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A Tax Revenue Dataset for Sub-Saharan Africa: 1980-2010*

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Abstract

This paper presents a unique tax revenue dataset for Sub-Saharan Africa, which main innovation is the level of detail it provides about tax revenue sources for a large number of countries (41) and over a long time period (1980-2010). The paper describes how the dataset was constructed, identifying along the way problem areas in tax revenue statistics in Sub-Saharan Africa and possible improvements. A graphical analysis highlights revenue performance over time and across three dimensions: income levels, the relative importance of tax revenue from extractive industries, and trading groups (free-trade areas and customs unions). The dataset, available at www.ferdi.fr, should be useful to a wide range of users and researchers, including academics, tax policy practitioners and advisers, and revenue and customs administrations.

JEL : H20, O10

Keywords: trade taxes, direct taxes, indirect taxes, revenue mobilization

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1. Introduction

The study of tax policy and administration in Sub-Saharan Africa (SSA), and more generally in developing countries (DCs), has attracted a lot of attention in recent years from various sources, including academia, think tanks, donor agencies of certain countries, and even advocacies such as anti-smoking groups. It is fair to say that the subject is no longer studied primarily by international institutions with a development or surveillance mandate in DCs—namely, the International Monetary Fund (IMF) and the World Bank. Even the Organisation for Economic Co-operation and Development, which has a much narrower membership than the IMF and the World Bank—focused on high-income countries—started in recent years dedicating significant resources to the study of tax issues in DCs.

Recent papers on tax policy in SSA have explored various issues; examples include the following: Bhushan and Yiagadeesen (2012) explores the relationship between aid and government incentives to mobilize domestic revenue; Brückner (2011) estimates the elasticity of tax revenue to GDP; Ebeke and Ehrhart (2010) analyze the instability of tax revenues and its effect on certain public spending items, such as investment; Di John (2009) studies taxation as an essential political element of state building; Fjeldstad and Moore (2009) explore the impact of the spread of ARAs on tax revenue collections and the incentives to undertake tax reform; Prichard and Leonard (2010), and Baskaran and Bigsten (2011) study whether improvement in tax administration and tax revenue collections is a sign of larger improvement across other areas of government, and improved governance; Stürmer (2010) studies the tax potential from the resource sector in three SSA countries (Zambia, Namibia, and Ghana).

Yet, little attention has been given to the need for quality and detailed revenue data that can be used for analytical purposes, particularly to explore issues related to the microeconomics of taxation and policy design. The IMF's Government Finance Statistics (GFS) database is an exception; it is the only publication that attempts to cover as many DCs as possible, in a consistent manner. Its major drawbacks, however, is the low coverage across countries and over time—due primarily to countries not reporting their data. Moreover, before the recent update to the 2001 GFS methodology, revenues collected by customs were in many cases accounted as trade revenues, including sales taxes and excise taxes—and even under the new standard, there is no systematic way to check that domestic taxes collected on imported goods are classified correctly as domestic tax revenue and not as tariff revenue. This blurs the study of important issues, such as the coordination of tariff and domestic tax reforms, changes in the tax mix, whether certain tax revenues bear disproportionately the pressures of globalization, whether value-added taxes perform as well as they are thought to do, the role of revenues from natural resources (a growing fiscal issue in DCs), and many other issues.

This paper fills a gap in this area, by providing a cross-section dataset on the composition of tax revenues (7 series) for 41 SSA countries over the period 1980-2010.¹ The series are: *Total Taxes*, *Trade Taxes*, *Indirect Taxes*, *Direct Taxes*, *Corporate Tax*, *Individual Tax*, and *Resource Taxes*.² The dataset builds on that in Keen and Mansour (2010), which was for 40 SSA countries over 1980-2005. This update was motivated by recent work on tax coordination in the West African Economic and Monetary Union (WAEMU) (Mansour and Rota-Graziosi, 2013), and by the number of empirical studies that showed interest in the dataset (including some referenced above).

The paper is organized as follows. Section II describes the sources and definitions of the data. Attention is given to how revenue accounting and tax rules may create differences in the definition of a particular series across countries, and attempt to provide the likely impact of such differences on the quality and cross-country comparability of the data. Section III presents a graphical analysis of the evolution of the level and composition of tax revenues. Section IV concludes.

2. The dataset: sources and definitions

2.1. Sources

Several sources were used to produce the dataset. The starting point was the IMF GFS for the main aggregates: *Total Taxes*, *Trade Taxes*, *Indirect Taxes*, and *Direct Taxes*. This was then completed and checked against IMF staff reports and statistical appendices produced by IMF surveillance and program missions, particularly to ensure that tariff revenues do not include domestic consumption taxes collected at the border (e.g. VAT and excises).³ Staff reports were also used to separate *Direct Taxes* into *Corporate Tax* and *Individual Tax*, with the former further split into corporate taxes from upstream resource activities in the mining and oil and gas sectors, and the rest. Where staff reports did not contain the desired disaggregation—and this is frequent, especially since the late 1990s—, data from IMF country desk economists were used instead.

The data source for the IMF staff reports is the Ministry of Finance of IMF member countries, usually provided by treasury departments, which consolidate data from customs and tax administrations, and other government agencies, according to a standard budget nomenclature.⁴ The IMF routinely discusses the data with the authorities as part of surveillance and program activities, and although

¹ Tax-to-GDP ratios for the seven series are reported for all countries in the appendix. Note that some countries have recently revised upward their GDP data, and more are likely to do so in coming years (see, for example, Jerven and Ebo Duncan (2012) on the Ghana case). The dataset precedes these revisions and is therefore not affected by them. However, these revisions do raise issues for cross-country comparative analysis of tax effort, which frequently relies on tax-to-GDP ratios (as is the case in this paper).

² The categorization of taxes as *direct* or *indirect* is not typical of tax revenue classification in national accounts or other public finance databases, including the IMF GFS database. It is done here primarily due to data constraints, but can be useful for analyzing certain aspects of African tax systems—e.g., equity issues.

³ Staff reports were also used for total tax revenues where the GFS did not contain such data.

⁴ This nomenclature is not necessarily harmonized across countries, although efforts in this regard have been deployed in recent years, including from the IMF Statistics Department, and the Fiscal Affairs Department on budget nomenclature systems.

no systematic and complete quality check is done, this is by far the best available source of government revenues in SSA. In cases where data provided by treasury departments did not contain the desired disaggregation (particularly domestic taxes collected from extractive industries), data provided directly by domestic tax administrations and collected by IMF country desk economists was used; occasionally, the authorities were contacted directly to verify or obtain missing data. Finally, in a few cases, data from IMF sources were checked against data available publicly (e.g. South Africa Treasury website).

Despite this, the dataset is not complete and is not perfect for reasons that will become obvious in the next sub-section. Table 1 shows the number of missing observations for each of the non-resource series. Only four countries have missing observations for *Total Taxes*, and six have missing observations for the split of *Direct Taxes* between *Corporate Tax* and *Individual Tax*. For a small number of missing observations on this split (where the period is one to three years), the data were constructed by assuming that each component is equal to the average of its share of *Direct Taxes* for the previous and following observations—or the first or last observation in cases where the missing observations were at the beginning or end of the dataset period.

Table 1. Missing Observations by Series and Country

Series	Number of missing observations	Countries and years
Total Taxes	23	Angola: 1980-1995; Chad: 1980-1981; Namibia: 1980-1981; Zimbabwe: 2005-2007
Trade Taxes	23	Angola: 1980-1995; Chad: 1980-1981; Namibia: 1980-1981; Zimbabwe: 2005-2007
Indirect Taxes	23	Angola: 1980-1995; Chad: 1980-1981; Namibia: 1980-1981; Zimbabwe: 2005-2007
Direct Taxes	23	Angola: 1980-1995; Chad: 1980-1981; Namibia: 1980-1981; Zimbabwe: 2005-2007
Corporate Tax	122	Angola: 1980-2010; Chad: 1980-1981; Equatorial Guinea: 1980-1988; Kenya: 1980-2010; Namibia: 1980-1988; Seychelles: 1987-2004; Uganda: 1990-1997; Zambia: 1980-1985; Zimbabwe: 2005-2007
Individual Tax	138	Angola: 1980-2010; Chad: 1980-1981; Kenya: 1980-2010; Namibia: 1980-1988; Nigeria: 1986-2010; Seychelles: 1987-2004; Uganda: 1990-1997; Zambia: 1980-1985; Zimbabwe: 2005-2007

For the series *Resource Taxes*, it was not possible to identify whether observations were missing or whether the country simply did not have extractive industries. However, the data were checked against the World Bank publication on subsoil wealth (World Bank, 2006); the resource countries in the dataset account for over 95 percent of countries for which the World Bank publication reports resource wealth, and include the large ones, such as Nigeria, and Central African countries.

Compared to the dataset in Keen and Mansour (2010), this update includes Angola, a resource rich country, a revision of all series for the period 2000-2005, and a revision of the resource tax series for Nigeria and Gabon in the 1980s. These revisions resulted in higher *Resource Taxes*, primarily due to replacing estimates with actual data for 2003 to 2005, and making some corrections for Nigeria and

Gabon in the 1980s (revenue from production sharing was missing for some years for Nigeria, and the resource royalty was missing for Gabon).

2.2. Definition of Variables

Total Taxes

This is the total of all taxes reported as such, including two revenue sources that countries do not systematically classify as tax revenue. The first source is stamp duties and fees. Where data were available, only certain registration fees (mainly real property registration), which can be non-negligible, were included in the total; otherwise, the total amount of registration fees was included. The second source includes profits from upstream activities in the non-renewable resource sector (oil and gas, and mining), royalties, and revenue from production sharing agreements when they are paid into the consolidated fund.

Trade Taxes

These include the following: (1) revenues from a country's external tariff on imports and exports, or its share from such sources in the case of a customs union with revenue sharing (e.g. South African Customs Union); (2) *ad-valorem* service fees or statistical fees as they are called in some countries, and special levies on imports and exports that are earmarked for certain use (e.g. the 1 percent levy in the West African Economic and Monetary Union (WAEMU) earmarked for financing the WAEMU Commission). This was done in part because it is not always possible to distinguish the various fees applicable—it can be argued that certain fees that do not finance the budget of the country that levy them should not be accounted as own revenue.

Another category that may be included is withholding on imports for purposes of income taxes. This is applied in many countries as a way to tax the informal sector; it is levied on imports, but can be deducted against a taxpayers' income tax liability (typically, tax on income from a business activity). Typically, revenues from this withholding are accounted for as direct taxes (levied by customs on behalf of the domestic tax administration). It was not possible, however, to confirm that this was indeed the case in all countries that practice this type of withholding.

Indirect Taxes

Indirect taxes include all domestic consumption taxes, such as sales taxes of various sorts, including value-added taxes (VATs), and excise taxes. In some countries, excise taxes may include *ad-valorem* or specific taxes on certain agricultural products, such as coffee and cocoa.

VATs are included in indirect taxes on a net basis, where data on refunds are available. However, for some countries, refunds are accounted for as an expense item in the central government budget, and are not always reported separately. For these countries, VAT revenue may be overestimated. Evidence from the IMF technical assistance suggests that refunds are on average about 20 percent of VAT revenues in SSA (see Harrison and Krelove, 2005).

Direct Taxes

These include taxes on all income sources (i.e. business profits, wages, portfolio income, income from real property, capital gains, etc). Payroll taxes, in particular social security contributions (SSCs), are typically not paid into the consolidated fund, and therefore do not show in *Direct Taxes*—some countries have minor general payroll taxes other than SSCs that are, however, included. This is a significant weakness of the dataset since SSCs can be substantive both in terms of revenue and their incentive effects on employment.⁵

Direct Taxes are not always the total of corporate and individual taxes. The difference is often due to taxes that cannot be allocated to either of these two sub-categories; these include payroll taxes (other than SSCs), recurrent taxes on real property, which are insignificant in SSAs, and taxes on portfolio income that are not reported as part of individual or corporate income. This difference is between 4 and 14 percent of *Direct Taxes* on average over the period.

Corporate Tax

This is the tax imposed on corporate income in countries that have a corporate tax. This can include taxes on profits from individual enterprises or any other business entities liable to a schedular profit tax in countries that have schedular tax systems (a number of Francophone countries). Data to split the profit tax according to the legal status of the business entity are not usually available in IMF staff reports.

A great deal of effort went into separating from the corporate tax, tax revenues from profits of corporations and other business entities from extractive activities in the oil and gas and mining sector. These were included in the series *Resource Taxes*.

In some cases, IMF staff reports and country files show resource income as a total of both the tax on profit and other revenues from extractive industries—which may include dividends from a national oil company or from government participation in private companies. For this reason, the *Corporate Tax* is not split between the share of extractive industries and other sectors. This split is very useful for the study of revenue mobilization as well as the incentive effects of various tax tools on extractive industries—e.g. profit taxes are superior to gross revenue royalties from an efficiency perspective, but many SSA countries find it more convenient to use royalties to extract more revenues from the sector because their base is less exposed to tax avoidance.

Individual Tax

This is the tax imposed on income of individuals from all sources in countries that apply a comprehensive income tax on individuals, including tax on business profits. In countries that apply

⁵ The IMF GFS classifies general payroll levies as taxes, but SSCs as non-tax revenues. IMF staff reports for Africa usually follow the GFS.

a schedular income tax, the *Individual Tax* includes primarily taxes on wages (other than SSCs, which as noted earlier, are not typically paid into the consolidated fund).

Resource Taxes

These include primarily revenues from the *Corporate Tax* that are collected from extractive activities in the oil and gas, and mining sectors, and royalties.⁶ Revenues from production sharing agreements (PSAs) were included in this series to the extent that they were paid into the government general fund—which typically occurs in the case of oil and gas through a national oil company. There is no separation of revenues from oil and gas, and revenues from mining activities, since most countries do not report revenues at this level of details. However, as shown later, it is relatively easy to analyze the aggregate relative importance of revenues from each of these two sectors given that few countries are rich in both hydrocarbons and non-hydrocarbons minerals.

Other variables

The dataset contains a number of other variables that are used in the trend analysis in the next section. These are the following: GDP at current prices; population; annual average inflation (as measured by the consumer price index); income classification, and modified income classification (as explained in footnote 8); and a trading groups variable (West African Economic and Monetary Union (WAE), Southern African Customs Union (SACU), East African Community (EAC), (Central African Economic and Monetary Union (CEMAC), and Economic Community of West African States (ECOWAS)). The source of all these variables is the IMF World Economic Outlook database, except income classification, which is taken from the World Bank.

3. Evolution of tax revenues: level and structure

This section describes the main features of the evolution of tax revenues in SSA over the period of the dataset. The emphasis is on the relative role of each major source of revenue, and future prospects for revenue mobilization.

3.1. General Observations

Table 2 shows a selection of tax revenue indicators. Overall, tax revenues grew from 17.5 percent of GDP in 1980 to 22.3 percent in 2010, with most of the increase occurring since 1995. The shares of non-resource and resource taxes (in total taxes) changed very little between in 2010 relative to 1980, but significant variations took place during the period.

⁶ The GFS classifies all revenue from the resource sector (other than the corporate income tax, excise taxes on energy products, and un-refunded general sales taxes such as VATs) as non-tax revenues. Such revenue includes primarily royalties, profit sharing, dividends received from state enterprises, and dividends and other investment income received from government direct participation in extractive enterprises. This distinction in the classification of revenue is immaterial for revenue analysis purposes for a number of reasons, including the equivalencies that exist between what is typically classified as non-tax instruments and tax instruments. For example, a profit sharing scheme can be designed to be equivalent in economic terms to a rent tax, and an export tax can be designed to be equivalent to a royalty.

First, in the early 1980s, oil revenues in Nigeria dominated resource taxes, buoyed by the petroleum shock at the end of the 1970s. It accounted for over three-quarters of revenues from extractive industries in SSA. Mining revenues in South Africa accounted for much of the remaining quarter. Only eight SSA countries reported resource revenues back then.

Second, in 2010, 18 countries reported resource revenues, but the country concentration of such revenues was still very high, with oil revenue in Nigeria and Angola accounting for a over 75 percent, and Francophone Central Africa for over 15 percent (Cameroon, Congo, Equatorial Guinea, and Gabon).

Table 2. Selected Tax Revenue Indicators

	1980	1985	1990	1995	2000	2005	2010
Total Taxes (billions of USD)	46.4	28.5	52.7	56.1	72.9	150.6	230.9
Percent of GDP	17.5	15.7	18.8	17.8	22.4	24.4	22.3
Non-resource Taxes (billions of USD)	27.0	22.7	40.4	49.8	49.9	93.8	157.6
Percent of Total	58.1	79.8	76.7	88.8	68.5	62.3	68.3
Percent of GDP	10.2	12.6	14.4	15.8	15.4	15.2	15.3
Resource Taxes (billions of USD)	19.4	5.8	12.3	6.3	23.0	56.7	73.3
Percent of Total	41.9	20.2	23.3	11.2	31.5	37.7	31.7
Percent of GDP	7.3	3.2	4.4	2.0	7.1	9.2	7.1
Number of countries reporting resource taxes	8	9	9	12	14	18	18
Total Taxes per Capita (USD)	148.3	78.5	125.4	116.6	129.8	237.1	321.7
In constant 2010 USD	884.7	389.9	519.1	393.7	259.1	356.0	345.0
Total Resource Taxes per Capita (USD)	62.1	15.9	29.2	13.1	40.9	89.3	102.1
In constant 2010 USD	370.3	78.9	120.8	44.1	81.6	134.1	109.5
GDP (billions of USD)	265.2	180.8	280.3	315.6	324.9	618.1	1,033.1
Population (millions)	313.0	362.7	420.2	481.2	561.8	634.9	717.7

Third, resource revenues declined during the 1980s and much of the 1990s, despite an increase in the number of countries reporting such source. Although much of this was due to unfavorable international oil prices, SSA countries failed to tax properly the mining sector.⁷ This sector is generally harder to tax relative to oil and gas, where production is concentrated and typically offshore—i.e. impossible to undertake without significant capital outlays. But many countries provided very generous tax regimes for mining in the 1980s and 1990s (a period with very low commodity prices) with long stabilization, only to regret it when prices started to increase in the early 2000s.

Fourth, almost all SSA countries have recently revised, or are in the process of revising their mining tax regimes—and the IMF has provided significant technical assistance in this area since 2008.

⁷ See for example the case studies by Stürmer (2010) on Zambia, Namibia, and Ghana.

Provided that the new regimes are more effective in taxing the mining rent, SSA can expect more revenues from the mining sector in the future. But oil revenue will likely dominate the picture for years to come.

Fifth, non-resource taxes improved a little in the 1980s, but have been stagnant since the early 1990s (slightly over 15 percent of GDP). Some of this may be due to development in resource revenues—the correlation between the annual growth rates of resource and non-resource taxes is -0.42 over the period—,but weak tax policy and administration remain important factors.

An interesting observation from Table 2 is the amount of tax revenue available per capita. Putting aside the early 1980s, which as noted earlier is dominated by oil revenue in Nigeria, real taxes per capita in SSA have declined. To the extent that part of such taxes serves as a social safety net in the form of government employment, this would simply imply a decline in real public wages. But to the extent that they finance infrastructure, health, education, and other pro-poor spending, SSA had less budget resources per capita in 2010 than it did in the 1980s and much of the 1990s. From this perspective, the effect of inflation caused by the resource sector (combined with population growth), outweighed the impact of additional revenues from this sector. Moreover, resource taxes as a share of GDP and as a share of total taxes have been highly volatile—the standard deviations over the entire period are 7.3 and 22.6 respectively.

3.2. Developments by Income Group

The data in Table 2 hide significant variations across countries, and over time. In this subsection, we look at the composition of taxes by income group since countries of similar income levels usually face similar challenges in revenue policy. Four groups are selected: low-income (LIC), lower-middle-income (LMIC), upper-middle-income (UMIC), and high-income (HIC).⁸ The groups are defined contemporaneously, meaning that countries change groups as they move from one income level to another. Given the small number of countries in the dataset (41), this classification may have the bias of reducing the number of observations for some groups as countries move up the income ladder over time. But this does not seem to be the case here. However, countries have moved out of, and back into the same category for a short period. In order to minimize the impact on how the series behave, moves for three years or less were ignored.⁹

Table 3 shows the main changes in GDP, population, and taxes between 1985 and 2010. The main observation is that the shares of LMICs declined in population, GDP, and taxes. A significant factor explaining this is South Africa moving to the UMIC group; also important is the number of

⁸ Income groups are defined according to the World Bank country classification, which is available for the period 1987-2010. For 1980-1986, it was assumed that the 1987 classification prevailed. The HIC group was ignored since only Equatorial Guinea qualifies, and only over 2007-2010.

⁹ This resulted in the following reclassifications: Côte d'Ivoire is LIC instead of LMIC in 2008-2010; Equatorial Guinea is LMIC instead of LIC in 2001-2003; Ghana is LIC instead of LMIC in 2010; Lesotho is LIC instead of LMIC in 1995; Mauritius is LIC instead of LMIC in 2010; Nigeria is LIC instead of LMIC in 2008-2010; Senegal is LIC instead of LMIC in 2009-2010; South Africa is UMIC instead of LMIC in 2001-2003.

countries moving back to the LIC group (Zimbabwe, Senegal and Côte d'Ivoire), with a more significant impact on the group than countries moving from LIC to LMIC (Botswana and Equatorial Guinea).

Table 3. GDP, Population, and Taxes by Income Group; 1985 and 2010

	1985				2010			
	LICs	LMICs	UMICs	Total	LICs	LMICs	UMICs	Total
Number of observations	29	9	2	40	28	8	5	41
GDP (billions of USD)	91.9	85.1	3.7	180.8	484.9	141.1	407.1	1,033.1
Share (percent of all groups)	50.9	47.1	2.0	100.0	46.9	13.7	39.4	100.0
Population (millions)	289.3	72.5	0.9	362.7	602.0	61.0	54.7	717.7
Share (percent of all groups)	79.8	20.0	0.2	100.0	83.9	8.5	7.6	100.0
Total Taxes (billions of USD)	10.7	16.3	1.4	28.5	89.6	47.4	93.9	230.9
Non-resource Taxes	8.0	14.1	0.5	22.7	57.7	15.3	84.4	157.4
Resource Taxes	2.7	2.2	0.9	5.8	31.7	32.1	9.5	73.3
Total Taxes (percent of all groups)	37.7	57.4	4.9	100.0	38.8	20.5	40.7	100.0
Non-resource Taxes	35.5	62.3	2.3	100.0	36.6	9.7	53.6	100.0
Resource Taxes	46.5	38.0	15.4	100.0	43.2	43.8	12.9	100.0

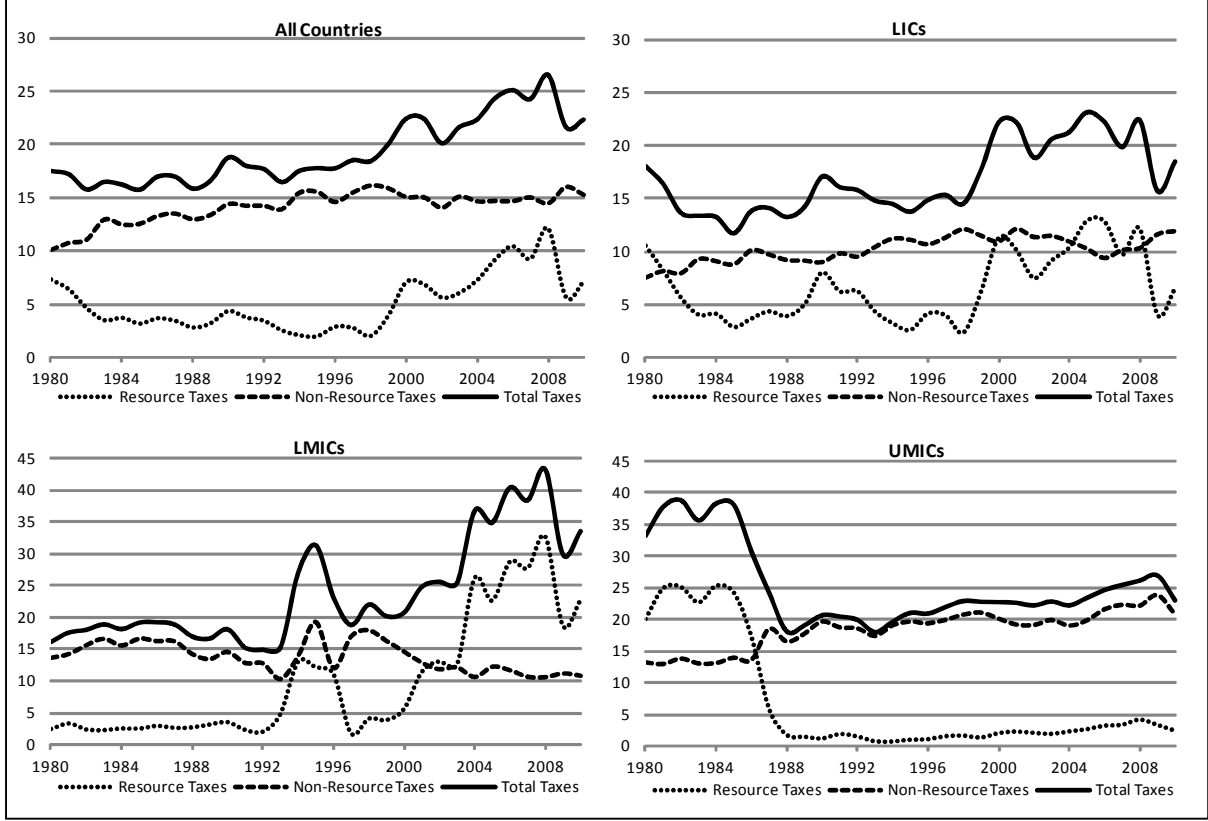
Note: Only Angola is missing in 1985, with a negligible impact on total figures.

Figure 1 shows the evolution of total resource and non-resource taxes by income group. For SSA as a whole, non-resource taxes have been relatively steady around 15 percent of GDP since 1990. This steadiness is also apparent in LICs—10 to 12 percent of GDP. In LMICs the non-resource ratio declined significantly in the past decade. Only UMICs have shown a steady improvement in the non-resource tax ratio, principally due to South Africa and Botswana. The contribution of resource revenues to the total revenue effort is persistent and significant in both LICs and LMICs. The collapse of resource revenues in UMICs in 1984 is entirely due to Gabon, the only UMIC that shows resource revenues prior to 1988.

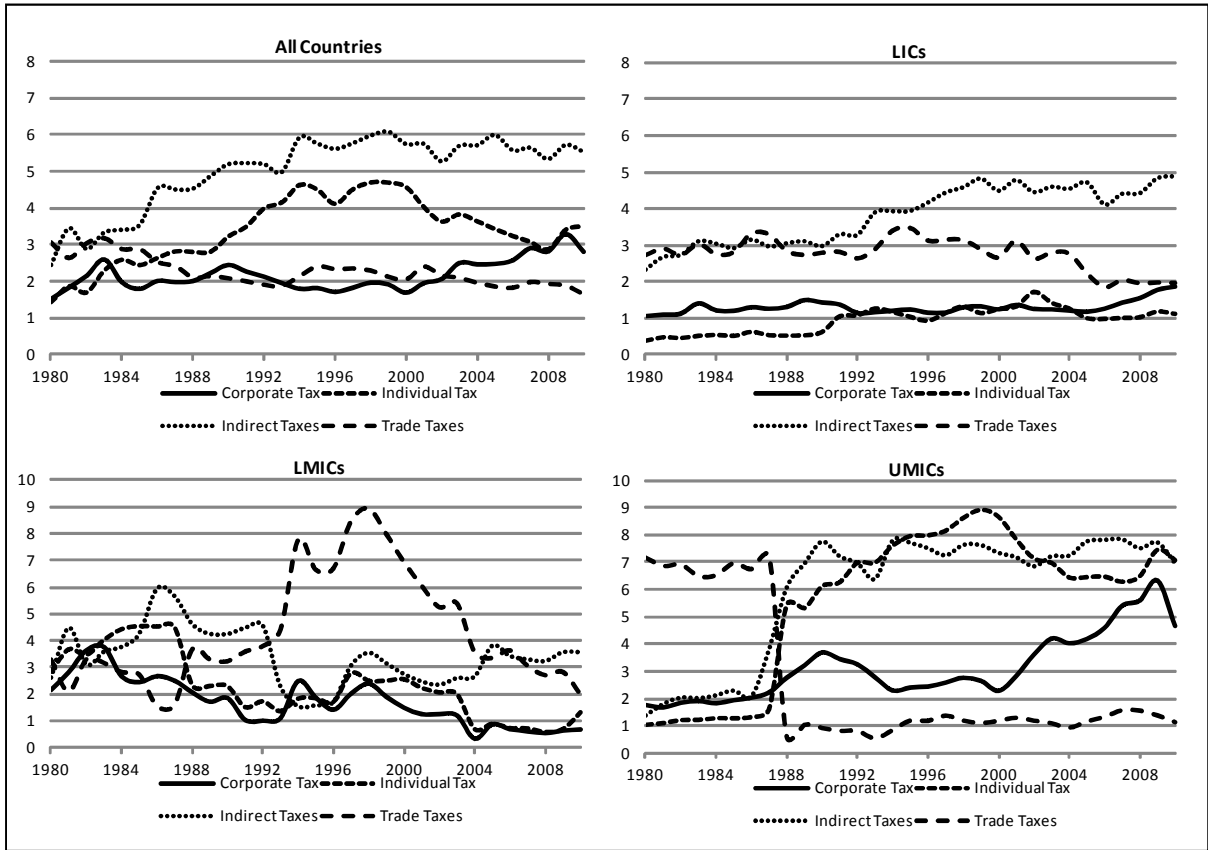
Moving to the composition of non-resource taxes by income group (Figure 2), the main trend in LICs is the replacement of trade taxes by indirect taxes, namely VATs and excises. In LMICs, and consistent with the previous observation on the decline in non-resource revenues, all revenue categories have been trending down since the mid-1980s, with a slight exception for indirect taxes. The increase in the tariff ratio in the first half of the 1990s is due to Swaziland and Botswana, which had a high GDP weight in the LMIC group in those years and high tariff ratios—both countries have had a relatively high ratio for the entire period. Also of interest in this group is the decline in the contribution of income taxes (personal and corporate), which coincides with the increase in resource revenues in the mid-1990s. This could be caused by a number of factors: low buoyancies of such taxes in relation to resource GDP; deliberate policy decisions to substitute resource taxes

for direct taxes; and relaxing audit rules on companies and individuals. In UMICs, the most significant trend is the increase in corporate income tax revenue, largely a South Africa effect.

**Figure 1. Non-resource and Resource Taxes by Income Group
(Percent of GDP, weighted)**



**Figure 2. Structure of Non-resource Taxes by Income Group
(Percent of GDP, weighted)**



3.3. Resource vs. Non-Resource Countries

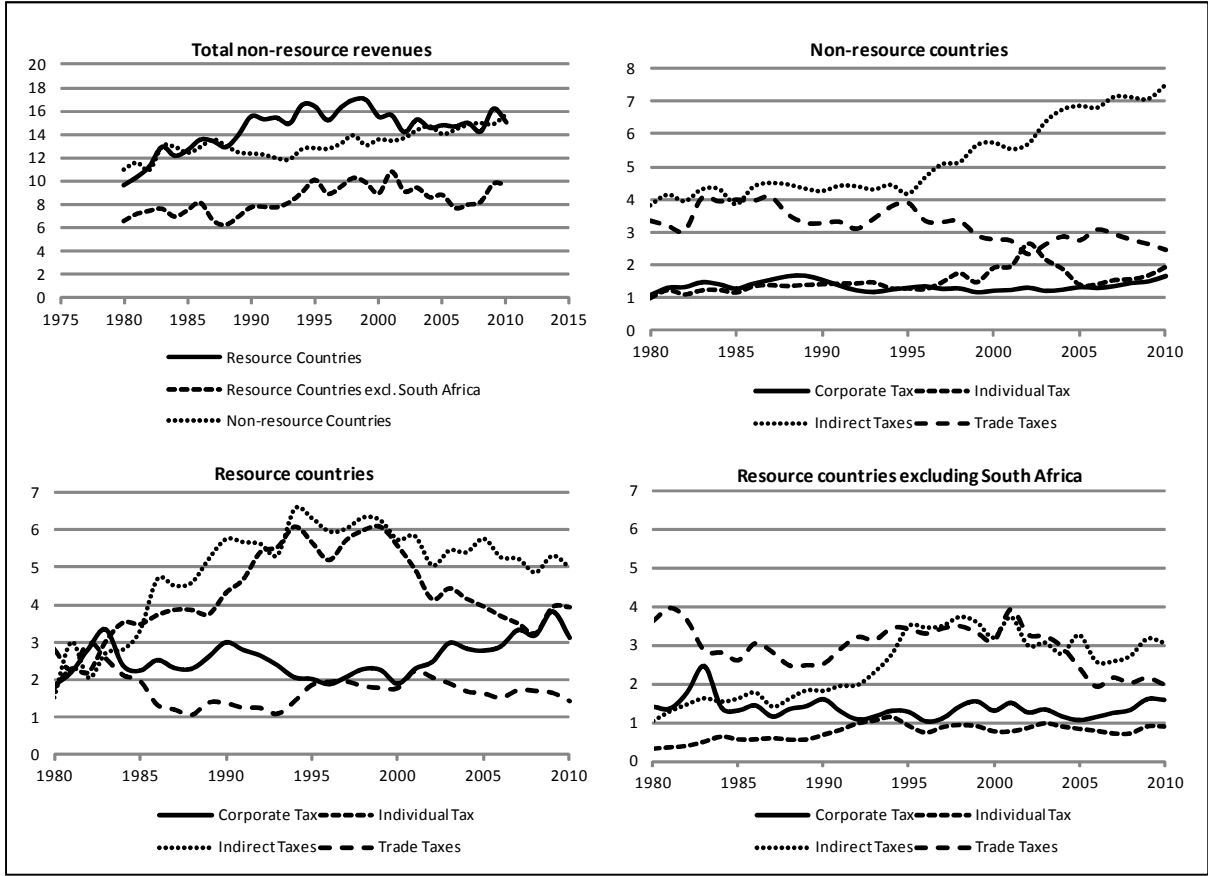
Resource countries have (as expected) more revenues at their disposal than non-resource countries; on average, between 1.5 to 2 times more over the period. Somewhat less expected is the fact that resource countries also have a slightly higher level of non-resource revenues in most years (first panel of Figure 3). This is primarily due to the strength of direct taxes—indirect taxes are more important in non-resource countries (second and third panel of Figure 3). A closer look at the data reveals that the strength of direct taxes is in large part due to South Africa (panel 4 of Figure 3); without it, resource countries raise about 40 percent less in direct taxes than non-resource countries.

In other words, it seems that resource revenues have substituted partially for non-resource revenues. Although empirically one has to control for other factors to test this hypothesis,¹⁰ there are clear examples in the data that show that this is indeed what happened in some countries: In

¹⁰ See Crivelli and Gupta (2014), who find that there is a significant and strong negative correlation between resource and non-resource revenues.

the Republic of Congo, the resource revenue-to-GDP ratio increased from an average of 17 percent in the early 1980s to 32 percent in the late 2000s; during that period, the non-resource revenue ratio dropped from 15 percent to 7 percent. In Equatorial Guinea, and over the same period, the resource revenue-to-GDP ratio increased from zero to 35 percent while the non-resource revenue ratio dropped from 20 to less than 2 percent. In almost all cases, the increase in resource revenues outweighed the decline in non-resource revenues. These examples suggest that tax policy and administration factors may have played a role in the decline of non-resource revenues.

Figure 3. Non-resource Taxes in Resource vs. Non-resource Countries
(Percent of GDP, weighted)



3.4. Development by Trading Group

The formation of trading groups in SSA has intensified over the past two decades. The main objective of this has been to encourage intra-group trade in goods, by reducing or eliminating tariffs, and reduce competition among the groups vis-à-vis other groups in SSA and non-SSA countries, by forming customs unions. In certain groups, trade integration was followed by some domestic tax harmonization, with the aim to reduce tax distortions to intra-group movement of capital, so that investment decisions to locate within a given group would be unaffected by tax

considerations.¹¹ The graphic analysis in this sub-section attempts to identify developments in the five main groups that may have consequences for the level and composition of tax revenues.¹²

Figure 4 shows the usual split of resource and non-resource revenues for the five groups. Developments in total tax revenues differ markedly across groups. In the EAC and SACU, tax-revenue to GDP increased steadily—at a much faster pace in the latter group, largely a South Africa effect. The resource sector played a very minor role in this development, and none in EAC, which is the only group among the five not to report resource revenues.

In ECOWAS and CEMAC, revenue development is marked by resource revenues; the two regions accounted for about 83 percent of total resource revenue in SSA in the early 1980s, and roughly 72 percent in the late 2000s. In CEMAC, non-resource revenues have been stagnant since the early 1990s, and are lower by about 2 percentage points of GDP relative to the early 1980s. For these two groups, trade integration does not seem to have contributed to revenue mobilization. WAEMU has performed relatively well since the early 1990s, gaining on average 6 percentage points of GDP in non-resource revenues, but only to recuperate the losses of the 1980s.

¹¹ The most advanced group in this area is the WAEMU; see Mansour and Rota-Graziosi (2013) for an assessment. Cnossen (2011) discusses issues and challenges in domestic tax coordination in SACU.

¹² As noted earlier in section 2, these are the East African Community (EAC), the Economic Community of West African States (ECOWAS), the Economic and Monetary Community of Central African States (CEMAC), the Southern African Customs Union (SACU), and the West African Economic and Monetary Union (WAEMU). Since trade integration in the ECOWAS is relatively recent, WAEMU members were included separately as a group, and excluded from ECOWAS.

**Figure 4. Resource and Non-resource Revenues by Trading Group
(Percent of GDP, weighted)**

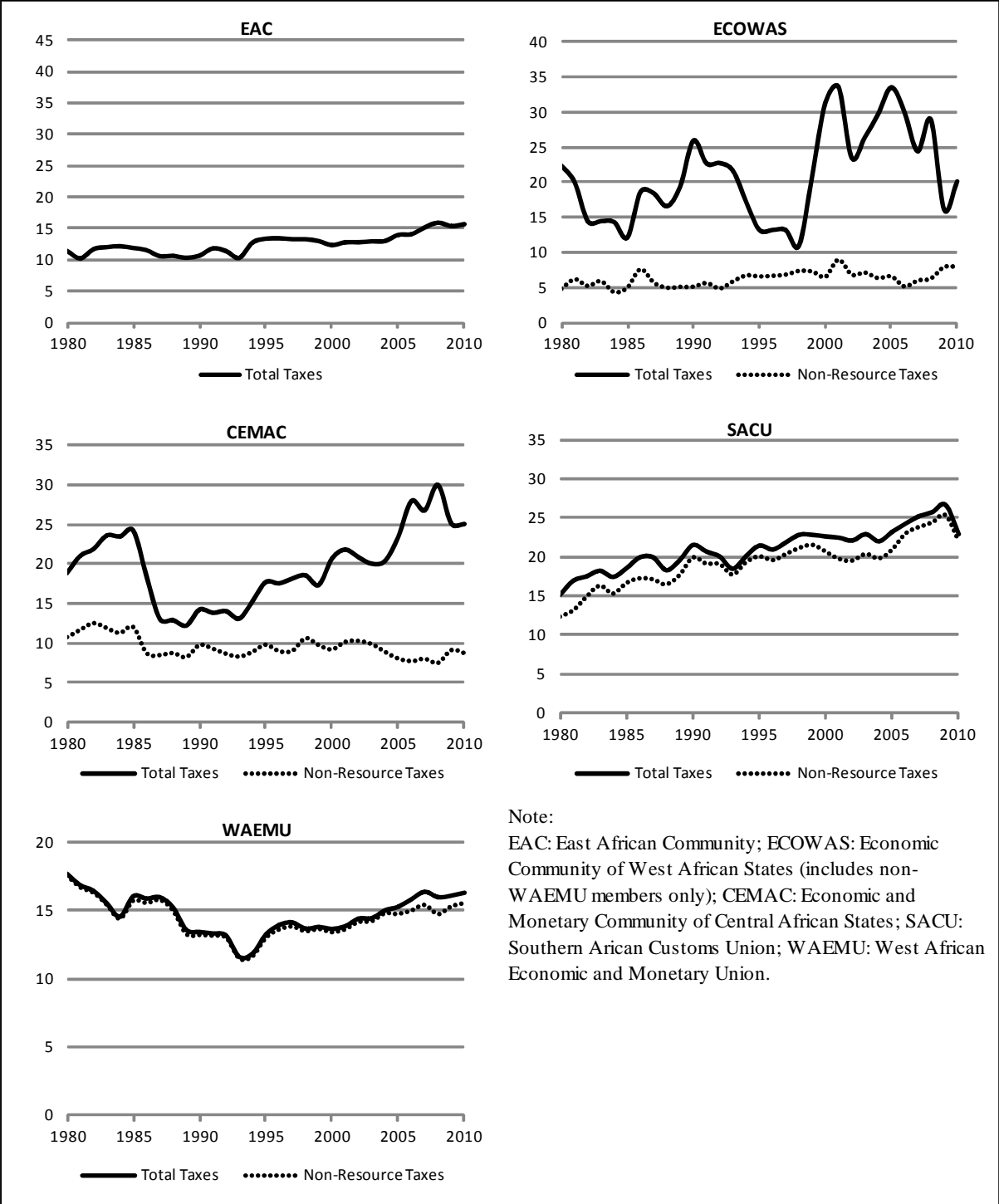
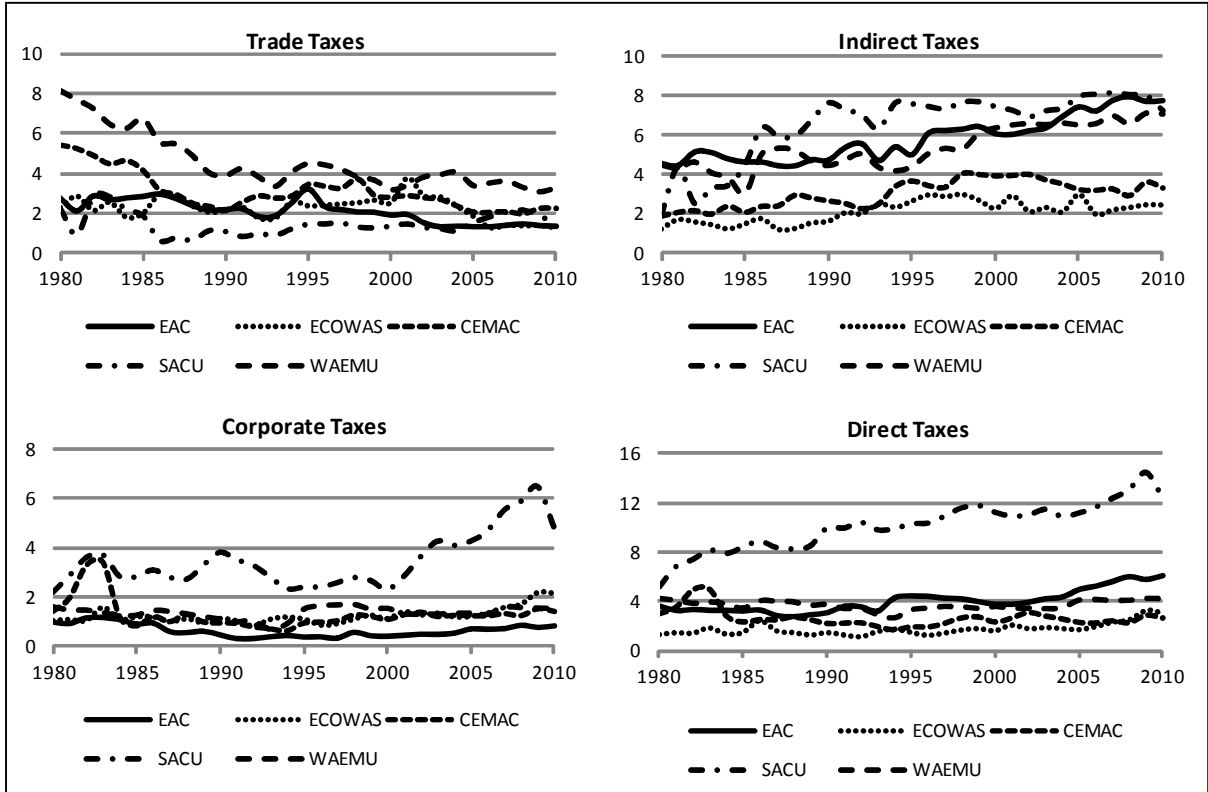


Figure 5 shows the main components of the non-resource tax-to-GDP ratio in the five trading groups. Trade taxes have declined significantly primarily in the Francophone groups (WAEMU and CEMAC), but remained relatively constant in the other groups—there is a convergence in the share of this source of revenue to a range of 1.5 to 3 percent of GDP. On average over the period, WAEMU have replaced slightly over 50 percent of lost trade revenues with indirect taxes, while CEMAC did less than 40 percent. The most remarkable non-resource revenue mobilization effort occurred in the EAC, where the increase in indirect taxes was 2.5 times the loss in trade taxes. This suggests that trade integration and domestic tax coordination are not necessary conditions for successful revenue mobilization in SSA.

Finally, Figure 5 also shows that the future of the corporate tax in SSA is uncertain. Aside from SACU, where the corporate tax yields significant revenue due mainly to South Africa, the yield has been dismal in the other groups, with the exception of ECOWAS, which has seen a slight improvement in the late 2000s. The reasons for this are not fully known, but extensive investment incentives that frequently take the form of tax holidays, are one factor that should preoccupy policy makers.

Figure 5. Main Tax Sources by Trading Group
(Percent of GDP, weighted)



Note: EAC: East African Community; ECOWAS: Economic Community of West African States (includes non-WAEMU members only); CEMAC: Economic and Monetary Community of Central African States; SACU: Southern African Customs Union; WAEMU: West African Economic and Monetary Union.

4. Conclusions

This paper has described a new tax revenue dataset for SSA that was constructed for a specific research project in 2007, and later updated for further research at the IMF Fiscal Affairs Department. The dataset is not perfect, but is the only available detailed dataset of its nature covering most SSA countries over a long period. It is hoped that it will motivate additional empirical research on taxation and wider macro-fiscal issues in SSA.

Several features of the dataset should be of interest: the disaggregation of the main revenue components; the separation of resource and non-resource revenues, which is increasingly key to the study of domestic revenue mobilization in SSA; the relative importance of the corporate tax when the share from oil and gas and mining activities is excluded, and its future role in SSA tax systems given the forces of corporate tax competition; the separation of tariff revenues from other consumption taxes, which allows for the development of a more realistic view on how trade liberalization has impacted revenues, how domestic tax policy has responded, and the growing role that indirect taxation plays in the tax revenue mix.

The brief trend analysis has shown that for most countries in SSA, domestic revenue mobilization remains a real challenge. Most additional revenues in the past 15 years came from oil and gas, and to a lesser extent, mining. This is of course a welcome development that presents many opportunities, but its significance is relevant only to a small number of countries. For most SSA countries, the opportunities that additional resource revenue brings may be small compared to the wider risks that it poses to non-resource revenues—in particular a disincentive to reform the tax system.

The trend analysis has also shown that progress in revenue mobilization is possible. A number of EAC countries improved their non-resource revenue-to-GDP ratios; some countries regained the losses of the 1980s (e.g. Tanzania, Mali, Niger), and some improved their non-resource revenue in the presence of high resource revenues (e.g. Botswana).

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Appendix. Tax-to-GDP Ratios: 1980-2010 (Percent)

<i>Total Taxes</i>	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Angola																	48.6	43.7	33.9	50.3	54.5	48.6	41.2	39.8	39.2	45.3	49.2	45.3	50.1	33.5	41.8
Benin	8.2	14.8	15.5	12.3	9.2	9.7	11.0	9.6	9.2	6.8	7.4	8.4	9.6	10.2	11.0	11.4	11.8	12.6	12.6	13.1	14.1	13.7	14.4	15.1	14.8	14.7	15.5	17.0	17.3	16.7	16.3
Botswana	15.6	26.6	19.3	20.0	24.2	26.0	29.7	31.1	24.2	30.4	29.5	33.9	33.9	31.2	31.0	37.8	24.8	27.5	29.7	20.8	34.6	34.3	27.4	31.7	31.2	31.2	30.5	33.1	28.1	32.1	27.2
Burkina Faso	8.4	8.6	8.3	8.3	8.0	7.9	9.3	9.7	8.8	8.2	9.0	9.0	7.8	7.9	9.7	10.7	11.3	11.6	11.1	12.0	10.8	10.3	10.8	11.1	12.5	11.5	11.2	12.2	11.8	12.3	12.7
Burundi	12.6	11.2	13.4	11.5	13.3	12.9	15.1	13.6	13.6	14.4	13.1	15.0	14.5	15.2	16.6	16.6	13.5	12.8	15.6	15.4	18.3	18.8	17.9	18.7	18.3	18.5	17.3	17.2	16.9	16.4	18.0
Cameroon	13.3	13.7	14.2	19.8	18.2	20.2	14.7	11.7	12.1	11.3	12.0	11.6	10.6	8.9	12.7	12.7	11.4	12.3	13.2	12.8	15.7	16.5	16.6	15.2	14.2	16.2	18.2	18.1	19.2	16.8	16.0
Cape Verde	12.1	13.1	14.9	14.5	13.8	12.0	12.7	11.8	11.5	12.1	13.2	13.5	15.5	16.3	16.7	17.0	16.7	16.3	16.5	16.8	18.2	18.7	20.8	20.1	20.5	21.6	23.4	24.4	25.2	20.2	19.1
Central African Republic	12.4	10.6	12.0	11.5	11.9	9.4	9.6	9.2	9.4	8.5	10.4	8.2	8.0	7.2	6.8	8.8	6.4	7.5	8.3	8.4	8.2	7.6	8.9	6.8	7.2	7.1	7.8	7.6	7.1	7.8	8.4
Chad			2.4	2.0	3.4	4.1	3.7	3.8	4.5	5.4	5.7	4.9	5.0	4.5	3.9	5.5	6.4	6.8	6.8	7.2	6.9	6.2	7.3	7.1	8.5	9.8	16.6	22.3	28.1	16.4	25.7
Comoros	8.8	9.8	10.2	12.3	11.9	11.0	12.2	9.7	11.6	10.2	10.9	13.2	12.7	12.6	11.4	10.8	12.9	9.7	10.2	9.0	9.2	10.5	13.8	13.5	11.6	10.9	10.0	10.2	10.3	11.1	
Congo, Rep. of	17.6	33.8	37.7	34.3	39.3	38.5	27.3	12.8	12.1	12.2	33.8	24.9	22.0	23.4	22.1	23.6	27.3	28.4	22.5	26.3	26.2	30.1	27.1	29.5	29.7	38.3	43.7	38.5	45.8	28.5	37.1
Côte d'Ivoire	21.7	22.4	21.5	20.0	17.8	21.2	20.8	22.1	20.5	18.1	17.6	16.9	16.9	13.9	14.7	16.4	17.2	16.7	15.4	15.0	14.7	15.3	15.7	15.0	15.4	16.4	17.5	17.5	17.0	17.9	18.4
Equatorial Guinea	16.7	20.9	25.3	15.3	24.5	17.0	17.9	15.3	15.1	14.5	14.1	13.4	15.9	16.2	14.7	12.7	17.0	15.6	29.6	19.6	19.6	28.3	28.9	28.6	31.0	31.5	40.7	36.1	35.8	39.8	28.7
Ethiopia	8.6	8.6	8.5	8.6	10.0	8.4	8.9	9.4	10.2	9.7	8.3	7.4	5.3	5.7	7.5	7.9	8.5	9.3	9.5	9.3	9.7	10.9	11.9	11.2	12.6	10.5	10.6	11.4	9.3	10.5	12.7
Gabon	33.4	38.0	39.1	35.8	38.6	38.4	30.6	23.1	20.8	18.4	13.3	18.4	22.0	22.1	23.0	30.2	29.4	30.5	34.7	27.9	33.4	33.6	30.8	29.5	29.6	30.7	31.2	28.8	31.4	31.3	27.6
Gambia	13.0	10.2	10.5	10.5	13.0	12.1	12.3	14.0	13.1	14.5	13.4	13.0	13.7	14.6	13.6	11.5	11.0	11.8	11.7	10.9	11.2	9.1	9.8	9.5	12.9	12.5	14.3	14.6	13.7	13.4	12.0
Ghana	4.2	7.4	4.4	7.8	6.2	7.4	10.3	9.2	8.8	8.7	7.6	7.8	6.1	8.8	11.2	11.3	11.4	9.5	9.9	9.0	11.0	12.3	11.4	13.7	13.2	14.0	14.0	13.6	13.2	12.5	13.8
Guinea	5.5	6.1	6.0	2.8	3.1	3.1	18.8	17.0	13.2	16.9	15.4	13.6	10.8	9.9	9.0	9.6	8.9	10.2	10.5	10.1	9.9	10.3	10.9	10.3	10.7	13.4	13.3	13.5	14.7	15.2	14.9
Guinea-Bissau	6.8	6.4	5.8	5.2	4.4	4.6	2.8	5.1	5.0	2.6	4.8	3.6	2.3	3.0	4.1	4.1	4.1	4.7	2.2	5.5	6.8	5.4	4.2	4.4	4.3	6.3	6.4	6.1	5.9	7.1	8.3
Kenya	13.9	14.4	13.7	12.6	12.8	12.3	12.6	13.2	15.3	13.3	12.9	13.2	13.0	12.6	17.3	17.7	17.9	16.8	17.5	17.1	16.2	16.4	16.2	16.2	16.6	17.2	16.1	17.0	17.9	17.6	18.3
Lesotho	27.2	25.4	24.1	25.2	32.6	32.8	31.0	30.1	25.3	25.7	29.6	31.2	32.5	35.7	39.2	40.2	38.6	37.6	38.0	33.1	34.1	30.9	33.9	34.4	35.5	46.5	59.4	54.6	57.8	54.5	36.8
Madagascar	16.1	12.8	12.0	11.2	11.8	10.0	9.3	11.0	10.5	8.8	9.4	6.8	8.7	8.2	7.7	8.3	8.5	9.4	9.8	11.0	11.3	9.7	7.7	10.0	10.9	10.1	10.7	11.4	13.0	10.6	10.7
Malawi	14.3	14.7	14.4	14.5	14.0	15.2	17.0	15.3	13.2	15.6	17.9	14.4	15.8	12.4	13.4	9.5	11.3	13.1	15.1	13.5	14.1	15.6	10.2	11.7	13.1	14.0	14.1	15.1	16.0	16.8	17.4
Mali	9.2	10.6	12.0	10.9	10.3	11.4	12.6	12.4	12.5	10.0	8.8	10.5	10.2	10.3	8.6	9.4	11.7	12.2	12.8	13.0	12.3	12.7	14.6	14.8	15.3	15.6	14.8	15.2	13.8	14.9	14.8
Mauritius	17.3	17.6	16.4	18.0	18.9	17.8	17.8	18.0	19.1	19.7	19.5	19.8	18.3	17.2	17.0	14.8	14.4	15.9	15.5	16.0	16.4	14.8	14.6	15.9	16.0	18.0	17.4	17.7	18.5	19.4	18.8
Mozambique	7.5	10.1	10.9	12.1	11.2	6.8	7.3	15.9	9.9	11.4	8.1	9.6	11.4	12.4	10.5	10.6	8.7	9.6	9.6	9.9	10.4	10.0	10.7	12.3	12.1	12.3	13.0	12.9	13.7	14.7	18.1
Namibia			18.5	19.2	19.9	19.0	23.4	26.0	22.7	22.1	27.5	22.6	25.5	26.6	25.1	25.4	24.6	25.0	29.6	27.1	28.7	28.5	26.9	31.2	24.1	24.3	22.9	23.5	26.8	28.0	26.5
Niger	12.3	10.9	9.9	9.1	9.6	9.2	9.4	8.6	7.8	8.2	7.9	7.1	6.8	6.6	5.4	7.1	7.1	7.7	8.4	8.5	8.7	9.4	10.0	9.9	11.0	9.8	11.8	12.4	16.4	13.2	12.8
Nigeria	30.9	25.0	21.6	17.5	18.0	14.5	22.2	22.0	19.9	23.9	32.6	30.1	32.2	32.1	21.7	14.1	14.0	14.8	11.4	26.6	36.7	39.7	26.4	29.8	33.6	37.6	32.9	26.5	31.6	16.7	21.4
Rwanda	9.6	9.4	9.1	8.6	8.8	10.0	11.7	10.8	10.3	10.0	9.1	9.5	9.3	8.8	3.6	6.7	8.8	10.0	10.3	10.0	9.7	10.7	11.9	11.6	11.2	11.3	11.2	11.6	12.8	11.7	12.0
São Tomé and Príncipe	15.1	9.9	15.1	9.9	11.8	11.3	8.0	9.4	6.9	5.2	4.5	5.4	6.3	4.9	3.7	4.2	3.0	5.0	7.3	9.8	9.7	11.4	11.5	12.5	15.5	18.5	17.4	16.4	14.9	13.2	15.6
Senegal	17.4	13.1	13.7	15.6	15.0	14.3	12.8	12.9	13.8	12.5	14.1	15.2	15.5	13.7	12.4	13.6	14.3	14.7	14.8	15.5	16.1	16.1	16.9	17.0	17.4	18.3	18.6	19.3	18.2	17.7	18.1
Seychelles	30.7	34.3	35.6	33.7	33.8	33.7	35.5	40.0	36.5	38.0	38.3	34.3	34.6	42.9	41.7	38.7	34.3	34.6	33.5	34.3	33.5	31.6	32.8	39.8	33.6	30.8	30.0	27.8	28.2	30.9	31.2
Sierra Leone	12.9	13.8	10.0	6.2	5.4	4.2	2.6	5.2	4.4	5.1	7.9	7.5	10.1	12.0	12.2	9.0	9.9	5.5	7.2	7.0	10.8	12.7	11.9	12.2	11.5	10.4	10.3	9.6	12.2	12.5	12.1
South Africa	15.6	17.3	17.5	18.2	17.3	18.4	19.6	19.5	18.0	19.1	21.1	20.1	19.4	17.8	19.5	20.8	20.6	21.5	22.3	22.7	21.8	21.6	21.5	22.2	21.4	22.6	23.6	24.6	25.2	26.1	22.5
Swaziland	15.7	16.3	11.8	14.5	13.3	14.0	14.2	12.8	15.4	16.5	15.1	21.0	19.9	17.5	18.0	17.7	20.4	20.5	21.8	22.5	22.7	22.2	22.6	24.8	32.2	42.1	36.0	38.6	34.7	24.4	
Tanzania	14.2	14.1	13.0	14.0	14.4	14.3	12.3	13.5	8.0	9.5	9.3	10.3	10.6	8.1	9.1	9.4	9.7	10.4	9.7	9.1	9.1	9.7	9.6	9.7	10.1	11.7	13.0	15.3	16.4	15.7	15.8
Togo	29.2	25.3	26.9	23.1	25.2	30.2	25.7	20.3	18.2	19.3	16.9	13.8	11.2	7.7	10.8	13.6	12.1	12.3	12.8	12.3	11.3	12.5	11.2	15.3	15.7	14.5	15.6	16.2	14.9	15.4	15.7
Uganda	2.7	1.2	6.5	9.4	8.3	7.5	6.1	3.6	4.8	4.2	6.3	7.6	6.5	7.0	8.0	9.3	9.9	10.6	10.0	10.9	9.9	10.0	10.6	10.8	10.1	11.4	11.8	11.9	12.3	11.8	11.8
Zambia	23.0	21.4	21.5	22.8	20.5	20.1	21.8	21.1	15.2	17.7	19.8	18.2	17.4	15.3	18.6	18.1	18.9	18.7	18.1	22.9	22.9	24.6	17.5	17.3	17.5	17.2	16.4	17.9	18.0	15.3	16.9
Zimbabwe	16.3	17.5	23.2	25.0	27.2	20.9	21.7	23.5	22.0	21.3	20.6	20.0	24.2	21.8	19.9	21.1	18.5	21.5	35.4	24.3	22.8	18.1	16.8	24.0	32.5			2.9	15.1	30.4	

Direct Taxes

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	
Angola																	0.9	1.5	2.2	1.7	1.6	2.9	2.7	2.9	2.8	5.2	4.4	3.7	3.9	3.6	4.2	
Benin	1.1	3.4	3.5	3.4	2.4	2.4	3.3	3.2	2.8	2.4	2.3	2.3	2.8	3.0	3.9	3.9	3.8	3.2	3.4	3.2	3.3	3.2	3.5	3.4	3.8	3.6	3.7	3.9	3.9	3.6	3.6	
Botswana	3.9	3.9	3.6	4.2	4.4	3.6	3.4	3.2	3.6	3.9	5.2	3.5	3.9	3.4	3.7	2.9	2.2	2.0	2.4	2.9	2.9	2.6	3.2	4.6	4.4	4.0	4.4	4.0	4.3	5.6	5.5	
Burkina Faso	1.7	1.6	1.5	1.5	1.8	1.3	1.8	2.2	2.0	2.0	2.4	2.4	2.3	2.2	2.0	2.5	3.0	2.8	2.6	2.9	3.3	2.7	2.8	2.7	2.8	3.0	2.9	3.2	3.0	3.0	3.1	
Burundi	2.6	3.0	3.5	3.1	2.9	2.6	2.9	2.5	3.3	2.8	3.5	4.0	4.0	4.7	3.6	3.7	4.0	3.5	4.6	4.1	3.9	5.2	5.0	5.0	4.9	4.9	4.9	5.0	5.0	4.6	5.5	
Cameroon	3.1	4.3	6.2	6.4	2.8	1.8	2.1	2.0	2.6	2.2	1.8	1.5	1.4	1.3	1.1	1.2	1.3	1.8	2.2	2.8	2.8	3.1	3.4	2.9	2.7	3.0	2.8	3.1	3.1	3.2	3.0	
Cape Verde	3.4	4.3	5.8	5.6	5.1	4.1	4.4	4.1	3.8	3.8	4.0	3.9	4.4	5.2	5.6	5.6	5.5	5.8	5.5	5.2	6.1	6.9	7.7	7.3	7.3	6.8	7.1	7.1	7.3	6.3	5.7	
Central African Republic	2.8	2.4	2.8	3.0	2.7	2.4	2.6	2.6	2.4	2.1	2.6	2.2	2.0	1.8	1.8	1.9	1.6	2.1	2.3	2.3	1.9	2.2	2.5	2.1	2.3	2.0	2.2	1.8	1.7	2.0	2.1	
Chad	0.0	0.0	0.3	0.2	0.4	0.9	1.0	1.1	1.1	1.6	1.6	1.8	1.9	1.5	1.3	2.3	2.6	2.4	2.2	2.5	2.3	2.3	3.1	3.3	2.3	1.9	2.0	2.8	2.6	3.4	3.6	
Comoros	0.4	0.4	0.5	1.1	1.1	1.3	1.9	1.3	3.1	1.9	3.4	1.9	2.4	1.3	1.8	1.6	1.2	1.5	1.7	2.0	1.8	1.2	2.2	2.3	2.5	1.7	2.2	2.6	2.0	1.8	2.4	
Congo, Rep. of	3.6	4.1	6.8	5.8	4.2	4.6	3.9	3.7	3.1	3.0	2.8	4.4	5.4	4.2	3.5	2.5	3.0	2.5	3.4	2.9	2.1	2.9	2.7	3.2	2.9	2.5	2.2	2.6	2.3	3.1	3.0	
Côte d'Ivoire	4.8	5.1	4.7	5.1	4.4	3.8	5.1	5.3	5.2	4.5	4.8	4.1	4.1	3.2	2.7	3.7	4.1	4.4	4.3	4.2	4.5	4.2	4.2	3.6	3.5	5.2	5.4	5.1	5.2	5.4	5.2	
Equatorial Guinea	2.0	2.6	1.7	3.0	0.8	0.6	0.7	0.9	1.3	1.0	0.6	0.8	0.4	0.4	0.6	0.4	0.6	0.6	0.9	0.7	0.4	0.7	1.0	0.7	0.7	0.6	0.7	0.5	0.4	0.9	0.8	
Ethiopia	2.2	2.8	2.9	3.0	3.5	3.1	3.4	3.8	4.2	4.2	3.4	2.8	2.1	1.8	2.2	2.5	3.0	3.0	3.0	3.1	3.3	3.7	4.5	3.9	3.6	2.1	2.1	2.2	2.2	2.6	3.1	
Gabon	3.2	2.6	3.0	3.0	3.1	3.4	3.6	4.7	4.0	4.1	3.2	3.5	3.1	2.9	2.5	3.1	2.8	3.2	4.1	3.2	2.3	2.8	3.9	3.5	3.9	3.0	3.2	3.5	3.4	4.5	3.6	
Gambia	2.4	2.5	2.0	1.5	1.9	2.1	2.0	1.9	1.8	2.0	2.0	1.7	2.0	2.6	2.5	2.5	2.3	2.8	2.9	2.8	2.9	2.7	3.0	3.0	3.5	3.8	4.3	4.3	4.9	3.7	3.8	
Ghana	1.2	2.2	1.5	1.6	1.4	1.7	2.3	2.3	2.8	2.3	1.9	1.5	1.3	1.9	2.3	2.7	2.9	2.8	2.8	2.7	3.5	4.0	3.7	4.2	4.0	4.1	3.8	4.1	4.2	4.7	5.3	
Guinea	2.2	0.9	2.7	0.9	0.9	0.6	3.6	4.3	1.2	1.3	2.5	0.6	0.8	0.8	0.9	1.0	1.1	1.1	1.1	1.2	1.1	1.3	1.5	1.4	1.7	1.9	2.5	2.4	3.1	2.7		
Guinea-Bissau	1.4	1.2	0.9	0.9	1.0	1.0	0.7	0.6	0.5	0.6	0.9	0.4	0.4	0.5	0.6	0.6	0.8	0.4	0.8	1.2	1.0	0.8	1.1	1.0	1.6	1.8	1.8	1.9	2.2	2.6		
Kenya	4.5	4.5	4.0	4.1	4.0	4.2	4.2	4.1	4.4	4.3	4.3	4.5	4.7	4.4	6.9	7.0	7.0	6.4	6.6	6.1	5.6	5.5	5.7	6.1	6.3	7.0	7.0	7.2	8.0	7.8	8.2	
Lesotho	3.2	4.4	4.2	4.2	3.7	3.5	3.9	4.5	3.7	3.4	3.7	3.8	6.3	6.7	5.9	7.2	7.5	7.2	7.2	7.6	7.6	7.5	8.2	8.9	10.5	11.0	10.4	10.4	11.9	12.4	12.2	
Madagascar	2.8	3.2	2.4	2.2	2.7	1.7	1.8	1.6	1.5	1.1	1.5	1.3	1.3	1.6	1.7	1.2	1.6	1.8	1.8	1.7	1.8	2.0	1.8	1.7	2.0	2.2	2.7	2.6	3.3	2.8	2.7	
Malawi	5.9	5.9	5.0	5.5	5.5	6.0	6.8	6.3	5.3	6.6	7.4	6.0	6.4	4.7	5.0	3.6	4.1	5.6	6.5	6.2	6.3	7.1	4.6	5.1	5.5	6.1	6.1	6.6	6.7	7.3	8.3	
Mali	1.9	1.7	1.7	1.6	1.5	1.6	1.7	1.3	1.3	1.4	1.6	1.5	1.6	1.4	1.4	1.9	2.3	2.4	2.5	1.9	1.5	1.8	2.0	2.6	2.6	2.7	2.6	2.6	2.5	2.8	2.8	
Mauritius	3.0	3.6	3.2	2.9	2.9	2.4	2.1	2.5	2.7	2.9	3.1	3.0	3.1	2.4	2.2	2.4	2.5	2.6	2.4	2.4	2.3	2.2	2.4	2.5	2.6	4.5	4.7	5.2	6.1	6.7	5.8	
Mozambique	1.2	1.7	2.9	3.3	3.0	2.2	2.0	2.2	2.6	2.6	1.6	2.0	2.0	2.0	2.1	1.9	1.7	2.0	1.9	1.5	1.6	1.8	2.1	2.9	2.7	2.9	3.5	4.5	4.2	4.5	5.9	
Namibia			3.5	2.6	4.6	5.6	8.6	10.3	8.8	6.6	10.6	8.3	6.5	8.3	8.1	8.1	7.3	8.1	10.5	9.8	9.8	9.5	10.0	13.1	10.0	8.7	8.1	7.5	7.7	8.8	8.8	
Niger	3.5	2.6	2.1	2.1	2.1	2.4	2.4	2.2	2.3	2.5	2.0	2.1	2.4	2.1	1.5	2.1	1.7	1.5	1.6	1.6	1.5	1.7	1.6	1.8	2.0	1.8	2.0	2.2	2.4	3.4	3.2	
Nigeria	1.3	1.1	1.3	2.0	1.3	1.5	2.5	1.1	1.1	0.9	1.2	1.2	1.0	1.3	1.5	1.2	0.8	1.0	1.3	1.4	1.3	1.7	1.4	1.4	1.3	1.2	1.6	2.0	2.2	3.1	2.7	
Rwanda	2.1	2.7	2.1	1.7	1.9	1.9	2.0	2.5	2.7	2.5	2.4	2.1	2.2	2.2	0.9	0.9	2.4	2.6	2.9	2.5	2.6	3.2	3.7	3.5	3.2	3.5	3.7	4.2	4.8	4.5	5.0	
São Tomé and Príncipe	2.7	1.1	4.2	3.6	3.4	3.5	2.2	2.5	1.2	1.0	0.9	0.9	0.6	0.6	0.5	1.0	0.9	2.2	2.4	3.1	3.3	3.5	4.1	3.6	4.2	4.5	4.7	4.5	4.0	4.1	3.9	
Senegal	4.1	3.7	3.3	3.5	3.8	3.6	3.4	3.3	3.8	3.6	3.9	4.2	4.0	3.7	2.9	3.3	3.3	3.5	3.6	3.4	3.9	3.7	3.9	4.0	4.2	4.7	4.5	4.3	4.6	4.8	4.9	
Seychelles	9.3	11.0	10.8	9.6	9.1	9.6	8.8	9.8	6.6	8.4	7.8	6.5	5.8	5.6	5.5	5.9	4.6	4.6	5.2	6.7	7.0	6.3	6.6	7.3	6.3	10.6	11.0	9.7	9.4	11.1	10.7	
Sierra Leone	3.1	3.7	2.4	1.9	1.6	1.2	0.7	1.0	1.7	1.4	1.9	1.9	2.3	2.9	2.6	1.4	1.6	1.5	1.2	1.8	2.9	3.4	3.1	3.1	3.4	3.3	3.3	2.9	3.4	3.3	4.0	
South Africa	5.4	7.1	7.6	8.4	8.1	8.7	9.1	8.5	8.4	8.8	10.2	10.2	10.8	10.1	10.2	10.6	10.8	11.3	12.0	12.3	11.7	11.4	11.5	11.8	11.2	11.6	12.1	12.9	13.7	15.0	12.7	
Swaziland	4.4	4.2	4.0	3.6	3.4	3.8	4.0	3.8	6.2	6.1	5.5	7.0	7.1	6.8	6.3	5.9	5.7	6.1	6.1	6.2	6.6	6.0	5.8	6.0	7.5	8.0	8.5	8.0	8.3	9.3	9.6	
Tanzania	5.0	4.7	4.4	4.6	4.3	4.0	3.9	3.3	2.0	2.5	2.3	2.8	2.8	2.5	2.4	2.7	2.8	3.2	2.6	2.4	2.7	2.3	2.3	2.4	2.8	3.4	3.9	4.7	5.2	4.9	5.1	
Togo	11.5	8.7	10.7	10.1	12.5	11.7	10.1	7.9	6.9	7.8	6.5	4.8	4.5	2.9	4.4	5.6	4.2	3.7	3.3	3.4	2.9	3.9	2.8	4.8	4.9	3.9	4.1	3.8	3.3	3.8	3.9	
Uganda	0.3	0.2	0.6	0.5	0.6	0.5	0.3	0.4	0.4	0.5	0.6	0.8	0.9	1.1	1.3	1.5	1.4	1.6	1.7	2.1	1.9	2.2	2.6	2.8	2.8	3.5	3.6	3.7	3.5	3.6	3.9	
Zambia	9.5	8.1	7.6	8.4	6.5	6.2	6.1	6.9	6.3	7.4	7.8	6.5	6.5	5.5	5.7	5.7	5.6	5.7	6.3	9.4	9.0	10.0	7.6	7.8	7.8	7.7	7.1	7.0	7.6	7.2	7.3	
Zimbabwe	9.2	9.9	12.3	12.6	12.5	9.9	10.3	12.1	11.8	10.7	10.8	10.6	11.1	11.6	11.0	11.2	9.4	10.9	18.7	13.0	14.4	10.4	9.3	13.3	17.1					1.0	3.8	11.4

Individual Tax

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	
Angola																	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Benin	0.4	0.4	0.5	0.5	1.1	0.7	0.9	0.9	1.0	0.9	0.9	0.9	0.9	1.0	1.1	0.8	0.9	1.0	1.1	1.1	1.3	1.3	1.4	1.5	1.8	1.7	1.4	1.6	1.9	1.8	1.7	
Botswana	1.7	2.0	1.8	2.0	1.9	1.6	1.6	1.5	1.0	1.1	1.0	1.3	1.4	1.2	1.7	1.7	1.3	1.2	1.4	1.7	1.7	1.5	1.9	2.7	2.5	1.6	1.8	1.6	2.0	3.9	3.8	
Burkina Faso	1.0	0.9	1.0	1.0	1.1	0.9	0.9	1.1	1.2	1.2	1.5	1.2	1.2	0.9	1.0	1.0	1.2	1.2	1.2	1.2	1.3	1.1	1.2	0.9	1.1	1.2	1.3	1.5	1.3	1.5	1.6	
Burundi	1.1	1.6	1.7	1.5	1.4	1.3	1.5	1.0	1.6	1.6	1.8	1.8	1.5	1.5	1.8	1.6	1.9	1.8	2.3	2.3	1.6	1.5	1.7	1.8	2.0	1.9	2.0	2.2	2.2	1.9	2.6	
Cameroon	1.6	2.1	2.0	1.9	1.9	1.5	0.9	1.0	1.0	0.8	0.9	0.8	1.0	0.9	0.7	0.8	0.7	0.6	0.7	0.9	0.9	0.9	1.1	1.1	0.7	1.1	1.1	1.1	1.3	1.3	1.4	1.4
Cape Verde	0.2	0.3	0.5	0.5	0.7	0.7	0.7	0.7	0.6	0.7	2.3	2.2	2.6	2.8	2.6	2.7	3.7	5.6	3.1	3.4	4.6	4.4	4.7	4.7	4.9	4.1	4.3	4.2	4.1	3.5	3.4	
Central African Republic	1.5	1.1	1.2	1.5	1.5	1.2	1.3	1.7	1.1	1.1	1.0	1.2	1.0	0.8	1.1	0.9	0.9	0.9	0.6	1.0	0.9	1.0	1.1	1.0	1.1	0.8	0.9	1.0	0.9	1.0	0.8	
Chad			0.2	0.2	0.3	0.5	0.6	0.5	0.6	1.0	1.1	1.2	1.3	1.0	0.7	1.0	1.0	1.2	1.0	1.1	1.0	1.0	1.6	1.9	1.2	1.0	1.0	1.3	1.0	1.6	1.5	
Comoros	0.2	0.2	0.2	0.5	0.5	0.4	0.5	0.2	0.3	0.2	0.2	0.3	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.4	0.5	0.4	0.7	0.8
Congo, Rep. of	1.7	1.2	1.8	1.8	1.7	2.3	2.1	2.2	2.0	1.8	1.9	2.5	3.2	2.0	1.9	1.2	1.4	1.2	1.6	1.4	1.0	1.4	1.3	1.5	1.4	1.2	1.0	1.2	1.1	1.5	1.4	
Côte d'Ivoire	1.5	1.7	0.9	1.0	1.0	0.9	1.8	1.9	1.9	1.8	2.1	1.8	1.9	1.6	1.3	1.2	1.2	1.4	1.4	1.5	1.7	1.7	1.8	1.7	1.7	1.9	2.2	2.0	2.1	2.1	2.1	
Equatorial Guinea	0.3	1.2	1.1	2.3	0.7	0.6	0.5	0.6	0.7	0.5	0.3	0.6	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.4	0.3	0.4	0.6	0.3	0.2	0.2	0.2	0.1	0.1	0.3	0.2	
Ethiopia	0.7	0.8	0.8	0.8	1.0	0.8	0.9	1.0	1.1	1.1	1.1	0.9	0.8	0.7	0.7	0.6	0.6	0.6	0.8	0.9	0.9	1.0	1.1	1.1	1.1	1.1	0.5	0.4	0.5	0.4	0.4	
Gabon	0.9	0.9	1.0	1.0	1.1	1.1	1.2	1.8	1.6	1.8	1.4	1.7	1.7	1.7	1.4	1.4	1.2	1.3	1.5	1.3	0.7	1.0	1.8	1.7	1.6	1.3	1.3	1.4	1.3	2.0	1.5	
Gambia	1.2	1.2	0.8	0.9	1.2	1.0	0.7	0.7	0.5	0.8	0.7	0.7	0.8	0.7	1.1	1.1	1.2	1.2	1.1	1.2	1.1	1.2	1.1	1.2	1.3	1.3	1.3	1.7	1.9	1.7	1.9	
Ghana	0.6	1.1	0.8	0.8	0.6	0.7	0.9	0.8	0.8	0.6	0.6	0.5	0.4	0.8	0.8	0.8	0.9	1.0	1.1	1.1	1.4	1.5	1.5	1.8	1.7	1.5	1.7	1.7	1.7	2.1	2.2	
Guinea	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.4	0.4	0.5	0.5	0.6	0.7	0.6	0.6	0.6	0.6	0.4	0.5	0.5	0.5	0.4	0.5	0.6	0.6	0.6	0.7	
Guinea-Bissau	0.3	0.2	0.2	0.2	0.6	0.6	0.4	0.3	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.5	0.5	0.3	0.2	0.2	0.2	0.4	0.5	0.5	0.5	0.6	0.6	
Kenya																																
Lesotho	2.2	3.0	2.7	2.7	2.2	2.2	2.6	2.5	2.7	2.0	2.1	1.8	3.4	4.2	3.9	4.4	5.3	5.0	4.7	5.4	5.5	5.0	5.3	5.4	6.1	6.9	6.3	6.7	6.3	5.8	6.9	
Madagascar	1.3	1.5	1.1	1.0	1.2	0.8	0.8	0.8	0.6	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.7	0.7	0.7	0.8	0.7	0.8	0.7	0.8	0.9	1.1	1.0	1.1
Malawi	2.3	2.3	2.2	2.4	2.4	2.3	2.1	2.3	2.4	2.6	3.0	2.4	2.6	2.4	2.6	2.0	2.1	1.9	2.9	2.7	3.0	3.1	2.0	2.4	2.8	3.2	3.5	3.4	3.8	3.9	4.4	
Mali	0.8	0.7	0.5	0.5	0.5	0.6	0.6	0.7	0.6	0.7	0.6	0.7	0.7	0.7	0.7	1.0	0.9	0.9	1.0	0.9	0.8	0.9	1.3	1.2	1.3	1.4	1.4	1.3	1.4	1.5	1.5	
Mauritius	1.7	1.8	1.8	1.8	1.8	1.1	1.2	1.3	1.4	1.3	1.4	1.2	1.1	1.2	1.0	1.2	1.2	1.4	1.2	1.2	1.1	1.1	1.1	1.1	1.2	1.5	1.3	1.3	1.6	1.9	1.8	
Mozambique	0.7	0.9	1.2	1.3	1.2	0.9	0.9	0.4	0.5	0.5	0.4	0.6	0.9	0.9	1.0	1.0	1.0	1.1	1.0	0.8	1.0	1.2	1.3	1.8	1.9	1.9	2.1	2.6	2.2	2.3	2.8	
Namibia										0.3	3.8	4.4	4.8	5.4	4.7	4.5	4.4	5.1	5.1	6.0	6.4	5.4	5.6	6.4	6.5	5.8	5.4	5.3	5.0	5.9	5.9	
Niger	0.6	0.5	0.5	0.8	1.0	1.1	1.1	1.2	1.1	1.0	0.9	0.9	0.5	0.9	0.6	0.8	0.8	0.6	0.6	0.6	0.6	0.8	0.6	0.7	0.8	0.6	0.7	0.7	0.7	0.9	0.9	
Nigeria	0.0	0.0	0.0	0.0	0.0	0.0																										
Rwanda	0.8	1.7	1.0	0.9	0.9	0.9	1.0	1.0	1.1	1.0	0.9	0.9	0.8	0.8	0.2	0.5	0.7	0.8	0.7	1.0	1.1	1.2	1.4	1.7	1.5	1.8	2.1	2.4	2.6	2.4	2.6	
São Tomé and Príncipe	1.2	0.6	0.0	0.5	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.3	0.3	0.2	0.3	0.4	0.5	1.0	1.1	0.9	1.6	1.9	1.8	1.8	2.3	2.6	2.9	2.7	2.5	2.5	2.5	
Senegal	1.5	1.4	1.2	1.1	1.0	1.0	1.0	1.0	1.2	1.2	0.8	2.2	2.2	2.0	1.6	1.8	1.8	2.0	1.9	1.7	1.9	1.6	2.0	2.0	2.0	2.2	2.2	2.2	2.5	2.9	2.9	
Seychelles	5.7	6.5	6.6	6.3	5.8	5.5	5.5																									
Sierra Leone	1.0	1.2	1.1	0.9	0.7	0.5	0.3	0.4	0.4	0.4	0.6	0.6	0.8	0.9	0.9	0.7	0.8	0.8	0.6	1.1	1.8	2.1	1.7	1.5	1.6	1.4	1.4	1.5	1.9	1.9	2.7	
South Africa	3.1	4.1	3.8	4.5	5.1	5.7	5.8	5.6	5.6	5.5	6.4	6.7	7.4	7.2	7.8	8.2	8.3	8.7	9.2	9.6	9.3	8.5	7.7	7.4	7.0	7.1	7.1	7.0	7.4	8.1	7.7	
Swaziland	1.6	2.0	2.0	1.8	1.8	2.0	1.9	2.1	2.2	2.2	1.6	2.1	1.9	1.8	2.0	2.1	2.4	2.8	3.0	3.2	3.8	3.8	3.4	3.6	4.7	4.7	4.9	5.9	5.6	6.5	6.7	
Tanzania	1.6	1.8	1.3	1.7	1.6	1.6	1.4	1.1	0.5	0.5	0.5	0.4	0.5	0.6	0.5	0.9	0.8	0.8	0.8	0.8	1.0	1.1	1.2	1.2	1.4	1.9	2.1	2.4	2.8	2.7	2.8	
Togo	1.9	1.6	2.0	2.0	1.7	2.2	1.9	2.1	1.8	1.7	1.9	1.8	1.9	0.8	1.4	1.3	1.1	1.2	1.1	1.1	1.2	1.2	1.5	1.8	2.2	2.2	2.2	1.9	1.6	2.2	2.2	
Uganda	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1										0.6	0.8	0.9	1.0	1.3	1.4	1.3	1.5	1.7	1.7	1.8	1.9	
Zambia							2.2	1.4	1.2	1.2	1.5	2.2	3.8	2.8	3.8	4.4	4.4	4.6	4.8	3.0	2.7	2.8	5.9	6.6	6.5	6.4	5.7	5.7	6.1	5.8	5.9	
Zimbabwe	5.0	5.4	6.3	6.3	7.2	6.0	6.4	7.3	6.8	6.8	6.5	6.6	6.9	6.9	6.1	6.3	5.2	7.0	13.1	8.6	9.9	7.5	6.9	10.7	13.3				0.5	2.7	5.7	

Indirect Taxes

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Angola																	0.9	1.7	2.6	2.1	1.9	3.2	3.2	3.1	2.4	2.2	2.0	2.0	2.1	2.5	2.1
Benin	0.7	1.2	1.2	1.3	1.0	1.0	1.0	0.7	0.8	0.5	0.8	1.0	1.6	1.7	4.6	4.8	5.3	6.0	5.7	6.3	7.7	7.3	7.9	7.8	8.3	7.0	7.2	8.0	8.0	8.1	7.8
Botswana	0.2	0.2	0.2	0.4	0.6	0.3	0.3	0.4	0.4	0.3	0.5	0.8	0.9	1.2	1.3	1.3	1.3	1.3	1.4	1.5	1.7	1.5	1.3	3.1	3.3	4.3	3.0	2.9	3.2	4.3	4.6
Burkina Faso	1.2	1.2	1.4	1.6	1.3	1.2	1.2	2.6	2.8	2.6	1.5	1.3	1.2	1.4	3.2	3.2	4.0	4.6	4.4	5.8	5.2	5.4	5.8	6.0	6.9	6.4	6.1	6.7	6.6	7.2	7.1
Burundi	3.2	3.6	5.3	5.1	4.9	4.8	5.1	5.2	5.5	5.9	6.2	6.7	6.6	6.7	7.3	7.6	6.1	6.0	6.2	7.4	9.1	8.9	8.9	9.1	9.2	9.1	8.9	8.7	8.7	9.0	10.6
Cameroon	2.3	2.2	2.0	1.8	2.4	2.0	2.5	2.1	3.0	2.9	2.7	2.4	2.1	2.3	4.6	4.7	5.0	4.6	5.1	5.5	5.8	5.8	5.7	5.1	5.4	6.1	6.3	6.4	6.4	6.5	6.2
Cape Verde	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	0.5	0.6	3.2	3.2	2.9	2.9	3.0	3.4	3.2	3.3	8.6	10.1	10.8	11.5	8.9	8.9
Central African Republic	2.2	2.8	3.0	3.1	3.0	2.3	1.8	1.8	2.2	2.6	3.6	2.5	2.8	2.2	2.5	3.0	2.3	3.8	4.5	4.5	4.7	3.6	4.8	3.1	3.3	2.8	3.0	3.5	3.2	3.4	3.9
Chad			0.6	0.5	0.5	0.7	0.6	0.9	1.1	1.6	1.8	1.7	1.6	1.5	1.2	0.8	1.2	1.6	1.2	1.7	1.9	1.6	1.4	1.3	1.1	0.7	0.7	1.0	0.9	1.2	1.4
Comoros	0.1	0.2	0.4	0.9	0.5	0.8	1.1	1.0	1.1	1.0	1.2	2.4	5.7	5.5	5.0	4.9	4.9	4.8	3.7	3.8	3.7	3.5	4.0	4.6	5.3	3.6	3.2	3.8	3.1	2.6	2.5
Congo, Rep. of	2.4	3.0	4.1	3.7	4.4	3.9	3.8	2.8	2.8	2.6	2.5	2.8	0.5	2.0	1.3	4.0	3.4	1.4	4.1	2.9	2.4	4.1	3.7	3.4	3.2	2.7	2.4	2.8	2.5	3.3	3.2
Côte d'Ivoire	6.1	6.3	6.9	5.8	4.9	3.3	8.0	8.8	8.3	7.8	7.8	8.3	9.4	7.4	6.0	6.1	6.2	6.0	5.6	6.1	6.1	6.5	6.0	5.5	5.7	4.4	4.6	5.0	5.0	6.2	6.2
Equatorial Guinea	1.5	1.7	1.3	1.7	3.1	2.2	5.2	5.9	6.5	7.0	6.2	5.7	5.4	5.4	4.0	3.8	2.1	1.8	2.5	1.6	0.9	1.0	0.9	1.1	0.8	0.5	0.6	0.5	0.4	0.8	0.6
Ethiopia	3.1	3.2	3.1	3.1	3.5	3.1	3.0	3.5	3.6	3.1	2.9	3.2	2.3	2.7	3.3	3.1	3.3	3.7	3.8	3.7	3.7	4.0	4.8	4.8	5.8	5.7	5.7	5.4	4.6	5.1	6.3
Gabon	1.3	1.7	2.0	1.9	1.9	2.1	2.2	4.1	3.6	3.2	2.6	3.0	3.6	3.6	2.5	2.5	1.5	2.3	2.8	2.0	2.2	2.0	2.4	3.1	3.0	2.5	2.3	2.3	2.0	2.7	2.5
Gambia	0.5	0.5	0.5	0.5	0.7	1.3	0.8	0.9	1.0	4.4	5.1	5.4	5.4	5.2	4.7	3.5	3.7	4.0	3.8	3.4	3.3	3.0	2.6	2.4	3.0	5.3	6.0	6.4	5.7	5.3	5.1
Ghana	2.1	3.5	2.1	1.5	1.9	1.9	3.7	3.0	3.3	3.5	3.5	4.2	3.3	4.8	5.3	5.0	4.9	3.8	4.0	4.0	5.0	5.4	5.0	6.3	5.9	6.7	6.4	6.4	6.0	5.3	5.3
Guinea	0.1	0.1	0.4	0.1	0.1	0.1	0.6	1.2	2.0	2.6	2.3	3.0	3.0	3.1	3.4	3.8	3.5	4.4	3.9	3.8	3.1	4.1	4.3	4.6	4.6	5.2	4.1	5.0	6.0	5.9	5.7
Guinea-Bissau	1.9	1.9	1.7	0.7	0.5	1.1	0.6	0.5	0.7	0.4	0.7	0.8	0.5	0.6	0.5	1.3	0.8	0.9	0.6	1.6	2.1	2.1	1.8	1.9	1.7	2.4	2.2	2.0	2.1	2.6	3.2
Kenya	5.7	5.6	5.2	4.8	5.3	4.9	4.7	5.4	6.1	6.0	5.7	6.0	6.9	6.6	7.6	7.1	7.4	7.0	7.5	7.5	7.2	7.7	8.0	8.4	8.4	8.5	7.8	8.3	8.4	8.3	8.5
Lesotho	0.0	0.1	0.3	1.6	3.9	3.2	3.9	7.1	6.1	6.7	7.7	6.7	6.0	6.3	6.2	6.0	6.0	5.8	5.7	5.3	5.1	5.4	5.0	5.7	7.4	8.5	7.9	8.4	8.1	8.6	8.3
Madagascar	5.4	3.6	4.1	4.2	4.3	3.6	3.4	3.3	3.6	3.5	3.7	2.3	3.4	3.0	3.6	3.9	3.3	3.5	4.5	6.5	6.8	5.7	4.4	5.8	6.7	6.5	6.6	7.1	8.0	6.8	7.1
Malawi	4.9	5.1	5.1	4.9	4.7	5.4	5.3	5.2	5.0	5.8	6.8	5.4	5.8	4.5	5.8	3.8	4.1	4.4	5.4	5.1	5.6	6.6	4.4	5.2	5.8	6.1	6.1	6.7	7.4	7.6	7.2
Mali	3.7	4.4	4.8	4.0	4.2	4.4	3.4	3.1	5.1	2.9	2.9	4.1	4.3	4.3	3.7	4.0	5.0	5.4	5.4	6.8	6.1	6.3	7.1	7.1	7.9	7.4	7.0	6.7	6.0	6.4	6.2
Mauritius	2.8	3.0	3.0	3.4	3.2	3.0	2.8	2.8	3.0	3.5	3.5	3.6	3.5	3.5	3.5	3.9	4.2	5.4	5.5	6.7	6.4	6.0	6.4	7.5	7.6	8.8	9.7	10.7	10.5	10.6	10.9
Mozambique	4.1	5.4	5.4	5.8	4.6	2.9	3.8	3.9	5.1	5.9	4.2	4.7	5.3	6.7	5.5	5.6	4.7	5.4	5.6	6.3	6.6	6.1	6.4	7.0	7.3	7.3	7.3	6.6	8.0	8.7	10.3
Namibia			2.5	3.6	3.6	4.1	4.8	5.3	5.6	5.0	6.2	6.1	6.7	8.5	7.9	8.9	8.6	8.0	7.9	7.6	7.9	6.9	6.3	6.1	5.3	4.7	6.1	5.1	5.5	5.6	6.1
Niger	3.1	2.9	2.7	2.9	3.1	2.8	4.6	3.9	3.4	3.2	2.9	2.4	2.2	2.1	2.0	2.4	2.2	3.0	3.2	3.5	3.7	4.4	4.5	4.2	4.6	5.2	5.2	5.5	5.0	5.7	5.4
Nigeria	0.8	1.1	1.3	1.5	1.1	1.5	1.3	0.7	0.6	0.8	1.0	1.1	1.2	1.1	0.8	2.0	2.6	2.5	2.6	2.2	1.8	2.5	1.5	1.6	1.3	2.4	1.2	1.4	1.6	1.9	1.8
Rwanda	2.3	2.3	2.4	2.6	2.5	2.8	2.9	3.4	3.4	3.6	3.3	3.5	3.0	3.2	1.2	2.7	3.1	3.6	4.3	5.1	4.8	5.5	5.9	4.3	5.8	5.8	5.6	5.9	6.3	5.9	5.9
São Tomé and Príncipe	4.7	3.1	2.9	1.5	2.9	2.2	1.6	1.1	1.4	0.8	1.3	2.0	2.7	1.9	1.3	1.2	0.7	1.0	1.9	2.6	3.3	4.5	3.7	4.3	5.1	5.8	4.0	3.5	2.9	3.1	3.8
Senegal	5.5	4.0	3.9	3.9	4.4	4.1	3.8	3.8	3.8	3.5	3.7	3.8	3.5	3.3	3.1	3.3	5.6	6.2	6.8	8.1	9.4	9.1	9.5	9.6	8.2	10.2	10.4	10.8	9.6	9.5	9.7
Seychelles	4.1	5.4	4.6	5.3	6.5	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.9	7.1	7.6	7.7	7.2	7.1	7.8	7.5	7.8	7.3	9.8	9.2	12.1	11.6	11.7	10.9	12.6	14.4
Sierra Leone	2.4	3.1	2.6	1.7	1.4	1.0	0.5	0.8	0.9	1.0	1.8	2.1	3.2	3.8	4.0	3.3	2.9	1.8	1.6	1.3	1.8	2.5	2.4	2.5	1.9	1.8	1.9	1.1	3.6	3.9	5.1
South Africa	2.0	4.6	2.6	3.4	3.5	4.6	6.6	6.2	6.2	7.1	8.0	7.6	7.3	6.5	7.9	7.9	7.7	7.6	8.0	8.1	7.8	7.7	7.3	7.5	7.7	8.3	8.5	8.6	8.5	8.3	7.4
Swaziland	0.4	0.3	0.3	0.3	0.2	0.5	1.1	2.3	2.5	3.4	3.2	3.4	2.9	2.5	2.6	2.6	3.2	3.4	3.9	4.0	4.2	4.2	4.3	4.7	4.5	4.8	3.9	4.0	4.7	4.6	5.1
Tanzania	6.2	7.6	7.3	7.8	6.4	6.5	6.7	7.5	4.3	4.9	4.9	5.2	5.2	3.4	3.8	2.3	4.2	4.3	4.1	4.3	4.1	5.4	5.4	5.4	5.4	6.6	6.7	7.7	7.9	7.7	7.7
Togo	2.5	1.7	4.1	3.4	3.2	2.9	1.9	1.9	2.2	1.9	1.7	1.8	1.1	0.7	0.8	1.4	1.9	2.1	2.3	2.2	2.0	2.8	2.5	3.6	3.9	6.7	7.5	8.0	7.2	6.9	7.1
Uganda	0.8	0.5	2.6	2.5	2.0	1.8	1.1	1.2	1.9	2.3	2.4	2.8	1.9	2.2	2.7	3.4	6.4	7.9	7.3	7.6	6.9	3.3	3.6	3.7	6.4	6.9	6.9	7.0	7.6	7.0	6.8
Zambia	10.6	10.7	11.0	11.4	9.9	8.6	7.6	7.7	6.1	4.4	4.8	5.7	4.9	4.5	6.5	6.4	6.6	6.8	6.8	9.0	8.0	8.3	4.7	4.3	4.1	7.5	6.8	7.4	6.6	5.4	5.8
Zimbabwe	5.7	5.1	6.5	7.4	9.2	7.1	6.2	6.5	5.6	5.0	5.0	3.9	4.4	4.8	3.4	3.9	3.9	5.7	4.1	6.7	5.5	4.9	5.6	8.6	11.1			0.9	7.7	13.7	

Trade Taxes

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	
Angola																	2.1	2.1	2.4	1.4	1.5	2.4	2.3	2.4	2.2	1.9	1.7	1.7	1.7	1.8	1.3	
Benin	6.3	9.5	10.3	7.0	5.4	6.1	6.2	5.7	5.1	3.4	4.0	4.6	4.8	4.7	1.2	1.5	1.6	2.0	1.5	1.7	3.0	2.9	3.0	3.6	2.7	4.0	4.6	5.1	5.4	4.9	4.9	
Botswana	9.2	11.2	8.9	8.2	8.6	6.5	5.3	5.1	4.0	4.5	4.7	5.7	8.4	9.0	7.2	5.4	5.1	4.8	5.2	4.6	6.7	6.2	4.5	3.9	4.8	6.2	6.0	8.7	8.5	9.4	7.9	
Burkina Faso	3.9	3.8	3.8	3.2	2.8	3.2	4.5	3.3	3.3	2.7	3.1	3.3	2.6	2.7	2.9	3.1	3.0	3.0	2.7	3.0	2.0	1.9	1.9	1.8	2.2	1.9	2.1	2.2	2.0	2.0	2.2	
Burundi	5.4	3.2	4.3	2.8	5.0	5.1	6.7	5.9	4.7	5.5	3.0	4.3	3.6	3.4	4.9	5.1	3.0	2.1	3.8	2.4	3.4	3.9	4.0	4.6	4.1	4.5	3.1	3.2	2.9	2.7	1.9	
Cameroon	5.5	5.3	4.1	3.9	3.9	3.0	1.9	2.0	1.4	1.2	1.0	1.3	2.0	1.7	2.7	2.5	2.4	2.3	2.4	2.2	2.1	2.1	2.2	2.2	2.1	2.2	2.1	2.2	2.1	2.3	2.3	
Cape Verde	7.5	7.4	6.9	6.8	7.1	7.0	7.4	6.8	6.8	7.3	8.0	8.5	10.0	9.7	9.5	10.0	9.4	6.3	6.7	6.8	7.5	7.7	8.4	8.5	8.6	4.9	5.0	5.0	5.0	4.1	3.9	
Central African Republic	6.2	4.9	5.5	4.5	5.0	4.7	3.3	3.8	3.3	3.2	4.2	3.5	3.1	2.6	2.4	3.9	2.5	1.6	1.5	1.6	1.6	1.7	1.6	1.6	1.6	1.5	2.0	1.8	1.7	1.9	1.6	
Chad			1.4	1.1	2.0	2.3	1.6	1.4	1.6	1.5	1.6	1.1	1.1	0.9	0.9	1.5	2.2	2.2	2.7	2.4	2.2	2.2	2.2	2.0	1.4	1.3	1.1	1.4	3.2	2.3	2.1	
Comoros	7.7	8.8	8.9	9.9	10.2	8.3	8.8	6.9	7.0	6.8	7.1	5.4	5.1	5.3	5.2	4.3	4.3	5.9	3.8	3.7	3.0	3.9	3.5	4.4	5.5	6.2	5.2	3.6	5.1	5.1	5.4	
Congo, Rep. of	3.5	4.7	6.5	5.5	6.8	5.8	5.1	4.4	4.0	3.7	3.3	4.4	4.8	4.8	3.1	4.5	4.5	2.6	3.0	1.5	1.4	2.1	1.7	2.1	2.0	1.3	1.3	1.3	1.1	1.5	1.3	
Côte d'Ivoire	10.2	10.9	9.8	9.0	8.4	9.4	6.7	6.9	6.0	4.8	3.5	4.1	3.1	2.5	5.3	5.8	5.7	5.1	4.4	4.6	3.9	4.4	5.3	5.6	6.0	4.6	4.7	4.7	4.1	3.6	4.0	
Equatorial Guinea	12.5	16.3	22.2	9.1	20.5	14.0	11.6	8.3	7.2	6.4	6.7	6.0	5.7	5.8	4.9	4.7	3.1	3.1	1.9	1.8	1.0	0.7	0.6	0.7	0.3	0.2	0.2	0.2	0.1	0.2	0.2	
Ethiopia	2.9	2.1	2.1	2.3	2.1	2.1	2.2	1.7	1.7	1.5	1.2	1.1	0.8	1.0	1.6	2.0	1.9	2.1	2.2	2.1	1.9	2.0	2.4	2.3	2.8	2.8	2.9	3.8	2.5	2.8	3.2	
Gabon	7.0	6.6	6.6	6.2	6.2	6.7	6.1	6.2	5.6	5.1	3.5	5.1	4.4	4.8	3.7	5.2	5.1	6.1	8.1	5.7	6.0	6.3	6.1	5.7	5.3	4.7	4.8	5.1	4.2	5.4	5.6	
Gambia	10.0	7.0	7.9	8.4	10.2	8.6	9.4	11.2	10.3	8.2	6.4	5.9	6.3	6.9	6.5	5.5	5.0	4.9	5.0	4.4	4.6	3.5	3.5	2.9	4.4	3.4	4.0	3.9	3.1	4.4	3.0	
Ghana	0.7	1.3	0.7	4.5	2.8	3.6	4.3	3.9	2.8	2.9	2.3	2.1	1.5	2.1	3.7	3.6	3.6	2.9	3.2	2.3	2.5	2.9	2.7	3.3	2.9	2.6	2.9	2.5	2.4	2.1	2.5	
Guinea	0.8	1.3	0.6	0.4	0.7	0.6	0.8	0.8	0.9	1.4	1.7	1.6	1.6	1.6	1.6	1.4	1.8	1.6	1.7	2.2	1.9	2.2	2.2	2.2	2.2	3.0	2.9	2.7	2.7	2.8	2.6	
Guinea-Bissau	2.5	2.3	2.5	2.9	2.4	2.1	1.1	3.5	3.5	1.3	2.9	2.1	1.2	1.8	2.6	2.1	2.4	2.8	1.1	3.0	3.5	2.3	1.3	1.4	1.5	2.1	2.3	1.8	1.5	1.8	1.9	
Kenya	3.1	3.7	4.1	3.2	3.0	2.7	3.0	3.0	2.8	2.5	2.2	2.0	1.4	1.6	2.8	3.0	3.1	3.0	2.9	3.1	3.0	2.8	2.1	1.6	1.8	1.7	1.3	1.5	1.6	1.5	1.6	
Lesotho	23.4	20.4	19.4	18.9	24.5	25.9	23.0	18.3	15.3	15.4	17.7	20.1	19.6	22.2	26.6	26.6	24.8	24.4	24.8	20.2	21.4	17.9	20.5	19.6	17.5	26.3	40.3	35.8	37.2	32.8	15.6	
Madagascar	4.6	4.1	4.1	3.5	3.5	3.9	3.2	4.4	4.2	3.6	3.6	2.5	3.1	2.9	2.1	2.6	2.8	3.1	2.8	2.2	1.8	1.4	1.0	1.7	1.5	1.2	1.2	1.4	1.4	1.0	0.9	
Malawi	3.3	3.8	4.0	3.7	3.4	3.4	4.2	3.1	2.5	2.7	3.2	2.6	3.2	2.8	2.6	2.1	3.2	3.1	3.2	2.2	2.1	1.9	1.2	1.3	1.8	1.8	1.8	1.8	2.0	1.9	1.8	
Mali	1.8	2.4	2.4	2.5	2.3	3.1	4.5	4.1	2.3	2.1	1.8	2.4	2.3	2.4	1.7	2.0	2.7	2.7	3.0	1.9	1.8	1.6	2.0	2.3	2.4	2.6	2.6	1.8	1.6	2.1	2.0	
Mauritius	10.1	9.7	9.1	10.4	10.9	10.4	11.2	11.0	11.3	11.0	10.4	10.4	9.0	8.6	8.6	7.7	6.1	6.3	6.1	5.3	5.6	4.7	4.0	4.0	4.1	3.9	2.2	1.0	0.8	0.6	0.5	
Mozambique	1.8	2.0	1.5	1.9	1.2	0.8	0.7	1.4	1.7	2.5	1.2	1.6	2.3	3.5	2.6	2.8	1.9	1.8	1.8	1.8	1.8	2.0	1.8	1.9	2.0	1.8	1.9	1.8	1.8	1.3	1.3	1.7
Namibia			12.4	13.0	11.7	9.2	10.0	10.4	8.3	6.7	7.1	6.4	12.1	8.8	7.8	7.1	7.7	8.1	8.3	8.7	9.5	10.4	8.0	7.7	8.4	9.1	7.2	9.9	10.9	10.9	10.0	
Niger	5.2	4.9	4.8	3.9	4.0	3.7	2.2	2.0	1.8	2.2	2.6	2.2	1.9	2.0	1.7	2.3	2.8	2.8	3.1	2.9	3.0	2.8	3.4	3.2	3.5	2.0	2.0	2.1	2.0	2.0	2.7	
Nigeria	2.9	3.4	3.1	1.9	1.4	1.5	2.7	2.5	2.3	1.8	2.1	2.4	1.7	1.1	1.9	2.0	2.1	2.3	2.3	2.8	2.5	4.0	2.8	2.7	2.2	1.6	1.0	1.2	1.1	1.2	1.0	
Rwanda	5.0	3.7	3.7	3.4	3.8	4.7	6.1	4.1	3.5	3.2	2.8	3.3	3.2	2.6	1.1	2.7	2.7	3.3	2.5	1.4	1.4	1.9	2.1	1.6	2.2	2.0	2.0	1.5	1.7	1.2	1.2	
São Tomé and Príncipe	8.2	5.4	6.6	4.2	4.8	4.7	3.4	1.8	4.1	3.1	2.1	2.3	2.8	1.9	1.5	1.8	1.1	1.6	2.6	3.6	3.0	2.9	2.9	3.4	3.4	3.3	3.8	3.5	3.1	2.8	2.9	
Senegal	7.1	4.8	5.6	5.7	6.3	5.9	5.1	5.3	5.6	4.7	5.9	6.6	7.0	5.9	5.8	6.4	5.1	4.9	4.4	3.7	2.5	3.0	3.1	2.9	2.8	2.7	2.9	3.5	3.2	2.7	2.8	
Seychelles	11.8	11.9	13.3	13.0	12.5	11.7	21.3	21.6	26.8	25.4	24.6	22.4	24.1	19.4	16.2	12.5	10.8	11.4	10.9	9.6	9.0	8.5	9.4	10.3	10.0	5.5	4.0	3.9	4.7	4.1	3.1	
Sierra Leone	7.1	6.8	4.8	2.5	2.3	1.8	1.3	3.1	1.6	2.3	3.4	2.9	3.6	4.3	5.0	3.9	4.7	2.1	3.9	3.4	5.7	6.5	6.1	6.2	5.7	4.9	4.7	5.1	4.9	4.7	2.5	
South Africa	2.1	0.6	2.4	2.4	1.7	1.5	0.2	0.3	0.3	0.8	0.7	0.4	0.3	0.3	0.7	1.0	1.0	1.1	0.8	0.7	0.7	0.8	0.7	0.8	0.6	0.8	1.0	1.2	1.2	0.9	0.7	
Swaziland	10.8	11.7	7.4	10.6	9.6	9.6	9.1	6.7	6.7	6.9	6.5	10.6	9.7	8.1	9.0	9.2	10.8	10.8	11.6	11.5	11.6	12.4	12.0	11.8	12.7	19.5	29.6	24.0	25.6	20.8	9.7	
Tanzania	2.6	1.5	1.0	0.9	0.8	0.8	0.9	1.9	1.0	1.3	1.4	1.5	1.5	0.9	1.2	2.9	1.5	1.6	1.4	1.3	1.1	1.1	0.9	0.9	1.0	0.9	1.4	1.4	1.4	1.4	1.3	
Togo	12.2	11.6	9.0	7.1	6.6	8.6	7.8	7.0	5.9	5.4	6.2	5.2	4.0	2.6	3.5	4.1	4.6	5.1	5.5	4.8	4.7	5.6	5.8	6.6	6.7	3.3	3.3	3.6	3.8	3.9	4.0	
Uganda	1.2	0.3	3.3	4.2	4.8	5.2	4.6	2.0	2.3	1.4	2.7	3.5	3.0	3.3	3.6	3.9	1.7	1.2	1.0	1.2	1.1	1.4	1.1	1.1	0.9	1.0	1.2	1.2	1.3	1.2	1.0	
Zambia	2.1	1.8	2.0	2.4	3.6	4.7	7.0	6.5	2.6	6.0	7.3	6.0	6.0	5.3	6.2	5.4	6.1	5.6	4.7	2.4	3.4	4.1	5.1	5.1	5.6	2.0	1.9	2.0	2.5	1.7	1.6	
Zimbabwe	0.6	0.8	2.0	2.7	4.4	3.3	3.1	3.6	3.1	2.9	3.3	3.0	3.3	5.3	3.3	3.9	2.8	4.0	6.0	3.9	2.4	2.5	1.6	1.7	3.9			1.0	3.6	4.5		

Resource Taxes

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	
Angola																43.6	37.1	25.1	44.2	48.7	39.0	31.9	30.3	30.8	35.0	40.2	37.1	41.2	24.2	33.0		
Benin																																
Botswana	2.3	11.3	6.6	7.1	10.6	15.6	20.7	22.3	16.2	21.6	19.1	23.9	20.7	17.5	18.7	17.9	16.0	19.3	20.5	11.7	23.3	23.7	18.1	18.7	17.3	16.6	16.8	17.3	12.0	12.4	9.0	
Burkina Faso																																
Burundi																																
Cameroon	2.4	1.8	1.9	7.7	7.3	8.0	8.2	5.7	5.0	4.7	3.5	3.2	3.1	2.1	2.8	3.0	2.8	3.6	3.4	2.2	4.9	4.6	4.9	4.1	3.9	5.0	6.8	6.4	7.6	4.8	4.5	
Cape Verde	1.0	1.3	2.1	2.0	1.7	0.8	0.6	0.6	0.3	0.2																						
Central African Republic																											0.4	0.5	0.4	0.4	0.3	0.3
Chad																										2.5	4.6	12.2	16.8	20.8	8.5	16.0
Comoros																																
Congo, Rep. of	8.0	17.8	19.1	18.2	22.3	22.4	11.0			1.6	15.7	13.2	11.4	12.4	14.1	12.4	16.4	21.9	12.0	19.0	20.3	21.0	18.9	20.8	21.6	31.8	37.9	31.9	39.9	20.6	29.6	
Côte d'Ivoire																0.1	0.4	0.4	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.9	1.5	1.4	1.3	1.0	1.1	
Equatorial Guinea												1.9	2.7	3.0	2.7	10.6	9.6	24.0	15.3	15.1	23.9	24.2	23.9	27.7	29.4	39.1	34.5	34.6	37.8	26.9		
Ethiopia																																
Gabon	20.7	25.9	26.1	23.6	26.4	25.4	17.9	6.2	6.5	5.8	3.5	6.2	10.6	10.3	14.0	19.0	19.3	18.1	18.8	16.3	22.6	21.8	17.7	16.6	16.6	19.8	20.3	17.3	21.1	17.6	15.2	
Gambia																																
Ghana																																
Guinea						1.0	7.6	8.7	6.4	7.5	8.5	8.4	5.5	4.4	3.0	3.0	2.7	3.0	2.8	2.4	2.7	2.8	2.3	1.5	2.1	3.6	4.5	3.3	3.6	3.3	3.9	
Guinea-Bissau																																
Kenya																																
Lesotho																																
Madagascar																																
Malawi																																
Mali																						0.8	0.9	0.9	0.8	0.7	1.3	1.1	2.6	2.3	2.3	2.5
Mauritius																																
Mozambique																										0.0	0.0		0.1	0.0	0.0	
Namibia										3.8	3.6	1.8	0.2	1.0	1.4	1.3	1.0	0.8	2.8	0.9	1.5	1.7	2.6	4.3	0.5	1.5	1.2	0.8	2.4	2.5	1.3	
Niger																										0.3	1.9	1.9	6.2	1.4	0.5	
Nigeria	25.9	19.3	16.0	12.1	14.2	10.1	15.8	17.7	16.0	20.5	28.4	25.5	28.3	28.6	17.5	8.8	8.4	9.0	5.2	20.2	31.2	31.5	20.7	24.1	28.7	32.3	29.1	21.9	26.6	9.8	14.5	
Rwanda																																
São Tomé and Príncipe																									2.8	3.2	3.2	3.0	3.5	1.2	2.4	
Senegal																																
Seychelles																																
Sierra Leone																																
South Africa	3.0	3.9	2.7	2.0	2.1	1.7	2.4	2.5	1.4	1.2	1.0	0.9	0.4	0.2	0.2	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.4	0.5	0.5	0.5	0.6	0.7	0.8	0.8	0.6	
Swaziland																																
Tanzania																																
Togo	2.4	3.3	2.9	1.9	2.4	7.0	6.0	3.4	3.2	4.2	2.5	1.6	1.5	0.6	2.1	2.5	1.4	1.2	0.7	0.5	0.2											
Uganda																																
Zambia															0.2	0.6	0.6	0.6	0.3	2.1	2.5	2.2	0.0	0.0	0.0	0.1	0.6	1.4	1.4	1.1	2.1	
Zimbabwe																																

“Sur quoi la fondera-t-il l'économie du monde qu'il veut gouverner? Sera-ce sur le caprice de chaque particulier? Quelle confusion! Sera-ce sur la justice? Il l'ignore.”

Pascal



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