpha and the AVE. All the research constructs have acceptable values for AVE, Cronbach alpha and composite reliability except Trust which has αvalue- of 0.557. However, it was still retained for hypothesis testing because it satisfies other statistical conditions.

8. Hypotheses testing

To test the five (5) hypotheses proposed for this research, path analysis using coefficient of determination (R^2) was used. R^2 is the measure of the percentage of a construct's variation that the model explains.

All the exogenous variables (trust, ICT, transparency and performance) explained 35.6percent of the variation of good governance, and ICT explained 1.1percent and 3.2percent of transparency and performance respectively. From these figures, ICT did not adequately explained transparency. R^2 values of 0.190 and lower are weak variance according to Urbach and Ahlemann (2010).

To determine the degree of relationship between the research constructs, path coefficient was calculated by running a bootstrap with 1000 re-samples.The significance of the coefficient path was to assess the t- statistics. T-value 1.8 – 2.39 is significant at 0.1 level of significance, t-value2.4 – 2.9 is significant at 0.05 level of significance and t-value3.0 and above is significant at 0.01 significance level. The Effect Size (f^2) of the overall model was tested using Cofen's f^2.

$$F^2 = \frac{R^2}{1 - R^2} \quad (1)$$

The path coefficient of all the hypothesized paths and the effect size values for the three endogenous variables with their respective R^2 are shown in Table 4. The result shows the performance, transparency and trust have large effect on their endogenous variable and the effect of ICT on its endogenous latent variables transparency and performance is small.

Table 4: Path coefficient and R^2 for overall model

Predictor Construct		Predicted Constructs	Path	T
ICT	→	Performance	0.180***	3.564
ICT	→	Transparency	0.104	1.779
Trust	→	Good Governance	0.133**	2.455
Perceived Performance	→	Good Governance	0.359***	5.455
Transparency	→	Good Governance	0.288***	4.648
			R^2	F^2
		Good Governance	0.356	0.553
		Performance	0.032	0.333
		Transparency	0.011	0.011

Note: *, **,***are indication of level of significance which represents 10percent, 5percent, and 1percent respectively (Source: Researchers' Field work)

9. Discussion

In this study, trust was included as a determinant of good governance. Previous studies (Levi 1998; Shih 2010) identified the importance of trust development. Contrary to Hypothesis 1, trust has positive significant effect on good governance with path coefficient of 0.133. Individuals who perceived government officials or representatives to be competent, keeping promises, always doing what is right and trust their decisions are likely to see the governing system as good.

The analysis also rebut the hypothesized relationship between perceived performance and good governance (Hypothesis 5). The result showed that perceived performance has a positive significant effect on good

governance with path coefficient of 0.359, the highest significant value among the constructs. It therefore implies that citizens perception of effect delivery of good service, proper administrative procedure in public service /government are determinants of good governance.

Transparency was also found to have a positive significant effect on good governance with path coefficient of 0.288 (Hypothesis 2). It therefore implies that transparency impacts good governance. For government to be referred to as good, it must continue in its effort to ensure citizens are well informed, promote two-way communication with the citizens, provide diverse opportunities for citizens to participate in decision-making.

The analysis also rebuts the hypothesized relationships between ICT, transparency and performance (Hypotheses 3 and 4). T**h**ypothesized path between ICT and performance is significant at 99percent confidence level with path coefficient 0.180 and effect value 0.333. Though ICT explained very little variation of performance, the low size of R^2 in the relationship between ICT and performance is not surprising as there is many other factors that could influence performance besides ICT. This suggest that the respondents believe that the use of ICT in governance will provide better organization of public services, public administrators will work better in revenue collection, and government would perform better if it computerized its processes and functions. The hypothesized path between ICT and transparency is positive but not significant and also returned low variation and effect value.

10. Conclusion

This paper empirically evaluates the relationship between ICT, government transparency and performance and trust, transparency and performance on good governance in Nigeria. Questionnaire was designed and administered within the south west region of Nigeria. The result showed that there is significant relationship between the statistical constructs. Findings revealed the use of ICT to redesign public administration would significantly improve good governance in Nigeria. Also the use of ICT to provide more information, promote openness and transparency in public expenditure and revenue has the potential to increase government transparency and in turn increase good governance. Government must also intensify effort to gain citizens trust by taking interest of the populace into consideration, obeying rule of law and keeping their electoral promises.

Based on the findings above, future research in this area will find the direct relationship between ICT and good governance, and the moderating effect of ICT on the relationship between trust and good governance as a useful means of developing the capability of ICT as a strategy for enhanced accountability in government. The research instrument can be tested in other parts of the country to have a general perception of the research constructs in Nigeria. More indicators of good governance could be added to these constructs for more empirical findings and a more acceptable generalization of outcomes.

References

Agbo, A. (2012) "The Rot in NNPC", *Tell Magazine* (Lagos), 30th January, pp 56-58.

Aghalino, S.O. (2007) "An Appraisalof the Oil Sector Reforms." In H. Saliu, E., Amali, andOlawepo, R. (eds) *Nigeria's Reform Programme: Issues and Challenges*. Ibadan: Vantage Publishers, pp 221-235.

Amadasu, D.E. (2003) "Personnel and the Nigerian Management Crisis: AjaokutaIron and Steel Mill Examined", *The Abuja Management Review*, Vol 1, No. 4, December, pp 1-10.

Babawale, T. (2007). *Good governance, Democracy and Democratic Best Practices: Prescriptions for Nigeria.* Lagos: Centre for Black and African Arts and Civilization Publications Monograph Series, pp 7–16.

Camp, L.J. (2006) "Varieties of Software and their Implications for Effective Democratic Government.In" C. Hood and Heald, D. (eds) Transparency: The Key to Better Governance? (online) *British Academy Publications,* www.britishacademypublications.com.

Castries, H.D. (2004) "Ethics, Governance, Trust, Transparency and Customer Relations", *The Geneva Paper on Risk Insurance,* Vol 29, No.1, pp 36-39.

Chin W.W. (1998) Issues and opinion on Structural Equation Modeling. *MIS Quarterly*, Vol. 22 No1,. pp 7-16.

Ekpe, A.N. (2008) "Effective Management of Socio-political Conflicts in Akwa-Ibom State: Chief Godswill Akpabio's Effort", *The Public Administration*, Vol 2, No. 2,. July-December, pp 63-70.

Federal Government of Nigeria (FGN) (2012) *National Information and Communication Technology (ICT) Final DraftPolicy.* Abuja: Ministry of Communication Technology.

Gberevbie, D.E. (2013) "Ethical Issuesand Nigeria's Quest for Development", *Rwanda Journal, Series B: Social Science,*Vol. 1, 1, pp 21-35.

Hasan, H.A. (2013)"Transparency, Trust and Confidence in Public Sector", *British Journal of Arts and Social Sciences,*Vol 13, No. 1, pp 131-140.

Heald, D. (2006) "Varieties of Transparency." In C. Hood and Heald, D. (eds) Transparency: The Key to Better Governance? (online) *British Academy Publications,* www.britishacademypublications.com.

Hvidman U. and Andersen SC.. (2013) "Perceptions of Public and Private Performance: Evidence from a Survey Experiment." *Public Management Research Conference* Universityof Wisconsin-Madison.

Ikponmwosa, O. and Ezomo, P.I. (2013) "ICT for National Development in Nigeria: Creating an Enabling Environment." *International Journal of Engineering and Applied Sciences,* Vol3, No. 2, April, pp 59-66.

Jike, V.T. (2003) "Organizational Behaviour and Negative Attitudes in Nigeria's Public Employment Sector: The Empirical Nexus, *The Abuja Management Review,* Vol 1, No. 4, December, pp 11-28.

Kim, P.O., Haligan, J., Cho, N., Oh, C.H. and Eikenberry, A.M. (2005) "Toward participatory and transparent governance: Report on the sixth global forum on reinventing government", *Public Administration Review,* Vol 65, No. 6, November/December, pp 646-654.

Kim, S. and Lee, J. (2012) Citizen Participation and Transparency in Local Government: An EmpiricalAnalysis *Global Conference onTransparency Netherlands*

Levi, M. (1998) "A State of Trust." In V. Braithwaite and M. Levi (eds) *Trust and Governance.* New York: Russell Sage Foundation, pp 77-101

Margett, H. (2006) "Transparency and Digital Government." In C. Hood and Heald, D. (eds) Transparency: The Key to Better Governance? (online) *British Academy Publications,* www.britishacademypublications.com.

Piotrowski, S.J., and Van Ryzin, G.G. (2007) "Citizens Attitudes towards Transparency in Local Government", *The American Review of Public Administration,* Vol 37, No. 3, pp 306-323.

Rousseau, D.M., Sim, B., Ronald, S., Burt, S. and Colin, C. (1998) "Not so Different after all: A cross-discipline view of Trust, *Academy of Management Review,* Vol 23, No. 3, 393pp-404.

Sein, M.K. and Harindranath, G. (2004) "Conceptualizing the ICT Artefact: Towards Understanding the Role of ICT, *The Information Society,* Vol 20, pp 15-24.

Shih, Mei-Chiang (2010) "Trust and Transparency in Network Governance: The Implication of Taiwan's Anti-Corruption Activities", *International Public Management Review,* Vol 11, No. 2, pp 95-131.

Ugwu, E., Eze, E.O. and Ugbene, I.J. (2012) "On the Technological Promises and Challenges Facing E-Business in Nigeria", *Computing, InformationSystems and Development Informatics,* Vol 3, No. 4, September, pp 9-14.

UNDP (2001) *Public Service Ethics in Africa*. A Publication of UNDP Regional Bureau for Africa. New York, Vol 2, pp 64-73.

Urbach, N. and Ahlemann, F. (2010) "Structural Equation Modeling in Information Systems Research Using Partial Least Squares." *Journal of Information Technology Theory and Application*, Vol 11, Iss 2, Article 2.

World Bank Institute (2006) A Report on the Global E-Discussion: Information and Communications Technology for Economic Development – Exploring Possibilities for Multi-SectorTechnology Collaborations, October 23 November–3, p 3.

World Bank (2004) "Reforming public institutions and strengthening governance", (online) www.worldbank.org/wbi/governance

E-democracy Implementation: The Imperative of Agenda Setting

Aderonke A. Oni[1], Charles K. Ayo[1], Victor W. Mbarika[2], Daniel E. Gberevbie[3] and Sheriff F. Folarin[3]
[1]Department of Computer Science, Covenant University, Ota, Nigeria
[2]School of Business, Southern University and A&M College, Baton Rouge LA, USA
[3]Department of Political Science and International Relations, Covenant University, Ota, Nigeria
ronke.oni@covenantuniversity.edu.ng
charles.ayo@covenantuniversity.edu.ng
victor@mbarika.com
daniel.gberevbie@covenantuniversity.edu.ng
sheriff.folarin@covenantuniversity.edu.ng

Abstract: Decline in the level of citizens' participation due to disconnect between citizens and their representatives has been identified as one of the prominent challenges facing most democratic societies in the world today. E-democracy has been identified to have the potentials to reduce the contemporary estrangement between the democratic actors by creating new forms of engagement, deliberation, and collaboration in polity to make the democratic processes more inclusive and transparent. However, e-democracy initiatives in many countries have had mixed success as most e-democracy implementations have been unable to justify the essence of huge investments made into it. This research paper reviews existing e-democracy development processes and agenda of nations among the top twenty countries in e-participation implementation as rated in the UN Global E-Government Evaluation, 2010. The sample composed of secondary data sourced from information system centric academic journals, book chapters, conference proceedings, database of international development organisations (OECD, UN, EU) on e-democracy implementation reports and database of research institutions and centres that focus on e-government and e-democracy implementation. Findings revealed that most countries do not have well established framework and agenda setting for e-democracy implementation, but only based their e-democracy implementation on one of the objectives of their e-government implementation. As a result, policy content is largely missing in most e-democracy strategies at both conceptual and implementation stage. This paper therefore, presents a guideline for e-democracy agenda setting and discusses issues germane to establishing e-democracy agenda. It submits that for a successful e-democracy implementation, the agenda-setting phase should capture the legal and political processes of the country. In addition, e-democracy strategic vision, strategic aim and objectives, strategic policy, mode of implementation and overseeing body should be well articulated in the agenda setting phase of e-democracy implementation plan. The discussion will benefit both researchers, government and practitioners on successful e-democracy implementation as basis for societal development.

Keywords: E-democracy, government, agenda setting, policy, policy-making, strategy

1. Introduction

Since the 1980s, a global public management revolution has been reshaping the relationship between citizens and the state. This revolution is concerned with how government can be more responsive to the governed. This has required new strategies and tactics to rebuild the responsive linkages between citizens and governments, and to encourage citizen involvement in public administration (Kettl 2005). The use of Information and Communication Technology (ICT) in enhancing citizens' political participation has been identified as a solution to the problems of representative democracy, particularly, the disconnection between representatives and citizens, and the decline of political interest amongst the populace (Kang and Dugdale 2010).

E-democracy is anything that governments do to facilitate greater participation in government and to enhance effective governance using digital or electronic means (Colman and Norris 2005). Cliff (2000) considered it as the use of information and communication technologies and strategies by democratic actors (governments, elected officials, the media, political organizations, citizen/voters) within the political and governance processes of local communities, nations and on the international stage. Hye, Jong and Hae (2008) defined e-democracy as the use of cyberspace and mobile technologies to enhance effective governance. E-Democracy is one of the ways in which government uses new ICTs to improve the way it does its business and to enhance community outcomes.

Leveraging on the capability of the Internet and mobile technology, e-democracy has the potential of creating new forms of engagement, deliberation, and collaboration in the political process to make democratic

processes more inclusive and transparent (Coleman and Gotze 2001; OECD 2003; Ayo 2008; Shirazi, Ngwenyama and Morawczynski 2010). While e-democracy is dependent on modern, suitably adapted ICT, more and better technology does not in itself lead to more and better democracy. Despite huge investment on e-democracy initiatives around the world, and academic efforts on e-democracy implementation, to date, e-democracy initiatives in many countries have had mixed success (Coleman and Norris 2005; Blackhouse 2007). E-democracy in most countries has failed to live up to the expectations of many dedicated proponents. This research paper reviews existing e-democracy development processes and agenda of top countries in e-participation implementation with a view to applying the lessons derived from it to developing nations as strategy for national development.

2.0 Literature Review

2.1 E-Democracy Development Process

Acquiring an e-democracy system that will considerably meet the needs of citizens to participate in the democratic process and the needs of government to provide citizens with adequate participation channels is most paramount in e-democracy implementation (Funikul and Chutimaskul 2009). A successful e-democracy implementation should therefore, target developing a system that will meet the needs of adequate channels for enhancing citizens participation in the democratic process. The key characteristics of e-democracy include better service with appropriate access time, reasonable cost of utilizing suitable ICT, responsiveness of government in listening, and support of citizens' participation (Funilkul and Chutimaskul 2009; Blumler and Coleman 2001). Several scholars have worked on methodologies for e-democracy implementation, examples include Black and Noble (2001); Clift (2004); Local E-Democracy National Project (2006); Funilkul and Chutimaskul (2009).

Black and Noble (2001) pointed out the importance of considering critical keys and potential barriers to the success of e-democracy development to achieve a successful implementation. They proposed six key issues to be considered in e-democracy development. These are investment, leadership, training, technological flexibility, access and digital divide, and privacy and security.

Investment involves determining the amount of money the government will spend in implementing e-democracy. Leadership involves the leaders in all tiers of government having the vision and commitment to jumpstart their government and political operations into e-democracy. For e-government and e-democratic principles to advance quickly, the political and bureaucratic leadership need to be committed to providing the investments needed to transform the government (Black and Noble 2001). Access and digital divide requires government to strive to provide access for everyone for e-democracy to deliver its mission. By improving communication and exchange, ICT can bring about amazing social and economic networks which will in turn form the basis for major development (Black and Noble 2001). Technological flexibility demands that technological foundation of e-government/e-democracy be flexible enough to support various software component and high degree of interoperability between different software, hardware, and vendors. Security and privacy issues require that government should put in place adequate security statement unless, citizens will remain sceptical to use the system. Training, according to Black and Noble (2001), involves investing resources in human capital to ensure that people know how to use tools so they can take part in democratic debate and processes. Training cuts across three major areas: training of public officials to ensure they understand the e-participatory tools and able to use them to drive e-democratic principles, training of government workers to be capable of using current software, hardware and tools, and lastly training of citizens to enable them adequately use the e-democracy tools.

Clift (2004), in his view about e-democracy implementation, proposed a top ten e-democracy: to do list to guide government in using ICT to improve their democratic process: i) a**nnounce all public meetings online in a systematic and reliable way e.g.** meeting time, place, agenda, and information on citizen testimony, participation, opinion/observations; ii) **Putting "Democracy Button" on site's top page such** as sharing real information that will help citizens to better understand the legitimacy of government agency and powers and how to best influence the policy course of the agency; iii) **implement "Service Democracy" e.g.** comment forms, online surveys, citizen focus groups to acquire the input required to be a responsive e-government. This also includes using the Internet to learn about what can be done better from the public; iv) **end the "Representative Democracy Online Deficit"** that is, Invest in the technology and communication infrastructure

of institutions designed to represent the people from the local to the federal government level; v) **internet-enable existing representative and advisory processes:** video conferencing, virtual committee chat rooms, online broadcasting of representative and in-person online consultation; vi) **embrace the two-way nature of the Internet:** This deals with giving people the tools to help hold government officials accountable, providing adequate feedback mechanism such as respond to e-mail in an effective and timely manner; vii) **hold government sponsored online consultations:** providing highly structured online consultation events designed to impact the policy process, educate people on public policy issues and a platform for interaction with agency staff and decision-makers; viii) **develop e-democracy legislation,** that is, to enact laws and seek the budgetary investments required to support governance in information age; xi) i**nternet education for elected officials:** Educates elected officials on the use of the Internet in their representative works, encourage national and international peer-to-peer policy exchanges among representatives and staff and x) **Create open source democracy online applications** leveraging the e-democracy services and infrastructure on open source technology to reduce cost.

Furthermore, Funikul and Chutimaskul (2009) presented a framework for sustainable e-democracy development based on the governance development standard called COBIT 4.1. The framework presented a 4 + 1 construct of e-democracy development process comprising: Stakeholders and policy; Information and Communication Technology; Development methodology; Process and project management; Environment and e-democracy components. These researchers however, focused on technology and not the democratic aspect of e-democracy.

As noted by Kotsiopoulos (2009), e-democracy is not all about technology, technology is just an enabler. E-democracy flourishes best where there is political will and leadership to make it work effectively by introducing the structural changes needed to take account of the opinions expressed. The incorporation of ICT into democratic processes usually requires structural changes and procedural reform (Council of Europe 2009). These among other include the formalization of the status of e-democratic tools (Millard, Millard, Adams and McMillan 2012) by integration them into the decision making processes. This paper examines the process of e-democracy development focusing on agenda setting.

3. Research Methodology

There are different approaches considered acceptable for building knowledge from literature in information system (IS) research. According to Silverman (1998), there is no agreed doctrine underlining all qualitative social research. Methods for conducting literature review are categorized into: traditional or narrative literature reviews and systematic literature reviews.

The systematic literature review involves a rigorous and well defined procedure applied to an existing literature (Okoli 2010). Review methodologies in Information Systems research include: the eight steps for systematic literature review (Okoli 2010), systematic approach to literature review (Levy 2006), writing a literature review (Webster and Watson 2002), grounded theory method for literature review (Wolfswinkel et al 2011) and structured case (Carroll and Swatman 2000). Grounded theory approach is considered is to be the appropriate method for the research because it support the development of concepts and constructs that are grounded in data. Grounded theory is considered in detailed in the following section.

This study employed qualitative approach using grounded theory method to analyse literature on e-democracy implementation and strategies. The sample composed of secondary data drawn from materials sourced from Information Systems centric publications and e-democracy strategy and implementation report documents. Electronic databases were searched for peer-reviewed journal articles, book chapters and conference proceedings on e-democracy. Documents on e-government strategy were consulted but were not much relevant because e-democracy is only an agenda in most e-government strategies. Only few countries such as Australia and UK have well established e-democracy strategy. The Web sites of government agencies, international organisations and academic institutions dealing with piloting and reporting e-practices were searched for relevant data. This includes OECD and Demo.net, and public.net. The terms used in searching for articles include “e-democracy strategy”, “e-government strategy”, “e-engagement”, “e-participation”, “online participation strategy”, “online participation”. These search key words were often combined with countries name, for example “Australia e-democracy strategy”. The results of the search yielded a total of 229 articles.

The selection and review of articles for this work was restricted to studies that focused on e-democracy/e-participation implementation, initiatives, technology, and evaluation. Special interest was on e-democracy strategies of countries within the top twenty in e-participation implementation (UN E-government Survey 2010) and Africa.

4. Guideline for E-democracy Agenda Setting

Literature analysis sets a delimiter for this research. The analysis of the major contents/focal points of e-democracy strategies, research and practice in literature was the starting point in developing the agenda setting guideline for e-democracy implementation. The proposed guideline summarises the e-democracy implementation process of the countries studied. The findings are presented below.

Policy: Policy content is largely missing in most e-democracy strategy at both conceptual and implementation level. According to United Nations Department for Economic and Social Affairs (2003), only 13 (8 percent) out of 190 countries have direct/clear statements or policy encouraging citizen participation. These policies are not essentially addressing e-democracy. High level policy direction serves to accelerate and deepen second and third generation ICT applications. A strong e-democracy policy with specific measurable goals is also essential to promote long-term progress in implementation (Henderson, Hogarth and Jeans 2007). Currently, the state of Queensland in Australia appears to be the only country where e-democracy initiatives have been introduced within a formal policy framework by national government. Other countries with laudable efforts on policy framework for e-democracy are UK (In the Service of Democracy), Switzerland, Estonia, Italy, and Canada. Policy is very important as it comprises of operational issues and strategic dimension needed to jump-start a viable e-democracy implementation. Table 1 gives a summary of policy issues to consider in e-democracy implementation.

Table 1: Summary of Policy Dimension for E-democracy Implementation

Policy	
Operational Issues	Security, privacy, and authentication legal protection given that different legislative frameworks apply across states and countries; timeliness and accuracy of content; large volume response management for rapid feedback /response with an electronic; feedback processes (including timeliness, comprehensiveness, individuation, privacy, and credibility issues); take-up rate barriers associated with the electronic medium i.e. infrastructure and access cost, awareness, skills, technical/design features
Strategic Dimension	desired outcomes/strategic vision roles and responsibilities of relevant stakeholders; representativeness of views and promoting inclusiveness; motivation to engage integration with decision-making processes minimum standards for participation integration with wider policy directions and off-line processes
Other key features	a specific definition of e-democracy an explicit commitment and knowledge of government responsibility to use IT strengthen representative democracy a clear statement that e-democracy processes will complement existing forms of consultation commitment to addressing key issues of equitable on-line access, responsiveness, privacy, security and authentication a reporting protocol for Government's response to citizen input links to related government policies, introduction of the e-democracy initiatives to be implemented and mode of evaluated commitment to continuing to explore e-democracy and the opportunities provided by new technologies.

Vision: Vision states the motivation for e-democracy implementation, though, it is another rarely mentioned element in the literature reviewed. Including vision statement in the strategy document for e-democracy sets direction for strategic aim and objectives. E-democracy vision is one of the strategic dimensions towards desired outcome (Hogan et al 2004). Vision sets the focus for activities and serves as motto of the e-democracy governing body.

Strategic Aim and Objectives: Governments implementing e-democracy are set to achieve certain objectives. Having clear cut objectives are extremely important as they serves as implementation guide. They justify the huge investment committed to e-democracy and help to measure the outcome of e-democracy. Strategic objective provides an overview of what the government is going to achieve and therefore, they must be defined in coherent manner and backed with appropriate choice of tools and technology for it to be accomplished (Oni et al 2013). The focal point of the objective of some countries reviewed is to strengthen democratic process and increase participation in public decision-making especially at the grass root level. Table 2 shows the summary of objectives of some sample countries.

Table 2: Summary of Notable E-Democracy Objectives

Aim and Objectives	Country
1. To encourage all local authorities to use e-democracy tools to enhance local democracy and to develop locally appropriate strategies for implementing such tools where relevant. 2. To ensure that the knowledge and experience of e-democracy is exposed and shared across local government for the benefit of all. 3. To develop new tools that support democratic practice both within local government and beyond. 4. To provide a focal point for democratic innovation and the dissemination of best practice. 5. To begin a sustainable process of electronically enabled participation and engagement that complements existing democratic structures and processes.	Bristol, UK
To test the use of the Internet in opening up democratic processes and enhancing community's access to and participation in government's decision making processes	Queensland
To use Internet and other communication technologies to facilitate, broaden, and deepen citizen participation in the democratic process	UK
Italian e-democracy aim to increasing transparency and public participation in local governments	Italy
To improve the policy-making process through a range of devices designed to enable reaching and engaging with a wider audience, providing relevant information, enabling more in-depth consultation, facilitating the analysis of contributions, providing relevant and appropriate feedback, and monitoring and evaluating	OECD
To promote the use of ICT in legislative and decision-making processes, within parliamentary and government environments, To enhance the participation of citizens in contributing to better legislation and policy-making.	European Parliament

Implementation plan: There are various levels of e-engagement which include information provisioning, consultation and active participation. The purpose of this part of agenda setting is to identify the level of e-engagement in order to jumpstart e-democracy implementation, the e-participation tools to involve, the channels of engagement to use, the roles and responsibilities of each category of stakeholders and the infrastructural need. Other issues that may be clarified at this stage include rules of engagement, monitoring and evaluation.

An agenda is an outline of programme to follow. It is the starting stage of e-democracy implementation and captures the legal and political processes to back e-democracy implementation. The sub-categories at this phase include strategic vision, strategic aim and objectives, strategic policy and implementation plan. Pivotal to these is the overseeing body which is a body responsible for monitoring e-democracy implementation at both pre-implementation and post implementation. Though the elements are the least mentioned components in literature their importance cannot be overemphasized.

Conclusion

Democratic development through technological intervention is a multidimensional process requiring adequate technological, social, political, legal and cultural integration. Efforts towards enhancing the responsiveness of

government and citizens relationship through either e-government, e-democracy and/or e-participation need to strategically incorporate all these aspects in order not make financial investment into implementation a waste.

For a successful e-democracy implementation, agenda setting phase should capture the legal and political processes of the country. E-democracy implementation should be properly articulated with the country's democratic norm and values to deliver maximally. Agenda setting towards e-democracy implementation should begin with policy framework. The policy framework should explicitly state the vision, objectives and policies guiding e-democracy implementation. The implementation plan which is part of the policy framework should identify the implementation approach, the level of engagement, the tools and technology to be involved in the implementation. Monitoring, evaluation and adherence to identified critical success factor are essential to ensuring sustainable e-democracy implementation, which is very important if the developing nations are to benefit maximally from gains of e-democracy for national development. Proper alignment of e-democracy implementation with its vision, policy, strategic aim and objectives will make monitoring and evaluation easy thereby saving governments time, money and disappointments.

References

Backhouse, J. (2007) "e-Democracy in Australia: the Challenge of Evolving a Successful Model." *The Electronic Journal of e-Government* Volume 5 Issue 2, pp 107 - 116, available online at www.ejeg.com

Black, A. and Noble, P. (2001) "E-Democracy around the World: A Survey for the Bertlesmann Foundation." Charleston, SC: Phil Noble and Associate, pp. 1-88.

Blumler, J.G. and Coleman, S. (2001) "*Realizing Democracy Online: A Civic Commons in Cyberspace."* London: Institute for Public policy Research.

Carroll, J.M. and Swatman, P.A. (2000) "Structured-case: A methodological framework for building theory in information systems research" *Proc of ECIS*, Vienna, Austria, 2000.

Clift, S.L. (2004) "E-government and Democracy: Representation and Citizen Engagement in the Information Age." 2004. Retrieved Nov., 2010, [www.publicus.net]

Coleman, S. and Norris, D. F. (2005). "A new agenda for e-democracy", *Oxford Internet Institute Forum Discussion* Paper No. 4, January 2005.

Coleman, S. and Gotze, J. (2001) "Bowling Together: Online Public Engagement in Policy Deliberation". Hansard Society. 2001. Retrieved 8th Oct., 2010 [www.hansardsociety.org.uk]

Funilkul, S. and Chutimaskul W. "The Framework for Sustainable eDemocracy Development." *Transforming People, Process and Policy, Vol 3 No 1, pp 16-31,* 2009.

Glaser, B. "Basics of Grounded Theory Analysis. Mill Valley"; Sociology Press, 1992.

Henderson, M., Hogarth, F. and Jeans, D. (2007) "E-Democracy Policy in Queensland." Encyclopaedia of Digital Government., pp 455-461, IGI Global, doi:10.4018/978-1-59140-789-8.ch069

Hogan, M., Cook, N., and Henderson, M. "The Queensland Government's e-democracy Agenda." Australian Electronic Government Conference, Centre for Public Policy, University of Melbourne, 2004.

Hye, K., Jong, K., and Hae, L. (2008). "A Study on the Public Sphere of Mobile Media," *Journal of Korea Information and Communications Society, Vol. 31, No. 4B.*

Jayasena, G.N. and Karunaratna, D.D. "Towards an Enabling Framework for eDemocracy through the Integration of Citizen Participation along the Spatial Dimension Using Free and Open Source Technologies." Proceedings of the 24th South East Asia Regional Computer Conference, November 18-19, 2007, Bangkok, Thailand.

Kang, H. and Dugdale, A. (2010) "A Comparative Study of e-Civil Participation in Australia and South Korea: The Case Study of GetUp! in Australia and the 2008 Candlelight Protest in South Korea," Proceedings of 6th International Conference on e-government.

Kettl, D.F. (2005). The Global Public Management Revolution, 2nd edn. Brookings Institution Press: Washington, DC.

Kotsiopoulos, I. (2009) "Bringing Together and Accelerating e-Government Research in the EU." ICT for Government and Public Service Unit, European Commission.

Levy, Y. and Ellis, T. (2006) "A Systems Approach to conduct an effective literature review in support of information systems research." Informing Science Journal, vol 9, pp 181-212.

Local E-Democracy National Project. "Deeper and Wider Community Engagement: e-Democracy and its Benefits for Local Authorities, Councilors, and Communities"; NorthLincsNet, Improvement and Development Agency, London, pp. 1-38, 2006.

Macintosh, A. (2004) "Characterizing E-Participation in Policy-Making." Proceedings of the 37th Hawaii International Conference on System Sciences, Computer Society Press.

Millard P, Millard K, Adams C and McMillan S, (2012) *Transforming Government through e-Participation: Challenges for e-Democracy*. European Conference on e-Government (ECEG) 2012, Barcelona, 14th-15th June.

OECD (2003), "Promise and Problems of E-Democracy: Challenges of Online Citizen Engagement", [Online], Retrieved Dec., 2010 [www.oecd.org/dataoecd/9/11/35176328 .pdf]

Okoli, C. and Schabram, K. (2010) "*A guide to conducting a systematic literature review of information systems research*"; Sprouts: Working Papers on Information Systems, 10(26). http://sprouts.aisnet.org/10-26.

Shirazi, F., Ngwenyama, O. and Morawczynski, O. (2010), "ICT expansion and the digital divide in democratic freedoms: An analysis of the Impact of ICT Expansion, Education and ICT Filtering on Democracy." *Telematics and Informatics,* Issue 27 pg 21 – 31.

UN E-Government Survey (2010) "Leveraging E-government at a Time of Financial and Economic Crisis"; UN Economic and Social Affairs.

Webster, J. and Watson, R. (2002) "Analyzing the past to prepare for the future: Writing a literature review." *MIS Quarterly*, 26(2), xxi-xxii.

Wolfswinkel, J., Furtmueller, E. and Wilderom, C. (2011) "Using grounded theory as a method for rigorously reviewing literature." *European Journal of Information Systems*, pp 1-11.