Artificial Intelligence and Election in Nigeria: An Assessment of the Possible Impact on the Country's Electioneering Process

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Abstract

The advancement in the field of Artificial Intelligence (AI) has significantly affected the electioneering process. This is true in terms of, for example, voters' education and electoral debates. But also true is the fact that the adoption of artificial intelligence has the potential to derail the country's democratic achievement in terms of relatively free and fair elections. It is against this background that the study examines the possible impact of AI on elections in Nigeria. The framework of analysis adopted for this study is the innovation diffusion theory. Based on the analysis thereof, the study concluded that the adoption of AI into the electoral process has the potential to either play a positive or negative role depending on its utilization by the Independent Electoral Commission (INEC) and the regulations set by authorities to guide its adoption. The study recommended, among others, that the electoral management bodies, both at the national and state levels, should embark on public awareness campaigns to educate the electorates on the workings and capabilities of artificial intelligence as regards elections and electioneering process so as to curtail the possible impacts of artificial intelligence-generated misinformation and disinformation.

Keywords: Artificial Intelligence; Democracy; Election; Electioneering Process; Election Integrity

Introduction

The use of technology has become an integral part of everyday human activities. This use cuts across almost every human endeavor, which includes, among others, transportation (Abduljabar, Dia, Liyanage & Bagloee, 2019), agriculture (Kant, Aggarwal, Jurgens, Sawhney & Ranjan, 2021), raw minerals processing (Bergh, 2016), governance (Odilov, 2024), education (Tahir, Hassan, & Shagoo, 2024, Harry, 2023), and also true, it is in the electioneering process (Juneja, 2024). One aspect of the technology that we have witnessed and that continued to grow at a fast pace is the field of Artificial Intelligence (AI).

The advancement in the AI sector has led to new opportunities, improving not only our ways of understanding but also how we process information and improve the techniques of carrying out various tasks in the electioneering process both at the pre-election, election, and post-election phases (Thapa, 2024). One of such is the innovative machine learning system algorithm, which is not only able to predict voters behavior based on historical records but also able to predict, for example, which legislative bill is likely to pass in the USA Congress based on the algorithmic assessment of the contents of the bill (Urvashi, Angelina, & Abishek, 2020, p. 1). Also, the innovative breakthrough in the last quarter of the year 2022 that led to the introduction of 'ChatGPT,' which utilizes, among others, generative AI, has in no small measure affected the

electioneering process in the stages above. Another innovation is the natural language processing that analyzes people's biases and sentiments based on their posts and comments on social media.

It is worthy to note that sound electoral processes are not only important but fundamental for any country with democratic settings (Norris, 2019). The primal foundation of democracy is its feature of accountability (electoral accountability), in which electorates elect candidates through periodic elections that best align with their political interests and expectations and do away with, by voting out of authority, those that fail to meet their political expectations. For this system to therefore function effectively there is the need for serene and healthy information environment where voters can vet what the elected officials are doing, have done and gearing at doing (Thapa, 2024). This information ultimately influences the choice of the electorate during elections (Cruz, Keefer, Labonne, & Trebi, 2019).

While it is true that the use of artificial intelligence has improved and may continue to improve electoral processes through, for example, helping the electorates and the citizenry in general in gaining more understanding of politics and democratic processes, at the same time, it has the potential and indeed does pose new challenges in the business of election and electioneering processes that have warranted worries among scholars (see, Risse, 2023; Heesen, 2022; Stepien-Załucka, 2021). These worries are, however, not of very recent origin; they have been advanced, albeit at low intensity, since the late 2000s or thereabouts (Bueno de Mesquita, Canes-Wrone, Hall, Lum, Martin & Velez, 2024, p. 8). This implies that the use of AI in politics is not new, but the very recent breakthrough in generated-purpose AI (as mentioned earlier) has provoked a new interest in the issue.

In Nigeria, while the adoption of these high-tech data analytics innovations (and many more breakthroughs to come) in AI are yet to be fully utilized and manifested in our electoral processes (David, Adeniyi, & Aliu, 2024), it is, however, only a matter of time considering the high-tech-driven feature of the present Nigerian generation and the quick-to-adapt and enshrine new innovative ways by the Nigerian political actors into the electoral processes in as far as it has the possibility of ensuring their success at electoral polls. It is against this background that the study set out to study the potential effects of the use of artificial intelligence on elections and the electoral process in the country.

Literature Review and Theoretical Framework

Conceptual Clarification

Before reviewing the thoughts of scholars on the subject matter, it is pertinent to understand the concept of artificial intelligence. Artificial Intelligence was first mooted in the Dartmouth Conference of 1955, where McCarthy, Minsky, Rochester, and Shannon proposed a study grounded on the hypothesis that “every aspect of learning or any other feature of intelligence can in principle be so precisely described that a machine can be made to simulate it” (McCartht, et al., 1955)

The concept of artificial intelligence suffers from a precise, universally acceptable definition so that different scholars in the field of science and technology see it from different perspectives, and these understandings of the concept have changed over time to reflect the continuous

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development in the field. Organisation for Economic Co-operation and Development (2019) sees AI as a machine-based system that, for explicit or implicit objectives, infers, from the input it receives, how to generate outputs such as predictions, content, recommendations, or decisions that can influence physical or virtual environments. Different AI systems vary in their levels of autonomy and addictiveness after deployment. Nilsson (2010) sees AI as the activity devoted to making machines intelligent, and intelligence is that quality that enables an entity to function appropriately and with foresight in its environment. For the purpose of the study, we see artificial intelligence as a digitalized computer system that is able to carry out simple and complex activities traditionally associated with humans, which include but are not limited to reading, decoding, and analyzing.

Literature Review

The issue of AI and its uses in the electoral process has generated a lot of interest among scholars in the field of political science. This interest cut across both the potentialities and challenges of this new technology breakthrough as it relates to elections and electioneering processes. Thapa (2024) in his submission argued that the adoption of AI in the electoral process has the potential to radically change the democratic process and democracy in general, both positively and negatively, depending on how the potential of the artificial intelligence is utilized by the political actors and the general public.

Pomares & Gonzalez (2024) in their policy briefing, argued that while authorities, especially electoral management bodies, continue to exploit the innovative AI in the future betterment of democracy and the democratic process in Latin America, which is the scope of their study, they maintained that there is the need for authorities and stakeholders to enact policies that will protect and safeguard the institution of democracy from the threats emanating from the adoption of AI in the electoral process. This view was also shared by Bueno de Mesquita., et al. (2023) who asserted that even though AI has the potential of a positive informative role to play in the electoral process, the big issue should be about its threat in the informative environment and its potential to threaten elections and the electoral process in general. They argued, therefore, that people, especially stakeholders, should always be critical and skeptical of the whole issue.

In their briefing, Adam and Hocquard (2023) are of the view that the advancement in the field of artificial intelligence presents a good opportunity to improve the electoral process. They maintained that despite the fact that there are some challenges attached to the introduction of artificial intelligence in the electoral process, artificial intelligence, when harnessed properly, can prove and indeed has proven useful in democratic advancement. Deeper, Stanley, and Muiris (2023) posited that even though there are benefits in the use of AI across the public and private sectors in general and the electoral process in particular, there are also risks and challenges associated with the adoption of AI at the various stages of the electoral process.

Mayank, Nihal, Shivani, Sanjana and Manash (2023) are of the view that the adoption of AI in the electoral process possesses the potential not only to enhance, among others, voters' engagement, enabling real-time campaign adjustments and facilitating personalized messaging, but also is mirrored by challenges, such as the manipulation of voter sentiments, the spread of misinformation, and the aggravating of political polarization among the people. They also

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maintained that the influence of AI goes beyond elections and electioneering activities, impacting the very fabric of societal discourse. Karl and Lyric (2019) observed that the adoption of AI and big data has negatively affected democracy by significantly challenging the individual's (voter) informational, decisional, and behavioral privacy, and according to them, these individual capacities are critical for the individual capacity to form ideas, to think outside the interference of others, to freely engage in political or public life, and to advance democratic norms and values.

Theoretical Framework

The theory adopted for this study is the innovation diffusion theory. The theory is one of the oldest social science theories. It has its origin in the field of communication. The theory explains how, over time, an idea, behavior, or product gains traction and spreads through a specific social system with the end game of this spread being that people, as part of a social system, adopt this new idea or behavior. This implies that people are doing things differently from the way they used to do it before. Their theory argues that the key to adoption is that people must see the idea or behavior as new or innovative. According to the theory, the adoption of the new idea or behavior does not happen simultaneously in a social system, but rather it is a process whereby some people are more apt to adopt the innovation than others. Rogers (2003) argued that innovations offering more relative advantage, compatibility, simplicity, trialability, and observability will be adopted faster than other innovations. He, however, argues that getting a new idea to be adopted, even when it is advantageous to adopt it, will be difficult.

According to the Rogers (2003) there are five established adopter categories, and majorities of the people, according to the theory, fall in the middle categories. These categories include the following: I*nnovators, Early Adopters*, *Early Majority*, *Late Majority, and Laggards*. The theory argues that, when promoting an innovation, there are different strategies used to appeal to the different adopter categories. *Innovators*: Innovators are people, who conceive new ideas, are interested in new ideas, and, based on these ideas innovate new things. They are people who want to be the first to try or experience new ideas or innovations. These categories require complex technical knowledge. *Early Adopters*: this category consists of people who represent opinion leaders. They have the advantage of leading others, and they also embrace change opportunities, which imply that they entertain, accept, and apply new ideas or behaviors.

This is because they are aware that things are not stagnant but in constant need of change. The formula for appealing to this category is the need and availability for how-to manuals and information sheets of the implementation of the innovation. *Early Majority*: These sets of people are not in the position of authority but do accept new ideas before an average individual does. But even with that, they usually need to be furnished with evidence of success that the innovation works elsewhere before they are willing to adopt it. Success of the innovation elsewhere is the best strategy to appeal to this set of people. *Late Majority*: These categories of people are people with a 'somewhat not sure' attitude about new ideas. They prefer the wait-and-see approach. They will only adopt new ideas after they have been tried by the majority. The strategy to appeal to this set of people only needs the provision of information of the success story of the adoption of the innovation by others. Laggards*:* This category of people is very reluctant and skeptical in embracing new ideas.

They are bound by their custom and tradition. They are also very conservative in nature, which makes them the hardest among all the categories to be convinced to accept new ideas. Appealing to this category of people will involve the deployment of tools that include, but are not limited to, fear and statistics. The stages by which a person adopts an innovation, and whereby diffusion is accomplished, include awareness of the need for an innovation, decision to adopt or reject an innovation, initial use of the innovation to test it, and the continued use of the innovation (Ismail, 2006). He further maintained that there are five main factors that influence the adoption of innovation, and each of these factors is at play to a different extent in the five adopters' categories, and they include relative advantage, compatibility, complexity, trainability and observation.

Relevance of the theory

The relevance of the theory hinges on the fact that it helps us understand the new trend and essence of adopting new technology (artificial intelligence) in the electoral process, which is, among other things, to maximize political gain on the part of political gladiators and to maximize or gain political knowledge on the part of the electorates. The theory also helps us understand why the level of adoption of this technology (artificial intelligence) is not even among nation-states.

Methodology

The study is descriptive in nature and relies on secondary sources of data such as textbooks, academic articles, journals, official government documents, newspapers and other online materials.

Utilization of Artificial Intelligence in the Electoral Process

The development in AI has enabled stakeholders and other monitoring teams in the business of elections through live-stream videos to monitor electoral events without the need to be physically present at the actual point of the political activities. This is made possible through the deployment of CCTVs or drones that give real-time accounts (images and videos) of the political happenings taking place, say, for example, actual voting at the voting centers during the election. Some scholars have argued that these methods represent one of the significant ways of knowing what is happening or happened during elections and that it goes a long way in curtailing electoral fraud (Obeta, Ekuma, Elejene & Murtala, 2021; Hyde & Manirov, 2014). The development enables stakeholders to give an accurate account of what they observed and make appropriate recommendations to the electoral management bodies for better elections in the future.

Another method by which AI is adopted into the electoral process is through the use of data analysis and video targeting for political ends (Yu, 2024). By generating information about electorates policy expectations and doubts with the help of AI algorithms (which are able to generate and process large volumes of data, including political), political gladiators and their political platforms are able to create special focus video content that addresses those concerns of the electorates and also amplifies their strength in bringing into reality those expectations of the electorates when given the chance to administer the affairs of the state (Thapa, 2024). In order to resonate with the electorate much better, some political platforms even use AI to generate dead

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revered politicians within their fold to amplify campaigns for political candidates and discredit other political parties and their political candidates.

Voter maintenance, though invisible, is another method by which AI is adopted in the electoral process. The importance of this exercise is not only essential but fundamental for the credibility of the election in general (Deeper et al., 2023). The adoption of AI has enabled the shift from manual to automated maintenance of, for example, voters' information with all its advantages. This has made the process faster and more reliable. With the help of AI instruments, multiple registrations are detected and removed from the electoral bodies' database (The Premium Times, 2022, September, 12). The continued breakthrough in AI technology and adoption by people, both for positive purposes and negative purposes, also adds to the need for time-to-time updating of the Electoral Body database to avoid infiltration.

Fourth is in the use of personalized messaging. Many people may be familiar with this type of method. As a Nigerian, who uses any of the Nigerian communication network lines (GSM), may have, in one or two occasions, received an unsolicited message personally addressed to the bearer of the network line and sometimes even containing the full name of the owner (of the network SIM card) advertising a product or containing an actionable instruction. The type of strategy is what is also adopted into the electioneering process. This type of strategy, when adopted in the electioneering process (AI-generated and sending unsolicited messages to potential voters), is meant to convince and influence the voters voting choice that the senders (political candidates or political platforms) identify with their concerns and expectations and are willing to give such concerns serious preference when given the mandate. The adoption of the strategy is only possible due to the AI's ability to analyze large volumes of data and specifically pinpoint people-especially the electorate's talking points, worries, regrets, concerns, desires, and expectations of not only the people standing for elections but their plan policies as well. With the help of this generated information, political candidates or political platforms are able to tailor their campaigns appropriately. This type of candidate-voter' interaction not only builds trust but enhances democracy in general.

Another point of involvement of AI in the electoral process is in the sphere of voters' authentication. Before the actual voting commences on election day, voters voting information via voters' cards is authenticated through the use of AI-powered card readers to ascertain whether the bearer of the card and the card itself are genuine or not. This adoption of this AI-powered instrument not only simplifies the accreditation process but also enhances the integrity of the election itself. This act is visible during the election in Nigeria. Another is in the area of strategy optimization. With too many activities that encompass the electioneering process, stakeholders adopt several strategies in order to cover as much ground as possible to avail them political victory. One of such strategies is the division of political labor. With different sets of people carrying out different political tasks, it is assumed that enough activities can be covered and the best of the people can be obtained. AI plays a significant role in harmonizing and optimizing these political strategies both at the pre- and post-stages of the election period. With AI, the effects of various political activities during the pre-election, for example, can be assessed, and policy announcements or implementations during the post-election period can also be weighed. The AI ability for predictive analysis allows the stakeholders in the electioneering and political

business to always fine-tune their actions and inactions to be at par with the needs and expectations of the people.

The Possible Impacts of AI on Election and Electioneering Process in Nigeria

The impact of the use of artificial intelligence can be group into two major categories; the positive and the negative impact

The Positive Impact

One of the positive impacts of the adoption of artificial intelligence in the electioneering process is that it could and does serve as a tool for educating the people politically (Adam and Hocquard, 2023). Citizens, and especially electorates, can be and are educated on not only the fundamentals and principles of democratic norms and values but also gets a better understanding of the manifestoes of the politicians standing for elections (Bueno de Mesquita Et al, 2023). This in no small measure enhances the electorates' abilities to make informed decisions on who to vote for and not to vote for. Through a system-programmed chatbot, for example, people can ask questions in a human-like conversation and get responses on contestant policies and programs if elected. Also, electorates can access through this medium such questions as the date for a particular election, the location of their polling units, registration, and voting procedures, among others. The internet has been a major go-to for voters seeking information about elections, observed Robertson et al. (2007).

Another important impact of the adoption of AI into the electoral process is in the area of civic education (Bueno de Mesquita Et al, 2023, Mayank, et al, 2023). Through online group chat-box discussion, people are exposed to their rights first as citizens and as electorates and also their responsibilities to the state as citizens. This is made possible due to the AI's ability to control and manage a large number of chat rooms and political conversations among the people and especially the electorate Adam & Hocquard (2023). AI could automatically moderate these varied discussions and opinions of the platforms' discussants in order to avoid them turning into contumely. In other words, it serves as an accord builder. Also, AI has the ability to itemize in summary form the discussions and submissions of the participants.

Through specially designed artificial intelligence tools, the electorates and the public in general could get an update on any changes, progressively or otherwise, of any government or political actors' policies or programs in which they have interest (Jungherr, 2023, Mayank, et al, 2023). This new information will enable them to have a better understanding of the issues and properly direct their questions, approval, or dissatisfactions when in contact with government officials or aspirants. Politicians, during political campaigns, can, with the help of artificial intelligence, summarize and itemize electorates' comments and suggestions gathered during political campaigns and political town hall meetings (Aneja, et al. 2020). These data could be sorted and classified using certain criteria that they deem fit. These exercises will not only allow the politicians to get better insight about the priorities of the people they intend to govern but also enable them to tailor their personalized AI-generated responses to the people in a more specific issue-based manner (Thapa, 2024, Mayank et al, 2023). The feedback and its classifications also enable the politicians to fine-tune their political programs to meet up with people's expectations.

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The Negative Impact

The following are some of the possible negative impacts of artificial intelligence in the electoral process.

One of the negative impacts of the adoption of artificial intelligence into the electoral process is the ease and speed of the spread of misinformation and disinformation to and among the electorate. Using the AI, political actors and people with hostile motives can engage in a widespread spread of false and distorted information in order to achieve their political aims. AI tools can be used (and are indeed being used) in making sophisticated voice cloning or creation of fake websites, which are then amplified in terms of traffic by bots and fake social media accounts that make it seem like a real people-to-people conversation (Karryl and Nuirianti, 2024; Gedeon & Miller, 2024).

This is in addition to the persuasive ability feature of the artificial intelligence, which is more capable in terms of sophistication. Also with deep fakes, which are gaining traction, images and videos, including of dead revered figures that seem real, are generated and made with voice clones that advise people not to vote or to vote in a certain way or direction. In the age of TikTok, Instagram, and many other social media platforms, these videos always go viral in the shortest amount of time with devastating impact. Its recent utilization in the electioneering process in Indonesia (Duffy, 2024) and during the recent American presidential convention with the U.S. president as the target (Mui, 2024) is a prime example. Also we must not forget the activities of Cambridge Analytica during the 2015 general election in the country (Cadwalladr, 2018). It is worthy to imagine what these kinds of misinformation and disinformation are capable of doing to the peace and stability of the country.

Another negative impact of the use of AI in the electoral process is its ability to manipulate voters' behavior (Aneja, et al. 2020). This is done through the use of highly persuasive AI technology that sends persuasive personal messages to the potential voters on a very large scale about intentions, policy decisions, or policy outcomes (Bueno de Mesquita, et al, 2023, Thapa, 2024). This model (AI persuasive technology) may, at the end of the day, convince voters to drop their initial sound judgment about issues and settle for less. It is worthy to note that these AI-generated persuasive messages may necessarily be the true reality of what they seem to be conveying of persuading voters about, thereby undermining political accountability, which is fundamental to the survival of democracy.

The threat of cyber-attack on the election infrastructure is another possible impact of AI in the electoral process (Bueermann and Dobrygowski, 2023). The continued advancement in the field of AI offers people with politically malicious minds the new advanced tools to attack and continue to attempt to breach election infrastructure in order to determine the outcome of an election. As stakeholders and people in general clamor and continue to clamor for a shift to a full electronic voting system as against a manual and hybrid voting system that characterized the country's election and indeed many in the African continent, this problem (cyber-attack) poses a significant threat that will put into question the credibility of the election itself. The attacks on the INEC election infrastructure during the 2023 general election are a good example (Michael, 2023), and this is even against the fact that the country operates a hybrid system where the actual

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voting and collation of the result are done manually. One can then imagine the threat when the whole system is electronic.

Another possible impact of the use of AI in the electoral process is the threat of candidates or voters being blackmailed into making electoral decisions that they otherwise will not take. Through the use of sophisticated AI instruments, political gladiators might and do hack and steal personal or corporate information of potential candidates or voters, which will then be deployed to undermine their opponent's political standing or to target a certain group of voters into doing their biddings. The significance and negativity of this threat at times force candidates and even promising candidates to stand down from continuing contesting for election, resigning from political positions, thereby forcing another election and dissuading voters from voting for (scandalous) candidates (see The Washington Post, 18/08/1998, The Wire, 10/06/2023).

Conclusion

The adoption of artificial intelligence in the electoral process has the potential to significantly influence the methods and styles of electioneering business in Nigeria. Depending on its utilization by political actors and regulation by the Electoral Management Bodies (both at the national and state level) and the government, this impact can either be an advantage by advancing elections process or at the detriment of the electioneering and democracy in general. It is therefore pertinent on the side of the Electoral Management Bodies, government and all the stakeholders involve in the electioneering business to among others, be proactive in enacting regulations that regulate the adoption and utilization of artificial for election purpose.

Recommendations

The electoral management bodies, both at the national and state levels, should embark on a public awareness campaign to educate the people on the workings and capabilities of artificial intelligence as regards elections and electioneering businesses so as to curtail the possible impacts of artificial intelligence-generated misinformation and disinformation. The government should enact electoral laws that mandate political parties to publicly disclose their adoption level (when, where, and how) of artificial intelligence so as to safeguard the electorate from unnecessary political manipulation.

The electoral management bodies in the country should look into establishing a fact-checking unit that fact-check and debunks, where necessary, misinformation or disinformation directed at the electorates by political parties in order to maintain sanity and trust in the electoral system. In achieving this, there is the need for EMBs to properly coordinate with different media houses in the country. The government or the electoral management bodies (both at the national and state level) must ensure that severe punishment is meted out to political parties that use misinformation or deep fakes as a strategy for political benefit. Also, the government must hold platforms that help in spreading misinformation and disinformation accountable for sharing such content without doing proper due diligence.

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