Governance Transparency of Tax Revenue Performance in West Africa

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Ramat Titilayo Salman, ORCID: https://orcid.org/0000-0001-7786-4577
PhD, FCTI, Department of Accounting, Faculty of Management Sciences, University of Ilorin, Ilorin, Kwara State, Nigeria

Peter Sanni, ORCID: https://orcid.org/0000-0003-1098-5889
M.Sc., Department of Accountancy, Kogi State Polytechnic, Lokoja, Kogi, Nigeria

Taiwo Azeez Olaniyi, ORCID: https://orcid.org/0000-0003-4265-8217
PhD, ACA, Department of Accounting, Faculty of Management Sciences, University of Ilorin, Ilorin, Kwara State, Nigeria

Khadijat Adenola Yahaya, ORCID: https://orcid.org/0000-0002-2840-5750
PhD, ACA, Department of Accounting, Faculty of Management Sciences, University of Ilorin, Ilorin, Kwara State, Nigeria

Abstract
This paper summarizes the arguments and counterarguments within the scientific discussion on the issue of governance and taxation revenue performance. The main purpose of the research is to examine the influence of management on tax revenue performance in West African countries. Specifically, the study aimed to investigate the impact of regulatory quality (political stability) and (voice and accountability) on tax revenue performance in West African countries; and to assess the effect of governance efficiency (the rule of law and control of corruption) on the performance of tax generation of West African countries. Secondary data were sourced from Governance indicators which cover 2005 to 2017. Regression analysis was employed to test the research hypotheses: regulatory quality does not significantly influence tax revenue performance in West African countries; and government efficiency does significantly affect tax revenue in West African countries. Sixteen West African countries were purposively chosen because of governance issues such as political instability and government ineffectiveness. The paper presents the results of an empirical analysis, which showed that regulatory quality, political stability and absence of violence, and voice and accountability have insignificant impacts (p-value>5% level of significance) on tax revenue performance. Moreover, government effectiveness, the rule of law and control of corruption have positive and significant impacts (p-value<5% level of significance) on tax revenue performance in West African countries. The study concludes that governance affects tax revenue performance in West African Countries; thus, the study recommends, among others that government should come up with realistic policies that will increase public and civil service quality.

Keywords: Governance, Performance, Taxation, West Africa.

JEL Classification: G3, M21.


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Introduction
The revenue generation may depend on its sufficient capacity to tax more and have more. There has been a growing concern about financing Africa’s future development in recent years. Mobilizing domestic income through tax revenue is identified as a top policy priority. However, the extent of such a revenue generation scheme is a function of the willingness and ability of the people to pay taxes. The gamut of institutional problems associated with revenue generation in developing countries reduces tax revenue (Awotomilusi,
Akintoye, & Adegbe, 2019). The quality of governance has become a general concern to citizens, particularly when they consider the benefits accrued from government institutions. It is believed that tax revenue generation is mainly influenced by governance quality because a country seeking to enhance tax collection should improve its ability to govern. Institutional climate and governance quality are emphasized in the literature as essential determinants of tax revenue in many countries (Andersson, 2017; Frey & Torgler, 2007).

The presence of government institutions that are responsible, accountable, fair, and able to meet citizens' and firms' needs could help people be more tax compliant. Hussain, Ilahi and Muqeem ul Islam (2016) opined that improved governance could be harnessed as an optimal solution to low tax revenue and the continued inability to meet tax targets. Good governance tends to prevail in countries with low corruption rates and shared characteristics. It includes press freedom, transparency through accessible public information, a high level of integrity, and an efficient judiciary system. Meanwhile, poorly policy implementation and weak government institutions like the judiciary and police are likely pointers of poor governance (Transparency International, 2017). The dominant theory focused on the perception of fair governance and a developed tax system in the tax literature. It is because a good tax system is associated with the quality of governance (Ajaz & Ahmed, 2010). Moreover, good governance triggers a good tax system and increases tax revenue generation. However, lack of clarity and transparency, political instability and governance of tax incentives aggravate tax base erosion. Therefore, good governance, to a large extent, ensures a good tax system and reduces tax base erosion.

In the past few decades, many developing countries have experienced fiscal crises. The Organisation for Economic Co-operation and Development countries (OECD) have a relatively high-income tax compared to low-income countries. Income tax of OECD countries accounted for 12.9% of Gross Domestic Product (GDP); it accounted for 3.5% of GDP in countries with low income. Hence, low-income countries have excessively low-income taxes (IMF, 2017). About 45% of the GDP in developed countries is obtained through taxes, while developing countries realize only 24 percent of their GDPs from taxes (OECD, 2019). Placing focus on Africa, in a report of the United Nations Commission for Africa (UNECA, 2019), continental pictures remain challenging with GDP’s weighted tax revenue ratio as 14.6 percent in 2018. This has therefore led to a serious issue, particularly as the tax performance could be declining on account of governance challenges. Hence, there is a need to investigate tax revenue performance from an institutional point of view. Therefore, the sole aim of the work is to examine the interaction of governance quality and performance of tax revenue in West African countries. Specifically, the study objectives are to:

- investigate the impact of regulatory quality (RTQ) (political stability and absence of violence; (PS) and voice and accountability (VOC)) on tax revenue performance of countries in West Africa; and
- assess the effect of governance efficiency (GOE) (the rule of law (RUL) and control of corruption (COC)) on tax revenue performance of West African countries.

The other parts of the work are organized as follows: Review of literature is in the second section, followed by methodology in third section, presentation of results in section four, while the last section covers the conclusion.

**Literature Review**

**Tax Revenue Performance and Governance.** Tax is imposed by a controlling body (usually government) on profits, wages, products, services, or property of individuals and corporations, trusts, and settlements. This tax is used to carry out government operations when collected, i.e., maintenance of law and order, infrastructure supply, healthcare, and public education, or as a fiscal instrument for economic regulation (Obara & Nangih, 2017). Taxation is the method of tax administration and collection (Adeniran, Alade, & Oshode, 2013). It is one of the viable means by which any government can raise revenue to fulfill citizens’ needs. For the survival of the developed and the developing countries, tax revenues are critically important. First of all, taxation is an essential source of central government revenues, as collecting taxes is necessary and routine and can ensure income stability. Second, taxes are structured by delivering public goods and services to meet social and public needs. Third, to ensure the protection and justice of society, the government requires tax income to build the security forces and the legal systems (Nightingale, 2002).

A low tax/GDP ratio in many emerging countries prevents them from implementing aggressive spending programs. Therefore, a rapid fall in domestic income and a related increase in government services are a policy priority (Bird & Zolt, 2014). Tax revenues vary from country to country, and patterns in income do not remain uniform; in some countries, the tax revenue shares have risen continuously, while tax income is
low in some countries. What is an ideological and technical problem is the optimal level of the tax-GDP relationship? Governments of different policies may have other public spending targets, which need different levels of taxation. Indeed, the ratios between tax revenue and GDP differ significantly between regions. West Africa’s propensity to share tax revenues is misleading, and domestic income has fallen dramatically since 2004 (OECD, 2019).

Maintaining the low performance of taxes in many developed countries is also a key factor behind fiscal corruption and governance issues (Everest-Phillips & Sandall, 2009). It is also clear that steps to eliminate such issues can be expected to raise tax revenues dramatically (Gupta, 2007). According to the Cambridge English Dictionary, governance is the way organizations or nations are operated at the highest level and the process for upholding the highest standards of management. It is the ‘governing’ approach which is proposed for the achievement of lasting economic, social, and institutional growth, for the promotion of a healthy environment between state, society, and the financial market, and the specific establishment of active citizen participation to this end.

Revenue generation depends on government efficiency. Effective governance offers a good tax administration and legitimacy for the state. The willingness of taxpayers to pay tax(es) and the performance of the tax administrators are pillars of good governance. The nation provides people with a sound tax system with good governance, providing people better what they want, allowing people to pay tax(es) for efficient public services (Hossain, 2014). There is no need to talk about the problems of revenue mobilization when a nation is governed democratically and openly (Haldenwang & Ivanyna, 2010). If the government is regarded as responsible, people will pay their taxes voluntarily, which decreases coercion requirements and generally reduces the cost of tax collection. On the other hand, if governments are seen as irresponsible, it would be more likely that government demands for (new or higher) fiscal charges that are expensive (Modugu, Eragbhe, & Izedonmi, 2012).

Strong governance offers an effective tax structure and tax system (Ajaz & Ahmed, 2010). An effective tax system relies on efficient governance. A fair domestic tax system facilitates good governance because an effective tax system encourages people to pay equally (Everest-Phillips & Sandall, 2009). For careful planning and effective revenue generation, the standard of governance is essential. Thus, tax evasion and corruption of public officials are widely considered to hurt tax revenue and economic growth and development (Ajaz & Ahmed, 2010). The precondition for an adequate level of tax effort in developed nations and high-income nations is a more legitimate and sensitive state. For developing countries, tax hikes are not successful in increasing tax revenue and are more viable in developing their governing institutions (Torgler, 2003). Countries may increase their tax revenue by improving the governance system, i.e., institutions so that a country’s tax efforts are highly responsive to the governance structure or institution.

**Indicators of Good Governance.** There are six (6) governance metrics which are grouped into three categories by Kaufmann, Kraay and Mastruzzi (2003). The groups are as follows:

1. **The Process by which Governments are Selected, Monitored and Replaced**
   - **Voice and Accountability.** The political process, democratic freedoms, and political rights are evaluated by voice and accountability. Voice and Transparency is a sub-component that reminds us of people's inclusiveness and degree of freedom in political decisions. It captures views of the degree to which citizens of a country can engage in their government's choice, as well as freedom of expression, freedom of association, and freedom of the media (Amadou, Maty, & Abebe, 2019). Countries believed to be accountable to their people typically enjoy higher tax revenue (Kaufmann, Kraay, & Mastruzzi, 2003).
   - **Political Stability and Absence of Violence.** It tests to recognize the likelihood of the overthrow/destabilization of the government. The threat of politically motivated violence and terrorism is not supposed to result in political stability and the absence of violence. Joshua and Jinjarik (2008) presumed that increased fragmentation and political uncertainty in a country would reduce tax collection efficiency and thus decrease compliance. Tedds (2007) suggested that in politically stable countries, there is a high degree of regulatory compliance.

2. **The Capacity of the Government to Effectively Formulate and Implement Sound Policies**
   - **Government Effectiveness.** These are inputs needed for the government to create effective policies, provide public goods, and enforce them. The effectiveness of the government measures perceptions of the quality of public services offered, the quality of the civil service and the degree of its independence from political restrictions, the quality of policy formulation and implementation, and the credibility of the

- **Regulatory Quality.** It focuses mainly on regulations, such as market/unfriendly policy, effect perceptions of the pressures exerted by overregulation (Torgler & Schneider, 2009). The Regulatory Quality sub-component is more related to private sector promotion and captures perceptions of the government’s ability to formulate and enforce sound policies and regulations for private sector growth (Amadou, Maty, & Abebe, 2017; Kaufman et al., 2010). Torgler and Schneider (2009) indicated that since they are more likely to attract foreign investment, countries with enabling laws that protect both individuals and companies appear to enjoy increased tax revenue.

3. **Respect of Citizens and the State for the Institutions that Govern Economic and Social Interactions**

- **Rule of Law.** It is a metric for evaluating the degree of trust of agents in and compliance with society’s laws. It tests the progress of a community in creating an atmosphere in which equal and predictable laws form the basis of economic and social interactions, Kaufmann et al. (2003). The Rule of Law (RL) captures the views of the degree to which agents have faith in and comply with the laws of society and for the standard of contract compliance, property rights, police, and courts.

- **Control of Corruption.** It tests the alleged abuse, that is, the exercise, for personal benefit, of public powers. Corruption regulation captures the degree to which political authority, including small and large forms of corruption, is exercised for personal benefit. In addition, Torgler (2003) argued that it could help regulate the issue of tax non-compliance by battling corruption. Uslaner (2007) suggested that greater tax enforcement would benefit from less corruption.

**Theoretical Framework**

The fundamental theoretical background for this study is the benefit received theory of taxation since it supports the six (6) governance metrics developed by Kaufmann, Kraay, and Mastruzzi (2003) and as used in this study. This theory emphasized that if there is good governance (supply of public goods and services), there is a high likelihood that taxpayers would willingly pay their taxes.

**Theory of Benefit Received.** Benefit Received Theory of taxation principle was developed by Wicksell in 1896. This principle suggests that the payment of tax is contingent on the benefit obtained from the government, which means that the tax burden on the economic entity is directly proportionate to the benefit received by the economic entity. The taxation theory of public finance bases taxes on an optimally revealed ability to pay for incentives earned or spending on public goods. The goal is to precisely determine the optimum amount of money that can be spent on public goods.

Musgrave (1959) emphasized that the benefits of taxation principles play a double role in functioning since a cumulative justice theory is based on the contract of ties between the state and people. On the other hand, it introduces the tax equality principle that makes citizens pay taxes equal to the number of benefits earned by the state. Taxpayers can only pay taxes if they have been given the same value of public goods. In complementing Musgrave’s study, Kaufmann et al. (2003) developed six (6) governance metrics that can boost public confidence in the government and thus increase tax compliance. In their research, Nawaz (2010) proved that tax non-compliance occurred when the respondent was taxed at a higher level than other taxpayers and did not obtain public goods equal to the tax charged. The greater the tax return received, the greater the degree of tax enforcement, that is, if the democratic process is viewed as fair and legitimate (Akpu & Ohaka, 2017). Likewise, more citizens would voluntarily pay taxes if they perceived government to be efficient. Therefore, governance affects every aspect of human activities, willingness to pay tax inclusive. Thus, the power of governance cannot be overemphasized in enhancing tax revenue performance (Olaniyi & Akinola, 2020).

**Empirical Review**

Various functions, such as income allocation, public goods provision, and the credibility of tax systems, are subject to administrative and governance shocks. In addition, governance affects tax revenue stability, their degree of predictability, provision of public services, and proper functioning of tax systems. Some past studies have been conducted by scholars including Arif and Rawat (2018); Awotomilusi, Akintoye, and Adegbe (2019); Epaphra and Massawe (2017); Faizal, Palil, Maelah, and Ramli (2017); Salam (2019); Sebhat and Mohammed (2019); Olaniyi & Akinola (2020) among others. Hussain, Ilahi and Islam (2016) evaluated the effect of institutional efficiency and governance on the tax-GDP ratio. Six World Bank
governance metrics, namely corruption, political stability, the rule of law, government effectiveness, regulatory efficiency and voice and transparency were utilized. Regression analysis further suggested a positive relationship between the tax-to-GDP ratio and the six-governance metrics. Epaphra and Massawe (2017) analyzed corruption, governance and tax revenues in Africa using regression analysis. The results showed that corruption and governance in African countries are the main determinants of less tax revenue. Corruption showed a significant negative influence on tax revenues. At the same time, governance appears to improve tax revenue generation when evaluated in terms of government efficiency, quality regulatory, the rule of law and voice and accountability. In the same vein, Arif and Rawat (2018) examined the effect of corruption on tax collection in developing economies. It was also revealed that corruption and governance affect the collection of tax revenues, as indicated by the studies of Potanlar, Samimi, and Roshan (2010); Ajaz and Ahmed (2010).

Furthermore, Amadou, Maty, and Abebe (2019) investigated the impact of corruption on tax morale of 36 African countries using an afrobarometer survey. Findings showed that the standard of governance, such as a low level of corruption, greater productivity and responsiveness, a strict rule of law, and a strong voice and accountability, had a significant influence on tax enforcement. Indeed, people living in countries and regions with strong governance quality are likely to be tax-compliant relative to those living in countries with poor governance quality. Olaniyi and Akinola (2020) examined the national culture and tax performance of ten (10) African countries from 2010 to 2016. Panel Corrected Standard Error was employed to test the strength of the variables. The study revealed that indulgence was positively influenced tax performance, while the power distance, individualism and long-term orientation have a significant negative influence on the tax performance of selected African countries.

Some studies utilized primary data in tackling the same issues. Such studies include, Ali, Fjeldstad and Sjursen (2014); Faizal, Palil, Maelah and Ramil (2017), and Salam (2019). Based on the rewarding scheme, Ali, Fjeldstad, and Sjursen (2014) reported that people who are more pleased with public service are likely to have a tax-compliant attitude. However, Syadullah and Wibowo (2015) revealed that corruption regulation, voice and accountability, and political stability substantially negatively affected the tax ratio. In Malaysia, perceptions of justice, trust, and tax performance were examined by Faizal, Palil, Maelah and Ramli (2017). The regression results revealed that government trust has a considerable effect on the perceived fairness of the tax system and that tax efficiency could increase the perception of procedural justice in tax systems and tax credentials. In the same vein, Salam investigated the standard of public governance and compliance with personal income tax in Ilorin, Kwara State, Nigeria, using OLS. The findings suggested a relationship between the standard of public governance, corruption regulation, and personal income tax compliance. From the above empirical evidence, the need for good governance and better policy interventions could be an antidote to the low tax-to-GDP ratio.

Methodology and Research Methods

The ex-post-facto analysis design was used to examine the relationship between governance and tax performance to achieve the study objectives. This method was employed because archive data were retrieved and thus cannot be changed. Secondary data collected were analyzed using the regression technique. Sixteen Western African countries (including Nigeria, Benin, Burkina Faso, Cape Verde, Cote d’Ivoire, Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Mauritania, Niger, Senegal, Sierra Leone, and Togo) were included in the population of this study. West Africa was considered because, over the years, countries have reported low tax collection therein, and this continues to have an inverse effect on the quality of social services that governments can offer to their citizens. Therefore, the study hypothesized that:

\( H_1: \) Regulatory quality (political stability and absence of violence; voice and accountability) does not significantly influence tax revenue performance in West African Countries.

\( H_2: \) Governance effectiveness (rule of law; and control of corruption) does not significantly influence tax revenue performance in West African Countries.

Model

The functional model is specified thus:

\[ TRP = f(\text{GOV}, \mu) \]  

(1)

Where: TRP is tax revenue performance; GOV is governance (measured by GOE, RUL, RTQ, COC, V0C & PAV)
The panel data model can be restated in an econometric form as:

\[ \text{TRP}_i = \beta_0 + \beta_1 \text{GOE}_i + \beta_2 \text{RUL}_i + \beta_3 \text{RTQ}_i + \beta_4 \text{COC}_i + \beta_5 \text{VOC}_i + \beta_6 \text{PAV}_i + \beta_7 \text{AGRIC}_i + \beta_8 \text{EDE}_i + \mu_i. \]  

(2)

Where: \( \text{GOE} \) = government effectiveness; \( \text{RUL} \) = rule of law; \( \text{RTQ} \) = regulatory quality; \( \text{COC} \) = control of corruption; \( \text{VOC} \) = voice and accountability; \( \text{PAV} \) = political stability and absence of violence; \( \text{AGRIC} \) = share of agriculture (control); \( \text{EDE} \) = economic development (control); \( \mu \) = unobserved determinant of tax performance; \textit{A priori} expectation based on extant literature and theoretical framework: \( \beta_1, \beta_2, ... \beta_8 > 0 \).

This study used data from multiple countries, and their features were observed over similar periods. Panel data regression technique was applied on the panel estimates of tax revenue and governance quality. The variance inflation factor (VIF) test was also carried out to test for multicollinearity. The Breush Pagan Lagrange Multiplier (LM) test was also conducted to test for random effects in the models. Likewise, the Hausman test was conducted to test whether the random-effects model is more consistent than the fixed effects model. Lastly, Pesaran’s Cross-sectional Dependence (CD) test of cross-sectional dependence tests was performed to indicate whether residuals are cross-sectionally dependent on the model or not.

Table 1. Variables Measurement

<table>
<thead>
<tr>
<th>Variables/ Type</th>
<th>Description</th>
<th>Measurement</th>
<th>Supporting Studies</th>
<th>A priori Expectation</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRP (Dependent)</td>
<td>Performance of tax revenue</td>
<td>It is measured as a tax percentage of GDP</td>
<td>Haldenwang &amp; Ivanyana (2015); Hossein (2014); Epaphra &amp; Massawe, 2017; Arif &amp; Rawat, 2018</td>
<td>( \gamma &gt; 0 )</td>
</tr>
<tr>
<td>GOVERNANCE (Independent)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GOE</td>
<td>Government efficiency</td>
<td>Worldwide governance indicator.</td>
<td>Awotomilusi et al. (2019); Ajaz &amp; Ahmed (2010); Hossein (2014); Hussain et al. (2016); Syadullah &amp; Wibowo (2015)</td>
<td>( \gamma &gt; 0 )</td>
</tr>
<tr>
<td>RUL</td>
<td>The rule of law</td>
<td>Worldwide governance indicator.</td>
<td>Awotomilusi et al. (2019); Ajaz &amp; Ahmed (2010); Torgler &amp; Schneider (2009)</td>
<td>( \gamma &gt; 0 )</td>
</tr>
<tr>
<td>RTQ</td>
<td>Regulatory quality</td>
<td>Worldwide governance indicator.</td>
<td>Ajaz &amp; Ahmed (2010); Hossein (2014); Hussain et al. (2016)</td>
<td>( \gamma &gt; 0 )</td>
</tr>
<tr>
<td>COC</td>
<td>Control of corruption</td>
<td>Worldwide governance indicator.</td>
<td>Syadullah &amp; Wibowo (2015); Torgler &amp; Schneider (2009)</td>
<td>( \gamma &gt; 0 )</td>
</tr>
<tr>
<td>VOC</td>
<td>Voice and accountability</td>
<td>Worldwide governance indicator.</td>
<td>Ajaz &amp; Ahmed (2010); Syadullah &amp; Wibowo (2015); Torgler &amp; Schneider (2009)</td>
<td>( \gamma &gt; 0 )</td>
</tr>
<tr>
<td>PAV</td>
<td>Political stability &amp; Absence of violence</td>
<td>Worldwide governance indicator.</td>
<td>Hossein (2014); Hussain et al. (2016); Syadullah &amp; Wibowo (2015)</td>
<td>( \gamma &gt; 0 )</td>
</tr>
<tr>
<td>CONTROLS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDE</td>
<td>Economic development</td>
<td>GDP per capita</td>
<td>Bird, Martinez-Vazquez &amp; Torgler (2007); Tsakunis et al. (2007); Epaphra &amp; Massawe, 2017</td>
<td>( \gamma_{1} &gt; 0 )</td>
</tr>
<tr>
<td>AGRIC</td>
<td>Agriculture</td>
<td>Agriculture-to-GDP ratio</td>
<td>Epaphra &amp; Massawe, 2017; Arif &amp; Rawat, 2017; Gupta, 2007</td>
<td>( \gamma_{15} &lt; 0 )</td>
</tr>
</tbody>
</table>

Source: Authors’ computation (2019)

Results and Discussion

Table 2. Summary Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Min.</th>
<th>Max.</th>
<th>Sum</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRP</td>
<td>13.08</td>
<td>1.48</td>
<td>22.74</td>
<td>2707.742</td>
</tr>
<tr>
<td>GOE</td>
<td>24.32</td>
<td>2.93</td>
<td>65.05</td>
<td>5058.96</td>
</tr>
<tr>
<td>RUL</td>
<td>29.47</td>
<td>1.88</td>
<td>74.52</td>
<td>6129.78</td>
</tr>
<tr>
<td>RTQ</td>
<td>30.54</td>
<td>3.92</td>
<td>56.40</td>
<td>6352.01</td>
</tr>
<tr>
<td>COC</td>
<td>30.60</td>
<td>2.88</td>
<td>80.29</td>
<td>6364.45</td>
</tr>
<tr>
<td>VOC</td>
<td>37.49</td>
<td>8.87</td>
<td>77.34</td>
<td>7798.95</td>
</tr>
<tr>
<td>PAV</td>
<td>31.92</td>
<td>0.97</td>
<td>79.71</td>
<td>6639.49</td>
</tr>
<tr>
<td>AGRIC</td>
<td>29.08</td>
<td>5.99</td>
<td>66.03</td>
<td>6047.96</td>
</tr>
<tr>
<td>EDE</td>
<td>1026.99</td>
<td>250.04</td>
<td>3670.43</td>
<td>210344.59</td>
</tr>
</tbody>
</table>

Source: Authors’ computation (2019)

Table 2 shows that the mean tax revenue as a ratio of GDP is 13.08%. It insinuates that tax revenue performance is low and far below average as taxation contributes less to overall revenue generation in West African countries. The mean value of government effectiveness in West African countries is 24.32 percent.
which implies that, on average, public services quality, civil service quality, and policy formulation and implementation quality are low in West Africa.

Furthermore, regulatory quality on average shows a value of 30.54 percent, which implies that the ability of West African governments to handle private sector development through proper and sound policies is low. In the same vein, the rule of law in West African countries has an average of 29.47 percent. It implies that the confidence in government institutions and adherence to a set of rules for the West African society is considerably low on average. Moreover, control of corruption shows an average of 30.60 percent, with a minimum value of 2.88 percent, with a maximum value of 80.29 percent in West African countries. The mean value of voice and accountability is 37.49%. The maximum and minimum values of voice and accountability in West Africa are 77.34% and 8.87%, respectively. Also, the mean value for the absence of violence and political stability is 31.92%. The maximum and minimum values of an absence of violence and political stability in West Africa are 79.71% and 0.97%, respectively, in the period under review.

**Preliminary Diagnostic Test**

This shows the report for the multicollinearity test and Breusch Pagan Lagrange Multiplier (BP-LM) test.

**Test for Multicollinearity**

Multicollinearity will occur when there is a strong relation among independent variables in the regression models.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Without Control</th>
<th>VIF</th>
<th>With Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOE</td>
<td>2.326</td>
<td>3.212</td>
<td></td>
</tr>
<tr>
<td>RUL</td>
<td>4.461</td>
<td>4.713</td>
<td></td>
</tr>
<tr>
<td>RTQ</td>
<td>1.083</td>
<td>1.541</td>
<td></td>
</tr>
<tr>
<td>COC</td>
<td>1.699</td>
<td>1.206</td>
<td></td>
</tr>
<tr>
<td>VOC</td>
<td>1.131</td>
<td>1.197</td>
<td></td>
</tr>
<tr>
<td>PAV</td>
<td>5.044</td>
<td>4.012</td>
<td></td>
</tr>
<tr>
<td>AGRIC</td>
<td>1.319</td>
<td>1.101</td>
<td></td>
</tr>
<tr>
<td>EDE</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Authors’ computation (2019)

The test for multicollinearity is achieved by conducting the variance inflation factors (VIF) test. The study utilized the VIF technique to determine if multicollinearity exists within independent variables. In table 3, the results of the VIF test are shown. All the independent variables in the study have VIF that is less than 10, which means the variables in the study are not strongly correlated with each other.

**The Breusch Pagan Lagrange Multiplier (BP-LM) Test**

The Breusch Pagan Lagrange Multiplier (BP-LM) test was carried out to test for the presence of random effects in two models, that is, with and without control models.

<table>
<thead>
<tr>
<th>Test</th>
<th>Null Hypotheses</th>
<th>Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Without Control</td>
<td>With Control</td>
</tr>
<tr>
<td>Breusch-Pagan Test</td>
<td>No effect</td>
<td>193.2263 (0.0000)</td>
</tr>
<tr>
<td>Hausman Test</td>
<td>No effect</td>
<td>39.7144 (0.0000)</td>
</tr>
<tr>
<td>Pesaran’s CD Test</td>
<td>No cross-sectional dependence</td>
<td>5.0822 (0.0000)</td>
</tr>
</tbody>
</table>

Source: Authors’ computation (2019)

The null hypothesis is that no effect occurs. In other words, there is no difference in the unobserved fixed effects. If the BP-LM test result is important at the 5% significance level, it implies that the null hypothesis is rejected. The BP-LM test in Table 4 reveals a figure of 193.2263 (p-value = 0.0000<0.05 significance level) for the model without control, and 192.9404 (p-value = 0.0000<0.05 significance level) were obtained for the BP-LM model with a control variable. These findings showed that the null hypothesis is dismissed since it is significant at a 5% value. It means that, in support of the random effects alternative for the model, the low p-value counts against the null hypothesis that the pooled OLS model is sufficient.

Hausman tests have been carried out to determine whether the random effects model is more reliable than the fixed effects model. The null assumption is that the model of random effects is more consistent. The rule of
decision is that we reject the null hypothesis if the Hausman Test is significant at a 5 percent significance level. Thus, in Table 4, the Hausman test reveals the chi-square statistics of 39.7144 (p-value = 0.0000<0.05 significance level) for the model without control, while 39.0918 (p-value = 0.0000<0.05 significance level) is for the model that takes the control variable into account. The rejection of the null hypothesis showed that this finding was important at the 5 percent significance level. It suggests that the low p-value favors the fixed-effects model against the null hypothesis that the random-effects model is consistent. A cross-sectional dependency (CD) test developed by Pesaran was employed. The results of the preliminary diagnostic tests showing that the Pesaran CD test indicates that the residuals are not cross-sectionally dependent on the model.

Model Estimation Result

Table 5. Regression Estimates

<table>
<thead>
<tr>
<th>Variable</th>
<th>Without Control Coefficients</th>
<th>p-value</th>
<th>With Control Coefficients</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-7.8316</td>
<td>0.0000</td>
<td>-8.4379</td>
<td>0.0000</td>
</tr>
<tr>
<td>GOE</td>
<td>0.1084</td>
<td>0.0143</td>
<td>0.0304</td>
<td>0.0012</td>
</tr>
<tr>
<td>RUL</td>
<td>0.1206</td>
<td>0.0001</td>
<td>0.2101</td>
<td>0.0000</td>
</tr>
<tr>
<td>RTQ</td>
<td>-0.0269</td>
<td>0.3267</td>
<td>-0.0156</td>
<td>0.2801</td>
</tr>
<tr>
<td>COC</td>
<td>0.3381</td>
<td>0.0000</td>
<td>0.4261</td>
<td>0.0000</td>
</tr>
<tr>
<td>VOC</td>
<td>0.0344</td>
<td>0.4113</td>
<td>0.0614</td>
<td>0.3631</td>
</tr>
<tr>
<td>PAV</td>
<td>0.0573</td>
<td>0.2125</td>
<td>-0.0807</td>
<td>0.1844</td>
</tr>
<tr>
<td>AGRIC</td>
<td>-1.1401</td>
<td></td>
<td>0.001</td>
<td></td>
</tr>
<tr>
<td>EDE</td>
<td>1.0316</td>
<td></td>
<td>0.000</td>
<td></td>
</tr>
</tbody>
</table>

Model Diagnostics

F-statistic 72.5543 (0.000) 78.2602 (0.000)

Source: Authors’ computation, (2019)

With or without considering agriculture and economic development as control variables in the model, the signs and impacts of governance variables on West African countries' tax revenue performance remain consistent, except for political stability and absence of violence that had a negative and negligible effect on the performance of tax revenue. That is, government effectiveness, the rule of law, and corruption control have a positive and significant impact on West African tax revenue performance; regulatory quality has negative and negligible effects on countries' tax revenue, while voice and accountability remain positive and insignificant in West African countries' tax revenue performance.

As revealed in Table 5, the effectiveness of governance showed a significantly positive impact of 0.0304 percent (p-value = 0.0012<0.05 significance level) on tax revenue performance in West Africa. It implies that a 1% increase in the perception of the government’s ability to come up with realistic policies that will boost the quality of public services quality in the region (that is, West Africa) will increase tax revenue performance (that is, tax to GDP ratio) by 0.0304 percent. The rule of law showed a significantly positive impact of 0.2101 (p-value = 0.0000<0.05 level of significance) on tax revenue performance of West African countries. It means that a percentage rise in perceptions of the degree to which citizens trust and adhere to rules of society will increase West Africa’s tax revenue output by 0.2101. Also, control of corruption has a significantly positive impact of 0.4261 (p-value = 0.0000<0.05 significance level) on tax revenue performance for the selected countries. It implies that an increase in measures towards control of corruption (and adherence from using public powers for private gain) will increase the level of revenue generated through the administration of taxes in the West African sub-region by 0.4261.

Regulatory quality showed an insignificant negative impact of -0.0156 percent (p-value = 0.2801<0.05 significance level) on tax revenue performance in West Africa. It means that no increase or decrease in the perception of the government's ability to develop and execute policies for the growth of the private sector in the region would substantially affect the performance of tax revenues. Voice and accountability indicated non-significant but a positive effect on tax revenue performance of 0.0614 (p-value = 0.3631<0.05 significance level). It means that neither an increase nor a decrease in the degree to which citizens of a nation can engage in the selection of their government and the exercise of their basic human rights would have a substantial impact on the performance of tax revenue in West African countries at a level of significance of 5 percent. Meanwhile, the absence of violence and political stability has a non-significant and negative impact of -0.0807 percent (p-value = 0.1844<0.05 significance level) on tax revenue performance in West Africa. It connotes that neither an increase nor a decrease in the percentage of the absence of violence and political
stability of the selected countries will significantly affect tax revenue performance at a 5% level of significance.

**Discussion**

Findings have shown that governance in West African countries has a substantial effect on tax revenue performance. It is consistent with Epaphra and Massawe's (2017) finding that governance in Africa is a significant determinant of tax revenue. It is also reinforced by the benefit theory that taxpayers only pay taxes when the government has given them the precise value of public goods. Specifically, the rule of law has a significant impact on tax revenue performance in countries in West Africa. It suggests that tax revenue performance among West African countries increases as people have more confidence in and comply with society's laws. In tandem with Arif and Rawat (2017); Hussain, Ilahi, and Muqeeem (2016), corruption control offers more tax revenue enhancement options. This result is also consistent with the a priori expectation.

In the same way, corruption control has a significant effect on the tax performance in West African countries. It explains that an increase in measures against corruption increases the level of revenue generated through tax administration in West Africa. It conforms with Torgler, Schaffnera and Macintyrea (2009) findings that corruption control significantly affected tax morale and tax performance. Government efficiency also directly influences the tax performance in West African countries. It suggests that the perception of the ability of the government to develop practical policies that will improve the quality of public services in the region (i.e., West Africa) will boost the tax performance. This submission is also consistent with Epaphra and Massawe (2017)'s findings that government efficiency will increase the output of tax revenue. It is also in line with the a priori expectation.

Voice and accountability do not contribute to tax revenue performance in West African nations. It shows that governments’ obligation to interfere with the freedom of the press and association does not affect tax performance. Thus, this finding contrasts with Torgler, Schaffnera, and Macintyrea (2009) that voice and transparency have a positive effect on tax revenue performance. The evidence does not suggest that regulatory quality substantially affects tax revenue performance. It has much to do with the fact that in West African countries, the government's capability to formulate and execute practical policies for private sector development has little to do with their economic prosperity. It contradicts the finding of Ajaz and Ahmed (2010) that good governance and regulatory quality affect tax collection positively. Policy results can directly affect taxpayers whether they are paying or evading taxes. The absence of violence and political stability show no significant effect on tax revenue performance in West African nations. It entails that government uncertainty would not adversely impact tax revenue performance in West African nations; thus, contrary to empirical evidence that tax revenue typically plummets in politically insecure circumstances (Ali et al., 2014).

**Conclusion and Recommendations**

The findings conclude that governance variables influence tax revenue performance in West African countries as proposed by benefit received theory. It is worthy of note that respect of citizens and the institutions of the state governing economic and social interactions being a governance division best explains tax revenue performance in West Africa since such variables as government effectiveness, the rule of the law and corruption control positively affect tax revenue performance. However, voice and accountability, political stability and regulatory quality have an insignificant effect on tax revenue performance.

**Recommendation**

Based on the findings, the study thus recommends that:

- Tax policymakers should prioritize good governance, especially when designing tax revenue legislation.
- Governments of West African countries should make efforts to foster citizens’ respect and public reference for economic and social interaction institutions.
- The government should boost their ability to come up with realistic policies that will increase public and civil service quality.
Future Research

This study suggests that future study can be carried on the effect of governance on taxation of all the West African countries since this study only covered sixteen West African Countries.

Author Contributions: Conceptualization: Ramat Titilayo Salmon; data curation: Peter Sanni; formal analysis: Peter Sanni; investigation: Taiwo Azeez Olaniyi; methodology: Peter Sanni; project administration: Khadijat Adenola Yahaya; resource: Taiwo Azeez Olaniyi; software: Khadijat Adenola Yahaya; supervision: Ramat Titilayo Salmon; validation: Ramat Titilayo Salmon; visualization: Taiwo Azeez Olaniyi; writing-original draft: Peter Sanni; writing-review editing: Khadijat Adenola Yahaya.

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