Hierarchical Component Model Approach on Tax Fairness, Public Governance Quality and Tax Compliance: A Mediating Role of Tax Morale

Bello, U.[1], Dandago, K.I.[2], Samaila, I. A.[3]

[1]Department of Accounting, Faculty of Management Sciences, Federal University of Kashere, Gombe State, Nigeria.

[2,3]Department of Accounting, Faculty of Management Sciences, Bayero University Kano, Nigeria.

Abstract

This study assesses the effect of tax fairness, public governance quality on tax compliance of MSEs in North-Eastern States of Nigeria through tax morale. The study population is 124,231 registered MSEs in North-Eastern states of Nigeria where sample of 527 MSEs was used. PLS-SEM was employed to ensure data analysis and hypotheses testing. Internal consistency reliability and validity checks were carried out to ensure that the measurement instrument is reliable and valid for data collection. The findings of the study revealed that direct assessment tax compliance is found to have been positively influenced by public governance quality and tax morale while, tax compliance was not significantly explained by tax fairness. Moreover, tax morale mediated the effect of public governance quality on tax compliance while no mediation was experience on tax system fairness and direct assessment tax compliance. Hence, the study contributed to the existing body of literature and tax authorities were adequately provided with an insight into improving tax compliance of direct assessment taxpayers through tax morale by public governance quality.

Correspondence: ubbayu@gmail.com

ORCID of authors: Bello, U.- iD https://orcid.org/0000-0003-0529-0310

Introduction

Tax compliance is categorised as either voluntary or enforced compliance. Enforced compliance being the effort of tax administrators, voluntary tax compliance is more preferred where taxpayer willingly declares all income accurately and paying exact tax liability in compliance with appropriate tax laws to relevant tax authority (Palil, 2010). Taxpayers voluntary compliance is now a global phenomenon affecting revenue generation experienced in both developed and developing economies (Mas'ud, Manaf & Saad, 2019; Mas'ud, 2017; Muhibudeen, 2018). Additionally, the problem tax noncompliance is more evident in the developing economies than developed countries (Kim, 2008; Sarsiti, Trisnowati, Widiastuti, & Budiwinarto, 2018). This may not be unconnected with the absence of direct assessment taxpayers database and existence of large unregistered businesses (Mas'ud, 2017; Terkper, 2003). Consequently, improving direct assessment tax required a serious attention toward achieving more revenue to the government.

In 2019 African countries witnessed an average tax-to-GDP ratio of 16.6% which increased by 0.3% from 2018 while Nigeria experienced a tax-to-GDP ratio of far below the African average of 6% in 2019 which is a decrease of 0.3% from 2018 (OECD, 2021). For the ten year period between 2010 to 2019 Nigerian tax-to-GDP dropped by an average of 1.3% from 7.3% in 2010 to 6.0% in 2019 while African countries average increases by 1.8% within the same period (OECD, 2021). While African average is increasing Nigerians average is decreasing.

The NBS reported that tax collections by states of the country totalling about N683.6 billion where Lagos accounted for about 40% (N268 billion) of the total tax collection in 2015. Moreover, the report of Joint Tax Board has it that there are more than ten million (10,006,304 to be specific) registered individual taxpayers in Nigeria in all the 36 states and FCT with Lagos alone accounting for about 4.6 million (46%) registered taxpayers demonstrating that all other 35 states and FCT accounted for the remaining 54% an average of 153,000 or 1.5% per state for others (Oyedele, 2016).

Since the discovery of oil in Nigeria, government neglected income from non oil sources especially tax revenue. Revenue from oil source is no more reliable for a country that heavily rely on oil with the current realities in the oil sector with full of uncertainties (Oyedele, 2016). Therefore, tax revenue is considered as the more predictable and consistent revenue source to the government at various levels. However, problem of tax noncompliance has been a major dilemma in harnessing this promising sour of government revenue more especially in a developing country like Nigeria.

NBS, (2021) reported that North-East recorded the least revenue (N42,915,002,928.39) accounting for only 5% of the total IGR generated in the country, as against South-West zone with the highest revenue (N385,414,274,922.27) amounting to more than 45%. Moreover, direct assessment tax accounted to insignificant part of the IGR generated by the states in the North-East where direct assessment tax in the second quarter of 2021 amounted to N1,074,407,181.07 which accounted for only 2.7% of total IGR generated in the region. Despite the low IGR in the region direct assessment tax is badly affected and contributed very low to the revenue despite large number of self employed persons in the region. In view of the foregoing there is a need for a study to explore factors responsible for this poor compliance to direct assessment tax in the region.

Studying the impact of public governance quality and tax fairness on tax compliance with the mediating role of tax morale is critical for numerous reasons. The result of the study will help in understanding why taxpayers abide by tax regulations. By studying tax morale as a mediator, it sheds

light on the psychological and social factors influencing compliance behavior. In addition the findings from the study can inform policymakers about the effectiveness of taxation policies. If tax fairness and good governance positively influence tax morale and, subsequently, compliance, governments can design policies to enhance fairness and governance for better compliance rates. The study posits that when taxpayers perceive the tax system as fair and the government as transparent and efficient, it fosters a sense of trust among citizens, leading to higher compliance and a more cohesive society. The study is motivated to the fact that by understanding the mediating role of tax morale, governments can work towards creating an environment where people willingly contribute to the economy through taxes. Similarly, studying tax morale provides behavioral insights into compliance which can helps researchers and policymakers understand the underlying motivations, attitudes, and beliefs that influence taxpaying behavior, which can be valuable for designing effective interventions and communication strategies to improve compliance. Overall, investigating the interplay between tax fairness, public governance quality, tax morale, and compliance behavior offers a comprehensive perspective on the complex dynamics of taxation systems, which is essential for building fair, efficient, and sustainable fiscal policies.

Several studies were conducted to explore factors affecting direct assessment tax compliance world over. Earlier studies on tax compliance were more concern on economic model of tax compliance in line with the deterrence theory of compliance where probability of noncompliance detection and penalty for defaulting were the major variables of concern. However, socio-psychological factors are now dominating the tax compliance studies after the realisation of the failure of economic model to adequately explain tax compliance behaviour. Good governance, tax system fairness and tax morale are the most important socio-psychological determinants

of tax compliance (Adegboye & Adekanla, 2023; Adeyeye, Otusanya & Arowomole, 2016; Alexander & Balavac-Orlic, 2022; Angeles, 2021; Basri, Natariasari & Devitarika, 2023; Bello, Dandago & Samaila, 2023; Casara, Filippi, Suitner, Dollani & Maass, 2022; Coronado, 2023; Deyganto, 2018; Fotiadis, Chatzoglou, 2022; Hanapi, 2022; Kemme, Parikh & Steigner, 2020; Kim & Wan, 2022; Kim & Wan, 2022; Castañeda, 2023; Lago-Peñas & Lago-Peñas, 2010; Nyamapheni & Robinson, 2021; Oladipo, Nwanji, Eluyela, Godo & Adegboyegun, 2022; Saptono & Khozen, 2023; Sebele-Mpofu, 2020; Sikayu, Rahmat, Nyet & Juliati, 2022; Umar, Derashid, Ibrahim, & Bidin, 2018). However, this study will differ significantly from the previous studies by examining the effect of public governance quality, perceived tax fairness and direct assessment tax compliance. The use of advanced Smart-PLS hierarchical component model in determining the extent of this relationship was employed.

Literature Review

Perceived Quality of Public Governance and Direct Assessment Tax Compliance

Governance quality is found to have positive relationship with tax compliance in various sectors of both developed and developing economies. Notably among these studies are Ige, Igbekoyi and Dagunduro (2023) among small and medium scale businesses in Nigeria; Coronado (2023) among 27 EU member countries and Australia where the study established that good governance practices improves tax compliance significantly; Abdulraqeeb and SafiahSidek (2022) among SMEs in Dubai ; Foya and Nhingwa (2022) on corporate taxpayers in Zimbabwe; Hanapi (2022) in Malaysia; Rashid, Uddin, Haque, and Hossain (2022) in 20 developed countries whose GDP per capita is greater than or equal to $12,000 and 17 developing countries whose GDP per capita is less than $12,000; Sebele-Mpofu (2020) on Zimbabwe's informal sector;

Cummings, Martinez-Vazquez, McKee & Torgler (2008) in Botswana; Umar, Derashid, Ibrahim, and Bidin (2018) conceptual paper in developing countries who found that tax compliance is significantly improved by taxpayers perception on good governance. However, Rashid et al. (2022) found significant negative effect of good governance on tax compliance in developing economies and otherwise in the developed countries.

H₁: *Public governance quality has no significant effect on direct assessment tax compliance of MSEs in North-Eastern States of Nigeria.*

Perceived Quality of Public Governance and Tax Morale

Few studies were conducted on the effect of quality of public governance on tax morale of taxpayers across the globe. However, a consensus among researchers was observed that governance quality improves tax morale prominent among such researches are Coronado (2023) among 2,127 respondents across 27 EU countries and Australia; Nyampheni and Robinson (2021) South Africa and Zimbabwe; Sebele-Mpofu (2020) in Zimbabwe; Kondelaji, Sameti, Amiri & Moayedfar (2016) Iran; Sá, Gomes and Martins (2016) Portugal and Spain; Sá, Martins and Gomes (2015) in Portugal; Lago-Peñas and Lago-Peñas (2010) among European countries; Torgler, Schaffner and Macintyre (2008) in Germany.

H₂: *Public governance quality has no significant effect on tax morale of MSEs in North-Eastern States of Nigeria.*

Perceived Tax Fairness and Direct Assessment Tax Compliance

Mix findings was experienced on the relationship between tax fairness and tax compliance studies where Castañeda (2023) on the taxpayers in the 18 major cities in Latin America; Kim and Wan (2022) on taxpayers in South Korea; Nguyen (2022) on

SMEs in Vietnam; Siahaan (2005) in Surabaya, East Java; Giray (2015) in Turkey; Adeyeye, Otusanya and Arowomole (2016) on Nigerian tradesmen and artisan; Deyganto (2018) in Ethiopia; Sikayu, Rahmat, Nyet and Juliati (2022) on SMEs in Malaysia found significant positive effect of tax fairness on taxpayers compliance. In the same vein Casara, Filippi, Suitner, Dollani and Maass (2022) in Italy found that inequality in tax system has negative effect on tax compliance. However, Oladipo, Nwanji, Eluyela, Godo and Adegboyegun (2022) argued that high tax fairness results to low compliance with payment of taxes by manufacturing firms in Nigeria.

H₃: *Tax system fairness has no significant effect on direct assessment tax compliance of MSEs in North-Eastern States of Nigeria.*

Tax Fairness and Tax Morale

Alexander and Balavac-Orlic (2022) argued that tax system fairness influences tax morale where financial and tax literacy is high and otherwise when it is low. Kim and Wan (2022) in South Korea found that vertical, horizontal and exchange tax system fairness has significant positive effect on tax morale; similarly Castañeda (2023) on the taxpayers in the 18 major cities in Latin America found the same result. Siahaan (2005) in Surabaya, East Java found that tax system fairness affect tax compliance through ethical attitude.

H₄: *Tax system fairness does not have significant effect on tax morale of MSEs in North-Eastern States of Nigeria.*

Tax Morale and Direct Assessment Tax Compliance

There is consensus of scholars on tax morale and tax compliance where significant positive effect was recorded in almost all part of the world. Prominent among these studies are Kemme, Parikh and Steigner (2020) 21 OECD Countries using world value survey; Angeles (2021) using mixed

method on small business in Philippines; Torgler and Schaffner (2007) using taxpayers opinion survey in the Unted States; Luttmer and Singhal (2014); Lisi (2015) in Italy; Alm and McClellan (2012) on USA firms; Cummings, Martinez-Vazquez, McKee and Torgler (2008) South African and Botswana; Torgler, Schaffner and Macintyre (2008) in Switzerland, Australia and Costa Rica.

H₅: *Tax morale has no significant effect on direct assessment tax compliance of MSEs in North-Eastern States of Nigeria.*

H6: *Tax morale has no mediating effect on quality of public governance and direct assessment tax compliance of MSEs in North-Eastern States of Nigeria.*

H7: *Tax morale has no mediating effect on tax system fairness and direct assessment tax compliance of MSEs in North-Eastern States of Nigeria.*
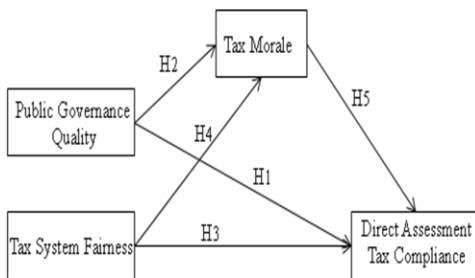

Figure 01: Research Framework

Theoretical Review

A quantitative research requires previous theories to underpin it in order to serve as a framework for further investigations which led researchers to develop theoretical frameworks randomly to underpin their studies (Sinclair, 2007).

Cognitive Theory

Cognitive theory maintained that the main factors influencing compliance, in the area of taxation, are an individual's own morality and level of moral growth (Sutinen &

Kuperan, 1999). Personal morality is the internal duty that a person has to act in accordance with his or her understanding of what is right or wrong. According to this theory, a person's personality is a key factor in determining tax compliance. It is believed that an individual is morally fit when he is willing to complying with tax obligations even if it go against his interest, family and religion for the benefit of others (Alabede, Ariffin, & Idris, 2011). It is against this backdrop that cognitive theory underpins this study that a morally sound taxpayer can comply with tax payment irrespective of what the government can do with it. However, factors determining tax morale (governance quality and tax system fairness) are the indirect determinants of tax compliance through tax morale.

Methods

Research Design

Survey method was found to be the most appropriate research design recommended for the study investigating perception, attitude, opinion and behaviour of individual taxpayers (Alabede, 2012; Deyganto, 2018; Hoa, Lien, & Tuan (2019); Holly, Soewandi & Tuwo (2019); Naicker & Rajaram, 2018; Obaid et al., 2020a, 2020b; Okpeyoa et al., 2019; Palil, 2010). Hence, this study adopts taxpayer opinion survey method based on the quantitative research approach.

The entire 124,231 registered self-employed individuals engaged in various micro and small-scale businesses in North-Eastern states of Nigeria incomes of which are subject to tax under PIT Act Cap P8 2011 in Nigeria made up the study population.

Sample Size and Sampling Technique

This study drives its sample using multistage proportionate cluster sampling technique. Registered MSEs are randomly selected from the six states in North-East Nigeria in proportion to their population as presented in Table 01. The sample size for this population

is 384 as determined using Krejcie and Morgan (1970) table of sample determination which is subsequently increased by 135 (35%) to compensate for the likelihood of non-response as suggested by Israel (2009).

Table 01: Population and Sample Size of registered MSEs in North-East Nigeria

S/N	States	MSEs	Sample
1	Adamawa	21,378	89
2	Bauchi	26,303	110
3	Borno	18,842	79
4	Gombe	25,939	108
5	Taraba	17,077	71
6	Yobe	14,692	62
	Total	124,231	519

Source: SMEDAN and NBS, 2021 Survey

Sources and Method of Data Collection

The data for this survey is collected using a well-structured online questionnaire adapted from the extant literature. This method was found to be widely used in accounting researches (MacElroy, 1999). Cooper et al. (2006) and Benfield and Szlemko (2006) argued that web based data collection is effective and efficient taking into consideration it's cost effectiveness and time management in distribution, retrieval, coding, entry and verification.

Technique for Data Analysis

Hierarchical component model (HCM) of PLS-SEM is used for data analysis and hypotheses testing. HCM was found suitable for the analyses based on the nature of the variables comprising of both first and second order constructs. Descriptive statistics was first employed before evaluating the inner and outer models of the study. The measurement model assessment is conducted to assess convergent validity, discriminant validity and construct reliability.

Reliability and validity checks

Content validity is performed in order to certify how fit the study instrument measures what it is supposed to measure. Consultations were made with some tax consultants, tax administrators, Owners of MSEs and Academics who are expert in the area of taxation to make a judgment on the appropriateness of items chosen to measure the construct. Due to this, certain items were reworded to accurately assess the construct and ensure that respondents could understand them. To evaluate for internal consistency and convergent validity (CV), factor loadings, average variance extracted (AVE), and composite reliability (CR) were all employed as suggested by Hair, Black, Babin, Andersen, and Tatham (2010). To check for discriminant validity a Fornell-Larcker criterion, cross loading and Hetero Trait Mono Trait (HTMT) criterion were used.

Measurement of Variables

Five-point Likert scale with score from 5 to 1 for strongly agree to strongly disagree respectively is used to measure the study variables.

Direct Assessment Tax compliance

Direct assessment tax compliance is measured with four items covering the four components of tax compliance adapted from (Bello, Dandago and Samaila, (2023); Bello et al., (2021)). Respondents were asked to indicate whether they can *Definitely Do, Probably Do, Not Sure, Probably Not Do And Never Do* to the questions as shown in Table 02 below.

Table 02: Measurement of Direct Assessment Tax Compliance

Code	Statements
TCOM1	To correctly register your business with relevant tax authorities
TCOM2	To declare the real income from business to the relevant tax authorities
TCOM3	To always keep proper accounting

Code	Statements
	records of all my business transactions
TCOM4	To always pay correct amount of taxes promptly

Public Governance Quality

Five point likert scale is used to measure each item under public governance quality adapted from Alabede, Ariffin and Idris (2011b). The first order construct of public governance quality are represented by Accountability, Corruption control, Rule of law and political statbility each measured with 3 items as presented in Table 03 below.

Table 03: Measurement of Public Governance Quality

Code	Statements
	Accountability
ACT1	There is responsibility on the part of government in relation to tax revenue.
ACT2	I believe that there is no wastefulness in government expenditure.
ACT3	I have access to the published accounts and annual report of the government.
	Political Stability
POS1	I believe that political situation is stable.
POS2	I believe that political protests are not a threat to stability.
POS3	I believe that territorial and sectarian conflict is not a threat to stability.
	Rule of Law
ROL1	I feel that the Judiciary is free from interference of other arms of government.
ROL2	I believe that justice is fairly administered.
ROL3	I believe that government has an effective power in combating crime.
	Control of Corruption
COC1	I trust the financial

Code	Statements
	honesty of political office holders.
COC2	I believe that diversion of public funds due to corruption is not common in the region.
COC3	I believe that individual and firms do not frequently make extra payments in connection to loan application, securing contract etc.

Tax System Fairness

Five point likert scale is used to measure each item under tax system fairness adapted from Alabede, Ariffin and Idris (2011a). The first order construct of tax system fairness are represented by tax fairness and equity of tax system each measured with 3 items as presented in the Table 04 below.

Table 04: Measurement of Tax System Fairness

Code	Tax System Fairness
TSF1	I trust legislatures in making good and fair tax laws for Nigeria
TSF2	Nigerian police force is effective in combating crime
TSF3	Justice is fairly administered
	Tax System Equity
TSE1	Taxpayers are treated equally in respective of their status in the society by tax administrators
TSE2	I believe that benefit from tax revenue is fairly distributed to citizens without bias
TSE3	Tax payment is charge in proportionate to the income generated which I consider just

Tax Morale

Five point likert scale is used to measure each item under tax morale adapted from Alm and McClellan (2012). Tax morale is measured with 3 items as presented in Table 05 below.

Table 05: Measurement of Tax Morale

Code	Statements
TXM1	I believe that paying appropriate tax is a moral obligation, so I declare the

		required tax
TXM2		I would feel guilty if I excluded some of my income when completing my tax return
TXM3		I do not think it is ethically wrong if I excludes small amount of income when completing the tax return (Reverse)

Findings and Discussion

The Measurement Model

To appropriately evaluate the measurement model, validity and reliability are the major criteria employed in PLS-SEM analysis (Hair, Gabriel, Silva, & Junior, 2019; Hair, Risher, Sarstedt, & Ringle, 2019). The predictive capacity of the structural model (Inner model) depends to a large extent on how reliable and valid the measures are determined by the measurement (outer) model. The appropriateness of the measurement model can be evaluated based on internal consistency and reliability of individual items using CR and Cronbach's Alpha; Convergent validity which assess individual constructs validity using AVE; and finally, Discriminant validity with the help of indicator's outer loadings, Fornell-Larcker criterion and HTMT.

Internal Consistency

To correctly assess internal consistency reliability of items CR, Cronbach's alpha and cross loadings were examined by calculating standard PLS algorism using SmartPLS. The result shows that some all the items loaded appropriately with more than 0.5 which is found to be accepted as argued by Hair, Hult, et al. (2014) that only items with outer loadings of less than 0.4 will be considered for deletion.
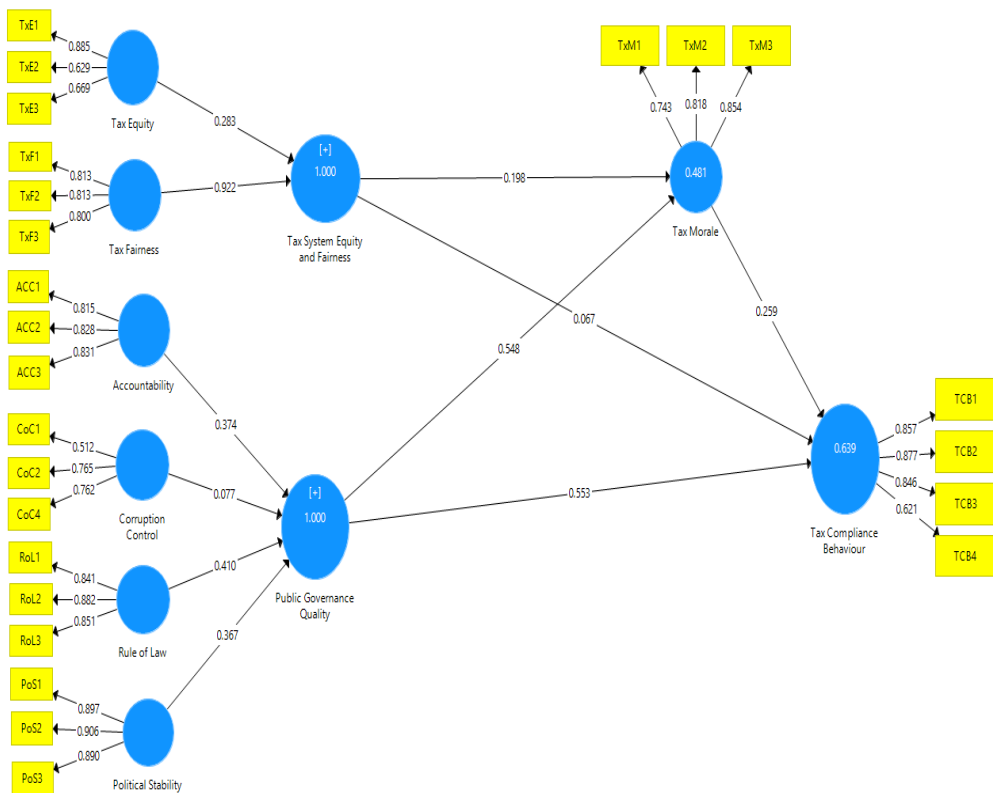

Figure 01: The Measurement Model

CR ranges from 0 to 1, and the recommended threshold value is 0.60 (Henseler, Ringle, & Sinkovics, 2009). However, values above 0.70 are most preferred (Hair, Gabriel, et al., 2019). Therefore, the reliability of the measurement model was determined by looking at the CR and Cronbach's alpha values for each of the constructs in this study. The results show that the CR values ranged from 0.758 to 0.888, exceeding the suggested threshold value of 0.70. When Cronbach's alpha is close to 1, it suggests greater internal consistency dependability since it measures how effectively items in a collection are positively associated with one another (Sekaran, 2003). The Cronbach's alpha result indicates that internal consistency is achieved for all the variables with minimum value being 0.568.

Convergent Validity

AVE values were used to evaluate convergent validity, which is the degree of agreement between multiple items in measuring a specific concept (Hair, Hult, Ringle, & Sarstedt, 2014). The results are shown in Table 06, and they show that all of the constructs' AVE values exceed the cut off

value of 0.50 (Hair, Hult, et al., 2014; Hair, Risher, et al., 2019; Henseler, et al., 2009).

Table 06: CR and AVE Values

	AVE	CR
Accountability	0.680	0.865
Corruption Control	0.500	0.726
Political Stability	0.806	0.926
Rule of Law	0.737	0.893
Tax Compliance Behaviour	0.652	0.880
Tax Equity	0.542	0.776
Tax Fairness	0.654	0.850
Tax Morale	0.650	0.848

Discriminant Validity

Discriminant validity which ensures a distinctiveness of a construct's measure which is not measured by other measures in SEM (Hair et al., 2010). To ensure that discriminant validity is achieved both cross loading (Chin & Newsted, 1999); Fornell and Larcker (1981) and Heterotrait-monotrait (HTMT) (Hair, Risher, et al., 2019) were assessed. Table 07 presented the results of Fornell and larcker criterion.

Table 07: Discriminant Validity: Fornell-Larcker (1981) Criterion

Constructs	ACT	COC	POS	ROL	TCB	TSE	TSF	TXM
Accountability	0.825							
Corruption Control	0.233	0.690						
Political Stability	0.622	0.158	0.898					
Rule of Law	0.691	0.171	0.449	0.858				
Tax Compliance	0.673	0.211	0.562	0.722	0.807			
Tax Equity	0.216	0.107	0.068	0.193	0.157	0.737		
Tax Fairness	0.529	0.163	0.470	0.638	0.570	0.135	0.809	
Tax Morale	0.641	0.140	0.444	0.642	0.671	0.199	0.540	0.806

The result presented in Table 07 above reveals that discrimant validity has been achieved considering the fact that the AVE's square root of individual construct is greater than correlation among the latent constructs. Moreover, as explained earlier cross loading and indicator loading is another method for checking discrimant validity. All indicator loadings were compared with cross loading

and it is observed that cross loadings are less than the indicator loadings, indicating that discriminant validity is well established.

Finally, an assessment of HTMT criterio is presented in Table 08 below. The result indicates that discriminant validity is achieved by establishing a correlation (HTMT values) between the constructs

below 0.90 (Hair, Hult, Ringle, & Sarstedt, 2014; Hair, Risher, et al., 2019; Hair, Sarstedt, Hopkins, & Kuppelwieser, 2014; Wong, 2013).

Table 08: Discriminant Validity: Hetrotrait-Monotrait Criterion

Constructs	ACT	COC	POS	ROL	TCB	TSE	TSF	TXM
Accountability								
Corruption Control	0.419							
Political Stability	0.756	0.259						
Rule of Law	0.859	0.288	0.525					
Tax Compliance	0.842	0.354	0.656	0.879				
Tax Equity	0.340	0.282	0.124	0.274	0.222			
Tax Fairness	0.696	0.296	0.581	0.822	0.736	0.211		
Tax Morale	0.827	0.255	0.538	0.796	0.859	0.278	0.708	

The Structural Model

Prior to assessing the inner model (Hair, Gabriel, et al. (2019); Hair, Hult, et al. (2014)) suggested that collinearity to be examined. In view of the above, the result of the multicollinearity indicated that problem of multicollinearity does not exist among the exogenous variables as evident with a Variance Inflation Factor (VIF) below the threshold values of 5. Systematic model analysis of the inner model was conducted in order to provide a thorough representation of the results and subsequaently test the hypotheses. The assessment of the structural model commences with an evaluation of the effect of the higher order constructs on the exogeneous variable. PLS-SEM Algorithm was used to examined the size of the path coefficients while PLS-SEM bootstrapping process to evaluate the significance of the relationship.
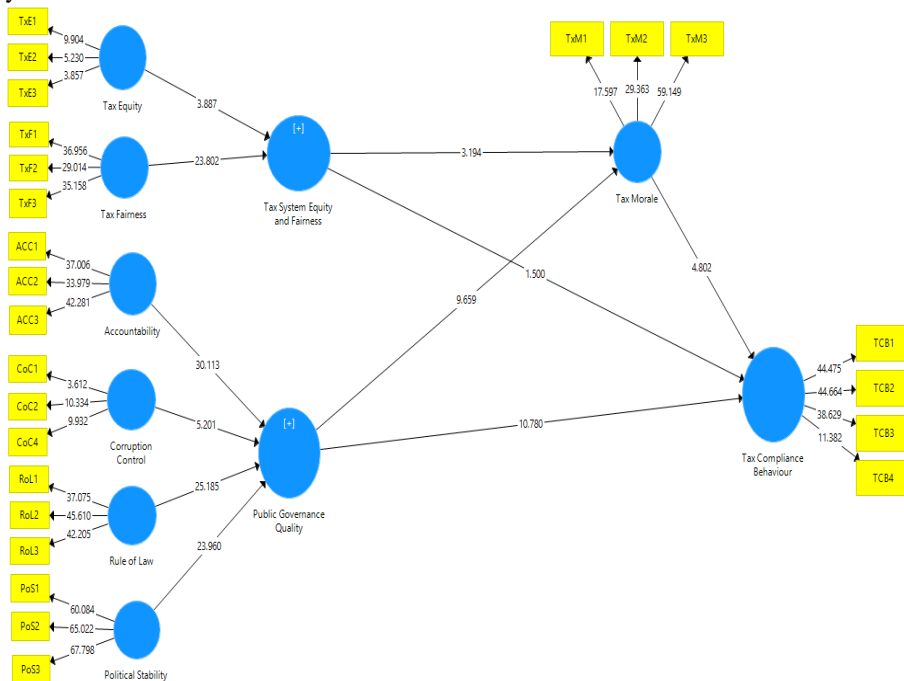

Figure 02: The Structural Model

Test of Hypotheses Direct Relationship

Table 09 below presented the results of testing the study's hypotheses. Hypothesis one (H1) proposed that Public governance quality has no significant effect on direct assessment tax compliance of MSEs in North-Eastern States of Nigeria. The result indicates that higher order quality of public governance positively inflences tax compliance (β=.553 t=10.78 P=0.000). This result indicated that a unit incresase in perceived quality of public governance increases taxpayers compliance with the payment of direct assessment tax by more than 55%, consequently null hypotheses is hereby rejected.

Similar, with respect to hypotheses two (H2), the result suggests that MSEs tax morale is significant affected by quality of public governance (β= .548; t=9.66; p=0.000); therefore, H2 is also rejected. However, hypotheses three (H3) is accepted on the basis that tax system fairness has no significant effect on direct assessment tax compliance (β= 0.067; t=1.50; p=0.134). in the other hand, the results indicated that hypotheis four (H4) is not supported becausd tax system fairness significantly and positively influences tax morale (β= .198; t=3.194; p=0.001); hence, H4 is rejected. Furthermore, hypothesis five (H5) is hereby rejected that tax morale has no significant effect on direct assessment tax compliance of MSEs (β= 0.259; t=4.802; p=0.0.000).

Table 09: Results of Direct Effects

Hypotheses	Path	Path Coef	T Stats	P Values	Decision
H1	PGQ -> TCOM	0.553	10.78	0.000	Rejected
H2	PGQ -> TXM	0.548	9.659	0.000	Rejected
H3	TSF -> TCOM	0.067	1.500	0.134	Accepted
H4	TSF -> TXM	0.198	3.194	0.001	Rejected
H5	TXM -> TCOM	0.259	4.802	0.000	Rejected

Test of Hypotheses (Indirect Relationship)

The result of the mediation analysis is presented in Table 10 below. Hypothesis six (H6) which proposed that public govrnance quality affect direct assessment tax compliance through tax morale is hereby rejected with variance accounted for (VAF) valued at 0.620 indicating that tax morale reasonably mediated the relationship between quality of public governance and direct assessment tax comapliance. However, the result of hpothesis seven (H7) indicated that tax system fairness did not significantly influence direct assessment tax compliance through tax morale with VAF of 0.134 which is less than the threshold of 0.2 for partial mediation (Hair, Hult, et al., 2014). The VAF establishes the strength of indirect effect relative to the entire effect (Hair, Hult, et al., 2014) as calculated in Table 10 below.

Table 10: Results of Indirect Effects

Path	Indirect Effect	VAF	Decision
PGQ-> TXM->TCOM	(0.548*0.259)/ 0.548*0.259+0.553	0.62	Mediated
TSF -> TXM->TCOM	(0.198*0.259)/ 0.198*0.259+0.553	0.13	No mediation

Evaluation of R-Squared

As demonstrated in Table 11 below, the model of this study explain about 64% of the total variance in direct assessment tax compliance of MSEs in North-Eastern States of Nigeria. This shows that the two (2) sets of higher order exogenous latent variable (i.e. public governance quality and tax system fairness) through tax morale jointly

explained about 64% of variation in direct assessment tax compliance.

Table 11: Variance Explained in the Endogenous Latent Variables

Endogenous Latent Variable	Variance explained (R^2)	Decision
Direct Assessment Tax Compliance	63.9%	Substantial

Analysis of Effect Size (f^2)

Table 12: Effect Sizes of Latent Variables (f2)

Hypotheses	Path	f^2	P Value	Rating Criterion
H1	PGQ -> TCOM	0.365	0.000	Large effect
H2	PGQ -> TXM	0.333	0.000	Large effect
H3	TSF -> TCOM	0.007	0.537	No effect
H4	TSF -> TXM	0.043	0.144	No effect
H5	TXM -> TCOM	0.097	0.033	Small effect

Assessment of Predictive Relevance (Q2)

Hair, Risher, et al. (2019) recommended using Stone-Geisser's Q^2 to assess the predictive relevance of a model, which assumes that an inner model must be able to provide evidence of prediction of the endogenous latent construct's indicators. This is in addition to examining the degree to which the model explained (R^2) variance in the endogeneous variable as a condition for predictive accuracy (Henseler, Ringle, & Sinkovics, 2009).

The cross-validated redundancy findings show that Direct Assessment Tax Compliance demonstrated predictive relevance, with Q^2 being more than zero (0.41) and being within the model's range of predictability (Hair, Hult, et al., 2014; Hair, Risher, et al., 2019; Henseler et al., 2009).

Table 13: Predictive Relevance

Total	SSO	SSE	Q^2
Direct Assessment Tax Compliance	1,440.00	848.929	0.41

Analysis of the effect sizes as described in Table 12 shows that public govrnance quality has large effect size while tax morale is found to have small effect with tax system fairness having no effect at all. Effect sizes are appraised 0.02, 0.15 or 0.35 as small, medium and large effect respectively. However, Chin and Newsted (1999) argued that yet a small effect size should be accepted if the changes in beta are significant.

Discussion of Findings

The result indicates that improved quality of public governance can translate to higher direct assessment tax compliance and tax morale. However, tax system fairness in the other hand has no considerable effect on direct assessment tax compliance. In the other hand, tax system fairness significantly and positively influences tax morale. The result of the mediation analysis indicated a reasonable variance accounted for (VAF) value maintaining that tax morale reasonably mediated the relationship between quality of public governance and direct assessment tax comapliance. Overal the model of this study explains significant variance in direct assessment tax compliance of MSEs in North-Eastern States of Nigeria. Similarly, the analysis of the effect sizes shows that public govrnance quality has large effect size while tax morale has small effect with tax system fairness having no effect at all with Direct Assessment Tax Compliance having high predictive relevance.

Conclusion and Recommendation

In general, the study provided considerable results in examining the relationship between exogenous variables (public governance quallity and tax system fairness), endogeneous variable (Direct Assessment Tax compliance) and the mediating variable (Tax morale) using the reflective-formative hiarachical component model. Therefore, the study concludes that public governance quality influences direct assessment tax compliance through tax morale. While tax system fairness do not influence direct assessment tax compliance.

Basd on the conclusion, the study recomends that government to improve on the quality of its governance by controlling corruption, ensuring rule of law, guarantee political stabiliy and improve on accountability since positive improvement on this factors improves tax morale which is established to improved tax compliance. Similarly, Tax Authorities should ensure that an effective communication strategy is developed in order to promote tax morale. Highlighting the positive impact of taxes on public services and transparent governance can contribute to building a sense of civic duty and tax morale.

It is recommended to future studies to pay attention to the following areas: firstly, adopt a longitudinal approach to examine how shifts due to time variation in public governance quality and perceptions of tax fairness influence tax morale and subsequent compliance behavior. Secondly, consider cross-regional and country analyses to account for cultural, social, and economic variations in different geopolitical contexts. Thirdly, control for external factors that might influence tax compliance, such as economic conditions, demographic variables, and historical trends. Fourthly, supplement quantitative findings with qualitative insights through conducting in-depth interviews or focus group discussions to uncover the underlying motivations and reasoning behind individuals' tax morale and compliance decisions.

References

Adegboye, A. A. & Adekanla, A. O. (2023). Tax Compliance Attitudes in Africa: How important is natural resource endowment? *Journal of economic development, 48*(2), 105-122.

Adeyeye, B. G., Otusanya, O. J. and Arowomole, S. S. A. (2016). Honesty, Tax Fairness, Government's Responsiveness and Voluntary Tax Compliance in Nigeria', Int. J. Economics and Accounting, Vol. 7, No. 4, pp.326–344.

Alabede, J. O. (2012). An Investigation of Factors Influencing Taxpayers' Compliance Behaviour: Evidence from Nigeria. (Doctor of Philosophy), Universiti Utara Malaysia.

Alabede, J. O., Ariffin, Z. B. Z., & Idris, K. M. (2011a). Determinants of Tax Compliance Behaviour: A Proposed Model for Nigeria. International Research Journal of Finance and Economics(78), 121-136.

Alabede, J. O., Ariffin, Z. B. Z., & Idris, K. M. (2011b). Public Governance Quality and Tax Compliance Behavior in Nigeria: The Moderating Role of Financial Condition and Risk Preference. Issues in Social and Environmental Accounting, 5(1/2), 3-24.

Alabede, J. O., Ariffin, Z. Z., & Idris, K. M. (2011). Individual taxpayers' attitude and compliance behaviour in Nigeria: The moderating role of financial condition and risk preference. Journal of Accounting and Taxation, 3(5), 91-104.

Alexander & Balavac-Orlic (2022). Tax Morale: Framing and Fairness. Economic Systems, 46(1).

Alm, J. & McClellan, C. (2012). Tax Morale and Tax Compliance from the Firm's Perspective. KYKLOS, 65(1), 1-17.

Angeles, I. T. (2021). Categorizing Taxpayers: A Mixed-Method Study on Small Business Tax Compliance in the Philippines. The South East Asian Journal of Management, 15(2), 212-234.

Basri, Y. M., Natariasari, R. & Devitarika, B. (2023). MSMEs Tax Compliance in Indonesia During Pandemic COVID-19: The Role of Risk Preference as Moderation. *Journal of Tax Reform, 9(1), 6–18.*

Bello, U., Abubakar, A., Sabo, A., Pantamee, A. A., Shehu, U. A., Saidu, N. A.,...... Mohammed, H. S. (2021). Tax Knowledge and Personal Income Tax Compliance: A Study of Small and Medium Enterprises in Gombe State, Nigeria. Journal of Money, Banking and Finance, 7(1), 93-109.

Bello, U., Dandago, K. I. & Samaila, I. A. (2023). Taxpayers' Perception and Direct Assessment Tax Compliance of Micro and Small Enterprises in North-East, Nigeria. International Journal of Research and Innovation in Social Science, 12(10), 1411-1421.

Benfield, J. A., & Szlemko, W. J. (2006). Research Design: Internet-Based Data Collection: Promises and Realities. Journal of Research Practice, 2(2).

Bello, U., Dandago, K.I., Samaila, I. A., KJM, 2023, 12 (03)

Casara, B. G. S., Filippi, S., Suitner, C. Dollani, E. & Maass, A. (2022). Tax the élites! The Role of Economic Inequality and Conspiracy Beliefs on Attitudes towards Taxes and Redistribution Intentions. British Journal of Social Psycholog y, 1-15.

Castañeda, N. (2023). Fairness and Tax Morale in Developing Countries. *Studies in Comparative International Development*. https://doi.org/10.1007/s12116-023-09394-z.

Chin, W. W., & Newsted, P. R. (1999). Structural equation modeling analysis with small samples using partial least squares. In R. H. Hoyle (Ed.). Statistical strategies for small sample research, 1, 307-341.

Cooper, C. J., Cooper, S. P., Junco, D. J. d., Shipp, E. M., Whitworth, R., & Cooper, S. R. (2006). Web-based data collection: detailed methods of a questionnaire and data gathering tool. Epidemiologic Perspectives & Innovations, 3(1).

Coronado, L. (2023). Why tax governance is key in an era of more tax risk and controversy. EY Tax Risk and Controversy Survey.

Cummings, R.G., Martinez-Vazquez, J., McKee, M., Torgler, B. (2008). Tax Morale Affects Tax Compliance: Evidence from Surveys and an Artefactual Field Experiment. Journal of Economic Behavior and Organization, doi:10.1016/j.jebo.2008.02.010

Deyganto, K. O. (2018). Factors Influencing Taxpayers' Voluntary Compliance Attitude with Tax System: Evidence from Gedeo Zone of Southern Ethiopia. Universal Journal of Accounting and Finance, 6(3), 92-107.

Eriksen, K., & Fallan, L. (2006). Tax knowledge and attitudes towards taxation. A Report on quasi-experiment. Journal of Economic Psychology, 17(3), 387-402.

Fischer, C. M., Wartick, M., & Mark, M. (1992). Detection Probability and Taxpayer Compliance: A Review of the Literature. Journal of Accounting Literature, 11, 1-49.

Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. Journal of marketing research, 382-388.

Fotiadis, K., Chatzoglou, P. The tax morale of exhausted taxpayers. The case of Greece. *Const Polit Econ* 33, 354–377 (2022). https://doi.org/10.1007/s10602-021-09349-3.

Giray, F. (2015). Factors Determining Taxpayers' Perception towards Tax Fairness: The Structural Equation Model for Turkey. International Journal of Economics and Finance Studies, 7(1), 17-38.

Hair, J. F., Black, W. C., Babin, B. J., Andersen, R. E., & Tatham, R. L. (2010). Mutilvariate data analysis (Vol. 280). Upper Saddle River: NJ: Pearson Prentice Hall.

Hair, J. F., Gabriel, M., Silva, D. D., & Junior, S. B. (2019). Development and validation of attitudes measurement scales: fundamental and practical aspects. RAUSP Management Journal, 54(4), 490-507.

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2014). A primer on Partial Least Squares Structural Equation Modeling (PLS-SEM): Thousand Oaks: Sage Publications.

Bello, U., Dandago, K.I., Samaila, I. A., KJM, 2023, 12 (03)

Hair, J. F., Risher, J., Sarstedt, M., & Ringle, C. M. (2019). When to Use and how to Report the Results of PLS-SEM. European Business Review, 30(1), 2-24.

Hair, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial Least Squares Structural Equation Modeling (PLS-SEM): An Emerging Tool in Business Research. European Business Review, 26(2), 106-121.

Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The Use of Partial Least Squares Path Modeling in International Marketing. New Challenges to International Marketing: Emerald Group Publishing Limited, 277-319.

Hoa, N. T., Lien, V. T. P., & Tuan, T. T. (2019). Determinants Affecting Tax Compliance: A Case of Enterprises in Vietnam. Academy of Accounting and Financial Studies Journal, 23(3).

Holly, A., Soewandi, M. A., & Tuwo, D. L. (2019). Determinant of Tax Payer Compliance in KPP Pratama Makassar Utara. Journal of Accounting, Entrepreneurship and Financial Technology, 1(1), 12-31.

Ige, A. G., Igbekoyi, O. E. & Dagunduro, M. E. (2023). Good Governance and Tax Compliance among SMEs in Nigeria: A Moderating Role of Socio-economic Factors. *International Journal of Economics, Business and Management Research, 7*(2), 69-92.

Israel, G. D. (2009). Sampling. Florida: University of Florida.

Kemme, D. M., Parikh, B. & Steigner, T. (2020). Tax Morale and International Tax Evasion. Journal of World Business, 55, 1-12.

Kim, S. (2008). Does Political Intention Affect Tax Evasion? Journal of Policy Modeling, 30(3), 401-415.

Kim, Y. & Wan, H. (2022). The Effect of Fairness on Tax Morale in South Korea: A framed question approach. International Review of Economics, 69, 103-123.

Kondelaji, M. H., Sameti, M., Amiri, H. & Moayedfar, R. (2016). Analyzing Determinants of Tax Morale Based on Social Psychology Theory: Case Study of Iran. Iranian Economic Review, 20(4), 579-595.

Krejcie, R. V., & Morgan, D. W. (1970). Determining Sample Size for Research Activities. Educational and Psychological Measurement, 30, 607-610.

Lago-Peñas, I. & Lago-Peñas, S. (2010). The determinants of tax morale in comparative perspective: Evidence from European countries. European Journal of Political Economy, 26, 441-453.

Lisi, G. (2015). Tax morale, Tax Compliance and the Optimal Tax Policy. Economic Analysis and Policy, 45, 27–32.

Luttmer, E. F. P. & Singhal, M. (2014). Tax Morale. Journal of Economic Perspectives, 28(4), 149-168.

Bello, U., Dandago, K.I., Samaila, I. A., KJM, 2023, 12 (03)

MacElroy, B. (1999). Comparing Seven Forms of On-Line Surveying. Quirk's Marketing Research Review.

Mas'ud, A., Manaf, N. A. A., & Saad, N. (2019). Trust and power as predictors to tax compliance: Global evidence. Economics and Sociology, 12(2), 192-204.

Mas'ud, a. (2017). Taxation and Tax Compliance: A Research Guide for African Tertiary Institutions. Zaria: Ahmadu Bello University Press Limited.

McGee, R. W. (1996). Is tax evasion unethical? University of Kansas Law Review, 42(2), 411-435.

Muhibudeen, L. (2018). Determinants of Tax Compliance Behaviour in the Informal Sector of Kano State, Nigeria. (Ph.D), Bayero University Kano.

Naicker, Y., & Rajaram, R. (2018). Factors that Influence Tax Compliance of SMEs in South Africa. Acta Universitatis Danubius, 10(2).

Nguyen, T. H. (2022). The Impact of Non-Economic Factors on Voluntary Tax Compliance Behavior: A Case Study of Small and Medium Enterprises in Vietnam. Economies 10: 179. https://doi.org/10.3390/economies10080179.

Nyamapheni, J. & Robinson, Z. (2021). Determinants of Tax Morale: Cross-Sectional Evidence from Africa. Journal of Accounting and Management, 11(3), 84-99.

Obaid, M. M., Ibrahim, I., & Udin, N. M. (2020a). Determinants of SMEs Tax Compliance in Yemen: A Pilot Investigation. IOSR Journal of Humanities and Social Science, 25(1), 64-67.

Obaid, M. M., Ibrahim, I., & Udin, N. M. (2020b). An Investigation of the Determinants of Tax Compliance Among Yemeni Manufacturing SMEs Using the Fisher Model. International Journal of Psychosocial Rehabilitation, 24(4), 1809-1824.

OECD, (2021). Revenue Statistics in Africa, Nigerian-Tax-to-GDP ratio. Retrieved on 25/08/2022 from https://www.oecd.org/tax/tax-policy/revenue-statistics-africa-nigeria

Okpeyoa, E. T., Musah, A., & Gakpetor, E. D. (2019). Determinants of Tax Compliance in Ghana: The Case of Small and Medium Tax Payers in Greater Accra Region. Journal of Applied Accounting and Taxation Article History, 4(1), 1-14.

Oladipo, O., Nwanji, T., Eluyela, D., Godo, B & Adegboyegun, A. (2022). Impact of tax fairness and tax knowledge on tax compliance behavior of listed manufacturing companies in Nigeria. Problems and Perspectives in Management, 20(1), 41-48.

Oyedele, T. (2016). Guess how many Nigerians pay tax and how our government spends the money. Retrieved on 28/08/2022 from https://www.pwc.com/ng/en/assets/pdf/tax-watch-june-2016.pdf

Palil, M. R. (2010). Tax knowledge and tax compliance determinants in self assessment system in Malaysia. University of Birmingham.

Bello, U., Dandago, K.I., Samaila, I. A., KJM, 2023, 12 (03)

Sá, C., Gomes, C. & Martins, A. (2016). Tax Morale Dimensions Analysis in Portugal and Spain. International Journal of Economics and Management Engineering, 10(12), 3969-3975.

Sá, C., Martins, A. & Gomes, C. (2015). Tax Morale Determinants in Portugal. European Scientific Journal, 236-254.

Saptono, P.B. and Khozen, I. (2023), "What determines the tax compliance intention of individual taxpayers receiving COVID-19- related benefits? Insights from Indonesia", *International Journal of Sociology and Social Policy*.

Sarsiti, Trisnowati, J., Widiastuti, E., & Budiwinarto, K. (2018). Factors Influencing Individual Taxpayers Compliance In The Region Ex-Resident of Surakarta. IOSR Journal of Economics and Finance, 9(1), 6-11.

Sebele-Mpofu, F. Y. (2020). Governance quality and tax morale and compliance in Zimbabwe's informal sector. Cogent Business & Management, 7(1).

Sekaran, U. (2003). Research Methods for Business: A Skill-Building Approach. Southern Illinois University at Carbondale: John Wiley & Sons, Inc.

Siahaan, F. O. P. (2005). The Influence of Tax Fairness, Ethical Attitudes and Commitment on Taxpayer Compliance Behavior. The International Journal of Accounting and Business Society, 13(1/2), 33-44.

Sikayu, S. H., Rahmat, M. B., Nyet, C. A & Juliati (2022). Fairness, Transparency and Attitude towards Tax Evasion amongst Owners of SMEs. International Journal of Service Management and Sustainability, 7(1), 185 – 206.

Sinclair, M. (2007). A guide to understanding theoretical and conceptual frameworks. Evidence Based Midwifery, 5(2), 39.

Sritharan, N., & Salawati, S. (2019). Examining the Moderating Effect of Tax Knowledge on the Relationship between Individual Factors and Income Tax Compliance Behaviour in Malaysia. International Journal of Academic Research in Accounting, Finance and Management Sciences, 9(3), 160-172.

Sutinen, J. G., & Kuperan, K. (1999). A socio-economic theory of regualatory compliance. International Journal of Social Economics, 26(1-3), 174-193.

Taing, H. B., & Chang, Y. (2020). Determinants of Tax Compliance Intention: Focus on the Theory of Planned Behavior. International Journal of Public Administration, 1-13.

Terkper, S. (2003). Managing Small and Medium Size Taxpayers in developing economies. Tax Note International, 211-234.

Torgler, B. & Schaffner, M. (2007). Causes and Consequences of Tax Morale: An Empirical Investigation. Center for Research in Economics, Management and the Arts (CREMA), Working Paper No. 2007 – 11

Torgler, B., Schaffner, M. & Macintyre (2008). Tax Compliance, Tax Morale and Governance Quality. Conference on Frontiers of Taxation, at the WZB in Berlin

Bello, U., Dandago, K.I., Samaila, I. A., KJM, 2023, 12 (03)

Wong, K. K. K. (2013). Partial Least Squares Structural Equation Modeling (PLS-SEM) Techniques Using SmartPLS. Marketing Bulletin, 24(1).