



## WEST AFRICAN TAX ADMINISTRATION FORUM

# TAX COMPLIANCE ATTITUDE IN WEST AFRICA: EVIDENCE FROM SENEGAL AND SIERRA LEONE

**WATAF DP/23/001**



**TAXES**



**WATAF  
DISCUSSION  
PAPER**



WEST AFRICAN TAX | FORUM DES ADMINISTRATIONS  
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*WATAF Discussion Papers* describe reports of commissioned studies but are published to elicit comments and encourage debate. The views expressed in WATAF Discussion Papers are those of the author(s) and do not necessarily represent the views of the WATAF Secretariat, Council, or General Assembly.

## WATAF DISCUSSION PAPER

May 2023



## About **WATAF**

The West African Tax Administration Forum (WATAF) comprises the Tax Administrations of all 15 West African countries - Benin, Burkina Faso, Cabo Verde, Cote d'Ivoire, The Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, and Togo - that are members of the Economic Community of West African States (ECOWAS). It exists to lead tax policy coordination and concerted tax administration capacities in the region. WATAF promotes tax transparency, harmonises regional tax laws and policies, promotes regional integration, and facilitates regional knowledge sharing, including dialogues to improve the quality of tax administration in member states, in order to increase the mobilisation of domestic revenue.

The inaugural meeting of WATAF was held at the Forum of Heads of Tax Administration in West Africa at the Rockview Hotel, Abuja, Nigeria, on 12, September 2011. The original signatories to WATAF's formation were representatives from tax administrations from five West African countries, namely: Benin, Ghana, The Gambia, Liberia, and Nigeria.

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## WATAF Discussion Paper:

### Tax Compliance Attitude in West Africa: Evidence from Senegal and Sierra Leone

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## ABSTRACT

In West Africa, tax avoidance and evasion are widespread. Promotion of tax compliance has continued to be a significant and hotly contested scholarly and policy topic in both industrialised and emerging economies. According to several studies, tax fraud is a result of people's intentional behaviour and flaws in tax law. The relationship between people's tax attitudes and tax evasion or avoidance, however, is not well supported by the available data and evidence. The study used three separate survey periods to examine residents' perceptions of taxes in Senegal and Sierra Leone. We argue that individuals' attitudes towards and experiences with politics, as well as their perception of the economy, may have a moderate or direct impact on whether or not they choose to pay taxes. A comprehensive review of the literature revealed that there is minimal evidence in West Africa. Using cross sectional survey data of citizens in the selected countries as well as a battery of advanced econometric techniques, we found that measures of political participation, health and education, trust, and schooling have a positive and significant relationship with tax compliance attitudes in both Senegal and Sierra Leone and are strongly important in stimulating enduring tax compliance. Wealth distribution and access to basic public services also serve as strong predictors of tax compliance in these countries, but they negatively influence tax-compliant attitudes. Additionally, we found compelling evidence of the fixed effects of religion, ethnicity, and geography on tax compliance. The key recommendation is that tax reforms should emphasise both the economic 'self-interest' of taxpayers and their legal obligations.

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**Keywords:** Tax Compliance, Political Participation, Taxpayers' Attitude, West Africa, Tax Evasion, Senegal, Sierra Leone.

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## Contents

Abstract .....	iii
Display Items .....	v
Acknowledgement .....	vi
Acronyms .....	vi
1. Introduction.....	1
1.1 Motivation.....	1
1.2 Defining Tax Compliance.....	6
1.3 The Economies of Senegal and Sierra Leone: An Overview.....	7
1.4 The Problem.....	12
1.5 Structure of Subsequent Sections .....	14
2. Review of Related Literature.....	14
2.1 Theoretical Issues .....	14
2.2 Empirical Evidence in Africa .....	16
3 Data Sources and Estimation Methods.....	19
3.1 Research Area and Design.....	19
3.2 Measurement of Variables.....	19
3.3 Model Specification and Estimation Techniques .....	21
4. Results and Discussions.....	21
4.1 Empirical Results.....	21
4.2 Discussion of Findings.....	37
4.2.1 Probable Factors for Tax Evasion - Descriptive Analyses.....	37
4.2.2 Explaining Tax Compliance Using Inferential Techniques .....	37
5 Conclusion and Suggestions for Future Research.....	41
References .....	44



## DISPLAY ITEMS

### List of Tables

Table 1: Socio-economic outlook in Senegal and Sierra Leone	10
Table 2: Differences in socio-economic characteristics of respondents	24
Table 3: Geographical distributions	26
Table 4: Reasons for tax evasion in Senegal and Sierra Leone	27
Table 5: Wald Test of fitness of binary regression estimates	29
Table 6: Binary logit regressions with marginal effects (Dependent variable=1 if individual	29
Table 7: Ordered logit regressions with marginal effects (Dep variable=3 if individual thinks it is wrong and punishable not to pay taxes, =2 if individual thinks it is wrong but understandable not to pay taxes, and =1 if one thinks it is not wrong) - Round 5	31
Table 8: Ordered logit regression with marginal effects (Dependent variable = 3 if individual thinks it is wrong and punishable not to pay taxes, =2 if one thinks it is wrong but understandable not to pay, and =1 if one thinks it is not wrong at all) - Round 6	35

### List of Figures

Figure 1: Tax revenue to national output ratio, 2010-2020 (in percent)	3
Figure 2: Voter turnout during elections in Senegal	4
Figure 3: Voter turnout during elections in Sierra Leone	4
Figure 4: Taxpayer attitude and behaviour towards compliance	7
Figure 5: Economic and political map of Senegal	8
Figure 6: Economic and political map of Sierra Leone	11



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## **ACRONYMS**

ECOWAS	Economic Community of West African States
IDEA	International Institute for Democracy and Electoral Assistance
IMF	International Monetary Fund
OECD	Organisation for Economic Cooperation and Development
WATAF	West African Tax Administration Forum

## 1. INTRODUCTION

### 1.1 Motivation

A well-functioning tax system in developing economies would not only help to increase tax revenue, expand fiscal space, and reduce debt pressure but also reduce dependence on natural resources and foreign aid, as well as contribute to the achievement of the United Nations Sustainable Development Goals (SDGs). However, the extent to which taxpayers abide by a nation's tax laws determines the amount of tax income a government will be able to collect (Fjeldstad *et al.* 2012). Among others, non-compliance with tax payments has resulted in a high level of tax evasion and avoidance in most developing economies, including West Africa (International Tax Dialogue, 2010; International Monetary Fund, 2011; Organisation for Economic Cooperation and Development, 2022), and this has undermined the effort of governments to collect as much revenue as possible to provide essential social services. Similar to other countries undergoing development processes, West Africa nowadays seriously seeks to increase tax revenue to promote economic growth and development.<sup>1</sup>

Tax compliance is simply the adherence to all the obligations and duties of tax payments specified by the law of a country. It means the intent of taxpayers to comply with tax regulations through accurate and timely payments (Kiow *et al.*, 2017). Bornman and Ramutumbu (2019) list a number of methods that citizens can be tax-compliant, including paying levied or assessed taxes before the deadline, accurately declaring income and deductions, filing tax returns, and refraining from tax evasion. Besides, tax compliance can induce economic growth through revenue generation for the funding of government projects and the promotion of good governance.

Persistency in tax non-compliance may reduce the amount of resources accessible to the government, causing negative effects on economic efficiency (Chand and Moene, 1999) and income distribution (Hindriks *et al.*, 1999). Although non-compliance is a growing universal issue, experts have argued that developing countries are mostly affected (Cobham, 2005; Fuest and Riedel, 2009). Karimeri (2011) opined that the concept of tax evasion should be clearly differentiated from tax avoidance. Tax avoidance is a deliberate reduction of one's liability through legal or constitutional means, such as exploiting loopholes in tax laws and aggressive tax planning, whereas tax evasion has been succinctly

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<sup>1</sup>At present, the Nigeria's national government under the leadership of President Tinubu set an ambitious target of 18 percent tax-to-gross domestic revenue ratio from 2023 to 2026. The president aims to revving the domestic revenue mechanism – particularly tax system – to mobilise the needed resources for the provision of public goods and services. (see the Guardian August 9, 2023 via <https://guardian.ng/news/tinubu-moves-to-end-overreliance-on-borrowing-for-public-expenditure-2/#:~:text=%E2%80%9COur%20aim%20is%20to%20transform,it%20is%20entrusted%20to%20serve>).



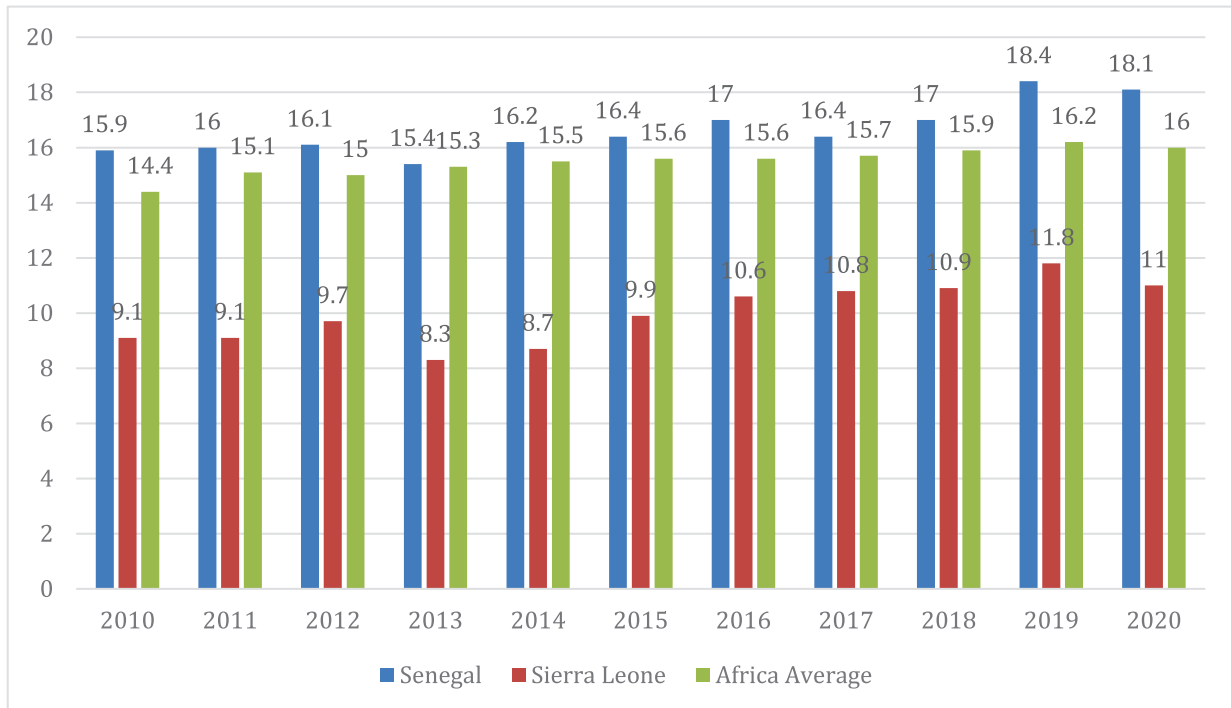
described as unlawful and unconstitutional ways of reducing tax liability (Alleyne and Harris, 2017). However, in recent times, some tax avoidance schemes have been declared null and void, and their real intentions are now considered and declared to be tax evasion.

To deal with the challenges of tax non-compliance, it is necessary to identify the elements that determine taxpayers' choice, either to pay taxes or not to pay. There are several factors that determine a taxpayer's compliance attitude, but variation exists from one nation or individual to another (Kirchler, 2007; Ali *et al.*, 2015). According to tax compliance literature, these determinants include taxpayers' opinions of the tax system and revenue administrators (Ambrecht, 1998); taxpayers' understanding of the tax system or tax legislation; peer attitudes or subjective standards (Silvani, 1992); rewards as a form of motivation (Feld *et al.*, 2006); and punishment such as penalties (Allingham and Sandmo, 1972). Others include the cost of compliance (Slemrod, 1992); audits and probability of audit; chance of discovery; cultural differences; perceived behavioural control (Furnham, 1983); taxpayer and tax collector ethics or morals; tax system equality and demographic characteristics such as gender and age (Murphy, 2004); as well as contextual tax awareness (Annan *et al.*, 2014; Adham *et al.*, 2016; Alleyne and Harris, 2017; Rantelangi and Majid, 2018; Putra *et al.*, 2018; Kassa, 2021). The list is non-exhaustive, and each factor can be categorised under business, industry, society, economy, or personality (OECD, 2015).

Although tax revenues in West Africa are growing, they are relatively low, and the region's dependence on natural resources and foreign aid has made it extremely vulnerable to external shocks. Low tax compliance is one main reason for the low revenue mobilisation. In recent times, governments, with the support of some international development partners, have paid more attention to tax revenue mobilisation. As shown in Figure 1, Senegal and Sierra Leone's tax-to-GDP ratios in 2020 were 16.6% and 11.0% respectively, compared to an average of 16.0% for 31 African countries, and a much higher figure of 34.1% for the OECD countries, according to the OECD's Revenue Statistics in Africa (2022). While Senegal has a higher tax-to-GDP ratio than the African average of 16.0%, Sierra Leone's figure is 5.0% lower.

Without doubt, politics plays a crucial role in human and societal interactions. It heavily impacts the socio-economic outcomes of every society. The extent to which politics affects and defines relationships depends on the personalities involved as well as socio-economic outcomes and environmental factors. Political participation therefore influences almost everything and could lead to improvements in the standard or cost of living, freedom, equality and right, the state of health, education, family structure, the state system and global relations.

Figure 1: Tax revenue to national output ratio, 2010-2020 (in percent)

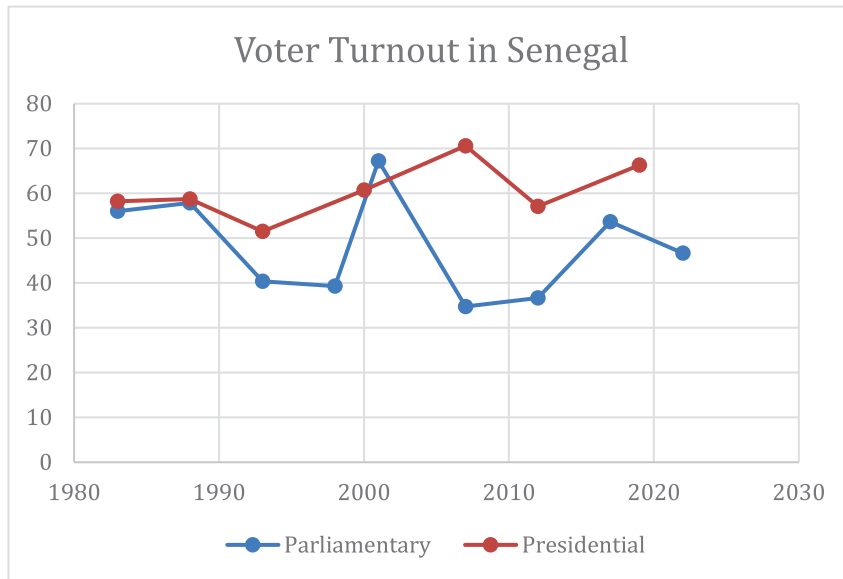


Source: OECD Revenue Statistics in Africa (2022)

Moreover, politics impacts and determines people's living conditions and relationships as they grow increasingly exposed and connected to others. Active participation in politics is the primary mechanism by which citizens engage in, determine, influence, and produce impact on the affairs of their states in collaboration with their governments. Democratic participation in politics is pivotal to the economic development and progress of any country. Figures 2 and 3 show voter turnout from 1959 to 2019 for both parliamentary and presidential elections in Senegal and Sierra Leone. The figures show that voter turnout during elections keeps fluctuating over the years and has been reducing during the parliamentary elections between 2017 and 2022 in Senegal. It also decreased in Sierra Leone during the presidential elections between 2012 and 2018. This might be a sign that people have lost interest in participating in politics or that the citizens are not satisfied with the economic outcomes in the selected countries. Hence, citizens might have developed low morale towards public institutions, including the tax system.

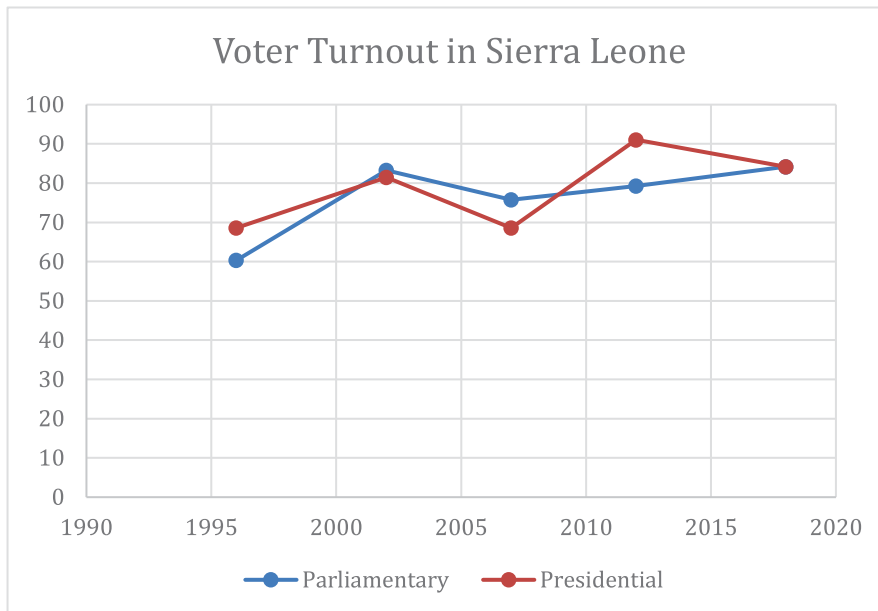


Figure 2: Voter turnout during elections in Senegal



Source: International Institute for Democracy and Electoral Assistance (IDEA)

Figure 3: Voter turnout during elections in Sierra Leone



Source: International Institute for Democracy and Electoral Assistance (IDEA)

A consensus view is that strong public participation in governance rides on good economic outcomes, while citizens' satisfaction with economic outcomes also facilitates support for public policy and programmes such as tax collection by way of high compliance. Moreover, citizens help the government accomplish its goals by contributing

financial resources in the form of tax payments, but only if and when they are satisfied with the economy. Individual compliance with tax laws and regulations may decrease when citizens are dissatisfied with the government's performance (Torgler, 2003). Provision of public services, high economic growth, and the like may lead to people having positive attitudes towards the tax system and, as a consequence, growing tax compliance. Mann and Smith (1988) similarly asserted that individuals are conscious of their exchange connections with the government with regards to tax compliance.

An expectation of good economic outcomes is an important factor that explains people's participation in governance and the reasons they pay taxes and otherwise (van den Boogaard *et al.*, 2022; and Mallett *et al.*, 2016). Improved economic outcomes (such as a reduction in inequality and employment opportunities) may spur greater participation in politics in order to retain incumbents or their political parties, for instance, and give support to the government by paying taxes or whistleblowing against tax fraud or corrupt practices by tax officials. Therefore, we argue that people will pay taxes when they participate in politics and when economic outcomes are favourable or improving. In other words, tax administration would enjoy improved compliance and support with growing participation in politics or democratic governance. However, the interplay may not be as simple, given the potential moderating role of several factors—poverty, inequality, and corruption—in an economy.

In West Africa, there are indications that governance and economic outcomes are suboptimal. Apart from high poverty, out-of-school children, high unemployment, and income inequality, there are other issues such as corruption and high bureaucratic inefficiencies, although the extent varies from one country to another (see Table 1). Abati (2006) hinted that the state of degeneration in West Africa's public infrastructure and economic activity is a symptom of poor public governance. Religious and interethnic violence, military *coup d'état* and degradation in public systems and services such as education, electricity, health, and roads are all symptoms of poor state administration (Natufe, 2006). Madueke (2008) discovered considerable discontent with West African public administrations, blaming the issue on a lack of control over corruption, a lack of rule of law, and inadequately defined government programmes. In West Africa, there are different forms of tax systems, from more centralised to multiple levels that devolve significant taxing rights to the subnational governments. For a tax system to be effective, it must be supported by laws enacted by the country's parliament. The goal was to eliminate tax duplication and disputes between the levels of government. The current study provides evidence on the main drivers of tax compliance attitudes in Senegal and Sierra Leone.



## 1.2 Defining Tax Compliance

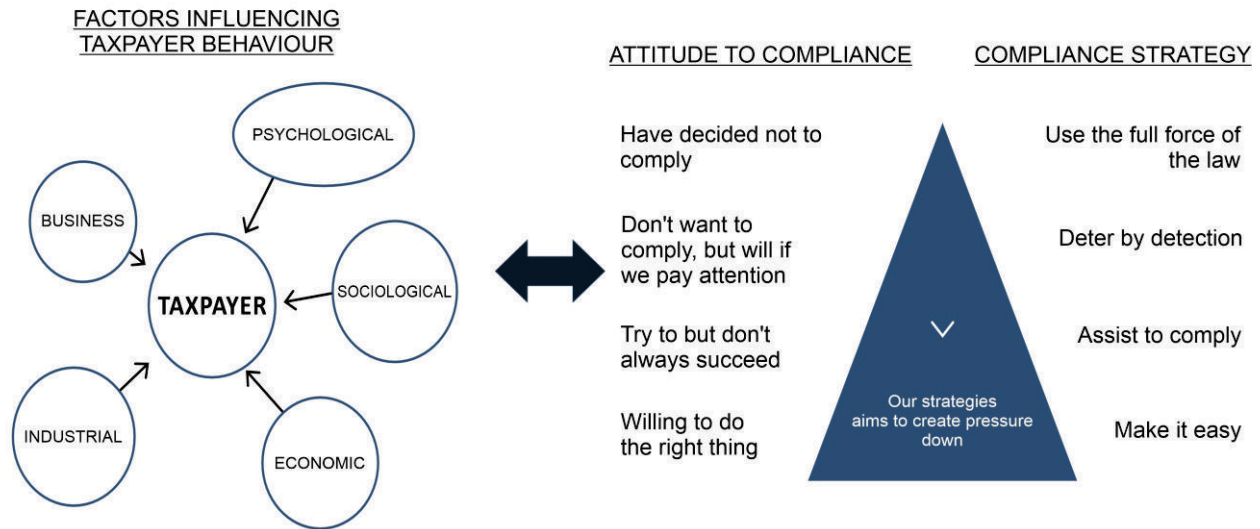
Low (or non-) compliance usually results in a tax gap. The tax gap is the discrepancy between the actual tax revenue generated and the amount that would have been received if there had been hundred percent compliance. That is the difference between the amounts of tax the government should collect if everyone paid what was required of him by law. Hence, tax evasion, avoidance, and late payment of taxes, as acts of non-compliance, would result in a tax gap.

Individuals, corporations, trusts, and other stakeholders do avoid paying their fair share of taxes. According to His Majesty Revenue and Customs<sup>2</sup> (2022), tax evasion is an illegal activity where registered individuals or businesses deliberately omit, conceal or misrepresent information so they can reduce their tax liabilities. Both tax evasion and tax avoidance can be considered unfavourable of the tax systems. Tax noncompliance is, however, indicated by the tax law of a given country. Figure 4 represents a diagrammatical linkage between taxpayer attitude and compliance.

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<sup>2</sup> His Majesty's Revenue and Customs (HMRC) is the United Kingdom (UK) revenue agency. The HMRC was called *Her Majesty Revenue and Customs* until the demise of Queen Elizabeth on 8th September 2022. It is a non-ministerial department of the UK Government, equally responsible for enforcing taxes and customs laws, amongst others.

Figure 4: Taxpayer attitude and behaviour towards compliance



Source: Adapted from OECD Guidebook on Tax Compliance

### 1.3 The Economies of Senegal and Sierra Leone: An Overview

West Africa comprises all member states of the Economic Community of West African States (ECOWAS): Benin, Burkina Faso, Cabo Verde, Cote d'Ivoire, The Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo, as well as Mauritania. The region is bordered in the south by the Atlantic Ocean. The population of West Africa is estimated at about 419 million people as of 2022<sup>3</sup> (Worldometer, February 2023). The colonial influences in the region were diverse, ranging from Belgian, English, French, and German to Portuguese. The current study focuses on the analysis of two countries in the region, namely Senegal and Sierra Leone.

**Senegal**, a colony of France, is officially the Republic of Senegal, with a population of about 16.9 million people and over 42% living in rural communities. It is bordered by Mauritania to the North, Mali to the East, Guinea, Southeast, and Guinea-Bissau to the Southwest. As seen in Figure 5, Senegal's Southern district of Casamance is divided from the rest of the country by The Gambia.

<sup>3</sup> Worldometer is a real-time online estimate of world's population. The figure quoted in this report was obtained on February 14, 2023. The estimate is based on the United Nations population figure but changes at least every five seconds.

Figure 5: Economic and political map of Senegal



Source: Map accessed via World Wide Web via the Internet

Senegal has experienced three peaceful political transitions since her independence in 1960, which makes the country one of the most stable countries in Africa. The country is administratively divided into 14 regions, each of which has a *Conseil Régional* (Regional Council) chosen by the population weight at the *arrondissement* level. Dakar is the political and economic capital of Senegal, a country that is primarily driven by mining, construction, tourism, fishing, and agriculture. These sectors also account for the majority of employment in rural areas. Similar to other developing countries, Senegal's average population age is 19 years, and the current life expectancy at birth is 68.59 years. The country has a literacy rate of 51.9 percent, and illiteracy affects about 1.5 million people (Countrymeters, 2022).

Similar to other developing countries, the combined dependency ratio of the population in Senegal hovers at 85.6%, distributed between the child dependency ratio of 80.3% and the elderly dependency ratio of 5.3%. Senegal's GDP in 2021 was \$2.63 billion in current values. It has a per capita GNP of \$1430 in 2020, making it a lower-middle-income country by World Bank classification standards. Between 2014 and 2018, Senegal's economy

increased at a rate of more than 6% per year, while its nominal GDP per capita for 2021 was \$1606, a 9.82% increase from 2020, with a GDP per capita of \$1463, an 1.88% increase from 2019 (World Bank, 2022). The country aims to become an emerging economy by 2035 and has continued to work on how to increase revenues and contain public spending. In 2020, a Medium-Term Revenue Strategy (2020-2025) was approved with the support of the World Bank Group and the International Monetary Fund (IMF). The strategy comprises tax policy, tax administration, and institutional reforms targeted at boosting the tax-to-GDP ratio to 20% (OECD, 2021).

As previously shown in Figure 1, **Senegal's tax-to-GDP ratio performed higher than the average for Africa, but it has decreased by 0.2% from 18.4% in 2019 to 18.1% in 2020** (OECD, 2022). Since 2010, the average for the 31 African countries has increased by 1.6%, from 14.4% in 2010 to 16.0% in 2020. Also, over the same period, the tax-to-GDP ratio in Senegal has risen by 2.2 percentage points, from 15.9% to 18.1%. The highest tax-to-GDP ratio in Senegal was 18.4% in 2019, with the lowest being 12.6% in 2001. Senegal's tax-to-GDP ratio in 2020 (18.1%) was higher than the average of the 31 African countries (16.0%) by 2.2 percentage points. In terms of tax type contributions, the value-added tax (VAT) contributed the highest share of tax revenues in Senegal in 2020 at 32%. The second-highest share of tax revenues in 2020 was derived from taxes on goods and services other than VAT, at 27% (Britacom, 2021).

In order to sustain the economy, the government engaged in tax administration capacity development, a major move that played a key role in achieving revenue and economic growth. Among several initiatives, the Belt and Road Initiative (BRI) Tax Academy was established to ensure capacity building in tax administration is achieved. However, the BRI jurisdictions, including the WATAF member states except Burkina Faso, were faced with more challenges than advanced economies in terms of enhancing tax administration capacity, increasing taxpayer compliance, and improving tax certainty. These challenges include a lack of adequate time for training, limited channels for updating tax knowledge, and a low level of experience in providing comprehensive external training, among others (Britacom, 2021). Table 1 contains additional information on the socio-economic outcomes in Senegal.





Table 1: Socio-economic outlook in Senegal and Sierra Leone

Indicator	Value	
	Senegal	Sierra Leone
Population (total)	16,876,720 (2021)	8,420,641 (2021)
Per capita income	USD 3,495 (PPP) (2021)	USD 1,615 (PPP) (2021)
Life expectancy at birth	68 years (2020)	60 years (2020)
Poverty headcount (at \$2.15/day threshold)	9.3*	26.1*
Corruption perception index <sup>4</sup>	43	34

**Note:** PPP - purchasing power parity; \* means percentage of population at 2017, PPP (2018).

Source: World Development Indicators (2022) and Transparency International (2022).

**Sierra Leone** is a tropical country on the West African coast, bordered by the Atlantic Ocean in the southwest; Liberia, southeast, and Guinea in the north and northeast. Sierra Leone holds a unique place in the history of the transatlantic slave trade. Freetown, the country's capital, was formed in 1787 as a haven for repatriated former slaves from London and the Americas. Sierra Leone has been a British Crown Colony since 1808, but it obtained independence in 1961. With an area of 71,740 km<sup>2</sup>, the country is slightly larger than Ireland but significantly smaller than the United States' State of South Carolina (Nationonline, 2022). There are about 18 ethnic groups in Sierra Leone that exhibit similar cultural characteristics, such as secret societies, chieftaincy, patrilineal descent, and farming methods (Britannica, 2022). Sierra Leone is made up of about 8,427,403 people, and its population is 0.10% of the world population (see Table 1).

<sup>4</sup>The Corruption Perceptions Index (CPI) is the most widely used global corruption ranking in the world. It measures how corrupt each country's public sector is perceived to be, according to experts and businesspeople. The CPI values range from 0 (highly corrupt) to 100 (very clean) and have been regularly produced by Transparency International since 2012.

Figure 6: Economic and political map of Sierra Leone



Source: Map accessed via World Wide Web via the Internet

Similar to several developing countries, Sierra Leone is also faced with the problem of employment at 5.33% in 2021, a 0.14% increase from 2020, and a total dependency ratio of 84.4%. The child dependency ratio is 76.7%, whereas the elderly dependency ratio in Sierra Leone is 6.7% (Countrymeter, 2022). Table 1 shows additional basic socio-economic variables in Sierra Leone.

**Sierra Leone experienced an increase in its GDP in 2021**, which was worth \$4.20 billion. Although the country's GDP value represents less than 0.01 percent of the global economy (Trading Economics, 2022), the nominal GDP per capita for 2021 was \$1615 (PPP), a 1.29% increase from 2020 (Macrotrends, 2022). In terms of economic freedom, Sierra Leone scores 52.0, ranking 140th in the 2022 Index. The country is placed 30th out of 47 countries in Sub-Saharan Africa, and its overall score is lower than the regional and global averages. Despite a slowdown in 2020, Sierra Leone's economic growth has averaged 3.4 percent over the last five years, but her citizens suffer from low well-being, with one out of four being extremely poor.

As shown in Figure 1, Sierra Leone experienced a decrease in the tax-to-GDP ratio of 0.8 percent from 2019 to 2020, when the figure stood at 11.0 percent. In comparison, the average ratio for the 31 African countries reported by the OECD publication in 2022 had decreased by 0.2 percentage points over the same period and was 16.0 percent in 2020. Since 2010, the average for the 31 African countries has increased by 1.6 percentage points, from 14.4 percent in 2010 to 16.0 percent in 2020. **The tax-to-GDP ratio in Sierra Leone had increased by 1.9 percent, from 9.1 percent to 11.0 percent. The highest tax-to-GDP ratio in Sierra Leone was 11.8 percent in 2019, with the lowest being 7.6 percent in 2007.** The personal income tax contributed the highest (32 percent) share of GDP in 2020. The second-highest share of tax revenues in 2020 was derived from taxes on goods and services other than VAT, which was 31 percent (OECD, 2022). The entire tax burden was 14.4 percent of total domestic income.

#### 1.4 The Problem

An understanding of the tax attitude of individuals is important for effective domestic revenue mobilisation. (OECD, 2004). An individual or organisation that fails to meet their tax obligations is said to have a negative tax compliance attitude, which could manifest in the form of refusal to file a tax return, underestimation of taxable income, gross exaggeration of tax benefits, and delayed payment of taxes (Das-Gupta and Chattopadhyay, 2002; Loo, 2006). Tax analysis of economic agents' behaviour varies from place to place and over time, and it may be difficult to generalise, particularly when compliance is the subject matter. Factors that could explain non-compliance with tax payments in a jurisdiction may be far different from others due to certain dynamics such as economic performance, level of development, political culture, historical evolution, geography, and so on.

One main challenge to effective revenue mobilisation is that tax policy in developing countries rarely gets formulated with sufficient understanding of taxpayers' attitudes. As evident in widespread tax evasion and avoidance in West Africa, tax behaviour must also be diagnosed based on the likelihood or intention of such behaviour. Although attitude may not perfectly predict behaviour, for a group of people and a society, the correlation is always high and positive. Some scholars have argued that implementing a direct tax system would force citizens to pay. While a direct tax system (especially in the formal sector) may be simple to administer, it may not be possible to achieve the desired tax burden distribution in economies with the type of economic structure of Senegal and Sierra Leone (African Development Bank, 2011 and 2018). There is extensive literature on tax compliance that identifies factors that impede governments' ability to implement strict tax compliance. Some studies (such as Agbadi (2011), Fjeldstad (2014), Jibao & Prichard (2015), Ondetti (2015), Prichard (2015), and Adekanla (2021)) have shown trust in government,

unemployment, natural resource endowment, natural disasters, corruption, tax knowledge, and level of literacy as correlates of taxpayers' compliance.

Some scholars claim that an effective national tax system is critical to achieving sustainable development because it fosters an increased domestic income base (Moore, 2008; Brautigam *et al.*, 2008; OECD, 2012; Fjeldstad, 2014). Similarly, Brautigam *et al.* (2008) suggested that nation-formation and effective taxation have a modest link. This is because tax money has the potential to improve governance and provide better incentives for economic growth (Moore, 2008; African Development Bank, 2011; OECD, 2012). However, Flores-Macias (2018) viewed that, though a proper taxation system could promote a nation's growth and also make room for a good relationship between citizens and political leaders, taxpayers do not like bearing the responsibility of paying taxes. The ability of the citizens of a country to request benefits in exchange for being tax compliant can engender development through transparency. This therefore implies that low institutional quality, characterised by poor accountability and transparency, widespread corruption, and sub-optimal provisions of public goods and services as perceived by the citizens, may drag on compliance.

In addition, economists and other social scientists the world over have enunciated the importance of politics in tax administration (Siegle, 2006; Molutsi, 2012; Adham *et al.*, 2016) and have therefore linked the participation of citizens in politics to the level of economic development. For instance, Umezurike and Danfulani (2015) opined that political participation is a panacea to economic growth, as genuine development cannot be credited to the economy in a democratic society without the active participation of its citizens in the political system. Leong (2000) and Gaventa (2002) stress it, stating that active citizens' political participation legitimises public policies and enables citizens to have claims of policy ownership and a sense of belonging. Furthermore, citizens get involved in a nation's political system by voting during election<sup>5</sup>, participating in community affairs, and joining political parties and electoral campaigns (Umezurike and Danfulani, 2015; Rantelangi & Majid, 2018; Putra *et al.*, 2018; Kassa, 2021). Nomor and Orjime (2018) opined that the pattern and level of citizens' political participation are determinants of the degree of success in a political system and the likelihood of economic prosperity in the country. This assertion may have a causal relationship that emanates from a rational decision to choose an alternative among the range of available options in governance.

In light of the above, political participation as a factor may also contribute to tax compliance in any economy. We can pose a few questions: ***Does political participation matter for tax***

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<sup>5</sup>Figures 2 and 3 represent a form of political participation in Senegal and Sierra Leone. Voter turnout, however, is one of many measures of active political interest or participation. Afrobarometer datasets contain a few indicators of political participation.

***compliance in West Africa? Is political activism a strong correlate of tax compliance attitudes in West Africa? Or, more broadly, what are the main drivers of tax compliance attitudes in West Africa?*** Although within a country-specific framework, factors that determine the tax compliance attitude of citizens have been studied for a few African countries such as Kenya, South Africa, Tanzania, and Uganda by Ali et al. (2014), there is a dearth of evidence in West Africa, particularly Senegal and Sierra Leone. The current study focuses on economic and non-economic factors that determine tax compliance attitudes in the two countries. This study is one of the few attempts in recent times to analyse tax compliance attitudes using micro-level data on Senegal and Sierra Leone.

This study is valuable for policymakers as well as academics because efforts to widen the tax base should be based on concrete and reliable knowledge of how people interact with and evaluate tax administration, as well as people's views on tax payments. The measures of tax compliance attitude in this study are novel and overcome a number of flaws associated with measuring tax compliance from taxpayers' perspectives. The absence of reliable data for research on taxpayer attitudes led to the use of a measure of indirect individual tax compliance attitude in previous studies. We, however, utilised Rounds 5 (2015), 6 (2016), and 7 (2019) of the Afrobarometer Surveys, which have a direct measure of the tax attitude of residents in Africa. The time frame permits an objective profiling of the impact of economic outcomes, economic satisfaction, and political participation on tax compliance attitudes with a view to identifying insights for improving tax administration in the selected countries.

## **1.5 Structure of Subsequent Sections**

Subsequent sections of this study are organised as follows: Section Two provides an extensive discussion of the evidence and theoretical issues. Section Three outlines the methodology. Section Four presents the data analysis, results, and discussion of the findings. Lastly, Section Five concludes with policy recommendations and suggestions for future research.

## **2. REVIEW OF RELATED LITERATURE**

This section contains a discussion of the existing studies on tax compliance. The literature on tax compliance is expansive but has no consensus on the drivers of tax compliance attitudes owing to several factors. With a view to understanding the factors that influence tax compliance attitudes in West Africa, we present a summary of the literature.

### **2.1 Theoretical Issues**

The theoretical underpinnings of taxpayers' attitudes towards their tax obligations are wide-ranging. Some theories have found extensive applications in the science and practice of tax

administration, while others have primarily contributed to the formulation and testing of hypotheses. Tax is a compulsory contribution to state revenue levied by the government on workers' income and business profits or added to the cost of some goods, services, and transactions. There are different types of taxes: they could be on money earned (individual income tax, corporate income tax, payroll tax, capital gain tax (gains on disposal, etc.), items bought (sales tax, gross receipt tax, value-added tax, excise tax), and assets owned (property tax, tangible personal property tax, estate and inheritance tax, wealth tax). Furthermore, tax compliance involves taxpayers' adherence to tax laws and regulations through timely and accurate payment of taxes.

The reasons people pay taxes and participate in political activities may be well understood when considering economic outcomes. An improved economic outcome (such as reducing inequality, increasing job opportunities, growing welfare, etc.) may induce greater participation in governance to retain the ruling party and their policies and programmes. It serves as an avenue to show support for the government by way of tax payment and whistleblowing against tax fraud or corrupt practices in the tax system. We posit that individuals are more likely to pay taxes when they engage in political activities and experience favourable or improving economic conditions.

Tax behavioural theory and benefit received theory<sup>6</sup> have had strong influence on taxpayers' compliance literature relative to other theories. However, of all the identified factors, the theories posit that the behavioural disposition of society's political stakeholders determines citizens' tax compliance attitudes. Prominent among the key factors enumerated in the theories are the benefits and costs of evasion, the availability and provision of public services and goods, the societal norms and behaviour of individuals' reference groups, and citizens' trust in government, to name but a few.

In particular, theories postulate that rewards and costs of evasion frequently impact the behaviour of taxpayers, which are associated with fraud penalties, likelihood of detection, and tax rates. The theory indicates that the severity of penalties and the likelihood of detection via high audit probabilities would result in a small number of cases of tax evasion by citizens. High noncompliance results from the absence of these measures of deterrence, advancing the coercive systems to achieve the desired level of tax compliance. Similarly, the theory asserts that government spending can serve the purpose of promoting tax compliance through the provision of social amenities and services. Indeed, scholars have argued that the availability of public goods and services does spur an attitude that supports compliance with tax payments. To sum up, taxpayers anticipate direct benefits social goods.

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<sup>6</sup> Cooper (1994), defining the benefit received theory of taxation, suggests that benefits conferred on individuals should determine the amount of taxes imposed on them. On the other hand, the behavioural theory of tax compliance argues that individuals consider both the *monetary cost* of tax payment and the *moral cost* of non-compliance.

There is the notion that attitudes and compliance behaviour towards tax payment are influenced by societal norms and the behaviour of individuals' reference groups, which include friends, neighbours, and relatives. Thus, the commitment to paying taxes becomes weaker when the taxpayer is fully aware that a large number of people evade taxes (see Ali *et al.*, 2014). In a similar environment but from a different perspective, McKerchar and Evans (2009) note that taxpayers' perception of unequal treatment within a group over time or space relative to their counterpart would alter their tax attitude. Citizens study the treatment they received from the government about their counterparts. The presence of unfair treatment in the state undermines the citizens' relationship with their government and the group within the state receiving preferential treatment. It thus implies that those who feel that they and their peers are fairly treated irrespective of education, wealth, religion, age, ethnicity, etc., tend to be more compliant with tax payments.

Additionally, the level of trust citizens have in their government might influence their compliance with regards to tax payments. It suggests that the central issue in tax compliance lies in the individual taxpayer's personal benefits. That is, a taxpayer sees his tax payments as a 'cost' that must have some form of 'benefit'. This is similar to participation in political activities, which are a part of civic responsibility; unlike taxes, which are compulsory, the driven forces are sometimes informed by individual intrinsic motives. In light of the level of tax literacy and evasion, tax-to-GDP, and people's participation in politics in West Africa, we formulate an empirical model that evaluates this assertion.

## 2.2 Empirical Evidence in Africa

The literature on tax compliance is active and extensive, covering diverse areas and several interests, including its determinants. Evidence in tax compliance literature on Africa shows that females are more tax-compliant than their male counterparts (Olufemi, 2018; John *et al.*, 2018). Moreover, Naomi *et al.*, (2002) claimed that males are more compliant when a negatively framed message is used, but females lead in compliance with a positively framed message. In addition, taxpayers' age, employment, level of academic qualification, income level, and religiosity contribute to tax compliance (Alexander *et al.*, 2021; Orumwense *et al.*, 2021; Deyganto, 2018; and Mutasah, 2016), but the middle-income group proved to be the most tax-compliant, as it benefits from government services the most (Inna, 2021).

Studies such as Muhammad (2022), Nyoman *et al.* (2020), Ngunjiri (2021), Timothy and Abbas (2021), among others, are notable on tax education and knowledge. Tax compliance would increase if knowledge of taxation was supported by awareness of being tax-compliant (Fahri *et al.*, 2022; Amardianto and Amrie, 2021; Deyganto, 2018). Moreover, there are positive correlations among key tax services, quality measures, and tax compliance (Daniel *et al.* 2020). Tax compliance is influenced specifically by the probability of being audited and high tax rates (Al-Mabrouk and Ferdous, 2021; Bin-Nashwan *et al.*, 2020; Aronmwan *et al.*, 2017; Tadesse and Goitom, 2014; Nugi, 2013; Ojochogwu and Stephen, 2012; Mohammed, 2010). In particular, audits and audit probability are positively

related to tax compliance (Enrico and Matteco, 2021; Shafik *et al.*, 2020; Jan-Emmanuel *et al.*, 2019; Deyganto, 2018), although particular audits of financial statements may have negative impacts (Sunardi *et al.*, 2022; Leandra, 2019), and the enforcement effort using audit probability directly affects tax compliance (Puri *et al.*, 2018; Ern *et al.*, 2009). However, Younse (2001) showed that optimal outcomes result from the use of audit resources by the lower and middle classes of taxpayers.

Enforcement can engender a positive impact on tax compliance (Norul *et al.*, 2021; Risna and Nur, 2021; Areo *et al.*, 2020; Kazi *et al.*, 2020; Nyoman and Ketut, 2019; Puri *et al.*, 2018; Ortega and Sanguinetti, 2013; Mohammed, 2010). Taxpayers seem to detest prosecution, administrative tax fines, and penalties and would endeavour to comply rather than suffer punishment. Moreover, Amardianto and Amrie (2021), Abba *et al.* (2020), Irwan and Apollo (2021), Arrozi *et al.* (2022), Ngunjiri (2021), Al-Mabrouk and Ferdous (2021), Christopher *et al.* (2021), and Deyganto (2018) demonstrated that sanctions could have a positive impact on tax compliance, but the strategies must be based on more than the "stick" of increased enforcement alone and should include the "carrot" of positive inducements for filing and correct assessment (Filomena *et al.*, 2020; Swistak, 2015). This is somewhat related to the social norms in which Murad and Mosab (2020), Bani-Khalid *et al.* (2022), and Kettle *et al.* (2016) listed subjective norms, perceived behavioural control, and patriotism among some crucial determinants of favourable intentions towards compliance, especially as enterprises and high-income taxpayers.

Existing research demonstrates that different communication channels and topics with taxpayers may considerably predict their compliance behaviour. Giulia and Christopher (2021), Justin *et al.* (2020), and Castro *et al.* (2020) specifically named contemporary methods of communication with taxpayers and reported that SMS and email could have more impact than letters, but enforcement messages have the greatest impact on compliance (see Kettle *et al.*, 2016; Daniel and Pablo, 2013). In contrast to the foregoing, deterrent messages improve compliance, according to Henrik *et al.* (2021), Julian *et al.* (2020), Deyganto (2018), Nadja *et al.* (2014), Lucio and Carlos (2013), and Benno (2002). Similarly, a mail-based programme aimed at increasing awareness of sanctions and detection enhancement produced a similar effect on tax compliance (Philip and Jan, 2015; Govin *et al.*, 2010). In line with previous studies, particularly in developed countries, Adedeji *et al.* (2021) reported that knowledge of peer tax behaviour could influence taxpayers to pay taxes or not. The study found that the publicity of punishments for tax evaders as well as an appreciation of faithful tax-compliant individuals could improve compliance in Nigeria. Alm *et al.* (2021) and Marandu *et al.* (2014) are of the notion that long-term tax compliance techniques should be focused on persuasion rather than compulsion, emphasising the mix of *carrot and stick* in building a sustainable compliance culture.

Trust and perceptions of government performance play a role in predicting compliance with the tax laws. Such a perception of government is an instrumental factor that shapes the emergence and maintenance of tax morale, resulting in *voluntary* tax compliance.



Similarly, perceived trust in the tax authority would have a positive influence on the taxpayer's behaviour, according to Yusri *et al.* (2021); Edrick and Heru (2020); Saeed *et al.* (2020); Areo *et al.* (2020); Musa *et al.* (2020); Fany *et al.* (2020); Christoph *et al.* (2013); and Kennedy *et al.* (2012). Moreover, Sunardi *et al.* (2022); Maria *et al.* (2021); Novrys and Risandy (2021); Luisito *et al.* (2018); and Gcabo and Robinson (2007) asserted that firm size and firm age have a positive effect on tax compliance but also found that a significant number of small firms pay taxes. The authors elucidated the factors that influence taxpayer behaviour in South Africa and hinted that evaders are not made overnight but become such after due consideration of the material consequences, normative expectations, socio-legal attitudes, and expressions. Generally, tax behaviour in South Africa is largely determined by economic factors. Al-Mabrouk and Ferdous (2021); Abba *et al.* (2020); and Batrancea *et al.* (2012) stated several factors that influence taxpayers' behaviour and highlighted the need for tax authorities to be aware of and understand these determinants if they want to improve tax compliance. These variety of factors could range from socio-psychological (attitudes, norms, justice, etc.) to political (complexity of legislation and tax system, fiscal policy) and economic (audit probabilities, fines, tax rates, income).

Areo *et al.* (2020) and Ali *et al.* (2014) investigated the variables that influence citizens' tax compliance attitudes in Kenya, Tanzania, Uganda, and South Africa and submitted that tax compliance correlates with the supply of public services. Nonetheless, the positive correlation varies with specific public services, which differ by country. It was also discovered that people's knowledge of the tax system is also positively associated with tax compliance attitudes. Alternatively, tax compliance attitudes were adversely connected with regular non-state actors' remuneration as a substitute for safety and the perception that a particular ethnic group is treated relatively unfairly.

A careful examination of the extant literature reveals that there is a paucity of studies on citizens' satisfaction with economic outcomes and political participation as factors influencing tax compliance. Although non-economic factors that may drive tax compliance attitudes have been studied in some African countries, none have been reported in Senegal or Sierra Leone. The current study therefore incorporates both economic and non-economic factors that may influence tax compliance attitudes. This study is one of the recent attempts to provide insights on tax compliance in West Africa. In the context of Senegal, the dearth of empirical evidence poses a concern for reforms. Petit and Jalles (2018) evaluated the measures to raise revenue in Senegal and found that long-term revenue mobilisation depends on both improvements to human capital and the quality of government spending. The study suggested improvements in tax administration and its policy framework in order to boost revenue in Senegal. In a similar exercise, Ameth's (2019) study is in tandem with Petit and Jalles's. However, Ameth advocated tax and institutional reforms in Senegal. Moreover, Sow and Sew (2021) reported a causal relationship between Islamic religious brotherhoods and tax morality in Senegal. This points to the individuality of tax non-compliance. In Sierra Leone, a few existing studies are Jibao (2014) and Kai, Kamara, and Koroma (2022). The latter blamed the existing tax laws as *aids* to tax avoidance and evasion, while Kassa (2021) reported tax fairness, knowledge, and moral obligation as influencers of tax behaviour.

### 3 DATA SOURCES AND ESTIMATION METHODS

#### 3.1 Research Area and Design

The study population comprised 18 years and older residents of Senegal and Sierra Leone who, by law, are eligible to participate in politics and the labour force. These are the people who legally constitute the respondents to Afrobarometer<sup>7</sup> Surveys. Samples were taken from various cities and towns in the selected countries of study. The Afrobarometer website provides information on the methods, surveys, instruments, and limitations of the data. This study collected cross-sectional data from the Afrobarometer surveys of 2014 (Round 5), 2016 (Round 6), and 2019 (Round 7). The survey gathered information on citizens' perceptions of democracy, markets, civil society, taxation, and governance in over thirty-five African countries. The data were analysed with appropriate quantitative methods through logistic regressions.

#### 3.2 Measurement of Variables<sup>8</sup>

The socio-demographic variables in the study include age, gender, level of schooling, income, and wealth index. In addition to these variables, the explanatory variables are measured and classified as follows: *Political participation*: We utilised a variable with a rating depending on people's responses to the inquiry, "How often do you participate in politics?" as a measure of political participation and a variable that encompasses residents' political activity. The variable is based on whether or not the individuals are politically engaged. Political engagement is measured if the respondent shows at least one of the following; political interest, rally participation, support for a political candidate, being an agent for a candidate, voting during an election, etc.

*Economic deterrence*: We used a rank variable based on people's responses to the inquiry, "Based on your experience, how easy or complicated is it to avoid paying the income or property taxes that you owe to the government?" The variable goes from 1 to 4, with 1 indicating "extremely easy" and 4 indicating "very tough."

*Fiscal exchange*: A number of variables are included in the regression to show the respondents' contentment with the government's supply of a variety of products and services that are required by its citizens, which may motivate them to comply. These include satisfaction with the government's provision of public goods like primary health care and education; contentment with infrastructure (providing clean water and sanitation, maintaining bridges and roads, and working to ensure a continuous power supply); and

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<sup>7</sup> The Afrobarometer website is accessible at <https://www.afrobarometer.org/surveys-and-methods/>.

<sup>8</sup> This section benefits immensely from insights in Ali *et al* (2014) as well as Fjeldstad *et al* (2012)

satisfaction with the government's oversight of crime, terrorism, and corruption. On a scale of 1 to 4, respondents were asked to score their satisfaction with the delivery of these items and services, with 1 indicating "very poorly" and 4 indicating "very well."

*Non-state actors as service providers:* Payments to non-state actors were included as a variable. The frequency with which respondents paid money to people in power or organisations that were different from the government, such as outlaws and gangsters in town, in exchange for protection, was measured. The variable ranged from 1 to 4, with 1 indicating "never made payment", 2 indicating "just once", 3 indicating "a few times", and 4 indicating "frequently."

*Social influence:* We employed other people's opinions of tax compliance as a proxy to assess the impact of other people's actions on tax compliance. The variable was assessed as a rank answer, with 1 indicating that the respondent believed others never evaded taxes and 5 indicating that they believed others constantly avoided taxes. Greater values suggested that the responder believed others were disobedient.

*Comparative treatment:* We employed a variable assessed as a ranked answer on how frequently people felt the government treated their own ethnic group unfairly to represent discrimination in the transfer interaction between government and taxpayers. The variable spanned from 1 to 4, with 1 indicating "never" and 4 indicating "always."

*Political legitimacy:* We assessed political legitimacy using a range of factors, including trust in tax administrators, tax authority corruption, general satisfaction with politicians, and people's perceptions of their country's democratic status. Individuals' trust in the tax authority was ranked according to their level of trust in the institution. The scale ranged from 1 to 5, with 1 representing "no trust at all" and 5 representing "a great deal of trust." Similarly, the participant's response to the question of how many tax officials they thought were corrupt reflected their perception of corruption. The variable ranged from 1 to 5, with 1 denoting "none" and 5 denoting "everything."

*Knowledge about taxes:* Individuals' understanding of the several kinds of taxes they must pay also plays a part to play in their compliance attitude. This was assessed as a rank answer for how tough it was to figure out which taxes to pay. The scale ran from 1 to 4, with 1 indicating "very easy" and 4 indicating "very tough."



### 3.3 Model Specification and Estimation Techniques

Based on the theoretical framework of tax behavioural theory, we estimated the following probit model:

$$\text{Probability (Tax\_Compliance}_i) = \alpha_1 + \alpha_2 X_1 + \alpha_3 Y_1 + \alpha_4 Z_1 + \varepsilon_i \dots\dots\dots (1)$$

The dependent variable is tax compliance attitude (Tax\_Compliance), which is a dummy variable with a value of 1 for tax compliance attitude and a value of 0, if otherwise.  $X_1$  is a vector that represents an individual's age, gender, education, work position, income, tribe, and whether they live in rural or urban areas.  $Y_1$  is a variable vector that reflects the many elements that influence tax compliance attitudes.  $Z_1$  is a vector for capturing fixed effects that are accessible, i.e.,  $\alpha_1$  are the relevant coefficients' vectors, and  $\varepsilon_1$  is the error terms.

The underlying assumption of the model of estimation is that the prediction can either be greater than one or negative. That is the prediction falling outside the range of 0 and 1. However, complications usually arise in the interpretation of the  $R^2$  as it does not create adequate provision for the measurement of equation fit. This is because the magnitude of dependent variable is restricted to 0 and 1. The data points may not fit well with the application of a linear probability model, when creating relatively small values for the  $R^2$  prominent in this kind of application<sup>9</sup>. The marginal effect of each explanatory variable is expressed in Equation 2 as:

$$\Delta = \Phi(X'_i\beta + \tau) - \Phi(X'_i\beta) \dots\dots\dots (2)$$

The first part of the equation indicates the variant of the continuous variables of interest. The result of the equation shows the net effect. Therefore, the study adopts the two-stage least square regression to cater for the issue of unobservable heterogeneities (or endogeneity) via instrumental variables that can be correlated with the explanatory variables.

## 4. RESULTS AND DISCUSSIONS

### 4.1 Empirical Results

The percentage computation of tax-compliant and non-compliant groups across gender, employment status, age groups, education, and wealth categories is presented in Table 2. The table shows that there is a higher percentage of those who are tax compliant compared to the non-compliant ones in both Senegal and Sierra Leone. Males who are employed and live in urban locations seem to be more tax-compliant in both countries. Also, tax compliance

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<sup>9</sup> See Davidson and Mackinnon (2021a) for a detailed theoretical exposé on probit models and their strength for econometric inference. Ali *et al.*, (2014) discussed its empirical application in a simple manner.

is prominent among those with secondary education and a higher level of *material* deprivation. It is also interesting to note that tax compliance decreases with increased levels of education and deprivation.

Specifically, Table 2 shows tax compliance across various socioeconomic groups in both countries in Round 6. The Round 6 results are fairly similar to the results presented from the analysis of the Round 5 dataset. There were more tax-compliant samples compared to the non-compliant ones, and the tax-compliant group spans across the male gender, those who are employed, and those who live in urban regions. It is, however, interesting to note that tax compliance increased with increased levels of education; the opposite was the case in Round 5.

Also, in Senegal, the Round 6 results as presented in Table 5 are similar to the results in Round 5. The sample of those who are tax compliant exceeds those who are not, and the tax compliant group spans across the male gender, those who are employed, and those who live in urban regions. Also, tax compliance is prominent among those with post-secondary education and those within the age range of 18–35 years. In addition, there is a gentle increase in the total number of tax-compliant samples in Round 5 compared with Round 6.

Moreover, Table 2 presents a percentage computation of tax-compliant and non-compliant groups across gender, employment status, age groups, and education levels in Round 7. Similar to previous rounds, Sierra Leone had a larger tax-compliant sample compared to the non-compliant ones, and the tax-compliant group spans across the male gender, those who are employed, and those who live in urban regions. Just like in Round 6, tax compliance increased with increased levels of education. However, the Round 7 results are similar to the Round 5 results, as there were tax-compliant people among those with high levels of deprivation. Also, in Senegal, tax compliance was found to be prominent among those with Secondary education and those within the older cohort. Furthermore, a higher percentage of the sample was tax-compliant in Round 7 than in the previous rounds.

Table 3 shows that in Sierra Leone, 54% of the sampled population has a tax-compliant attitude. The regional shares varied from 33% in the Northern Province to 13% in the Western Area. In Senegal, 55% of the sampled population were tax compliant, and the regional shares varied from 29% in Dakar (the capital city of Senegal and the region with the largest population in the country) to less than 1% in Kedougou (which is the region with the lowest population based on the 2013 Census). Furthermore, the table presents the geographical variation in Sierra Leone and Senegal, respectively, for Round 6. In Sierra Leone, where 63% of the sampled population had a tax-compliant attitude, the regional shares varied from 33% in the Northern Province to less than 14% in the Southern Province. In Senegal, where 60% of the sampled population had a tax-compliant attitude, the regional shares varied from 33% in Dakar to about 1% in Kedougou.



It is also interesting to see the changes that took place at the regional level between 2014 and 2017. Though at the national level, there seems to be an improvement in tax compliance attitudes across both countries. However, at the regional level, Northern Province in Sierra Leone did not experience progress in this regard, and Kedougou in Senegal had similar performance. In addition to this, the Western Area experienced a large decline in Tax Compliance attitudes (from 23.2% to 13%). This further emphasises the need for ensuring the regions are well attended to if any country will ever experience inclusive development and progress.



Table 2: Differences in socio-economic characteristics of respondents

	Senegal			Sierra Leone		
	Compliant Attitude (Round 5)	Compliant Attitude (Round 6)	Compliant Attitude (Round 7)	Compliant Attitude (Round 5)	Compliant Attitude (Round 6)	Compliant Attitude (Round 7)
Total (%)	54.9	59.72	79.32	53.8	62.69	65.41
Male (%)	58.33	63.11	79.73	51.51	64.80	67.28
Employed (%)	56.70	63.23	79.77	53.59	76.69	73.56
Urban (%)	54.97	68.70	78.58	57.07	69.98	66.73
Age (%)						
18-35	53.51	61.55	78.49	52.15	63.92	65.20
36-50	52.57	56.40	78.43	56.28	61.27	65.61
51 and above	60.89	60.16	82.64	55.03	62.87	65.87
Level of Schooling (%)						
No formal education	52.22	51.58	80.47	57.46	56.67	63.14
Primary	51.06	56.40	78.06	57.23	56.96	63.79
Secondary	62.84	63.54	80.67	50.98	68.29	67.03
Post-secondary	56.31	81.56	79.84	49.53	77.71	68.32

Wealth <sup>10</sup> (%)		
0-0.8	52.22	54.69
1.0-1.8	51.06	60.26
2.0-2.8	62.84	48.64
3.0-4.0	56.31	37.33
No Lived poverty	84.65	72.36
Low Lived Poverty	84.65	69.96
Moderate Lived Poverty	78.27	66.19
High Lived Poverty	71.88	47.93

The table shows the geographical variation in tax compliance attitude. In Sierra Leone, where 65% of the sampled population had a tax compliant attitude, the regional shares varied from 33% in the Northern Province to less than 20% in the Southern Area. In Senegal, where 79% of the sampled population had a tax-compliant attitude, the regional shares varied from 26% in Dakar to less than 1% in Kedougou. It should be noted that Dakar did not only witness a decline in tax compliance in Round 7, but had the lowest percentage across all rounds.

<sup>10</sup> This is an index computed by the Afrobarometer measuring how often, if ever, anyone in the family has gone without enough food to eat, clean water for home use, medicines or medical treatment, fuel to cook, or a cash income over the previous year. Higher scores signify greater deprivation. The table contains the differences in socioeconomic characteristics between respondents with a tax-compliant attitude and respondents with a non-compliant attitude (% of the sample).



Table 3: Geographical distributions

	Tax Compliant					
	Sierra Leone			Senegal		
	<u>Round 5</u>	<u>Round 6</u>	<u>Round 7</u>	<u>Round 5</u>	<u>Round 6</u>	<u>Round 7</u>
Western Area	13.4	23.2	24.4			
Southern Province	23.1	13.7	19.8			
Eastern Province	30.8	30	22.6			
Northern Province	32.7	33.1	33.2			
Dakar				29.29	33.1	26.08
Diourbel				8.5	11.73	12.41
Fatick				2.88	4.33	5.36
Kaffrine				3.03	4.75	2.63
Kaolack				6.37	7.96	5.99
Kedougou				0.76	1.4	0.84
Kolda				5.77	2.37	4.21
Louga				7.59	3.35	6.1
Matam				3.95	1.82	4.31
Saint-Louis				7.28	6.01	7.36
Sedhiou				2.88	1.51	3.05
Tambacounda				4.55	4.33	4.42
Thies				10.47	14.11	14.51
Ziguinchor				6.68	3.21	2.73

Source: Computed from Afrobarometer Surveys (2014, 2016 and 2019)

Table 4 shows the reasons some individuals and enterprises evade taxes. In Sierra Leone, the most prominent reason was the one relating to the poor supply of public services. This reason is plausible, as citizens are usually discouraged from paying taxes when they feel the government is not providing an adequate and regular supply of essential public services. Moreover, another reason was that respondents believe taxes are high, unfair, and unaffordable. There could be a relationship among these identified reasons. The majority of the respondents stated that taxes are high and unaffordable, probably because there seems to be little or no value for taxes previously paid, low access to public goods, or perceptions of inappropriate utilisation of public funds. Greed, selfishness, and ignorance were mentioned as other factors that could drive tax evasion. Its weight was, however, low. In Senegal, respondents were also asked for the reasons why some evade taxes. The most prominent reason of all those identified relates to the affordability of taxes. The main reason why many people evade taxes is that they believe taxes are high and unaffordable. Another reason some people evade taxes is related to the poor supply of public services and the fact that the government wastes or steals tax money, as observed in Sierra Leone.

Table 4: Reasons for tax evasion in Senegal and Sierra Leone

	Sierra Leone	Senegal
Reasons	%	%
Unfair tax system	17.3	8.6
Taxes are too high	22.5	22
Taxes are unaffordable	15.6	37
Poor public services	34.6	11.5
The government wastes/steal tax money	6.9	10.5
They know they will not be caught	1.1	3.1
Greed/Selfishness/Ignorance	0.4	4.9
Other	1.6	-

Source: Computed from Afrobarometer Survey

Table 5 contains sample size and Wald test results for the various specifications across the survey rounds for both Sierra Leone and Senegal. The results showed the fitness of the models for the binary logistic model that is presented in Table 6, which contains the marginal effect results of the binary logistic models for all rounds of data. From the results, *Health and Education* (an index for respondents' satisfaction with health and educational services) were positive and statistically significant predictors of tax compliance. The results specifically revealed that the higher the level of satisfaction with health and educational services, the higher the probability of tax compliance. This narrative holds true across the various rounds analysed in Sierra Leone, but the direction changed in Senegal for Round 7. *Satisfaction with Politicians* (a variable that measures the degree of satisfaction with the performance of the President/Prime Minister, MP/National Assembly, and Local Government Councillor), *Crime and Conflict* (an index for satisfaction with crime, conflict, and corruption), and *Employment and Schooling* variables have similar narratives as they have positive relationships with tax compliance in Sierra Leone. Round 7 results also revealed that those who *participated in the most recent election* by voting were more likely to be tax compliant compared to those who did not participate.

In Senegal, the *Managing Economy* (an index that measures satisfaction with government management of the economy, living standards, creating jobs, narrowing income gaps, and ensuring enough to eat) and *Trust* (Trust in the Tax Administration) variables have similar narratives as they have positive relationships with Tax Compliance. Round 5 and 7 results also revealed that those who *participated in the most recent election* by voting are more likely to be tax compliant compared to those who did not participate.

In addition, the *Difficulty of finding which taxes to pay* has a negative relationship with tax compliance in Round 6 for Sierra Leone and Rounds 5 and 6 for Senegal. It shows that the more difficult it is to find out which taxes to pay, the lower the probability of tax compliance. However, this same variable changed direction in the Round 5 result. *Wealth*, which is an index measuring deprivation, reflects that an increase in deprivation is associated with a decrease in the probability of tax compliance, and this result also held in both Round 5 and Round 7 results for both Sierra Leone and Senegal. The Round 6 results showed those with higher levels of *education* and those who live in *urban* areas have a higher probability of tax compliance in Sierra Leone and Senegal.

Table 6 further shows that in Sierra Leone, *unfair treatment of one's own ethnic group* (perceived frequency of discrimination against one's own ethnic group) is negatively associated with Tax Compliance. This shows that the more frequent the perception of discrimination against one's own ethnic group, the lower the probability of tax compliance. Also interesting to note is the *Payments to non-state actors'* variable, which shows that those who make frequent payments to powerful people or groups other than the government are less likely to be tax compliant.

*The infrastructure* variable (an index that measures the satisfaction of respondents with water, roads, and electricity) shows that the higher the level of satisfaction, the higher the probability of tax compliance in Senegal and, mildly, in Sierra Leone.

Table 5: Wald Test of fitness of binary regression estimates

	Sierra Leone			Senegal		
	Round 5	Round 6	Round 7	Round 5	Round 6	Round 7
N	967	1,097	1,080	949	1,046	1,165
Pseudo	0.096	0.164	0.076	0.083	0.109	0.049
Chi-square	128.21	238.07	105.90	107.73	153.05	58.07
Prob>chi2	0.000	0.000	0.000	0.000	0.000	0.000

Table 6: Binary logit regressions with marginal effects (Dependent variable=1 if individual thinks it is wrong and punishable not to pay taxes, =0 if otherwise)

Variables	Sierra Leone			Senegal		
	Round 5 Marginal Effects	Round 6 Marginal Effects	Round 7 Marginal Effects	Round 5 Marginal Effects	Round 6 Marginal Effects	Round 7 Marginal Effects
Age	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	0.001 (0.001)	0.000 (0.000)	0.001 (0.001)
Male (d)	0.053* (0.031)		0.000 (0.029)	0.034 (0.033)	0.036 (0.030)	-0.000 (0.025)
Self-employment (d)	-0.208*** (0.036)	-	-	-0.036 (0.032)	-	-
Employment (d)	0.004 (0.039)	0.197*** (0.029)	0.082** (0.033)	-0.000 (0.037)	0.044 (0.029)	-0.021 (0.026)
Political Participation (d)	0.057 (0.037)	-0.056 (0.035)	0.157*** (0.043)	0.078** (0.037)	-	0.079*** (0.024)
Schooling	-0.010 (0.007)	0.028*** (0.006)	-0.001 (0.006)	-0.009 (0.009)	0.020*** (0.007)	-0.003 (0.006)
Wealth	-0.061*** (0.017)		-0.059*** (0.018)	-0.080*** (0.019)	-	-0.058*** (0.015)
Urban (d)	-0.105*** (0.034)	0.129*** (0.032)	0.056 (0.032)	-0.034 (0.040)	0.114*** (0.032)	-0.050 (0.028)
Managing Economy	-0.081**	-0.166***	-0.012	0.091**	-0.032	0.035



	(0.033)	(0.031)	(0.025)	(0.034)	(0.031)	(0.026)
Corruption (Government)	-0.013 (0.032)	0.032 (0.022)	-0.024 (0.020)	-0.020 (0.025)	-0.020 (0.024)	0.005 (0.016)
Difficulty of evading tax	-0.079*** (0.019)	0.067*** (0.019)	0.005 (0.016)	-0.014 (0.023)	-0.009 (0.019)	0.011 (0.014)
Health and Education	0.049* (0.027)	0.051*** (0.018)	0.082*** (0.023)	0.055** (0.027)	0.114*** (0.028)	-0.042** (0.021)
Infrastructure	-0.021 (0.033)	-0.038 (0.027)	-0.058** (0.026)	-0.042 (0.032)	0.051* (0.027)	0.038* (0.020)
Crime and conflict	0.007 (0.031)	0.059** (0.022)	0.003 (0.025)	0.030 (0.026)	-0.029 (0.025)	-0.029 (0.021)
Basic services from the government	-0.095*** (0.029)	-0.163*** (0.025)	-0.011 (0.030)	0.015 (0.028)	-0.062** (0.027)	-0.023 (0.022)
Payment to non-state actors	-0.052** (0.019)			-0.012 (0.035)	-	-
Perceived non-compliance of others	0.007 (0.017)			-0.029 (0.016)	-	-
Unfair treatment of own ethnic group	-0.023 (0.020)	-0.007 (0.017)	-0.031* (0.017)	0.011 (0.025)	0.067** (0.028)	-0.011 (0.011)
Trust	0.032* (0.017)	-0.017 (0.014)	-	0.034** (0.014)	0.018 (0.013)	-
Corruption (Tax Officials)	-0.001 (0.023)	-0.004 (0.018)	-	-0.018 (0.021)	0.043** (0.021)	-
Satisfaction with politicians	0.020 (0.027)	0.039* (0.021)	0.069*** (0.016)	-0.061** (0.022)	0.019 (0.019)	0.011 (0.017)
Democracy	-0.006 (0.018)	-0.002 (0.013)	0.006 (0.015)	0.021 (0.018)	-0.004 (0.015)	0.003 (0.013)
Difficulty of finding which taxes to pay	0.053** (0.024)	-0.055*** (0.016)	-	-0.043** (0.020)	-0.032 (0.016)	-
Value added tax (d)	0.077** (0.037)	-	-	0.079** (0.033)	-	-
Region fixed effects	YES	YES	YES	YES	YES	YES
Ethnicity fixed effects	YES	YES	YES	YES	YES	YES
Religion fixed effect	YES	YES	YES	YES	YES	YES

Note: Standard errors in parentheses (); d = dummy variable, \*p<0.10, \*\*p<0.05, and \*\*\*p<0.01

Table 7: Ordered logit regressions with marginal effects (Dep variable=3 if individual thinks it is wrong and punishable not to pay taxes, =2 if individual thinks it is wrong but understandable not to pay taxes, and =1 if one thinks it is not wrong) - Round 5

VARIABLES	Sierra Leone				Senegal			
	Not Wrong at all	Wrong understandable	Wrong but understandable	Wrong and punishable	Not Wrong at all	Wrong understandable	Wrong but understandable	Wrong and punishable
Age	0.000 (0.000)	0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.000 (0.000)	-0.001 (0.001)	0.001 (0.001)	0.001 (0.001)
Male (d)	-0.017* (0.009)	-0.042** (0.021)	0.059** (0.029)	0.059** (0.029)	-0.006 (0.006)	-0.027 (0.026)	0.033 (0.032)	0.033 (0.032)
Self-employment (d)	0.056*** (0.012)	0.142*** (0.025)	-0.198*** (0.035)	-0.198*** (0.035)	0.006 (0.006)	0.023 (0.023)	-0.029 (0.031)	-0.029 (0.031)
Employment (d)	0.002 (0.011)	0.006 (0.027)	-0.009 (0.038)	-0.009 (0.038)	0.001 (0.007)	0.004 (0.029)	-0.005 (0.036)	-0.005 (0.036)
Schooling	0.002 (0.002)	0.005 (0.005)	-0.007 (0.006)	-0.007 (0.006)	0.002 (0.002)	0.008 (0.007)	-0.010 (0.009)	-0.010 (0.009)
Wealth	0.017*** (0.005)	0.044*** (0.012)	-0.061*** (0.016)	-0.061*** (0.016)	0.014*** (0.004)	0.060*** (0.015)	-0.074*** (0.018)	-0.074*** (0.018)
Urban (d)	0.025** (0.010)	0.063** (0.023)	-0.088** (0.032)	-0.088** (0.032)	0.005 (0.007)	0.022 (0.031)	-0.028 (0.038)	-0.028 (0.038)
Political Participation	-0.021* (0.005)	-0.048* (0.025)	0.069* (0.036)	0.069* (0.036)	-0.016* (0.008)	-0.063** (0.028)	0.079** (0.036)	0.079** (0.036)
Managing Economy	0.024** (0.009)	0.060** (0.023)	-0.083** (0.032)	-0.083** (0.032)	-0.017** (0.007)	-0.069** (0.027)	0.086** (0.034)	0.086** (0.034)

Perception	0.005	0.013	-0.018	0.005	0.020	-0.025
Corruption (Government)	(0.009)	(0.022)	(0.031)	(0.005)	(0.020)	(0.024)
Difficulty of evading tax	0.021***	0.053***	-0.074***	0.003	0.012	-0.015
	(0.006)	(0.013)	(0.018)	(0.004)	(0.018)	(0.022)
Health and Education	-0.014*	-0.034*	0.048*	-0.009	-0.038	0.047
	(0.007)	(0.018)	(0.025)	(0.005)	(0.021)	(0.026)
Infrastructure	0.006	0.015	-0.021	0.007	0.028	-0.035
	(0.009)	(0.023)	(0.032)	(0.006)	(0.025)	(0.031)
Crime and conflict	-0.005	-0.013	0.018	-0.007	-0.029	0.036
	(0.009)	(0.022)	(0.030)	(0.005)	(0.020)	(0.025)
Basic services from the government	0.025***	0.063***	-0.088***	-0.003	-0.011	0.013
	(0.008)	(0.020)	(0.028)	(0.005)	(0.022)	(0.027)
Payment to non-state actors	0.015**	0.037**	-0.051**	0.005	0.022	-0.028
	(0.005)	(0.013)	(0.018)	(0.007)	(0.028)	(0.034)
Perceived non-compliance of others	-0.004	-0.010	0.014	0.004	0.019	-0.023
	(0.005)	(0.012)	(0.016)	(0.003)	(0.013)	(0.016)
Unfair treatment of own ethnic group	0.007	0.017	-0.023	-0.001	-0.004	0.005
	(0.005)	(0.013)	(0.019)	(0.005)	(0.020)	(0.025)
Trust	-0.009*	-0.022*	0.031*	-0.007**	-0.031***	0.038**
	(0.005)	(0.011)	(0.016)	(0.003)	(0.011)	(0.013)
Corruption	0.003	0.009	-0.012	0.003	0.012	-0.015
	(0.006)	(0.016)	(0.022)	(0.004)	(0.016)	(0.020)
Satisfaction with politicians	-0.006	-0.016	0.022	0.012**	0.049**	-0.061**
	(0.008)	(0.019)	(0.027)	(0.005)	(0.018)	(0.022)

Democracy	0.000 (0.005)	0.001 (0.013)	-0.002 (0.017)	-0.006 (0.004)	-0.026 (0.014)	0.032 (0.018)
Difficulty of finding which taxes to pay	-0.011* (0.007)	-0.029* (0.016)	0.040* (0.023)	0.008* (0.004)	0.033** (0.016)	-0.040** (0.020)
Value added tax (d)	-0.020* (0.010)	-0.052** (0.026)	0.072** (0.036)	-0.016** (0.007)	-0.067** (0.026)	0.083** (0.033)
Region fixed effects	YES	YES	YES	YES	YES	YES
Ethnicity effects	YES	YES	YES	YES	YES	YES
Religion fixed effect	YES	YES	YES	YES	YES	YES

Note: Standard errors in parentheses. d = dummy variable. \*p<0.10. \*\*p<0.05 and \*\*\*p<0.01



Table 7 contains the results of the robustness check. This is different from the results in Table 6 for it is an ordered logistic regression. The outcome variable (Tax Compliance) has three ordered responses: *not wrong at all*, *wrong but understandable*, *wrong and punishable*. The results from the binary logistic analysis are consistent with the results from the ordered logistic regression for Senegal and Sierra Leone. The table shows that the results from Round 5 analysis reflect that *Health and Education*, *Trust* and *Value added tax* have a positive relationship with *Tax Compliance*, while *Wealth*, *Self-employment*, and *Payments to non-state actors* and *Difficulty of finding which taxes to pay* have negative relationships with *Tax Compliance*. The only difference is in the *Political Participation* which was positive and significant in the ordered logistic model but was not significant in the binary logistic model. For Senegal, the result from Table 6 showed that the Round 5 analysis reflects that *Political Participation*, *Managing Economy*, *Trust* and *Value added tax* variables have positive relationships with *Tax Compliance*, while *Wealth*, *Satisfaction with Politicians*, and *Difficulty of finding which taxes to pay* variables have negative relationships. However, the *Health and Education* were no longer significant in the ordered logistic model. The result from Round 6 of the ordered probit analyses was similar to the results from the binary logistic model for Sierra Leone. However, there are a few exceptions. *Perception of Corruption (Government)* which was not a significant predictor of *Tax Compliance* in the binary logistic model, emerged as a significant predictor in the ordered logistic model. Finally, the result from Round 6 of the ordered probit analyses for Senegal is also similar to the results from the binary logistic model. However, there are a few exceptions. Variables such as *Trust* and *Difficulty of finding taxes to pay* which were not previously significant statistically in predicting *Tax Compliance* in the binary logistic model were found to be significant predictors in the ordered logistic model.

Table 8: Ordered logit regression with marginal effects (Dependent variable = 3 if individual thinks it is wrong and punishable not to pay taxes, =2 if one thinks it is wrong but understandable not to pay, and =1 if one thinks it is not wrong at all) - Round 6

VARIABLES	Sierra Leone				Senegal			
	Not Wrong at all	Wrong but understandable	Wrong punishable	Wrong and punishable	Not Wrong at all	Wrong understandable	Wrong but punishable	Wrong and punishable
Age	0.000 (0.000)	0.000 (0.001)	-0.000 (0.001)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
Male (d)	-0.003 (0.011)	-0.004 (0.016)	0.006 (0.026)	-0.010 (0.006)	-0.036 (0.022)	0.046 (0.029)	-	-
Self-employment (d)	-	-	-	-	-	-	-	-
Employment (d)	-0.070*** (0.011)	-0.122*** (0.019)	0.192*** (0.028)	-0.009 (0.006)	-0.032 (0.022)	0.041 (0.028)	-	-
Schooling	-0.011*** (0.003)	-0.016*** (0.004)	0.028*** (0.006)	-0.005** (0.002)	-0.016*** (0.005)	0.021*** (0.007)	-	-
Wealth	-	-	-	-	-	-	-	-
Urban (d)	-0.044*** (0.012)	-0.070*** (0.020)	0.114*** (0.031)	-0.023*** (0.007)	-0.085*** (0.025)	0.108*** (0.031)	-	-
Difficulty of evading tax	-0.026*** (0.008)	-0.037*** (0.011)	0.062*** (0.018)	0.000 (0.004)	0.001 (0.014)	-0.002 (0.019)	-	-
Managing Economy	0.068*** (0.014)	0.099*** (0.018)	-0.167*** (0.030)	0.009 (0.007)	0.030 (0.023)	-0.038 (0.030)	-	-
Perception (Government)	-0.020** (0.009)	-0.029** (0.012)	0.049** (0.021)	0.002 (0.005)	0.008 (0.018)	-0.010 (0.023)	-	-
Political Participation	0.017 (0.014)	0.024 (0.020)	-0.041 (0.034)	-	-	-	-	-

Health and Education	-0.019** (0.007)	-0.027** (0.010)	0.046** (0.017)	-0.024*** (0.007)	-0.081*** (0.021)	0.105*** (0.027)
Infrastructure	0.014 (0.011)	0.020 (0.015)	-0.034 (0.026)	-0.013** (0.006)	-0.044** (0.020)	0.057** (0.026)
Crime and conflict	-0.027*** (0.009)	-0.039*** (0.013)	0.065*** (0.021)	0.002 (0.005)	0.006 (0.018)	-0.008 (0.024)
Basic services from the government	0.054*** (0.011)	0.079*** (0.015)	-0.133*** (0.025)	0.012* (0.006)	0.040* (0.021)	-0.051* (0.027)
Payment to non-state actors	-	-	-	-	-	-
Perceived non-compliance of others	-	-	-	-	-	-
Unfair treatment of own ethnic group	0.002 (0.007)	0.003 (0.010)	-0.005 (0.016)	-0.016** (0.007)	-0.056** (0.021)	0.072** (0.027)
Trust	0.004 (0.006)	0.005 (0.008)	-0.009 (0.014)	-0.006** (0.003)	-0.022** (0.010)	0.028** (0.013)
Corruption (Tax officials)	-0.001 (0.007)	-0.001 (0.010)	0.001 (0.018)	-0.011** (0.005)	-0.037** (0.016)	0.048** (0.020)
Satisfaction with politicians	-0.015* (0.008)	-0.021* (0.012)	0.036* (0.020)	-0.005 (0.004)	-0.018 (0.014)	0.024 (0.018)
Democracy	-0.005 (0.005)	-0.007 (0.007)	0.011 (0.012)	0.002 (0.003)	0.008 (0.011)	-0.011 (0.014)
Difficulty of finding which taxes to pay	0.026*** (0.007)	0.037*** (0.009)	-0.063*** (0.016)	0.008** (0.004)	0.027** (0.012)	-0.035** (0.016)
Value-added tax (d)	-	-	-	-	-	-
Region fixed effects	YES	YES	YES	YES	YES	YES
Ethnicity fixed effects	YES	YES	YES	YES	YES	YES
Religion fixed effect	YES	YES	YES	YES	YES	YES

Note: Standard errors in parentheses. d = dummy variable. \*p<0.10, \*\*p<0.05 and \*\*\*p<0.01

## 4.2 Discussion of Findings

The previous section contained results and findings (Tables 2–8) from statistical and econometric analysis. It clearly revealed the behaviour of the explanatory variables and their impact on tax compliance attitudes in Senegal and Sierra Leone. In this section, we further discuss the findings in relation to some existing evidence in Africa (and a few other developing countries).

### 4.2.1 Probable Factors for Tax Evasion - Descriptive Analyses

The results showed that more than half the respondents had a favourable attitude towards tax compliance over the entire study period, similar to findings reported in Ali *et al.* (2014) in Kenya and South Africa. Also, tax compliance attitudes increased through the age range; the older the population gets, the more compliant they tend to become. This could possibly connect to the older person's understanding of the importance of tax revenue as a means to increase the provision of public goods (e.g., health services, road networks, etc.) and an increase in employment opportunities. This result resonates with Ali *et al.* (2014), the OECD (2013), and Orumwense and Doris (2021), who claimed that levels of education and employment could drive tax morale. Moreover, the main reasons for tax evasion in Senegal are citizens' inability to afford tax payment, high rates of taxes, poor public services (in both countries), as well as waste or theft of tax revenue by the government (Senegal) and unfair tax treatment (Sierra Leone), in similarity to studies in Kenya, South Africa, Tanzania, and Uganda. The findings shed light on citizens' awareness of the responsibility of government and its agencies and the importance of greater transparency and accountability in public offices.

### 4.2.2 Explaining Tax Compliance Using Inferential Techniques

The entire explanatory variables in the model can be categorised into five broad groups of indicators, for the purpose of summarising the findings, which are *fiscal exchange*, *comparative treatment*, *politics and political legitimacy*, *socio-economic outcomes* and *knowledge about taxes* indicators. Fiscal exchange indicators including health and education, infrastructure and basic services from the government emerge as important predictors of tax compliance attitude in Senegal but more intense in its profile in Sierra Leone. While it recorded effect in two surveys in Senegal, the effect was positive throughout the entire rounds in Sierra Leone. This reveals that citizens expect to enjoy public goods and services such as health and education as they exercise their right to pay taxes. In other words, the benefit theory assumptions that the gains in the society from tax payment would drive citizens' compliance to it. It specifically reveals that the higher the level of satisfaction with health and educational services, the higher the likelihood to be tax-compliant. This finding corroborates a common line of evidence (in for example Nigeria, Tanzania and Uganda to name but a few) that reasonable access to public goods and services may

engender a responsible citizenship (Batrancea *et al*, 2012; Ali *et al*, 2014, Abba *et al*, 2020; AlMabrouk and Ferdous, 2021; and; Orumwense and Doris, 2021). This further suggests that improvement in education would lead to increase in tax compliance in the long run. The positive relationship between education and tax compliance may also be attributed to the understanding that taxation plays a vital role in the growth and development of a modern society (see Ershaid, 2021, and Mwangi and Macharia, 2021).

Furthermore, access to public infrastructure was a positive and significant factor in explaining tax-compliance attitudes in the selected countries but was more effective in Senegal. Similar to some extant studies (OECD, 2013; Orumwense and Doris, 2021), infrastructure was an important determinant of tax compliance in Kenya. A negative sign of basic service suggests that when individuals access public infrastructure but are less satisfied with the services rendered, it might prevent them from paying their taxes, disregard the punishment attached to evasion, and engender an unfavourable attitude towards taxation. This emphasises the need for the government to provide better infrastructure to encourage tax compliance, as suggested by the OECD (2013).

**Comparative Treatment.** Extant studies opines that the manner an individual or group is treated by the government relative to their fellow citizens counts as a vital factor in determining an individual's compliance attitude to tax (D'Arcy, 2011 and Fjedstad *et al*, 2012). Results show that *unfair treatment of own ethnic group* was a positive and significant predictor of tax compliance in Senegal, suggesting that individuals care about the treatment they get directly from the government in relation to other ethnic nationals and that the perception that they always benefit more than others would drive them to support the government by paying their taxes when they are due. The reverse thus implies that uncared-for citizens would undermine government policies, including tax policy. This seems like the situation in Sierra Leone, where preferential treatment would discourage tax payment.

**Politics and political legitimacy.** The political legitimacy indicator includes trust, corruption (tax officials), satisfaction with politicians, and political participation. As in the tax compliance literature, the cruciality of *Trust* remains central to taxation. Whether trust is in government officials or in tax administration, it matters how the government builds it. The higher the level of trust in the government, the greater the likelihood of being tax compliant. (Daude *et. al.*, 2013; Tang and Chang, 2021; Orumwense and Aiwoho, 2021). Therefore, greater transparency, improved access to public services, and a low tax burden are factors that may help increase the level of trust in government (Coita *et al*, 2021). In both countries, participation in politics by citizens has both a positive and causal relationship with tax compliance<sup>11</sup> Individuals that are active in politics might also have favourable attitudes

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<sup>11</sup> This was established with the ordered logistic regression only. When treated in isolation, the results are sufficient to make the claim that participation in politics would enhance tax revenue mobilisation.

towards taxation, in accordance with Isbell (2017)<sup>12</sup>. It suffices to opine that the political system in Senegal may create some forms of advocacy for taxation. For instance, the manifestos of political parties may discuss tax policy as another main instrument of governance. In a similar manner, the government may choose to have a regular public discourse on taxation and its role in an economy. Indeed, the involvement of individuals in political activities motivates their decision to be tax compliant and seek punishment for tax evaders.

**Corruption.** The perception of corruption among tax officials turns out to have a positive and significant relationship with Tax\_Compliance, and in a way, it is the antithesis of the empirical evidence. That individuals pay less attention to fraud or cheating among tax administrators does not imply an endorsement of corrupt practices but is a signal that other factors may be at play. In Senegal, the extent of the accountability of tax officials seems to influence taxpayer compliance. A strand of empirical evidence in South Africa and Uganda showed that corrupt practices among tax officials erode the likelihood of tax compliance. This study contradicts Bertinelli *et al.* (2018) and Jibril *et al.* (2020), who found that corruption, such as bribe-giving to tax authorities to evade, negatively influences tax compliance. This further reiterates trust in tax authorities as key to encouraging tax compliance (Jibril *et al.*, 2020).

Satisfaction with politicians emerges as a crucial factor in relation to tax compliance in Senegal. While it seems contradictory to have higher satisfaction but a lower likelihood to pay taxes, it suggests, however, that individuals may have had an understanding that politicians are public servants who use public resources and that regardless of their level of performance, it may be insufficient to reciprocate through tax payments. This implies that the level of satisfaction an individual derives from the services of the president, members of parliament, and elected local officials may not necessarily enhance the likelihood of paying taxes. This is in contrast to strong evidence in Kenya, South Africa, Uganda, and Tanzania that shows that satisfaction with politicians reinforces tax compliance. Even though citizens desire to have taxes contribute to development (Isbell, 2017), it suffices to state that the polity in Sierra Leone has had serious instability in the past. In the early years of independence in 1961, there were allegations of mismanagement, corruption, and self-enrichment by civilian and military leaders (Jalloh, 2001). The country also experienced a civil war (1991–2002) that exacerbated instability in civil life, and the war legacy may have included mistrust, disaffection, and dissatisfaction with politicians.

**Knowledge about tax (tax awareness) factors** includes the *difficulty of finding out taxes to pay and value-added taxes* that are found to have a significant effect on tax compliance. Both lack of knowledge and complexity in the tax system are negative predictors of tax compliance attitudes among Senegalese. This shows that the more people find it difficult to

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<sup>12</sup> Isbell (2017) found that in Africa, there is high positive correlation between having free and fair elections and support for the government by way of tax payments.

identify the tax to pay, the less they will be tax compliant. In a similar vein, Sierra Leoneans recognised knowledge of tax as an 'aid' to tax payment, but they tended to switch behaviours with time and circumstances. In other words, their decision could be short-term-oriented, and they may seek knowledge but still not pay at some points regardless of the punishment attached to tax evasion. This corroborates Ali *et al.* (2014) for Kenya, South Africa, Tanzania, and Uganda, and Isbell (2017) for Africa. Perhaps a lack of proper tax awareness makes it difficult for people to identify the tax to pay and how to pay it. This aligns well with Nurlis and Ariani (2020) in Indonesia. Thus, tax awareness can strengthen decisions to be tax-compliant, and the onus is on tax authorities to reinforce these tendencies. This is in line with Musimenta (2020), who submitted that sufficient tax knowledge enables taxpayers to comply with tax compliance in Ghana.

In recent times, both Senegal and Sierra Leone have enjoyed support from international development partners (including the African Development Bank and the International Centre for Tax and Development, to name but a few) in their domestic revenue mobilisation drives. A part of these interventions includes tax administration reforms and the promotion of tax culture. Moreover, the level of awareness of value-added tax (VAT) predicts tax compliance attitudes in both economies, and it suggests that the more information people have on VAT, the higher their likelihood of paying taxes. This is because VAT is already included in the prices of goods and services. This could also be attributed to the people's knowledge of tax obligations (Twum *et al.*, 2020). Areo *et al.* (2020) and Ershaid (2021) are two of the studies that reported such a positive effect in Nigeria and the Tabuk region, respectively. Similar evidence exists in Kenya, South Africa, Tanzania, and Uganda, according to Ali *et al.* (2014). This further buttresses the view that knowledge of the importance of taxes can stimulate people to pay them (Twum *et al.*, 2020).

**Socioeconomic factors.** Wealth, satisfaction with how government is managing the economy, schooling, and living in urban location are indicators of the socio-economy. With a positive effect on tax compliance people who live in urban centres and have experienced schooling are more likely to be tax-compliant. Similarly, satisfaction with the manner with which the economy is being managed leading to are food security, employments and the likes would help individuals tend to pay taxes. On the other hand, deprivation index has a negative effect and it suggests that individuals will not comply with tax policy when they are deprived of necessary things for their survival. Satisfaction with the management of the economy in Sierra Leone shows a negative but statistically robust with tax compliant attitude over the study. Dissatisfaction makes them evade tax regardless of the punishment that may accompany it. This finding confirms Beach and Boogaard's (2022) report on Sierra Leone on how deprivation could pose barriers for tax governance. Deprivation and poor access to the basic necessities of life would not produce in any nation a responsible citizen. In developing countries, more often than not, citizens pay taxes with the hope of receiving public goods and services (van den Boogaard *et al.*, 2022; Jibao, 2014; and Mallett *et al.*, 2016).

Across all model specifications and estimations in both countries, individual taxpayers' region, ethnicity, and religion matter for their tax attitude. As hypothesised under theoretical issues, our findings further substantiate the fact that tax payment decisions are extremely self-motivated and driven. Therefore, tax authorities must treat each taxpayer as a 'customer king' who deserves friendly business models and practices.

## 5 CONCLUSION AND SUGGESTIONS FOR FUTURE RESEARCH

Tax compliance is of interest to policymakers, administrators, and academics. West African countries are faced with low tax compliance levels, which has created impediments to domestic revenue mobilisation and exacerbated corruption in tax administrations. The research study provides a comprehensive survey of the literature in tax compliance, with a view to assessing the state of knowledge in the subject matter in West Africa in particular. The extensive review of the extant studies helps to provide a basis for an empirical analysis of tax compliance in West African countries, where records have shown that tax evasion and avoidance are pervasive. On the backdrop of insights from the literature and the fact that scanty evidence exists in West Africa, WATAF set up a research agenda to investigate tax compliance in its member countries, who coincidentally are the member states of ECOWAS.

Despite the existence of active literature in tax compliance, there is hardly any consensus on the main determinants of tax compliance, at least when taxpayers are the primary object of analysis. Particularly, empirical evidence does not provide much insight into country-specific influences that must be considered to engender a favourable tax culture and improved compliance. There is sparse country-specific evidence in West Africa, and where available, the evidence is faulted on the reliability of the data and methodology employed on the one hand and the measurement of compliance attitude on the other. In some cases, most studies in West Africa are not replicable, the data is not accessible, and the findings are not implementable or lack concreteness for policy actions.

Tax noncompliance is a continual and growing global problem, but it has more deleterious effects in developing countries, including West Africa, where poverty remains unabated and income inequalities remain high. In this project, we argue along the lines of the popular view that economic outcomes could correlate with taxpayers' attitudes in a country. We, however, extend the idea by employing the perceptions of taxpayers of economic outcomes to capture citizens' satisfaction or otherwise with the outcomes and the way such may affect their attitude towards paying or not paying taxes. Furthermore, we included an index of wealth (deprivation) to establish whether wealth correlates with attitudes towards taxation. Apart from interrogating the role of several other factors, we examine the way political participation or interest may be a driver of attitudes towards supporting or working against a government by way of paying or not paying taxes. This is the first attempt to use survey data



on political participation to assess tax compliance in West Africa. This study (and some others) on tax compliance attitudes focuses on the centrality of taxpayers in taxation, unlike research projects that emphasise policy and its institutional environment only.

Three rounds of surveys from Afrobarometer (Rounds 5, 6, and 7) over seven years were gathered. The surveys collected information on tax knowledge, awareness, and perception towards taxation vis-à-vis factors such as public goods provision, trust in government, trust in tax administration, etc. Both descriptive analysis and probit and logistic regressions were employed to analyse the data. We attempted to show the trend of some key variables, particularly the reason for non-compliance, and draw inferences from the data. Compared to previous studies, the Afrobarometer surveys that we applied contain more tax-specific data. In addition, the study's measure of tax compliance attitude is new and aims to address shortcomings in the measure of compliance attitude used by earlier studies. Previous studies used proxies that were criticised because their measure mixed attitude towards tax with attitude towards the perception of tax enforcement. Furthermore, since the questions were directly phrased, their measure of tax compliance attitude could be biased upward due to strategic responses. Another uniqueness of this study is that it attempts to profile taxpayers' attitudes in the selected countries by assessing their consistency over a seven-year period.

We focus on factors that determine citizens' tax compliance attitudes in Senegal and Sierra Leone. It was discovered from the findings that political participation, health and education, trust, awareness about value-added tax, and schooling had a positive and significant relationship with tax compliance attitudes in both Sierra Leone and Senegal. This reveals that political participation, health and education, knowledge of value-added, and schooling are important in ensuring that people are tax compliant. Wealth and basic services from the government are also important predictors of tax compliance in both Sierra Leone and Senegal, but they negatively influence tax compliance attitudes. At least one out of three people in Senegal would not pay taxes if they had the opportunity to cheat, while two out of five people in Sierra Leone would want to evade tax payments. This was consistent across the years examined. Taxpayers consider evasion a way to punish the state for poor public service provision or poor accountability. In order of weight, provision of public goods, amount of tax payment, and fairness were the leading factors for likelihood of evasion in Senegal, whereas affordability, amount of taxes, and public goods provision emerged as the top three reasons in Sierra Leone.

Specifically, in Senegal, improvements in public provisions of health, education, and public infrastructure tend to stimulate favourable taxpayer attitudes. The study further shows that the major reasons why people evade tax in Sierra Leone are poor public services, taxes being too high, taxes not being affordable, and government waste or theft. Moreover, trust in government, satisfaction with politicians, corruption among tax officials, and political participation emerge as significant influences on taxpayer attitudes in both countries. Also,

results showed that people who live in urban areas and are educated are more likely to be tax-compliant. The more individuals are satisfied with the government's management of the economy, the more people feel food-secured and have jobs. Individuals tend to be more interested in fulfilling their obligations by being tax-compliant, but deprivation erodes the tendency to be tax-compliant. The increase in tax compliance could be attributed to a better understanding of the importance of tax payment through education, an increase in the provision of public services through better health services, and an increase in employment levels.

Specifically, in Sierra Leone, improvements in public provisions of health, education, and public infrastructure tend to stimulate favourable taxpayer attitudes over the entire study period. People who are educated, participate in politics, and also live in urban areas tend to be more tax-compliant. They become more favourable towards taxation as they gain more education. Trust, political participation, and unfair treatment of one's own ethnic group are important determinants of tax compliance in both countries. It is worth stating that the findings of the study vary with the construction and measurements of tax compliance attitudes. In sum, political participation, health and education, trust, knowledge of value-added tax, and schooling have a positive and significant relationship with tax compliance in both Sierra Leone and Senegal. It therefore suggests that said variables are important in ensuring that people are tax-compliant. Wealth and basic services from the government are also important predictors of tax compliance in these countries, but they may negatively influence tax-compliant attitudes.

It is worth stating that some results vary across the periods under study, and some caution is necessary in applying the findings. Rather, tax policymakers and tax administrations must examine their policy measures for consistency. Tax reforms should be designed in a manner that guarantees progress in taxpayers' experiences and perceptions of the tax system. Thus, tax authorities should formulate and implement reform measures with the understanding that taxpayers are economic agents who possess capabilities for both adaptive and rational expectations. Furthermore, policymakers should utilise as much as possible taxpayers' perceptions and experiences as inputs in tax policy design. Future studies may attempt to expand the profile of taxpayers' attitudes and perceptions with additional surveys to include the post-COVID era.

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