SOCIO-DEMOGRAPHIC VARIABLES AND GOVERNMENT'S PERFORMANCE RATING IN SOCIAL SERVICES IN NIGERIA: AN EMPIRICAL INVESTIGATION FROM MULTINOMIAL LOGISTIC REGRESSION MODEL

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ABSTRACT

The nature of Nigerian socio-cultural diversities and the socio-demographic characteristics of the people across the six geo-political zones in the country have continued to influence the voting patterns as well as government's performance rating in the provision of social services. Specifically, this study analyzed the trends and patterns of government's performance ratings in the provision of social services within the six geo-political zones in Nigeria, it also analyzed the impact of socio-demographic variables on government's performance rating in social services in Nigeria. The study adopted quantitative research method to address the research problem across the entire country. Monthly panel data extracted from NOIPolls governance snap polls for the periods of 12 months in 2021 were used for this analysis. This study followed proportionate-stratified random sampling technique in selecting respondents aged 18 years and above. A total of 12,827 respondents from the study population were sampled for the periods of 12 months in 2021. Post-stratification weights using 'gender' and 'geo-political zones' variables were also applied to the data to make the data even more representative of the study population, the weighting of 'gender' and 'geo-political zones' variables were only applied to the descriptive part of this analysis. An instrument known as socio-demographic variables and likert scale performance rating index questionnaire (SVLSPRIQ) was used to collect data for this survey. A set of analytical tools such as descriptive statistics which include trends and graphical analyses as well as multinomial logistic regression analysis were used to analyze the data collected from this survey. Based on the results of the findings from the NOIPolls governance polls, this research found that the socio-demographic variables of the respondents had significant impact on the rating of government's performance in the provision of social services across the six geo-political zones in Nigeria. Therefore, this study concludes that gender, age-group, geo-political zones and socio-economic status of the respondents had significant influence on government's performance rating in the provision of social services in Nigeria. Hence, the study recommends the need for ethnic tolerance and value reorientation in Nigeria. The reorientation programmes should include: rating of government's performance in the provision of social services objectively without ethnicity biasedness and call on all Nigerians to imbibe the spirit of ethnic tolerance as well as political awareness whereby candidates can be voted into political offices in any election without considering the ethnic background of such candidates.

Keywords: Government's performance rating, socio-demographic variables, social services, multinomial logistic regression model, weighting, governance polls, NOIPolls-Nigeria.

1. INTRODUCTION

The governments of any country have the primary responsibilities of ensuring good social services for her citizens, ensure the security of lives and properties of the people as well as bring development closer to the people and by implication engender with the much-needed socio-economic turn around for the better welfare of her citizenry (Benito, Hanns, & Claudio, 2020; Felesia & Akakandelwa, 2017). However, since 1999, Nigeria as a nation has continued to wade through many socio-economic challenges and agitations across the six geo-political zones that suggest public frustration and total loss of confidence and hope in government's capacity to deliver social services to the people who elected them into various public offices. Many years down the line, the better economy that Nigerians anticipated for, is still very well out of sight (Jorunn, 2015 & Nwoba, 2015; Kennedy & Chris, 2015). The nature of Nigerian socio-cultural diversities as well as the socio-demographic characteristics of the people within the six geo-political zones across the country have continued to influence the voting patterns and government's performance rating in the areas of provision of social services to the people. Nigeria is a federation of 36 states grouped under six geo-political zones, with 774 local government areas with a population estimated at over 214.4 million distributed across gender, age-groups and socio-economic status (National Population Commission [NPC], 2020; World Bank Report, 2019 & National Bureau of Statistics [NBS], 2019). Nigeria also has a land mass of about 923,768 square kilometres, blessed with huge oil and gas reserves as well as commercial deposits of solid minerals of international demands. Despite these potentials, more than 70% of the Nigeria population are classified poor while about 54.4%, are absolutely poor and live below the global US$1 benchmark, with life expectancy flirting between 48 and 52 years (International Monetary Fund [IMF], 2020 & National Bureau of Statistics [NBS], 2019; World Bank, 2021; Oboh, 2017; Achmad & Hafidz, 2021). These poor statistics have the tendency of increasing crime rates as well as worsening the security situation of the country.

There have been variations in the ratings of government's performance in the provision of social services across gender, age-group, socio-economic status as well as the six geo-political zones in Nigeria. For example, the NOIPolls governance polls for the periods of 12 months in 2021 reports that 16% and 31% of the respondents who strongly approved and approved the performance of government in the provision of social services were interviewed from the North-East geo-political zone and 13%, 18% and 22% of the respondents from the same geo-political zone said they neither approved nor disapproved, disapproved and strongly disapproved the performance of the government in the provision of social services. The category of respondents from the North-West geo-political zone who said they strongly approved and approved the performance of the government in the provision of social services had the proportions of 3% and 38% while 24%, 21% and 14% of the respondents from the same geo-political zone said they neither approved nor disapproved, disapproved and strongly disapproved the performance of the government in the provision of social services (NOIPolls Governance Polls, 2021). Also, 22% and 18% of the respondents said they strongly approved and approved the performance of the government in the provision of social services were from the South-East geo-political zone, 33% and 27% of the respondents from the same geo-political zone said they disapproved and strongly disapproved government's performance in the provision of social services (NOIPolls Governance Polls, 2021).

The category of respondents that strongly approved and approved government's performance in the provision of social services in the South-South geo-political zone had the proportions of 7% and 20% while the respondents from the same geo-political zones who said they neither approved nor disapproved, disapproved and strongly disapproved the performance of government in the provision of social services had the proportions of 21%, 30% and 22%. Only 8% and 28% of the respondents said they strongly approved and approved the performance of the government in the provision of social services and the categories of the respondents from the same geo-political zone said they neither approved nor disapproved as well as disapproved and strongly disapproved government's performance in the provision of social services with the proportions of 15%, 36% and 13% (NOIPolls Governance Polls, 2021). However, the category of respondents that said they strongly approved and approved the performance of the

government in the provision of social services who scored the proportions of 6% and 30% were youths population age-group between 18-35 years whereas 19%, 28% and 17% of the respondents from the same age-group said neither approved nor disapproved, disapproved and strongly disapproved the performance of the government in the provision of social services in Nigeria (NOIPolls Governance Polls, 2021). The respondents who said they strongly approved and approved government's performance in providing social services with the proportions of 6% and 27% constituted the adults' population age group between 36-60 years while the respondents from the same age-group that said they neither approved nor disapproved, disapproved and strongly disapproved the performance of the government in the provision of social services had the proportions of 19%, 27% and 21% (NOIPolls Governance Polls, 2021). Also, 4% and 16% of the respondents who strongly approved and approved the performance of the government in the provision of social services formed the proportion of the age-group around 61 years and above who were categorized as older adults' population whereas 24%, 24% and 32% of the respondents from the same age-group said they neither approved nor disapproved, disapproved and strongly disapproved the performance of the government in the provision of social services (NOIPolls Governance Polls, 2021). Therefore, the variations in the ratings of government's performance in the provision of social services across gender, age-group, socio-economic status and geo-political zones in Nigeria have the tendency of dividing the country across ethnic line which may have serious implications for the country's democracy as well as the attainment of the Sustainable Development Goals (SDGs).

In addition, according to United Nations (UN, 2015) and World Bank (2014) report on governance, governments in developing countries are expected to provide 100% social services to enhance better welfare of the people, but in Nigeria the provision of social services such as job creation, electricity, infrastructures, economy, security, healthcare, education as well as poverty alleviation programmes amongst others across the six geo-political zones in the country have been rated very low compared to other developing countries in Africa. For instance, in the course of government's performance rating survey in social services across the six geo-political zones in Nigeria, job creation was rated 10% while security was rated 12%, with healthcare being rated 21% whereas education was rated 20% among others (NOIPolls Governance Poll, 2021). These poor statistics contradict the United Nations' recommendation of 100% provision of social services by the Nigerian governments. This development has serious implications for social welfare and as well as human capital development index for a developing country like Nigeria. Also, these less than desirable social services indicators suggest a huge performance lapses on the part of Nigerian governments. Therefore, in view of the aforementioned problems, this paper seeks to provide answers to the following research questions:

    I.   How have government's performance ratings in the provision of social services evolved within the six geo-political zones in Nigeria?

    II.   What is the impact of socio-demographic variables on government's performance rating in social services in Nigeria?

2. CONCEPTUAL REVIEW

2.1 Government's Performance Rating

The World Governance Performance Rating Indicators (WGI) project, defines "good governance and government's performance rating" as consisting of "the traditions and institutions by which authority in a country is exercised and the basis on which the masses rate the performance of the government in the areas of social services provision" (World Bank, 2014). WGI identifies the following six core good governance components which constitute the basis of government performance rating: i) voice and accountability, ii) political stability and the absence of violence, iii) government effectiveness, iv) regulatory quality, v) rule of law, and vi) control of corruption. Based on these measures, Nordic states in Europe such as Sweden, Denmark, and Norway have a high standard of governance (World Bank, 2020).

Government's performance rating is a subset of good governance, good governance is rare in Africa, but it exists in a few countries such as Botswana, Mauritius, Senegal, and Ghana. From a development perspective, good governance is a major means for promoting sustainable development, reducing poverty, improving social welfare and maintaining peace (Chris, Ali, Sonya & Magui, 2017). Countries with good governance are efficient

in delivery of social services, follow the rule of law, and have inclusive institutions responsive to the needs of citizens. Ben and Zidi (2017) conceptualize government's performance rating to includes how governments are selected, monitored, and replaced, including their capacity to formulate and implement sound policies, provide social services, and earn the respect of citizens and institutions that elected them to their respective political offices. Good governance plays an essential role in achieving multidimensional poverty-reduction goals. Economic growth helps to reduce poverty only in good governance states in most cases. Rapid and narrow growth driven by foreign aid can create misery and repression under autocratic governance. Promoting rapid growth cannot reduce poverty unless there is good governance present to design and implement inclusive development policies and social programmes to attack poverty directly (Achmad & Hafidz, 2021; European Commission [EC], 2015).

2.2 Socio-Demographic Variables

Socio-demographic variables include, for example, age-group, gender, geo-political zones, education, religious affiliation, marital status, household, employment (occupation) and income of respondents in any empirical survey. It also includes, for example, socio-economic status, which combines information on education, occupation and income (Sofie & Marc, 2016; Qi-Gao, 2019).

2.3 Empirical Review

Okoli, John and Akume (2017) examined the impact of government's performance rating on poverty rate in Nigeria from (1999-2015). Okoli *et al.* (2017) employed a simple survey design and descriptive method of analysis to investigate their findings. The study found that, the inability to organize at the aspect of governance has had a negative outcome on the nations capacity to effectively put together the abundant resources nature has endowed for the good of its citizenry. Meanwhile, Mbanefo, Soyibo and Anyanwu (2016) used Probit model and descriptive statistics to investigate government's performance in the odd supply of healthcare services and electricity supply in Nigeria. Specifically, the survey was designed to identify both the patterns and determinants of public and private healthcare services and electricity utilization by individuals. In addition, the study ascertained individuals access to primary healthcare facilities and their healthcare seeking practices. The study concluded that the price of healthcare services, household income, travel time, age and road have significantly affected the demand and access of women to healthcare facilities and electricity demand. Also, the Organization for Economic Co-operation and Development (OECD, 2016) equally used one-way analysis of variance and descriptive statistics to examine the impact of citizens' educational background on good governance in OECD countries, the study found that as citizens become more educated, their expectations of government's performance rise. The study reports that if citizens' expectations rise faster than the actual performance of governments, trust and satisfaction could decline. The study concluded that changes in expectations may explain more of the erosion of political support than real government's performance.

To this end, a few empirical studies have been documented on the impact of socio-demographic variables on government's performance rating in social services in Nigeria. Previous studies like Jorunn (2015) and Nwoba (2015) found that religion, level of education and gender have positively predicted public sector's performance rating in social services in Nigeria. Therefore, in this present study an attempt is made to analyze the impact of socio-demographic variables on government's performance rating in social services in Nigeria. Primarily, the contribution of this study to the body of empirical literature is that, ethnicity, gender, age-group occupation, and geo-political zones have considerable influence on government's performance rating in social services in Nigeria. The nature of Nigerian socio-cultural diversities within the six geo-political zones across the minority and majority ethnic groups may influence the performance rating of the government in the provision of social services as well as the general performance of the government, unlike the studies conducted by Oboh (2017), Achmad and Hafidz (2021) who used descriptive statistics and contents analysis to investigate voting patterns in Nigeria. However, the studies of Oboh (2017), Achmad and Hafidz (2021) did not factor in the influence of socio-demographic variables on the voting patterns as well as the rating of government's performance in social services across the six geo-political zones in Nigeria as it is being investigated in this study.

3. METHODOLOGY

This study employed quantitative research method to address the research problem across the six geo-political zones in Nigeria. The NOIPolls governance poll panel data for the periods of 12 months in 2021 were used for this analysis. The National Population Commission (NPC, 2020) projected Nigerian population to be 214.4 million. Meanwhile, the target population for this cross-sectional analysis was 214.4 million Nigerian population. Out of the 214.4 million population, respondents between 18-35 years of age constituted the youths' population while the proportion of adults' population in the sample size were within 36-60 years of age while 61 years and above formed the proportion of the older adults' population. However, the population of Nigerians below 18 years of age were not considered in the course of the monthly survey due to some ethical reasons. This paper adopted proportionate-stratified random sampling technique in selecting respondents aged 18 years and above. A total of 12,827 respondents from the study population were sampled for the periods of 12 months in 2021. Post-stratification weights using 'gender' and 'geo-political zones' variables were also applied to the data to make the data even more representative of the study population and allow for more accurate population totals of estimates and the essence of this is to reduce non-response biasedness as well as improve the rate of statistical precision. The weighting of 'gender' and 'geo-political zones' variables were only applied to the descriptive part of this analysis. Socio-demographic variables and likert scale performance rating index questionnaire was adopted to elicit information from the respondents across the six geo-political zones in the country. The survey instrument comprises two sections, the first section focused on the socio-demographic characteristics of the respondents such as gender, age-group, geo-political zones and occupation while the second section focused on government's performance rating in some selected social services using the likert scale performance rating index.

3.1 Analytical Techniques and Modeling of Qualitative Response Multinomial Logistic Regression Model

In this paper we hypothesized that the socio-demographic background of the respondents (such as gender, age-group, geo-political zones and socio-economic status [occupation]) during the NOIPolls monthly governance snap poll will predict whether the respondents will strongly approve or disapprove the performance of the government in the provision of social services. Therefore, the econometric method adopted in this research is the qualitative response multinomial logistic regression model to analyze the impact of socio-demographic variables on government's performance rating in social services in Nigeria. Based on the research questions set out in the first section of this article, this study used a set of analytical tools which include descriptive statistics such as graphical and trends analyses as well as multinomial logistic regression to analyze the information elicited from the respondents. The multinomial logit model was estimated using the NOIPolls monthly governance panel data for the periods of 12 months in 2021. However, this section begins with the mathematical modeling of qualitative response multinomial logistic regression model.

Multinomial logistic regression model is a predictive model which is frequently used in predicting probabilities of outcomes of a categorically distributed dependent variable with more than two categories given a set of independent variables. In this paper, our Y, dependent variable (government's performance rating in social services) has 5 categories such as strongly approve, approve, neither approve or disapprove, disapprove, and strongly disapprove while the independent variables (X) are gender, age-group, geo-political zones and occupation which are all in continuous forms for the purpose of this analysis. In this article, multinomial logistic regression allowed us to compute the probabilities of government's performance rating in social services using the likert scale performance rating index (5 categories, [0-4]). In matrix notation, let X be the matrix of the independent variables, ß be the coefficients and k be the categories, then we would have:

$$P(Y=0/X)=\frac{1}{1+\sum_{k=1}^{5}e^{X\beta_K}}, P(Y=0/X)=\frac{e^{X\beta_2}}{1+\sum_{k=1}^{5}e^{X\beta_K}},..., P(Y=5/X)=\frac{e^{X\beta_5}}{1+\sum_{k=1}^{5}e^{X\beta_K}} \dots\dots\dots\dots\dots (1)$$

The k-1=4 odds of each category of Y, government rating in social services, with Y=0 as reference category, are given by:

$$\frac{P(Y=1/X)}{P(Y=0/X)} = e^{X\beta_2}, \frac{P(Y=2/X)}{P(Y=0/X)} = e^{X\beta_3}, \frac{P(Y=3/X)}{P(Y=0/X)} = e^{X\beta_4}, \frac{P(Y=4/X)}{P(Y=0/X)} = e^{X\beta_5} \quad \dots\dots\dots \text{(2)}$$

Thus, the odds ratios for the predictors (gender, age-group, geo-political zones and occupation) is the exponentiation of the coefficients, which could demonstrate how the risk of the dependent variable falling in one category compared to falling in the reference category. An odds ratio greater than one could be interpreted as the probability of the dependent variable belonging to this category is higher than that belonging to the reference category, and the probability increases as the variable increases. Vice versa, when an odds ratio is less than one, the outcome is more likely to belong to the reference category, and the probability decreases as the variable increases (Murat-Gunduz & Karacan, 2017).

After taking the natural antilogarithms of both sides of equations 1 and 2, we could obtain four ln odds of Y, relatively to the reference category:

$$\ln\frac{P(Y=1/X)}{P(Y=0/X)} = X\beta_2, \ln\frac{P(Y=2/X)}{P(Y=0/X)} = X\beta_3, \ln\frac{P(Y=3/X)}{P(Y=0/X)} = X\beta_4, \ln\frac{P(Y=4/X)}{P(Y=0/X)} = X\beta_5 \quad \dots\dots\dots \text{(3)}$$

Alternatively, we could also obtain the odds ratios of $\hat{\beta}_2$, $\hat{\beta}_3$, $\hat{\beta}_4$ and $\hat{\beta}_5$ as follows:

$$\hat{\beta}_2 = \frac{\exp(y_2)}{1+\exp(y_1)+\exp(y_2)+\exp(y_3)+\exp(y_4)} \quad \dots\dots\dots \text{(4)}$$

$$\hat{\beta}_3 = \frac{\exp(y_3)}{1+\exp(y_1)+\exp(y_2)+\exp(y_3)+\exp(y_4)} \quad \dots\dots\dots \text{(5)}$$

$$\hat{\beta}_4 = \frac{\exp(y_4)}{1+\exp(y_1)+\exp(y_2)+\exp(y_3)+\exp(y_4)} \quad \dots\dots\dots \text{(6)}$$

$$\hat{\beta}_5 = \frac{\exp(y_5)}{1+\exp(y_1)+\exp(y_2)+\exp(y_3)+\exp(y_4)} \quad \dots\dots\dots \text{(7)}$$

Where: $\hat{\beta}_2$, $\hat{\beta}_3$, $\hat{\beta}_4$ and $\hat{\beta}_5$ are the estimated parameters for each categories of the dependent variable denoted by Y while y_1, y_2, y_3, y_4, y_5 are the categories of the dependent variable, where y_1=I strongly approve, y_2 = I approve, y_3 = I neither approve or disapprove y_4 = I disapprove and y_5 = I strongly disapprove. However, it should be noted that parameter $\hat{\beta}_1$ and y_1 category = I strongly approve were omitted in the model because they have been treated as a reference category which is equivalent to zero. Thus, the logit for each category over the reference category depends on the values of independent variables. The explanatory variables in the selected model above have four (B) parameters with four odds ratios (exp [B]), one for each category of the likert scale performance rating index except its reference category (0=had not been), which is assumed but does not show in the tables. The "exp(B)" column in SPSS's label denotes the odds ratios of the explanatory variables with the response variable, it is the predicted change in odds for a unit increase in the corresponding explanatory variable.

In multinomial logit model there are L-1 response categories $(Y_1, Y_2, Y_3, …, Y_{(L-1)})$. The effects of explanatory variables are expressed in terms of log-odds ratios by using the Maximum Likelihood Estimation (MLE). The likelihood in this case is seen as the 1st category in Y (I strongly approve) and ith respondent, it is arranged as $Y_{i1} = 0, …, Yil = 1, Yil = 0$. It is denoted by:

$$\tau_{il} = P(Yil = 1) = (\tau_{i1})^0 (\tau_{i2})^0 ... (\tau_{il})^1 ... (\tau_{iL})^0 = \prod_{l=1}^{L} (\tau_{il})^{Yil} \quad …………………………………………………………… (8)$$

Then, the likelihood function for *n* independent variable observation and Y dependent variable with L categories is denoted by the equation (5)

$$\Omega = \prod_{i=1}^{n} P(Yil) = \prod_{i=1}^{n} [\prod_{l=1}^{L} (\tau_{il})^{Yil}] \quad ……………………………………………………………………….. (9)$$

It is known that, $\sum_{l=1}^{L} Yil = 1$ and likelihood function's natural logarithm is taken for every respondent i. Therefore, the likelihood function is denoted by:

$$\ln(\Omega) = \sum_{i=1}^{n} [\sum_{l=1}^{L-1} Yil\Psi_1 - \ln\{1 + \sum_{i=1}^{L-1} e\Psi 1\}] ………………………………………………………………… (10)$$

The likelihood equations can be arrived at by taking first order derivative of $\ln(\Omega)$. $\ln(\Omega)$ includes (L-1) X (k+1) unknown parameters. So, the estimated maximum likelihood values are differentiated from the above equation and they are denoted by $\hat{Y}_1, \hat{Y}_2, \hat{Y}_3, ..., \hat{Y}(L-1)$ for finding vectoral parameters' likelihood equations are equaled to zero . parameters are in non-linear types; their solutions are found by Newton-Raphson method. Iterative procedures are used to find out the parameter estimations. At the end, the maximum likelihood (ML) is referred to as (-2LL), negative two likelihoods (See Dimistrios & Stephen, 2007; Gujarati, 2007; Johnson & Dinado, 2016). Hosmer and Lemeshow (2015) also report that in the course of determining the overall goodness of fit for multinomial logit model, the Deviance and Pearson statistics are used to check the robustness of the model. With multinomial logit model, different iterations are used to find the best solution which is the smallest possible deviance or best fit. Both statistics measure the Goodness of fit with (number of parameters in saturated model - the number of parameters in estimated model), degrees of freedom and X^2 distribution. Deviance statistic is called "-2LL" by Cohen *at al.* (2016) and "D" by Hosmer and Lemeshow (2015) and it can be thought of as a chi-square value.

The Pearson equation is stated below:

$$X^2 = r(y_j, \hat{\pi}_j) = \sqrt{\frac{(y_j - m_j \hat{\pi}_j)}{m_j \hat{\pi}_j (1 - \hat{\pi}_j)}} \rightarrow X^2 = \sum_{j=1}^{J} r(m_j \hat{\pi}_j)^2 ……………………………………………………………….. (11)$$

The Deviance equation is stated below:

$$\delta((y_j, \hat{\pi}_j) = \pm \left\{ 2\left[y_j \ln\left(\frac{y_j}{m_j \hat{\pi}_j}\right) + (m_j - y_j) \ln\left(\frac{m_j - y_j}{m_j (1 - \hat{\pi}_j)}\right) \right] \right\}^{1/2} …………………………………………………………… (12)$$

$(y_j - m_j \hat{\pi}_j)$ and $D = \sum_{j=1}^{J} \delta(y_j, \hat{\pi}_j)$ is given as (+) and (-) signs in formula m_j where j gives the total value the five categories. Both statistics (Pearson and Deviance) measure the Goodness of Fit with (number of parameters in saturated model - the number of parameters in estimated model) degrees of freedom and X^2 distribution. Deviance statistic is called -2LL by Cohen *at al.* (2018) and D by Hosmer and Lemeshow and it can be

thought of as a chi-square value. The likelihood ratio test, this statistic is usually used to compare the fit of the model with and without predictors. It tests the significance of coefficients in the model.

$$D = -2\ln\left[\frac{Maximum\,likelihood\,of\,the\,restricted\,model}{Maximum\,likelihood\,of\,the\,non-restricted\,model}\right] \dots\dots\dots\dots\dots\dots (13)$$

Restricted model refers to the multinomial logistic model which has constant while the non-restricted model refers to the multinomial logistic model that includes all desired effects or k-number of predictors. The difference between these two deviance values is referred as G for goodness of fit and likelihood ratio test.

$$G = X^2 = D(for\,the\,model\,without\,variable) \dots\dots\dots\dots\dots\dots (14)$$
$$- D(for\,the\,model\,with\,variable) \dots\dots\dots\dots\dots\dots (15)$$
$$G = X^2 = -2\ln\left(\frac{L\,null}{L_k}\right) \dots\dots\dots\dots\dots\dots (16)$$

Where the odd ratios of multinomial values are found by taking the log and multiplying them by -2. If J is the number of categories dependent variable and I is the number of estimated parameters, then this statistic has X^2 distribution with $((J-1).(I-1))$ degrees of freedom (Gujarati, 2016). The Wald test statistic is used to show whether estimated regression coefficients for the mentioned predictors are significantly different from zero. If the coefficient is significantly different from zero, then it is assumed that the predictor is making a significant contribution to the prediction of outcome, in this paper, the predictor variables are gender, age-group, geo-political zones and occupation while the outcome variable is government's performance rating in social services with five outcomes categories.

$$Wald = \left[\frac{\hat{B}_j}{\hat{SE}(B)}\right]^2 \dots\dots\dots\dots\dots\dots (17)$$

Where $\hat{B}_j$ = is the estimated regression coefficients and $\hat{SE}(B)$ represents the standard error of the estimated coefficients. Estimated regression coefficients and their standard errors are used to compute a t-statistic. Wald statistic is basically identical to the t-statistic in linear regression and has X^2 distribution with 1 degree of freedom (Azer & Walker, 2015). The Pseudo R^2 statistics, this statistic varies between 0 and 1. Zero (0) means predictors are sub-optimal at predicting the outcome variable and one (1) means that the model predicts the outcome variable perfectly. This analysis focused on the Cox and Snell's R^2 (1989) in explaining our model's goodness of fit which is based on the log likelihood of the model [LL (new)] and the log likelihood of the original model [LL (baseline)], and sample size, n;

$$R_{cs}^2 = 1 - e\left[-\frac{2}{n}LL(new) - LL(baseline)\right] \dots\dots\dots\dots\dots\dots (18)$$

4. ANALYSIS OF SOCIO-DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

This section analyzes the socio-demographic characteristics of the respondents in NOIPolls monthly governance poll for the period of 12 months in 2021. The essence of this section is to depicts the respondents' socio-demographic variables who participated in NOIPolls governance polls for the periods of 12 months in 2021. The socio-demographic characteristics of the respondents include gender, age-group, geo-political zones as well as occupation.

Figure 4.1: Summary of Total Average Weighted Socio-Demographic Characteristics of Respondents (N=12,827)

Source: NOIPolls Governance Polls (2021)
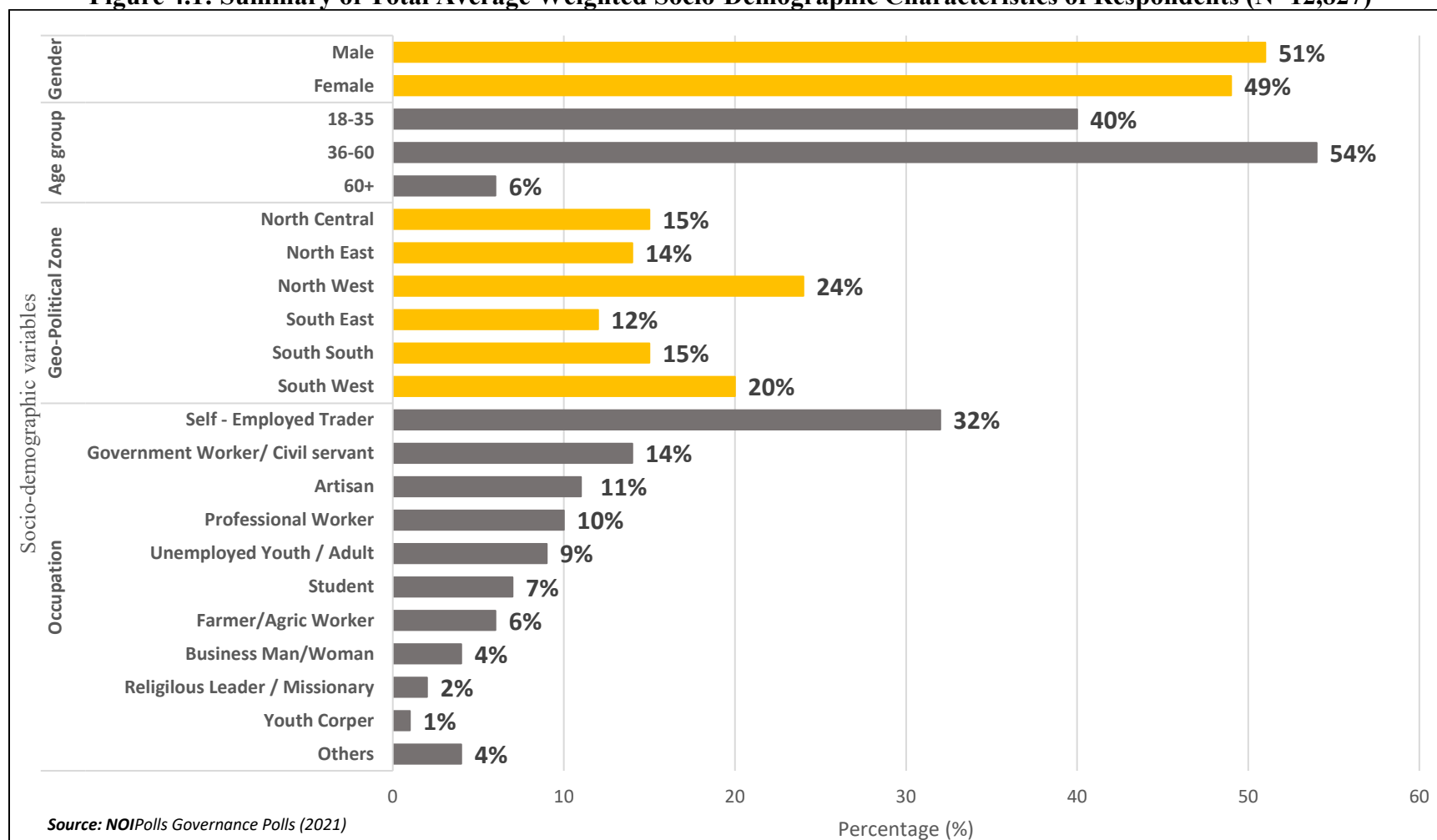
Figure 4.1 illustrates that 51% of the respondents in NOIPolls governance polls for the periods of 12 months in 2021 were males and while 49% were females. Also, 40% constituted the proportion of respondents who fall within the age-bracket of 18-35 years while 54% constituted the proportion of the population of the respondents who fall within the age-group of 36-60 years. Meanwhile, only 6% of the respondents were 61 years and above. In addition, this survey covered the six geo-political zones in Nigeria, in that 15% and 14% of the respondents were from the North-Central and North-East geo-political zones whereas 24% of the respondents were from the North-West geo-political zone respectively. Also, 12% and 15% of the respondents were from South-East and South-South geo-political zones while 20% of the respondents were from the South-West geo-political zone. However, 32% and 14% of the respondents were self-employed traders and civil servants (government workers) whereas 4% and 10% of the respondents interviewed during the survey were business men/business women as well as professional workers. Also, 9% and 11% of the respondents fall within the categories of unemployed youth-adults and artisans. Again, 6% and 7% of the respondents constituted the categories of farmers and students, 2% and 1% were in the categories of religion leaders (missionary) as well as youths corpers and 4% constituted others. It

should be noted that the sample size drawn for this survey for the periods of 12 months in 2021 across the six geo-political zones in Nigeria was selected based on the population census projection in the 2006 National Population Census by the National Population Commission (2020).

4.1 Analysis of the trends of government's performance ratings in social services within the six geo-political zones in Nigeria.

This section analyses the trends and patterns of government's performance ratings in the of provision of social services across the six geo-political zones Nigeria. The essence of this analysis is to evaluate whether the performance of the government in the provision of infrastructures, security, power supply, economy, education, healthcare, conflict resolutions, poverty alleviation, anti-graft war (fighting corruption) and so on have actually improved during the periods of 12 months in 2021.

Figure 4.1: Total average percentage of government's performance ratings in social services across the six geo-political zones in Nigeria

Source: *NOI*Polls Governance Polls (2021)
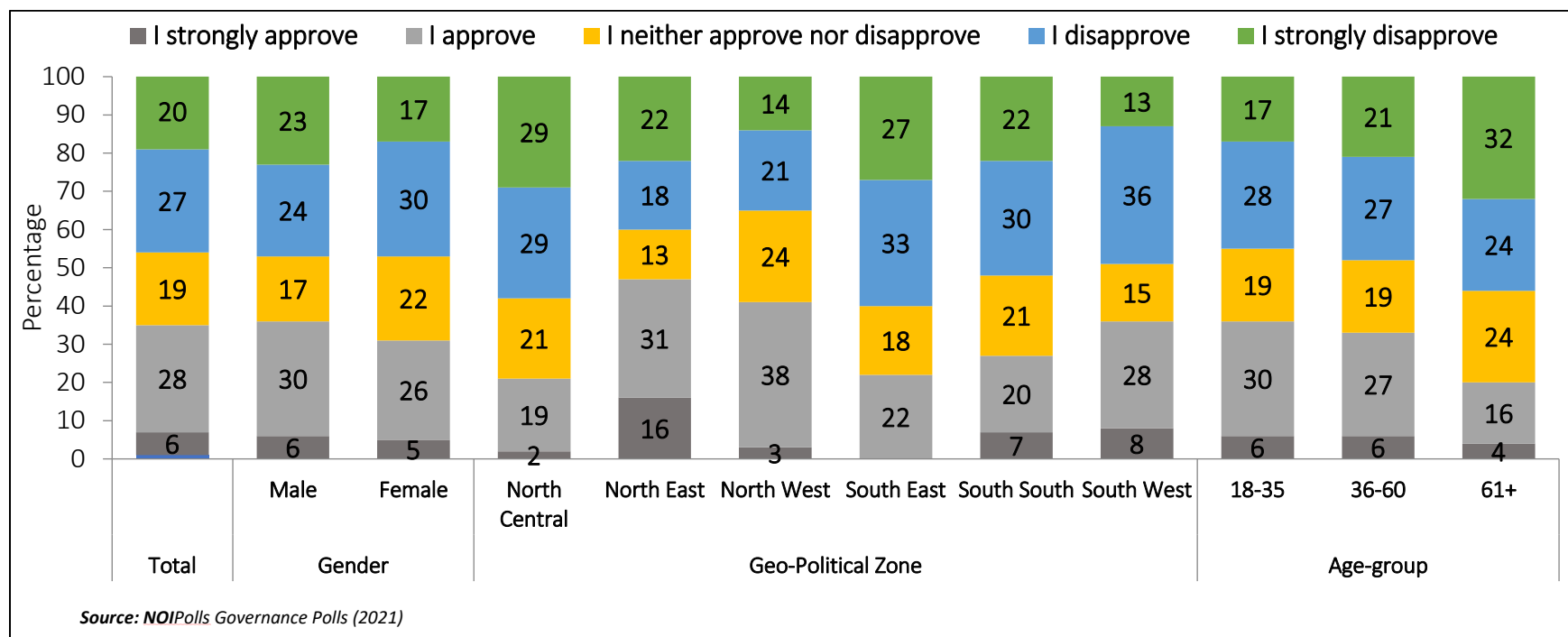
Figure 4.1 depicts a somewhat variation in the proportions of the ratings of government's performance in the provision of social services across, gender, geo-political zones as well as age-group in Nigeria. Figure 4.1 shows that 6%, 30% and 17% of the respondents who strongly approved, approved and neither approved nor disapproved the performance of the government in the provision of social services were males while 24% and 23% of the respondents who disapproved and strongly disapproved government's performance in the provision of social services were also males. Meanwhile, 5% and 26% of the respondents who strongly approved and approved the performance of the government in the provision of social services were females and the categories of the respondents that neither approved nor disapproved as well as disapproved and strongly disapproved government's performance in the provision of social services with the proportions of 22%, 30% and 17% were females. However, 2% and 19% of the respondents who strongly approved and approved the performance of the government in the provision of social services were from the North Central geo-political zone whereas 21%, 29% and 29% of the respondents from the same geo-political zone said they neither approved nor disapproved, disapproved and strongly disapproved the performance of the government in the provision of social services.

In addition, 16% and 31% of the respondents who strongly approved and approved the performance of the government in the provision of social services were interviewed from the North-East geo-political zone and 13%, 18% and 22% of the respondents from the same geo-political zone said they neither approved nor disapproved, disapproved and strongly disapproved the performance of the government in the provision of social services. The category of respondents from the North-West geo-political zone who said they strongly approved and approved the performance of the

government in the provision of social services had the proportions of 3% and 38% while 24%, 21% and 14% of the respondents from the same geo-political zone said they neither approved nor disapproved, disapproved and strongly disapproved the performance of the government in the provision of social services. Also, 22% and 18% of the respondents said they strongly approved and approved the performance of the government in the provision of social services were from the South-East geo-political zone, while 33% and 27% of the respondents from the same geo-political zone said they disapproved and strongly disapproved government's performance in the provision of social services.

The category of respondents that strongly approved and approved government's performance in the provision of social services in the South-South geo-political zone had the proportions of 7% and 20% while the respondents from the same geo-political zones who said they neither approved nor disapproved, disapproved and strongly disapproved the performance of the government in the provision of social services had the proportions of 21%, 30% and 22%. Only 8% and 28% of the respondents said they strongly approved and approved the performance of the government in the provision of social services and the categories of the respondents from the same geo-political zone said they neither approved nor disapproved as well as disapproved and strongly disapproved government's performance in the provision of social services with the proportions of 15%, 36% and 13%. However, the category of respondents that said they strongly approved and approved the performance of the government in the provision of social services who scored the proportions of 6% and 30% were the youths' population age-group between 18-35 years while 19%, 28% and 17% of the respondents from the same age-group said neither approved nor disapproved, disapproved and strongly disapproved the performance of the government in the provision of social services in Nigeria. The respondents who said they strongly approved and approved government's performance in providing social services with the proportions of 6% and 27% constituted the adults' population age group between 36-60 years while the respondents from the same age-group that said they neither approved nor disapproved, disapproved and strongly disapproved the performance of the government in the provision of social services had the proportions of 19%, 27% and 21%. Also, 4% and 16% of the respondents who strongly approved and approved the performance of the government in the provision of social services formed the proportion of the age-group around 61 years and above who were categorized as older adults' population whereas 24%, 24% and 32% of the respondents from the same age-group said they neither approved nor disapproved, disapproved and strongly disapproved the performance of the government in the provision of social services.

Figure 4.2: Total average percentage of government's performance rating in social services across the six geo-political zones in Nigeria
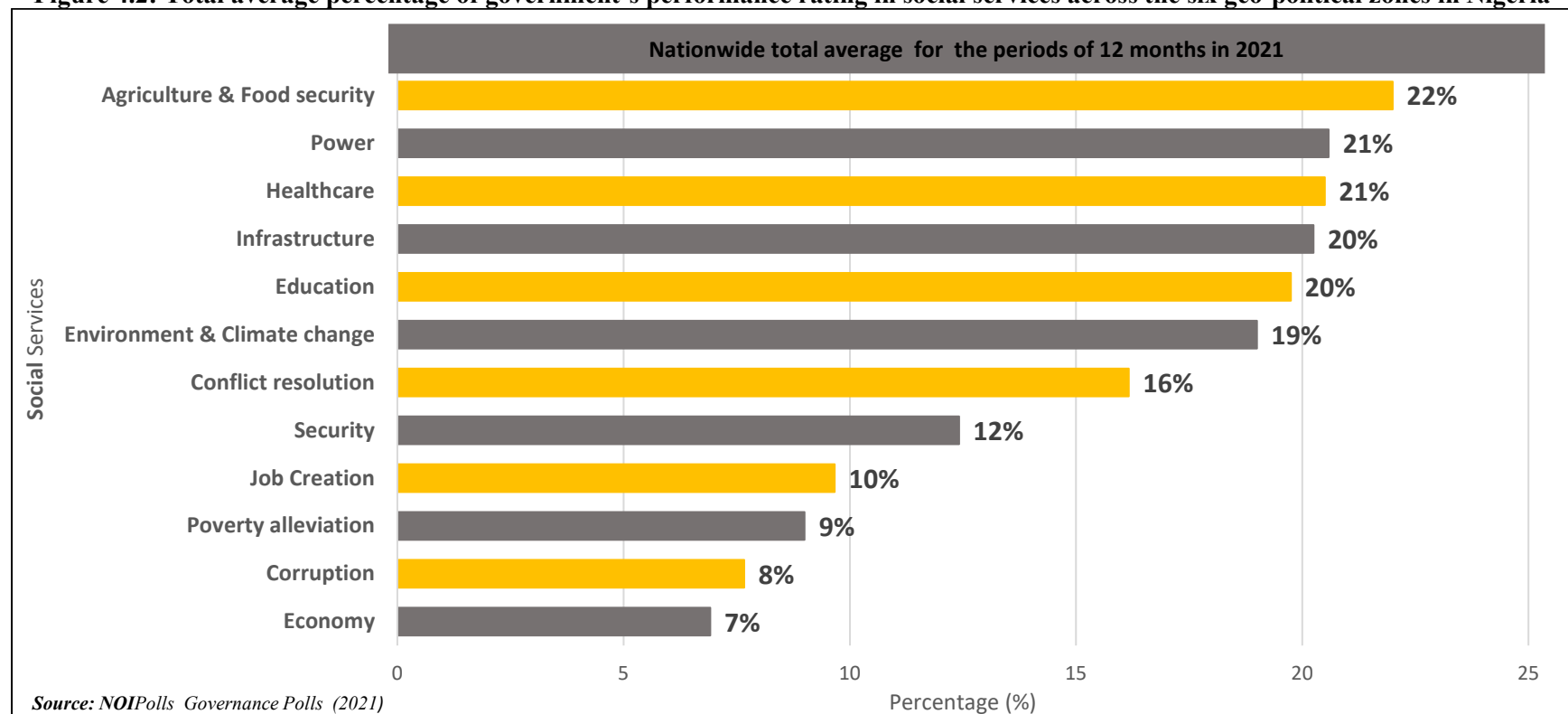
Figure 4.2 illustrates the total average percentage of government's performance ratings in social services indicators across the six geo-political zones in Nigeria for the periods of 12 months in 2021. The United Nations' (2015) good governance recommendation for the provision of social services in developing countries stands at 100%. Meanwhile, the percentage rating of agriculture and food security was 22% and power was rated 21%, environmental and climate change was also rated 19% while education and infrastructures stood at 20% and 20% on the rating index. However, security and healthcare indicators were rated 12% and 19% whereas poverty alleviation and corruption were rated 9% and 8%. Also, job creation and economy were rated 10% and 7% on the social services rating index. But, the result in figure 4.2 above somewhat contradicts the United Nations' recommendation of 100% provision of social services for a developing country like Nigeria. This is 100% against the government's economic blue print to lift over 10 million Nigerians out of poverty as well as create empowerment and investment programmes that will increase the welfare of the people (World Bank, 2019 & IMF, 2020). This result is in line with the study conducted by World Bank (2021) which reports that over 4.3 million Nigerians have lost their jobs between 2015 and 2021 while more than 11 million Nigerian have been pushed into poverty. This result is also in conformity with the studies conducted by Liang *et al.* (2020), Khan *et al.* (2020) and Abdillah *et al.* (2020) who reported that the weak institutional framework of the governments in developing countries have not given the government of these countries the capacity to utilize the countries' natural resources for the full benefits of the citizens in the areas of provision of social services for better welfare.

Estimated multinomial logistic regression results

4.2 Estimated multinomial logistic regression results which correlates socio-demographic variables with government's performance rating in social services in Nigeria.

Table 4.1: Multinomial logistic regression diagnostic tests result

Likelihood Ratio Tests

Effect	AIC of Reduced Model	BIC of Reduced Model	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.
Intercept	1519.272	1597.942	1487.272	18.088	4	.000
Gender	1511.848	1590.518	1479.848	10.663	4	.000
Age group	1511.438	1590.108	1479.438	10.254	4	.000
Geo-Political Zone	1548.477	1627.147	1516.477	47.293	4	.000
Occupation	1507.037	1585.707	1475.037	5.853	4	.000

Model Fitting Information

Model	AIC	BIC	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	1551.812	1571.479	1543.812			
Final	1509.184	1607.522	1469.184	74.627	16	.000

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	960.713	784	.000
Deviance	897.130	784	.000

Pseudo R-Square

Cox and Snell	.071
Nagelkerke	.075
McFadden	.024

The chi-square statistic is the difference in -2 log-likelihoods between the final model and a reduced model. The reduced model is formed by omitting an effect from the final model. The null hypothesis is that all parameters of that effect are 0.

Source NOIPolls Governance Poll (January, 2021)

Table 4.2: Multinomial logistic regression result which correlates government's performance rating in social services with socio-demographic variables

Government's performance rating in social services[a]		B	Std. Error	Wald Test Statistics	df	Sig.	Exp(B)	95% Confidence Interval for Exp(B) Lower Bound	95% Confidence Interval for Exp(B) Upper Bound
I approve	Intercept	-.152	.906	.028	1	.000			
	Gender	.463	.284	2.667	1	.001	1.589	.912	2.770
	Age group	-.048	.254	.036	1	.000	.953	.579	1.568
	Geo-Political Zone	.132	.089	2.225	1	.000	1.141	.959	1.358
	Occupation	.077	.050	2.419	1	.000	1.080	.980	1.191
I neither approve nor disapprove	Intercept	-2.180	.913	5.695	1	.000			
	Gender	.821	.285	8.324	1	.001	2.273	1.301	3.969
	Age group	.383	.253	2.291	1	.000	1.467	.893	2.409
	Geo-Political Zone	.264	.089	8.924	1	.000	1.303	1.095	1.550
	Occupation	.063	.050	1.573	1	.001	1.065	.965	1.175

Category	Predictor	B	Std. Error	Wald	df	Sig.	Exp(B)	Lower	Upper
I disapprove	Intercept	-.902	.880	1.049	1	.000			
	Gender	.522	.276	3.573	1	.000	1.685	.981	2.893
	Age group	-.021	.246	.008	1	.000	.979	.604	1.585
	Geo-Political Zone	.412	.086	22.913	1	.000	1.509	1.275	1.786
	Occupation	.076	.049	2.447	1	.000	1.079	.981	1.187
I strongly disapprove	Intercept	-2.263	.939	5.812	1	.001			
	Gender	.732	.292	6.261	1	.000	2.079	1.172	3.688
	Age group	.277	.260	1.134	1	.000	1.319	.792	2.196
	Geo-Political Zone	.403	.091	19.661	1	.000	1.496	1.252	1.788
	Occupation	.017	.052	.105	1	.000	1.017	.918	1.127

a. **The reference category is: I strongly approve.**

Source: NOIPolls Governance Poll (January, 2021)

However, regarding the fitted model information in table 4.1, the chi-squared ratio test yielded a value of 74.627 (p = 0.000), indicating a robust model fit. In addition, acceptable values are also obtained for the pseudo R-squared (Cox and Snell: .071, Nagelkerke: .075, McFadden: .024). The likelihood ratio test in the table 4.1 is based on deviance [-2 Log Likelihood (LL)], the significance of the difference between the (-2LL) for our selected model minus likelihood ratio for a reduced model (intercept only). A common use of the likelihood ratio test is to test this difference (it is called chi-square model) dropping an interaction effect. If the chi-square model is significant, the interaction effect is contributing significantly to the full model and should be retained. However, the presence of a relationship between the response variable and combination of explanatory variables is based on the statistical significance of the final model chi-square. In our multinomial logit model, the p-value of the model chi-square (18.088) is 0.000, less than the level of significance 0.05. Hence, we reject the null hypothesis which states that there is no significant difference between the model without explanatory variables and the model with explanatory variables. Therefore, the existence of a significant relationship between government's performance rating in social services and socio-demographic variables is hereby validated and accepted to be true against the null hypothesis. By implication, table 4.2 illustrates that the socio-demographic variables in the multinomial logit model have significantly influenced government's performance rating in the provision of social services in Nigeria. This result corroborates the findings of Oboh (2017), Kennedy and Chris (2015), Qi-Gao (2019), Benito, Hanns, and Claudio (2020) who reported that voting patterns and government's provision of social amenities across the six geo-political zones in Nigeria have been influenced by ethnicity and religion diversities.

Further, table 4.2 illustrates that gender (with the odds-ratio[Exp(B)] of 1.589**)** is 1.589 times more likely to influence the respondents' rating of government's performance in the provision of social services as indicated by the coefficient of (.463), while age-group (with the odds-ratio[Exp(B)] of 0.850) is 0.850 times less likely to predict government's performance rating in the area of social services in Nigeria with estimated coefficient of (-.048). Meanwhile, socio-economic status (occupation) of the respondents (with the odds-ratio[Exp(B)] of 1.065) is 1.065 times more likely to influence the respondents' rating of government's performance in the area of provision of social with estimated coefficient of (.063) while geo-political zone (with the odds-ratio[Exp(B)] of 1.303) is 1.303 times more likely to predict the respondents' rating of government in the provision of social services as indicated by the coefficient of (.264).

Table 4.3: Multinomial logistic regression diagnostic tests result

	Likelihood Ratio Tests						Model Fitting Information						
Effect	**Model Fitting Criteria**			**Likelihood Ratio Tests**			**Model Fitting Criteria**				**Likelihood Ratio Tests**		
	AIC of Reduced Model	BIC of Reduced Model	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.	Model	AIC	BIC	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept	1543.871	1622.043	1511.871	19.021	4	.000	Intercept Only	1573.712	1593.255	1565.712			
Gender	1526.189	1604.360	1494.189	1.339	4	.000	Final	1532.850	1630.564	1492.850	72.861	16	.000
Age group	1529.766	1607.938	1497.766	4.916	4	.000	**Goodness-of-Fit**				**Pseudo R-Square**		
Geo-Political Zone	1587.124	1665.295	1555.124	62.274	4	.000	Chi-Square	df	Sig.	Cox and Snell	.072		
Occupation	1529.517	1607.689	1497.517	4.667	4	.000	Pearson	956.300	856	.000	Nagelkerke	.075	
							Deviance	943.354	856	.000	McFadden	.024	

The chi-square statistic is the difference in -2 log-likelihoods between the final model and a reduced model. The reduced model is formed by omitting an effect from the final model. The null hypothesis is that all parameters of that effect are 0.

Table 4.4: Multinomial logistic regression result which correlates government's performance rating in social services with socio-demographic variables

Government's performance rating in social services[a]		B	Std. Error	Wald Test Statistics	df	Sig.	Exp(B)	95% Confidence Interval for Exp(B)	
								Lower Bound	Upper Bound
I approve	Intercept	1.520	.767	3.926	1	.001			
	Gender	.103	.250	.168	1	.000	1.108	.679	1.810
	Age group	-.243	.213	1.308	1	.000	.784	.517	1.190
	Geo-Political Zone	.096	.079	1.484	1	.000	1.101	.943	1.284
	Occupation	-.053	.041	1.708	1	.001	.948	.875	1.027
I neither approve nor disapprove	Intercept	1.027	.804	1.630	1	.000			
	Gender	.122	.262	.216	1	.000	1.129	.676	1.888
	Age group	-.273	.223	1.491	1	.001	.761	.492	1.179
	Geo-Political Zone	.162	.082	3.885	1	.000	1.175	1.001	1.380
	Occupation	-.050	.043	1.381	1	.001	.951	.874	1.034
I disapprove	Intercept	1.113	.758	2.157	1	.000			
	Gender	.194	.247	.617	1	.000	1.214	.748	1.970
	Age group	-.378	.210	3.231	1	.001	.686	.454	1.035
	Geo-Political Zone	.333	.077	18.566	1	.000	1.396	1.199	1.624
	Occupation	-.055	.040	1.843	1	.000	.947	.875	1.025
I strongly disapprove	Intercept	-1.156	.869	1.768	1	.001			
	Gender	-.016	.282	.003	1	.001	.984	.566	1.710
	Age group	-.079	.236	.113	1	.000	.924	.582	1.466
	Geo-Political Zone	.508	.089	32.855	1	.000	1.661	1.397	1.976
	Occupation	.003	.045	.006	1	.000	1.003	.918	1.096

a. The reference category is: I strongly approve.

Table 4.4 shows that geo-political zone is 1.101 times more likely to influence the respondents' rating of government's performance in the provision of social services in Nigeria compared other variables in the model with estimated coefficient of (.096) while age-group is .761 times less likely to influence the respondents rating of government's performance compared to other variables in the model with estimated coefficient of (-.273). In addition, occupation is .947 times less likely to influence the respondents' rating of government's performance in the provision of social services compared other variables in our multinomial logit model with estimated coefficient of (-.055). Also, geo-political zone is 1.661 times more likely to influence the respondents' rating of government's performance in the provision of social services as compared to other variables in the multinomial logit model with estimated coefficient of (.508).

4.5: Multinomial logistics regression diagnostic tests result

	Likelihood Ratio Tests						Model Fitting Information						
Effect	Model Fitting Criteria			Likelihood Ratio Tests			Model	Model Fitting Criteria			Likelihood Ratio Tests		
	AIC of Reduced Model	BIC of Reduced Model	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.		AIC	BIC	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept	1528.679	1607.655	1496.679	10.097	4	.000	Intercept Only	1566.221	1585.965	1558.221			
Gender	1527.562	1606.538	1495.562	8.981	4	.000	Final	1526.581	1625.301	1486.581	71.639	16	.000
Age group	1519.877	1598.852	1487.877	1.295	4	.000	**Goodness-of-Fit**				**Pseudo R-Square**		
Geo-Political Zone	1571.969	1650.945	1539.969	53.387	4	.000		Chi-Square	df	Sig.	Cox and Snell	.067	
Occupation	1524.924	1603.900	1492.924	6.343	4	.000	Pearson	966.158	892	.000	Nagelkerke	.071	
							Deviance	907.598	892	.000	McFadden	.023	

The chi-square statistic is the difference in -2 log-likelihoods between the final model and a reduced model. The reduced model is formed by omitting an effect from the final model. The null hypothesis is that all parameters of that effect are 0.

4.6: Multinomial logistic regression result which correlates the impact of socio-demographic variables with government's performance rating in social services

Government's performance rating in social services[a]		B	Std. Error	Wald Test Statistics	df	Sig.	Exp(B)	95% Confidence Interval for Exp(B)	
								Lower Bound	Upper Bound
I approve	Intercept	.748	.849	.776	1	.001			
	Gender	.188	.280	.452	1	.000	1.207	.697	2.089
	Age group	-.178	.239	.554	1	.000	.837	.524	1.337
	Geo-Political Zone	.119	.089	1.779	1	.000	1.126	.946	1.341
	Occupation	.089	.052	2.982	1	.001	1.093	.988	1.209
I neither approve nor disapprove	Intercept	-.621	.893	.484	1	.000			
	Gender	.239	.294	.657	1	.001	1.269	.713	2.260
	Age group	-.104	.250	.175	1	.000	.901	.552	1.470
	Geo-Political Zone	.319	.093	11.862	1	.001	1.376	1.147	1.650
	Occupation	.107	.053	4.005	1	.000	1.113	1.002	1.236
I disapprove	Intercept	-.678	.831	.665	1	.000			
	Gender	.565	.272	4.304	1	.000	1.759	1.032	3.001
	Age group	-.130	.232	.312	1	.000	.878	.557	1.385
	Geo-Political Zone	.430	.087	24.757	1	.000	1.538	1.298	1.822
	Occupation	.110	.050	4.773	1	.000	1.116	1.011	1.232
I strongly disapprove	Intercept	-.826	.882	.877	1	.001			
	Gender	.188	.291	.415	1	.000	1.206	.682	2.135
	Age group	-.015	.246	.004	1	.000	.985	.608	1.596
	Geo-Political Zone	.342	.092	13.952	1	.000	1.408	1.177	1.685
	Occupation	.119	.053	5.094	1	.001	1.126	1.016	1.249

a. **The reference category is: I strongly approve.**
   Source: NOIPolls Governance Poll (March, 2021)

Table 4.6 illustrates that gender is 1.207 times more likely to influence the respondents' rating of government's performance in the provision of social services in Nigeria compared to other socio-demographic variables in the model with estimated coefficient of (.188) while the age-group of the respondents is .901 times less likely to influence the respondents' rating of government's performance in the provision of social services in Nigeria compared to other variables in the model with estimated coefficient of (-.104). Table 4.6 further illustrated that geo-political zone is 1.538 times more likely to influence the respondents' rating of the performance of government in the area of social services provision in Nigeria compared to other variables in the model with estimated coefficient of (.430) while the socio-economic status of the respondents' (occupation) is 1.126 times more likely to influence the respondents' rating of government's performance in the provision of social services in Nigeria as compared to other variables in the model with estimated coefficient of (.119)

Table 4.7: Multinomial logistic regression diagnostic tests result

	Likelihood Ratio Tests						**Model Fitting Information**						
Effect	**Model Fitting Criteria**			**Likelihood Ratio Tests**				**Model Fitting Criteria**		**Likelihood Ratio Tests**			
	AIC of Reduced Model	BIC of Reduced Model	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.	Model	AIC	BIC	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept	1664.566	1742.972	1632.566	9.072	4	.000	Intercept Only	1684.550	1704.151	1676.550			
Gender	1661.778	1740.184	1629.778	6.284	4	.000	Final	1663.494	1761.501	1623.494	53.055	16	.000
Age group	1660.229	1738.635	1628.229	4.735	4	.000	**Goodness-of-Fit**			**Pseudo R-Square**			
Geo-Political Zone	1693.998	1772.404	1661.998	38.504	4	.000		Chi-Square	df	Sig.	Cox and Snell	.052	
Occupation	1656.659	1735.064	1624.659	1.164	4	.000	Pearson	1055.170	932	.000	Nagelkerke	.055	
							Deviance	1034.496	932	.000	McFadden	.017	

The chi-square statistic is the difference in –2 log-likelihoods between the final model and a reduced model. The reduced model is formed by omitting an effect from the final model. The null hypothesis is that all parameters of that effect are 0.
   Source: NOIPolls Governance Poll (April, 2021)

Table 4.8: Multinomial logistic regression result which correlates the impact of socio-demographic variables with government's performance rating in social services

Source: NOIPolls Governance Poll (April, 2021)

Government's performance rating in social services[a]		B	Std. Error	Wald Test Statistics	df	Sig.	Exp(B)	95% Confidence Interval for Exp(B)	
								Lower Bound	Upper Bound
I approve	Intercept	.876	.833	1.105	1	.001			
	Gender	-.284	.274	1.074	1	.000	.753	.440	1.288
	Age group	.211	.238	.787	1	.000	1.235	.774	1.971
	Geo-Political Zone	.109	.086	1.596	1	.000	1.115	.942	1.320
	Occupation	-.040	.043	.880	1	.000	.961	.884	1.045
I neither approve nor disapprove	Intercept	-.651	.855	.579	1	.000			
	Gender	.110	.280	.155	1	.001	1.116	.645	1.931
	Age group	.371	.242	2.352	1	.000	1.449	.902	2.329
	Geo-Political Zone	.215	.087	6.090	1	.000	1.240	1.045	1.471
	Occupation	-.033	.043	.582	1	.000	.967	.888	1.053
I disapprove	Intercept	-.543	.832	.426	1	.000			
	Gender	-.082	.272	.090	1	.000	.922	.541	1.571
	Age group	.330	.236	1.956	1	.000	1.391	.876	2.207
	Geo-Political Zone	.355	.085	17.341	1	.000	1.426	1.206	1.684
	Occupation	-.023	.042	.294	1	.000	.977	.900	1.062
I strongly disapprove	Intercept	-.446	.832	.287	1	.000			
	Gender	-.300	.273	1.210	1	.000	.741	.434	1.265
	Age group	.443	.236	3.520	1	.000	1.557	.980	2.472
	Geo-Political Zone	.350	.085	16.830	1	.000	1.419	1.201	1.677
	Occupation	-.038	.043	.815	1	.000	.962	.885	1.046

The reference category is: I strongly approve.

Table 4.8 depicts that occupation is .961 times less likely to influence the respondents' rating of government's performance in social services in Nigeria compared to other variables in the multinomial logit model designed for this study with estimated coefficient of (-.040) while geo-political zones is 1.240 times more likely to influence respondents' rating of government's performance in social services as compared to other variables in our model with the estimated coefficient of (.215). In addition, the respondents' age-group is also 1.391 times more likely to influence the rating of government's performance in the provision of social services in Nigeria compared to other variables in the model with estimated coefficient of (.330) while gender is .741 times less likely to predicts the respondents' behaviour in the rating of government's performance in the provision of social services as compared to other socio-demographic variables in the model with estimated coefficient of (-.300).

Table 4.9: Multinomial logistic regression diagnostic tests result

	Likelihood Ratio Tests						Model Fitting Information						
Effect	**Model Fitting Criteria**			**Likelihood Ratio Tests**				**Model Fitting Criteria**			**Likelihood Ratio Tests**		
	AIC of Reduced Model	BIC of Reduced Model	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.	Model	AIC	BIC	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept	1543.871	1622.043	1511.871	19.021	4	.000	Intercept Only	1573.712	1593.255	1565.712			
Gender	1526.189	1604.360	1494.189	1.339	4	.000	Final	1532.850	1630.564	1492.850	72.861	16	.000
Age group	1529.766	1607.938	1497.766	4.916	4	.000	**Goodness-of-Fit**				**Pseudo R-Square**		
Geo-Political Zone	1587.124	1665.295	1555.124	62.274	4	.000		Chi-Square	df	Sig.	Cox and Snell	.072	
Occupation	1529.517	1607.689	1497.517	4.667	4	.000	Pearson	956.300	856	.000	Nagelkerke	.075	
							Deviance	943.354	856	.000	McFadden	.024	

The chi-square statistic is the difference in -2 log-likelihoods between the final model and a reduced model. The reduced model is formed by omitting an effect from the final model. The null hypothesis is that all parameters of that effect are 0.

Source: NOIPolls Governance Poll (May, 2021)

Table 4.10: Multinomial logistic regression result which correlates government's performance rating in social services with socio-demographic variables

Government's performance rating in social services[a]		B	Std. Error	Wald Test Statistics	df	Sig.	Exp(B)	95% Confidence Interval for Exp(B)	
								Lower Bound	Upper Bound
I approve	Intercept	1.520	.767	3.926	1	.001			
	Gender	.103	.250	.168	1	.000	1.108	.679	1.810
	Age group	-.243	.213	1.308	1	.000	.784	.517	1.190
	Geo-Political Zone	.096	.079	1.484	1	.000	1.101	.943	1.284
	Occupation	-.053	.041	1.708	1	.001	.948	.875	1.027
I neither approve nor disapprove	Intercept	1.027	.804	1.630	1	.000			
	Gender	.122	.262	.216	1	.000	1.129	.676	1.888
	Age group	-.273	.223	1.491	1	.001	.761	.492	1.179
	Geo-Political Zone	.162	.082	3.885	1	.000	1.175	1.001	1.380
	Occupation	-.050	.043	1.381	1	.001	.951	.874	1.034
I disapprove	Intercept	1.113	.758	2.157	1	.000			
	Gender	.194	.247	.617	1	.000	1.214	.748	1.970
	Age group	-.378	.210	3.231	1	.001	.686	.454	1.035
	Geo-Political Zone	.333	.077	18.566	1	.000	1.396	1.199	1.624
	Occupation	-.055	.040	1.843	1	.000	.947	.875	1.025
I strongly disapprove	Intercept	-1.156	.869	1.768	1	.001			
	Gender	-.016	.282	.003	1	.001	.984	.566	1.710
	Age group	-.079	.236	.113	1	.000	.924	.582	1.466
	Geo-Political Zone	.508	.089	32.855	1	.000	1.661	1.397	1.976
	Occupation	.003	.045	.006	1	.000	1.003	.918	1.096

b. The reference category is: I strongly approve.

Source: NOIPolls Governance Poll (May, 2021)

Table 4.10 shows that geo-political zone is 1.101 times more likely to influence the respondents' rating of government's performance in the provision of social services in Nigeria compared other variables in the model with estimated coefficient of (.096) while age-group is .761 times less likely to influence the respondents rating of government's performance compared to other variables in the model with estimated coefficient of (-.273). In addition, occupation is .947 times less likely to influence the respondents' rating of government's performance in the provision of social services compared other variables in our multinomial logit model with estimated coefficient of (-.055). Also, geo-political zone is 1.661 times more likely to influence the respondents' rating of government's performance in the provision of social services as compared to other variables in the multinomial logit model with estimated coefficient of (.508).

Table 4.11: Multinomial logistic regression diagnostic tests result

	Likelihood Ratio Tests						Model Fitting Information						
Effect	Model Fitting Criteria			Likelihood Ratio Tests				Model Fitting Criteria			Likelihood Ratio Tests		
	AIC of Reduced Model	BIC of Reduced Model	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.	Model	AIC	BIC	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept	1682.599	1761.266	1650.599	5.363	4	.000	Intercept Only	1697.183	1716.850	1689.183			
Gender	1681.625	1760.292	1649.625	4.389	4	.000	Final	1685.236	1783.570	1645.236	43.948	16	.000
Age group	1684.639	1763.306	1652.639	7.403	4	.000	Goodness-of-Fit			Pseudo R-Square			
Geo-Political Zone	1700.475	1779.143	1668.475	23.240	4	.000		Chi-Square	df	Sig.	Cox and Snell	.043	
Occupation	1684.086	1762.753	1652.086	6.850	4	.000	Pearson	1139.067	968	.000	Nagelkerke	.045	
							Deviance	1061.335	968	.000	McFadden	.014	

The chi-square statistic is the difference in -2 log-likelihoods between the final model and a reduced model. The reduced model is formed by omitting an effect from the final model. The null hypothesis is that all parameters of that effect are 0

Source: NOIPolls Governance Poll (June, 2021)

Table 4.12: Multinomial logistic regression result which correlates government's performance rating in social services with socio-demographic variables

Government's performance rating in social services[a]		B	Std. Error	Wald Test Statistics	df	Sig.	Exp(B)	95% Confidence Interval for Exp(B)	
								Lower Bound	Upper Bound
I approve	Intercept	-.532	.770	.478	1	.001			
	Gender	.130	.267	.236	1	.000	1.138	.675	1.921
	Age group	.495	.235	4.424	1	.001	1.640	1.034	2.600
	Geo-Political Zone	.075	.079	.901	1	.000	1.078	.923	1.259
	Occupation	.003	.044	.006	1	.001	1.003	.920	1.094
I neither approve nor disapprove	Intercept	-1.183	.819	2.086	1	.000			
	Gender	.060	.284	.045	1	.000	1.062	.609	1.854
	Age group	.359	.248	2.103	1	.001	1.433	.881	2.329
	Geo-Political Zone	.169	.083	4.107	1	.000	1.184	1.006	1.395
	Occupation	.080	.046	3.080	1	.000	1.083	.991	1.185
I disapprove	Intercept	-1.200	.759	2.496	1	.000			
	Gender	.248	.261	.903	1	.000	1.282	.768	2.139
	Age group	.485	.230	4.424	1	.000	1.624	1.034	2.551
	Geo-Political Zone	.263	.077	11.570	1	.000	1.300	1.118	1.513
	Occupation	.029	.043	.455	1	.000	1.029	.946	1.120
I strongly disapprove	Intercept	-1.468	.799	3.370	1	.000			
	Gender	-.127	.278	.207	1	.001	.881	.511	1.520
	Age group	.609	.241	6.408	1	.000	1.839	1.147	2.949
	Geo-Political Zone	.241	.081	8.838	1	.000	1.273	1.086	1.492
	Occupation	.047	.045	1.066	1	.000	1.048	.959	1.144

a. **The reference category is: I strongly approve.**

Source: NOIPolls Governance Poll (June, 2021)

Table 4.12 shows that geo-political zone is 1.078 times more likely to predicts the respondents behaviours in the rating of government's performance in the provision of social services in Nigeria as compared to other variables in the model with estimated coefficient of (.075) while gender is 1.062 times more likely to influence the respondents' rating of government's performance in the provision of social services as compared to other variables in the multinomial logit model designed for this study with the estimated parameter of (.060). Meanwhile, occupation is 1.029 times more likely to influence the respondents' rating performance of the government in the areas of social services compared to other variables in the model with the estimated coefficient of (.029). Table 4.12 illustrated further that the age-group of the respondents is 1.839 times more likely to influence the respondents' behaviours in the rating of the performance of the government in the areas of social services in Nigeria as compared to other variables in the model with estimated coefficient of (.609).

Table 4.13: Multinomial logistic regression diagnostic tests result

	Likelihood Ratio Tests						Model Fitting Information						
Effect	Model Fitting Criteria			Likelihood Ratio Tests			Model	Model Fitting Criteria			Likelihood Ratio Tests		
	AIC of Reduced Model	BIC of Reduced Model	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.		AIC	BIC	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept	1685.527	1764.154	1653.527	4.502	4	.000	Intercept Only	1700.524	1720.181	1692.524			
Gender	1685.310	1763.937	1653.310	4.285	4	.000	Final	1689.025	1787.309	1649.025	43.499	16	.000
Age group	1688.302	1766.929	1656.302	7.277	4	.000	**Goodness-of-Fit**				**Pseudo R-Square**		
Geo-Political Zone	1702.633	1781.260	1670.633	21.608	4	.000		Chi-Square	df	Sig.	Cox and Snell	.042	
Occupation	1689.680	1768.307	1657.680	8.655	4	.000	Pearson	1147.569	968	.000	Nagelkerke	.044	
							Deviance	1071.629	968	.000	McFadden	.014	

The chi-square statistic is the difference in -2 log-likelihoods between the final model and a reduced model. The reduced model is formed by omitting an effect from the final model. The null hypothesis is that all parameters of that effect are 0.

Source: NOIPolls Governance Poll (July, 2021)

Table 4.14: Multinomial logistic regression result which correlates government's performance rating in social services with socio-demographic variables

Government's performance rating in social services[a]		B	Std. Error	Wald Test Statistics	df	Sig.	Exp(B)	95% Confidence Interval for Exp(B)	
								Lower Bound	Upper Bound
I approve	Intercept	-.604	.785	.592	1	.001			
	Gender	.126	.262	.230	1	.001	1.134	.678	1.895
	Age group	.493	.236	4.347	1	.001	1.637	1.030	2.601
	Geo-Political Zone	.091	.080	1.301	1	.001	1.096	.937	1.282
	Occupation	.013	.044	.083	1	.001	1.013	.929	1.104
I neither approve nor disapprove	Intercept	-1.127	.835	1.821	1	.000			
	Gender	.057	.279	.042	1	.001	1.059	.612	1.831
	Age group	.326	.250	1.702	1	.001	1.385	.849	2.260
	Geo-Political Zone	.164	.085	3.724	1	.000	1.178	.997	1.391
	Occupation	.092	.046	4.060	1	.000	1.096	1.003	1.199
I disapprove	Intercept	-1.079	.774	1.945	1	.001			
	Gender	.165	.257	.411	1	.001	1.179	.712	1.953
	Age group	.456	.232	3.855	1	.000	1.577	1.001	2.486
	Geo-Political Zone	.266	.078	11.519	1	.001	1.305	1.119	1.521
	Occupation	.040	.043	.850	1	.000	1.041	.956	1.132
I strongly disapprove	Intercept	-1.496	.819	3.340	1	.001			
	Gender	-.197	.274	.515	1	.001	.821	.480	1.406
	Age group	.599	.244	6.051	1	.001	1.820	1.129	2.934
	Geo-Political Zone	.251	.083	9.116	1	.000	1.285	1.092	1.512
	Occupation	.067	.045	2.184	1	.001	1.069	.978	1.168

a. The reference category is: I strongly approve.

Source: NOIPolls Governance Poll (July, 2021)

Table 4.14 illustrates that gender is 1.134 times more likely to influence the respondents' behaviours in the rating of government's performance in social services compared to other variables in the model with an estimated coefficient of (.126) while the socio-economic status of the respondents (occupation) is 1.096 times more likely to influence the respondents' rating of government's performance in the area of social services as compared to other variables in the model with the estimated coefficient of (.092). Also, table 4.14 indicates that the respondents age-group is 1.577 times more likely to influence their rating of government's performance in social services as compared to other variables in the model with estimated parameter of (.456) while geo-political zone is 1.285 times more likely to influence the behaviours of the respondents in rating the performance of the government in the provision of social services as compared to other variables in the model with the estimated coefficient of (.251).

Table 4.15: Multinomial logistic regression diagnostic tests result

	Likelihood Ratio Tests						Model Fitting Information						
Effect	Model Fitting Criteria			Likelihood Ratio Tests			Model	Model Fitting Criteria			Likelihood Ratio Tests		
	AIC of Reduced Model	BIC of Reduced Model	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.		AIC	BIC	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept	1567.100	1645.868	1535.100	8.344	4	.000	Intercept Only	1571.408	1591.101	1563.408			
Gender	1563.178	1641.947	1531.178	4.422	4	.000	Final	1566.756	1665.216	1526.756	36.652	16	.002
Age group	1562.850	1641.618	1530.850	4.094	4	.000	**Goodness-of-Fit**				**Pseudo R-Square**		
Geo-Political Zone	1583.066	1661.835	1551.066	24.310	4	.000		Chi-Square	df	Sig.	Cox and Snell	.035	
Occupation	1563.500	1642.268	1531.500	4.744	4	.000	Pearson	1043.980	876	.000	Nagelkerke	.037	
							Deviance	985.174	876	.000	McFadden	.012	

The chi-square statistic is the difference in -2 log-likelihoods between the final model and a reduced model. The reduced model is formed by omitting an effect from the final model. The null hypothesis is that all parameters of that effect are 0.

Source: NOIPolls Governance Poll (August, 2021)

Table 4.16: Multinomial logistic regression result correlating government's performance rating in social services with socio-demographic variables

Parameter Estimates

Government's performance rating in social services[a]		B	Std. Error	Wald Test Statistics	df	Sig.	Exp(B)	95% Confidence Interval for Exp(B)	
								Lower Bound	Upper Bound
I approve	Intercept	2.906	1.092	7.082	1	.000			
	Gender	-.326	.342	.912	1	.001	.722	.369	1.410
	Age group	-.238	.301	.626	1	.000	.788	.437	1.421
	Geo-Political Zone	.058	.103	.317	1	.000	1.060	.866	1.297
	Occupation	-.087	.054	2.555	1	.000	.917	.824	1.020
I neither approve nor disapprove	Intercept	2.109	1.112	3.595	1	.000			
	Gender	-.253	.348	.530	1	.000	.776	.392	1.536
	Age group	-.296	.306	.935	1	.001	.744	.408	1.355
	Geo-Political Zone	.180	.105	2.958	1	.000	1.197	.975	1.470
	Occupation	-.030	.055	.298	1	.001	.971	.872	1.080
I disapprove	Intercept	1.993	1.062	3.525	1	.001			
	Gender	-.034	.332	.010	1	.000	.967	.504	1.853
	Age group	-.154	.291	.281	1	.000	.857	.485	1.516
	Geo-Political Zone	.189	.100	3.582	1	.000	1.209	.993	1.471
	Occupation	-.032	.052	.384	1	.001	.969	.875	1.072
I strongly disapprove	Intercept	2.485	1.080	5.292	1	.000			
	Gender	-.321	.338	.901	1	.000	.726	.374	1.407
	Age group	-.424	.297	2.035	1	.001	.654	.365	1.172
	Geo-Political Zone	.307	.102	9.112	1	.000	1.360	1.114	1.660
	Occupation	-.033	.053	.380	1	.000	.968	.873	1.074

a. The reference category is: I strongly approve.

Source: NOIPolls Governance Poll (August, 2021)

Table 4.16 shows that gender is .340 times less likely to predict the behaviours of the respondents in the rating of government's performance in the provision of social services as compared to other variables in the model with an estimated coefficient of (-.326) while geo-political zone is 1.197 times more likely to influence the behaviours of the respondents in the rating of government performance in social services compared to other variables in the model with the estimated coefficient of (.180). I addition, occupation is also .969 times less likely to predict the behaviours of the respondents in rating the performance of government in social services as compared to other variables in the model with an estimated coefficient of (-.032) while the respondents age-group is .654 times less likely to influence the respondents' rating of government's performance compared to other variables in the model with an estimated coefficient of (-.424).

Table 4.17: Multinomial logistic regression diagnostic tests result

Source: NOIPolls Governance Poll (September, 2021)

	Likelihood Ratio Tests						Model Fitting Information					
Effect	Model Fitting Criteria			Likelihood Ratio Tests			Model Fitting Criteria			Likelihood Ratio Tests		
	AIC of Reduced Model	BIC of Reduced Model	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.	Model	AIC	BIC	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept	1591.103	1670.207	1559.103	20.740	4	.000	Intercept Only	1637.612	1657.388	1629.612			
Gender	1578.794	1657.897	1546.794	8.430	4	.000	Final	1578.364	1677.243	1538.364	91.249	16	.000
Age group	1583.527	1662.631	1551.527	13.164	4	.000	**Goodness-of-Fit**				**Pseudo R-Square**		
Geo-Political Zone	1633.384	1712.487	1601.384	63.020	4	.000		Chi-Square	df	Sig.	Cox and Snell	.084	
Occupation	1572.821	1651.924	1540.821	2.457	4	.000	Pearson	1032.321	888	.000	Nagelkerke	.089	
							Deviance	999.799	888	.000	McFadden	.030	

The chi-square statistic is the difference in -2 log-likelihoods between the final model and a reduced model. The reduced model is formed by omitting an effect from the final model. The null hypothesis is that all parameters of that effect are 0.

Table 4.18: Multinomial logistic regression correlating government's performance rating in social services with socio-demographic variables

Government's performance rating in social services[a]		B	Std. Error	Wald Test Statistics	df	Sig.	Exp(B)	95% Confidence Interval for Exp(B) Lower Bound	Upper Bound
I approve	Intercept	.834	1.044	.638	1	.000			
	Gender	.381	.349	1.191	1	.001	1.464	.738	2.905
	Age group	.220	.306	.518	1	.000	1.246	.684	2.271
	Geo-Political Zone	-.007	.109	.005	1	.001	.993	.802	1.229
	Occupation	-.077	.055	1.943	1	.000	.926	.831	1.032
I neither approve nor disapprove	Intercept	-.672	1.070	.395	1	.000			
	Gender	.603	.355	2.892	1	.000	1.827	.912	3.661
	Age group	.413	.311	1.765	1	.001	1.512	.822	2.782
	Geo-Political Zone	.167	.110	2.324	1	.000	1.182	.953	1.466
	Occupation	-.081	.056	2.061	1	.001	.922	.826	1.030
I disapprove	Intercept	-1.599	1.029	2.415	1	.000			
	Gender	.740	.340	4.729	1	.000	2.097	1.076	4.086
	Age group	.698	.298	5.479	1	.001	2.009	1.120	3.604
	Geo-Political Zone	.330	.105	9.792	1	.001	1.391	1.131	1.710
	Occupation	-.072	.053	1.828	1	.000	.930	.838	1.033
I strongly disapprove	Intercept	-1.504	1.047	2.065	1	.001			
	Gender	.428	.346	1.530	1	.001	1.534	.779	3.022
	Age group	.628	.303	4.286	1	.000	1.873	1.034	3.393
	Geo-Political Zone	.392	.107	13.401	1	.000	1.480	1.200	1.825
	Occupation	-.057	.054	1.103	1	.001	.944	.849	1.051

a. The reference category is: I strongly approve.

Source: NOIPolls Governance Poll (September, 2021)

Table 4.18 illustrates that occupation is .163 times less likely to predict the respondents' behaviour in the rating of government's performance in the provision of social services compared to other variables in the model with an estimated coefficient of (-.077) while gender is 1.827 times more likely to influence the rating of government's performance in social services compared to other variables in the model with the estimated coefficient of (.603). In addition, geo-political zone is 1.391 times more likely to predicts the behaviours of the respondents in rating the performance of government in the provision of social services compared to other variables in the multinomial logit model with an estimated coefficient of (.330) while the respondents' age-group is 1.873 times more likely to influence the respondents' behaviours in rating government's performance in the provision of social services compared to other variables in the model with an estimated coefficient of (.392).

Table 4.19: Multinomial logistic regression diagnostic tests result

Effect	AIC of Reduced Model	BIC of Reduced Model	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.	Model	AIC	BIC	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept	1647.609	1726.094	1615.609	20.184	4	.000	Intercept Only	1672.083	1691.704	1664.083			
Gender	1632.683	1711.168	1600.683	5.259	4	.000	Final	1635.424	1733.530	1595.424	68.659	16	.000
Age group	1637.067	1715.552	1605.067	9.643	4	.000	**Goodness-of-Fit**				**Pseudo R-Square**		
Geo-Political Zone	1677.013	1755.498	1645.013	49.589	4	.000		Chi-Square	df	Sig.	Cox and Snell	.067	
Occupation	1630.725	1709.210	1598.725	3.301	4	.000	Pearson	1157.427	916	.000	Nagelkerke	.070	
							Deviance	1070.190	916	.000	McFadden	.023	

The chi-square statistic is the difference in -2 log-likelihoods between the final model and a reduced model. The reduced model is formed by omitting an effect from the final model. The null hypothesis is that all parameters of that effect are 0.

Source: NOIPolls Governance Poll (October, 2021)

Table 4.20: Multinomial logistic regression result correlating socio-demographic variables with government's performance rating in social services

Parameter Estimates

Government's performance rating in social services[a]		B	Std. Error	Wald Test Statistics	Df	Sig.	Exp(B)	95% Confidence Interval for Exp(B)	
								Lower Bound	Upper Bound
I approve	Intercept	2.000	.979	4.171	1	.000			
	Gender	.077	.328	.055	1	.001	1.080	.568	2.055
	Age group	-.302	.261	1.333	1	.000	.740	.443	1.234
	Geo-Political Zone	.056	.105	.282	1	.000	1.058	.860	1.300
	Occupation	-.034	.055	.393	1	.000	.966	.868	1.075
I neither approve nor disapprove	Intercept	2.111	.969	4.746	1	.000			
	Gender	-.164	.326	.252	1	.000	.849	.448	1.608
	Age group	-.294	.259	1.292	1	.000	.745	.449	1.238
	Geo-Political Zone	.183	.104	3.120	1	.001	1.201	.980	1.472
	Occupation	-.050	.054	.846	1	.000	.951	.855	1.058
I disapprove	Intercept	.517	.938	.304	1	.001			
	Gender	.178	.314	.322	1	.001	1.195	.646	2.211
	Age group	.007	.248	.001	1	.000	1.007	.619	1.638
	Geo-Political Zone	.406	.100	16.385	1	.000	1.501	1.233	1.826
	Occupation	-.050	.052	.911	1	.000	.951	.859	1.054
I strongly disapprove	Intercept	.059	.958	.004	1	.001			
	Gender	.251	.320	.616	1	.000	1.286	.686	2.410
	Age group	.075	.253	.088	1	.001	1.078	.657	1.769
	Geo-Political Zone	.305	.102	8.946	1	.000	1.357	1.111	1.657
	Occupation	-.005	.053	.008	1	.000	.995	.897	1.104

a. **The reference category is: I strongly approve.**

Source: NOIPolls Governance Poll (October, 2021)

Table 4.20 shows that gender is 1.080 times more likely to influence the rating of government's performance in the provision of social services compared to other variables in the model with an estimated coefficient of (.077) while age-group is .745 times less likely to predicts the behaviours of the respondents compared other variables in the model with an estimated coefficient of (-.294). Also, geo-political zone is 1.501 times more likely to predicts the behaviour of the respondents in government's performance rating in social services compared to other variables in the model with an estimated coefficient of (.406) while the socio-economic status (occupation) of the respondents is .995 times less likely to predicts the behaviours of the respondents in rating government performance in the provision of social services compared to other variables in the model with an estimated coefficient of (-.005).

Table 4.21: Multinomial logistic regression diagnostic tests result

Effect	Likelihood Ratio Tests						Model Fitting Information						
	Model Fitting Criteria			Likelihood Ratio Tests			Model Fitting Criteria				Likelihood Ratio Tests		
	AIC of Reduced Model	BIC of Reduced Model	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.	Model	AIC	BIC	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept	1402.971	1479.701	1370.971	14.158	4	.000	Intercept Only	1452.515	1471.698	1444.515			
Gender	1400.012	1476.742	1368.012	11.199	4	.000	Final	1396.813	1492.726	1356.813	87.702	16	.000
Age group	1399.359	1476.089	1367.359	10.546	4	.000							
Geo-Political Zone	1445.492	1522.222	1413.492	56.679	4	.000	**Goodness-of-Fit**			**Pseudo R-Square**			
							Chi-Square	df	Sig.	Cox and Snell	.093		
Occupation	1395.221	1471.951	1363.221	6.408	4	.000	Pearson	982.920	840	.000	Nagelkerke	.099	
							Deviance	892.164	840	.000	McFadden	.034	

The chi-square statistic is the difference in -2 log-likelihoods between the final model and a reduced model. The reduced model is formed by omitting an effect from the final model. The null hypothesis is that all parameters of that effect are 0.

Source: NOIPolls Governance Poll (November, 2021)

Table 4.22: Multinomial logistic regression result correlating government's performance rating in social services with socio-demographic variables

Government's performance rating in social services[a]	Parameter Estimates	B	Std. Error	Wald Test Statistics	df	Sig.	Exp(B)	95% Confidence Interval for Exp(B)	
								Lower Bound	Upper Bound
I approve	Intercept	1.643	1.109	2.195	1	.001			
	Gender	-.307	.378	.657	1	.000	.736	.351	1.544
	Age group	.042	.333	.016	1	.000	1.043	.543	2.002
	Geo-Political Zone	-.079	.121	.427	1	.001	.924	.728	1.172
	Occupation	.104	.069	2.274	1	.000	1.109	.969	1.269
I neither approve nor disapprove	Intercept	.044	1.122	.002	1	.000			
	Gender	.146	.378	.148	1	.001	1.157	.551	2.427
	Age group	.136	.334	.165	1	.000	1.145	.596	2.202
	Geo-Political Zone	.220	.120	3.383	1	.000	1.246	.986	1.575
	Occupation	.044	.070	.397	1	.000	1.045	.912	1.197
I disapprove	Intercept	-.111	1.068	.011	1	.000			
	Gender	.156	.359	.189	1	.001	1.169	.578	2.363
	Age group	.350	.317	1.218	1	.000	1.420	.762	2.645
	Geo-Political Zone	.347	.114	9.229	1	.000	1.414	1.131	1.768
	Occupation	.029	.067	.192	1	.000	1.030	.904	1.173
I strongly disapprove	Intercept	-.690	1.109	.387	1	.000			
	Gender	-.337	.375	.810	1	.000	.714	.342	1.488
	Age group	.571	.329	3.010	1	.000	1.769	.929	3.371
	Geo-Political Zone	.314	.118	7.061	1	.000	1.369	1.086	1.726
	Occupation	.070	.069	1.054	1	.000	1.073	.938	1.228

a. The reference category is: I strongly approve.

Source: NOIPolls Governance Poll (November, 2021)

Table 4.22 illustrates that gender is .736 times less likely to predict the behaviours of the respondents in rating the performance of government in the provision of social services compared to other variables in the model with an estimated coefficient of (-.307) while the respondents' age-group is 1.145 times more likely to influence the respondents' rating of government's performance in the provision of social services compared to other variables in the model with the estimated coefficient of (.136). Table 4.22 further illustrates that geo-political zone is also 1.414 times more likely to influence the respondents' behaviours in rating the government's performance in social services compared to other variables in the model with an estimated coefficient of (.347) while the socio-economic status of the respondents (occupation) is 1.073 times more likely to predicts the respondents' behaviours in the rating of government's performance in the provision of social services compared to other variables in the model with an estimated coefficient of (.070).

Table 4.23: Multinomial logistic regression diagnostic tests result

	Likelihood Ratio Tests						Model Fitting Information						
Effect	Model Fitting Criteria			Likelihood Ratio Tests			Model Fitting Criteria			Likelihood Ratio Tests			
	AIC of Reduced Model	BIC of Reduced Model	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.	Model	AIC	BIC	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept	1444.603	1522.200	1412.603	8.496	4	.000	Intercept Only	1450.969	1470.368	1442.969			
Gender	1447.961	1525.557	1415.961	11.853	4	.000	Final	1444.107	1541.103	1404.107	38.861	16	.000
Age group	1445.680	1523.276	1413.680	9.573	4	.000	**Goodness-of-Fit**			**Pseudo R-Square**			
Geo-Political Zone	1448.890	1526.486	1416.890	12.783	4	.000	Chi-Square	df	Sig.	Cox and Snell	.040		
Occupation	1443.061	1520.658	1411.061	6.954	4	.000	Pearson	840.943	804	.000	Nagelkerke	.042	
							Deviance	844.611	804	.000	McFadden	.014	

The chi-square statistic is the difference in -2 log-likelihoods between the final model and a reduced model. The reduced model is formed by omitting an effect from the final model. The null hypothesis is that all parameters of that effect are 0.

Source: NOIPolls Governance Poll (December, 2021)

Table 4.24: Multinomial logistic regression result which correlates socio-demographic variables with government's performance rating in social services

Government's performance rating in social services		B	Std. Error	Wald Test Statistic	df	Sig.	Exp(B)	95% Confidence Interval for Exp(B)	
								Lower Bound	Upper Bound
I approve	Intercept	1.728	.927	3.477	1	.001			
	Gender	.183	.297	.378	1	.000	1.200	.670	2.150
	Age group	-.081	.264	.095	1	.000	.922	.549	1.547
	Geo-Political Zone	.030	.088	.115	1	.001	1.971	.817	1.153
	Occupation	-.034	.050	.480	1	.000	.966	.876	1.065
I neither approve nor disapprove	Intercept	.207	.966	.046	1	.000			
	Gender	.475	.309	2.361	1	.001	1.608	.877	2.946
	Age group	.190	.274	.481	1	.000	1.209	.707	2.066
	Geo-Political Zone	.060	.091	.426	1	.000	1.942	.787	1.127
	Occupation	-.012	.051	.057	1	.001	.988	.894	1.092
I disapprove	Intercept	.669	.935	.513	1	.000			
	Gender	.527	.298	3.118	1	.000	1.693	.944	3.038
	Age group	.031	.265	.014	1	.000	1.032	.614	1.735
	Geo-Political Zone	.059	.088	.451	1	.000	1.061	.893	1.262
	Occupation	-.060	.050	1.431	1	.000	.942	.853	1.039
I strongly disapprove	Intercept	.478	.960	.248	1	.000			
	Gender	-.049	.310	.025	1	.000	.952	.518	1.749
	Age group	.425	.273	2.431	1	.000	1.530	.896	2.610
	Geo-Political Zone	.146	.092	2.544	1	.000	1.864	.722	1.034
	Occupation	.023	.051	.208	1	.000	1.024	.926	1.131

a. The reference category is: I strongly approve.

Source: NOIPolls Governance Poll (December, 2021)

Table 4.24 illustrates that gender is 1.200 times more likely to predicts the behaviours of the respondents in rating the performance of government in social services compared to other variables in the model with an estimated coefficient of (.183) while the respondents' age-group is 1.209 times more likely to influence the respondents' rating of government performance in the provision of social services compared to other variables in the model with the estimated coefficient of (.190). Also, table 4.24 depicts that geo-political zone is 1.061 times more likely to influence the respondents' behaviours in rating the government's performance in social services compared to other variables in the model with an estimated coefficient of (.059) while the socio-economic status of the respondents (occupation) is 1.024 times more likely to predicts the respondents' behaviours in the rating of government performance in the provision of social services compared to other variables in the model with an estimated coefficient of (.023).

5. CONCLUSION

Based on the result of the analysis of socio-demographic and government's performance rating in social services variables extracted from NOIPolls governance snap polls for the period of 12 months in 2021, this research concludes that the socio-demographic variables of 12,827 sampled respondents in NOIPolls governance snap polls for the 12 months in 2021 have significantly impacted government's performance rating in the provision of social services in Nigeria. For instance, in the course of using the likert scale performance rating index during the survey, the study found significant wide margins among the respondents who rated the government in the provision of social services, for example, high proportions of respondents from the North East, North-West as well as North-Central rated the government very high compared to respondents from the South-South, South-East and South-West who participated in the survey, discrepancies in the margin of rating was also observed across the age-groups, gender and socio-economic status of the respondents. Therefore, following the result of the analysis of the impact of socio-demographic variables on government's performance rating in social services in Nigeria, this study found that the respondents' gender, age-groups, socio-economic status

(occupation) and geo-political zones (states of residence) had significant influence on the respondents' behaviours in the rating of the government's performance in the provision of social services in Nigeria. This result corroborates the studies conducted by Benito *et al.* (2020), Felesia and Akakandelwa (2017), Jorunn (2015), Kennedy and Chris (2015) and Nwoba (2015) who reported that socio-cultural factors such as religion and culture have significant impact on voting patterns and elections outcomes in Nigeria.

6. RECOMMENDATIONS

Following the result of the analysis of the impact of socio-demographic variables on government's performance rating in social services in Nigeria, this article recommends that:

There is the need for ethno-religious and value reorientation in Nigeria. This reorientation programmes should include: rating government's performance in social services objectively without ethno-religious biasedness, call to imbibe the spirit of ethnicity and religious tolerance, political awareness as well as voting candidate in elections without looking at his/her ethnicity background but based on the capability and capacity of such candidate.

A country strategy aimed at achieving equal participation by all ethnic groups would ordinarily demand a political leadership of the servant-leader type that is accountable to all citizens. Discrimination against citizens on ethnic grounds is a violation of human rights. Ethnic groups that are discriminated against in Nigeria are usually marginalized economically in terms of resource allocation and politically in terms of decision-making. Addressing these problems in view of the lack of dedicated servant leadership in Nigeria therefore require that the government, stakeholders and, the African Union, set up a strong and credible African court on human rights, with a broad but well-defined mandate that includes, among other things, effective protection of marginalized ethnic groups in the country.

There is need for institutional reforms as well as strong democratic institutions in order to change the way Nigerians think as well as change the character of the governments and imbibe all-inclusive reforms that favour all citizens, irrespective of their ethnic background.

7. ACKNOWLEDGEMENT

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