



# Factor Analysis of Government Performance and Tax Morale in Nigeria

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## ABSTRACT

### Keywords:

*Afrobarometer Survey, Confirmatory Factor Analyses, Government Performance, Nigeria, Tax Morale*

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The paper made a factor analysis of the variables that shape the tax morale of individuals in developing economies as well as the factors that citizens considered to be important in assessing government performance. Data from the Afrobarometer Survey 6 Questionnaire administered on Nigerians was used for the analysis. Desk review of several journal articles was made to extract the relevant factors used for the study. A collection of variables offered in the literature as determinants of tax morale and the aspects of government that are measured when assessing government performance were synthesized as measurement parameters. Both exploratory and confirmatory factor analyses were conducted using principal component analysis. The study established that the data from Afrobarometer Survey 6 on Nigeria was found reliable with adequate goodness of fits, which is significant for any study. The paper found six of the items on the questionnaire suitable to measure tax morale and ten other items suitable as measures of government performance under three dimensions as an improvement on economic issues, infrastructure provision, and social issues. The paper recommends that the government and other policymakers should pay sufficient attention to tax morale and the performance of government, especially adequate provision of food and improving the standard of living among the poor citizens before attempts at controlling crime.

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Public revenue generated, especially from taxes, are used to finance governments' performance in discharging their duties and responsibilities. Drawing from the fiscal exchange theory and the principle of reciprocity, one could infer theoretically that governments performance and taxpayers' readiness to comply. According to Organization for Economic Cooperation and Development (OECD) (2013), tax is very important to the sustainability of any nation in so many ways. According to Armah-Attoh and Awal (2013), the ability of a government to generate revenue by a nation has a significant relationship with its ability to serve its citizens and consolidate representative governance. Meanwhile, the tendency for the government to generate revenue from tax compliance is found to be dependent on tax morale (Kira, 2017; Torgler, 2003). Understanding this tax morale is considered essential to

attaining tax compliance for adequate public revenue generation (Beale & Wyatt, 2017). According to Kira (2017), to build effective taxation through favorable tax morale among taxpayers, some challenging issues need to be addressed. Despite several efforts taken by stakeholders in meeting the challenges, many hurdles remain unsolved (Beale & Wyatt, 2017). Significant among the hurdles include how to identify and explain factors that determine taxpayers' morale and find a link between them and their variances (World Bank/PWC, 2017). Based on this identified gap, this paper made a factor analysis of tax morale and government performance to understand major factors that determine the level of tax morale of citizens and their perception of government performance.

## **Literature Review**

### **Government**

According to the Merriem-Webster Dictionary (2020), "government is a small group of persons holding simultaneously the principal political executive offices of a nation or other political unit and being responsible for the direction and supervision of public affairs". Essentially, the government serves as the agent of the state. Though the state has the nature of perpetuity, the form, and structure of government change over time. Government encompasses the rulers, leaders, employees, officials, or officers of the state occupying certain offices of public trust under the laws of that state (Obeleagu-Nzelibe, Amobi, & Emejulu, 1996).

Duties are performed by government. The ultimate duty of government is to secure the citizens' right to life. Smith (1796) argued that there are three essential duties of government in any society such as 1) protecting society from external aggressors, 2) protecting members of society against other members' injustice or opposition, and 3) creating and maintaining some public works. Obeleagu-Nzelibe et al. (1996) grouped government functions into economic and socio-political functions. The socio-political functions include protection of the state's sovereignty, protection of individual citizens and their properties, the establishment of a system of justice and the promotion of citizens' general welfare like provision of public education, health services, public parks, and social benefits to the old and indigent people. The economic functions of government include the provision of a system of economic institutions to assist in the management of scarce resources to meet the needs of all. Areas covered by such institutions are healthy competition, price control, and fiscal policy, as well organization and regulation of business life.

### **Tax Morale**

Tax morale is a concept discovered to understand the reasons behind people paying taxes, rather than why people evade taxes (Ramona-Anca & Larissa-Margareta, 2013). Tax morale refers to the willingness, the internalized obligation, and the inherent motivation to pay tax (Alm & Torgler 2006). It is a moral obligation, not a legal one (Torgler & Schneider, 2009). It refers to the attitude of a group of taxpayers within a society, based on moral and not a legal obligation, towards the urge of discharging or neglecting their tax responsibilities.

### **Review of Empirical Studies**

Several studies had been carried out on tax morale and compliance among individuals across economies of the world. For example, the OECD (2013) reviewed global studies using WVS as well as regional surveys on tax morale. The study found that existing literature on tax morale globally identified a range of socio-economic and institutional factors that affect tax morale. Prominent among the socioeconomic factors is a claim to a faith or religious identity. Other factors include age, perceived economic situation, education, and employment type. On the other hand,

there is inconsistency in the findings on the effects of gender. The institutional factors influencing tax morale include trust in government, satisfaction with democracy and public services, health, and education. Building fiscal legitimacy, enforcement of the tax laws, and overall trust in the legal system were also associated with higher tax morale. Fear of being caught was found not to be a significant driver, while the association of corruption with tax morale exhibits no consistent results.

Horodnic and Williams (2020) studied factors associated with tax morale selected a sample of 82 studies across the world that used tax morale as the dependent variable. The findings suggested that tax morale is formed by a large number of variables grouped into formal and informal institutions, most salient of which was trust; vertical and horizontal. The study concluded that a low level of trust in public institutions, failure in the formal institution, as well as a low level of trust regarding the compliant behaviour of other citizens are associated with low tax morale.

Efebera et al. (2015) examined the compliance intentions of low-income individual taxpayers in the US-based on the theory of planned behaviour. Findings suggested a significant positive relationship between compliance intentions and; equity perceptions of the tax system, normative expectations of compliance, and penalty magnitude. Furthermore, findings suggested the existence of two-way interactions between penalty magnitude and exchange equity, and penalty magnitude and normative expectations.

Tishar and Hasanuzzaman (2019) examined individual income tax non-compliance as a latent variable to identify the determinants of income tax non-compliance and key factors using EVSCALE in Bangladesh. The results found that monthly income, tax morale, tax education, and occupation had significant influence. Syafriel (2018) adopted Second-Order Confirmatory Factor Analysis on responses from a survey of 350 registered Indonesian taxpayers. The results confirmed that attributes of personal taxpayer's compliance comprising awareness, knowledge, perceived equality and fairness, compliance cost, fiscal service quality, tax socialization, tax regulation, tax audit, and penalties manifested positively on the personal taxpayer's compliance in Indonesia. Widanaputra, Ratnadi, and Putra's (2019) similar study on Indonesians suggested that knowledge of taxation and accounting information systems as well as tax penalties have a positive effect on tax compliance.

Nguyen et al., (2020) adopted focus group discussions among ten chief accountants and tax officers as well as interviews with 200 firms involving chief accountants/financial directors in Vietnam. The results established that being compliant voluntarily was directly affected by audit probability, corporate reputation, and business ownership. Another study conducted in Vietnam by Hoa, Lien, and Tuan (2019) also found that tax inspection, tax penalty, and tax knowledge affected compliance readiness.

Nuran Bayram et al. (2017) examined the reliability and structural validity of tax compliance factors with a sample of 320 Turkish taxpayers. The results suggested that tax compliance intention, general fairness, procedural fairness, and social norms scale was found to be adequate and reliable to measure tax compliance in Turkey. Mohamad and Ali (2017) examined the determinants of tax non-compliance of Malaysians SMEs. The results suggested that there was a significant relationship established between tax incentive and company size with tax non-compliance.

In Africa, Mbilla et al. (2018) surveyed 361 self-employed Ghanaians to examine the extent to which institutional factors, economic factors, individual factors and social factors influence tax compliance. The findings suggested a positive significant influence of economic, individual, and social drivers on tax compliance behaviour. While no significant influence was found from

institutional drivers on taxpayers' compliance. In Ghanaian study with a survey sample of 472 SME operators, Carsamer and Abbam (2020) found that institutional, firm and entrepreneurs' characteristics were determinants of SMEs' tax compliance, but religious notoriety was not. Likewise, Machogu (2015) assessed factors influencing income tax compliance within the context of MSEs in Kenya. Data were collected from 50 purposefully selected SMEs. The study concluded that the quality of public governance, attitudes, and ethnicity influenced Kenyan compliance. Fredrick and Peter (2019) also examined among Ugandan taxpayers, the influence of demographic factors on taxpayer compliance in Uganda. The study adopted raw data from a survey conducted by Uganda Revenue Authority on 284 responses from sole proprietors and owners of Small and Medium Enterprises. The data were analysed using factor analysis and correlational analysis. The findings indicated that gender was significant factors, while age and education were not significant. Despite the extensive studies on tax morale and compliance, inconsistency can be observed in the findings. Tishar and Hasanuzzaman (2019) also affirmed the existence of a recognisable gap in the efforts to measure income tax morale and compliance which needs to be explored in further studies.

## **Method**

### **Sample and Design**

The study used a quantitative approach by measuring respondents' views on a graduated scale for statistical analysis to have a reasonably accurate measurement of the constructs rather than using methods like words or observations (Armah-Attoh & Awal, 2013; Ogunbameru & Ogunbameru, 2010; SPSS, 2009). Data were collected mainly from primary data sourced through interviews. The population comprised of Nigerians within the taxpaying age. The random sampling technique was used to select a sample of 2,400 individuals above 18 years purposefully extracted. The survey was conducted in English, Hausa, Yoruba, Igbo, Pidgin, Tiv, Ibibio, and Ijaw languages.

### **Materials**

The survey adopted data from the Afrobarometer Round 6 survey questionnaire; "The Quality of Democracy and Governance in Nigeria" (Afrobarometer, 2018). The questionnaire contains 120 items out of which factors for latent variables of tax morale and government performances were selected. Tax morale was measured with six selected items. These are; Q26e. Citizens pay taxes (Tax Payment), Q42b. People must obey the law- (Obeying Law), Q42c. People must pay taxes- (Compulsion of Taxes), Q43. Obey government always vs. only if vote for it- (Obeying Government), Q44. Citizens must pay taxes vs. no need to tax the people- (Need for Taxes), and Q65c. Pay more taxes to increase health spending- (Increasing Tax for Infrastructure). Government performance, as the dependent variable, was measured with Question 66. These were measured on 13 different performance areas classified in this paper into three performance areas; economic, social, and infrastructural development. Economic Issues were measured with four items; Q66a. Handling managing the economy, Q66c. Handling creating jobs, Q66d. Handling keeping prices down, and Q66e. Handling narrowing income gaps. For infrastructural facilities, we used Q66g. Handling improving basic health services, Q66h. Handling addressing educational needs, Q66i. Handling providing water and sanitation services, Q66l. Handling maintaining roads and bridges, and Q66m. Handling providing reliable electric supply. The social issue was measured with Q66b. Handling improving living standards of the poor, Q66f. Handling reducing crime, Q66j. Handling ensuring enough to eat, and Q66k. Handling fighting corruption.

## Data Analysis

Data were analysed in three stages. The first stage involved descriptive analysis, followed by the Exploratory Factor Analysis (EFA) carried out to evaluate the items scales and identify items loading to a specific variable and the reliability estimation using the *Cronbach's alpha* with the inclusion of the correlation of the items. The EFA used for the study was based on the Eigenvalue greater than 1. The third stage of the analysis involved Confirmatory Factor Analysis (CFA) testing whether the constructs posed reasonable validation and reliability in the assessment for sets of items in the model. Following the view of Anderson and Gerbing (1984), validity, reliability, internal consistency, convergent validity, and discriminant validity were assessed for the whole set of data used. The discriminant validity was assessed by comparing the Average Variance Extracted (AVE) to the square correlation between the construct as a complementary measure of composite reliability (Sarstedt & Mooi, 2014).

## Results

As shown in Table 1, a total of 2,400 responses (1202 male and 1198 female) were analysed. The respondents were 22.7% Yoruba, 17.3% Igbo, 24.5% Hausa and other minority tribes were 35.5%. This testifies that the opinion covers all tribes in the country. Age distribution of respondents revealed that 31.2% were between 18 to 25 years, 41% were between 26 and 35 years, 16.6% between 36 and 45 years, 6.7% were between 46 and 65 years and 10.1% were above 65 years. Altogether, 88.8% of them were in their active age (tax-paying age). This suggests that the data could be useful for reliable prediction of taxpayers' behaviour in Nigeria, at least in the near future.

Table 1

### Descriptive Statistics

Characteristics	Frequency	Percentage (%)
Age:		
18 - 25 years	748	31.2
26 - 35 years	985	41.0
36 - 45 years	399	16.6
46 - 65 years	161	6.7
Above 65 years	107	10.1
Tribe/Ethnic Group:		
Hausa	588	24.5
Igbo	415	17.3
Yoruba	543	22.7
Others	850	35.5
Gender:		
Male	1202	50.1
Female	1198	49.9

## Factor Component Analysis

### Exploratory Factor Analysis

Results from the test of suitability conducted on the perception of government performance and tax morale. The EFA results are presented in Table 2. The Kaiser-Meyer-Olkin measure of sampling adequacy was used to test the usefulness of the dataset for factor analysis. It assesses the sufficiency of the sample size to perform principal component analysis. The result gave KMO value of .83. This is considered to be a good value indicating that the sample is sufficient enough for the results of the factor analysis (IBM, 2018; Karagoz, 2016).

Bartlett's test of sphericity test was used to further test the suitability of the dataset. Bartlett's test of sphericity tests the hypothesis that the correlation matrix is an identity matrix, which would

indicate that the variables are unrelated and therefore unsuitable for structure detection. Therefore, a smaller value (less than .05) of the significance level indicates that the dataset is useful for factor analysis. The result of the test in Table 2 revealed that the hypothesis is not supported since  $p < .05$ , therefore the dataset is suitable for principal component analysis.

Table 2

*Test of Suitability of the Dataset using KMO and Bartlett's Test*

		Approx. Chi-Square	Df	p
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.83			
Bartlett's Test of Sphericity		8982.49	120	.001

## Principal Component Analysis (PCA)

### Analysis of Variance Explained

Table 3 presents the results of the Analysis of Variance Explained by the items used. The results revealed that four components were derived with Eigenvalues above 1. The cumulative percentage sum of square loadings stood at 53.25%. This suggests that the four components were able to bring 53.25% variance to tax morale, the dependent variable.

Table 3

*Total Variance Explained*

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.21	26.33	26.33	4.21	26.33	26.33	3.09	19.32	19.32
2	1.88	11.79	38.13	1.88	11.79	38.13	2.43	15.20	34.52
3	1.27	7.96	46.10	1.27	7.96	46.10	1.74	10.90	45.42
4	1.14	7.14	53.24	1.14	7.14	53.24	1.25	7.82	53.24
5	.99	6.23	59.47						
6	.88	5.54	65.02						

## Principal Component Analysis (PCA)

To purify the data set and maximise the relationship between the variables in the group, a PCA was conducted to assign the items in the data set into sub-variable groups. A total of 19 items expressed on the Likert scale for Tax Morale (6 items) and Government Performance (13 items) were subjected to PFA, as shown in Table 4. The components were tax morale with six items, government performance in providing infrastructure facilities with four items, government performance in economic management with three items, and government performance in social issues with three items.

Tax morale factors: Results of the 6 items for tax morale indicate that all the six factors had loadings between .58 and .75. Loadings for all the factors are above the .5 threshold limit for acceptability (Hair et al., 2010). This implies that all the six factors fall within the acceptable limit and therefore useful for our analysis.

Government performance factors: Results indicate that, out of the 13 factors assessed, 10 fell within the components formed (Hair et al., 2010). Four of the items were grouped under infrastructural facilities, three under each of social and economic developments. This implies that 10 of the 13 factors fell within the acceptable limit and therefore useful for analysis.

Performance on the infrastructural facility (PIF): This forms the second component from the results of PCA in Table 4 showing that four of the five items had values above the .5 threshold. Performance on health (PIF1) had the highest factor loading of .79, education (PIF2) followed with

.79, then provision of water and sanitation services (PIF3) with .67 before maintenance of roads and bridges infrastructure (PIF4) with .59. Provision of electricity supply had a value below .50, therefore not able to make the component. This suggests that Nigerians prefer health when assessing government performance, more than any other areas of government performance. This was followed by education and water and sanitation services before infrastructure facilities. Noteworthy is the finding that the provision of electricity was not given priority by Nigerians perception. It was found immaterial compared to the influence of government performance in each of the other four areas mentioned.

**Performance on Economic Management (PEM):** PEM forms the third component on the PCA table with only three of the four examined variables found relevant for the assessment of government performance, with factor loadings between .42 to .87. Government Performance in keeping price down (PEM3) had the highest loading of .87, then job creation (PEM2) with .85 and managing the economy (PEM1) with .42 loading. Performance in bridging the gap between the rich and the poor had lower loading and could not be considered as a part of the component. These suggest that Nigerians gave high priority to the government's efforts in keeping prices of goods down; hence, Nigerians rate high the efforts of the government in controlling inflation above its efforts in areas like job creation and managing the economy. Meanwhile, efforts of the government in bridging the income gap area was not perceived as relevant enough as the factor loading was low.

**Performance on Social Issues (PSI):** This performance area formed the fourth component in the table. Similar to other performance variables, three items made the component with a factor loading of .52 to .78. Government performance in crime reduction (PSI 2) had the highest factor loading of .78, followed by the provision of enough food (PSI 3) with .57 loading and improving living standard (PSI2) with the loading of .52. Perception of the government's efforts in fighting corruption was not considered important enough to influence Nigerians' assessment of government performance. These findings suggest that Nigerians, give priority to the government's efforts in crime reduction, followed by food provision than improving citizens' living standards. However, respondents did not consider government performance in fighting corruption to be relevant enough in the assessment of government performance.

Table 4

*Rotated Component Matrix*

	Component			
	1	2	3	4
TM1	.75			
TM2	.71			
TM3	.68			
TM5	.64			
TM6	.62			
TM4	.58			
PIF1		.79		
PIF2		.79		
PIF3		.67		
PIF4		.59		
PEM3			.87	
PEM2			.85	
PEM1			.42	
PSI2				-.78
PSI3				.57
PSI1				.52

*Note.* Extraction Method: Principal Component Analysis, Rotation Method: Varimax with Kaiser Normalization, a. Rotation converged in 5 iterations.

## Confirmatory Factor Analysis

### Reliability and Validity/Model Adequacy Tests

A reliability test was carried out using Cronbach alpha to test the construct validity of the instrument. The results of these tests are presented in Table 5.

*Reliability Test:* The result gave *Cronbach alpha* of 0.790 as shown in Table 5. This revealed that the data used has 79% reliability which suggested that the dataset is 79% reliable for inferences deduction and therefore the findings therefrom can be useful for decision making.

*Construct validity tests:* The absolute fit of the model was tested as  $X^2/DF$  which gave a value of 4.40. The benchmark requires the value to be between 2 and 5 to be acceptable (Civelek, 2018). The result suggests that the model has an adequate fit, thus the result of the factor analysis could be considered useful for decision making.

### Tests of Relative Fit

*Comparative Fit Index (CFI):* The result of CFI was established to be .97 which is found to be above the .9 benchmark required (Byrne, 2010; Civelek, 2018). Therefore, the model was found to have a good fit among the factors measured by the data.

*Root Mean Square Error of Approximation (RMSEA):* This test of fit compares the mean differences of each expected degree of freedom that can come up in a population with each other. With a value of .03, the model is found to have the goodness of fit on this measure (Byrne, 2010; Civelek, 2018).

*Normed Fit Index (NFI):* The result of NFI (.96) in Table 5 also suggests that the model's goodness of fit is also good .9 (Civelek, 2018).

*Tucker-Lewis Index (TLI):* The value of TLI test result was .96. This also suggests a good fit for the model since it is above .9 (Civelek, 2018).

Overall, based on the findings from the five model fit tests conducted, it is considered that the data has a goodness of fit that is adequate for analysis.

Table 5

*Results of Reliability and Validity Tests*

Test	Value
Cronbach Alpha	.79
Chi-square	140.81
DF	32
$X^2/DF$ (absolute fit)	4.40
CFI	.97
NFI	.96
TLI	.96
RMSEA	.03

## Confirmatory Factor Analysis

To assess the strength of the loading factor for each of the items used to measure the two latent variables, a second-order CFA was conducted and the results are presented for tax morale and government performance in Figures 1 and 2 respectively.

### Confirmatory Factor Analysis for Tax Morale

The test of adequacy and suitability of data for tax morale showed that the data was adequate and suitable with appropriate goodness of fit ( $p < .05$ ; CFI  $> .90$ ; NFI  $> .09$ ; TLI  $> .90$ ; RMSEA = .06). The p-value ( $p < .05$ ) also testifies to the reliability of the data at a 5% significant level, suggesting

that the result would be reliable. Six factors were used to measure the latent factor of tax morale. Each of them gave positive factor loading with payment of taxes (TM1) giving the highest factor loading of .67 to the measurement of tax morale. Compliance with the law (TM2) contributed next with .66 loading followed by perceiving tax as being compulsory (TM3), acknowledging the need for citizens to pay tax (TM5), paying more taxes to increase government spending (TM6), and obeying government in power (TM4) with .64, .63, .61 and .59 respectively as factor loadings. In all, these results suggest that payment of taxes and obeying the law had the highest values to the measurement of tax morale among Nigerians while obeying the government in power gave the least value to tax morale measurement among Nigerians. Meanwhile, all the factors were considered strong enough to be measures of tax morale, therefore useful for any study.

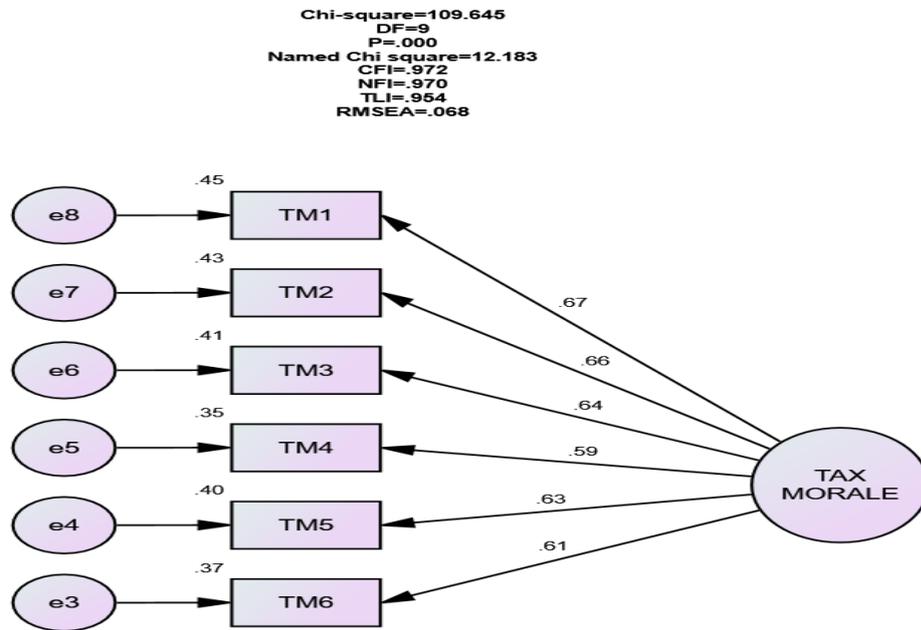


Figure 1. Confirmatory factor analysis of tax morale

### Confirmatory Factor Analysis for Government Performance

The results in Figure 2 reveals that the data used to measure GP altogether passed the goodness of fit for the absolute fit test ( $X^2/DF = 3.77$ ), comparative fit test (.97), RMSEA (.03), Normed fit test (.97) and the Tucker-Lewis test (.96). Based on these values, the data is considered to have the goodness of fit and therefore can be reliably used to assess government performance.

### Factor Loading for the Latent Variables

*Performance in Economic Management:* As shown in Figure 2, the three items measuring government performance in economic management showed a positive influence. The highest factor loading of .87 came from keeping prices down (PEM3), followed by .69 from performance in job creation (PEM2) before managing the economy with the loading of .23 as the least. These imply efforts of the government in keeping prices down in Nigeria measured .87 of the perception of government performance. The assessment of government performance is measured by 60% of the government's effort in job creation and 23% was measured by efforts in economic management. This suggests that a government that focuses efforts on reducing inflation within the country would be perceived as performing more than focusing on any other areas of performance.

*Performance in Improving Infrastructure Facility:* Four items were used to measure government performance in the provision of infrastructure facilities. The loading factors were .77 for education (PIF2), .73 for health (PIF1), .68 for water and sanitary facilities (PIF3), and .56 for road and bridge maintenance (PIF4). These revealed that perception of government efforts in the provision of education (PIF2) among citizens would increase the level at which government is adjudged to be performing by 77%. The assessment would be improved by 73% if it is in the area of health provision (PIF1), 68% if the provision of water and sanitary facilities (PIF3) and 56% improvement would be perceived if Nigeria perceived that the government is putting efforts on road and bridges maintenance (PIF4).

*Performance on Social Issues:* In the assessment of government performance on social issues, Nigerians showed appreciation of .35 for the government's effort in improving the standard of living of the poor (PSI1). It also gave the value of .19 if the effort is in getting enough food on citizens' table (PSI3). However, the individual value of government effort in reducing crime gave a negative value of .61. This testifies that if the government is perceived as fighting crime alone, it would lead to a negative perception of the performance of such a government by Nigerians. The negative result from PSI2 showed the need for further analysis in form of improvement of the model.

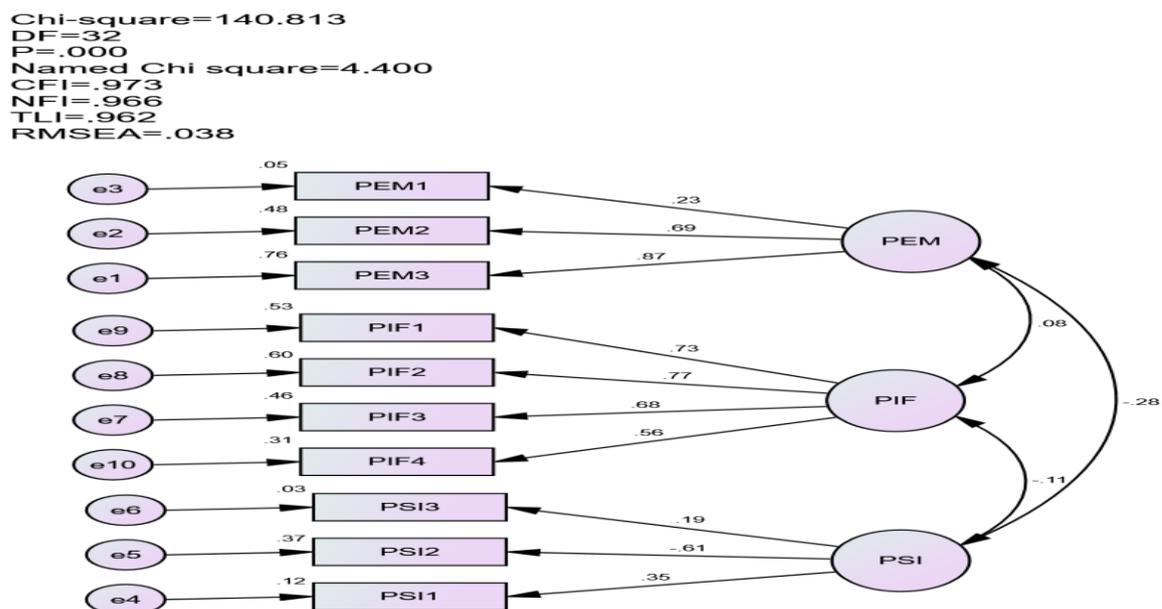


Figure 2. Confirmatory factor analysis of government performance

### Association among the Variables

**PEM ↔ PIF:** The result of the correlation between the variables revealed a positive association between performance on economic activities (PEM) and performance on infrastructure facilities (PIF). This suggests that the government that is perceived to be performing high on economic management would be expected to be performing high in the provision of infrastructure facilities.

**PSI ↔ PEM:** The association of government performance in social issues (PSI) with performance in economic activities (PEM) gave a negative (indirect) relationship of .28. This implies that, if the government is improving its performance on social affairs among its citizens, then, there is a tendency that such a government would be perceived as performing badly in the economic management by .28.

**PSI ↔ PIF:** The association of government performance in social issues (PSI) with performance in the provision of infrastructure facilities (PIF) also gave a negative (indirect) relationship of .11. This implies that, if the government is improving its performance on social affairs among its citizens, then, there is a tendency that such a government would be perceived as performing badly in the provision of infrastructure facilities (PIF) by .11. To have better insight into the reason behind the negative association, further analysis was made to modify the model.

**Improvement of the Model**

To improve the results from the initial model, the negative result in the association of the performance on the social issue with either of the performance in improving living standard and performance in getting enough food to eat was further investigated by correlating the two factors (PSI1 and PSI3). This was done by hypothesizing a scenario whereby the government is simultaneously pursuing improvement in citizens’ living standards as well as in getting enough food to eat. The results are presented in Figure 3.

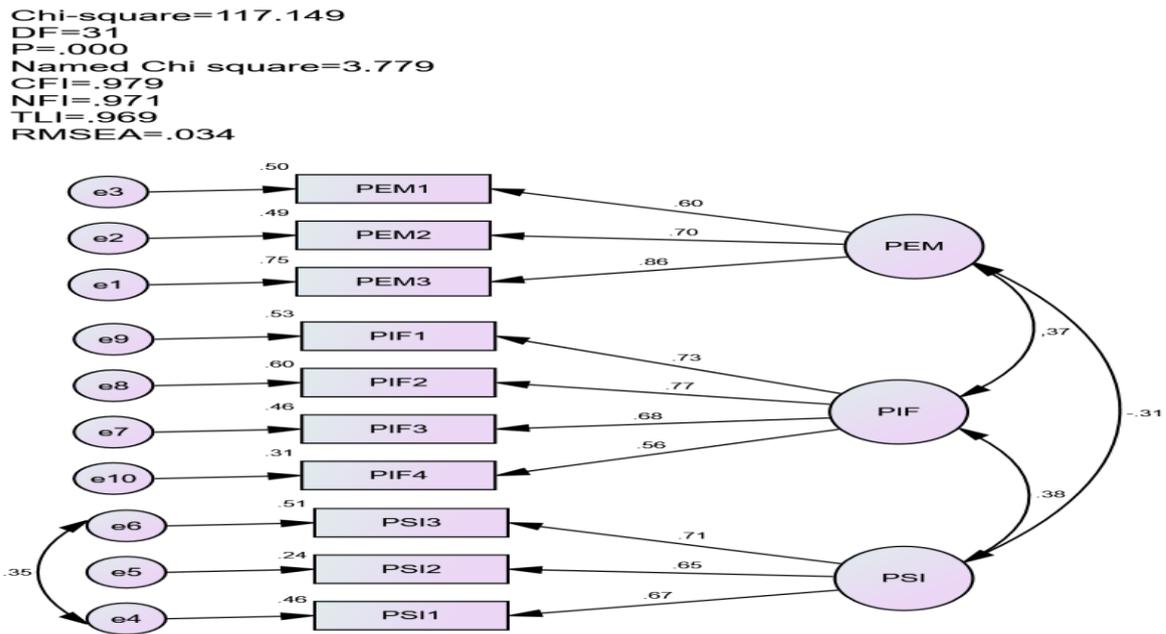


Figure 3. Confirmatory Factor Analysis for government performance (improved version)

The results in Figure 3 from the modified model gave better magnitude in almost all the latent and observed variables after the modification. Specifically, substantial improvement was recorded in the individual values of government performance in getting enough food to .71 from .19, and government performance in improving the living standards of the poor to .67 from .35. The value of government performance in crime reduction remarkably improved from its earlier negative value of .61 to a positive value of .65. This implies that if the government is perceived by the citizens to be taken efforts to improve living standards and simultaneously working on providing enough food on the table of the poor, citizens would appreciate any effort on crime control and would therefore assess the government performance in fighting crime positively. Any efforts in fighting crime would then be able to contribute 65% (.65) to variance in the way government performance is adjudged.

## Discussion

Overall, each of these ten (out of thirteen) factors are strong enough in measuring government performance. For performance on economic management, three factors were identified, four were identified for measurement of performance on infrastructural facilities, and three factors for performance on social issues. Altogether the data measured more than 50% of what the model intended to measure. This shows that there were other factors considered exogenous to the model, the data was able to measure more than 50% of tax morale and government performance. This result was found to be significant at 5%.

The results of the principal component analysis identified four components as tax morale and three variables of government performance. Tax morale has all the six factors adopted well included in the component with loadings from .58 to .75. The factors in the component for performance on infrastructure provision has loadings from .59 to .79. The component of PEM had its three factors included with loads of .42 to .87. The PSI component has .53 to .97 loading. The result of the adequacy test ( $p < .05$ ; CFI  $> .90$ ; NFI  $> .09$ ; TLI  $> .90$ ; RMSEA = .06). These show that the data are reliable and had a good construct validity and had adequate goodness of fit from the methods adopted to measure the fits. They suggested that the data used for the study is adequate and suitable with appropriate goodness of fit.

The strength of the loading revealed that tax morale factors had strong strength (.59 to .67). The three variables of government performance also had factors showing strong loading, government performance on economic issues with strong loadings of .60 to .86. Government performance on infrastructure provision with strong loadings of .56 to .77 and government performance on social issues with strong loadings of .65 to .71 as factor loading. These are mostly above .60.

The result of the correlation showed that government performance on infrastructure provision had a positive association with government performance on economic issues as well as government performance on social issues. These testify that it is encouraging the government to pursue improvement in its efforts on the economic issue.

The performance on a social issue is very crucial among the aspects of government performance, especially on the aspect of crime control. It was found that for government performance in crime control to be appreciated by the government must be perceived to be simultaneously performing on both food provision and improvement of living standards; otherwise, the performance efforts on control of crime would lead to a negative perception from the citizens. Specifically, it was also found out that if the government can ensure enough food are available for the poor and the living standards of the poor is improved, the government's effort in the control of crime would be appreciated by citizens; otherwise, control of crime by the government would negatively affect the citizens' perception towards such a government. If government ensure the provision of enough food and improvement of the standards of living in it social efforts, such government would be able to achieve positive perception if it pursues improvement in infrastructure and social issue; otherwise, it might have negative result if the two are not pursued simultaneously. Crime control can only be pursued after the government had ensured foods are available to the poor and their living standard is well taken care of. Governments, therefore, need to be conscious of their efforts on the economic issue in Nigeria. The result of simultaneously pursuing economic and social factors showing negative association calls for care and caution when the Nigerian government is formulating policies in the areas of infrastructure provision and social issues.

## Conclusion

Based on the findings of the study, the paper concluded that tax morale can be adequately measured by four of the items on the Afrobarometer questionnaire used for survey 6 to study Nigerians which include: citizens pay taxes (tax payment), people must obey the law (law compliance), people must pay taxes (compulsion of taxes), obey government always vs. only if vote for it (unconditionally obeying government), citizens must pay taxes vs. no need to tax the people (need to pay taxes), and pay more taxes to increase health spending (increasing tax to meet infrastructure needs). Government performance can also be adequately measured by the three aspects of performance as measured by ten items on the questionnaire. Furthermore, there are items of performance that have to be taken with caution by the Nigerian government especially crime control.

Based on the findings of this study, the following recommendations are made: Government and tax authorities should acknowledge that Nigerian citizens accept that, as citizens they must pay tax, obey the law of the country, tax is a compulsory level and the government must tax the citizens. All these can be positively used to determine their level of tax morale. The government should work on enlightening the public more in these directions. It is also recommended that the government should ensure they focus their policies and strategies formulations on keeping the price of goods and services down, creating jobs, and managing the economy. On infrastructure, the government should give priority to education, health, water, and sanitation as well as maintenance of roads and bridges. On the social issue, the government should give priority to the improvement of the living standard of the poor and the provision of enough food to the poor. It is of importance that the government must pursue the two simultaneously, hence any effort on control of crime would negatively affect the perception of the citizens towards the performance of such government in controlling crime. Researchers on tax morale/compliance should consider using these key factors to measure tax morale in their studies in the future. Likewise, the three aspects of government performance and their relevant factors should be adopted in measuring government performance in similar studies in a jurisdiction similar to Nigeria.

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