

Determinants of Tax Compliance in the Informal Sector: The Intentions of TIN and Non-TIN Registered Taxpayers



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Abstract Studies have relied on the extended version of the Theory of Planned Behaviour (ETPB) in predicting the compliance intentions of individuals. However, few papers have examined the joint effect of the ETPB variables and other psychosocial factors in explaining the tax compliance intentions among individuals (i.e. persons with tax identification numbers (TIN) and those without tax identification numbers) in the informal sector. We examined the effect of ETPB variables including trust, perceived tax complexity, and intervention strategies on the compliance intentions of TIN registered and Non—TIN registered taxpayers. Employing cross-sectional data from a survey of micro and small self-employed individuals from the Ghanaian informal sector, the partial least square structural equation modelling technique was used to analyse the data. We find that individuals without TIN have high intentions to be tax compliant compared to those with TIN. Policymakers would have to further strategize in knowing the reasons accounting for high compliance intention among Non-TIN taxpayers beyond the intended purpose of the TIN that is supposed to make TIN registered taxpayers more responsible

Keywords Tax compliance · Tax non-compliance · Tax identification number (TIN) · TIN registered taxpayers · Non-TIN registered taxpayers · Ghanaian informal sector · Theory of planned behaviour (ETPB)

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1 Introduction

The problem of tax compliance is an evergreen issue, which is as old as tax itself as no one enjoys paying taxes (Yin et al., 2016; Okpeyo et al., 2019). Finding solutions to the problem of tax non-compliance has been a huge challenge generally faced by governments and tax authorities especially in developing countries (Chepkurui et al., 2014). Earlier studies have established that taxes are the main fuel on which a nation's infrastructural development and public service delivery machinery by governments is efficiently sustained (Owusu et al., 2020; Youde & Lim, 2019). Despite the fact that the key role of taxes to the economy cannot be over emphasized, there is a huge tax gap in the annual revenue target for most central governments owing to a low level of global voluntary compliance at the individual and corporate levels.

The large informal sector and lack of proper systems and structures to enforce tax laws in developing countries like Ghana have negatively resulted in widespread non-compliance of tax by taxpayers over the years and hence, low revenue collections by tax authorities (Aryee, 2007; Okpeyo et al., 2019; Amponsah et al., 2019). Convincing taxpayers to voluntarily pay taxes was always cumbersome, and this often creates an adverse impact on the economy (James & Alley, 2004; Chepkurui et al., 2014). In developing countries, the alarming level of public expenditure that is constantly highlighted in the annual budget of governments are partly accounted for by growth in public sector wage bill and enormous pressure (Taing & Chang, 2020). Ensuring voluntary tax compliance has therefore become a priority in developing countries as most of these countries continue to struggle in dealing with the consistent shortfall in annual revenue targets to meet the rising public expenditure.

Defined as a compulsory, unrequited payment to the general government (OECD, 2019), benefits provided by governments to taxpayers are not in proportion to the payments made by taxpayers. This means there is a redistribution of these payments across households for it to qualify as tax. Hence, a very prudent public policy objective to mitigate the tax gap in contemporary times by governments is to find ways of promoting tax compliance culture among taxpayers. Given the cost of ensuring that taxpayers comply with tax as a major hindrance in ensuring good tax compliance behaviour from taxpayers (Bird & Zolt, 2005; Owusu et al., 2020), the issue of trust is very key as the assessment and payment of taxes by small and micro taxpayers in Ghana is done from a provisional perspective. This approach has placed responsibility on the tax authorities thereby incurring the cost of determining each taxpayer's liability and collecting them. In essence, tax authorities inform taxpayers how much tax liability they owe based on the tax authority's own assessment which could be in excess or below the taxpayer's own assessment. The shortcoming of this policy is that more people will not voluntarily comply with their tax obligations mostly when the perceived level of enforcement remain quite low.

The problem of tax non-compliance which remains an albatross especially on the neck of most developing countries like Ghana need to be addressed. In most jurisdictions, the issues that affect tax compliance among the citizenry seem similar

as tax authorities find it difficult in convincing taxpayers to comply with the tax laws in the country which could be out of the taxpayer's ignorance or willful intent. Policies to enhance taxpayer services and encourage voluntary tax compliance in many developing countries have been swiftly implemented as a way of minimizing the level of tax non-compliance (OECD, 2019; Taing & Chang, 2020). Kamleitner et al. (2012) argue that research and policy makers generally perceive small and micro taxpayers as non-compliant to tax obligations, even though it remains a fact that some do comply with the tax laws. Small and micro entities in the informal sector who comply with tax laws are driven by some behavioural reasons or factors which are also instigated by other influential factors. The main question, therefore, is what factors influence these entities to voluntarily comply with their tax obligations.

Numerous studies have been conducted on predictors of tax compliance or non-compliance intention from a behavioural perspective in different jurisdictions relying on the variables of the Extended Theory of Planned Behaviour (Alleyne & Harris, 2017; Mbilla et al., 2018; Owusu et al., 2020; Enachescu et al., 2019). Again, other strands of literature have investigated the taxpaying behaviour of small and micro entities in the informal sector (Terkper, 2003; Atuguba, 2006; Otieku, 1992; Appah & Wosowei, 2016) as well as trust and tax compliance (Ali & Ahmad, 2014; Ya'u & Saad, 2018). In the Ghanaian context of provisional tax assessment of individual taxpayers, trust in the tax system and authority is very crucial in promoting voluntary tax compliance through a synergistic tax environment. Thus, due to the trust between a taxpayer and the tax authority, this synergistic environment asserts a mutual trust between the two parties (that is, tax authority and taxpayer) irrespective of who does the tax assessment. Trust in the authority and system relates to the general perception by a social group or individual that the tax authorities are working beneficially and generously for the common good (Kirchler & Wahl, 2010).

The mixed findings in previous studies have called for further investigation. Unlike the empirical work of Alleyne and Harris (2017) and Owusu et al. (2020) however, we investigate the effect of perceived tax complexity on tax compliance as an addition to the Extended Theory of Planned Behaviour (attitude, subjective norms, perceived behavioural control and moral obligation) on an individual's willingness to comply with tax payment responsibility. This study, therefore, examines the effect of trust, attitude, subjective norms, perceived behavioural control, moral obligation, tax complexity and tax compliance intention among TIN and Non-TIN registered MSMES in the informal sector. Aside from the newness of this study and the contextual focus of prior studies on developing countries, the findings of this study present a policy direction and novel strategies that are very important in bridging the revenue gap in developing countries.

This paper continues with four other parts in addition to this introduction. The second section examines the concept of tax compliance, reviews prior studies on trust, and presents a development of the study hypotheses. The third section explores the method used to conduct the research, highlighting how data was collected and the analysis thereof. Section four presents the results of the study and discussion of the results. The final section draws conclusions and suggest some important areas for future research.

2 Literature Review

2.1 *Concept of Tax Compliance*

The issue of low voluntary tax compliance has a huge downturn on all nations. Nations all over the world struggle to mobilize the required amount of revenue from the informal sector, especially the self-employed in order to provide relevant public services (Mbilla et al., 2018; Rosid et al., 2018; Augustine & Enyi, 2020). In effect, tax non-compliance involves the reduction of tax required by taking part in false dealings to shun tax, engaging in all forms of imaginable genuine tax deduction by means of delay schemes and enticements that constitute evasion or avoidance (Jones & Rhoades-Catananch, 2010). Tax compliance is the willingness of individuals to act in accordance to both the spirit and the letter of the tax law and administration without the application of enforcement activity but through the taxpayers' positive reciprocity (James & Alley, 2002; Gangl et al., 2015). Similarly, voluntary tax compliance is defined as the willingness and passion by the taxpayer to comply on his or her own with the relevant tax laws, rules and regulations of the tax authority due to the level of trust and cooperation existing between the taxpayer and tax authority (Kirchler, 2009; Sitardja & Dwimulyani, 2016).

Failure by the taxpayer to follow the tax provisions suggest a person may be committing an act of non-compliance (Kirchler, 2009) and hence, complete compliance may require positive actions on the part of the taxpayer to discharge his or her legal and civil duties in full. It may be that taxpayers innocently fail to meet their tax obligations because they fail to complete their tax returns correctly or are unaware of or misunderstand various provisions of the tax system. Notwithstanding, non-compliance is not only an intentional violation but also involves violation in terms of ignorance. Various reasons have been attributed to the high level of non-compliance to taxes. For instance, lack of transparency, high level of complexity, lack of trust in the tax system and authority, inequality in the tax burden and ambiguity of the tax law have been mentioned as factors accounting for tax non-compliance (Atuguba, 2006; Saad, 2014; Oladipupo & Obazee, 2016).

The high prevalence of non-compliance especially tax dodging is due to the lack of a mechanism in place to collect taxes and the widespread opinion that paying taxes is unreciprocated and thus the government does not deserve a portion of a worker's income (McGee, 1999). In addition, ethical stands, culture and religiosity have been cited by other studies (Atuguba, 2006; Nsor-Mballa, 2015; Owusu et al., 2021). Though, it has been argued that punishment and deterrence can influence tax compliance behaviour (Castro & Scartascini, 2015), personal standards (attitude, emotions and trust) have also been hyped as various predictors influencing individual taxpayers willful behaviour towards tax compliance and effective tax administration (Alon & Hageman, 2013; Gurama, 2015; Alleyne & Harris, 2017; Enachescu et al., 2019). Social norms may account for tax behaviour when the desire to evade taxes decreases and the majority of the citizenry comply with taxes (Hashimzade et al., 2013). On the contrary, the likelihood of a high level of default behaviour

when the country's deviation rate is high. Accordingly, numerous factors can account for people's tax compliance or non-compliance behaviour.

Measuring the actual compliance behaviour of people can be very tedious due to difficulty in identifying and assessing actual defaulters. The reluctance of giving credible information with regards to unethical behaviour such as tax non-compliance makes it almost impossible to evaluate actual compliance behaviour (Abdul-Razak & Adefula, 2013; Gurama, 2015). Therefore, researchers have resorted to using intentions to involve in a wrongful behaviour as a suitable proxy for actual wrongful behaviour (Mbilla et al., 2018; Owusu et al., 2020).

2.2 Intentions to Engage in Tax Compliance

The driving forces that affect a person's behaviour are contained in the person's intention. Intention constitutes the extent of mindful effort and motivational mechanism that would inform a person's performance of a behaviour (Ajzen, 1991). Ajzen (1991) asserts that intention gives a signal of people's consistency and desire to pursue a behaviour as well as the amount of planned effort applicable in order to perform the behaviour. Again, Ajzen (1991) maintain that people's intention to carry out a specific behaviour is predisposed by an attitudinal standard in the direction of the behaviour (the extent of people's assessment of favourableness or unfavourableness of a behaviour); subjective norms (apparent social burden from others to either perform or not to perform a behaviour); perceived behavioural control (supposed comfort or difficulty in the behaviour occurrence) and moral obligation (the perception of right or wrong).

2.3 The Theoretical Framework: Extended Theory of Planned Behaviour (ETPB)

The Theory of Planned Behaviour brings to bear attitude, subjective norms and perceived behavioural control as the factors that influence individual's behavioural intentions, which have the potential of ultimately affecting the performance of real behaviour (Ajzen, 1991). Attitude is generally perceived as an individual's assessment of a behaviour to either be favourable or unfavourable (Ajzen, 1991). Subjective norms look at the extent to which a person is of the opinion that his or her decision can be influenced by the views of other relevant people. Also, perceived behavioural control explains the level of control (difficulty or opportunity) that a person has regarding his or her capability to be involved in a specific behaviour

Extending the TPB, Beck and Ajzen (1991) added 'moral obligation' as another variable to the TPB framework which describe a person's view about moral uprightness (good) or otherwise (bad) of performing a certain behaviour. Subsequent to the

TPB's comprehensiveness, the study relies on the ETPB to investigate the factors that influence self-employed individuals' tax compliance intention. Specifically, the study examines whether sole proprietors' intention on tax compliance (attitude), their opinion of tax compliance endorsement by prominent stakeholders (subjective norms), their perceived ability to engage in compliance (perceived behavioural control), their perception of moral goodness or otherwise of involving in tax compliance (moral obligation), and their perceived difficulty in being tax compliant (perceived tax complexity) are good predictors of individuals tax compliance intention. Thus, the hypothesis is that:

H1: Attitude has a positive effect on tax compliance intention

H2: Subjective Norms has a positive association with tax compliance intention

H3: Perceived Behavioural Control has a positive relationship with tax compliance intention

H4: Moral Obligation has a positive effect on tax compliance intention

H5: Perceived Tax Complexity is negatively associated with tax compliance intention

2.4 Trust and Tax Compliance Intention

The reciprocity mystery about payment of taxes is centred on trust between the tax authority and taxpayer (Gangl et al., 2015), because tax compliance is perceived as a multi-faceted measure. Defined as the apparent susceptibility of persons due to the dealings of others behaviour based on their ability, kindness, and honesty (Guo et al., 2012). Trust in the authority and tax system relates to the general perception by a social group or individual that the tax authorities are working beneficially and generously for the common good (Kirchler & Wahl, 2010). From extant literature, trust in the authority and system positively relates to tax compliance (Torgler, 2003; Torgler & Schneider, 2007; Ya'u & Saad, 2018). Kirchler (2009) noted that voluntary tax compliance as well as trust in the government and system for individual, the group, or society will increase when tax authorities treat taxpayers in a responsible and respectful manner.

As a result, a synergistic tax environment is created due to the trust between a taxpayer and the tax authority, and this synergistic environment asserts a mutual trust between the two parties. The mutual relationship and respect accorded the individuals by tax authorities will influence their loyalty and enthusiasm for compliance, and in turn, pay their taxes honestly in fulfillment of a psychological contract between the two parties (Ya'u & Saad, 2018). Empirically, the significant role of trust in the tax system and authority in promoting tax compliance behaviour cannot be over emphasised (Lavoie, 2008), owing to lack of regular direct contact between the tax authority and taxpayers (Chai et al., 2011; Prichard, 2016). Robbins (2016) identified five key holistic dimensions of trust to include integrity (truthfulness and honesty), competency (interpersonal and technical skills and knowledge of a

particular leader), consistency (individual predictability, reliability and good judgment in tackling a situation), loyalty (faithfulness or devotion to someone and advocates for their success) and openness (the ability of a person or leader to give you the whole truth). Thus, we hypothesize that:

H6: Trust positively relates to intention to engage in tax compliance.

3 Methodology

3.1 Research Design, Instrument and Data Collection

The study adopted the quantitative approach specifically, a survey method with questionnaires as the means of data collection. The questionnaires comprised two different sections. The first section required the background information about the respondents. The second section focused on the specific questions used to measure respondents' intentions to engage in tax compliance. Drawing on the ETPB, four constructs: attitude, subjective norms, perceived behavioural control and moral obligation as well as PTC are relevant predictors of tax compliance intention. Indicators adapted from Alleyne and Harris (2017) measured these constructs. In addition, three other constructs: PTC, ABIS and trust were examined as predictors of tax compliance intention. The indicators adapted for their measurement were; PTC (Saad, 2014), ABIS (Langham et al., 2012) and trust (Ya'u & Saad, 2018). All the indicators of the study constructs were measured on a Likert scale with anchors ranging from one to seven, details of which are provided in Table 2. Out of the 750 questionnaires distributed, 746 were collected and 725 were fully completed and used for the analysis.

3.2 Data Analysis Procedures

The data was analyzed descriptively using Statistical Package for Social Sciences (SPSS). The normal diagnostic test of reliability and validity was conducted on the research instrument. The predicted hypotheses of the study were tested using structural equation modelling (SEM). The SEM-based techniques help researchers to test and validate relationships as well as evaluate measurement models and structural paths that comprise latent constructs made up of multiple indicators (Astrachan et al., 2014). The Partial Least Square based SEM (PLS-SEM) technique was adopted using SmartPLS 3.0 software for the analysis of the structural model.

Table 1 Demographic characteristics of respondents

Variable	Groups	Frequency (n = 725)	Percent
Gender	Male	401	55.3
	Female	324	44.7
Age	30 and below	204	28.1
	31–35	139	19.2
	36–40	158	21.8
	41 and above	224	30.9
Educational level	Non-formal	76	10.5
	Basic education	210	29.0
	Secondary education	208	28.7
	Tertiary	231	31.9
Number of years in business	Below 4 years	214	29.5
	4–5 years	138	19.0
	6–7 years	138	19.0
	Over 7 years	235	32.4
Nature of business	Agric-related	144	19.9
	Commerce	381	52.6
	Service	152	21.0
	Others	48	6.6
Business registered with assembly or GRA for tax purposes	Yes	375	51.7
	No	350	48.3
Has a tax identification number (TIN)	Yes	323	44.6
	No	402	55.4

4 Results and Discussion

4.1 Profile of Respondents

The descriptive statistics of the respondents is presented in Table 1. Males form the majority of the study sample accounting for 55.3%, while commerce was the activity most engaged in with a share of 52.7% of the respondents. A cumulative majority (69.1%) of the respondents were not above 40 years. Similarly, 57.7% of the respondents received education from primary to secondary level while 31.9% received tertiary education with only 10.5% receiving no formal education at all. This suggests the respondents at least have a fair idea about tax compliance.

In addition, 32.4% (majority) of the respondents have been in business for more than 7 years whereas other respondents have a business duration of less than 4 years; 4–5 years and 6–7 years, indicating that a respondent might have evaded or avoided tax for at least once. More of the respondents have registered with either the GRA or MMDA's for tax purposes. However, about 55.4% of the respondents have no Tax

Identification Numbers (TIN), suggesting that, the aim of bringing more individuals into the tax bracket through the TIN system by ACT 632 (2002), has not gained the needed grounds for promoting tax compliance.

4.2 Descriptive Statistics on Constructs

In this section, the mean scores, and standard deviations of the respondents' opinions on the precise indicators used to measure the key constructs of the study are reported. Respectively, the mean score of each indicator under the constructs: attitude, subjective norm, perceived behavioural control, moral obligation, PTC, ABIS and trust indicate the level of agreement or disagreement to each statement. Results from this analysis as given in Table 2 show an overall mean of 5.22 for the construct 'attitude towards tax compliance intention'. This value indicates that the respondents strongly agree with the statements that explain tax compliance to be good, pleasant, and attractive. This outcome thus indicates that self-employed individuals sampled have a favourable attitude towards tax compliance.

An overall mean of 4.42 recorded by the construct 'subjective norm' proves that the respondents were of the strong opinion that other prominent people in their lives will approve a tax compliance intention. Similarly, perceived behavioural control had an overall mean of 4.02 which demonstrates the level of indecision self-employed individuals have over their intention to engage in tax compliance. Again, the construct 'moral obligation' had an overall mean of 4.76 indicating that the respondents strongly consider tax compliance to be morally good. Consequently, 'intention to engage in tax compliance' which is the variable of interest recorded an overall mean of 4.34 suggesting that the respondents had a very strong intention to engage in tax compliance.

Furthermore, the construct 'perceived tax complexity' had an overall mean of 4.63 suggesting that the complex nature of the tax system make the respondents intention to engage in tax compliance very low. Finally, the construct 'trust' had an overall mean of 3.41; an indication that the respondents are of the strong opinion that the perceived dishonesty in the authority and the tax system will lower their intention to engage in tax compliance. The mean scores of most of the indicators were above the 3.5 mid-point value, a clear indication that the respondents believe it is good to voluntarily engage in tax compliance. By implication, the respondents demonstrate that noncompliance is unlawful and believe that though unreciprocated, individuals have a civic responsibility to pay taxes as a way of contributing to the welfare of others. Thus, voluntary compliance will enable the state to function properly. Nevertheless, most of the respondents somehow agree that noncompliance is justified if to a large extent the tax rates are too high (mean = 5.55) and the terms in the individual income tax return forms are difficult to understand (mean = 4.65).

Table 2 Descriptive statistics on constructs

Variables	Mean	Std. Deviation
Attitude		
I will be disturbed if I am unable to correctly state my taxes	4.95	2.182
I will feel guilty if I cheat on my taxes	5.14	2.217
I will feel pleased if I pay less taxes	5.30	2.129
The likelihood of being audited by the GRA is low	5.24	2.119
It will be financially beneficial for me to pay less taxes	5.44	2.064
I find the concept of tax compliance very relevant	5.26	2.097
Overall mean	5.22	2.13
Subjective Norms		
My family and peers will think that I should pay less taxes	5.00	2.317
My family and peers will think that I should only pay the correct taxes	5.15	2.017
Most people who are important to me will look down on me if I cheat on taxes	4.69	2.303
Most people I know will approve of me cheating on taxes	3.06	2.446
My role models and co-workers will think filing my tax returns should exclude some income sources.	4.25	2.389
If I cheated on my taxes, most people who are important to me will disapprove	4.39	2.521
Overall mean	4.42	2.33
Perceived Behavioural Control		
With my tax knowledge, skills and resources, it will be very easy for me to pay less taxes	3.55	2.244
Due to my limited tax knowledge, skills and resources, it is hard for me to pay less taxes	5.01	2.224
I will successfully state less taxes in my tax return form if I wanted to	4.11	2.406
With my tax knowledge, skills and resources, I will have no difficulty in stating less taxes successfully	3.76	2.385
There are no barriers that will prevent me from stating less taxes successfully	3.68	2.495
Overall mean	4.02	2.35
Moral Obligation		
I think it would be morally wrong to engage in tax non-compliance	5.64	2.156
I will not feel guilty if I cheated on taxes	3.44	2.556
Cheating on taxes goes against my principles	4.69	2.582
It will be morally wrong for me to cheat on taxes	5.25	2.419
Overall mean	4.76	2.43
Tax Compliance Intention		
I will report my income fully, including all other sources	3.90	2.443
I will not attempt to cheat by omitting to report any extra income in my tax return form	3.86	2.366
I will declare extra income which is not earned from my regular income source	4.18	2.608
I will not fail to comply with the tax laws in future	5.43	2.137

(continued)

Table 2 (continued)

Variables	Mean	Std. Deviation
Overall mean	4.34	2.39
Perceived Tax Complexity		
I think the terms used in tax publications (e.g. GRA guide books) and in tax return forms are difficult for people like me to understand	4.65	2.450
The sentences and wording in the individual income tax return guide looks lengthy and not user-friendly	5.20	1.914
The rules related to individual income tax are clear	4.54	2.186
Most of the time I need to refer to others for assistance in dealing with tax matters	4.61	2.348
I will have a problem in completing and filing the tax return form(s), if they are required	4.11	2.322
I will find it tedious to maintain all my relevant records for the whole year for tax purposes (if I must complete the tax return form(s))	5.10	2.012
Most of the tax liability am given to pay after assessment made by GRA looks overstated for me to pay	5.32	1.908
I do not have to make a lot of effort to understand the explanations given in GRA guide books and other similar explanatory material	3.49	2.427
Overall mean	4.63	2.20
Trust		
Current graduated tax rates are far too high	5.55	1.979
Generally, the income tax system in Ghana is fair	3.49	2.450
Overall, the burden of tax in Ghanaian tax system has been well distributed	2.87	2.053
Tax revenue is wisely spent by the government on project and infrastructure that are beneficial to taxpayer	2.67	2.091
The taxes I must pay are not too high considering the social benefits provided by the government	2.39	1.807
GRA cares about the concerns of taxpayers when a provisional assessment is made.	3.34	2.420
GRA trust the assessment made by taxpayers themselves	2.95	2.150
GRA considers the views of average citizens on new laws over changes to their systems with much flexibility	3.35	2.317
I am satisfied with assessment and collection of tax process made by GRA	3.75	2.427
GRA gives good cooperation when taxpayers need information about tax laws	3.16	2.258
Overall, GRA is very efficient in carrying their duties and affairs with taxpayers	3.17	2.224
In my opinion, GRA can check the correctness of all the information reported in tax form submitted by taxpayers	4.35	2.495
Overall mean	3.41	2.22

4.3 *Validity and Reliability*

Tests for reliability and validity were conducted to determine the suitability for including the constructs in the structural model analysis. Reliability explains the assessment of the consistency of results produced using a research instrument (Golafshani, 2003). The Cronbach alpha (CA) and Fornell and Larcker measure of composite reliability (CR) scores were used to measure the internal consistency of each construct. Results from Tables 3 and 4 demonstrate that the CA and CR score of each construct is above 0.7, which falls within the recommended threshold (Fornell & Larcker, 1981; Hair et al., 2017) except CA for attitude, moral obligation, and subjective norms. However, CR is superior to CA, which assumes that all indicators should weigh equally while CR assumption uses the loadings obtained from the model itself (Hair et al., 2012a, b) and hence, all constructs are reliable. Also, convergent and discriminant validity of the instruments were checked as a test for validity. As shown in Tables 3 and 4, the AVEs of all the constructs met the acceptable threshold of 0.5 and above (Hair et al., 2017). Again, the Fornell and Larcker criterion of discriminant validity was used to show how uncorrelated and distinct the constructs are. For discriminant validity to be assured, the square root of the AVE scores of the factors should be larger than the cross-correlations between the factors (Fornell & Larcker, 1981). The results of this test as presented in Table 5 and 6 suggest discriminant validity is assured as the AVE scores for the factors were greater than the squared correlations of the factors.

Table 3 Validity and reliability test (With TIN)

Construct	CA	CR	E
Attitude	0.54	0.76	0.52
Tax compliance intention	0.77	0.90	0.81
Moral obligation	0.59	0.74	0.50
Perceived Behavioural control	0.72	0.82	0.54
Perceived tax complexity	0.63	0.84	0.73
Subjective norms	0.68	0.86	0.76
Trust	0.82	0.87	0.53

Table 4 Validity and reliability test (Without TIN)

Construct	CA	CR	AVE
Attitude	0.79	0.88	0.71
Tax compliance intention	0.73	0.85	0.65
Moral obligation	0.73	0.85	0.65
Perceived Behavioural control	0.63	0.79	0.55
Perceived tax complexity	0.78	0.85	0.52
Subjective norms	0.50	0.80	0.67
Trust	0.80	0.86	0.51

Table 5 Discriminant validity (Fornell and Larcker Criterion) (With TIN)

Constructs	ATT	MO	PBC	PTC	SN	TCI	TR
ATT	0.724						
MO	0.500	0.707					
PBC	-0.454	-0.399	0.737				
PTC	0.265	0.236	-0.462	0.853			
SN	0.653	0.480	-0.419	0.308	0.869		
TCI	0.478	0.468	-0.331	0.330	0.536	0.901	
Trust	-0.388	-0.151	0.571	-0.453	-0.385	-0.216	0.725

Table 6 Discriminant validity (Fornell and Larcker Criterion) (Without TIN)

Constructs	A	TCI	MO	PBC	SN	T	TC
A	0.841						
TCI	0.262	0.808					
MO	0.376	0.608	0.807				
PBC	0.135	0.423	0.239	0.742			
SN	-0.246	-0.697	-0.562	-0.215	0.816		
T	0.140	0.611	0.495	0.484	-0.585	0.716	
TC	0.098	-0.484	-0.329	-0.229	0.510	-0.450	0.723

Table 7 Multicollinearity of constructs, R2 and Q2 (With TIN)

Constructs	VIF
Attitude	2.042
Moral obligation	1.604
Perceived Behavioural control	1.916
Perceived tax complexity	1.409
Subjective norms	1.966
Trust	1.741
R ² (0.386)	
Q ² (0.26)	

4.4 Structural Model Analysis

Upon establishing the suitability of the constructs using the reliability and validity tests, the study proceeded to assess the structural model. Prior to testing the hypotheses of the study, a test for multicollinearity was conducted using the variance inflation factor (VIF). The test results suggest issues of collinearity will not influence the structural model negatively as the VIF scores were below the maximum threshold of less than 3, as shown in Table 7 and 8 (Hair et al., 2017). Again, using the Herman’s single factor score test to check for common method bias, test result of 12.24% suggest our model has no common method bias problem as the Herman’s single factor score is within the 50% acceptable threshold (Podsakoff et al., 2012). The proposed hypotheses were finally tested using the Bootstrapping procedures of Smart-PLS. Figures 1 and 2 presents the structural models for the direct relationships

Table 8 Multicollinearity of constructs R2 and Q2 (Without TIN)

Constructs	VIF
Attitude	1.299
Moral obligation	1.761
Perceived Behavioural control	1.361
Perceived tax complexity	1.619
Subjective norms	2.146
Trust	2.118
R ² (0.633)	
Q ² (0.403)	

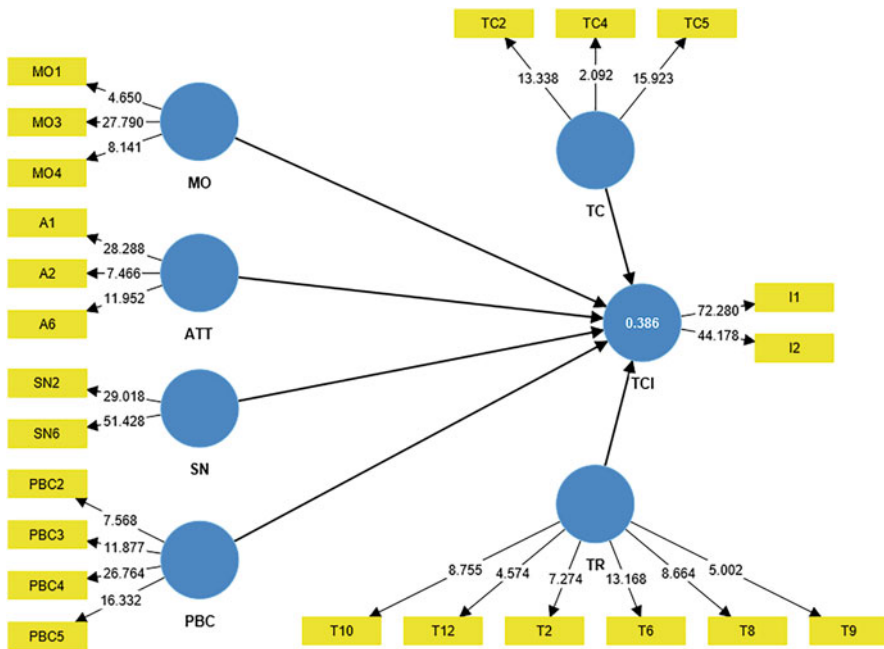


Fig. 1 Structural model for Taxpayers with TIN

between the exogenous and the endogenous constructs based on the PLS algorithm for the analysis of the responses with TIN and without TIN. Based on the structural relationships of the study as shown in Figs. 1 and 2, the coefficient and significance of the paths in the structural models were analysed using bootstrapping procedure. The regression results of the bootstrapping analysis are presented in Tables 9 and 10.

Prior to testing the hypotheses of the study, the coefficient of determination (R²) was assessed. The exogenous variables of the study, tax compliance intention, recorded R² values of 0.386 and 0.633 for the analysis of data of respondents with TIN and those without TIN respectively. Thus, 38.6% of the variations in tax compliance intention is explained by the variables of the study related to respondents with TIN numbers and 63.3% of the variations in tax compliance intention is

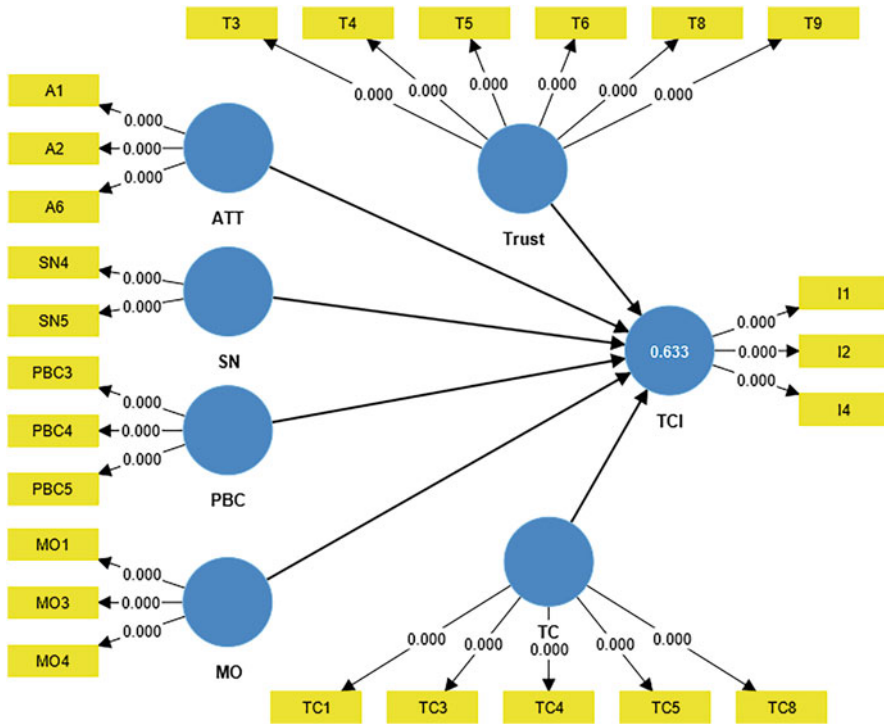


Fig. 2 Structural model for Taxpayers without TIN

Table 9 Hypotheses testing (Direct Relationship) (With TIN)

Hypotheses	Path	Coefficient	P-Values	Results
H1:	AT - > TCI	0.138	0.071	Rejected
H2:	MO - > TCI	0.193	0.007	Accepted
H3:	PBC - > TCI	-0.029	0.692	Rejected
H4:	PTC - > TCI	0.165	0.012	Accepted
H5:	SN - > TCI	0.320	0.000	Accepted
H6:	Trust - > TCI	0.078	0.252	Rejected

Table 10 Hypotheses testing (Direct Relationship) (Without TIN)

Hypotheses	Path	Coefficient	P-Values	Results
H1:	AT - > TCI	0.049	0.218	Rejected
H2:	MO - > TCI	-0.377	0.000	Accepted
H3:	PBC - > TCI	0.199	0.000	Accepted
H4:	PTC - > TCI	0.225	0.006	Accepted
H5:	SN - > TCI	-0.113	0.000	Accepted
H6:	Trust - > TCI	0.111	0.041	Accepted

explained by the variables of the study related to respondents without TIN numbers. An assessment of the predictive relevance of the model was carried out using the blindfolding rules (Hair et al., 2017). Recording Q^2 estimations of 0.403 and 0.26 for the exogenous variable, tax compliance, for the analysis of data of respondents with TIN and those without TIN respectively, suggests that the model has predictive relevance as the values are above the recommended threshold of zero.

4.5 Discussion of Results

The results presented in Table 9 and 10 reveal a positive but insignificant relationship between an individual's attitude and tax compliance behavior, regardless of whether they possess TIN numbers or not. This finding indicates that individuals who hold a favorable attitude towards paying taxes may, to some extent, have intentions to comply with their tax payment obligations, although the impact of attitude alone may not be substantial. According to the Theory of Planned Behavior proposed by Ajzen (1991), attitude is one of the key determinants influencing behavioral intentions. A positive attitude towards a specific behavior is expected to lead to a greater likelihood of engaging in that behavior. However, the relationship between attitude and tax compliance intention in this study seems to be weaker and statistically insignificant. Several factors may contribute to this finding. It is possible that individuals' attitudes alone are not sufficient to overcome other barriers or challenges they may face in complying with tax regulations. Therefore, while a positive attitude towards tax payment is a necessary condition for tax compliance intention, it may not be the sole determinant of actual compliance behavior. This finding is consistent with previous studies (Owusu et al., 2020; Sadress et al., 2019) that have also demonstrated a positive association between attitude and tax compliance behavior.

The relationship between subjective norms and tax compliance intention also yielded a positive and highly significant relationship between the two constructs with regards to individuals with TIN numbers. This finding is an indication that the adherence of individuals with TIN numbers to tax regulations is significantly influenced by the pressure and influence exerted by influential individuals such as role models, family members, friends, and respected figures in society. The negative relationship between subjective norms and tax compliance intention among individuals who have not registered with the tax authorities is not entirely unexpected. Since these individuals have already defied the government's aim of bringing more individuals into the tax bracket by not registering, they are not likely to be influenced by the opinions of respected individuals in society with regards to being tax compliant. In this context, the absence of a positive relationship between subjective norms and tax compliance intention implies that external pressures and influences do not play a significant role in shaping their intention to comply with tax regulations.

The results suggest that efforts to promote tax compliance should not only focus on legal enforcement and penalties but also emphasize the importance of positive

role models and influential individuals who can promote a culture of tax compliance within the society. This argument is supported by extant studies in the area of taxation (Jimenez & Iyer, 2016; Owusu et al., 2020), which demonstrate that the tax compliance behavior of individual taxpayers can be shaped by the opinions of important individuals in their lives. Hence, our findings provide empirical support for the argument that subjective norms play a crucial role in predicting tax compliance behavior.

The regression output also shows a negative and statistically insignificant relationship between perceived behavioural control and tax compliance intention for individuals with TIN numbers. This finding suggests that the sense of control individuals perceive over their behaviour may not have a significant influence on their intention to comply with their tax payment obligations, as proposed by Ajzen's Theory of Planned Behavior (1991). This finding contradicts previous studies conducted by Lee and Kozar (2005) and Alleyne and Harris (2017), which concludes that the perceived ease or control an individual has over their actions influences their willingness to pay taxes. The contradiction in findings may be attributed to the context and sample characteristics of the present study which may differ from those of previous research as well as factors such as cultural, economic, and institutional variations which could affect the role of perceived behavioral control in tax compliance intentions.

Surprisingly, the relationship between perceived behavioral control and tax compliance intentions of those without TIN numbers was however positive and statistically significant. The positive relationship between perceived behavioral control and tax compliance intentions amongst those without TIN numbers suggest that enhancing such individuals' sense of control and self-efficacy in relation to tax compliance could be an effective strategy for promoting compliance behavior among those who are currently outside the formal tax system. By providing clear and accessible information about tax regulations, simplifying procedures, and offering support and guidance, tax authorities can help individuals without TIN numbers to perceive a greater level of control over their tax compliance behavior.

The results also demonstrate a positive and highly significant association between moral obligation and tax compliance intentions of the respondents with TIN numbers. This finding is an indication that an individual's sense of personal responsibility towards others in society can have a positive impact on their willingness to comply with tax regulations. Even though moral obligation is not directly linked to any legal requirements, it reflects an individual's beliefs about what is morally right or wrong. Individuals with a strong sense of responsibility towards others are more likely to view tax payment as morally right and, therefore, fulfill their tax payment responsibilities. Empirically, our results align with previous studies (Alleyne & Harris, 2017; Culiberg, 2018) that have concluded that moral obligation influences tax compliance intention. The negative relationship between moral obligation and tax compliance intention among individuals who have not registered with the tax authorities is not surprising as such individuals may already be demonstrating a lack of commitment to contributing to the society by not registering.

The results of our study unexpectedly demonstrate a positive and statistically significant correlation between respondents' perception of tax complexity and their intention to comply with tax obligations. This finding contradicts previous research conducted by Saad (2014) and PWC (2014), which suggest that complex tax laws and administration systems typically discourage tax compliance. This finding may be attributed to several factors. First, individuals' subjective perception of tax complexity may differ from the actual complexity of the tax system. It is possible that individuals who perceive tax regulations as complex also view compliance as an important duty or responsibility, leading to their higher intentions to comply. Another possible explanation could be the presence of external factors influencing this negative relationship. For instance, individuals who perceive tax regulations as complex may also perceive a higher risk of penalties or legal consequences for non-compliance. This heightened risk perception could motivate individuals to have stronger intentions to comply, despite perceiving the tax system as complex.

The relationship between trust and tax compliance also yielded a positive and statistically significant result regardless of the respondents' formal registration within the tax system. This finding suggests that individuals are more motivated to comply with their tax payment responsibilities when they have trust in the system and perceive those in charge of managing state resources as honest and trustworthy. When individuals trust the government or tax authority, they are more likely to perceive tax regulations as fair and legitimate. They believe that their tax contributions will be utilized for the benefit of society and public goods. Consequently, they feel a sense of obligation and responsibility to fulfill their tax obligations, as they view tax compliance as a civic duty (Alemika, 2004). This finding aligns with existing studies conducted by Chai et al. (2011) and Mohseni and Sreenivasan (2014), which emphasize the significance of taxpayers' perception of the government or tax authority as a predictor of tax compliance intention. It underscores the crucial role of trust in shaping individuals' attitudes and behaviors towards tax compliance.

5 Conclusion

Globally, trust has become an issue of importance when it comes to domestic revenue mobilisation because of the government's inability to meet revenue targets. Consequently, many countries, especially developing ones have embarked on several tax reforms on determining the key antecedents to individual's intention to pay taxes. This study contributes to the literature by investigating the effect of 'trust' in government and tax system on tax compliance intention among selected self-employed individuals working in the informal sector. Drawing on the ETPB constructs and perceived tax complexity, we evaluate the tendency of individual's willingness to pay taxes. Based on our expectation and consistent with empirical studies (Ya'u & Saad, 2018; Robbins, 2016; Prichard, 2016; Mohseni & Sreenivasan, 2014), we found that there is positive relationship between two of the

constructs, attitude and trust on tax compliance intention. However, it is interesting to note that the relationship between perceived tax complexity and tax compliance intention in our study did not align with our hypothesis and previous empirical studies. Further research is necessary to better understand the underlying mechanisms and contextual factors that contribute to the positive relationship between perceived tax complexity and tax compliance intention. It would be valuable to investigate the specific aspects of tax complexity that individuals perceive as influential and examine how these perceptions interact with other variables in future studies.

Certainly, the findings of this study highlight the mechanisms through which individuals' intention will translate into actual behaviour of filing, reporting and paying taxes without compulsion from tax administrators. The usefulness of the study to the community and government emphasize the need for being a good steward for the benefit of the masses. As a result, the probability of the more 'difficult to tax' self-employed individuals appreciating the need to demonstrate responsible tax compliance behaviour cannot be discounted.

Despite the immeasurable contributions of this study, the findings of this study are limited in some respects. First, this study only indicates factors that influence people's intention to engage in tax compliance and not actual tax compliance behaviour. Also, the respondents engaged had no personal influence on the research instrument but to fit into the pre-defined parameters of which may badly affect the interpretation and generalisation of the of the findings. Whilst using intention as a proxy may be a good predictor of actual tax compliance behaviour, this may not represent true tax compliance behaviour. Therefore, care must be taken in interpreting the findings of the study. Therefore, important avenues for future research are available based on these limitations.

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