Fiscal capacity equalisation in Tanzania

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Abstract
Fiscal equalisation aims at enabling decentralized governments to supply similar services at similar tax rates. In order to equalize fiscal disparities, differences in both fiscal capacities and in fiscal needs have to be measured. This paper focuses on the measurement of fiscal capacity in a developing country. The current intergovernmental transfer system in Tanzania does not take differences in fiscal capacity into account. As a result, local governments in rich areas are able to generate considerably more revenue per capita than those in poor areas. Public services in poor areas are hard to finance. We propose a way of measuring fiscal capacities of local governments in Tanzania using poverty data. We use this measure to derive an equalisation grant that would support local governments which have a low fiscal capacity.

Key words: fiscal equalisation, fiscal capacity, local taxation, intergovernmental grants

In virtually every country, government is decentralized. Decentralisation allows public services to be tailored to local demand, it can promote efficiency and innovation, and foster competition between jurisdictions (Oates, 1999). A problem associated with decentralisation is the emergence of fiscal disparities. Fiscal disparities arise when sub-national governments are not able to produce comparable services at comparable tax rates. Fiscal disparities arise both on the revenue and on the expenditure side of the budget (Ladd, 1994). Jurisdictions with an affluent population are usually better able to finance public service provision than other jurisdictions, because they can raise tax revenue more easily. On the expenditure side, spending needs, the expenditures needed to provide a certain standard level of public services, differ. In the first place, spending needs differ as a result of demographic reasons. For example, jurisdictions with a large proportion of school age children need to spend more (per capita) on education in order to reach a standard service level. In the second place, it may be more costly to produce a standard package of public services in one jurisdiction than it is in others. Jurisdictions which are sparsely populated, e.g., may need more school busses.

Fiscal disparities result into two problems: inequity and inefficiency in resource allocation (see e.g. Boadway, 2004). Equity requires that equals be treated equally. In the presence of fiscal disparities, residents of some jurisdictions receive better or more services for their tax money than their counterparts in less favoured jurisdictions. This inequity may in turn result in an inefficient allocation of factors of production, because

labour and capital are more likely to locate in jurisdictions with high net fiscal benefits. Labour and capital should locate where their productivity is highest, not where fiscal benefits are highest.

The obvious solution to the problem of fiscal disparities is to compensate jurisdictions with high expenditure need and low fiscal capacity (Ladd and Yinger, 1994). Many countries use equalisation transfers to this end. These transfers may originate from the central government (horizontal equalisation), or may redistribute directly from rich jurisdictions to poor ones (vertical equalisation). In each case, they may be aimed at ensuring that every jurisdiction is capable of providing a standard package of public services at standard tax rates.

Equalisation has two components: fiscal capacity equalisation and expenditure needs equalisation. This paper explores the possibilities of fiscal capacity equalisation in Tanzania. Recently, Tanzania introduced formula-based grants from the central government to local governments. Although some of these grants are distributed according to criteria aimed at reducing disparities in spending need, no attempt is made at fiscal capacity equalisation. Per capita tax revenue varies widely over local governments, however. As the government considers strengthening local governments' revenue raising capacities, the importance of fiscal capacity equalisation is likely to grow. We review the measurement options of fiscal capacity and their applicability in developing country like Tanzania, where far less data is available than in developed countries. Relatively few developing countries attempt to equalise differences in fiscal capacity (Bird and Smart, 2002). We calculate an index of fiscal capacity for local governments based on poverty line data, and derive an equalisation grant. To the best of our knowledge, poverty line data has not been used before to estimate fiscal capacity.

The paper is organized as follows. First, we discuss measures of fiscal capacity available in the literature. Then, we briefly describe the local government system in Tanzania. Next, we choose the best possible measure of fiscal capacity, given limited data availability, and calculate an index value for every local government. From this index, we derive an equalisation grant. The final section concludes.

MEASURES OF FISCAL CAPACITY

There are two major approaches to measuring fiscal capacity. One is used to equalize tax *rates* (representative tax system, RTS), the second to equalize tax *burdens* (income approach, sometimes called macro approach).

Representative Tax System (RTS) Approach

Under the RTS, fiscal capacity is defined as the weighted sum of the major tax bases potentially available to the jurisdictions being compared (e.g. Chernick, 1988). Fiscal equality is assumed to be achieved when application of average tax rates to the tax bases of the representative revenue regime produce the same per capita revenues in every jurisdiction. To implement this approach, data is collected on the bases for taxes and other revenues administered by every jurisdiction. Using this information and the national average tax rates, it is possible to compute the amount of revenues that each jurisdiction would collect under the average fiscal effort. This amount measures the fiscal capacity of each jurisdiction.

Alternatively, fiscal capacity may be estimated using regression analysis (Martinez-Vazquez and Boex, 1997). This makes data collection for each separate tax base unnecessary and instead only requires data on total revenue collections and proxies for tax bases. In this approach, jurisdictions' revenue collections are regressed on variables representing proxies for a set of tax bases. The parameter estimates are used to predict the amount of revenue each jurisdiction would collect under average fiscal effort. In practice, the difference with macro measures may be small. Proxies for tax bases are likely to include measures like personal income and GRP.

A number of problems arise when the RTS approach is used for equalisation. First, it ignores differences in the ability of jurisdictions to export taxes, i.e., to let non-residents bear part of the tax burden (e.g. through a tax on tourists). Furthermore, if a jurisdiction faces a more (or less) restrictive legal framework than the average, its ability to raise revenue will not be directly reflected in its RTS (Chernick, 1998). In addition, the RTS ignores distributional constraints which may limit jurisdictions to tax. For example, jurisdictions with relatively unequal income distribution must take into account the distributional effect of taxes and the revenue productivity of different tax instruments. Similarly, if jurisdictions are less homogeneous in terms of competitive fiscal environment, then RTS is a weaker measure of fiscal capacity. This is because jurisdictions will have different tax bases and structures.

A more fundamental problem with RTS is that the revenue capacity of a jurisdiction is not assessed against a standard *burden* imposed on the incomes of residents of a jurisdiction. This is required if horizontal equity is to be achieved. No matter how high the tax base, tax is ultimately paid out of income. This is recognized by the income approach to fiscal capacity.

In practice, applying RTS is difficult because jurisdictions make different choices with respect to tax structures, tax mixes and tax rates (Barro, 2002; Courchene, 1984). In some countries, even statutory bases are not well defined due to the existence of many miscellaneous tax bases. Sometimes, certain tax bases are only used in few jurisdictions. Then, it is not clear how, if at all, these bases should be included in the RTS formula. Even for well established tax bases, some compromise must be struck in defining the tax base if these differ across jurisdictions. Much judgment is involved in applying the method. As a result, implementation may easily be driven by political rather than equity and efficiency considerations.

Finally, RTS can result in incentive problems, because jurisdictions are able to affect the equalisation payment they receive. They can do this by altering their tax rate (*rate tax-back*: if they are large enough, they can affect the national average tax rates by altering their own tax rates) or the size of their tax base (*base tax-back*: if their tax base is eroded as a result of high tax rates, the grant they receive will increase).

Income approach

Macro measures like gross regional product (GRP) or personal income may be better indicators of the ability of jurisdictions to raise revenue (Usher, 1995; Barro, 2002; Smart, 2002; Wilson, 2007). The most prominent of these approaches is the income approach, developed by Bradbury and Ladd (1985) and Ferguson and Ladd (1986). The income approach measures revenue raising capacity as the per capita amount of revenue a jurisdiction's residents could raise if they imposed a standard tax burden on themselves.

If relevant, this may be augmented by the share of the tax burden that is exported to non residents. Ignoring this for the moment, jurisdiction i's per capita equalisation entitlement is then given by (Ahmad and Searle, 2006; Wilson, 2007):

$$E_i = t(Y-Y_i),\tag{1}$$

where t is the uniform percentage burden on the nation's residents, Y is average per capita income, and Y_i is the per capita income of residents in jurisdiction i.

This approach uses personal income as the only determinant of an individual's ability to pay tax. Ultimately, every tax is paid by people out of their income. Therefore, the income of the individuals in a jurisdiction is the appropriate measure of their ability to pay local taxes, regardless of the type of tax bases available. This approach recognizes the fact that a jurisdiction with a tax base that is x per cent higher than average (e.g. highly property values) may not always enjoy incomes that are x per cent above average. To give an example, in most countries (including Tanzania), urban jurisdictions have higher per capita property values than rural ones. Adopting the RTS approach by applying the national average tax rate to actual property values would work in favour of jurisdictions that are less urbanized, whereas city dwellers do not always have proportionally higher incomes.

Apart from personal income, other macro variables may be used to measure fiscal capacity. One is Gross Regional Product (GRP), which aggregates the value added by all economic resources in the jurisdiction. Computation of GRP is data-intensive; the necessary data usually are not readily available for each jurisdiction.

LOCAL GOVERNMENT FINANCE IN TANZANIA

There are two levels of government in Tanzania mainland: the central government, and 122 districts or local governments (in 2006). The 21 regions do not form a separate government level; these are deconcentrated departments of the central government. The islands community of Zanzibar has a high degree of autonomy and is not included in this study. All districts have an elected council, which is responsible for setting tax rates and delivering local government services, mainly in the fields of health, education, roads, water and agriculture.

<Table 1 about here>

Although local governments' main source of revenue consists of grants received from the central government, local taxation has a significant share in local revenues (Table 1). Other own source revenues, providing only 1.4 per cent of revenue, include fines and penalties and income from property, goods and services.

Local taxation

Revenue-raising powers of local governments are set down in the Local Government Finances Act of 1982 and the Urban Authorities (Rating) Act of 1983. In 2003, a closed-list approach to taxation was introduced: local governments are only allowed to levy taxes or levies that are on the list. Table 2 displays revenues from different local taxes.

<Table 2 about here>

The *service levy*, a turnover tax, is the most important revenue source for local government authorities, accounting for 29% of total local tax revenue. Local authorities have no discretion over tax base or tax rate, which is set at 0.3% of business turnover. The service levy is only collected from producers with annual turnover exceeding 20 million shillings.

Local fees and charges yield 28 per cent of local tax revenue. These include market fees and charges and sanitation fees and charges.

Revenue from agricultural *produce cess* amounts to 25% of local tax revenue. This type of tax is levied by most rural districts on the sale of major crops (e.g. sisal, tobacco and cotton) produced within their jurisdictions. Local governments are free to choose tax rates, which may vary from crop to crop, but there is a maximum rate of 5%.

The *property tax* yields only 11 per cent of local tax revenues, which is low compared with other countries. Legal incidence is on owners of buildings, structures or similar development (not land). Tax rates can be flat or ad valorem. Flat rates may depend on building size or use. Ad valorem rates may be classified, e.g. taxing commercial property at a higher rate than residential property. Local councils are free to set rates, although these have to be approved by the central government. Property values are assessed by the local authorities. However, Kelly and Musunu (2000) estimate that only about one quarter of taxable buildings are on the property tax rolls.

Other revenue sources listed in Table 2 are relatively unimportant. *Land rent* revenue (2.5 per cent of total revenue) consists of the 20 per cent of revenue that local governments receive to compensate them for collecting this central government tax. *Guest house levy* (2.2 per cent of revenue) is imposed on the owners of guest houses with yearly turnover up to 40 million shillings. The tax rate is fixed by the central government at 20% of the total payments received from guests.

Table 2 makes clear that not all taxes are levied by every local government. The relative importance of taxes and levies varies widely. For example, whereas the service levy accounts for 29 per cent of total local government tax revenue, this share varies from zero to 80 per cent.

Finally, the bottom row of Table 2 shows that per capita revenue differs greatly between districts. In Kibondo, per capita tax revenue is only 34; in Ilala it is 9,593 Tshs. It is unlikely that these large differences arise as a result of local differences in the preferences for public services. This highlights the importance of some kind of fiscal capacity equalisation.

Local taxation is widely regarded as the weakest link in Tanzania's local government finance structure (Boex and Martinez-Vazquez, 2006). The taxes assigned to local governments are mostly low-yielding and unpopular. They are difficult to administer and suffer from high compliance costs. Enforcement is weak, tax resistance widespread (Fjeldstad, 2001), accountability low and corruption common (Brockington, 2008). Local tax autonomy is low compared to that in other developing or developed countries. Only the property tax and produce cess can be regarded as "true" local taxes, to the extent that local governments are free to choose tax rates and tax base (although the tax rate of produce cess is capped at 5 per cent). The central government recognizes the importance of adequate local government tax revenue and of local tax autonomy, and it strives for

reform. The yearly Local Government Fiscal Review routinely expresses these sentiments. A government white paper states that:

> If structured appropriately, local taxation empowers communities, enhances accountability, helps improve vertical imbalance problems, and overall, it improves the efficiency of the public sector. Each government requires control over at least one good revenue source. (…) Deficient local taxes should be transformed into sound revenue instruments (United Republic of Tanzania, 2006).

However, increasing the dependency of local governments on own tax revenue would increase inequities arising from fiscal disparities.

Intergovernmental grants

Until 2004, Tanzania had a discretionary system of intergovernmental grants. Among its many shortcomings were dis-equalising tendencies which allocated a relatively high share to wealthier and urban jurisdictions (Boex and Martinez-Vazquez, 2006). Starting in 2004, a new system of formula-based transfers was introduced. The present system includes block grants which finance current expenditures in each of the following five sectors: education, health, agriculture, roads, and water supply. These sectors have been identified by the central government as priority policy areas. To finance local administration and policies over which local governments have autonomy, local governments receive a general purpose grant.

Apart from these recurrent grants, two other kinds of transfers exist in Tanzania. Development grants provide funds to finance local government investments. Finally, there exist earmarked ministerial subventions.

Recurrent block grants (Tshs 517 million in 2006/2007) are distributed over local governments according to about ten variables thought to reflect local spending needs. The block grant for Health, for example, is allocated according to number of inhabitants (70 per cent of the grant), number of poor residents (10 per cent), district medical vehicle route (10 per cent), and under-five mortality (10 per cent). Thus, these grants are aimed to equalize fiscal disparities in spending needs.

The general purpose grant (Tshs 83 million in 2006/2007) was originally introduced in 2003 as compensation grant, which served to compensate local governments for the abolishment of several local taxes. The present general purpose grant is still allocated in part according to the distribution of abolished revenue sources (Boex and Martinez-Vazquez, 2006). The Local Government Finance Act 1982 expressly allows for equalisation of fiscal capacity:

> The government may, where it is satisfied that a particular local authority has a weak revenue base, pay to that local authority an equalisation grant to enable it to provide, maintain and develop other necessary services within its area. (United Republic of Tanzania, 1982, Article 10, subsection 4).

However, fiscal capacity measures are not included in the present grant allocation formula used in Tanzania. In the next section, we show how this could be remedied.

EQUALISING FISCAL CAPACITY IN TANZANIA

Choice of method

The choice between RTS and income approach to measure fiscal capacity is not clear-cut. This depends, among other things, on data availability and on the structure of the tax bases available. Both approaches may sometimes yield similar results. Smart (2002) finds that, for most provinces in Canada, there exists a strong relationship between revenue capacity as measured with RTS and aggregate income measures like GRP. In the end, the choice of a method is a pragmatic one, especially in countries like Tanzania where data availability is low.

There are several reasons which limit the feasibility of the representative tax system (RTS) approach in Tanzania. Statutory tax bases are not well defined and tax bases differ significantly. E.g., property tax may be based on property value (with different rates for e.g. commercial and residential property) or may be an equal amount for all properties with certain characteristics. Some tax bases are only used in about half of local jurisdictions (Table 2). For example, property tax is prevalent in urban areas but not in rural areas.

Even if these difficulties could somehow be overcome, RTS is unfeasible because the size of the local tax bases is simply unknown. In theory, the tax base could be calculated from tax revenues for those taxes where tax rates are set by the central government (service levy and land rent). However, as enforcement is low, this would underestimate the tax base significantly, and to a different degree in different jurisdictions. Apart from these practical problems, the RTS approach does not account for differences in the ability to pay tax.

In this paper, we use the income approach to measure the fiscal capacity of local governments. Ultimately, all taxes are paid by people out of income. Local governments have several tax instruments at their disposal to tap the income within their territory. Provided tax rates are not restricted in practice, ability to pay is the only variable limiting local tax capacity. This is not the case, of course, if some districts cannot raise their tax rates to a sufficient level because of central government regulation. As the central government strives to increase local tax autonomy, we ignore this possibility in this paper. We also abstract from the fact that part of the local tax burden will be born by non-residents. Given the taxes available at the local government level, this share will probably be low. Data to estimate this share are unavailable.

Index based on income tax revenue data

We have found two possible sources for local personal income data. First, we consider personal income tax revenue levied by the central government. The Tanzania Revenue Authority, which administers this tax, is able to break down revenues (but not taxable income) by district. The most recent data available relate to fiscal year 2006/2007. In that year, personal income tax was payable from a yearly income of Tshs 720,000. Tax rates are progressive, ranging from 18.5 per cent for the lowest income bracket (Tshs 720,000 - Tshs 2,160,000) to 30 per cent per cent for the highest bracket (over 6,480,000 Tshs). This progressiveness is a disadvantage of this data source, as local government tax rates are not progressive. Another disadvantage is that many people are not covered by the

personal income tax, because they do not have an income from formal employment above the threshold of Tshs 720,000.

For every district, we calculated per capita revenue, and divided this by average per capita revenue in Tanzania. This is our first index of fiscal capacity:

$$FCa_i = R_i/R, \tag{2}$$

where R_i is per capita personal income tax revenue collected in district i, and R average per capita revenue from this tax. Values above one indicate higher than average fiscal capacity, values below one indicate low fiscal capacities (the lowest value possible being 0). The value of FCa varies considerably (Figure 1). Over forty per cent of districts score lower than 0.10 (fiscal capacity more than 90 per cent lower than average). This is too low even to be visible in Figure 1. Only twenty districts score higher than 1, the highest value being an extreme 28 (Ilala, the down-town part of Dar es Salaam, the de-facto capital of Tanzania). One reason for these huge differences is the progressiveness of the personal income tax: high incomes are concentrated in a few large urban districts. Another reason is that, in rural districts, few people have formal jobs which earn taxable income. Thus, it seems, personal income tax revenue data are a rather poor basis for an indicator of local fiscal capacity.

<Figure 1 about here>

Index and equalisation based on poverty data

The ability to pay tax may be estimated best through local income. Average household income is available at the regional level, but not for individual districts. Moreover, average income may not be the best indicator, as local governments cannot tax income progressively. Tanzania is a very poor country. A better indicator of fiscal capacity could be the share of inhabitants with enough income to be able to pay tax at all. On the district level, estimates are available of the share of the population above the poverty line in 2000/2001 (Muzzini and Lindeboom 2008), based on a technique called poverty mapping (Lindeboom and Kilama, 2006). The basic needs poverty line in 2000/2001 was set at Tshs 262 per adult equivalent per day. This is low compared with poverty lines used elsewhere (United Republic of Tanzania, 2005). As a result, people below the poverty line cannot be expected to pay much tax.

We construct an index of fiscal capacity in a similar manner as above. For every district, we divided the share of the population above the poverty line by the national average:

$$FCb_i = P_i/P, \tag{3}$$

where P_i is the proportion of the population above the poverty line in jurisdiction i, and P the national average of this proportion. The underlying assumption is that inhabitants below the poverty line do not pay tax, and that inhabitants above the poverty line each are able to pay the same (positive) amount of tax. This measure probably understates true differences in fiscal capacity, as fiscal capacity will in fact also depend on the extent to which income is above the poverty line. Thus, our measure of fiscal capacity and the

equalisation grant based on it may be seen as a first step towards a more comprehensive approach (which would require more data than currently available).

Figure 1 shows that for half of the districts, FCb has a value above one, indicating higher than average fiscal capacity, while the other half has a value below one, indicating low fiscal capacity. According to this measure, urban districts have relative high fiscal capacities, but not disproportionally so, as in the case of the index based on personal income tax revenue. Bunda, represented by the bar on the extreme left in Figure 2, has the lowest FCb (0.49, which is 51 per cent below average). Bukoba Urban, represented by the bar on the extreme right in Figure 2, has the highest FCb (1.35, which is 35 per cent above average). The median value equals 1.00. Table 3 lists the value of FCb for every district.

<Figure 2 about here>

We conclude that the poverty line-based fiscal capacity index FCb is preferable to FCa, its counterpart based on income tax revenues. Using FCb, we calculated a grant allocation which equalizes fiscal capacity, based on Equation (1). In (1), tY is average per capita local tax revenue. At a standard tax burden, a local jurisdiction's per capita tax revenue is equal to average per capita tax revenue multiplied by FCb. Thus, local government i's per capita equalisation entitlement is given by

$$E_i = LR(1 - FCb_i), \hspace{4cm} (4)$$

where LR is average per capital local tax revenue.

<Table 3 about here>

Grants based on poverty data

Two kinds of grants are possible: from rich districts to poor ones, or from the central government to the districts. In the first case, the grant is equal to the difference of average per capita tax revenue (LR) and fiscal capacity (LR × FCb_i). For example, in Serengeti district, 39.4 per cent of the population is above the poverty line. The national weighted average of this percentage is 65.9. This gives Serengeti an FCb of 0.60 (39.4/65.9). The average local government has per capita tax revenue of 1,394 Tshs (2006/2007). Thus, Serengeti's per capita fiscal capacity is 834 Tshs (0.60 × 1,394), and the equalisation grant amounts to 560 Tshs (1,394 – 834). Districts with above-average fiscal capacity 'receive' a negative grant. Grants calculated this way vary between -487 Tshs (Bukoba Urban) and 711 Tshs (Bunda) per capita, or -509 million Tshs and 474 million Tshs. Together, the grants sum to zero.

In Tanzania, grants flow from the central to the local governments, not from rich to poor districts. The grants calculated above can be supplemented by an amount just enough to set the most negative grant to zero (i.e., 487 per capita). Thus, per capita grants vary from 0 to 1,198 (again for Bukoba Urban and Bunda, respectively; see Table 3); the total sum to be paid out being 18.3 million Tshs.

Figure 3 shows that these equalisation grants would benefit districts with low per capita tax revenue most. However, there is no direct relationship, as tax revenue not only

depends on fiscal capacity, but also on the extent to which fiscal capacity is used to generate revenue. It should be noted that complete equality is not our goal here. Tax revenue should follow from local decisions concerning taxes and service levels, while spending need for services financed from unconditional funds may differ between districts as well. The districts with high tax revenues displayed on the right hand side of Figure 3 are large cities, and may need high revenues to finance urban facilities. Estimation of spending needs is outside the scope of this paper.

The above considerations notwithstanding, Figure 3 suggests that the effect of the proposed equalisation grant on inter-district equity is rather small. A few districts enjoy extremely high per capita tax revenues. It is unlikely that this can be explained fully by higher revenue effort and higher spending needs. The high per capita tax revenues in the large cities are probably related to the much higher income levels there, and the presence of large companies. In order to take this into account, a different setup could be considered. Above, we set the smallest grant to zero, with the consequence that all but one of the districts receive a positive grant. A different approach might be to set grants to zero for districts with per capita tax revenue above a certain threshold. If such a threshold would be set at, e.g., 2,000 Tshs, the richest 18 districts would not receive an equalization grant (see Figure 3), leaving some more funds for the districts that are poorer. This way, the equalizing impact of the equalization system can be increased at will. The exact threshold is a matter for political decision making. Without better income data, we cannot say what the best level would be. Apart from setting a threshold, the equalizing impact of the grant can, of course, be augmented by increasing the funds available for distribution.

<Figure 3 about here>

A logical way to implement fiscal capacity equalisation would be to include it in the allocation of the general purpose grant. As we have seen, this grant is meant to finance both local administration and policies over which local governments have autonomy. The latter category is also financed partly from local taxation. Thus, local governments which can raise little tax revenue could be supported by giving them a higher general purpose grant. This is easily implemented by allocating part (or all) of the general purpose grant as proposed above. A practical issue is that the poverty data used are only available for 2000/2001. If the proposed method should be implemented, a regular update must be made (e.g., every ten years).

If part of the general purpose grant received by local governments would depend on a local poverty indicator, the local governments' incentive to promote development could arguably be reduced. However, if the poverty indicator is not updated very regularly (which seems likely), grant allocation would only change after an interval of numerous years. It seems plausible that the time horizon of (elected) local administrators is rather limited. In that case, incentive effects are negligible.

CONCLUSIONS

Since 2004, Tanzania has a system of conditional grants from the central government to the local governments which aims at equalising differences in spending needs. However, although a non-negligible part of local government revenue comes from taxation, no attempt has been made yet to equalize differences in fiscal capacity. Consequently,

jurisdictions with a wealthier population are able to raise more tax revenue than poor jurisdictions. The differences are considerable. As the central government seeks to strengthen the role of local taxation, this problem is likely to grow.

As in many developing countries, data availability in Tanzania is low. This limits the options available to measure fiscal capacity. We show that it is nevertheless possible to develop an index for local fiscal capacity, based on income estimates. Ultimately, all taxes are paid by people out of their income. We base our indicator for fiscal capacity on the share of the population above the poverty line. As the poverty line used in Tanzania is low, people below it cannot be expected to pay much tax. We use our index of fiscal capacity to derive an equalisation grant that compensates for differences in fiscal capacity. We show that this grant would make the distribution of unconditional funds (tax revenue plus unconditional grants) less unequal. This may help poor districts finance projects they consider valuable.

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Table 1. Local Government recurrent resources 2006/2007

	Amount (billion Tshs)[*]	Percentage of total
Grants	600	90.8
Taxes and levies	52	7.9
Other own source revenues	9	1.4
Borrowing	0.1	0.0
Total	**662**	**100**

Source: United Republic of Tanzania (2007).
[*] Tshs: Tanzanian shilling. In 2006, 1,600 Tshs roughly equalled one euro; 2,360 Tshs equalled one pound sterling and 1,260 Tshs equalled one US dollar.

Table 2: Local government tax revenue, 2006/2007.

	Share of districts levying this tax (%)	Total revenue (million Tshs)	Revenue share		
			Average	Lowest	Highest
Taxes					
Property tax	50	5,476	10.5 %	0 %	42 %
Land rent	51	1,333	2.5 %	0 %	61 %
Service levy	88	15,139	28.9 %	0 %	80 %
Produce cess	75	13,119	25.1 %	0 %	99 %
Guest house levy	66	1,128	2.2 %	0 %	67 %
Licenses, fees and charges					
License fees, permits	92	1,471	2.8 %	0 %	64 %
Local fees and charges	96	14,631	28.0 %	0 %	96 %
Total		**52,297**	**100.0** %		
				Lowest	Highest
Total per capita (Tshs)		1,394		34	9,593

Source: Monitor Local Government Finances; http://www.logintanzania.net.

Table 3. Fiscal capacity index (FCb) and equalisation grant (Tshs per capita)

District	Fiscal capacity index	Grant	District	Fiscal capacity index	Grant
Arumeru	1.24	148	Mbinga	1.09	358
Arusha Urban	1.33	25	Mbozi	1.20	214
Babati	0.76	827	Mbulu	0.77	808
Bagamoyo	0.91	616	Meatu	0.71	884
Bariadi	0.82	732	Misungwi	0.91	609
Biharamulo	0.79	774	Mkuranga	0.91	611
Bukoba Rural	1.25	135	Monduli	1.16	271
Bukoba Urban	1.35	0	Morogoro Rural	1.04	425
Bukombe	0.79	781	Morogoro Urban	1.31	61
Bunda	0.49	1198	Moshi Rural	1.10	349
Chunya	1.13	300	Moshi Urban	1.25	138
Dodoma Rural	0.87	673	Mpanda	0.95	561
Dodoma Urban	1.11	328	Mpwapwa	1.10	353
Geita	0.57	1083	Mtwara Rural	0.96	544
Hai	1.19	226	Mtwara Urban	0.94	575
Hanang	0.77	806	Mufindi	1.16	258
Handeni	1.03	440	Muheza	1.02	453
Igunga	0.79	776	Muleba	1.11	334
Ilala	1.28	99	Musoma Rural	0.55	1113
Ileje	1.04	429	Musoma Urban	0.94	567
Iramba	0.87	673	Mvomero	1.12	324
Iringa Rural	1.05	421	Mwanga	1.11	328
Iringa Urban	1.24	150	Mwanza	1.20	212
Kahama	0.95	554	Nachingwea	0.89	641
Karagwe	1.11	328	Namtumbo	0.69	925
Karatu	0.92	599	Newala	0.86	683
Kasulu	0.90	620	Ngara	1.00	485
Kibaha	1.04	434	Ngorongoro	1.16	267
Kibondo	0.92	599	Njombe	1.14	294
Kigoma Rural	0.93	580	Nkasi	0.84	705
Kigoma Urban	1.11	328	Nzega	0.99	506
Kilindi	0.94	573	Pangani	1.19	229
Kilolo	1.08	379	Rombo	0.95	552
Kilombero	1.08	379	Ruangwa	1.07	394
Kilosa	1.06	400	Rufiji	1.01	478
Kilwa	0.99	497	Rungwe	1.04	438
Kinondoni	1.30	68	Same	1.00	487
Kisarawe	0.74	844	Sengerema	0.82	745
Kishapu	0.82	732	Serengeti	0.60	1047
Kiteto	1.09	360	Shinyanga Rural	0.87	669
Kondoa	1.20	207	Shinyanga Urban	1.19	226
Kongwa	0.91	616	Sikonge	0.87	664
Korogwe	1.05	410	Simanjiro	1.16	264
Kwimba	0.91	611	Singida Rural	0.67	942
Kyela	1.16	269	Singida Urban	0.82	741
Lindi Rural	0.74	853	Songea Rural	0.90	628
Lindi Urban	1.24	152	Songea Urban	1.04	434
Liwale	0.94	575	Sumbawanga Rural	1.00	485
Ludewa	1.15	275	Sumbawanga Urban	1.10	345
Lushoto	1.28	95	Tabora Urban	1.16	260
Mafia	0.87	666	Tandahimba	1.00	491
Magu	0.95	554	Tanga	1.26	131
Makete	1.15	277	Tarime	1.03	440
Manyoni	0.78	796	Temeke	1.08	372
Masasi	0.95	556	Tunduru	0.93	584
Maswa	0.86	686	Ukerewe	0.78	789
Mbarali	1.32	42	Ulanga	1.10	349
Mbeya Rural	1.04	429	Urambo	0.90	624
Mbeya Urban	1.33	28	Uyui	0.79	783

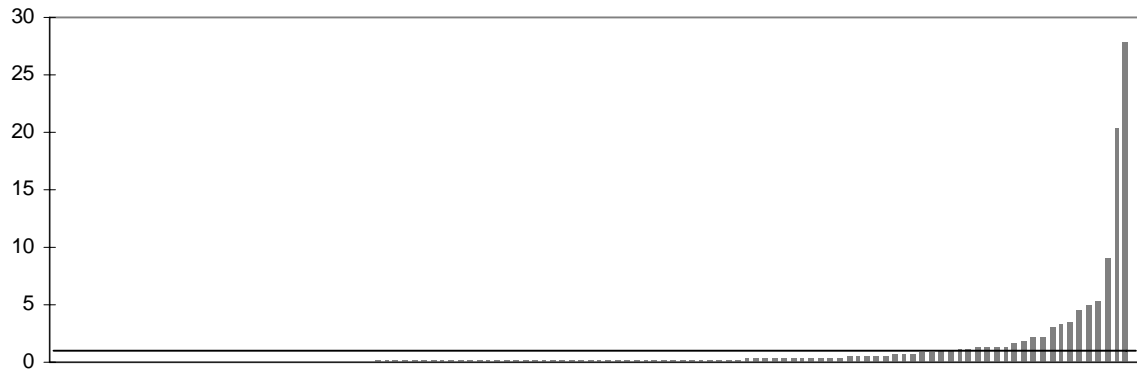**Figure 1. Index of local fiscal capacity based on income tax data (FCa), per district**

Figure 2. Index of local fiscal capacity based on poverty data (FCb), per district
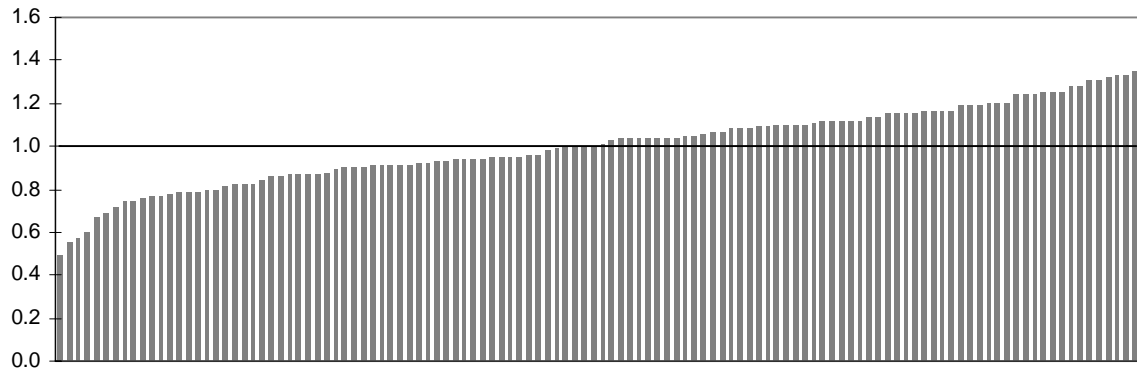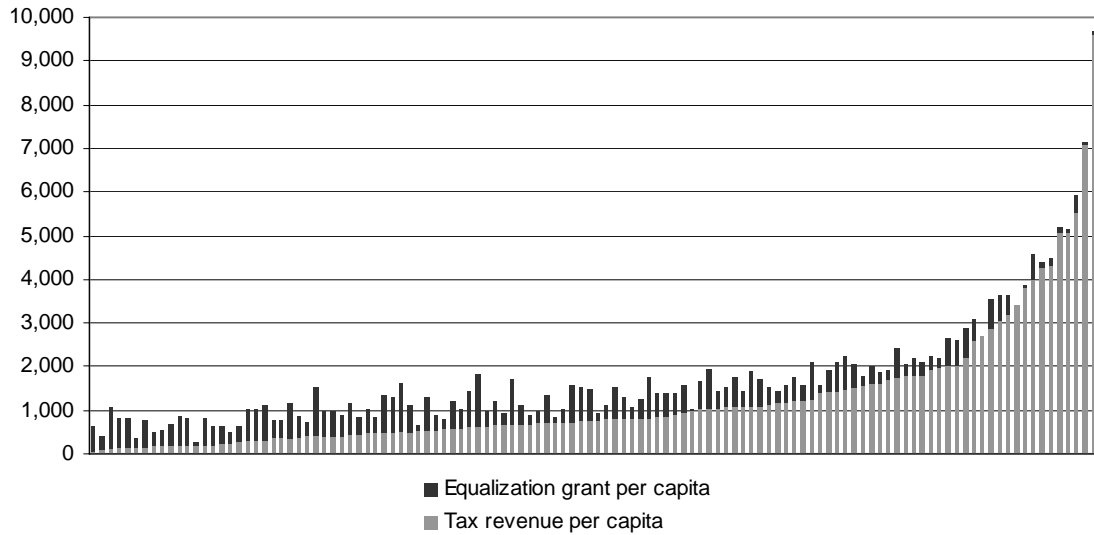
Figure 3. Tax revenue and proposed equalisation grant, per district, 2006/2007 (Tshs per capita).

Sources: equalisation grant: own calculations (see text); per capita tax revenue: calculated from revenue data taken from http://www.logintanzania.net/ and population data from the 2002 census (inflated by 2.9 per cent per annum, which is estimated population growth).