Chapter 13
Adoption of E-Voting System to Enhance the Electoral Process in Developing Countries

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ABSTRACT

Literature reviewed confirm challenges in the electoral process in developing countries like Ghana. These challenges are mainly Institutional and Technical challenges. The Institutional challenges come from the electoral commission, security agencies such as the Police, and civil society groups that are not well equipped to lend their full support to the electoral process, and also electoral challenges can be identified in three stages, pre-election, during election, and after election. And it is assumed that e-voting system when adopted will resolve this electoral challenges, but the system design should be approach from the Socio-technical perspective so that the system will not fail after implementation.

INTRODUCTION

This chapter discusses the challenges of the voting process in developing countries, using Ghana as a case study, and how e-voting systems can be adopted to solve this challenges. We define developing countries in this context as all sub-Saharan African countries. The chapter further discuss what developing countries need to do to have a successful adoption of e-voting system by discussing Roger’s diffusion of innovation theory.

Adoption of E-Voting System to Enhance the Electoral Process in Developing Countries

BACKGROUND

With the advancement in Information and Communication Technology (ICT), several developed countries such as Estonia, US etc., are transforming their electoral process using IT. Computerized systems area being used to replace the manual part of the electoral process to make it more efficient and reliable. But developing countries are still using the manual process in all aspect of its electoral process. Country like Ghana has only replaced it manual verification system with biometric verification device called the BVD machine, but the rest of the process is still manual. There are claims that this manual electoral process has challenges which impact on the final outcome of the results. Some of the problem associated with these manual process includes ballot stuffing, multiple voting, tampering of voting results, spoilt ballots due to wrong thumb printing, long queues at polling center and delays in vote counting (Nana Karikari-Apau, 2012). The perception of these manipulations results in violence during elections and post elections across the sub-saharan Africa, and this violence is as a result of mistrust of the current electoral process (Goldsmith, A., 2015; Adolfo, Eldridge Vigil, et al, 2012). In the past few years several elections context in Africa has been marred by election violence, few of these countries includes Côte d’Ivoire, Kenya, Nigeria, Zimbabwe, Cameroon, Democratic Republic of Congo, Liberia, Equatorial Guinea, Gambia, Guinea, Madagascar, Sierra Leone, Senegal and Uganda. Violence’s such as widespread coercive intimidation of both candidates and voters including harassment, imprisonment and assassinations; violent riots and clashes between supporters or security elements of the competing political parties; and attacks on local party headquarters and party symbols (Goldsmith, A., 2015). All these violence was as a result of the mistrust of the manual electoral process. Hence using ICT in the form of Electronic Voting (E-voting) system in the electoral process is a call in the right direction.

HOW E-VOTING CAN BE USED TO ENHANCED ELECTORAL PROCESS IN DEVELOPING COUNTRIES

What Is Electronic Voting (E-Voting) System?

E-voting has been define as any electronic means of casting votes, storing votes and tallying of votes or system where election data is recorded, stored and process primarily as digital information (Tanzila Afrin, Prof.K.J.Satao, 2013; Mohammed Awad Ernst L. Leiss, 2011). E-voting system can be of several forms but the most prominent among all is the Internet voting (I-voting) and Direct Recording Electronics (DRE).
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