

## **MENTAL ACCOUNTING, PERCEIVED TRUST IN THE REVENUE AUTHORITY AND VOLUNTARY TAX COMPLIANCE OF GAMBIAN TAXI DRIVERS**

**Gabriel Msughter Tyokoso**

Department of Accounting,  
Joseph Sarwuan Tarka University, Makurdi- Nigeria  
Corresponding Author: e-mail: [gt yokoso@gmail.com](mailto:gt yokoso@gmail.com)

**Momodou Mustapha Fanneh**

Department of Economics,  
Euclid University, Gambia

### **Abstract**

*Accounting literature is awash with previous studies on tax compliance behavior of taxpayers yet there is no consensus among scholars on the factors that influence voluntary tax compliance of taxpayers especially in developing countries. This study examines the effect of mental accounting and perceived trust in the revenue authority on voluntary tax compliance behavior of Gambian taxi drivers. Primary data for the study were obtained from a sample of 103 taxi drivers in Banjul, Turntable and Serrekunda; and analysed using the structural equation model. Findings of the study suggest that mental accounting has a positive significant effect on tax compliance behavior of Gambian taxi drivers while perceived trust in revenue authority had a positive but insignificant effect on voluntary tax compliance of Gambian taxi drivers. The study concludes that mental accounting affects the voluntary tax compliance behavior of Gambian taxi drivers while trust in revenue authority does not. Based on the findings of the study; the study recommends that Gambian Revenue Authority (GRA) should provide mental accounting tools such as budgeting templates or mobile apps to help taxi drivers track their income and expenses in order to facilitate voluntary tax compliance among taxi drivers in The Gambia. Similarly, GRA should implement mental accounting-friendly tax policies by utilizing behavioral economics insights to enhance voluntary tax compliance in Gambia.*

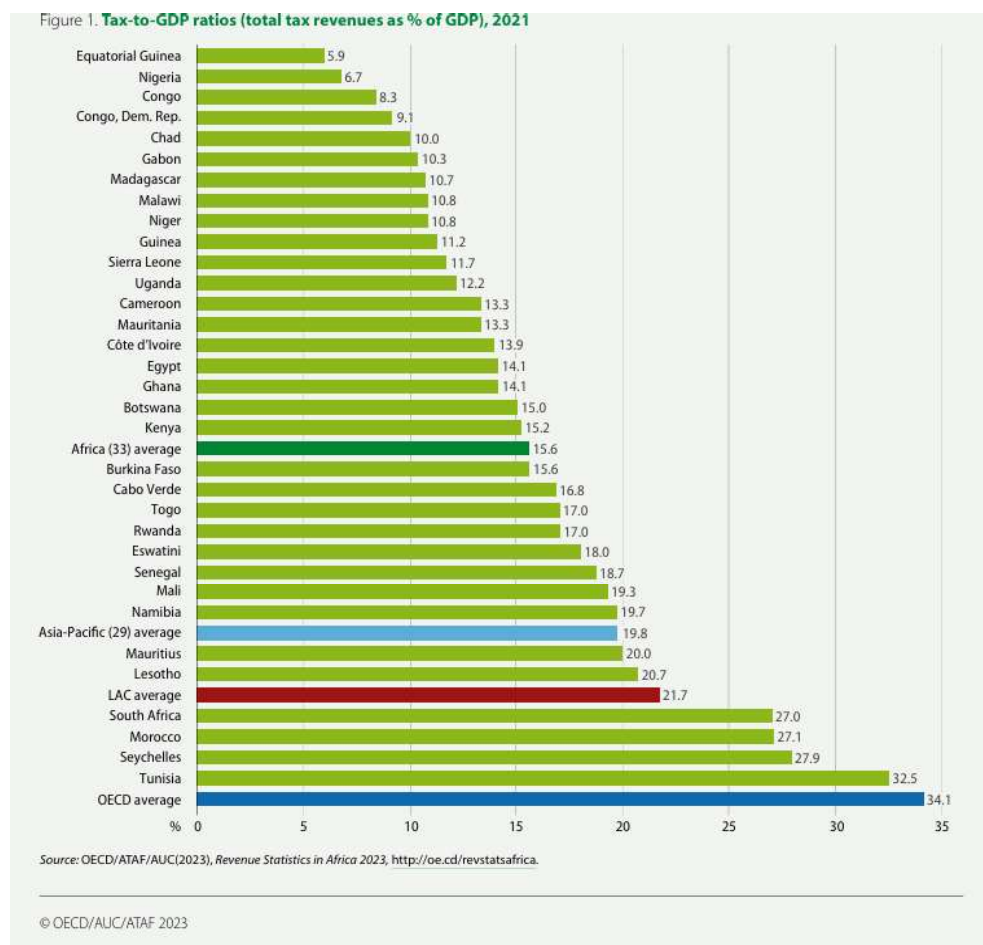
**Keywords:** Mental Accounting, Perceived Trust in Revenue Authority, Voluntary Tax Compliance, Taxi drivers, The Gambia.

### **Introduction**

Taxation plays a crucial role in every economy because it provides the revenue needed by government to provide security, infrastructure and other public goods and services for the citizens. Tax-to-GDP ratio of African countries has continued to be consistently low compared to other continents for many years. According to West African Tax Administration Forum (WATAF, 2023), the unweighted average of tax-to-GDP ratio of 33 African countries in 2021; the “Africa (33) average” was 15.6%. Tax-to-GDP ratio means total tax revenues which includes compulsory social security contributions expressed as a ratio of gross domestic product (GDP). The 2021 Africa (33) average is well below the averages of Asian and Pacific countries of (19.8%), Latin America and the Caribbean (LAC) of (21.7%), and the OECD of (34.1%). One of the major

reasons adduced for the low Tax-to-GDP ratio in Africa is low tax compliance behavior of African tax payers compared to their counterparts in other continents due majorly to tax evasion and avoidance.

Tax evasion and avoidance are common problems in many developed and developing nations such as The Gambia. Getting eligible tax payers to voluntarily pay their taxes to relevant tax offices as at when due has been quite challenging especially for businesses in the informal that hardly keep accounting records of their business transactions upon which they can be assessed for tax purposes. Figure one below shows the tax- to- GDP of 33 African countries in 2021 compared with the African average, the Asia- Pacific, the Caribbean average, and the OECD average.



Though Gambia is not among the 33 African countries presented in the chart above whose average tax-to- GDP ratio is 15.6% compared to OECD tax-to-GDP ratio of 34.1%, Gambia’s tax-to-GDP ratio in 2021 was 16.8% which is just half of the average of OECD tax-to-GDP ratio in 2021. Figure two below indicates that The Gambian tax-to- GDP from 2010 to 2021 has been very unstable and consistently lower than the OECD average thus, suggesting low voluntary tax compliance problem in The Gambia. Figure two below presents the tax-to- GDP ratio of The Gambia from 2021 to 2010:

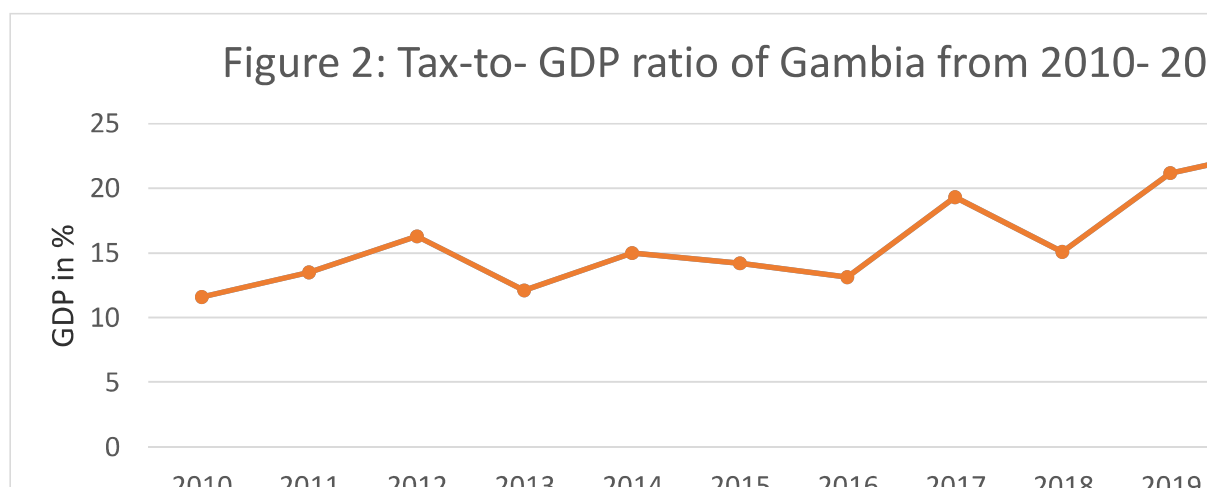


Figure two above shows that tax-to-GDP ratio of The Gambia was lowest in 2013 and highest (slightly above 20%) in 2019 and 2020 though very far below the tax-to-GDP ratio of OECD countries. Consequently, low tax compliance is likely to be responsible for the poor tax-to-GDP ratio in The Gambia. According to the Commission of Inquiry into Tax Evasion and other Corrupt Practices set up by the government of The Gambia in 2012 (Shout Africa, 2012; Ogbeta, 2023), government lost huge public funds due to non-tax compliance by Gambian taxpayers. The report of the commission indicates that government lost over D2 billion from selected 50 taxpayers which were reassessed on their Income, Sales and Payee tax and D3, 838, 106. 80 butut in respect of capital gains tax for 14 transactions of sales of leasehold properties.

The foregoing suggests that low tax compliance is a major problem militating against effective tax administration in Gambia over the years especially among the small self-employed individual tax payers in the informal sector which are very hard to tax (Ogbeta, 2023). It is in view of the low tax compliance behavior of the informal sector tax payers that the Informal Sector Regulation Act of 2007 was passed and amended in 2015 to improve voluntary tax compliance of these groups of tax payers in Gambia. The act provides for the taxation of Taxi, Gelegele and Van Drivers at D3, 000 annually.

In spite of the informal sector regulation act and several tax awareness campaigns of the Gambian Revenue Authority (GRA), voluntary tax compliance among Gambian informal sector tax payers have been a problem over the years. Though previous studies from other climes such as Muehlbacher et al., (2017), Olsen et al., (2019), and Mutanga et al., (2021) document that mental accounting and perceived trust of taxpayers affect voluntary tax compliance of tax payers, no empirical study has examined the influence of these factors on the voluntary tax compliance behavior of informal sector taxpayers such as taxi drivers in The Gambia. Consequently, the paper investigates the influence of Mental Accounting and Perceived Trust in the revenue authority on Voluntary Compliance to Tax of Gambian Taxi Drivers to fill the gap in the local literature. The choice of the two factors is based on the fact that the informal sector taxpayers are arguably the hardest to tax as a result of lack of accounting records and so their voluntary tax compliance behavior is majorly influenced by psychological factors such as mental accounting and trust in the revenue authority.

This study is important because firstly, it provides empirical findings on the effect of mental accounting and perceived trust in revenue authority on voluntary tax-compliance behavior of Gambian taxi drivers. Secondly, the Gambian Revenue Authority could use the findings and recommendations of the study to make policy

decisions that improve voluntary tax compliance among taxi drivers in particular and other Gambian taxpayers generally. Thirdly, the study is a modest contribution to the taxation literature in developing countries generally and The Gambia in particular that can be used as a reference material. The study is divided into five sections including introduction, literature review and theoretical framework, data and methodology, results and discussion, conclusion and recommendations.

### **Literature Review and Theoretical Framework**

The slippery slope framework (SSF) of tax compliance (Kirchler, 2007; Kirchler, Hoelzl, & Wahl, 2008) comprises the social-psychological and economic factors in one conceptual framework which distinguishes between two perspectives: (1) trust in tax revenue agencies, and (2) perceived power of the revenue authorities. Trust in tax revenue agencies arises from appreciation of the tax laws by tax payers, taxpayers' perceptions of the distributive and fairness of procedures, the assumption by tax payers that revenue agencies work efficiently to achieve public interests, and the believe that fellow taxpayers will also pay their taxes as expected by revenue authority. The power of revenue authorities is concerned with the perceptions of tax payers of the effectiveness of the power of revenue authority in preventing tax evasion through different deterrence measures such as audits and fines.

The SSF states that both trust in revenue authority and power of revenue authority positively impact the tax compliance behavior of citizens through different channels. Trust in revenue authority is assumed to be positively associated with voluntary tax compliance, while power in revenue authority is expected to be positively associated with non-voluntary tax compliance. Therefore, the two perspectives result in different reasons for compliance with tax responsibilities by tax payers, yet all the dimensions facilitate the collection of more tax revenues (Kogler et al., 2023). Mental accounting of taxes by tax payers and trust in revenue authority are expected to impact positively on voluntary tax compliance behavior of tax payers. The SSF is therefore the most appropriate theory that under pines this study as it best explains the relationship between trust in revenue authority, mental accounting and voluntary tax compliance behavior of taxi drivers in The Gambia.

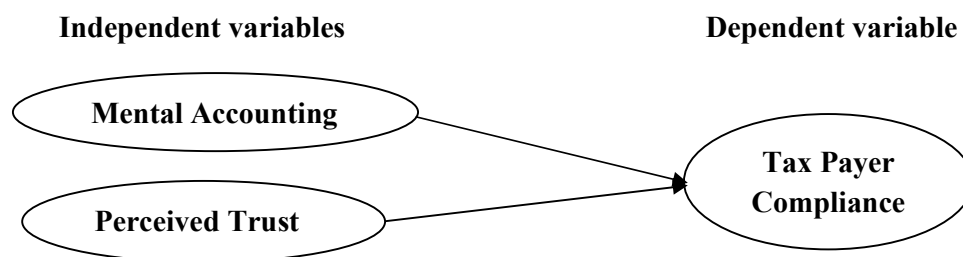
Many previous studies investigate the relationship between mental accounting, trust in revenue authority and tax compliance. Mutanga et al., (2021) examine the effect of mental accounting and perceived trust on voluntary compliance of Small and Medium Scale Enterprises (SMEs) in Zimbabwe. Results from data analysis document evidence that both mental accounting of taxes and trust in revenue authority have significant positive effect on voluntary compliance behavior of SMEs in Zimbabwe.

Muehlbacher et al., (2017) examine the effect of mental segregation of tax due on tax compliance using experimental approach to collect data for the study. Result of the study indicates that mental segregation of tax due has a significant positive effect on tax compliance. Andika and Setyowati (2019) investigate the impact of trust on the tax compliance behavior of tax payers collecting data from questionnaire and interview respectively. Results of both the quantitative and qualitative data analysis suggest a that trust has a significant positive impact on the tax compliance behavior of the sampled tax payers.

Olsen et al., (2019) investigate the effect of mental accounting on the propensity to pay tax of self-employed taxpayers that make separate mental account for future

income and value added tax due. Results of the study show that segregation of taxes is associated with lower propensity to evade tax. Respondents with higher mental accounting scores also have higher tax planning scores. In contrast, Hikmah et al., (2021) document no evidence of significant association between mental accounting and Indonesian SMEs. Islami and Febrian (2020) study the effect of gender and trust on voluntary tax compliance using fairness perception as a mediating variable for a sample of 150 Indonesian tax payers. Results from data analysis indicate that both gender and trust has a significant positive effect on voluntary tax compliance of Indonesian tax payers and the relationship is mediated by fairness perception of tax payers. Based on the empirical studies reviewed above, this study argues that mental accounting and perceived trust in revenue authority is positively associated with voluntary tax compliance behavior of Gambian taxi drivers.

From the foregoing empirical studies, this study conceptualizes that voluntary tax compliance of Gambian taxi drivers is influenced by mental accounting of taxes and perceived trust in the revenue authority as presented in the conceptual framework of the study in figure 3 below:



**Figure 3:** Conceptual Framework of the Research

### **3. Method**

The design adopted for this study was the survey approach which used a structured questionnaire to elicit responses from taxi drivers. The design is most appropriate for this study because it facilitates easier collection of primary data needed for the study from Gambian taxi drivers on the study variables of mental accounting, perceived trust in tax authorities and voluntary tax compliance. Also, the design has been used severally by previous empirical studies on tax compliance and it is therefore tested-proven. Though the actual population of taxi drivers in The Gambia could not be ascertained due to absence of accurate records associated with most informal sectors, a sample of 103 taxi drivers was used to collect data for the study.

Following previous studies, such as Mutanga et al., (2021) which use five- point likert scale structured questionnaire that ranges between (strongly agree to strongly disagree) was adopted with modifications and used to collect primary data for the study. The questionnaire was divided into four sections; section A- which covers demographic information of respondents, section B- deals with measurement of mental accounting, section C- covers measurement of perceived trust in the revenue authority while section D, covers the dependent variable; voluntary tax compliance. Table 1 below presents a measurement of the study variables which has been adopted with modifications from Muntanga et al., (2021).

**Tale 1: Measurement of study variables**

<b>Variable</b>	<b>Measurement</b>	<b>Source</b>
Mental accounting	Adopted measurement scale by Muehlbacher and Kirchler (2013)	Mutanga et al., (2021)
Perceived trust	Adopted measurement scale by Hartner et al. (2009)	Mutanga et al., (2021)
Voluntary tax compliance	Adopted measurement scale from Mutanga et al., (2021)	Mutanga et al., (2021)

**Source: Author’s compilation**

The data collected for the study was analyzed using the Structural Equation Modelling (SEM) approach which is arguably superior to regression analysis when analyzing data of complex relationships where some variables serve as both dependent and independent variable at the same time like the conceptual relationship expressed in figure 3 above (Kline, 2016; Schumacker & Lomax, 2016).

**4. Results and Discussion**

**4.1 Demographic information of respondents**

The demographic information of 103 taxi drivers sampled for the study is presented in table 4.1 below:

**Table 2: Demographic data of respondents**

<b>Position</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Owner	47	45.63
Driver	56	54.37
<b>Gender</b>		
Male	102	99.03
Female	1	0.97
<b>Marital Status</b>		
Married	56	54.37
Single	47	45.63
<b>Formal Education</b>		
Yes	89	86.41
No	14	13.59
<b>Education Level</b>		
Pre- school	2	1.94
Primary	22	21.36
Secondary	17	16.50
Tertiary	40	38.83
Adult literacy	22	21.36
<b>Ethnicity</b>		
Mandinka	34	33.01
Fula	12	11.65
Wollof	25	24.27
Jola	18	17.48
Sarrahuleh	8	7.77
Others	6	5.83

**Source: Authors compilation from data analysis**

Table 2 indicates that 47 taxi drivers representing 45.63% are owner- drivers while 56 taxi drivers representing 54.37% are only drivers who do not own the vehicles they

drive. The statistics shows that majority of the taxi drivers are not the owners of the vehicles they drive. Similarly, the table shows the gender distribution of the respondents which reveals that 102 taxi drivers representing 99.03% are male while only one (1) taxi driver is a female. The gender distribution shows that taxi driving is highly dominated by the male gender in Gambia.

Similarly, the table shows the marital status of the respondents where 56 representing 54.37% of the taxi drivers are married while 47 taxi drivers representing 45.63% are single. This shows that majority of the taxi drivers are married and they take care of their financial needs from income generated from driving taxi. The table further indicates the formal education status of the respondents. According to the table, 89 respondents representing 86.41% of taxi drivers have acquired formal education while 14 respondents representing 13.59% of taxi drivers did not have formal education. This suggests that majority of the respondents are knowledgeable enough to understand the information required from them by the questionnaire. The remaining 13.59% of the respondents were assisted to fill the questionnaire by the assistance of local language interpreters.

Table 2 also reveals the highest educational level of the respondents where 2 respondents representing 1.94% of the taxi drivers attended school only to pre- school level, 22 respondents representing 21.36% of taxi drivers attended school up to primary school level while 17 respondents representing 16.50% of taxi drivers went to school up to secondary school level. Similarly, 40 respondents representing 38.83% of taxi drivers have one form of tertiary education or the other while 22 respondents representing 21.36% have adult education as the highest level of their education. These statistics show that that majority of the respondents schooled up to tertiary level while the least number of respondents have only pre- school education.

Furthermore, table 2 shows the ethnicity of respondents where 34 respondents representing 33.01% of taxi drivers were Mandinka, 12 respondents representing 11.65% of taxi drivers were Fula while 25 respondents representing 24.27% of taxi drivers were Wollof. Similarly, 18 respondents representing 17.48% of taxi drivers were Jola, 8 respondents representing 7.77% of taxi drivers were Sarrahuleh while 6 respondents representing 5.83% were made up of other tribes in The Gambia. These statistics suggests that majority of the taxi drivers sampled for the study were Mandinka while the minority tribes have the least number of taxi drivers sampled for the study.

#### **4.2 Measurement Model**

Table 2: Reliability and validity

Item	1	2	3	Composite reliability	AVE
MA2		0.822		0.767	0.526
MA3		0.687			
MA4		0.654			
PT1	0.722			0.884	0.658
PT2	0.857				
PT3	0.879				
PT4	0.776				
VC1			0.836	0.810	0.681
VC2			0.815		

**Source:** Author’s compilation from data analysis

An exploratory factor analysis (EFA) was done with the help of principal component factor analysis using varimax rotation approach. The minimum threshold factor loading setting was set at 0.50. The communality of the scale which indicates the level of variance in each dimension was also set at a threshold of 0.5 and equally tested to ensure acceptable levels of explanation. The analysis indicates that all communalities were a minimum of 0.50 and above suggesting the suitability of the data for factor analysis test.

To determine the suitability of factor analysis, an evaluation of the correlation matrix using two key tests was conducted. Firstly, Bartlett's Test of Sphericity which assesses the significance of correlations within the matrix was conducted. The result shows a statistically significant correlation ( $X^2 = 341.151, p < 0.000, n = 103$ ), indicating that factor analysis is appropriate. Secondly, Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy (MSA) which evaluates data suitability for factor analysis was conducted. The KMO score was 0.796, exceeding the 0.5 acceptable threshold, further confirming our data is adequate for factor analysis. Finally, the factor solution derived from this analysis yielded three factors for the scale, which accounted for 70.988 percent of the variation in the data. Nonetheless, when the initial EFA was conducted, one item measuring mental accounting of taxes (MA1: When I earn money, I automatically think about the incurring tax) loaded on more than two dimensions so it was removed and the EFA was repeated and all the items loaded satisfactorily as presented in columns 1- 3 on table 2.

**Table 3: Discriminant Validity**

	<b>Compliance</b>	<b>Mental Accounting</b>	<b>Perceived Trust</b>
<b>AVE square root</b>	<b>0.8252</b>		
<b>Compliance</b>	1.0000	<b>0.7253</b>	
<b>Mental Accounting</b>	0.4724	1.0000	<b>0.8111</b>
<b>Perceived Trust</b>	0.3566	0.3222	1.0000

**Source:** Compilation of the author from data analysis

Table 3 above presents the correlation results of the study variables and the square root of the average variance extracted (AVE) which appears diagonally (0.8252, 0.7253 and 0.8111). The low correlation value between mental accounting and perceived trust (0.3222) which was below 0.8 shows that multicollinearity is not a problem in this study. The table further indicates a positive but low correlation coefficients between mental accounting, perceived trust and voluntary tax compliance behavior of Gambian taxi drivers. Similarly, the square root of AVE which appears diagonally in the table are consistently greater than all the correlation coefficients between the independent variables which appears on the vertical columns suggesting satisfactory discriminant validity of the study variables. Based on the value of AVE and square root of AVE, it is evident that there is both convergent and discriminant validity in the dataset. Consequently, an SEM analysis was conducted to estimate the relationships among the study variables and the output is presented in figure 3 below:

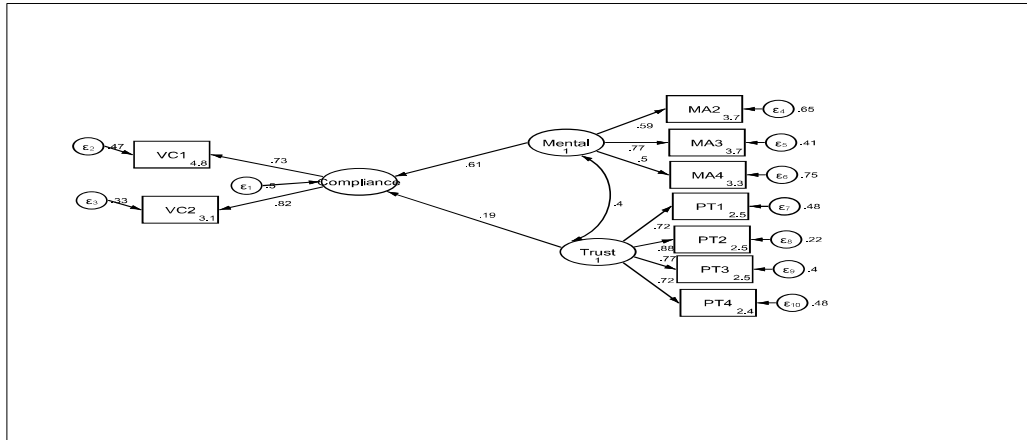


Figure 3: Diagram of SEM Result

Figure 3 above shows the output of the SEM analysis of the structural relationship between voluntary tax compliance, mental accounting and trust in revenue authority of the sampled taxi drivers in The Gambia represented on a diagram. The diagram shows that mental accounting and trust in revenue authority are associated positively with voluntary compliance with coefficients of 0.61 and 0.19 respectively. A summary of the SEM result is presented in table 4.4 below:

Table 4: Summary of Structural Model Result

	Coef.	Std. error	z	P >  z	[95% Conf. Interval]	
Mental	.6086801	.1172547	5.19	0.000	.3788651	.8384951
Trust	.194834	.1224801	1.59	0.112	-.0452226	.4348905

Source: result output from Stata

### 4.3 Discussion of Results

From table 4 above, mental accounting has a positive and significant relationship with voluntary tax compliance behavior of Gambian taxi drivers. This result is consistent with Muehlbacher et al., (2017), Olsen et al., (2019), and Mutanga et al., (2021). Trust in revenue authority has a positive though insignificant relationship with voluntary tax compliance behavior of Gambian taxi drivers. This finding is inconsistent with Andika and Setyowati (2019), Islami and Febrian (2020), and Mutanga et al., (2021) who document significant positive relationship between trust and tax compliance behavior of tax payers. The insignificant positive relationship between trust and voluntary tax compliance behavior of Gambian taxi drivers may be as a result of distrust of tax authorities. Taxi drivers may perceive Gambian tax authorities as corrupt or unfair, leading to mistrust and a lack of encouragement to obey tax laws and regulations voluntarily. The policy implication of the study findings is that Gambian Revenue Authority (GRA) can improve voluntary tax compliance of Gambian taxi drivers by implementing mental accounting - tax friendly tax policies.

### 5. Conclusion and Recommendations

Accounting literature is awash with previous studies on tax compliance behavior of taxpayers yet there is no consensus among scholars on the factors that drive voluntary compliance with tax by taxpayers especially in developing countries. The paper

investigates the effect of mental accounting and perceived trust in the revenue authority on voluntary tax compliance behavior of Gambian taxi drivers. Primary data for this paper were obtained from a sample of 103 taxi drivers in Banjul, Turntable and Serrekunda; and analysed using the structural equation model. Findings of the study suggest that mental accounting has a positive significant effect on tax compliance behavior of Gambian taxi drivers while perceived trust in revenue authority had a positive but insignificant effect on voluntary tax compliance of Gambian taxi drivers. The study concludes that the voluntary tax compliance behavior of Gambian taxi drivers can be improved by mental accounting but not perceived trust in Gambian Revenue Authority (GRA). Based on empirical evidence from data analysis; the paper recommends that Gambian Revenue Authority (GRA) should provide mental accounting tools such as budgeting templates or mobile apps to help taxi drivers track their income and expenses in order to facilitate voluntary tax compliance among taxi drivers in The Gambia. Similarly, GRA should implement mental accounting- friendly tax policies by utilizing behavioral economics insights to enhance voluntary tax compliance in Gambia.

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