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Abstract

One commonly observed phenomena about taxation in Africa are regional differences and the fact that southern African countries have higher levels of shares of taxation in GDP. This article argues that the major source of differences in 'tax effort' is the colonial histories of various countries. Using standard measures of 'tax effort in a panel data framework and dividing colonial Africa along forms of incorporation into the colonial system, it shows that African countries and others with similar colonial histories have higher levels of 'tax effort'. However, the difference disappears when we control for the colonial factor. These results hold under different model specifications.

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Africa's colonial past, and its implications for the continent's contemporary societies and economies, has been a central concern since independence among historians and political economists, especially those of a Marxist/nationalist persuasion (Amin 1972;Beckman 1981;Boahen 1985;Young 1988). Neoclassical economists' 'discovery' of 'institutions', especially through the seminal work of Douglas North (1990;1997), has generated interest in the 'path dependence' among more orthodox analyses associated with neo-institutionalism, and has revived attention to the colonial past of developing countries. Researchers working in this vein now look at how colonial culture, forms of colonisation, legal systems and institutional heritage have shaped the 'initial conditions' of African economies and continue to have an impact on, current economic performance (Acemoglu, et al. 2001;Austin 2008;Bolt and Bezemer 2009;Bowden and Mosley 2008;Engerman, et al. 2005;Grier 1999;Lange 2004.;Moradi 2008). The colonial state was, if anything, a surplus extraction regime and systems of taxation were a defining characteristic of various forms of colonisation even by the same imperial power. Forms of incorporation particular to different forms of colonisation determined who was taxed, at what amount, in what form, for what purposes, and by whom.

In this paper, we seek to explain a widely observed feature of African economies, namely the significant differences in the share of tax revenue in GDP. We look at the historical process of integration of indigenous populations into the colonial order, giving special attention to the structures of labour markets in the region and to the revenue needs of colonial governments. The end of colonialism left an institutional and infrastructural residue that still plays a major role in the determination of tax policies and the capacity to collect tax and that accounts for the differences in tax performance. By extending the conventional model used in the comparative measurement of tax efforts, we argue that, controlling for standard 'tax handles'[1] such as structural features as levels of development and industrialisation or policy variables such as aid, the differences in tax ratios reflect differences in colonial heritage. Once this historical fact is also controlled for, the observed relationship between tax ratios and tax efforts disappear.

The paper is organised as follows. Section one introduces a classification of African countries that is derived from various historians and from which we will obtain the key regressor of our analysis as a dummy variable. In the second section we present the empirical models and the data, and conduct the econometric analysis. Some concluding remarks are offered in section three.

1. Taxation in Africa

Revenue collection varies across Africa along a whole range of classifications. One simple classification is along regional lines, as used by international organisations. This classification shows that countries of Southern Africa tend to have higher shares of tax revenue in GDP than other regions. There have been many explanations for this high tax share in the Southern African region. Some have attributed it to the Southern African Customs Union, in which South Africa collects customs duties and makes compensatory transfers to other members of the Union (Stotsky and Wolde-Mariam 1997). However, some of the other countries with high tax ratios are not members of the Union. Others have suggested that the ease of levying taxes on the mining industry plays an important role. This explanation may be valid for Zambia, Namibia and Botswana but cannot explain the case of other countries of the region, such as Malawi, which has a relatively high tax ratios even without a mining industry. Still others have suggested that the differences could simply be the result of 'institutional spillover' whereby the tax administration practices of the more advanced country (in this case South Africa) spread to its neighbours, either through a contagion effect or through shared tax arrangements such as customs union (Stotsky and Wolde-Mariam 1997)[2]. This begs the questions of what determined the limits of spillover, and why, for example, Kenya's settler legacy did not spill over to Tanzania and Uganda. Another classification that appears in the literature simply groups countries by the origins of the erstwhile colonial power, or by currency zones (Stotsky and Wolde-Mariam 1997). While this might explain the differences in tax collection between Francophone and Anglophone Africa, for example, it does not explain the differences among countries within each of these groups.

A fruitful way of understanding these differences would lean towards a more sociological and historical inquiry into the social processes behind taxation and public finance, or to 'fiscal sociology' generally attributed to Joseph Schumpeter (Campbell 1993). As Bird

and Zolt and Bird argue, 'Where a country ends up in terms of both tax level and tax structure depends in large part on where it begins. To put it another way, how fiscal systems develop depends significantly on how they started' (Bird and Zolt 2005: 24). We therefore begin by looking at the various forms of integration of African economies into the colonial order. We start with Samir Amin's (1972) division of Africa into three groups: (1) 'Africa of the colonial economy' (*économie de traite*), also known as the cash crop economies; (2) 'Africa of the concessionary companies'; and (3) 'Africa of the labour reserves'. In a similar vein, Oliver and Atmore (1967) divide Africa into three regions based on analysis of colonial rule, paying special attention to the fiscal needs of the colonial governments and the ways of financing colonial administration and maintenance of law and order at a minimum cost to the metropolitan taxpayers. Their classification of countries is the same as Amin's, with the exception of two countries. We follow Oliver and Atmore in placing Uganda and Tanzania in the cash crop economy category (see Table 1).

Table 1
Forms of Colonial Incorporation

Type	*Countries*
Cash crop economies (enlarged West Africa)	Benin, Burkina Faso, Cameroon, Côte d'Ivoire, The Gambia, Ghana, Guinea, Guinea-Bissau, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone, Tanzania, Togo, Uganda
Africa of the concession companies (Congo Basin)	Congo Kinshasa, Congo Brazzaville, Gabon, Central African Republic, Rwanda, Burundi
Africa of the labour reserves (East and Southern Africa)	Angola, Botswana, Kenya, Lesotho, Madagascar, Malawi, Mozambique, Namibia, South Africa, Swaziland, Zambia, Zimbabwe

Source: Constructed from the classification by , Oliver and Atmore (1967) and Samir Amin (1972)

In the cash crop economies, production was left to peasants while marketing was dominated by metropolitan mercantile houses or, later, by state marketing boards that enjoyed monopsonistic positions in the economy. Taxation took place largely through the marketing channels and poll taxes. There were few restrictions on the movement of indigenous labour and on informal activities in the urban areas, although the movement of crops was highly regulated. The monopsonies that controlled the peasants were notorious for their exploitative pricing (Bauer 1954). Significantly, the case for paying low commodity prices to peasants was often made on the basis of a version of 'vent for surplus' theory, which sought to explain the extraction of surplus from the colonies without any major prior investment by colonial capital (Myint 1958). This conjured an

image of natives wallowing in unwanted leisure until colonial trade opened up outlets for surplus.

In the Africa of the concession companies, the colonial power gave private companies concessions on vast tracks of land, for the production of crops on large plantations or for mineral extraction[3]. The Belgian Congo is the iconic example of an economy 'that depended on taxation and plunder instead of production and investment' (Rodney 1990: 358). It was based on the big role of great economic trusts, the concentration of political functions in the metropole, Mining, rather than plantation concessions, became the most important activity in most of these countries. These economies relied on forced labour up until late in their imperial days and there was virtually no development of peasant commercial farming encouraged (Betts 1990;Coquery-Vidrovitch 1990;Rodney 1990). Ruanda-Urundi was an extension of this type of economy[4]. As Kenneth Good observes, although there were White settler communities in these countries, their status differed substantially from those of the labour reserve economies both in terms of their political clout internally and the absence of a *petit colon* class' (Good 1976: 598).

The third category of colonial economies in Africa was the labour reserve economy, often associated with racial segregation, migrant labour and the ubiquitous townships or locations. The "White Economy" drew on labour reserves for its labour requirements and and used them for the disposal of unwanted labour (Meillassoux 1981;Phimister 1974;Van Onselen 1976). One characteristic of such economies was a by far larger White settler population as a percentage of the total as compared to cash crop economies (See Appendix 1) . The labour reserves were sometimes within the economies themselves (as was the case in Angola, Kenya, South Africa, Namibia, Zambia and Zimbabwe) or were whole countries assigned that role by the colonial division of labour (pre-diamond Botswana, Lesotho, and Swaziland) (Mogalakwe 2006). In some cases the various forms of market incorporation took place within the same economy. Thus while the southern part of Mozambique had the characteristic features of a labour reserve economy, the central part was much more akin to the Africa of concessions (Hinderink and Sterkenburg 1987). In Malawi there was similar ambiguity, as settler agriculture relied on indigenous labour for its cash crop production and peasant farming for 'wage food' (Mandala 2006). Two features of labour reserve economies were their highly dualistic formal labour

market and a migrant labour system that tied large numbers of peasants to the 'enclaves' – national or regional – of White-owned mining industry and plantation agriculture (Mhone 2000). Indigenous populations were basically confined to employment in White farms or industry. To ensure low reservation wages for the native population, measures were taken to block alternative sources of income that might compete with the wage economy. These measures included disruption of peasant agriculture, job discrimination, criminalisation of informal activities by Africans in the urban areas, political regimentation of African, migration control. Etc. As the cash crop economies used the 'vent for surplus' argument to justify low commodity prices, the labour reserve economies had their own theoretical justifications for low remuneration of indigenous labour. 'The backward-bending supply curve' or the 'target worker' hypothesis suggest that, given an underlying preference for leisure, indigenous labour would reduce its supply beyond a certain wage rate (Moore 1955).

The usual caveat that none of these economies exactly fit these ideal types holds here. We believe, however, that this classification does capture the fundamental categories of experience in the sub-Saharan region of Africa and serves adequately as a heuristic framework, even in light of the caveat about its taxonomic accuracy. These characteristics produced a number of political economic features that have had a long-lasting impact on both levels and structures of taxation. First there are significant differences in structure of taxations between these two economies. The non-labour reserve economies tend to rely more on trade taxs than the labour reserve reserves, which in turn have higher domestic taxes and depend more on direct taxes (See table 2). Second, and closely related to the levels and strucrure of taxation, were three political economy feature: (1) state capacity; (2) levels of formalisation and informalisation of the economy; and (3) levels of inequality.

Table 2
Structure of Taxation in Africa (Average 1984-2004)

Country	Tax share	Trade Tax	Domestic Tax	Nontax Revenue	Dirext Tax	Indirect tax
Labour Reserve Economies						
Angola	32.08	4.73	12.82	10.24	71.34	18.42
Botswana	34.34	15.32	56.30	20.47	47.76	31.78
Kenya	18.75	17.10	17.96	14.69	29.38	50.68
Lesotho	32.49	50.10	16.67	16.30	16.93	66.76
Madagascar	9.19	43.24	24.27	20.46	14.96	67.81
Malawi	16.87	16.06	34.79	14.43	50.19	35.38
Mozambique	10.52	17.30	47.77	13.52	18.38	68.11
Namibia	25.78	30.96	25.36	10.98	26.62	56.79
South Africa	23.14	3.62	34.33	7.01	54.26	38.51
Swaziland	26.28			5.89	28.65	65.47
Zambia	18.23	30.08		4.93	32.38	62.64
Zimbabwe	23.13	10.91	36.15	9.13	46.66	44.22
Average	*22.57*	*21.76*	*30.82*	*12.34*	*36.46*	*50.55*
Non-Labour Reserve Economies						
Benin	11.67	50.96	17.05	19.01	26.11	69.36
Burkina Faso	9.36	33.61	33.15	12.99	20.95	64.18
Burundi	15.20	24.33	38.27	19.71	22.53	62.97
Cameroon	13.56	16.03	36.37	12.41	30.67	53.15
Central African Republic	7.89	31.71	35.40	10.43	22.46	67.11
Chad	5.75	13.46	11.78	15.67	17.89	36.57
Congo	22.27	10.44	21.58	15.35	52.22	32.38
Congo. Democratic Republic	5.34	23.76	26.58	29.66	27.29	50.34
Cote d Ivoire	16.86	34.72	28.13	19.84	20.32	60.92
Gabon	11.71	20.25	10.77	16.95	13.53	33.70
Gambia The	17.98	42.89	12.32	22.58	18.52	71.20
Ghana	14.15	25.90	36.33	14.13	22.09	62.83
Guinea	11.57	13.53	31.53	6.83	7.71	85.46
Guinea-Bissau	3.80	18.77	42.87	94.56	9.40	18.39
Mali	11.89	38.54	24.55	22.66	15.33	64.01
Mauritania	16.35	29.77	18.05	30.31	23.57	45.66
Niger	8.15	42.62	19.03	27.67	25.20	61.65
Nigeria	18.85	9.67	6.90	44.88	38.08	16.52
Rwanda	9.89	31.83	39.63	56.12	24.79	72.14
Senegal	15.83	22.08	49.87	10.24	22.75	67.01
Sierra Leone	8.73		17.34	5.06	22.45	66.29
Tanzania	11.36	25.15	28.58	8.66	31.86	53.73
Togo	15.23	37.79	14.92	14.32	31.47	52.79
Uganda	8.51	49.80	28.68	7.31	14.21	78.48
Average	*11.67*	*50.96*	*17.05*	*19.01*	*26.11*	*69.36*

1.1 State capacity

One aspect of the political capacity of the state is its legitimacy and the 'quasi-voluntary compliance' it induces among taxpayers (Levi 1988). Settler economies were virtually 'war economies' because one major preoccupation of communities with minorities dominating vast majorities is security. This state of affairs produced in the minds of the denizens of the enclave a 'laager mentality', and the need for the construction of strong state apparatus for both administration and security. In the case of South Africa, Lieberman attributes the acceptance of high personal taxes to race-based allegiances between the state and economic elites: 'Construction of a racial union in South Africa led to high levels of inter- and intra-class solidarity, which in turn motivated upper groups to pay, whereas an officially non-racial federation in Brazil led to inter-class polarization, intra-class fragmentation, and, ultimately, resistance to tax payment.' (Lieberman 2003: 59). In such situations the minority entered a Faustian bargain with the state: in exchange for security, citizens allowed political elites considerable autonomy which allowed room to impose high taxes or persuade the privileged settler community to accept higher taxes. The threat of potential uprising by oppressed racial groups enhanced the autonomy of the state to extract more from those it would protect. The private sector was also willing to finance such states if only because they delivered cheap labour and access to other resources controlled by the state[5]. All this has partly accounted for settlers' willingness to pay high income taxes for their security and welfare benefits because the state was 'their' state (Bell and Bowman 2002).

In trying to 'maintain civilised standards' or to keep up with 'mother country', the White settlers created highly interventionist states that supported industrialisation and agricultural development[6]. Thus in the dominant settler economies, some kind of 'developmental state' emerged. Such a state sought to systematise the incorporation of the labour reserve economies through labour recruitment institutions, 'Bantustanisation', customs unions and even federation, as in the case of The Federation of Rhodesia and Nyasaland (Belcher 1979;Nattrass 1991;Phimister 1991). One should also add that there was a kind of nationalism among settlers that insisted 'that their money be used to develop their own economy rather than lent out at low rates of interest to the British

borrower' (Good 1976)[7]. Furthermore, in the cases where White labour enjoyed some political rights (as in South Africa, Zambia and Zimbabwe) a White 'welfare state' emerged as part of the process of giving legitimacy to the racial order. This was reinforced by the 'laager mentality' that produced sentiments of solidarity that underpinned the racist welfare states that emerge[8].

The provision of welfare services and the developmentalist imperatives of the social order necessitated a large state. In addition the regimentation of native life and the management of the labour reserve areas also required a much more interventionist policies towards "native authorities", as traditional authorities were labeled. Not surprisingly the "native" areas were managed in a much more direct manner than was the case in the cash crop economy[9]. All these exigencies of the labour reserve economies were bound to render the revenue imperative quite high and lead to larger bureacracies to implement state policies, administer law and order, and actually collect revenue. Although the figures in Appendix 2 are 20 or years into independence they show that labour reserve economies generally have more civil servants per 100 citizens than both cash crop economies. The figures for concession economies are also high, but this is partly attributable to the two outliers— Congo and Gabon—both major oil producers.

### *1.2 Levels of formalisation and informalisation*

The reach of the state is facilitated by the extent to which the economy is formalized. Generally, levels of informalisation are much lower in labour reserve economies than in cash crop economies. A high level of informalisation of an economy provides 'exit options' that can undermine the state's tax efforts. Data on the informal sector in Africa are hard to come by, but Appendix 3 is indicative of the sharp differences in the degree of informalisation between these two types of economies. As we noted above self-employment and spontaneous settlement by natives in urban areas or around commercial farms of the labour reserve economies were not allowedwere serverely restricted by various mechanisms of 'influx control', the most notorious of these being the 'pass system'. In addition there were tight controls of small businesses. Many of the small enterprises that elsewhere were in the informal sector were formalised and reserved for Whites, and were thus registered and subjected to taxation. One consequence of this is the low level of informalisation in the labour reserve economies when compared to other

African countries. Restrictions on the informal sector not only make it administratively easy to collect tax, but can also positively affect tax morale in the formal sector, especially if taxation is not accompanied by redistributive policies that might benefit the denizens of the informal sector. Raising barriers to entry can be consistent with a deliberate government policy for raising tax revenue by generating market power for those permitted to function in the protected sector, and hence rents (Auriol and Warlters 2002). The rents can then be readily confiscated by the government through entry fees and taxes on profits at a low administrative cost. Not surprisingly, the postcolonial state may also seek to maintain some barriers against informalisation—and indeed most of them did so, until economic liberalisation under structural adjustment reforms forced them to remove or relax them. In addition, the spatial distribution of population into townships that ensured the 'governability' of indigenous populations tendedto be maintained as the new elite moved into the hitherto exclusive but now de-racialised 'White areas'. The new elite found the separation between these areas and the townships congenial and necessary for the 'maintenance of standards'.

1.3 Differences in levels of inequality

One other distinctive feature of the labour reserve economies is the high level of inequality. As Figure 1 shows, labour reserve economies had an average Gini coefficient higher than 0.50, while the cash crop economies had around 0.45. There is considerable controversy over the relation between inequality and taxation. In the 'median voter' models of taxation, based on the (unrealistic) assumption that the pivotal agent in society is the median voter, it is postulated that high inequality will lead to higher taxes because the majority will push for redistributive taxation and expenditure (Persson and G.Tabellini 1993). The empirical basis and the political veracity of this hypothesis have proved rather thin (Benabou 1996). For one the model is premised on democratic institutions that would give simple majority power to make major changes in fiscal policy. As noted above, in the case of the settler economies, high taxation was accepted precisely because there were no redistributive expenditures outside the confines of the settler enclave. Significantly, greater inequality in Africa leads to higher tax share and most labour reserve economies have higher tax shares than would be predicted by their Gini coefficient (Figure 1).

Figure 1
Gini Coefficients and Tax Shares in Africa (1984-2004 averages)
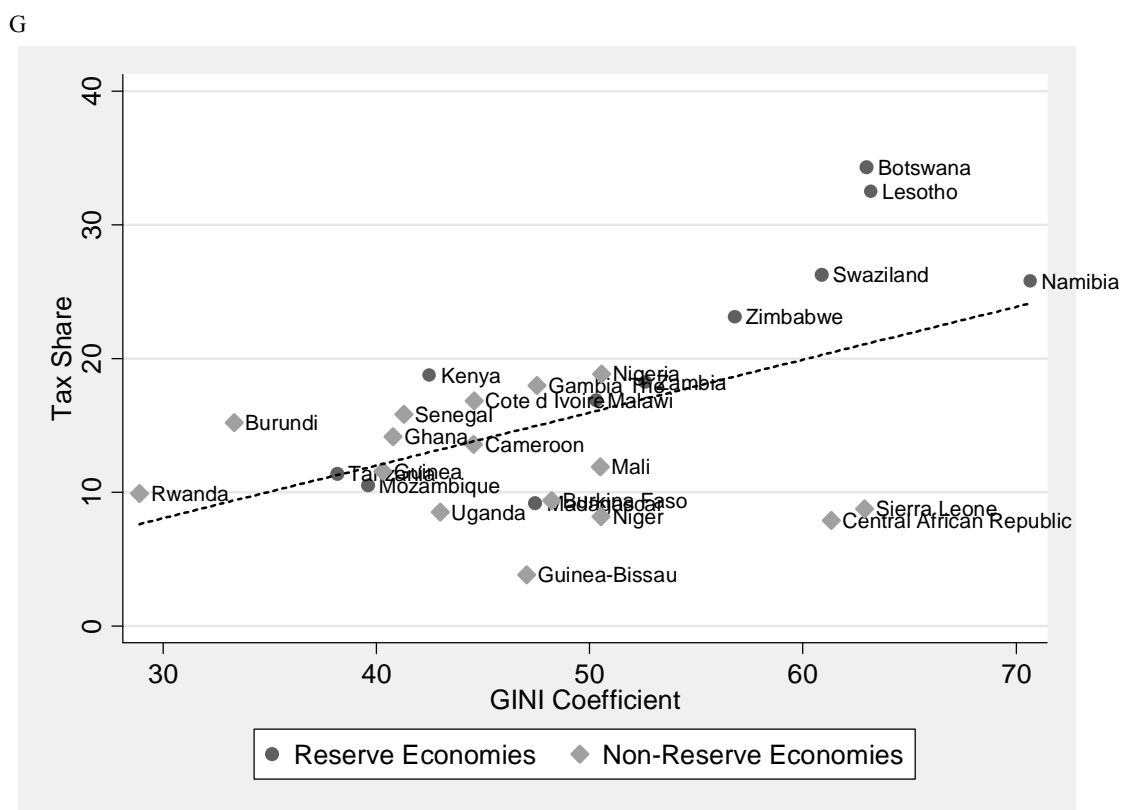
Notes: Based on data from World Bank Data Disks 2005

In the labour reserve economies Whites paid income taxes while natives were confined to 'poll taxes' or to service user charges. In such an order it was important to ensure that none of the tax collected from Whites 'leaked' to other sections of the population. The segregation of local authorities in these economies ensured that there was no transfer of revenue among the various racial groups (Bell and Bowman 2002). Since industry was in 'White areas', the revenue from it went to Whites. Thus in South Africa, in the aggregate, more than 90% of total revenues of local government serving Africans came from their own sources (Fjeldstad and Rakner 2004). In this way the usual progressive nature of direct taxes was attenuated as 'dualism' and enclavity of the settler economy ensured little leakage of incomes from one sector to the other. Consequently while the tax structure was redistributive among Whites, partly explaining the fact that intra-racial inequality was much less pronounced, it was not redistributive in the aggregate. This feature of the tax system remains after liberation or independence and may explain why while interracial inequality has often been reduced , intra-racial inequalities have increased.

As a consequence of all this, at independence, labour reserve economies had more elaborate state structures, higher levels of regulatory reach and formidable repressive capacity. And more pertinent to this paper, fairly elaborate tax collection mechanisms were in existence in these counties. As a consequence, labour reserve economies have a much higher share of tax revenue to GDP than cash crop and concession economies (See Table 2). In addition there are significant differences in the structure of taxation between these two types of economies. The cash crop economies rely much more on trade taxes than the labour reserve economies, which in turn have high domestic taxes and depend more on direct taxes than their cash crop economy counterparts. This might also partly explain the higher levels of direct taxation in labour reserve economies: such taxes are more difficult to collect and are generally associated with greater levels of state capacity (Zolt and Bird) and have been attributed by some to the persistence of institutions that underpinned the racist regimes, especially in South Africa and Zimbabwe. For neo-institutionalists this greater capacity to collect taxes would simply be confirmation that White settler economies had better institutions, which were then bequeathed to the post-colonial state (Acemoglu, Johnson, and Robinson 2001).

The other side of the labour reserve economy was, of course, the types of resistance by indigenous populations and the nationalist responses it provoked. Labour reserve economies tended to produce much stronger and more broad-based nationalist movements which could ride, for years after liberation, on the popularity of having dislodged a racist order. The nationalism that sustained the struggle for liberation was often strong enough to give the new state broad powers in terms of taxation and redistribution. Independence meant deracialisation of these tax systems, and their extension (together with higher incomes) to the new Black middle class and workers in the formal sector. This process of deracialisation legitimised the existant tax structure in the eyes of the newly liberated racial groups (Lieberman 2002). In most cases, there were attempts to extend the hitherto racial welfare state to indigenous people (Mhone 2004;Nattrass and Seekings 2001).The new agenda may not have been as radical as suggested in the movements' manifesto during the struggle for liberation, but it often required considerable state expenditure to meet some of the nationalist promises[10]. This in, turn, led to an appreciation or harnessing of the administrative and control mechanisms bequeathed them

by the settler regime. All this also led to the reversal of opposition to various taxes imposed by the settler regime on Africa[11].

2. Empirical Model and Data

2.1 Data Sources

The definition of all the data used in the analysis including the dummy variables are explained in Table 3. The Table also include the sources of the data. As most of the data is quite volatile, we reduce the noise by dividing the data into five four year-averages between 1984-2004, a standard procedure in this kind of studies. We have only included countries from continental sub-Saharan Africa. For these countries inclusion in the analysis is determined by data availability.

Table 3
Variable Descriptions and Sources

Variable	Description	Source
AGRI	Agriculture as share of gross domestic product	World Bank Development Indicators 2006
AID_{t-1}	Aid as percentage of gross national income	World Bank Development Indicators 2006
CONFLICT	Unity if there is a minimum of 25 battle-related deaths per year and per incompatibility. It is zero otherwise	UCDP/PRIO Armed Conflict dataset v.4-2007 (Uppsala Conflict Data Program 2007)
FRANCZONE	Members of CFA Monetary Zone where unity belongs to the CFA zone and zero otherwise	
DEBTSHARE	Share of debt service in gross national income	World Bank Development Indicators 2006
DEPEND	Dependency ration – share of population under 15 and over 65 years in total population	World Bank Development Indicators 2006
EXPORT	Share of exports in gross domestic product	World Bank Development Indicators 2006
INDUS	Industry as share of gross domestic product	World Bank Development Indicators 2006
INFLATION	Inflation	World Bank Development Indicators 2006
$LOGCAP_{t-1}$	Log of per capita income in constant 1995 US$	Calculated by author
LOGPOPDENSE	Log of population density (per square kilometre)	Calculated by author
TAXSHARE	Tax revenue as share of gross domestic product	World Bank Africa Database 2006
RESERVE	Dummy variable, which takes the value unity if the country is classified as a reserve labour economy, and zero if it is a cash crop economy (explained above)	As classified by several authors in Table 1
STATCAP	Unweighted average of government effctiveness and rule of law indices	As defined in (Kaufmann, et al. 2005)
URBAN	Share of urban population in total population	World Bank Development Indicators 2006

Table 4 gives a summary of key variables used in various models.

Table 4
Summary of the Varibles

Variable	Numbers of Obs	Mean	Std. Dev.	Min	Max
TAXSHARE	164	16.03	8.32	0.86	40.05
DEPEND	164	0.94	0.09	0.59	1.12
URBAN	164	31.18	14.45	5.04	83.29
EXPORT	164	29.58	18.17	4.04	91.60
INFLATION	163	30.73	140.78	-2.96	1757.70
DEBTSHARE	159.	105.	72.53	2.54	408.92
AGRI	164	28.30	14.22	2.42	58.89
INDUS	164	25.17	12.16	9.36	63.05
MANUF	162	10.37	5.35	2.31	32.34
AID	164	10.96	9.06	0.00	57.03
MINING	125	11.75	15.95	0.02	67.42
IMPORT	162	120.89	995.14	7.73	12705.13
LOGPOPDENSE	164	3.26	1.29	0.33	5.86

2.2 Empirical analysis

A high *tax ratio* is not a good measure of a country's tax capacity and does not necessarily mean that a country with high tax share is exerting itself more than one with a lower one. The higher share may be the result of 'windfall gains' or accounted for by favourable structural variables or "tax handles" other than a government's own efforts, with the consequence that a country with a higher tax ratio may actually be collecting less tax than is warranted by these structural determinants. A better index of a country's performance is *tax effort*, which measures the relationship between actual and potential levels of taxation. This leads us to the central hypothesis, namely, that the status of labour reserve economy confers upon the countries enjoying that status more 'tax handles' than other economies so that the often-observed higher tax share in these countries can be attributed to this historical fact and not any contemporaneous exertion on the part of the government of the day. More specifically the coefficient for the dummy variable proxying for the labour reserve economies is positive.

In this paper we follow the various studies that use regression analysis in measuring the 'taxable capacity' as the predicted value (Cheibub 1998;Davoodi and Grigorian

2006;Piancastelli 2001;Stotsky and Wolde-Mariam 1997;Teera and Hudson 2004). Tax effort is then defined as the ratio between actual tax share and the expected or predicted tax share. An index greater (less) than one suggests that a country is collecting more (less) than would be predicted given its economic structure. In early years, the seminal work on the tax effort literature used ordinary least square methods of analysis. In more recent years virtually all analyses of tax efforts use panel data analysis not only to exploit the increased number of observations that panel data sets provide but also for the statistical properties which combine both spatial and temporal dimensions of taxation, taking into account not only the heterogeneity of the countries but also the changes over time with each country. In line with this practice we model the following generic form:

$$T_{it} = \alpha_{it} + \beta_{it} R_{it} + \delta_{it} X_{it} + \psi_{it} + \mu_{it} + \varepsilon_{it} \quad\text{..Equation 1}$$

where T is the share of tax in GDP, α_{it} is the overall constant, R_{it} is-the regressor of chief theoretical interest, X_{it} is a vector of control variables consisting of proxies for possible tax bases and other factors that might affect a country's ability to raise tax revenues, ψ_{it} is the time effect for each country , μ_i is the group effect for each county and $\varepsilon_{i,t}$ is an unobserved random error term, where i = 1,2,…N are the cross-section units (in this case countries) and t = 1,2,…T are the periods We start with the model with fairly standard regressors and add more variables as we proceed:

$$\text{TAXSHARE}_{it} = \beta_0 + \beta_1 \text{LOGCAP}_{it} + \beta_2 \text{INDUS}_{it} + \beta_3 \text{AID}_{it} + \beta_4 \text{EXPORT}_{it} + \beta_5 \text{LOGPOPDEN}$$
$$\text{SE}_{it} + \beta_6 \text{DEPEND}_{it} + \beta_8 \text{URBAN} + \beta_9 \text{AGRI}_{it} + \beta_{10} \text{LOGPOPDENSE}_{,t} +$$
$$\beta_{11} \text{DEBTSHARE}_{it} + \psi_t + \mu_{it} + \varepsilon_{it} \quad\text{......................................(2)}$$

This model will be tested using different specifications and additional variables. We first conducted the Hausman Test to determine the choice between the fixed effect and the random effect model The test firmly favoured the latter[12].

LOGCAP, which serves as the proxy for the level of development, is expected to be associated with a higher capacity to collect tax, 'consistent with the idea that the ability to tax grows faster than income' (Burgess and Stern 1993: 774) and higher demand for

public goods (Chelliah 1971;Wagner 1976). The coefficient of AID_{t-1} is ambiguous in the literature, although it comes out negative in a significant number of studies. AGRI and INDUS are usually used as a proxies for structural change and level of modernisation of the economy. AGRI is expected to work negatively on tax collection because it proxies the difficulties involved in taxing the rural sector, especially in the developing countries. INDUS, in contrast`, should favour tax collection because it is much easier to tax the formal sector that is constituted by key industrial structures. Trade (EXPORT and IMPORT) is expected to favour taxation, as it is administratively much easier to control the flow of international goods, which explains why trade taxes play an important role in many developing countries (Tanzi 1987). In the literature it is suggested that since the amount of aid a country receives is likely to be affected by the fiscal position of the recipient as countries receiving high aid may be ones having problems mobilising domestic resources or faced with high indebtedness problems of endogeneity loom large. It is therefore suggested that aid should be entered in the equation with a lag in order to control for the possibility of endogeneity. (Gupta, et al. 2003;Morrissey, et al. 2007)[13]. In much of the literature laaged aid ($AID_{t-1)}$ has a negative coefficient. Its negative effects are attributed to the 'aid dependence' syndrome—a state of mind that induces aid recipients to lose their capacity to attain self-sufficiency. Some suggest that aid is subject to moral hazard, discouraging domestic effort by obviating domestic revenue mobilization (Bräutigam 2001;Ghura 1998;Remmer 2004)[14]. Others suggest that aid undermines the administrative capacity of the state by shifting 'ownership' from national policy-makers s to foreign advisers or by overburdening local bureaucracies with onerous tasks and conditionalities.(Ali, et al. 1999;Azam, et al. 1999;Moss, et al. 2005). Aid might also weaken some tax handles by, for example, impairing export performance through adverse movements in the real exchange rate (so-called 'Dutch Disease effects') (Agbeyegbe, et al. 2004;Elbadawi 1999). Furthermore, some negative effects on tax revenue may be the intended consequences of policy conditionalities set by donors that require the removal of 'distortionary taxes', especially those on trade (McGillivray and Morrissey 2001) or, more generally, the reduction of the size and reach of the state .[15] Urbanisation (URBAN) has ambiguous effects on taxation. On the one hand, concentration of both economic activities and population should facilitate taxation while, on the other, patterns of urbanisation may encourage informal activities (especially in the service and nontradable goods sectors) that are difficult to tax. Intuitively population density (LOGPOPDENSE)

should be positive because it makes tax collection easier, although it has also been suggested that population density leads to greater anonymity of citizens and may thus undermine tax effort. The dependence ration DEPEND is expected to increase demand for public provision of services such as education, health care and social security and will therefore tend to push tax collection upwards. DEBTSHARE has been hypothesised to have an ambiguous effect with some suggesting that high public debt requires a higher revenue effort to service the debt while others suggest that a high debt burden can create macroeconomic instability and imbalances that would tend to reduce tax levels (Gupta, Clements, Pivovarsky, and Tiongson 2003). Because of the importance of mining in many African countries and the close association of the labour reserve economies with mining, in other specifications of the regression we replace INDUS with MANUF and MINING. The coefficient for MANUF is expected to be positive because of the relative ease of taxing the sector. The impact of MINING on revenue is ambiguous in the literature. On the one hand there is the view that the existence of formal and usually centralised production units and the export-orientation of the industry make the taxation of the mining sector relative easy (Chelliah). On the other hand they is the 'Resource Curse' literature that suggests a number of mechanism that may undermine the need and political will to tax the non-mining sector so that whatever gains are made from ease of taxing mining are more than compensated for by losses of revenues from other sectors (Collier 2006;Moore 1998).

Table 5 shows the results of the statistical analysis, with the second column containing the simple benchmark of a random effects specification. All in all we have 163 observations for 20 years divided into five four year period over the period 1984-2004 and from 35 countries[16]. When we replace INDUS with MANUF and MINING, we are left with 97 observations derived from 28 countries for which data was available over the same period 1984-2004[17]. Virtually all explanatory variables have the expected signs. In Models 3 and 5 we introduce the dummy RESERVE. Across all the models, the coefficient of LOGCAP is positive and significant and in some significantly so. INDUS is positive although not statistically significant. AID_{t-1} is positive but not statistically significant. Both EXPORT and IMPORT are positive and statistically and highly significant in all specifications. LOGPOPDENSE is positive and significantly so. URBAN is ambiguous but not statistically significant in any of the specifications. The coefficient of AGRI is

negative though not significantly so in all specifications. In Models 4 and 5MINING is positive and, as we will see, remains so in all our other specifications in defiance of the predictions of the "Resource Curse" thesis. MANUF, in contrast, is negative, perhaps reflecting the 'de-industrialisation' and the privatisation schemes that took place in most countries during this period. Although DEBSHARE has the right sign, the coefficient is negligible. Most significantly for our analysis, the coefficient of our central variable, RESERVE, is positive and, statistically highly significant in all the three specification.

Table 5

Determinants of Tax Share – Baseline Models (Dependent Variable: TAXSHARE)

Variables	Model 1	Model 2	Model 3	Model 4	Model 5
LOGCAP	3.450***	2.948**	1.603	5.339***	4.051***
	(3.861)	(2.190)	(1.226)	(3.931)	(3.460)
AID$_{t-1}$		0.0592	0.0551	0.0798*	0.0479
		(1.510)	(1.465)	(1.732)	(0.993)
INDUS		0.0654	0.0654		
		(1.198)	(1.260)		
AGRI		-0.104*	-0.0661	-0.0866	-0.0492
		(-1.745)	(-1.146)	(-1.380)	(-0.800)
EXPORT		0.139***	0.137***	0.106**	0.0691*
		(3.886)	(4.039)	(2.565)	(1.769)
IMPORT		0.0582**	0.0496**	0.103***	0.113***
		(2.571)	(2.281)	(3.473)	(4.074)
DEBTSHARE		0.00712	0.00473	0.0111	0.00141
		(1.037)	(0.722)	(1.460)	(0.186)
LOGPOPDENSE		1.185*	1.334**	1.146*	1.005**
		(1.798)	(2.182)	(1.827)	(2.176)
DEPEND		-3.399	0.591	-4.255	2.362
		(-0.602)	(0.107)	(-0.717)	(0.401)
URBAN		-0.0639	0.0126	-0.0469	0.0225
		(-1.126)	(0.217)	(-0.793)	(0.403)
RESERVE	9.120***		7.229***		5.251***
	(4.913)		(3.716)		(3.595)
MANUF				-0.134	-0.172**
				(-1.596)	(-2.022)
MINING				0.103**	0.121***
				(1.971)	(2.813)
Constant	-7.631	-6.683	-8.065	-20.07	-21.12*
	(-1.471)	(-0.542)	(-0.694)	(-1.507)	(-1.768)
Observations	163	126	126	97	97
Countries	35	35	35	28	28
R-squared	.	.	.	.	.

*** $p<0.01$, ** $p<0.05$, * $p<0.1$
z statistics in parentheses

In Table 6 we derive the tax efforts as defined above for Models 2 and 3. Recall that the tax equation is a performance measure. Consequently, countries whose tax effort is greater than expected will have a coefficient greater than one. Looking at the results of Model 2 in column 2, we see that the average tax effort of labour reserve economies is 1.16 while that for the cash crop and concession economies is below 0.91. And even when we control for MINING, tax effort in the labour reserve economies still exceeds that of cash crop economies and is above one. This is in line with our earlier observations that in many tax effort studies high tax shares are associated with high tax efforts. When we control for RESERVE (column 3 and 5), the difference in tax effort between labour reserve economies and other economies is reduced or reversed. suggesting that the historical status of the labour reserve economies provides a significant 'tax handle' in itself, and once we control for it there is nothing special about the tax performance of labour. reserve economies in and Southern African economies, more specifically.

Table 6
Tax Effort in Sub-Saharan African Countries

Country	Tax Effort Model 2	Tax Effort Model 3	Tax Effort Model 4	Tax Effort Model 5
Labour Reserve Economies				
Angola	1.31	1.17	1.10	1.02
Botswana	1.32	1.23	1.07	1.03
Kenya	1.27	0.94	1.32	1.06
Lesotho	1.39	1.27	1.29	1.23
Malawi	1.07	0.80	1.21	0.99
Mozambique	0.88	0.62	0.87	0.72
Namibia	1.27	1.19	1.11	1.06
South Africa	1.05	0.97	0.94	0.93
Swaziland	0.77	0.74	0.77	0.80
Zambia	1.11	0.84	1.21	1.02
Zimbabwe	1.36	1.11		
Average	1.16	0.99	1.09	0.99
Non-Labour Reserve Economies				
Benin	1.13	1.21	1.14	1.16
Burkina Faso	0.88	1.08	0.95	1.00
Burundi	1.43	1.64		
Cameroon	0.95	1.09	0.90	0.99
Central African Republic	1.35	1.39	1.57	1.36
Chad	0.61	0.75		
Congo	1.00	1.15	0.82	0.91
Congo. Democratic Republic	0.87	0.80	1.11	0.95
Cote d Ivoire	0.86	0.98	0.89	1.08
Gabon	0.46	0.53		
Gambia The	0.79	0.92		
Ghana	1.00	1.06		
Guinea	0.71	0.85	0.66	0.73
Guinea-Bissau	0.36	0.37		
Mali	1.23	1.38	1.25	1.25
Mauritania	0.93	1.06	0.82	0.91
Niger	0.93	1.12	1.10	1.07
Nigeria	1.31	1.38	1.22	1.25
Rwanda	0.71	0.83	0.83	0.96
Senegal	0.97	1.07	1.00	1.10
Sierra Leone	0.80	0.84	0.74	0.76
Tanzania	0.92	1.08	0.95	1.08
Togo	0.83	0.91	0.83	0.89
Uganda	0.82	0.95	0.97	1.00
Average	0.91	1.02	0.98	1.03

3. Robustness Tests

To test the robustness of the results we proceed as follows. In the first part we change the model specification into a first order dynamic panel one to take into account the fact that rates of taxation tend to persist. We therefore include lagged TAXSHARE ($TAXSHARE_{t-i}$) among the right hand variables. This recognition of inertia immediately raises the problem of serial correlation. In addition, the problem of heteroskedasticity is likely to arise as a result contemporaneous correlation across panels for African countries which are often simultaneously buffeted by the same forces such as changes in AID_{t-1} regimes, climate and terms of trade. Furthermore, there is the 'contagion effect' in the sense that in matters of taxation countries are likely to learn from their neighbours. Indeed, in our case the the Wooldridge test for autocorrelation in panel data rejects the no first-order correlation hypothesis while the Breusch-Pagan Lagrange Multiplier test for random effects strongly rejects the homoskedasticity assumption.. To address some of these problems we resort to the panel-corrected standard error estimates to correct for serial correlation and contemporaneous correlation of observations between the panels[18]. The results of additions to the baseline models are reported in Models 6 and 7 in Table 7. Most of the regressors behave as expected although LOGCAP is negative without being statistically significant.. Control for mining also gives us the expected results including for LOGCAP which is positive. More pertinent for the analysis is that RESERVE is still positive and statistically significant.

As second stage in the exploration the the robustness of the results, we augment the baseline model with additional variables (including a measure for membership to CFA zone (FRANCZONE), conflict, and inflation that appear in the literature. With respect to taxation, Adam and associates (Adam, et al. 2000) show that the tax system of CFA countries appears to be more buoyant than that of non-CFA states. One possible explanation is that the convertibility of the CFA has reduced the black market. In the members of currency zone. FRANCZONE variable also serves as a control for the differences between British and French colonies, a much discussed divide. we hypothesise, therefore, that the coefficient for FRANCZONE is positive. One variable that takes on significant importance in Africa is conflict. The expected effect of

CONFLICT is ambiguous. On one hand, conflict can be so disruptive of structures of governance that large parts of the economy fall outside the reach of the state. This is particularly the case with revenue from natural resources, especially minerals (the 'Diamond Wars' are an example). On the other hand there is the 'bellicist' view which extend to Africa Charles Tilly (1985) argument that predation and war increase the need for tax revenue and provides the state both the political basis and authority to tax its citizens (Herbst 1990;Thies 2005;2007)[19]. Inflation (INFLATION) also has ambiguous effects, although it is frequently argued that for developing countries where inflation is often high and the collection lags are long, inflation may have a negative impact on tax effort (Burgess and Stern 1993). The results of this extended model are given in Models 10, 11, 12 and13 in Table 7. First we note that the coefficient of TAXSHARE$_{t-1}$ is positive and significant in all the models suggesting that there is persistence of tax revenue over time. LOGCAP is ambiguous while INDUS and MINING are both significantly positive. Once gain IMPORT and POPDENSE are also significantly positive. In all specifications, INFLATION has a negative sugn although the coefficient is negligible. The coefficient for FRANCOPGU+ONE is significantly negative in three specifications and positive only in but not significantly so. Significantly the coefficient for RESERVE is positive and statistically significant in all specifications. In other words the results for RESERVE are highly robust to the inclusion of additional variables and specifications.

Table 7

Determinants of Tax Share: Accounting for Serial Correlation (PCSE)
Dependent Variable: TAXSHARE

VARIABLES	Model 6	Model 7	Model 8	Model 9	Model 10	Mode1 1l	Model 12	Model 13
TAXSHARE$_{t-1}$	0.675***	0.617***	0.479***	0.306***	0.669***	0.637***	0.461***	0.331***
	(6.475)	(5.206)	(4.531)	(3.476)	(6.193)	(5.619)	(4.322)	(3.732)
LOGCAP	-0.109	-0.245	2.303***	3.033***	0.153	-0.00919	2.130***	2.933***
	(-0.170)	(-0.404)	(4.396)	(4.586)	(0.232)	(-0.0140)	(3.876)	(3.852)
AID$_{t-1}$	0.00449	0.0126	0.0127	0.00462	0.0239	0.0326	0.0229	0.0274
	(0.389)	(0.771)	(0.853)	(0.241)	(1.021)	(1.234)	(1.256)	(1.026)
INDUS	0.121***	0.125***			0.0798	0.0836		
	(3.107)	(3.130)			(1.499)	(1.565)		
AGRI	-0.0830	-0.0538	-0.111***	-0.0191	-0.0724	-0.0502	-0.0926***	-0.0162
	(-1.363)	(-1.016)	(-4.069)	(-0.956)	(-1.201)	(-0.887)	(-4.065)	(-0.804)
EXPORT	0.0200	0.0329	0.00823	-0.0120	0.0155	0.0266	-0.00133	-0.0143
	(1.080)	(1.629)	(0.278)	(-0.255)	(0.735)	(1.351)	(-0.0348)	(-0.295)
IMPORT	0.0308**	0.0295**	0.101***	0.131***	0.0333***	0.0317**	0.103***	0.125***
	(2.221)	(2.052)	(10.33)	(5.537)	(2.778)	(2.572)	(7.195)	(4.786)
DEBTSHARE	0.000861	-0.00204	0.000271	-0.00612	-0.00291***	-0.00482***	-0.00886**	-0.00956**
	(0.494)	(-1.182)	(0.0602)	(-1.111)	(-2.924)	(-4.739)	(-1.992)	(-1.998)
LOGPOPDENSE	0.445**	0.553***	0.695***	0.873***	0.426*	0.540***	0.665**	0.813***
	(1.963)	(2.646)	(2.617)	(3.259)	(1.897)	(2.923)	(2.478)	(3.603)
DEPEND	-1.916	0.256	2.401	11.87**	0.669	0.795	6.988	10.67**
	(-0.640)	(0.0906)	(0.647)	(1.983)	(0.191)	(0.235)	(1.434)	(2.093)
URBAN	-0.0428	-0.0104	-0.00398	0.0952***	0.000953	0.0209*	0.0634**	0.110***
	(-1.567)	(-0.631)	(-0.151)	(2.730)	(0.0616)	(1.869)	(2.557)	(4.080)
RESERVE		2.116***		4.895***		1.835***		4.684***
		(3.424)		(6.439)		(4.193)		(7.064)
MANUF			-0.213***	-0.206***			-0.189***	-0.197***
			(-5.576)	(-7.793)			(-5.439)	(-6.688)
MINING			0.0606***	0.101***			0.0547***	0.0839***
			(3.064)	(5.757)			(2.855)	(3.985)
CONFLICT					0.623	0.954**	-0.0311	0.693
					(1.412)	(2.052)	(-0.0568)	(0.883)
INFLATION					0.00528***	0.00486***	0.00572***	0.00442***
					(5.126)	(4.821)	(7.332)	(8.170)
FRANCZONE					-1.109*	-0.488	-1.549***	0.142
					(-1.921)	(-1.044)	(-2.981)	(0.290)
Constant	5.321	1.892	-9.177	-28.04***	1.140	-0.355	-13.39*	-26.92***
	(0.840)	(0.322)	(-1.637)	(-2.629)	(0.198)	(-0.0647)	(-1.901)	(-2.656)
Observations	126	126	97	97	126	126	97	97
Countries	35	35	28	28	35	35	28	28
R-squared	0.864	0.870	0.892	0.915	0.876	0.879	0.909	0.923

Note: One asterisk (*) indicates statistical significance at the 10 percent level and two asterisk (**) indicates significance at the 5 percent level and three asterisk (***) indicated significance at one

In these extended models most of the variables behave as expected. Perhaps the most significant change is that of agriculture whose coefficient either remain negative but statistically insignificant or turns to positive but while remaining very small and insignificant. It is noteworthy that RESERVE is stronger and more significant when we control for mining, suggesting it is not the historical association of mining with Southern Africa that explains the differences in in the tax share.

We present the tax efforts for the extended specification in Table 8. as we noted above in the literature on tax effort countries with high tax share in GDP also tend to have high tax effort. This does not seem to hold in the African case, especially when we control for RESERVE. In the Table 8 the tax efforts of labour reserve economies and those of cash economies are slightly higher or equal when do not control for RESERVE. However when we introduce RESERVE, the tax efforts of cash crop economies are decidedly higher, confirming the point made earlier.

Table 8
Tax Effort in Sub-Saharan African Countries (Extended Models)

COUNTRY	Tax Effort (Model)	Tax Effort* (Model 7)	Tax Effort (Model 8)	Tax Effort* (Model 9)	Tax Effort (Model 10)	Tax Effort* (Model 11)	Tax Effort (Model 13)	Tax Effort * (Model 14)
Angola	1.08	1.07	1.07	1.02	1.02	1.01	1.00	0.98
Botswana	1.04	1.04	1.01	1.00	1.04	1.04	1.00	1.00
Kenya	1.08	1.00	1.11	0.98	1.05	1.01	1.07	1.00
Lesotho	1.10	1.11	1.09	1.10	1.11	1.11	1.10	1.09
Malawi	0.96	0.89	1.11	1.02	0.98	0.94	1.14	1.06
Mozambique	0.96	0.86	0.97	0.82	0.94	0.87	0.99	0.85
Namibia	1.11	1.11	1.05	1.04	1.10	1.11	1.05	1.05
South Africa	1.02	1.01	1.01	0.99	1.00	0.99	0.99	0.98
Swaziland	0.89	0.86	0.90	0.88	0.89	0.87	0.90	0.89
Zambia	0.94	0.90	1.14	1.02	0.94	0.92	1.09	1.03
Zimbabwe	1.08	1.06			1.07	1.06		
Average	*1.02*	*0.99*	*1.05*	*0.99*	*1.01*	*0.99*	*1.03*	*0.99*
Benin	1.27	1.25	1.12	1.07	1.26	1.23	1.09	1.06
Burkina Faso	0.92	0.97	0.94	1.00	1.01	1.05	1.00	1.04
Burundi	1.11	1.18			1.11	1.15		
Cameroon	1.12	1.12	1.02	0.98	1.13	1.12	1.03	0.98
Central African Republic	1.24	1.16	1.55	1.26	1.23	1.13	1.47	1.14
Chad	0.86	0.88			0.85	0.82		
Congo	1.12	1.16	0.97	0.99	1.19	1.21	1.04	1.03
Congo. Democratic Republic	1.21	1.10	1.35	1.06	1.03	1.01	1.10	1.04
Cote d Ivoire	0.94	0.97	1.00	1.12	0.97	0.98	1.06	1.11
Gabon	0.73	0.72			0.72	0.72		
Gambia The	0.92	0.97			0.91	0.96		
Ghana	1.08	1.07			1.03	1.05		
Guinea	0.75	0.79	0.71	0.81	0.84	0.86	0.79	0.83
Guinea-Bissau	1.08	0.98			1.23	1.03		
Mali	1.20	1.21	1.13	1.14	1.21	1.20	1.18	1.12
Mauritania	0.90	0.94	0.85	0.92	0.87	0.93	0.82	0.93
Niger	0.95	0.98	0.97	1.06	1.00	1.01	1.07	1.04
Nigeria	1.85	1.77	1.59	1.43	1.81	1.78	1.48	1.45
Rwanda	0.85	0.87	0.93	1.01	0.80	0.82	0.88	0.97
Senegal	1.01	1.04	0.97	1.04	0.98	0.97	0.97	0.99
Sierra Leone	0.94	0.93	0.90	0.86	0.93	0.95	0.88	0.89
Tanzania	0.98	1.00	0.98	1.10	0.92	0.97	0.92	1.10
Togo	0.86	0.87	0.82	0.85	0.91	0.91	0.87	0.86
Uganda	0.99	1.00	0.96	0.97	0.90	0.93	0.88	0.95
Average	*1.04*	*1.04*	*1.04*	*1.04*	*1.04*	*1.03*	*1.03*	*1.03*

* Indicated equations controlling for RESERVE

Let us now turn to one final point that serves both as an additional test for the robustness of the results but also as a link to the more recent literature on tax efforts that includes institutions among its determinants (Bird, et al. 2004;Bräutigam and Knack 2004;Ghura 1998;Gupta, Clements, Pivovarsky, and Tiongson 2003). We argued earlier that three features of labour reserve economies account for the higher performance of these economies in terms of tax collection: state capacity, politics and "tax morale", degree of informalisation of the economy, income distribution and structure of income. Unfortunately, data on information and income distribution in Africa are too patchy to allow for panel data analysis. We only address the issue of state capacity. Recent studies in tax effort have included proxies of institutional capacity to capture the effect of citizen's demand and the responsiveness of government. Thus Brautiugan and Knack (Bräutigam and Knack) and Richard Bird and associates (Bird, Martinez-Vazquez, and Torgler 2004) use the International Country Risk Guide (ICRG) and combinations of several indices used by the World Bank (Kaufmann, Kraay, and Mastruzzi 2005) to construct their Quality of Governance Index, with special emphasis on aspects affecting private foreign investment decisions. Ghura (1998) and Gupta and associates (Gupta, Clements, Pivovarsky, and Tiongson 2003)use a corruption index to proxy the quality of institutions We draw the World Bank governance indicators (Gupta, Clements, Pivovarsky, and Tiongson 2003) to construct a proxy, STATCAP, which, in light of our discussion above, is an unweighted average of government effectiveness and rule of law indices. STATCAP does not fully include the notion of state capacity discussed above which included the coercive capacity of the state. Nevertheless the correlation between RESERVE and STATCAP is 0.4026. The result in Table are not exactly comparable to those of the regression tables above. We retain the specification but are now confine to the years for which data on which we base STATCAP are available. The data available for STATCAP is for the years 1998 and 2002-2004. As in other studies using this institutional variable STATCAP is positive .When we control for RESERVE , the coefficient of STATCAP becomes more efficient . In other words the historical condition of being a labour reserve economy enhances the effectiveness of state capacity. Once again the sign of the coefficient for RESERVE is as predicted and still highly significant suggesting that even after we control for state capacity as meacured here, the other feafutes of the labour reserve economy still exercise a positive impact on the tax ratio.

Table 9
Determinants of Tax Share: Accounting for Serial Correlation (PCSE)
Dependent Variable: TAXSHARE

VARIABLES	Model 14	Model 15	Model 16	Model 7	Model 18	Model 19	Model 20	Model 21
L.LOGCAP	-0.0321	0.0411	2.432***	3.397***	0.622	0.303	3.124***	3.583***
	(-0.0223)	(0.0338)	(7.718)	(4.718)	(0.559)	(0.301)	(3.390)	(3.696)
L.AID	-0.146	-0.155*	-0.0255	-0.0258	-0.124**	-0.132**	0.000623	0.00396
	(-1.607)	(-1.839)	(-0.484)	(-0.430)	(-2.019)	(-2.067)	(0.00935)	(0.0538)
INDUS	0.268***	0.295***			0.231***	0.259***		
	(12.98)	(16.21)			(4.990)	(5.793)		
AGRI	-0.185***	-0.0834***	-0.143**	0.0225	-0.126***	-0.0604	-0.127**	0.0185
	(-15.43)	(-2.974)	(-2.013)	(0.466)	(-4.032)	(-1.286)	(-2.355)	(0.598)
EXPORT	0.117*	0.0989*	0.0152*	-0.0188	0.122***	0.111**	0.00838	-0.0164
	(1.838)	(1.663)	(1.759)	(-0.494)	(2.669)	(2.478)	(0.422)	(-0.409)
IMPORT	0.0158	0.0211	0.171***	0.185***	0.0198	0.0222	0.174***	0.188***
	(0.512)	(0.809)	(10.43)	(4.997)	(0.793)	(1.061)	(7.601)	(4.901)
DEBTSHARE	0.0149**	0.00967**	-0.0136**	-0.0210**	0.0124*	0.00867	-0.0188***	-0.0210***
	(1.974)	(2.089)	(-2.563)	(-2.557)	(1.717)	(1.465)	(-6.737)	(-5.906)
LOGPOPDENSE	0.183*	0.525***	0.334	0.863**	0.295	0.567**	0.343*	0.753***
	(1.703)	(2.791)	(1.133)	(2.281)	(1.581)	(2.401)	(1.718)	(3.027)
DEPEND	-22.81***	-10.90**	-5.392**	15.05***	-15.75***	-10.41**	-0.403	11.53***
	(-3.699)	(-2.009)	(-2.297)	(3.027)	(-2.709)	(-2.048)	(-0.0700)	(2.637)
URBAN	-0.322***	-0.219***	-0.0975***	0.0786	-0.270***	-0.202***	-0.0386	0.0781**
	(-16.85)	(-18.51)	(-3.881)	(1.518)	(-15.56)	(-15.66)	(-1.279)	(2.513)
STATCAP	3.068**	3.172**	2.428***	2.748***	4.323**	4.466**	2.633***	3.218***
	(2.088)	(2.187)	(2.630)	(3.062)	(2.257)	(2.246)	(2.919)	(3.097)
RESERVE		4.515***		6.028***		4.096***		6.616***
		(34.33)		(34.19)		(14.42)		(5.968)
MANUF			-0.195	-0.139			-0.243	-0.209
			(-1.260)	(-1.337)			(-1.253)	(-1.616)
MINING			0.178***	0.214***			0.115	0.162***
			(3.663)	(8.441)			(1.626)	(3.260)
INFLATION					0.0354*	0.0292*	0.0426**	0.0279*
					(1.931)	(1.816)	(2.049)	(1.825)
CONFLICT					0.599	1.399*	1.114	2.275
					(0.966)	(1.723)	(1.341)	(1.501)
CURRENCY					-0.981	0.253	-0.750	1.460
					(-1.461)	(0.458)	(-0.897)	(1.637)
Constant	44.50***	24.40**	9.227**	-29.30***	31.45***	21.39**	-0.934	-27.47***
	(3.135)	(2.158)	(2.271)	(-3.297)	(3.002)	(2.491)	(-0.0854)	(-2.902)
Observations	64	64	52	52	64	64	52	52
Number of CID	33	33	27	27	33	33	27	27
R-squared	0.797	0.819	0.877	0.913	0.822	0.835	0.902	0.930

z statistics in parentheses
*** p<0.01, ** p<0.05, * p<0.1

4. Concluding Remarks

The paper is a reminder of 'fiscal inertia' that has been observed in different parts of the world (Webber and Wildavsky 1986). As a consequence of the so-called 'ratchet effect', taxes, once introduced, tend to stick long after the original argument for them is gone. The success of any particular type of taxation depends on the inherited practices that constitute the "initial conditions" of the structure of the economy, degrees of formality of economic activities, on politics, etc. Colonisation has left institutional arrangements and practices that have proved remarkably resilient over the years. One such arrangement has been the structure and level of taxation. The colonial status of African economies has significant implications for taxation in African economies today close to half a century after 1960, the modal year of independence. We have argued that labour reserve economies have a higher tax share, in part, because of particular 'tax handles' they inherited from their colonial past. We suggested that these include state administrative and coercive capacity, low levels of informalisation of the economy and high levels of inequality We found that once these historical advantages or characteristics are accounted for the high tax ratios of labour reserves economies do not in fact suggest high levels of 'tax efforts' as is suggested in the literature. The result was found to be robust over a varied set of specifications This conclusion suggests that some of the observations about the 'special case' of South Africa are misleading: South Africa turns out to be quite 'normal' in the context of labour reserve economies.

It should be borne in mind that the inertia on taxation is only one side of the coin. Tax is closely related to expenditure not only in a simple accounting sense but in the more profound sense in that the tax-expenditure nexus signals the fundamental social values of society, the balance of social forces and the kind of 'social contracts' they have arrived at. No analysis of expenditure is made in this paper but a possible conjecture is that expenditure patterns are likely to differ in African regions along the lines identified above, with urban and formal sector biases stronger in the labour reserve economies than in the other non-labour reserve economies. Furthermore within the urban and rural areas, the incidence of public expenditure will favour the formal sectors. One possible implication is that side by side with what may seem like progressive tax structures (as suggested by high levels of direct taxation) there will be highly regressive patterns of expenditure[20]. This may be an area for further exploration.

Appendix 1

Settler Populations in Selected former British colonies, 1955

Case	Settler population as percentage of total
Labour reserve economies	
Lesotho	0.3
Malawi	0.3
Kenya	0.5
Mauritius	0.9
Botswana	**1.0**
Swaziland	1.4
Zambia	3.0
Zimbabwe	7.9
Average	1.91
Cash crop economies	
Gambia	0.1
Ghana	0.1
Nigeria	0.1
Sierra Leone	0.1
Uganda	0.1
Tanzania	0.3
Average	0.13

Source: (Lange 2004.)

Appendix 2
Number of Civil Servants per 100 citizens (average, 1986-1996)

Country	Average (1986-1996)
Labour reserve economies	
Kenya	1.82
Lesotho	1.51
Madagascar	0.82
Malawi	1.20
Mozambique	0.80
Zambia	1.41
Zimbabwe	1.64
Average	1.32
Cash crop economies	
Benin	0.76
Burkina Faso	0.39
Cameroon	1.41
Chad	0.43
Côte d'Ivoire	0.82
Equatorial Guinea	1.63
Gambia, The	1.08
Ghana	1.96
Guinea	1.08
Guinea-Bissau	1.71
Mali	0.38
Mauritania	0.95
Niger	0.46
Senegal	0.87
Sierra Leone	1.27
Tanzania	1.18
Togo	0.58
Uganda	1.16
Average	1.01
African of concessions	
Burundi	0.47
Central African Republic	0.72
Congo	3.22
Gabon	2.75
Rwanda	0.47
Average	1.79

Source: (Lienert and Modi 1997)

Appendix 3
Informal Economy Employment as a % of employment

Country	Year	Percentage
Labour Reserve Economies		
Botswana	1985	27.0
Zimbabwe	1987	8.8
South Africa	1999	21.3
Average		19.0
Cash Crop Economies		
Senegal	1991	76.7
Cameroon	1993	57.3
Gambia	1993	72.4
Madagascar	1995	57.5
Niger	1995	0.0
Côte d'Ivoire	1996	52.7
Mali	1996	71.0
Ghana	1997	78.5
Benin	1999	46.0
Tanzania,	2001	46.0
Uganda	1993	83.7
Average		58.3
African of concessions		
Congo	1984	36.5
Central African Republic	1989	83.1
Gabon	1989	27.2
Average		48.9

Source: (ILO 2003)

Appendix 4
Income Distribution

	Survey year	Richest 10% to poorest 10%	Gini coefficient
Labour reserve economies			
Botswana	1993	77.6	63.0
Kenya	1997	13.6	42.5
Lesotho	1995	105.0	63.2
Malawi	1997	22.7	50.3
Namibia	1993	128.8	70.7
South Africa	2000	33.1	57.8
Swaziland	1994	49.7	60.9
Zambia	1998	41.8	52.6
Zimbabwe	1995	22.0	56.8
Average		54.9	57.5
Cash crop economies			
Gambia	1998	20.2	47.5
Ghana	1998	14.1	40.8
Nigeria	1996	24.9	50.6
Sierra Leone	1989	87.2	62.9
Tanzania, U. Rep. of	1993	10.8	38.2
Uganda	1999	14.9	43.0
Average		28.7	47.2

Source: (UNDP 2006)

5. References

Acemoglu, Daron, Simon Johnson, and James Robinson. 2001. "The Colonial origins of Comparative Development:." *American Economic Review*, Vol. forthcoming. National Bureau of Economic Research.

Adam, C., D. Bevan, and G. Chambas. 2000. *Exchange Rate Regimes and Revenue Performance in Sub-Saharan Africa*: Dept. of Economics, University of Oxford.

Adam, Hochschild. 1998. King Leopold's Ghost: A Story of Greed, Terror, and Heroism in Colonial Africa. New York: Houghton Mifflin Company.

Agbeyegbe, Terence, Janet G. Stotsky, and Asegedech WoldeMariam. 2004. "Trade Liberalization, Exchange Rate Changes, and Tax Revenue in Sub-Saharan Africa." International Monetary Fund: Washington D.C.

Ali, A. A. G, Cornelius Mwalwanda, and Y. Suliman. 1999. "Official development assistance to Africa: an overview." *JAE*, 8:4, pp. 504.

Amin, Samir. 1972. "Underdevelopment and Dependence in Black Africa-Origins and Contemporary Forms " *JMAS*, 10:4, pp. 503-24.

Auriol, Emmanuelle and Michael Warlters. 2002. "Taxation base in developing countries." *Journal of Public Economics*, 89:4, pp. 625-46.

Austin, Gareth. 2008. "The reversal of fortunes thesis and the compression of history: Perspectives from African and comparative economic history." *Journal of International Development*, 20:8, pp. 996-1027.

Azam, Jean-Paul, Shantayanan Devarajan, and Stephen A. O'Connell. 1999. "Aid Dependence Reconsidered." World Bank Washington, D.C.

Bauer, Peter. T. 1954. *West African Trade*. Cambridge, England: Cambridge University Press.

Beckman, Bjõrn. 1981. "Ghana:1951-78: The Agrarian Basis of the Colonial State," in *Rural Development in Tropical Africa*. J. Heyer, Pepe Roberts and Gavin Williams eds. London:: Macmillan, pp. 143-67.

Belcher, T. 1979. "Industrial Decentralisation and the Dynamics of Forced Labour in South Africa." *The Journal of Modern African Studies*, 17:4, pp. 677-86.

Bell, Michael E. and John H. Bowman. 2002. "Widening the Net: Extending the Property Tax into Previously Untaxed Areas of South Africa." Lincoln Institute of Land Policy: Cambridge, MA

Benabou, Roland. 1996. "Inequality and Growth." 11-74. NBER Macroeconomics Annual: Cambridge, MA.

Betts, R. F. 1990. "Methods and institutions of European domination," in *General History of Africa vol. VII: Africa Under Colonial Domination 1880-1935*. A. A. Boahen ed. California: UNESCO, Heinneman, pp. 312-37.

Bird, R. M. and E. M. Zolt. 2005. "Rethinking Redistribution: Tax Policy in an Era of Rising Inequality: Redistribution via Taxation: The Limited Role of the Personal Income Tax in Developing Countries." *UCLA L. Rev.*, 52:6, pp. 1627-867.

Bird, Richard M., Jorge Martinez-Vazquez, and Benno Torgler. 2004. "Societal Institutions and Tax Effort in Developing Countries." *SSRN eLibrary*: CREMA.

Boahen, Adu. 1985. "Colonialism in Africa: Its Impact and Significance," in *Africa under Colonial Domination: General History of Africa*. A. Adu Boahen ed: Heineman and UNESCO.

Bolt, Jutta and Dirk Bezemer. 2009. "'Understanding Long-Run African Growth: Colonial Institutions or Colonial Education?" *Journal of Development Studies*, 45:1, pp. 24 - 54.

Bowden, Sue, Blessing Chiripanhura, and Paul Mosley. 2008. "Measuring and explaining poverty in six African countries: A long-period approach." *Journal of International Development*, 20:8, pp. 1049-79.

Bowden, Sue and Paul Mosley. 2008. "Historical roots of poverty: A symposium." *Journal of International Development*, 20:8, pp. 987-95.

Bräutigam, Deborah. 2001. *Aid Dependence and Governance*. Stockholm: EGDI-Swedish Ministry of Foreign Affairs.

Bräutigam, Deborah and Stephen Knack. 2004. "Foreign Aid, Institutions, and Governance in Sub-Saharan Africa*." *EDCC*, 52:2, pp. 255.

Burgess, Robin and Nicholas Stern. 1993. "Taxation and Development." *JEL*, 31:2, pp. 762-830.

Campbell, John L. 1993. "The State and Fiscal Sociology." *Annual Review of Sociology*, 19, pp. 163-85.

Cheibub, José antonio. 1998. "Political Regimes and the Extractive Capacity of Governments, Taxation in Democracies and Dictatorships." *World Politics*, 50:3, pp. 349-76.

Chelliah, R. J. . 1971. "Trends in Taxation in Developing Countries,." *International Monetary Fund Staff Papers.*, 18:, pp. 254-331.

Collier, Paul. 2006. "Is Aid Oil? An Analysis of Whether Africa Can Absorb More Aid." *World Development*, 34, pp. 1482-97.

Coquery-Vidrovitch, Catherine. 1990. "The Colonial economy of the former French, Belgion, and Portuguese zones, 1914-35," in *General History of Africa vol. VII: Africa Under Colonial Domination 1880-1935*. A. A. Boahen ed. California: UNESCO, Heinneman, pp. 351-81.

Davoodi, Hamid R. and David A. Grigorian. 2006. "Tax Potential and Tax Effort: Factors Behind the Stubbornly Low Tax Collection in Armenia." *The 4th Annual AIPRG Conference on: "Armenia: Public Sector Governance and Economic Efficiency"*. The World Bank: Washington, D.C.

Devarajan, Shantayanan, Andrew Sunil Rajkumar, and Vinaya Swaroop. 1999. "What does aid to Africa finance?". World Bank: Washington, DC.

Elbadawi, Ibrahim A. 1999. "External aid: help or hindrance to export orientation in Africa?" *JAE*, 8:4, pp. 578.

Engerman, S. L., K. L. Sokoloff, and H. Hall. 2005. "Colonialism, inequality, and long-run paths of development."

Fjeldstad, Odd-Helge and Lise Rakner. 2004. "Taxation and tax reforms in developing countries: Illustrations from sub-Saharan Africa." Chr. Michelsen Institute Development Studies and Human Rights: Bergen, Norway.

Ghura, D. 1998. "Tax revenue in Sub-Saharan Africa: effects of economic policies and corruption." International Monetary Fund: Washington D.C.

Good, Kenneth. 1976. "Settler Colonialism: Economic Development and Class Formation." *The Journal of Modern African Studies,*, 14:4, pp. 597-620.

Grier, R. M. 1999. "Colonial legacies and economic growth." *Public Choice*, 98:3, pp. 317-35. .

Gupta, Sanjeev, Benedict Clements, Alexander Pivovarsky, and Erwin R. Tiongson. 2003. "Foreign Aid and Revenue Response: Does the Composition of Aid Matter?". Fiscal Affairs Department, IMF: Washington, D.C.

Herbst, J. 1990. "War and the State in Africa." *International Security*, 14:4, pp. 117-39.

Hinderink, J. and J. J. Sterkenburg. 1987. Agricultural commercialization and government policy in Africa: KPI London.

ILO. 2003. "Key Indicators of the Labour Market." ILO.

Kaufmann, Daniel, Aart Kraay, and Massimo Mastruzzi. 2005. "Governance Matters IV: Governance Indicators for 1996-2004 ".

Lange, Matthew K. . 2004. " British Colonial Legacies and Political Development." *" World Development,*, 32:8, pp. 905-22.

Levi, Margaret. 1988. *Of Rule and Revenue*. Berkerly: University of California Press.

Lieberman, Evan. 2002. " How South African citizens evaluate their economic obligations to the state." *Journal of Development Studies* (Journal of Development Studies), 38:3, pp. 37-62.

Lieberman, Evan S. . 2003. Race and regionalism in the politics of taxation in Brazil and South Africa. . Cambridge Cambridge University Press.

Lienert, I. and Jitendra Modi. 1997. "A Decade of Civil Service Reform in Sub-Saharan Africa." International Monetary Fund: Washington, D. C.

Mandala, Elias. 2006. "Feeding and Fleecing the Native: How the Nyasaland Transport System Distorted a New Food Market, 1890s–1920s." *JSAS*, 32:3, pp. 505-24.

McGillivray, Mark and Oliver Morrissey. 2001. "Fiscal Effects of Aid." UNU/WIDER: Helsinki.

Meillassoux, Claude. 1981. *Maidens, meal and money : capitalism and the domestic community*. Cambridge: Cambridge University Press.

Mhone, Guy. 2004. "Historical Trajectories of Social Policy in Post-Colonial Africa: The Case of Zambia," in *Social Policy in a Development Context*. Thandika Mkandawire ed. Basingstoke: Palgrave Macmillan, pp. 284-308.

Mhone, Guy C.Z. 2000. "Enclavity and constrained labour absorptive capacity in Southern African economies." International Labour Organization/Southern Africa Multidisciplinary Advisory Team (Ilo/Samat): Harare.

Mkandawire, Thandika. 1999. "Shifting Commitments and National Cohesion in African Countries," in *Common Security and Civil Society in Africa*. Lennart Wohlegemuth, Samantha Gibson, Stephan Klasen and Emma Rothchild eds. Uppsala: Nordiska Afrikainstitutet, pp. 14-41.

Mkandawire, Thandika. 2009. "From Nattional Question to Social Question." *Transformation*, 69, pp. 130-60.

Mogalakwe, Monageng. 2006. "How Britain underdeveloped Bechuanaland protectorate: a brief critique of the political economy of colonial Botswana." *Africa Development*, 31:1, pp. 66-88.

Moore, Mick. 1998. "Death without Taxes: Democracy, State Capacity, and Aid Dependence in the Fourth World," in *The Democratic Developmental State: Political and Institutional Design*. Mark Robinson and Gordon White eds. Oxford: Oxford University Press, pp. 84-121.

Moore, W. E. 1955. "'Labor Attitudes toward Industrialization in Under-developed Countries." *American Economic Review*, XLV:May

Moradi, Alexander. 2008. "Confronting colonial legacies - lessons from human development in Ghana and Kenya, 1880-2000." *Journal of International Development*, 20:8, pp. 1107-21.

Morrissey, Oliver, Olaf Islei, and Daniel M'Amanja. 2007. "Aid Loans versus Aid Grants: Are the Effects Different?". CREDIT, University of Nottingham.

Moss, Todd, Gunilla Pettersson, and Nicolas van de Walle. 2005. "The Aid Institutions Paradox: Long-Term Costs of High Aid Dependency." Queen Elisabeth House, Oxford.

Musgrave, Richard A. 1969. *Fiscal systems*. New Haven ; London: Yale University P.

Myint, Hla. 1958. "The "classical" theory of International Trade and the Underdeveloped Countries." *EJ*, 68:270 pp. 317-37.

Nattrass, Nicoli. 1991. "Controversies about Capitalism and Apartheid in South Africa: An Economic Perspective." *JSAS*, 17:4, pp. 654-77.

Nattrass, Nicoli and Jeremy Seekings. 2001. "Democracy and Distribution in Highly Unequal Economies: The Case of South Africa." *The Journal of Modern African Studies*, 39:3, pp. 471-98.

North, Douglas. 1990. *Institutions, Institutional Change and Economic Performance*. Cambridge: Cambridge University Press.

North, Douglass C. 1997. "The Contribution of the New Institutional Economics to an Understanding of the Transition Problem." United Nations University/WIDER (World Institute for Development Economics Research): Helsinki.

Oliver, Roland Anthony and Anthony Atmore. 1967. *Africa since 1800*. London,: Cambridge U.P.

Persson, T. and G.Tabellini. 1993. "Is Inequality Harmful for Growth." *American Economic Review*, 84, pp. 600-21.

Phimister, I. 1974. "'Peasant production and underdevelopment in southern Rhodesia'." *African Affairs*, 73, pp. 217–18.

Phimister, Ian. 1984. "Accommodating Imperialism: The Compromise of the Settler State in Southern Rhodesia, 1923-1929." *The Journal of African History*, 25:3, pp. 279-94.

Phimister, Ian R. 1991. "Secondary Industrialisation in Southern Africa: The 1948 Custom Agreement between Southern Rhodesia and South Africa." *JSAS*, 17:3, pp. 430-42.

Piancastelli, Marcelo. 2001. "Measuring the tax effort of Developed and developing Countries. Cross country Panel data analysis - 1985/95." Instituto de Pesquisa Economica Aplicada: Rio de Janeiro.

Remmer, Karen L. 2004. "Does Foreign Aid Promote the Expansion of Government?" *American Journal of Political Science*, 48:1, pp. 77-92.

Rodney, Watter. 1990. "The colonial economy," in *General History of Africa vol. VII: Africa Under Colonial Domination 1880-1935*. A. A. Boahen ed. California: UNESCO, Heinneman, pp. 332-50.

Stotsky, Janet and Asegedech Wolde-Mariam. 1997. "Tax Effort in Sub-Sahran Africa." IMF.

Tanzi, Vito. 1987. "Quantitative Characteristics of the Tax Systems of Developing Countries," in *The Theory of Taxation for Developing Countries*. David Newbery and Nicholas Stern eds. Oxford: Oxford University Press, pp. 205-41.

Teera, Joweria M. and John Hudson. 2004. "Tax performance: a comparative study." *Journal of International Development*, 16:6, pp. 785.

Thies, Cameron G. 2005. "War, Rivalry, and State Building in Latin America." *American Journal of Political Science*, 49:3, pp. 451-65.

Thies, Cameron G. 2007. "The Political Economy of State Building in Sub-Saharan Africa." *The Journal of politics*, 69:3, pp. 716-31.

Tilly, Charles. 1985. "War Making and State Making as Organized Crime," in *Bringing the State Back In*. Peter Evans, Dietrich Rueschemeyer and Theda Skocpol eds. Cambridge: : Cambridge University Press, pp. 169–91.

UNDP. 2006. Human Development Report 2006: Beyond Scarcity - Power, Poverty and the Global Water Crisis New York: United Nations.

Van Onselen, C. 1976. Chibaro: African Mine Labour in Southern Rhodesia, 1900-1933. London: Pluto Press.

Wagner, Richard E. 1976. "Revenue Structure, Fiscal Illusion, and Budgetary Choice." *Public Choice*, 25:1, pp. 45-61.

Webber, Carolyn and Aaron B. Wildavsky. 1986. *A History of Taxation and Expenditure in the Western World*. London: Simon & Schuster.

Wolpe, Harold. 1980. "Capitalism and cheap labour-power in South Africa: from segregation to apartheid.," in *The Articulation of Modes of Production: Essays from Economy and Society.* . Harold Wolpe ed.

Young, Crawford. 1988. "African Colonial State and its Political Legacy," in *The Precarious Balance: State and Society in Africa*. D. Rothchild and N. Chazan eds. Boulder. Co:: Westview Press, pp. 25-67.

Zolt, E. M. and R. M. Bird. 2005. "Redistribution via Taxation: The Limited Role of the Personal Income Tax in Developing Countries." *UCLA Law Review*, 52.

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[1] The idea of "tax handles" comes from the work by Richard Musgrave (1969) who emphasised the structure features of an economy that facilitates tax collection.

[2] Stotsky and Wolde-Mariam (Stotsky and Wolde-Mariam) seem to subscribe to geographical determinism of tax effort, as they observe in passing that that 'tropical African countries…tend to have low indices of tax effort' (p. 35).

[3] As Samir Amin observes: 'Here, ecological conditions had to some extent protected the peoples who took refuge from the ravages of the slave trade by fleeing into zones unlikely to be penetrated from the coast. The low population density and the lack of sufficient hierarchisation made the colonial trade model non-viable. Discouraged, the colonial authorities gave the country to any adventurers who would agree to try to 'get something out of it' without resources—since adventure does not attract capital.' (Amin 1972: 117).

The brutality of this order was first captured by Joseph Conrad in *Heart of Darkness* and in more recent years has been chronicled in *King Leopold's Ghost* (Adam 1998)

[4] The violence of these regimes showed up in the large numbers of Ruandi-Urundis that escaped to neighbouring countries to avoid forced labour. (Rodney 1990)

[5] There is a vast literature on the on the functional role of apartheid in the accumulation process and its acceptance by business precisely because of its role as a system of labour regimentation (See especially Wolpe 1980)

[6] In the words of Kenneth Good 'Colonial development of this kind implied the existence of a particularly active and interventionist state. If its basis was in the control of land and labour, its elaboration was influenced by the settlers' demands for goods and services similar to those in Britain, or the most advanced settler colonies outside of Africa. Because they were settlers, not just administrators, they took the long-term view of people preparing for the growth of established societies.' (Good 1976:)

[7] As a Rhodesian Minister of Agriculture stated the matter in March 1920:

, " cannot quite get over the fact of the huge profits the Trusts make out of the tobacco which we are trying to grow out here by the sweat of our brows, or perhaps I should say the natives'...The fact of Directors of the Trusts dying multi-millionaires... makes one wonder if they ever think of where all their money comes from and how it is that a few crumbs from their groaning tables are not let fall to enable the growers in Rhodesia, or in other parts of the world for that matter, to make a bare living... " (cited in Phimister 1984: 279)

[8] Perhaps the most important distinction between the African settler economies and countries like Brazil and other African economies is that the former were able to minimize 'leakages' of tax revenue toward expenditures on the indigenous population.

[9] Colonial rule in the labour reserves was generally of the "direct rule" type asw opposed to "indirect rule" in which the colonial powers extensively used traditional authorities for the implementation of some of their policies.. Thus using the data in Matthew Lange's study (Lange 2004.) on the effect of indirect rule on various indicators of governance in Ex-British colonies, we see that with the exception of Malawi, all our labour reserve economies score low on his index of extent of ' indirect rule'.

[10] On the construction and trajectories of nationalist agenda see (Mkandawire 1999;2009)

[11] For a while the nationalist movements in South Africa had to contend with their own creation of resistance to taxation in attempts to make the townships ungovernable as township dwellers continued with boycott of taxes on services.

[12] The test yielded a value 19.18 and Prob>chi2 = 0.0237 suggesting the random effects model is the more appropriate one.

[13] We would like to thank an anonymous referee for this suggestion.

[14] Thus Brautigam and Knack (2004: 263) argue that 'political elites have little incentive to change a situation in which large amounts of aid provide exceptional resources for patronage and many fringe benefits'.

[15] World Bank economists (Devarajan, et al. 1999) suggest, for instance, that if the marginal cost of taxation is exceptionally high—which it might be in African countries—using aid for tax relief may be the best use of foreign resources. Gupta and associates (Gupta, Clements, Pivovarsky, and Tiongson 2003: 20) note: "In some countries, the dampening effect of aid on revenues could be part of a strategy to return resources to the private sector to accelerate economic growth"

[16] Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Congo, Congo. Democratic Republic, Cote d Ivoire, Gabon, Gambia The, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Malawi, Mali, Mauritania, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, South Africa, Swaziland, Tanzania, Togo, Uganda, Zambia, Zimbabwe,

[17] These countries are: Angola, Benin, Botswana, Burkina Faso, Cameroon, Cameroon, Central African Republic, Congo, Congo. Democratic Republic, Cote d Ivoire, Kenya, Lesotho, Malawi, Mali, Mauritania, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, South Africa, Swaziland, Tanzania, Togo, Uganda, Zambia,

[18] We use the xtpcse command in STATA.

[19] Using regressions methods in the form used in this paper Thies concludes:

'The existence of an interstate rivalry results in higher levels of extraction from society in African states. Internal ethnic rivals engaged in conflict with the state also result in the capture of a larger percentage of the national income through taxation. These findings generally conform to predatory theory that expects states would expand their extraction in order to face these types of challenges' (Thies 2005;2007: 728)

[20] This is strongly implied by Sue Bowden, Blessing Chiripanhura and Paul Mosley (2008) in a paper comparing poverty in 'settler economies' and 'peasant economies'.

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