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Factors Influencing the Usage of Twitter During Presidential Elections in Nigeria

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Abstract

This study examined the factors influencing the usage of Twitter during presidential elections in Nigeria. The population of the study comprises those under the age of voting in Nigeria that has Twitter account in Nigeria. Creswell (2012) sampling technique was used to select 576 respondents in Nigeria who have twitter account and are in voting age. Data was obtained through questionnaire administration. Structural Equation Modelling method of multiple regression analysis were used to achieve the objectives of the study. Results of the regression analysis revealed that factors (such as compatibility, cost effectiveness, interactivity, trust, ease of use and networking capability) are significant determinant of usage of Twitter during presidential elections in Nigeria at 1% and 5% level of significance. The study concluded that there are factors influencing the usage of twitter during presidential elections in Nigeria. Therefore, it is advised that politicians should always seek for information through social media that might improve their interactions with various populace. Therefore, social media adoption becomes essential due to its multifaceted and symmetrical nature.

A. Introduction

Over the last decades, social media has become an important source of information and has attained a trending issue in the world. It has become an ideal means for communicating with a large audience and freely transmitting ideas, thoughts, and news [1]. Social media is often used to source ideologically biased content that supports preexisting opinions, regardless of its validity [2].

The difficulty of detecting and combating new types of propaganda is one that social media platforms are currently experiencing. For instance, in "disguised propaganda," sources are purposefully obscured to conceal the propagandist's true identity [3]. In addition, propagandist pays for space in media houses or sources to broadcast their political adverts as reliable news pieces [4]. Social media has many positive impacts on society, but it may also be used for evil purposes, such as propaganda and the creation of phony identities to influence people and sway public opinion. Some of these illegal online actions target election contexts deliberately because they provide the best opportunities to have the most impact on political trends [5]. Propaganda modifies information so as to actively sway people's opinions and further a planned objective [6]. Broadly speaking, propaganda is the "dissemination of information facts, arguments, rumours, half-truths, or lies to affect public opinion.

It is crucial to remember that propaganda also refers to real (factual) information packaged in a way to sway people's opinions, discredit competing ideas, or mobilize the public. Disinformation and misinformation relate to purposely and unintentionally erroneous information, respectively [7]. In order to have the most impact, propaganda employs psychological and rhetorical strategies that are meant to be imperceptible. According to [8], propaganda employs psychological and rhetorical strategies that are meant to be imperceptible in order to have the greatest impact. Because of this, nefarious propaganda news sources have demonstrated their ability to have a significant impact on the mindset of people in a society. People were more likely to reduce their natural barrier of critical thinking when disinformation was disseminated under the pretense of news because it gave the impression that the material was reliable [9]. As a result, it is crucial to prevent or minimize propaganda during the presidential election. Detecting fake news entails identifying the possibility that a specific news article is false [10]. A fake news detection system is important so as to assist in the identifying and filtering of deceptive news. Hence, this study tends to examine the factors influencing the usage of Twitter during Nigeria’s presidential election.

B. Literature Review

1. Democratic Participant Theory

A political and media philosophy known as the "democratic-participant hypothesis" contends that democratizing access to stakeholders would improve the media's effectiveness [11]. Since achieving independence in 1960, the majority of Nigeria's governmental administration has been under military authority. There were still concerns about the freedom of expression and the ability to make one's own political judgments as the country transitioned to democracy. Voters avoided open elections as a result because they may be physically harmed by opposition parties sponsored by the military or by opponents with a history of violence.

Because voters in Nigeria may now voice their thoughts and make decisions from the comfort of their own homes thanks to the rise of social media, the country's political landscape has been transformed as a consequence. They could take part in conversations on the benefits and drawbacks of certain candidates. As a direct consequence of this, encouragement to vote was directed at younger people. For the purpose of reducing the risk of violence and abuse, the voting age of millennials was historically low or nonexistent. According [11], the democratic participation theory is an application of the social responsibility theory that maintains that the media should disseminate different thoughts and perspectives of people or groups regardless of their political leanings. This theory holds that the democratic participation theory is an application of the social responsibility theory.

2. Twitter and Presidential Campaign

Effective communication is essential to the practice of politics. Politicians utilize communication strategies that are intended to persuade others about a certain subject or cause. The capacity for effective communication has always been seen as a highly desirable quality in political candidates. This is of the utmost importance in Nigeria, where political leaders are obligated to address the most pressing issues currently being discussed in the public sphere, such as terrorism, unemployment, and other related issues [12]. They make use of specialized communication channels in order to convey a predefined message to a specific target audience in order to acquire information that may influence the political behavior of their audience. The message being sent and the demographic that it is aimed at will, to a significant extent, determine which communication medium will be the most successful in terms of persuading votes [13].

As was said before, the introduction of the Internet as a new means of mass communication has stoked competition amongst the old forms of media, which include radio, television, newspapers, and magazines [14]. It is now abundantly obvious that social media may be used to organize support for political causes. Campaign strategists now rely heavily on social media as a tool for moving the conversation forward and organizing political support since social media has matured into a significant political instrument. Twitter has emerged as a significant tool for political campaigning in recent years, particularly in the United States.

C. Methodology

The population of the study is the users of Twitter in Nigeria. However, the sample size was determined by [15]. “Sample Size - Infinite Population (where the population is greater than 50,000)

$$SS = \frac{Z_2 x(p) x\,(1-p)}{C^2} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(1)$$

SS = Sample Size
Z = Z-value(1.96 for a 95 percent confidence level)
P = Percentage of population picking a choice, expressed as decimal (0.5)
C = Confidence interval, expressed as decimal (.04 = +/- 4 percentage points)

$$SS = \frac{3.8416\ x\ .5\ x\ .5}{0.0016}$$

SS = 600

$$NewSS = \frac{SS}{[1 + \frac{(SS-1)}{Population}]} \text{.........................} (2)$$

Note: Calculate the sample size using the infinite population formula first. Then, use the sample size derived from that calculation to calculate a sample size for a finite population.

Example:

$$NewSS = \frac{600}{[1 + \frac{(600-1)}{18988}]} \text{.......................}(3)$$

New SS = 575.631

New SS ≈ 576

Therefore, a questionnaire was developed using google form and was filled by five hundred and seventy-six respondents. The nature of data is primary data which was obtained through structured questionnaire. The method of data analysis is Structural Equation Modelling using Partial Least Square (PLS) 4.0 were used to examine the objectives of the research.

Model Specification

The model of the research is stated in its functional form as:

UTP= f (COM, COST, INT, TRU, EASE, NETC)..(4)

Therefore, in its econometric form; the model for this study becomes

$$UTP = \beta_0 + \beta_1 COM + \beta_2 COST + \beta_3 INT + \beta_4 TRU + \beta_5 EASE + \beta_5 NETC + \mu \text{......}(5)$$

Where: β0 = Constant

UTP= usage of Twitter during presidential elections in Nigeria

COM= Compatibility

COST= Cost effectiveness

INT= Interactivity

TRU= Trust

EASE= Ease of Use

NETC= Networking Capability

D. Data Presentation and Interpretation of Result

Table 1. Descriptive Statistics and Normality Test

	Mean	Median	Min	Max	Standard Deviation	Excess Kurtosis	Skewness	Number of Observations Used
Compatibility	3.896	4.000	1.000	5.000	0.653	1.464	-0.623	384.000
Usage of Twitter	4.068	4.000	1.000	5.000	0.729	2.161	-1.077	384.000
Cost Effectiveness	3.701	4.000	1.000	5.000	0.723	-0.345	0.191	384.000
Interactivity	3.914	4.000	1.000	5.000	0.600	3.559	-0.983	384.000
Trust	3.846	4.000	2.000	5.000	0.649	0.805	-0.525	384.000
Ease of Use	3.701	4.000	1.000	5.000	0.708	-0.348	0.238	384.000
Networking Capability	3.948	4.000	2.000	5.000	0.759	-1.088	0.015	384.000

Source: Field Survey (2024)

The descriptive statistics and normality tests for factors influencing the usage of Twitter during presidential elections in Nigeria provide a comprehensive overview of the central tendencies and distribution of data across variables. The mean values are above 2.5 which is the average of the responses, indicating that most respondents relatively favor the questions towards agreement than disagreement. The standard deviations which are all below 1 suggest moderate variability in the responses of the respondents. Skewness values are negative for all variables showing a negatively skewed normal distribution as they are all within -3 and +3. Excess kurtosis is generally positive and shows a peaked distribution, indicating a few extreme cases. The data is also verified for normality here since all results are within -3 and +3. The implication of these findings is that the data is valid and normally distributed, hence it can be used for further analysis.
Measurement Model Assessment

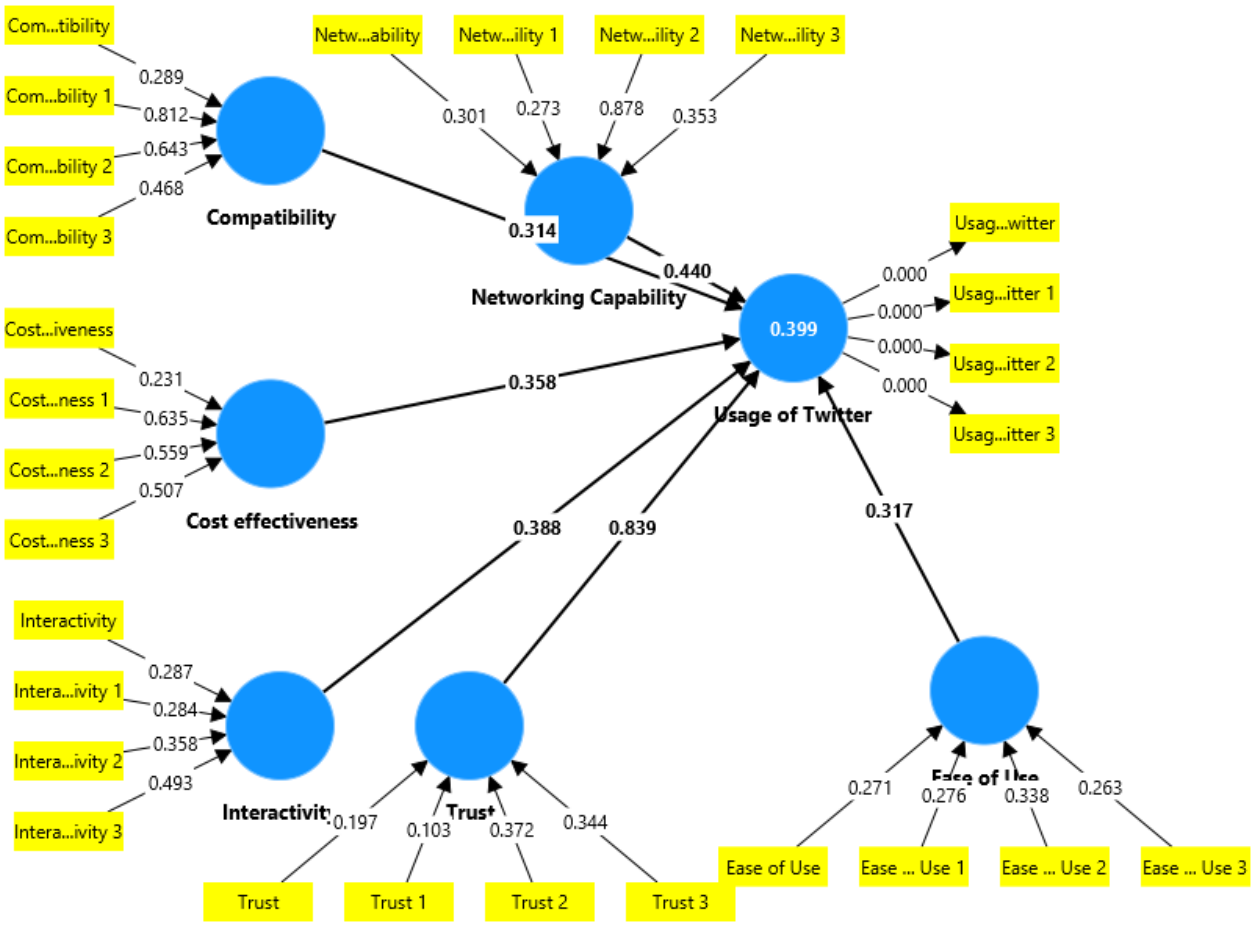

Figure 1. Factors Influencing the Usage of Twitter During Presidential Elections in Nigeria
Source: Field Survey (2024)

The structural model depicted in Figure 1 demonstrates the relationships between compatibility, cost effectiveness, interactivity, trust, ease of use, networking capability and usage of Twitter during presidential elections in Nigeria. The model clearly depicts that the outer model has strong weight on the latent variables with the values higher than 0.5. The model also makes it easier to understand the relationships between the variables. The visual representation of the data allows for a more intuitive understanding of the relationships between the variables, which can be helpful in decision-making and strategizing regarding factors influencing the usage of Twitter during presidential elections in Nigeria.

Table 2. Validity and Reliability Statistics

	Cronbach's Alpha	**Composite Reliability**	**Average Variance Extracted (AVE)**
Compatibility	**1.000**	**1.000**	**1.000**

Usage of Twitter	**1.000**	**1.000**	**1.000**
Cost Effectiveness	**1.000**	**1.000**	**1.000**
Interactivity	**1.000**	**1.000**	**1.000**
Trust	**1.000**	**1.000**	**1.000**
Ease of Use	**1.000**	**1.000**	**1.000**
Networking Capability	**1.000**	**1.000**	**1.000**

Source: Field Survey (2024)

The reliability and validity statistics, including Cronbach's Alpha and Composite Reliability are all above 0.7. This confirms that the constructs used in this study are robust and reliable. High Cronbach's Alpha values indicate strong internal consistency, suggesting that the items used to measure factors influencing the usage of Twitter during presidential elections in Nigeria reliably reflect these constructs. Additionally, the Average Variance Extracted (AVE) for all constructs are above 0.5, indicating excellent convergent validity, meaning that the constructs explain a large portion of the variance among the items. This high level of validity and reliability implies that the study's measurements are well-constructed and accurately reflect the underlying compatibility, cost effectiveness, interactivity, trust, ease of use, networking capability and their impact on the usage of Twitter during presidential elections in Nigeria. The implication is that the constructs are sufficiently precise and reliable for analyzing the relationships, which strengthens the study's conclusions about these relationships.

Table 3. Discriminant Validity

	Compatibility	**Usage of Twitter**	**Cost Effectiveness**	**Interactivity**	**Trust**	**Ease of Use**	**Networking Capability**
Compatibility	1.000						
Usage of Twitter	-0.050	1.000					
Cost Effectivenes	0.623	-0.030	1.000				

s							
Interactivity	0.835	-0.022	0.529	1.000			
Trust	0.245	0.418	0.135	0.274	1.000		
Ease of Use	0.574	-0.097	0.812	0.442	0.104	1.000	
Networking Capability	0.241	0.110	0.589	0.202	-0.027	0.543	1.000

Source: Field Survey (2024)

The discriminant validity results show clear distinctions between the constructs. The diagonal values represent the square root of the AVE, while the off-diagonal values represent the correlations between the variables. The diagonal values are all greater than the off-diagonal values, indicating adequate discriminant validity for the variables. Usage of Twitter during presidential elections in Nigeria having a high self-correlation and much lower correlations with other variables. This suggests that while certain factors may overlap or influence each other, they have unique impacts on Twitter during presidential elections in Nigeria.

Multicollinearity Test

Table 4. Variance Inflation Factor

	Compatibility	**Usage of Twitter**	**Cost Effectiveness**	**Interactivity**	**Trust**	**Ease of Use**	**Networking Capability**
Compatibility		4.147					
Usage of Twitter							
Cost Effectiveness		3.817					
Interactivity		3.416					
Trust		**1.093**					

Ease of Use		3.153					
Networking Capability		**1.658**					

Source: Field Survey (2024)

The VIF results for all the construct variables indicate that multicollinearity is not a concern within this model, as all values are below the commonly accepted threshold of 5. This suggests that each independent variable contributes uniquely to explaining variations in the usage of Twitter during presidential elections in Nigeria, without significant overlap with other variables. The relatively low VIF values of the constructs, imply that these factors provide distinct insights into the usage of Twitter during presidential elections in Nigeria that are not confounded by other factors influencing the usage of Twitter. The implication here is that the factors influencing the usage of Twitter, independently influence the usage of Twitter during presidential elections in Nigeria without being distorted by multicollinearity. This enhances the reliability of the regression coefficients and supports the robustness of the model in identifying distinct predictors of the usage of Twitter during presidential elections in Nigeria.

Structural Model Assessment

Test of Hypothesis: There are no Significant Factors influencing the Usage of Twitter during Presidential Elections in Nigeria

Table 5. Path Coefficient

	Original Sample (O)	**Sample Mean (M)**	**Standard Deviation (STDEV)**	**T Statistics (|O/STDEV|)**	**P Values**
Compatibility-> Usage of Twitter	0.030	0.028	0.090	3.338	**0.005**
Cost Effectiveness -> Usage of Twitter	0.001	0.003	0.077	2.014	**0.009**
Interactivity -> Usage of Twitter	0.074	0.079	0.094	7.791	**0.000**
Trust -> Usage of Twitter	0.479	0.481	0.059	8.076	**0.000**
Ease of Use -> Usage of Twitter	0.247	0.250	0.076	3.267	**0.001**
Networking Capability -> Usage of Twitter	0.280	0.282	0.066	4.225	**0.000**

Source: Field Survey (2024)

The bootstrap path coefficient analysis depicted in table 5 was conducted to test the null hypothesis that there are no significant factors influencing the usage

of Twitter during presidential elections in Nigeria. A look at these path shows that the relationship is statistically significant. The p-values are less than the conventional significance level of 0.05 and the T statistics are greater than 1.96, suggesting strong evidence to reject the null hypothesis. Therefore, compatibility, cost effectiveness, interactivity, trust, ease of use and networking capability significantly affects the Usage of Twitter during Presidential Elections in Nigeria.

However, compatibility, cost effectiveness, interactivity, trust, ease of use and networking capability have a positive significance with Usage of Twitter during Presidential Elections in Nigeria. Overall, compatibility, cost effectiveness, interactivity, trust, ease of use and networking capability have a partial significant effect on Usage of Twitter during Presidential Elections in Nigeria. Hence, the null hypothesis is not totally rejected not accepted. This implies that compatibility, cost effectiveness, interactivity, trust, ease of use and networking capability significantly affect Usage of Twitter during Presidential Elections in Nigeria. This is consistent with the works of [16] and [17].

Table 6. Coefficient of Determination

	R Square	**R Square Adjusted**
Usage of Twitter	0.258	0.246

Source: Field Survey (2024)

The R^2 value for Usage of Twitter during Presidential Elections in Nigeria is 0.258, indicating that 25.8% of the variance in Usage of Twitter during Presidential Elections in Nigeria can be explained by compatibility, cost effectiveness, interactivity, trust, ease of use and networking capability. This moderate level of explanation suggests that while compatibility, cost effectiveness, interactivity, trust, ease of use and networking capability contribute to understanding Usage of Twitter during Presidential Elections, a significant portion of the variance is influenced by other factors not captured in this model, such as macroeconomic conditions etc.

Table 7. F Square

	Compatibility	**Usage of Twitter**	**Cost Effectiveness**	**Interactivity**	**Trust**	**Ease of Use**	**Networking Capability**
Compatibility		**0.000**					
Usage of Twitter							
Cost		**0.000**					

Effectiveness							
Interactivity		**0.002**					
Trust		**0.083**					
Ease of Use		0.026					
Networking Capability		0.004					

Source: Field Survey (2024)

The effect size, often denoted as f-square is depicted in table 7, this measures the magnitude of the relationship or impact of independent variables on a dependent variable in statistical analysis. This study assesses the effect sizes of various latent variables on "Usage of Twitter during Presidential Elections". All the independent variables all have a value above 0.02 except trust which is considered small effect size. Hence, this suggests all the variables indicate a moderate effect size, indicating that they all have a noticeable impact on Usage of Twitter during Presidential Elections. In other words, changes or differences in any of the variables can explain moderately the variability in Usage of Twitter during Presidential Elections in Nigeria.

E. Conclusion and Recommendations

Social media networks made it possible for users to read news, share it, and discuss significant events in addition to interacting with one another. With the use of mobile devices, social media has enabled a large number of individuals to have access to the Internet. The study concludes that there are factors influencing the usage of twitter during presidential elections in Nigeria. Therefore, it is advised that politicians should always seek for information through social media that might improve their interactions with various populace. Consequently, social media adoption becomes essential due to its multifaceted and symmetrical nature.

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