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Analysis of Corruption, Taxation and Revenue of West African Countries.

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Abstract

This study analyzes the contribution of taxes as a source of revenue for the least and most corrupt West African countries. The study compared the tax revenue as a percentage of gross domestic product (GDP) for African countries perceived as more corrupt and least corrupt. It was found that the least corrupt African countries collected more tax as a percentage of GDP than the more corrupt countries. The top four least corrupt West African countries showed a consistent pattern of higher tax revenue as a percentage to GDP on the basis of their rank in the corruption perception index. The least corrupt the country the higher the tax revenue as a percentage of GDP. The more corrupt nations however showed an inconsistent pattern. This study adds to the literature that supports the notion of eradicating corruption. Since the least corrupt nations showed evidence of higher tax collection than the more corrupt nation.

Introduction

The contribution of taxes as a source of revenue was analyzed for the least and most corrupt West African countries. This was done by comparing the tax revenue as a percentage of gross domestic product (GDP) for African countries perceived as more corrupt and least corrupt. West Africa was destabilized by political unrest in the twentieth century. Although the end of wars in these countries was a step in the right direction, the sub region was still faced with major problems; there was still famine in the Sahelian region. Rapid population growth and urbanization was leading to an increase in the urban poor. Between the years 2010 and 2050, while global population growth rate was expected at 38%, the region's population growth rate was expected at a 100%. The sub region therefore needed further research to enable policy makers, regulators and donor organizations in making effective decisions to improve conditions of the region.

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This study is motivated by the fact that most African countries have struggled in tax collection. Bleaney et al (1995), Baryeh and Ezeka (2016) and others have documented the problems faced by tax administrators (lack of resources, inadequate compensation etc) as well as the impediments faced by tax payers (illiteracy, lack of coordination among various tax administrations, corruption among tax personnel etc) in various African countries. The research question posed is "will countries with high corruption generate less revenue measured by GDP and collect less tax as compared to countries with less corruption." This follows Baryeh and Ezeka (2016) who found that some countries with more revenue still had less tax as a percentage of GDP than others. Tax revenue could help build infrastructure, provide basic amenities (funding for schools) and help maintain existing structures such as roads and railways etc. However in West Africa, numerous problems had besieged tax administration that it had impeded the capacity and ability to collect taxes. Using the corruption perception index (CPI), from Transparency International, five least corrupt West African countries were compared to the five most corrupt countries. Among the countries under study Ghana was the least corrupt with a cleaner score of 48, Senegal 43, Benin 39, Burkina Faso 38 and Liberia 37. The most corrupt countries were Guinea Bissau 19, Guinea 25, Cameroon 27, Nigeria 27 and Togo 29.

The five most corrupt West African nations were chosen based on their rank on the corruption perception index and compared to the least corrupt nations based on rank. It was found that the least corrupt African countries collected more tax as a percentage of GDP than the more corrupt countries. The top four least corrupt West African countries showed a consistent pattern of higher tax revenue as a percentage to GDP based on their rank in the corruption perception index. The less corrupt the country the higher the tax revenue as a percentage of GDP. The more corrupt nations however showed an inconsistent pattern. This study adds to the literature that supports the notion of eradicating corruption, since the less corrupt nations showed evidence of collecting more tax than the more corrupt nations.

The paper proceeds as follows. Section 1 presents literature review, section 2 analyzes revenue generation by GDP, section 3 presents taxation in the West African

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countries, section 4 presents data analysis and findings, and section 5 presents the conclusions.

Literature Review: Corruption

Corruption is the unethical, fraudulent or dishonest behavior of people in power or place of authority. This involves demanding payments or bribes in the form of monetary or other means in return for services or other things that do not warrant such payments or bribes. Countries with high corruption would not have a prosperous economy. This is because it would translate to individual prosperity instead of national prosperity. The most powerful and influential individuals in the decision-making process will hold the national wealth to ransom. Low corruption also attracts investors and investments build economies. Patton (2014) document that worldwide, least corrupt nations have a larger GDP for instance all but four had a GDP of $100 billion annually while 19 out of the 21 most corrupt nations had a GDP of lower than $100 billion in the year 2013. Moreover, the more corrupt nations showed majority nations (19 with available data) with an unemployment rate of 10% or more while the least corrupt nations showed, only 2 nations, with unemployment of more than 10%. Corruption was defined based on the corruption perception index (CPI) from Transparency International. The corruption perception index ranked countries depending on the perceived corruption in their respective public sectors. "0 highly corrupt and 100 very clean."177 and 175 countries in the world were ranked in 2013 and 2014 respectively while 167 countries in the world were ranked in 2015.

There were two schools of thought on the link between economic growth and corruption. Some researchers advocated that economic growth led to lower corruption, while others were of the view that lower corruption led to economic growth. For instance, Bai et al (2014) found that economic growth led to lower corruption. They found that the growth of Vietnamese firms led to a decrease in bribery. Studies by Bai et al show that, countries could grow out of corruption since economic prosperity resulted in lower bribery. So it was not necessary trying to eradicate corruption for the sake of economic prosperity but rather economic prosperity eradicated corruption. Though it should be

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noted that a fair and progressive economic and political system allows people to develop at their own pace and economic prosperity will tremendously reduce corruption.

Aidt et al (2008) found that countries with strong democracies showed corruption damaged growth. These countries also showed that growth in return, reduced corruption while reduced corruption resulted in increased growth. They however did not find such results for countries with deficient institutions. Aidt et al found that countries without democracies, corruption did not affect economic growth; voters were unable to punish corrupt politicians. Studies by Tanzi and Davoodi (1997) concluded that corruption adversely affected economic growth in four ways. It lowered expenditures on business operations and maintenance, led to higher public investment, lowered the quality of public infrastructure and further lowered government revenues.

Guetat (2006) and Gyimah-Brempong and Camacho (2006) investigated North African, Middle eastern and Latin American countries and found that these countries demonstrated that corruption inhibited economic growth. Mauro (1995) showed that corruption decreased economic growth because it declined private investment. Ehrlich and Lui (1999) studied the effect of government and corruption on economic growth and found that size of government and corruption decreased per capita income however, results did not apply to long term growth rates in advanced countries. Mo (2001) found an adverse effect between corruption and economic growth. The study further stated that political instability accounted for about half of the effect. Corruption also adversely affected human capital and private investment.

Revenue Generation by GDP

Economic prospects for the sub region were optimistic. GDP growth was expected at 4.9%, 5.1% and 5.2 % for 2013, 2014 and 2015 respectively. Discoveries in the mineral sector in Guinea, Ghana, Nigeria, Liberia and Sierra Leone were geared to attract increased foreign investments. Also, there was an anticipated increase in foreign direct investments (FDI). FDI was expected at $54 billion by 2015. This increased investment was expected to drive growth.

West African countries were too dependent on agriculture. The agricultural sector accounted for 35% of West African economies GDP. Heads of states in Africa

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identified food staples as the driver of economic growth in Africa. In the sub Saharan countries, it contributed about 13% of GDP and employed about 60% of the labor force. A well balanced agricultural system which included both domestically produced staples and foreign exchange earning cash crops would be ideal. Worldwide agriculture contributed only 3% of GDP. Africa did poorly in international trade, accounting for only 3% of worlds exports. Additionally, debt financing had been a major problem for most African countries, they had spent as much as 40% of their export earnings on debt financing in the 1990s. This reduced to about 16% in 2009. Debt financing is still a major problem for most countries in the region. Due to inaccurate statistics, GDP had been inaccurately reported in Africa. In recent times, some countries "rebased" and hence showed more accurate figures of GDP. For instance, Magnowski (2014) concluded that after Nigeria rebased it produced a new GDP of $488 billion dollars for 2013, almost doubling the amount before rebasing. Mossman (2014) assessed that the inaccuracies was due to the country's statisticians missing half of the economy, also the cell phone industry and the film industry (Nollywood) were large contributory components to the economy, Nollywood was the world's second largest film industry. After rebasing Nigeria's GDP, it surpassed that of major economies like South Africa's for the first time.

Taxation in West African countries

There were various challenges facing taxation in the sub region. For instance, cash transactions were preferable in these countries. Fakile and Adegbie (2012), contended that the effectiveness of taxation was dependent on a government's ability to maintain its tax jurisdiction. Record-keeping was inadequate. Revenue collecting authorities faced massive challenges such as transportation, personnel and technology. Ayee (2007) advocated that the informal sector in Ghana served as a massive voting block for political parties. Tendler (2002) described a phenomenon known as the 'devil's deal' which was an "unspoken agreement" between political parties and the informal sector for electoral support. Reforms were ongoing to address the challenges; these include tax identification numbers, training and hiring of qualified tax officials, improving amenities and logistics in tax offices and educating citizens on tax compliance.

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Data Analysis and Findings

Gross Domestic Product (GDP) data was obtained from World Bank reports. The Corruption Perception Index (CPI) was obtained from Transparency International for the three years under study, 2013, 2014 and 2015. One hundred and seventy-seven, 175, and 167 countries in the world were ranked in 2013, 2014 and 2015 respectively. The CPI ranks are shown in Table 1

Table I: CPI ranks for selected countries, 2013-2015

Country	CPI Rank 2013	CPI Rank 2014	CPI Rank 2015
Ghana	46	48	47
Senegal	41	43	44
Benin	36	39	37
Burkina Faso	38	38	38
Liberia	38	37	37
Togo	29	29	32
Nigeria	25	27	26
Cameroon	25	27	27
Guinea	24	25	25
Guinea-Bissau	19	19	17

Since 2014 was the median among the three years, data from that year was chosen for analysis. In 2014, 175 countries in the world were ranked. The CPI ranked the countries on the basis of the perceived corruption in their respective public sectors, with 0 for highly corrupt to 100 for very clean. This study is an extension of Baryeh and Ezeka (2016) which examined two West African countries, Ghana and Nigeria. This study chose ten West African countries using the corruption perception index. Five least corrupt West African countries were compared to the five most corrupt countries. Among the countries under study Ghana was the least corrupt with a cleaner score of 48, Senegal 43, Benin 39, Burkina Faso 38 and Liberia 37. The most corrupt countries were Guinea Bissau 19, Guinea 25, Cameroon 27, Nigeria 27, and Togo 29. (Using 2014 CPI index).

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The CPI score for the three years are as shown. Most countries did not change drastically in ranks. Burkina Faso for instance stayed the same in all three years.

GDP per capita was dependent on purchasing power parity (PPP). PPP GDP were converted using purchasing power parity rates into international dollars. The international dollar equates the purchasing power of the GDP as the dollar (USA). This GDP at purchaser's prices is the aggregate value of all production in the country and product taxes subtracting subsidies excluded in the product valuation. Calculations excluded depreciation, degradation and depletion. The top five less corrupt nations showed a consistent pattern of less corruption as defined by the CPI corresponding to more GDP. Ghana which was least corrupt showed a high and increasing GDP $3968.06 billion (b), $4096.58b and $4200.55b in all consecutive years under study 2013, 2014 and 2015. Senegal had $2267.84b, $2330.46b and $2430.80b in all three years. Benin earned $1931.92b, $2037.59b and $2109.85b over the years. Burkina Faso showed $ 1583.16b, $1626.26b and $1659.22b in the years of study. Liberia showed the least GDP, $ 845.80b, $845.46b and $836.15b. Among the most corrupt countries, the pattern was not very consistent. Nigeria was an outlier; it was considered a giant in Africa because of its

Table 2: CPI ranking for 2014 and GDP 2013-2015

CPI Rank 2014	Country	2013	2014	2015
48	Ghana	3968.06	4096.58	4200.55
43	Senegal	2267.84	2330.46	2430.80
39	Benin	1931.92	2037.59	2109.85
38	Burkina Faso	1583.16	1626.26	1659.22
37	Liberia	845.80	845.46	836.15
29	Togo	1341.61	1406.76	1459.80
27	Nigeria	5638.55	5932.83	5991.69
27	Cameroon	2840.74	2983.08	3122.64
25	Guinea	1233.98	1225.74	1206.53
19	Guinea-Bissau	1382.29	1405.99	1452.85

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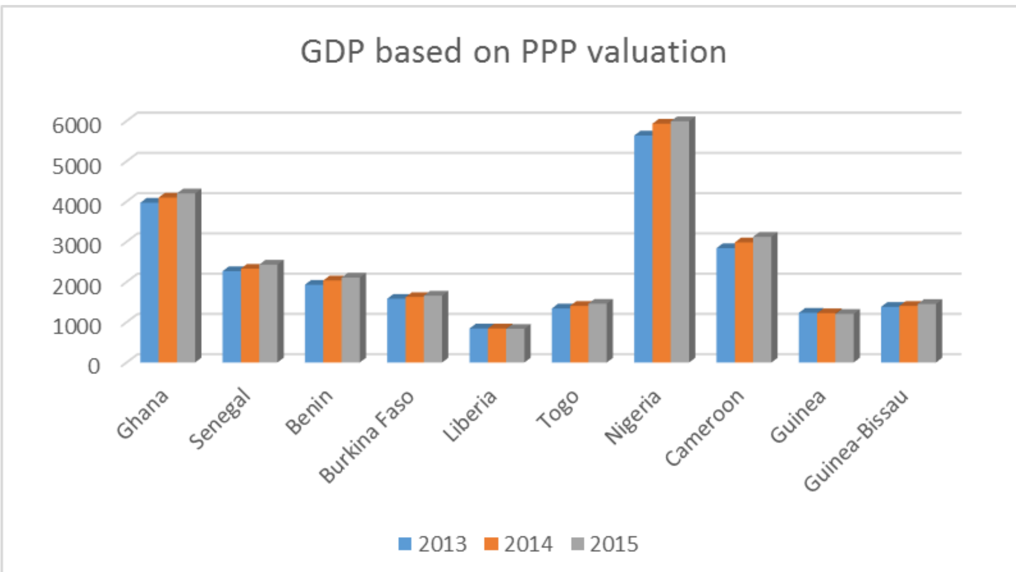
vast population and relative bigger economy so even though it was perceived as one of the most corrupt nations it presented a very high GDP $5638.55b, $5932.83b and $5991.69b in the three years of study. Togo's pattern also exhibited inconsistency, $1341.61b, $1406.76b and $1459.80b while Cameroon and Guinea followed the trend as the more corrupt the country the less the GDP. For the years under study 2013, 2014 and 2015. GDPs were as follows. Cameroon $2840.74b, $2983.08b and $3122.64b respectively. Guinea $1233.98b, $1225.74b, $1206.53b respectively and Guinea Bissau $1382.29, $1405.99 and $1452.85 respectively. The results are shown in Table 2 and Figure 1.

Figure 1: GDP based on PPP valuation in Billions $ 2014



The proportion of GDP contributed by each country under study was compared to the total of all ten countries under study for 2014. We chose to use 2014 because it was the median among the three years (2013, 2014 and 2015). It was revealed that the least corrupt countries in West Africa followed a similar pattern. Ghana contributed 17% of the GDP of all the countries under study, Senegal 10%, Benin 8.5%, Burkina Faso 6.8% and Liberia 3.5%. Among the most corrupt nations, the pattern was not so consistent. Nigeria again was an outlier, it contributed 24.8% of GDP and its economic size and

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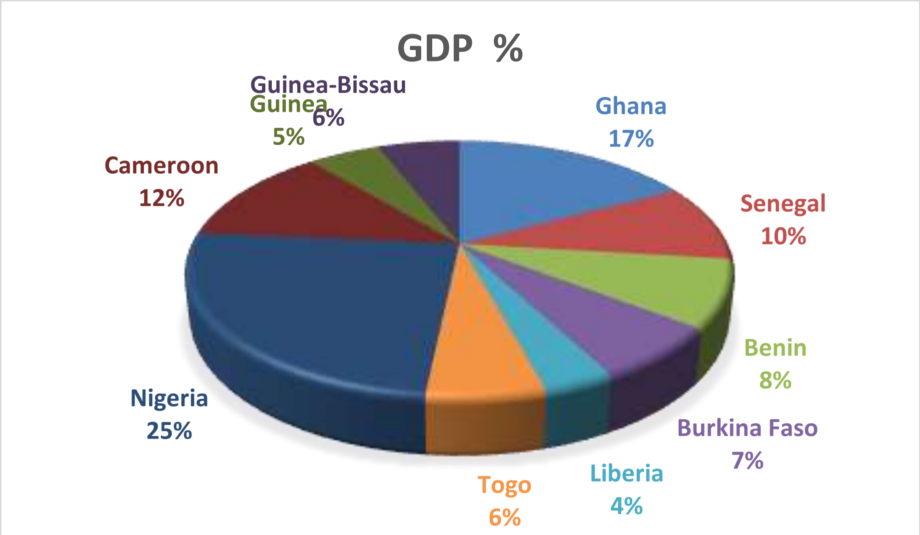
population far superseded the other countries under study. Cameroons GDP was 12.5% and even though considered more corrupt than Togo however earned more GDP. Togo's GDP was 5.8%. Cameroon was also much bigger in size and economy than Togo. Guinea and Guinea Bissau 5.1% and 5.9% respectively. Results are shown in Table 3 and Figure 2.

Table 3: GDP 2014

Country	2014(billions)	2014%
Ghana	4096.58	17.14714
Senegal	2330.46	9.754654
Benin	2037.59	8.528782
Burkina Faso	1626.26	6.80707
Liberia	845.46	3.538859
Togo	1406.76	5.888304
Nigeria	5932.83	24.83317
Cameroon	2983.08	12.48634
Guinea	1225.74	5.130605
Guinea-Bissau	1405.99	5.885081

Figure 2: GDP percent



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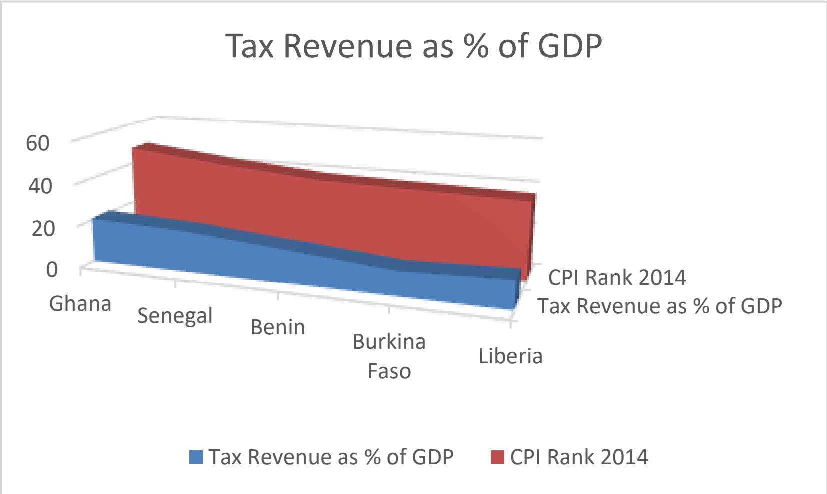
We analyzed the tax revenue as a percentage of GDP based on the 2014 CPI score. An examination of the least corrupt West African countries revealed that there was a consistent pattern. Ghana the least corrupt in the group showed a higher tax revenue as a percentage of GDP 20.8% followed by Senegal, 19.2%, then Benin 15.4% and Burkina Faso 11.5%. The only country among the group that did not follow the group pattern was Liberia 13.2%. Results are shown in Table 4 and Figure 3.

Table 4: Tax revenue as a percentage of GDP

	CPI Rank 2014	Tax Revenue % of GDP
Ghana	48	20.8
Senegal	43	19.2
Benin	39	15-4
Burkina Faso	38	11.5
Liberia	37	13.2
Togo	29	15.5
Cameroon	27	18.2
Nigeria	27	6.1
Guinea	25	8.2
Guinea-Bissau	19	11.5

Figure 3: Tax revenue as a percentage of GDP



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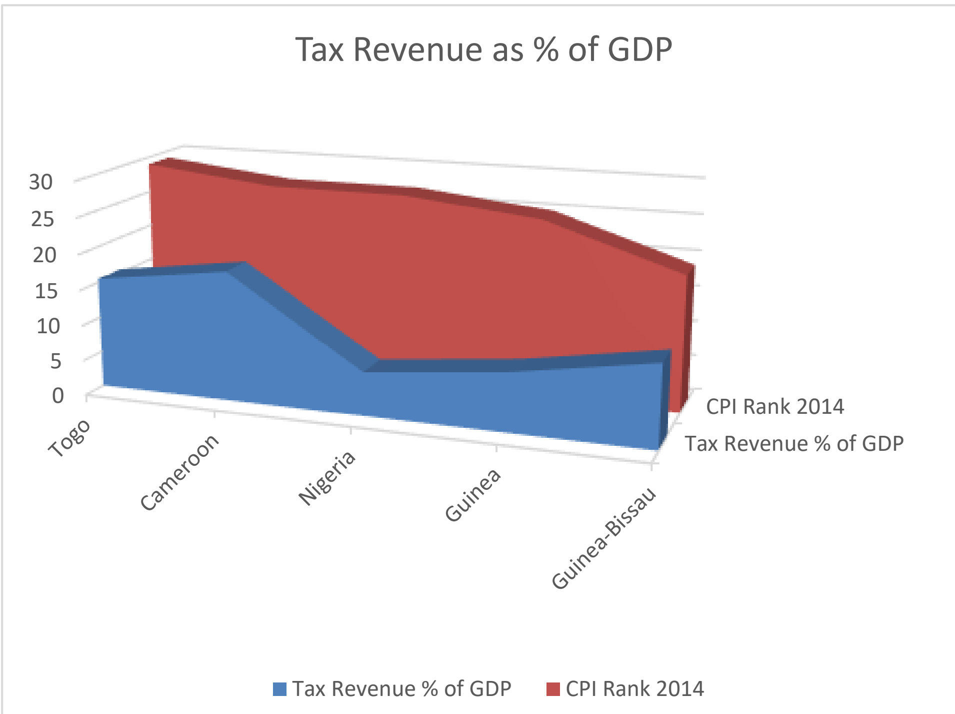
Tax as a percentage of GDP was also analyzed for the most corrupt West African countries. It was found that the most corrupt West African countries exhibited an inconsistent pattern as shown below. Cameroon had the highest tax as percentage of GDP, 18.2% followed by Togo 15.5% as shown in figure 4. Guinea Bissau, the most corrupt West African country according to the CPI had a tax revenue as a percentage of GDP of 11.5%, followed by Guinea 8.2%. Nigeria was the outlier it had the lowest percentage 6.1% for the year 2014. Again, Nigeria's result can be attributed to its size and economy. Results are shown in figure 4.

Figure 4: Tax revenue as a percent of GDP



Conclusion

This study is motivated by the fact that most African countries have struggled in tax collection. The sub region therefore needs further research to enable policy makers, regulators and donor organizations in decision making to improve conditions in the

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region. The contribution of taxes as a source of revenue was analyzed for the least and most corrupt West African countries. This was done by comparing the tax revenue as a percentage of GDP for West African countries perceived as more corrupt and least corrupt.

The study found that the least corrupt African countries collected more tax as a percentage of GDP than the more corrupt countries. The top four least corrupt West African countries showed a consistent pattern of higher tax revenue as a percentage to GDP on the basis of their rank in the corruption perception index. The less corrupt the country the higher the tax revenue as a percentage of GDP. The more corrupt nations however showed an inconsistent pattern. This study adds to the literature that supports the notion of eradicating corruption. Since the less corrupt nations showed evidence of collecting more tax than the more corrupt nation. Further studies would replicate the study for countries in the world and try to investigate the correlation between corruption and tax revenue. The difference in results for more corrupt and less corrupt countries also need to be further investigated in further research.

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