

CHALLENGES AND OPPORTUNITIES FOR THE IMPLEMENTATION OF E-VOTING IN NIGERIA: LESSON FROM LESSONS FROM OTHER DEVELOPING COUNTRIES

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1. Introduction

The deployment of Information and Communication Technologies (ICT) by Electoral Management Bodies (EMBs) has become an emerging global trend in the quest to improve electoral processes in the last 35 years. The principles of credibility, integrity and transparency in elections remains at the core of electoral values. However, experiences show a steady decline in electorates trust and confidence in institutions managing elections as well as those providing support services (security agencies, judiciary in charge of electoral dispute resolution). On the other hand, in order to improve electoral integrity and boost voter confidence, EMBs around the world have increasingly deployed ICTs in various aspects of electoral operations, including biometric voter registration, voter authentication, and the use of Geographic Information Systems for polling station localization, electronic balloting, the implementation of electronic or online voting, and collaborative voting.

Despite the unprecedented gains of conducting six consecutive elections since 1999, amidst perceptions that Nigeria's democratic experiment is yet to be consolidated, there exists a commonly shared view by key electoral stakeholders that the electoral space is still plagued by a series of challenges that negatively impact the process[1].

Notwithstanding these efforts, the challenge of enhancing transparency, mainstreaming inclusivity, increasing voter turn-out, addressing logistics failures,

eradicating vote buying and other malpractices, preventing election violence among others still persists. In the midst of this collective concern to improve the electoral process, there has emerged the debate on the desirability or otherwise of adopting electronic voting and electronic transmission of results by a broad range of stakeholders, including, political enthusiasts, Civil Society Organizations[2], other interests' groups and citizens who see this as a 'silver bullet' for Nigeria's electoral challenge.

The broad objective of this study is to highlight the challenges and opportunities on implementing e-voting in Nigeria and the identification of potential areas of collaboration for technical assistance providers.

2. State of Play on Implementation of E-Voting in Nigeria

As far back as 2004, the Independent National Electoral Commission (INEC) embarked on studies and campaigns on e-voting, a process that was truncated by restrictions in the electoral law. However, technology has been deployed in most of the election processes since 2003, with the utilization of the Optical Mark Recognition (OMR) system to compute an electronic register of voters and the use of the Automated Finger prints Identification System (AFIS) to clean the date of double registrants, the use of Direct Data Capture Machines (DDCM) for the registration of prospective voters in 2006, an enhanced DDCM system in 2010 ahead for voter registration ahead of the 2011 elections.

In late June 2021, INEC recommenced the Continuous Voter Registration exercise which was suspended mid-2018 with an online pre-registration portal that allows prospective voters fill in their biodata ahead of the biometric data capture scheduled for a later date [3].

3. Case Studies: Comparative International Experiences

Having reviewed the state of play of technology deployment and the potential implementation of e-voting in INEC as well as emerging trends at sub national levels, it will be apt at this stage to undertake a review of e-voting experiences in other contexts with a view to exploring how some of the basic

questions were addressed. This sub-section will therefore undertake a review of the e-voting systems in Namibia, Brazil, and India to distill important lessons learned.

3.1 E-voting in Namibia

In the 2014 “Performance assessment and post-election report”, the ECN mentioned that administrative problems were experienced during the election process. Challenges were particularly experienced with the use of the Voter Verification Device that resulted in a delay of verifying voters. This problem was reportedly due to human error and not necessarily a device malfunction. For the ECN, the EVMs worked well and recorded the votes with accuracy [7]. As a benefit of the use of the EVMs, they equally fast tracked the time spent at the voting stage.

3.2 E-voting in Brazil

The Brazilian voting system implemented by the SEC has made commendable progress in eliminating human manipulation of votes, thereby ensuring security and transparency of the electoral process. Before being computed, votes must first be counted at the polling station upon conclusion of the voting exercise on election day. Thereafter, the presiding officer prints the results tally sheet from the EVM. The results tally sheet is an extract of the votes that were cast for each candidate, without making any correspondence between the voter and the vote [5]. For the transmission of data, the Electoral Justice has its own system that accepts information sent by the EVMs which can only be accessed using an alphanumeric password as well as a token. The data is sent to the SEC through a VPN tunnel, on the internet, which connects to the exclusive Electoral Justice network [6].

3.3 E-voting in India

The EVM software is designed to allow only one vote for each electorate. The ballot unit is used after the Presiding Officer has enabled its functionality from the Control Unit. The next vote can only be counted after the Presiding Officer authorizes the ballot from the Control Unit, and the same procedure must be

followed for subsequent votes [4]. When a voter presses the blue button next to the candidate and symbol of his choice, the lamp next to that candidate's symbol glows red and a long beep sound is heard.

4. Conclusion

Implementing electronic voting is becoming an emerging trend, not only in terms of number of countries that have embraced it but even more so the number of those currently engaged in a conversation on why, when and how to deploy e-voting. In all these contexts, the issues to be addressed are basically the same. From this study, the challenges of implementing e-voting can be distilled into two broad categories: the technical and non-technical. Consequently, a comprehensive analysis of these factors provided an insight into the challenges and opportunities that exists when considering implementation of an e-voting system

5. Recommendations

- i. Given the level of infrastructural development in Nigeria and low level of trust in the electoral system, the most sustainable and appropriate e-voting choice is the EVM with an integrated VVPAT.
- ii. Given the variations in the mode of voting, there is need for the security agencies to put in place an e-voting security architecture that will among others handle the physical security of EVMs as well as related facilities and installations.

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TECHNOLOGICAL INNOVATION OF AGRI-FOOD INDUSTRY IN NIGERIA: A BETTER FUTURE

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Introduction

To achieve the UN Sustainable Development Goal of a "world without hunger" by 2030, more productive, efficient, sustainable, inclusive, transparent, and resilient food systems will be needed. [1, 4, 9]. This will require an urgent transformation of the current agri-food system. Digital technologies are opening up new avenues for smallholders to participate in a digitally driven agri-food system [10].

The digital agriculture revolution

Value chains will become traceable and coordinated at the most detailed level, allowing different fields, crops, and animals to be managed precisely to their own optimal prescriptions. Digital agriculture will result in highly productive, anticipatory, and adaptable systems to changes such as those caused by climate change. As a result, food security, profitability, and sustainability may improve. In the context of the SDGs, digital agriculture has the potential to provide economic benefits through increased agricultural productivity, cost efficiency, and market opportunities.