Chapter 3
E-Voting:
India and the Philippines – A Comparative Analysis for Possible Adaptation in Africa

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ABSTRACT
This chapter contributes to the debate around e-voting by describing and discussing the experiences of two adopting countries: India and the Philippines. With careful, qualified comparison of the experience, the author overviews the possibility for adoption in Africa. Africa often finds itself at the centre of attention with respect to elections. This regrettably relates to extreme violence, civil disobedience, and fraudulent activities. Will e-voting be the panacea for her problems? This chapter also provides a snapshot of current international e-voting experiences with respect to trailing, piloting, adopting, and even abandoning this practice. A challenge with electronic voting is that the voting machines are susceptible to sometimes undetectable changes by insiders, outsiders, and hackers who may or may not have ulterior motives. Opportunities, on the other hand, include inter alia neutral, faster, more accurate ballot counting. The chapter concludes with a contextual African evaluation of India’s and the Philippines’s respective e-voting experiences.

INTRODUCTION
Electronic voting (e-voting) is a term encompassing several different types of voting; embracing both an electronic means of capturing a vote and an electronic means of counting votes. There are many countries that are beginning to adopt, pilot or trial e-voting. On the other hand, a few countries have acknowledged e-voting challenges and abandoned e-voting either after adoption or piloting.

India is the world’s second most populated country with 1.1 billion people. India has complex election-related challenges such as being the world’s largest democracy with 671 million voters, multi-lingual illiteracy, a practiced though illegal caste system, rural off-grid geographic areas, and booth capturing (where booths are ‘taken over’ by politically hired thugs) (Thakur, 2012).

The previous paper ballot-based elections took weeks to administer and months to resolve, rendering this massive country almost without
governance after elections. India has a coalition government which is an interesting observed characteristic of many countries who are currently adopting e-voting.

The Philippines, on the other hand, is the world’s second largest archipelago with over 7000 islands and a population of 90 million people. Philippines also experience election-related challenges such as a monumental complex island logistic, violence exacerbated by delays in results and counting, ballot stuffing, illiteracy, areas with no telecommunication, and a high number of invalid votes (Thakur, 2012).

Filipino elections took weeks to administer because the logistics of counting and collating results was very complex. This complexity often extended the voting administration period leading to tension and sometimes extreme election-related violence.

The Indian and Filipino e-voting experiences have both been perceived largely positively after speeding the results and simultaneously reducing violence. They consequently serve as enticing models for study and evaluation.

This chapter defines the different implementation strategies that India and the Philippines used that helped towards their elections being successful. The key term here is “context”.

The research method is desktop literature review which comprised electoral websites, journals, and media articles. In addition experts were interviewed or canvassed for validation of their experiences.

**BACKGROUND**

The use of Information and Communication Technologies (ICT) is pervasive. Its increasing use in elections is therefore unsurprising. ICT is now used, inter alia, in back office Electoral Management Boards (EMB) operational activities, communication for information dissemination such as election results, voter education, and Geographic Information Systems (GIS) to assist in demarcating voter districts.

ICT helps in data information system(s) to create, store, and update voter registration information; to capture and tally votes (e-voting); with auditing; to statistically analyse results for voter irregularities; with predictive algorithms and more recently as a tool to observe elections through inter alia netbooks, tablets, mobiles, and cameras (Thakur, 2011).

An important and difficult requirement of e-voting systems is to ensure that the vote cast is secret, that there is no link whatsoever between the vote cast and the vote captured, and that the integrity of the vote is secure in that the vote cast is the vote counted.

Most software programs and operating systems record the date and time a record is created, or issues a sequence number to allow for system audits to assist when a system crashes. As both of these events can be replayed, one may, with appropriate video monitoring outside a booth, predict who cast a vote for whom for most of the day (Thakur, 2012).

E-voting machines are referred to by many names. In the West they are called Direct Recording Electronics (DRE), or DRE Voter Verifiable Audit Trail (DRE/VVAT); in South America urnas; in India Electronic Voting machines (EVM) and in the Philippines Precinct Count Optical Scan (PCOS).

Intriguingly as each successive wave of automation introduced new advantages such as speed and accurate counting (lever machines), ease of use and multi-lingual facilities (DRE), auditability and speed (DRE with VVAT); it simultaneously introduced disadvantages such as mechanical failure and non-validation (lever machines), software and hardware errors (DRE), software, hardware and printer failure (DRE/VVAT).

India, Brazil and the Philippines are the only three countries to have full precinct based electronic voting with subtle differences. It is