

Blockchain Technology for Electoral Process in Africa: A Short Review

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Abstract

The electoral process in Africa has suffered from deep political instability following the post-colonial independence of most African nations. Moreover, the electoral process in many African countries is characterized by massive rigging, high cost of electoral materials, and declaration of false results. In this paper, I will present a review of the Blockchain Technology and some of the potential roles it will play in conducting a transparent election in African Nations. A Blockchain is designed as an open distributed ledger that can record transactions between two parties efficiently and in a verifiable and permanent way, using a peer-to-peer network protocol. This paper opines that with the emergence of the Blockchain Technology, African Nations should tap from it and build a reliable, secure, and convenient electoral voting system. It further suggests that a Blockchain Electoral Voting System will eliminate most of the challenges faced by African nations in conducting a free, fair and transparent election with low cost and total security. A few highlighted advantages of Blockchain Electoral Voting System over the Traditional Voting System (ballot-box system), includes — It is safer and more convenient for both voters and electoral commission body to use and manage respectively. Votes saved via the system are very well secured and almost impossible to alter. It is very transparent because the blockchain itself can be designed as a public immutable ledger. It is economically cheaper to run and maintain compared to the traditional ballot-box system. The issue of election rigging is almost completely eradicated with this technology (if properly installed). An attempt to alter/manipulate records (votes) in the system's database can be spotted easily, because of its rigorous consensus rules, such an attempt is considered void and denied permission to access, alter, or destroy any of the previously saved votes. However, the paper argues that there are institutional challenges to implementing this technology within the continent. Specifically, there is a need to educate the masses as well as create robust policies that can accommodate this technology within the continent. Failure to acknowledge these challenges may well prevent the application of Blockchain Technology in African electoral process in the foreseeable future.

Keywords: Blockchain Technology, Electoral Process, Ballot-box, Voting System, Africa, Votes.