#### ANALYSING THE IMPACT OF SOCIOECONOMIC FACTORS INFLUENCING VOTER TURNOUT IN NIGERIA'S FOURTH REPUBLIC (2015-2023)

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ABSTRACT: Despite various political situations in Nigerian democracy marked by various political contexts and a wide range of strategies to contest the results, voter turnout in Nigerian presidential elections has declined. This study aimed to investigate the influence of socioeconomic factors on voter turnout in Nigeria's 2015, 2019, and 2023 presidential elections. Using secondary data, the study employed descriptive statistics (maximum, minimum, mean, and standard deviation) and ordinary least squares (OLS) regression analysis with the statistical package for the social sciences (SPSS) environment to describe and evaluate the impact of these factors on voter turnout, respectively. ESRI ArcGIS 10.8 was also used to examine the geographical distribution of voter turnout. The findings revealed a significant decrease in the average voter turnout of 46.72% in 2015, 35.63% in 2019, and 27.06% in the 2023 presidential elections. Notably, states with higher voter turnout rates were often aligned with the ruling party's geopolitical zones, which shifted over the three election cycles. Findings indicate that socio-economic factors did not significantly affect voter turnout in the 2015 and 2023 presidential elections. Additionally, only the percentage of educated women negatively influenced voter turnout in the 2019 presidential election. Based on these findings, the paper recommends that the federal, state and local governments should further strengthen the implementation of measures to reduce poverty and improve socio-economic conditions so that citizens can participate more actively in elections.

**Keywords:** Socio-Economic, Ordinary Least Squares, Presidential Elections, Voter Turnout, Nigeria

#### **INTRODUCTION**

Nigerian politics has a diverse range of political parties, and there seems to be an increasing trend of cooperation amongst different ethnicities and religions to formulate and carry out their political philosophies based on social preferences. The restoration of democratic governance in Nigeria in 1999, following years of military rule, marked a significant turning point in the country's political landscape (Haroon and Suleiman, 2024; Nwankwo, 2019b). Since then, the methods and outcomes of elections have become focal points for scholarly research. Despite

these advancements, voter turnout has remained below average due to persistent issues such as voter apathy, violence, and systemic challenges (Nwankwo and Okafor, 2018; Omotola and Aiyedogbon, 2011). Historically, voter turnout in Nigeria was 52.26% in 1999, increased to 69.08% in 2003, but then drastically dropped to 43.65% in the 2015 presidential elections (Afolabi, 2018; Nwankwo, 2019a). This decline indicates a growing disinterest in politics among citizens, which persists despite the implementation of electronic voting, such as the use of card readers and the Bimodal Voter Accreditation System (BVAS). Therefore, it will be crucial for future policy decisions to comprehend the regional heterogeneity of voter turnout across space in Nigeria.

Voter turnout is an important measure of how inhabitants participate in their country's governance and in selecting its leader (Hortala-Vallve and Esteve-Volart, 2011; Jubit et al., 2023). It is, therefore, defined as "the amount by which voters exercise their right to vote on Election Day" and is quantified as the proportion of votes cast in an election that includes invalid votes (Solijonov, 2016). Higher voter turnout is often seen as a sign of democratic development, while lower turnout typically correlates with voter apathy and mistrust of the political process (Adigun, 2020). Many empirical studies have shown that a person's tendency to participate in political activities depends on several factors, such as education, income, political interest, political awareness, and other personal characteristics (Kulachai et al., 2023; Willeck and Mendelberg, 2022). Research conducted in the industrialised world has shown that citizen engagement has been individualised, with an emphasis on psychological involvement and socioeconomic position as determinants (Gallego, 2010; Hassell et al., 2016; Kulachai et al., 2023; Solijonov, 2016). Numerous studies of political behaviour in developed countries have found that people with higher levels of education are more likely to participate in politics than those with lower levels of education (Hansen and Tyner, 2019; Jackson, 1995; Kim, 2023; Tenn, 2007). However, Nigeria has experienced declining voter turnout alongside changes in its socio-economic composition over the past two decades (Gana and Audu, 2023; Yusuf, 2023).

Previous studies have focused on the relationship between religion and voter turnout in Nigeria (Agbor, 2019; Nwankwo, 2020; Ojo, 2020) and the spatial pattern of voter voting homogeneity in Nigeria's Fourth Republic (Nwankwo, 2019b). No study has assessed the influence of these different factors on the three presidential elections in Nigeria. Therefore, this study's objectives were to use ArcGIS 10.8 to assess the temporal distribution of voter turnout from 2015 to 2023 and the influence of socio-economic factors on the 2015, 2019 and 2023 presidential elections in the Fourth Republic of Nigeria using statistical regression. By employing statistical regression analyses, this study aims to fill this gap in the literature and provide insights that can inform Election Management Bodies (EMBs) and other stakeholders on fostering greater public participation in Nigeria's democratic processes.

#### THEORETICAL FRAMEWORK AND LITERATURE REVIEW

Factors that influence citizens' voting behaviour are hotly debated in the political, sociological, and economic literature (Kulachai et al., 2023). In recent times, the link between voter turnout and demographic/socioeconomic characteristics has resulted in a variety of theoretical methods. These theoretical methods explain why individuals vote. Among these theories are the social-psychological approach, the rational voter approach, and the political efficacy theory. These three ideas, which provided a major explanation for the pattern of voter turnout, have been used by a number of studies (Matsusaka, 1995; Okey and Djahini-Afawoubo, 2020; Schulz, 2005). As discussed in subsequent paragraphs, these theories provide a framework for

examining the drivers of voter turnout in Nigeria. However, although that assumption may not be directly consistent with the available literature on turnout in Nigeria, some associations can be demonstrated.

Some researchers have employed the social psychology approach to comprehend citizenship, gender, and leadership and the reasons behind people's recent participation in democratic government (Andreouli, 2019; Hoyt and Simon, 2017; Okey and Djahini-Afawoubo, 2020). Social psychologists generally concentrate on the social environment to comprehend human behaviour, thought, and emotion. Social psychological approaches assume that individuals will vote if they acquire the right psychological dispositions, such as a feeling of civic responsibility. According to Okey and Djahini-Afawoubo (2020), researchers who use this approach continue to find that when all else is equal, voters who feel more obligated to their country are more likely to vote. The social psychology method was developed in response to the realisation that political opinions were not static and that their correlation with involvement varied over time (Manstead, 2018). Thus, it stands to reason that social psychological approaches to comprehending patterns of voter turnout could make it abundantly evident that socioeconomic characteristics do matter in determining how people react to political leaders and how those leaders might go about their roles in influencing people's participation in voting, whether or not they ought to. Consequently, this model of voter turnout was used in this study to posit that everyone has a predisposition to vote. It focuses on how information may persuade some individuals to vote and others to abstain based on their social or economic background.

The concept of rational choice voting, which was first put out by Anthony Downs in 1957 in a work titled "An Economic Theory of Democracy," provides an economic explanation for voting behaviour (Antunes, 2010). The rational voter approach is a simple economic model of voter turnout. Because it is thought that citizens are rational beings, the rational voter approach assumes that they will vote if the benefits outweigh the costs (Matsusaka, 1995; Okey and Djahini-Afawoubo, 2020). This is because rational people weigh the advantages of swaying an election and the benefits against its costs (Edlin et al., 2007; Geys, 2006). If voting is more beneficial than it is to cost, then citizens cast ballots. Research on voting expenses has shown voting costs are associated with voter turnout (Schoeman and Puttergill, 2006). Researchers have increased the explanatory power of the traditional rational voter theory by explicitly including information in it. This information is based on the assumption that reasonable individuals abstain from voting if they feel incapable of weighing their options, even if they believe they must (Farber, 2009). On the other hand, the theory also takes into account the fact that people only cast ballots when they are certain they are supporting the correct party, or the one that would maximize their utility.

Consequently, assuming that everyone has the fundamental desire to vote, variations in turnout could be linked to variations in state-to-state levels of citizen awareness, which socioeconomic considerations could influence. Because of the difficult voting environment in Nigeria, the rational voter approach was used to try to explain the connections that seem to be connected to voting costs. This model has drawn criticism because voters who anticipate higher costs than benefits from voting nevertheless cast ballots (Jung, 2017). From the standpoint of traditional benefit-cost analysis, such action is demonstrated to be logical. There are other elements at work where individuals believe it is their responsibility to vote, while others abstain if they feel unwilling to examine the options. Given Nigeria's specific political setting, we argue that perceptions of a free, fair, and credible voting process, as well as institutional confidence, may play an important role in determining voter turnout.

Political efficacy, such as civic engagement and political trust, is regarded as a fundamental idea in theories of democratic government and political participation since it may influence political involvement (Aly et al., 2014; Helal and Hamza, 2015). This approach has been conceptualised and operationalized differently in various research. Political efficacy is the subjective belief of a political actor that they can effect change on their own (Hayes and Bean, 1993; Mahlangu and Schulz-Herzenberg, 2022). This model states that a person's orientation, such as their political interest, level of faith in the government, and sense of civic duty, is a major factor in determining their likelihood of voting (Nwankwo, 2019a; Yildirim, 2020). Coping strategies in a particular behavioural domain are determined by efficacy. In other words, those who believe they are "efficacious" are far more likely to take action when faced with a problem in their surroundings and are also less inclined to give up in the face of difficulties than people who do not share this belief (Helal and Hamza, 2015). According to the assumptions made for this study, if citizens' demands for political control are consistently denied, they will likely feel thoroughly alienated and disillusioned. At this point, they may resort to more extreme political activity, which might discourage others from casting ballots.

The factors that influence political engagement have been extensively studied or recorded, particularly in democracies in the West as opposed to emerging democracies in Africa. Both in developed and emerging economies, a variety of factors have influenced voter turnout, including socialisation, socioeconomic level, demographics, historical apathy to voting and civic responsibility, and the structural features of the political system. It has been noted that people's civic responsibilities in the political process have been impacted by previous voter apathy. One of the main democratic conundrums, particularly in developing nations like Nigeria, is voter apathy, which is a subset of political apathy (Okafor et al., 2022). These authors used documentary approaches to gather data and concluded that Nigeria's democracy is still struggling to consolidate because of growing voter apathy. They recommended that the EMB ensure that voting decisions are not obstructed in any way to restore public confidence in the electoral process and motivate citizens via widespread education. In addition, a study by Independent National Electoral Commission and Friedrich-Ebert-Stiftung (2011), documented the existence of voter apathy in Nigeria. The study's findings showed that politicians were the main perpetrators, with the government, INEC, and politicians coming in top of the list of those held accountable.

Previous research (Bate, 2020; Gallego, 2010; Jackson, 1995; Kim, 2023; Mogaladi and Mlambo, 2022) demonstrated how education influences voter turnout. For example, Jackson (1995) examined the connection between education and voting behaviour in developed nations and identified four of the most popular concepts: (a) education fosters a sense of civic responsibility; (b) education raises one's perception of political efficacy; (c) education facilitates registration; and (d) education raises one's level of political sophistication or awareness. Additionally, research by Gallego (2010) and Kim (2023) highlights how education improves political efficacy, promotes civic responsibility, makes voter registration easier, and raises political awareness. In Nigeria, where issues like ethnic identity, security concerns, and political disillusionment are more significant, these findings about the beneficial effects of education on voter turnout could not hold true. This disparity calls into question whether these findings hold true in various political contexts. Willeck and Mendelberg (2022) and Tenn (2007) also point out the difference between higher levels of education and lower voter turnout, stating that higher education is only associated with greater political engagement. This discrepancy has led scholars to rethink basic theories on the relationship between education and voter participation, especially in situations where some levels of education may not provide the motivation or skills necessary to participate in politics.

Studies such as Wolfinger and Wolfinger (2008) have shown that demographic factors such as marital status, children, and homeownership significantly influence voter turnout. Meanwhile, Nwankwo and Okafor (2018) found that the influence of trust has also increased over time. Political trust and homeownership have a greater impact than age, education, and income. Nwankwo (2020) found that the influence of religion has increased since the 2011 elections but was not significant in 1999 and 2003. These studies emphasise demographic characteristics such as marital status, children, property ownership, religion, and political trust, among others, implying that a comprehensive understanding of voter behaviour requires a multidimensional approach. Therefore, understanding socio-economic factors that influence voter turnout in Nigeria cannot be overemphasised as it depends on factors such as candidate role, popularity, party identity, ethnicity, track record, and leadership. The shift in the importance of religion across different electoral cycles suggests that the influence of socio-economic factors is not static but rather evolves with the political climate. The relationship between public services, trust in democratic institutions, and voter turnout in Africa is complex. Okey and Djahini-Afawoubo (2020) find that access to basic amenities and trust in democratic institutions positively influence voter turnout in Togo. However, voter satisfaction with democracy has a negative impact. In Nigeria, Ibrahim et al. (2015) find that economic conditions, fear, uncertainty, expectations, and political socialisation are the main factors determining voting behaviour and political engagement. This analysis reveals inconsistencies and gaps in the existing literature on the interplay between socio-economic factors and voter engagement.

The influence of social media on voting behaviour has been a more prominent topic in recent research on African voter turnout trends. Odon (2024) investigated how social media has changed Nigerian election tactics and political communication. According to the findings, social media platforms give candidates the opportunity to communicate directly with voters, which boosts turnout, particularly among young people. According to Ajaegbu and Ajaegbu (2024), social media encourages public engagement, amplifies voices, and sparks demonstrations against unfavourable government policy. For instance, candidates in the 2023 Nigerian elections benefited minor parties, particularly the Labour Party, by using social media to raise their profile and communicate with voters directly. Iseolorunkanmi et al. (2023) discovered that voter education initiatives backed by the media increase voter turnout, diminish illegitimate ballots, and enhance voting literacy. Despite high levels of political interest among youth, actual turnout remains low—a paradox that existing literature has yet to fully address. This gap highlights the need for research focusing on how digital engagement intersects with traditional educational and socioeconomic influences on voter turnout.

Our study distinguishes itself from prior empirical research in several key ways. First, earlier studies have largely overlooked the impact of socioeconomic determinants on voter turnout across different presidential elections in Nigeria. Second, much of the existing literature has concentrated on voters' preferences among candidates rather than on the actual turnout itself. Additionally, previous research has yet to examine the geographical variations of voter turnout observed in the three presidential elections analysed in this study. The focus of this paper is to systematically explore how socio-economic characteristics influence voter turnout in Nigerian presidential elections in 2015, 2019, and 2023. While many studies from developed countries demonstrate that socioeconomic characteristics influence voter turnout, this paper specifically investigates whether similar influences are present in the Nigerian context.

#### MATERIAL AND METHODS

#### The Study Area

Nigeria is a West African country situated on the west coast of Africa on the inner ridge of the Gulf of Guinea. It is situated between 3° 15′ and 13° 30′N latitude and 2° 59′ and 15° 00′E longitude, with a total area of 923,768 km² (see Figure 1). The borders are as follows: To the east is the Republic of Cameroon, to the south is the Gulf of Guinea, and to the west and north are the Republics of Benin and Niger. Inland hills and plateaus divide the plains into north and south. Except for a handful, most demographic groupings within the states are homogenous, which may have some geographic bearing on people's engagement in political processes. While the precise count of languages spoken in Nigeria remains uncertain, current conjecture and surveys estimate that there are between 450 and 500 languages spoken in Nigeria (Ayenbi, 2014; Ayeomoni, 2012; Omachonu and Dalhatu, 2018). These states' and the FCT's unique cultural values, demography, climate, socioeconomic classes, and population densities may all have an impact on how often people participate in democratic government.

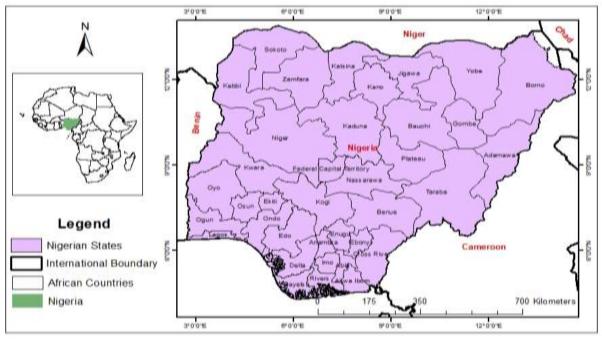


Figure 1: Map of Nigeria showing Nigerian 36 States and the FCT

The political and economic landscape in Nigeria had started to change by 1850, changing the composition of the states to varying degrees (Falola and Heaton, 2008, p. 85). Nigerian societies saw several transformations as a result of British colonial control. The Nigerian protectorates were supposedly merged in 1914 for economic reasons, which have continued to impact Nigeria's political and economic structure of government. On October 1, 1960, Nigeria gained independence from Britain. Nigeria's political landscape since independence has been characterised by a federal system that, having reinforced regional divides in the 1950s, collapsed into complete dysfunction between 1960 and 1966 (Alumona and Azom, 2018). As a result, the controls of resource allocation in Nigeria became dependent on the control of both the federal and national assemblies, which house or control the majority of the country's assets. During this time, the major political parties in each region engaged in a bloody and ruthless struggle for control of these bodies and resources (Bourne, 2015, p.138; Falola and Heaton, 2008, p.153). Each of these had an impact on how often individuals participated in democratic

government. Except for a brief restoration to democracy between 1979 and 1983, the army maintained control over the country from 1966 until 1999 through a series of army coups and increasingly autocratic and corrupt military rulers (Siollun, 2009, p. 1). Before 1999, Nigerian politics had been marked by military rule and control, which started as an anomaly during emergencies and eventually became a regular feature. Since 1999, Nigeria has remained democratic.

Since transitioning from military to democratic government in 1999, Nigeria has held multiparty presidential elections seven times in its Fourth Republic (1999, 2003, 2007, 2011, 2015, 2019, and 2023). It has also organized multiparty national assembly contests as well as state and local government. Except for the 2015 presidential election, in which former then-President Goodluck Jonathan congratulated his opponent, then-President Muhammadu Buhari (Aziken, 2015; Busari, 2017; Durotoye, 2015), contestations usually follow election results. Presidential elections are also marked by serious human rights incidents, as well as fraudulent activity and manipulation, such as violence, assassinations of politicians, and outright ballot hijacking, with the majority of incidents occurring before, during, or after the election (Banjo, 2023). Numerous deaths during the 2011 presidential election caused some individuals to flee to their respective states in time for the 2015 general elections. Nigerian elections are less credible due to a number of factors, such as violence, opposition boycotts, disregard for the law and agreements between the government and opposition, erroneous obstacles to opposition candidacies, widespread fraud, erroneous judicial rulings on complaints and appeals, etc. Numerous instances imply that Nigeria's election environment is marked by political immaturity among its populace, electoral fraud, and a skewed electoral system. The 2015 general elections were one of the most contested, and the world community recognized the results as deemed legitimate.

The INEC, the body responsible for overseeing electoral administration, was established in 1998, just before Nigeria transitioned from military to civilian rule (Odoziobodo, 2015; Saliu and Ifejika, 2017). Its purpose is to function as an impartial and efficient electoral oversight body dedicated to promoting free, fair and credible elections in order to promote sustainable democracy in the country (Omotola, 2010). Its presence has been confirmed in all her 36 states of Nigeria, FCT and its 774 LGAs. The 1999 Constitution of the Federal Republic of Nigeria established INEC to, among other things, oversee the electoral process for various political offices in the country (Onwunyi et al., 2019). Its establishment is provided for in Article 153(f) of the Constitution of the Federal Republic of Nigeria. Conflicts between political parties and candidates on election periods have arisen recently due to its composition, which may have an impact on voter turnout.

#### **Research Methods**

This article examines how socio-economic factors influence voter turnout in Nigeria's 36 states and the FCT for the 2015, 2019, and 2023 Fourth Republic presidential elections. It was restricted to these three presidential elections since there were serious flaws in the previous ones of 1999, 2003, 2007 and 2011, including extensive violence and vote-rigging that was replicated across the nation (International Crisis Group, 2007; Isma'ila and Othman, 2015). These three elections were also considered because of the introduction of electronic voting systems, such as the use of card readers in the 2015 and 2019 presidential elections and the BVAS in the 2023 presidential elections. Studies have shown that INEC implementation of smart card readers and BVAS has decreased electoral malpractice, boosted public trust, and done away with proxy voting (Akah et al., 2024; Kassem and Osasona, 2021). Our dependent

variable is voter turnout rates in the 2015, 2019, and 2023 presidential elections, calculated as the percentage of votes cast out of the total number of registered voters according to the 36 states and the FCT (Bate, 2020). A significant drawback of this measure is that it fails to consider the challenges associated with registering to vote in Nigeria, as well as other factors that influence turnout, such as education level. Studies like Adio and Olabisi (2023), Bate (2020), Nwankwo (2019a) and Nwankwo & Okafor (2018) used the rate of voter' turnout to understand the relationship between demographic and socioeconomic factors on voter turnout.

Voter turnout rates for Nigerian presidential elections were sourced from two primary organizations: the Nigeria Civil Society Room (2015) for the 2015 election and Yiaga Africa (2023) for the 2019 and 2023 elections. Both organizations are recognized for their roles in monitoring elections and compiling electoral data, providing a reliable foundation for analysis. The researchers compiled and utilized these datasets to ensure consistency and accuracy in representing voter turnout across the three elections. While both organizations are reputable, their methodologies for collecting and reporting data may differ, potentially leading to inconsistencies in how voter turnout is defined and measured across different elections. Additionally, the choice of these sources is justified as they focus specifically on Nigerian elections, allowing for a contextual understanding of the factors influencing voter turnout within the country.

This study includes a list of independent factors. In this study, demographic data such as the total population figures according to states were obtained from the 2006 Census (National Bureau of Statistics, 2011). The total population in 2006 was projected through 2018 to serve as the midyear of the three election cycles considered in this study. To determine population density, the total population was estimated compared to the area of the 36 states and the FCT. The projection was performed using the formula of Newman (2001):  $P_n = Po + (\frac{1+R}{100} \times Po) n$  Where:  $P_n = Po + (\frac{1+R}{100} \times Po) n$  Where:  $P_n = Po + (\frac{1+R}{100} \times Po) n$  and  $Po = Po + (\frac{1+R}{100} \times Po) n$  in 2018) and  $Po = Po + (\frac{1+R}{100} \times Po) n$ 

Regarding the socio-economic variables, six variables were used to assess the dynamics associated with the three theories discussed above. These include the unemployment rate, the Education Index (EI), and the Gender Inequality Index (GII) as reported by the National Bureau of Statistics (2018). Others include the proportion of educated men and women and the proportion distribution of the legal population by source of drinking water, as determined by the National Population Commission (NPC) [Nigeria] and ICF (2019). These variables were used to evaluate the dynamics associated with the three theories discussed in section 2 as a measure of economic inequality because the political and economic elites may use factors such as a rise in the unemployment rate, low educational attainment, and lack of access to essential services like clean drinking water as advantages to shape public opinion and affect voting patterns and rates as observed in the country's current social structure. This socio-economic landscape can change rapidly; thus, data collected at one point may not accurately reflect current conditions or trends affecting voter behaviour. While these six variables are significant, they do not encompass all potential socio-economic factors influencing voter turnout. Other important aspects, such as cultural influences, political trust, urbanization, ethnic composition may also play a critical role but are not included in this analysis.

Descriptive statistics like maximum, minimum, mean, and standard deviation measures were used to describe the dependent and independent variables in the statistical package for the social sciences (SPSS) version 20 environment while ESRI's ArcGIS 10.8 was used to examine the

distribution of the voter turnout rates of the three presidential elections. OLS model was used to analyse the influence of socio-economic and demographic variables on voter turnout of 2015, 2019, and 2023 Nigerian presidential elections. The OLS formula is given as follows:

$$y_i = \beta_0 + x_i \beta + \varepsilon_i \tag{1}$$

Where:

 $y_i$  = The dependent variables, (which are the voters' turnout of 2015, 2019, and 2023 presidential elections at the ith location [state])

 $\beta_0 = Estimated intercept representing the value of y when x equals <math display="inline">\boldsymbol{0}$ 

 $x_i$  = The vector of selected explanatory variables

 $\beta$  = The vector of regression coefficients

 $\varepsilon_i$  = The random error term.

OLS is a widely accepted statistical method for estimating the relationships between independent variables, such as socio-economic factors, and the dependent variable of voter turnout (Fiorino et al. 2021; Manoel et al. (2021). This method is particularly valuable as it offers clear interpretations of coefficients, helping researchers understand how changes in predictors like unemployment rate, population density or income affect voter participation. Following studies like Frank and Martínez (2023), who examined 70 variables associated with voter turnout across 579 elections in 80 democracies from 1945 to 2014; this study employed OLS regression to analyse the effects of socioeconomic factors on voter turnout in Nigerian presidential elections.

While OLS provides a robust framework for understanding general trends, it has limitations. One major concern is its assumption of a linear relationship between independent and dependent variables, which may not always apply to complex social phenomena like voting behaviour. Additionally, OLS can be sensitive to outliers and may yield biased results if key variables are omitted. Issues such as multicollinearity among predictors can further complicate result interpretation (Adio and Olabisi (2023). Despite these limitations, OLS remains a fundamental tool in assessing voter turnout due to its methodological rigour and practical application in analysing voter behaviour within Nigeria's intricate political environment.

#### RESULTS AND DISCUSSIONS

#### **Exploratory Analysis**

Table 1 presents an overview of the basic descriptive statistics for each variable considered based on the literature, enabling an examination of the data collected. State-specific averages for voter turnout in 2015, 2019, and 2023 were 46.72, 35.63, and 27.06, respectively. This indicates that Nigerian voting turnout has been steadily declining. This may be because of the significant problems with the past elections that made it difficult for people to cast ballots, or it might be because of the adoption of electronic voting methods, including the use of card readers in the presidential elections of 2015 and 2019 and the introduction of BVAS in 2023.

Election turnout in 2015 had a minimum of 28.8% and a maximum of 68.98%; in 2019, it was a minimum of 18.32% and a maximum of 54.63%; in 2023, it was a minimum of 15.66% and a maximum of 40.61%. Findings revealed an average unemployment rate of 26.22% and a population density of 348.17 persons per square kilometre. Table 1 also displays the GII, the Educational Index, the percentage of women and men who are literate, and the distribution of the de jure population by drinking water source. These factors may likely have an impact on a range of Nigerian circumstances linked to voter participation.

Table 1: Descriptive statistics of dependents and explanatory variables

Variables	N	Minimum	Maximum	Mean	Std. Deviation
Voter Turnout 2015	37	28.80	68.98	46.72	10.45
Voter Turnout 2019	37	18.32	54.63	35.63	8.98
Voter Turnout 2023	37	15.66	40.61	27.06	6.21
Population Density 2018	37	52.97	2901.11	348.17	485.54
Unemployment Rate	37	13.10	48.70	26.22	10.26
Educational Index	37	0.33	1.01	0.72	0.20
% distribution of de jure population by drinking water source	37	34.40	89.60	66.21	13.54
% of Literate women	37	10.60	88.00	56.21	24.86
% of literate men	37	29.40	98.20	73.19	18.36
Gender Inequality Index	37	0.42	0.91	0.68	0.15

Source: Authors Analysis (2023)

Putting geographic data on a map and looking for patterns is a natural method to investigate the data. Figure 3 shows the geographic distribution of voter turnout for the 2015, 2019, and 2023 presidential elections in Nigeria. As shown in Figure 2(a), in the 2015 presidential election, Akwa Ibom, Bayelsa, Delta, Jigawa, Rivers and Sokoto states had the highest turnout rates, ranging from 59.01% to 69%. Jigawa State had the highest percentage of turnout, at 68.98%. Most of the states with the highest voter turnout in the 2015 presidential election were located in Nigeria's South-South geo-political zone. This may be because former President Goodluck Jonathan ran as a candidate from the People's Democratic Party (PDP). However, in the 2015 presidential election, states such as Abia, Borno, Edo, Lagos, and Ogun had the lowest voter turnout, within a range of 29% to 34%. This election was the first in Nigeria's history in which a sitting president was defeated. Figure 2(b) shows the 2019 presidential election voter turnout results. Abia, Enugu, Lagos, and Rivers states had the lowest turnout at 18.32% to 23.30%, while Kaduna, Katsina, Kebbi, Jigawa, and Sokoto states had the highest voter turnout at 44.60% to 54.63%. What is interesting is that all the states with the highest voter turnout in the 2019 presidential election came from Nigeria's North-West geo-political zone. This is believed to be because the then-President Muhammadu Buhari ran for re-election on the platform of the All Progressives Congress (APC) from Katsina State in the northwest.

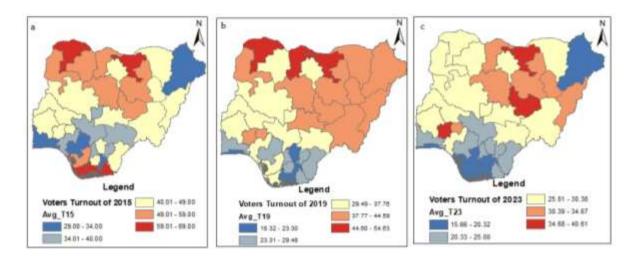


Figure 2: a. 2015 Voters Turnout Rate b. 2019 Voters Turnout Rate c. 2023 Voters Turnout Rate

Source: Authors Analysis (2023)

For the 2023 presidential election, Figure 2(c) shows that Adamawa, Jigawa, Osun and Plateau states had the highest turnout at 34.68-40.61%, while Abia, Bayelsa, Borno, Delta, Rivers, Imo and Lagos states had the lowest turnout ranging from 15.66% to 20.32%. The lowest voter turnout in these states could be a result of political apathy, as was seen in Lagos State for the 2023 presidential election, with strong political messages throughout the year tiring people out and making them less likely to vote. Despite the fact that the APC's vice presidential candidate is from Borno state, the state had one of the lowest voter turnouts in the 2023 presidential election, possibly as a result of Boko Haram activity. The findings indicate that South-South political zones, including Bayelsa, Delta, and Rivers states, had the lowest voter turnout in the 2023 presidential election; this could be because of higher barriers and less incentives. Unlike the 2015 and 2019 presidential elections, the states with the highest voter turnout were spread across the country's north-central (Plateau state), north-east (Adamawa), northwest (Jigawa state), and southwest (Osun state) geo-political zones and were not concentrated in one region. Moreover, the story of the 2023 presidential election is different from the previous two elections, as the third party, Mr. Peter Obi, campaigned on the Labour Party's manifesto. This may have ultimately affected voting behaviour and voters' motivations and could become a force to be reckoned with in the upcoming Nigerian presidential election.

#### Impact of socio-economic variables on voter turnout in Nigeria

The linear spatial regression analysis in this section elucidates the empirical relationship between socio-economic factors and voter turnout in the 2015, 2019, and 2023 presidential elections. As shown in Table 2, the OLS regression results indicate that socio-economic factors did not significantly affect voter turnout in the 2015 and 2023 presidential elections, suggesting that other critical elements influence voting behaviour. The political environment during these elections was rife with controversy and tension, with 2015 in particular described as one of the most contentious elections in Nigeria's history (Animashaun, 2015). Factors such as the rise of terrorism, particularly Boko Haram leading to election postponements, and ethnic conflict between the North and South stemmed from perceptions of a "lost turn" for the North and ongoing economic marginalization outweighed socio-economic concerns. These dynamics, also noted by Daniel and Bako (2023), exacerbate the ethnic, regional, and religious divides that

have long characterised Nigerian politics. Voters may have prioritised their security and political identity over socio-economic status when deciding whether to participate in the electoral process. Although there were 14 presidential candidates, the primary contest was between Major General Muhammadu Buhari of the APC and the then-incumbent President Goodluck Jonathan of the PDP. Therefore, these results are in line with the results of Nwankwo (2019b), who concluded in his study that economic factors were negligible and did not influence the 2015 Nigerian presidential elections.

As shown in Table 2, the proportion of literate women was significant at the 0.05 significance level in the 2019 presidential election. For example, the percentage of literate women had a significant impact on voter participation in the 2019 presidential elections at b = -0.33 p 0.02. In other words, the share of literate women has an unstandardised coefficient of -0.33, suggesting that turnout decreases by 0.33 standard deviation units as a state goes from 0 to 1. Increased literacy may lead to lower voter turnout as it may lead to a better understanding of political issues and disillusionment with the democratic process. This is in line with a study in India by Nandwani and Roychowdhury (2024) which found that higher economic awareness, economic independence and literacy levels among women are associated with greater political awareness and participation, but not necessarily higher voter turnout due to reasons such as disillusionment with politics, political parties or candidacy. Moreover, low voter turnout despite rising literacy rates may be due to the fact that Nigerian women are expected to prioritise domestic responsibilities over civic engagement. Of particular note is the lack of significant relationships between population density and voter turnout in the three models. Thus, issues with voter fear, avoiding long line-ups at the polls, an ecological fallacy, oddities unique to this election, or other variables might be the cause of this. On the other hand, people travelling to their hometowns and communities to vote may also be another factor why population density did not influence Nigeria's presidential election.

Table 2: Impact of socio-economic/demographic variables on voter turnout (n = 37).

Variable	Unstandardized Coefficients		Standardized Coefficients	_ f	Sia
variable	В	Std. Error	Beta	_ t	Sig.
Voter Turnout 2015					
(Constant)	59.323	19.177	-	3.093	0.004*
Population Density	-0.003	0.004	-0.141	-0.737	0.467
Unemployment rate	0.332	0.173	0.325	1.92	0.065
Education Index 2016	-26.15	26.823	-0.499	-0.975	0.338
% distribution of de jure population by drinking water source	-0.021	0.156	-0.027	-0.134	0.894
% of Literate women	-0.14	0.23	-0.334	-0.609	0.547
% of literate men	0.227	0.206	0.4	1.102	0.279
Gender Inequality Index 2017	-12.989	14.675	-0.187	-0.885	0.383
Voter Turnout 2019					
(Constant)	30.033	10.856	-	2.766	0.01*
Population Density	-0.003	0.002	-0.158	-1.252	0.22
Unemployment rate	-0.116	0.098	-0.133	-1.188	0.244
Education Index 2016	2.842	15.184	0.063	0.187	0.853

% distribution of de jure population by drinking water source	0.039	0.089	0.059	0.443	0.661
% of Literate women	-0.33	0.13	-0.914	-2.531	0.017*
% of literate men	0.176	0.117	0.36	1.508	0.142
Gender Inequality Index 2017	15.65	8.307	0.262	1.884	0.07
Voter Turnout 2023					
(Constant)	32.26	11.217	-	2.876	0.007*
Population Density	-0.002	0.002	-0.181	-0.962	0.344
Unemployment rate	-0.088	0.101	-0.145	-0.867	0.393
Education Index 2016	0.685	15.689	0.022	0.044	0.965
% distribution of de jure population by drinking water source	0.016	0.091	0.035	0.174	0.863
% of Literate women	-0.183	0.135	-0.731	-1.356	0.186
% of literate men	0.106	0.121	0.312	0.875	0.389
Gender Inequality Index 2017	-1.607	8.583	-0.039	-0.187	0.853

<sup>\*</sup>Variables significant at 5% Critical values; Source: Authors Analysis (2023)

None of the variables listed in Table 2 were related to voter turnout in the 2023 presidential election. Other significant factors may have an impact on the 2023 voting patterns. Many voters may become disillusioned with the political system, believing it to be corrupt and indifferent to their demands. This disappointment may overshadow socio-economic factors and lead people to abstain from voting. According to Oyoru (2023), regardless of voters' socio-economic background, losing faith in the electoral process significantly reduces their enthusiasm to vote. In addition, this finding might be because of the four out of the eighteen presidential candidates—Atiku Abubakar of the PDP, Rabiu Kwankwaso of the New Nigeria People's Party, Peter Obi of the Labour Party, and Bola Ahmed of the APC—come from the three largest ethnic groups in the country: the Hausa/Fulani, Yoruba, and Igbo. This could be attributed to the intense competition in the election. As a result, other factors such as ethnicity and regionalism, religion, the emergence of 'viable' third force parties, the burden of history, the independence of the electoral umpire and the new Electoral Act, insecurity and crises, and schisms within the parties may have a greater influence on voter turnout than people's social or economic characteristics. This demonstrates why particular, customised factors like education cannot fully account for variances in voter turnout in Nigeria. In Nigeria, where many people struggle financially on a daily basis, meeting basic needs may take priority over voting. According to Adigun (2020), poor voters may prioritize obtaining necessities over participating in the electoral process, which may reduce the importance of socio-economic factors in predicting voter turnout. Voter participation is discouraged by the ongoing threat of violence and insecurity, especially from groups like Boko Haram in the Northeast, banditry in the Northwest, Indigenous People of Biafra (IPOB) in the Southeast among others. Voters may have prioritized personal protection over civic engagement in 2023 elections, making security concerns more important than socioeconomic considerations. According to research by Kwarah Tal et al. (2024), voter turnout in Nigeria can be significantly impacted by insecurity, particularly in areas where violence is common.

The model summary in Table 3 shows that the "R" value is 0.83, which is a high correlation, indicating that the socio-economic factors in this study have a greater impact on the 2019 election. The R<sup>2</sup> value in Table 3 is 0.69, which means that the independent variables account for 69% of the voter turnout of the 2019 presidential elections as influencing factors, while

other factors outside Table 2 account for more than 31%. However, the impact of the independent factors taken into consideration in this paper is reduced, as evidenced by the R<sup>2</sup> values of 28% and 31% for the presidential elections of 2015 and 2023, respectively. These findings are also consistent with those of Nwankwo et al. (2017), who found that in South-Eastern Nigeria, electoral abstention is influenced by socioeconomic status, social trust and a weak institutional framework, unemployment, registration problems and demographic factors, corruption and inadequate security, deceit and intimidation, social ties, and poverty.

Table 3: Complete Model Summary for Voter Turnout for 2015, 2019 and 2023

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Voter Turnout
1	.533 <sup>a</sup>	0.284	0.111	9.8562774	2015
2	.830a	0.689	0.614	5.5796502	2019
3	.554 <sup>a</sup>	0.307	0.139	5.7649366	2023

a Predictors: (Constant), X; Source: Authors Analysis (2023)

According to the ANOVA result in Table 3, voter socioeconomic factors have no discernible impact on greater voter turnout rates in 2015 and 2023. However, the results showed a significant impact on the presidential elections of 2019 (F (7, 29) = 1.64, p < 0.001). These factors often have a negligible impact on Nigerian presidential elections. Thus, these findings are consistent with those of Nwankwo (2019b), who concluded that economic considerations were insignificant and had no effect on the 2015 Nigerian presidential election.

Table 4: Model Summary ANOVA<sup>a</sup> for Voter Turnout for 2015, 2019 and 2023

Sum Squares	of df	Mean Square	F	Sig.
able: Voter t	urnout 2015			
1115.022	7	159.289	1.64	.164 <sup>b</sup>
2817.24	29	97.146		
3932.262	36			
able: Voter t	urnout 2019			
2001.015	7	285.859	9.182	$.000^{b}$
902.842	29	31.132		
2903.858	36			
able: Voter t	urnout 2023			
426.039	7	60.863	1.831	.119 <sup>b</sup>
963.8	29	33.234		
1389.839	36			
	Squares able: Voter t 1115.022 2817.24 3932.262 able: Voter t 2001.015 902.842 2903.858 able: Voter t 426.039 963.8	able: Voter turnout 2015  1115.022	able: Voter turnout 2015  1115.022	able: Voter turnout 2015  1115.022

b Predictors: (Constant), X; Source: Authors Analysis (2023)

#### Conclusion

This paper examines socio-economic factors influencing voter turnout in the 2015, 2019 and 2023 presidential elections. The study highlights a steady decline in voter turnout in Nigerian presidential elections. This steady decline can be attributed to several interrelated factors,

including institutional issues in the electoral process, the introduction of electronic voting methods and broader socio-political dynamics that have shaped voter behaviour. Significant challenges in previous elections, including logistical difficulties and allegations of voter fraud, likely contributed to voter disenfranchisement. Furthermore, the geographic distribution of voter turnout shows regional differences influenced by party affiliation and historical voting patterns. For example, the highest voter turnout in 2015 was concentrated in the South-South geopolitical zone, reflecting support for then-incumbent President Goodluck Jonathan. In contrast, the 2019 election saw higher turnout in the Northwest, where the-then President Muhammadu Buhari received significant support. However, the distribution of states with high turnout across different regions by 2023 suggests shifts in political dynamics and voter motivations potentially influenced by the emergence of new parties and candidates. The results also suggest that socio-economic variables alone cannot fully explain the differences in voter turnout. The lack of significant relationship between these variables and turnout in the 2015 and 2023 presidential elections suggests that other factors such as political disillusionment, ethnic identity, security concerns, and competition among candidates play a more important role in shaping voting behaviour in Nigeria.

Future research should focus on conducting longitudinal studies to monitor changes in voter behaviour across multiple electoral cycles, providing insights into the evolving spatial influence of socio-economic factors on voter turnout using GWR model. Additionally, a detailed analysis of gender-specific voter behaviour is necessary to understand how gender interacts with socio-economic variables, particularly in relation to educational attainment and its impact on voting habits. Furthermore, exploring regional variations within Nigeria can uncover localized factors that affect voter turnout. These research directions will enhance our understanding of the complex relationship between socio-economic conditions and voter behaviour in Nigeria's dynamic political landscape.

#### Recommendations

In light of the study of socio-economic factors influencing voter turnout in Nigerian presidential elections, the following recommendations are made:

- 1. To address the issue of decreased voter turnout, particularly among younger voters and those from lower socioeconomic backgrounds, a comprehensive voter education programme needs to be put into place. The Federal Ministry of Education ought to stress how important it is to implement civics instruction in school curricula in order to improve students' comprehension of democratic values and the significance of voting. Potential voters' disinterest and alienation will be lessened as a result. Another way to do this is to plan outreach activities that involve locals directly and use social media influencers and local leaders to promote involvement. This strategy will boost confidence in electoral institutions and promote the transparency of the electoral process.
- 2. In order to improve voter turnout and rebuild public trust, electoral reform is necessary. To allay worries about corruption and anomalies that prevent people from voting, the federal government should bolster procedures that guarantee free, fair, and transparent elections. This can entail guaranteeing responsibility in instances of electoral fraud and strengthening the function of independent electoral institutions in Nigeria.
- 3. By establishing jobs, increasing educational opportunities, and making sure that basic needs are met, the federal, state, and local governments can lessen poverty and improve

socioeconomic conditions and voter turnout. This will also help to lower voter absenteeism at elections.

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