

Taxation in Tanzania – Revenue performance and incidence



Foreword

This country economic report on Tanzania is part of a series of annual studies, which are undertaken by the departments of economics of three Swedish universities in collaboration with the regional departments of Sida, under an agreement with the Department for Policy and Methods. The purpose of these studies is to improve Sida's economic analysis and knowledge of the programme countries for Swedish development cooperation in order to enhance the effectiveness of programme as well as project support.

This report has been prepared by Jörgen Levin, Department of Economics, Örebro University. It analyses the structure and incidence of fiscal revenue generation in Tanzania, in particular with regard to its distributional impact, and explores the scope for and constraints to increasing revenue generation and to making it pro-poor.



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Published by Sida 2005

Department for Policy and Methodology

Author: Jörgen Levin

Printed by Edita Communication AB, 2005

Art. no.: SIDA4766en

ISBN 91-586-8576-6

This publication can be downloaded/ordered from www.sida.se/publications

1. Introduction

Building the capacity of low-income countries to mobilize more tax-revenues is now at the top of the worldwide development-policy agenda. Countries need to be able to finance increased public spending on poverty-reduction in line with their Poverty-Reduction Strategy Papers (PRSPs), as well as on public goods that are critical to economic development. A rapid increase in public services and a corresponding increase in tax revenue is thus a policy priority. While aid-inflows can provide much-needed funding, aid-recipients also need to make every effort to improve and reform their tax-systems so that domestic revenues rise over time, eventually leading to a reduction in their aid-dependence. At the same time, governments and donors must be careful to design tax reforms in ways that take proper account of their distributional impact, in particular their impact on the poor. Since tax-policies have redistributive impacts, both positive and negative, of a size comparable to the effects of social-sector expenditures and since a pro-poor expenditure-strategy takes time to implement it is important to understand the distributional consequences of tax-policies (Sahn and Younger, 2002).

One needs to be cautious about increased taxation, for at least three other reasons as well. First, increased taxation may have adverse supply-side effects by constraining already low private investment, thus undermining growth and the prospects for increasing tax-revenues sustainably. For example, limited access to bank-financing and high interest-rates mean that investment is usually largely financed by retained earnings. Taxation reduces the expected after-tax earnings from a given investment project, thus reducing the availability of investment-finance.

Second, taxation also generally affects the composition of investment, which may be a more fundamental problem for economic growth, particularly in African countries, than the level of overall investment itself (Adam and O'Connell, 1997; Devarajan et al., 2002). Non-uniform taxation reduces growth because differential tax treatment drives a wedge between the before-tax marginal products of capital in alternative uses, reducing the level of output generated by any given aggregated stock of capital. Reduced output results in lower aggregate saving at the original saving-rate, slowing the rate of further capital-formation, and the growth-rate therefore falls.

Third, the investment-and-growth literature identifies risk-aversion and the irreversibility of investment-projects as distinct and fundamental channels through which uncertainty about investment-returns can affect

growth. And of course, tax increases generate uncertainty about what the tax-structure will be in the future.

However, Tanzania needs to significantly increase tax revenues to finance its anti-poverty and development programmes. Under its poverty-reduction program, Tanzania plans to increase government expenditures and transfer payments to improve the welfare of the poor. It also plans to increase development-oriented and social-services expenditures for education and training, health care, water and extension-services. Thus, tax-revenues may need to grow faster than national income.

The low and falling tax-revenue/GDP ratio in Tanzania has raised serious concerns over the years. Import-taxes have been reduced substantially, while large tax incentives have been offered for new investments. At the same time sluggish private-sector growth has not generated enough revenue to compensate for lost revenue from the shrinking parastatal sector (World Bank, 2000). The tax-system fails to capture potential revenues from economic activities due to the size and fast growth of the informal sector, and in addition, tax collection is inefficient. One of the main fiscal challenges thus remains structural reform of tax policy and tax administration. However, during 2003/04 the government, besides abolishing a large number of local-government taxes, also introduced reforms aimed at increasing transparency and reducing the abuse of tax-exemptions.

A number of studies have addressed taxation-issues in Tanzania. This report addresses three major issues. First, tax-revenue is projected using a Computable General Equilibrium (CGE) model based on new, updated data. Second, the 1990 household-budget survey is used to analyse who was ultimately paying direct and indirect taxes in Tanzania. This partial analysis is again supplemented with data from the general-equilibrium model, which was used to analyze the impact on overall tax-revenue of broadening the Value-Added Tax (VAT), as well as its poverty impact. Third, tax-policies and the informal sector are discussed. Some observers have argued that, in order to broaden the tax-base, the informal sector must be included in the tax-net. A recent survey undertaken by the Tanzania Revenue Authority is used to analyze the impact on economic growth and the distribution of income, as well as the likely revenue-implications.

The next section reviews the overall structure of the tax system in Tanzania. The third section then compares revenue-performance in Tanzania to some other sub-Saharan countries. The fourth section discusses revenue-projections and incidence-analysis, especially regarding the impact of broadening the VAT-base, and the fifth section discusses the impact of broadening the income-tax base to include the informal sector. The sixth section reviews some current issues regarding local-government taxation. The final section draws conclusions and gives some policy recommendations.

2. The structure of taxation in Tanzania

The tax-structure in Tanzania has changed over the years (Table 2.1). The total income-tax-revenue share in GDP was 3.6% in 1999/2000, falling to 3.0% in 2000/01 but rising again to 3.4% in 2002/03. The corporate income-tax has been the biggest single source but has declined since the mid-1990s.¹

Table 2.1: Tax revenue (percent of GDP)

	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03
Income tax	3.6	3.5	3.4	3.1	3.6	3.0	3.2	3.4
department								
PAYE	0.8	1.0	1.0	1.0	1.2	1.3	1.4	1.5
Development	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3
levy								
Individuals	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Corporate taxes	1.5	1.4	1.4	1.2	0.9	0.7	0.7	0.9
Withholding tax	0.7	0.6	0.5	0.5	0.5	0.5	0.4	0.4
Rental tax	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Other taxes	0.2	0.0	0.0	0.0	0.6	0.1	0.0	0.0
Consumption	4.0	4.5	3.9	3.5	3.4	3.2	3.2	3.4
taxes (domestic)								
Excise duties	1.4	1.6	1.7	1.0	1.1	1.0	0.9	0.9
Sales tax/VAT	1.7	1.7	1.3	1.2	1.0	0.9	0.9	1.0
(products)								
VAT (services)	0.0	0.0	0.0	0.9	1.0	1.0	1.1	1.3
Other taxes	0.9	1.1	0.9	0.4	0.4	0.3	0.3	0.3
International	5.4	5.4	4.8	4.7	4.4	5.8	5.6	5.7
trade								
Import duties	2.0	2.1	1.8	1.6	1.4	1.4	1.1	1.2
Excise duties	0.8	0.8	0.5	0.5	0.4	1.2	1.3	1.1
VAT on imports	1.1	1.4	1.6	1.9	1.7	2.5	2.6	2.7
Tax Revenue as	12.9	13.3	12.1	11.3	11.4	12.0	12.0	12.6
percent of GDP								
Collection costs	2.6	2.9	3.0	2.9	3.3	3.7	3.3	
(% of revenue)								

Source: URT (2002) and Tanzania Revenue Authority

¹ The Corporate tax-rates are divided into four categories: resident company (30%); non-resident company (30%); mining company (22.5%, increased to 30% from the fifth profit-making year); and co-operative society (25%). Deductions for tax-purposes are training-levy paid; research and development expenditures; depreciation (building 4%, hotel 6% and machinery 12-37.5%); and investment allowance on specified construction and machinery (20%).

2.1 Corporate income-taxes

Levin (2001) analysed the sectoral development of corporate income taxes during 1996–2000 (Table 2.2). The main finding was that corporate income-tax payments in the manufacturing sector had declined substantially over the period, from almost 41% of total corporate tax-payments in 1996 to just over 6% in 1998, since rising somewhat but still low. The agriculture sector, which is usually assumed to be difficult to tax, was actually contributing about a third of total corporate income taxes.

Table 2.2: Corporate taxes by sector
(as percentage of total corporate taxes collected)

	1996	1997	1998	1999	2000
Agriculture	29.6	27.8	40.5	35.1	34.1
Mining	3.4	9.3	9.3	8.4	5.2
Manufacturing	40.8	25.1	6.1	12.2	17.1
Electricity and water	0.0	0.0	0.0	0.0	0.0
Construction	4.4	17.8	8.9	8.5	6.3
Trade, Hotels and Restaurant	17.5	16.3	27.8	26.1	29.7
Transport and Communication	4.1	3.5	7.1	9.4	7.5
Financial and Business Services	0.2	0.1	0.2	0.2	0.0
Public Administration	0.1	0.1	0.1	0.2	0.1
Total	100.0	100.0	100.0	100.0	100.0

Source: Levin (2001)

A recent investment-climate survey (RPED, 2004) pinpoints various constraints on private-sector investment. More than 50% of the surveyed firms see taxation, the cost of and access to finance, availability of electricity, and corruption as major or very severe constraints. There have been various tax-incentives, such as tax-holidays, targeted at priority sectors. But while conducive to foreign investment, this approach has led to a relatively high-tax rate in some other sectors and hence induced compliance problems, while also adversely affecting the general investment-climate. In order to improve it, a uniform approach is needed, lowering and simplifying the tax-regime for all sectors.

2.2 Individual income taxes

Individuals are taxed from two sources: the individual income-tax and Pay as You Earn (PAYE). Most income-taxes are collected from PAYE, which has increased its share over the years, while the individual income-tax has been rather low but stable.

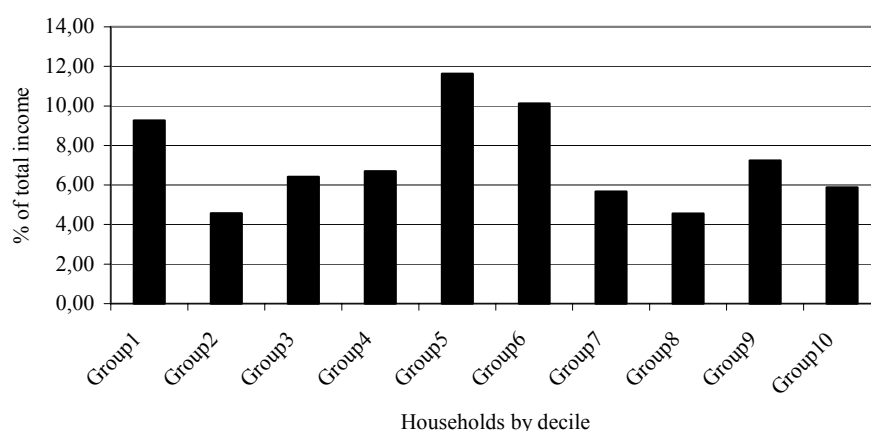
Most observers agree that the current Income Tax Act is obsolete and needs to be replaced. After intense lobbying several provisions have already been dropped or redefined, but distributional aspects need attention. There was no attempt to analyse the distributional impact of the proposed Income Tax Act. One reason why it was not undertaken was severe difficulties in assessing income tax data. However, if we want to address issues of equity from a taxation point of view the structure of income taxes are important.

Figure 2.1 shows who is paying how much income-tax in Tanzania.² The vertical axis shows income-taxes paid as a percentage of total

² The 1990 household-budget survey was used. The number of households reported to have paid income-tax is rather small: only 369 of 4895 households.

income in each household-decile. The tax-rate is high for the poorest decile, only surpassed by the two middle deciles. The four richest deciles pay a lower rate than the poorest.

Figure 2.1: Income tax payments in Tanzania 1990



The low income-tax threshold in Tanzania – Tshs. 60,000 per month, or about USD 2 per day – is a major concern. In Kenya the threshold is about USD 5.4 per day, and has been rising over time as a way to minimise the impact on the poor. In terms of GDP/capita, the Kenyan threshold is twice as that in Tanzania. In the new Income Tax Act there were only a slight adjustment (threshold increased from Tshs. 50,000 to Tshs. 60,000), which suggests that income taxes in Tanzania is anti-poor. In order to make it pro-poor the income tax threshold should be raised compared to the per capita income.

2.3 Consumption and international-trade taxes

The share of consumption taxes in GDP has fallen since the mid-1990s, while the share of trade taxes has increased (Table 2.1). Within the latter the GDP-share of import tariffs has declined, while the shares of excise duties and VAT on imports have risen. Tariff rates have declined and the number of tariff bands has been reduced, but the declining GDP-share of import tariffs has been attributed to generous exemption-schemes and evasion (see section 3).

The sales tax was the most important source of income for the government in the 1980s, but became less important in the 1990s. In a number of African countries VAT has increased revenue quite successfully.³ The Value Added Tax (VAT) was introduced in July 1998 (fiscal year 1998/99) replacing previous sales-taxes and parts of the stamp-duty and entertainment taxes.

It was anticipated that more revenue would be generated in Tanzania with VAT, as the VAT-base is significantly broader than for the previous sales-tax.⁴ First, manufacturers previously excluded from sales-tax are registered as taxpayers under the VAT-system. Second, a number of items not previously liable to sales-tax are subjected to VAT, and the number of goods excluded from VAT is limited.⁵ Third, VAT includes

³ For example, revenue collected from VAT in Mozambique increased from 3.3% of GDP in 1998 to 5.4% in 2002.

⁴ Nevertheless, an annual turnover of TSH 40 million is the current threshold for paying VAT, so most small outlets in the retail sector are excluded.

⁵ Certain goods and services are excluded from VAT, such as: food and livestock supplies, pesticides, fertilisers, health, educational and veterinary supplies, books and newspapers, housing and land, financial and insurance services, water-supply, and funeral services.

services such as electricity, telephone and hotels and restaurants, which previously were subjected to a lower sales tax.

Nevertheless, the Tanzanian experience seems to have been less successful than many other countries. Although the GDP shares of VAT on imports and of domestic VAT on services have risen since the introduction of VAT in 1998, the GDP share of domestic VAT on products has fallen. Table 2.3 compares VAT in Tanzania with some other countries. The VAT efficiency ratio for Tanzania is below all the others, although the VAT-rate is fairly high.⁶ As with import tariffs, exemptions and evasion are part of the reason. Consequently, any attempt to enhance VAT-productivity must first focus on building administrative capacity and improving compliance through targeted taxpayer-education.

Table 2.3: VAT Rates and VAT revenue efficiency ratios for selected countries, 1998–2000

	VAT-rate (%)	VAT-efficiency ratio
Tanzania	20.0	0.165*
Kenya	16.0	0.33
Uganda	17.0	0.20
South Africa	14.0	0.44
Zambia	17.5	0.33
Turkey	18.0	0.49
Brazil	20.5	0.42
Colombia	16.0	0.28
Venezuela	14.5	0.22
Average for sample of emerging market countries	16.6	0.37
Average for Africa	16.7	0.24
Average for OECD	17.6	0.40

Sources: IMF (2003a) and IMF (2003b)

2.4 Strategies for increasing tax-revenues

Broadening the VAT-base is usually suggested as a strategy for increasing revenue further. However, there are at least two reasons for caution. First, broadening the base without an efficient system of collection could simply foster more evasion. Second, distributional aspects need to be assessed, to avoid adverse impact on the poor. Section 4 looks at the distributional impact of broadening the VAT-base in Tanzania.

A way to reduce the potential regressive nature of VAT is to make it uniform but also introduce other selective indirect taxes, such as excise duties on specific imports and domestically manufactured products, such as beer, wine, spirits, cigarettes, soft drinks and petroleum. The advantage of excise duties is that they can potentially raise a great deal of revenue with little distorting effect.

Most economic analysis of taxation assumes that tax-liability can be ascertained and the revenue collected costlessly. However, tax-systems differ greatly in the resource-cost of operation, the administrative cost of taxation, which is thus a critical determinant of appropriate tax-policy, often preventing an increase in the number of taxed commodities. Thus it is important to have some idea of the administrative cost of various

⁶ This measure, defined as the ratio of the GDP share of VAT-revenue to the VAT-rate, is used as a measure of VAT-performance. An efficiency-ratio of 0.33 means that a 1.0% increase in the VAT-rate would generate an increase of

taxes. Table 2.1 shows estimates of total collection costs as a percent of total revenue collected in Tanzania. There are few estimates of such costs for comparable countries but these figures do not seem excessive.

Administrative costs for industrialised countries are typically 1–2% of revenue collected. It would be useful, if possible, to disaggregate administrative costs for each type of tax. There are no absolute quantitative criteria in determining whether a tax is unproductive. Mann (2002) suggests, however, that if the cost is greater than 5% one should question the administrative procedures and systems supporting the tax; if the cost is greater than 10%, both the administrative procedures and the structure of the tax itself should be called into question; and if the cost is greater than 15% the very existence of the tax should be questioned.

3. Tax revenue performance

Cross-country analyses of tax-revenue performance suggest that Tanzania should be capable of generating substantially more tax-revenue (Ghura, 1998). Bevan (2001) estimated that Tanzania should have been able to generate an 18% tax-revenue share of GDP in 1999 far above the actual 11%. Kenya, Malawi, Ghana and Zambia – which all have broadly similar tax-structures in terms types of tax and rates, and have or are setting up autonomous revenue-authorities were all generating substantially more revenue than Tanzania (Table 3.1 below). But Tanzania is not alone in achieving a low tax-revenue GDP ratio: Ethiopia, Uganda, Mozambique, and Cameroon all performed similarly.

Good performers collected considerably more income-taxes than the others, probably because of both greater administrative efficiency and different structural characteristics of their economies. For example, the size of the agricultural sector in GDP is probably important: The smaller the share of agriculture sector, the greater will be the monetised share – such as manufacturing – thus providing a larger available tax-base. Kenya, for example, has a higher share of formal activities than does Tanzania (URT, 2002).

Table 3.1: Regional comparison of tax performance (as percent of GDP)

	Tanzania 1999/2000	Kenya 1999/2000	Malawi 1999/2000	Uganda 1999/2000	Mozambique 2000
Total revenue	11.3	22.7	17.5	11.7	12.7
Tax revenue	10.1	22.5	15.9	10.8	11.6
Taxes on imports	3.2	3.6	2.4	1.2	2.0
Taxes on goods and services	2.6	8.8	6.0	7.4	7.5
Income taxes	3.0	6.9	7.3	2.1	1.8
Other taxes	1.3	3.2	2.6	0.0	0.4
Non-tax revenues	1.2	0.2	1.6	0.9	1.0

Source: IMF (2003a) and IMF (2003b)

Table 3.1: Regional comparison of tax performance (continued)

	Ethiopia 1999/2000	Ghana 1999/2000	Cameroon 1999/2000	Zambia 2000
Total revenue	18.8	17.0	NA	19.6
Tax revenue	11.8	15.0	12.0	19.4
Taxes on imports	4.5	6.0	4.3	6.0
Taxes on goods and services	2.8	5.0	4.2	5.1
Income taxes	4.2	4.0	3.1	6.4
Other taxes	NA	0.0	0.4	1.9
Non-tax revenues	7.0	2.0	NA	0.2

Source: IMF (2003a) and IMF (2003b)

But regardless of any static structural difference, Tanzania seems to be falling behind in the trend of tax/GDP ratios when compared to some other sub-Saharan countries (Table 3.2). Cameroon, Ethiopia and Ghana all had lower tax/GDP ratios than Tanzania in 1992/93, but by 2000/01 all were doing consistently better than Tanzania – especially Ghana.

Table 3.2: Trends in tax/GDP ratios (percent), selected sub-Saharan countries

Countries	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
Cameroon	9.1	7.7	9.6	10.4	10.1	11.1	11.8	12.1	12.9	12.7
Ethiopia	8.3	10.9	11.4	12.5	12.9	11.8	11.4	11.8	13.7	NA
Tanzania	11.7	11.4	12.2	12.9	13.3	12.1	11.3	11.4	12.0	12.0
Ghana	10.8	13.2	n/a	n/a	16.0	14.0	16.0	15.0	16.0	17.0

Source: Addison and Levin (2004).

Tanzania's tax-regime allows for many exemptions, and thus Tsikata (1999) found large differences when comparing Tanzania's actual receipts with the revenues implied by published tariffs and estimated import-volumes. But the differences far exceed the exemptions presumably due to corruption/smuggling at official entry-points (ports and roads) and smuggling through unofficial entry-points (unguarded borders). Table 3.3 shows the estimated tax-revenue/GDP ratio if all exempted goods were taxed.⁷ The difference has recently fallen fairly consistently.

Table 3.3: Tax/GDP ratio with and without exemptions in Tanzania

	1998/99	1999/00	2000/01	2001/02	2002/03
Income tax department	3.4	3.7	3.1	3.4	3.4
Customs and excise department	7.1	6.8	8.5	8.3	7.2
Sales Tax/VAT department	6.4	4.5	3.6	4.4	4.1
Tax Revenue/GDP (including exemptions)	16.9	14.9	15.3	16.1	14.7
Tax Revenue/GDP (excluding exemptions)	11.3	11.4	12.0	12.0	12.6
Difference	5.6	3.5	3.3	4.1	2.1

Source: TRA Flash Reports.

Exemptions granted at the customs-level (covering import tariffs, as well as VAT and excise duties levied on imports) account for the largest share of foregone tax-revenue, and it is mainly the private sector that has been benefiting from the exemptions (Table 3.4). In the late 1990s approximately one-third of exemptions were granted directly to private compa-

⁷ Of course agents would change their behaviour and import less if goods became more expensive, so the figures in the table overstate the impact, even if it were possible to close all the loopholes.

nies and individuals, plus those granted through the Tanzania Investment Centre (TIC). Since then the percentages have reversed but the total remains about the same. The share of customs-exemptions in total revenue-collected has declined over the years, while the VAT-share declined but increased again, suggesting some type of shift in the exemption-regime.

Table 3.4: Distributions of exemptions (% of total exemptions)

	1998/99	1999/00	2000/01	2001/02	2002/03
Government Institutions	17.1	16.1	20.6	7.0	6.4
Parastatal Organizations	2.3	2.9	1.7	3.0	9.5
Religious Institutions	6.0	5.2	8.2	8.8	9.6
Non-Government Organizations	27.0	19.4	15.7	33.5	25.9
Private Companies & Individuals	35.1	40.6	33.6	20.0	11.2
Tanzania Investment Centre (TIC)	12.6	15.8	20.2	27.6	37.4
Total	100.0	100.0	100.0	100.0	100.0
Customs exemptions/total revenue collected	66.0	76.2	39.9	39.4	30.3
VAT exemptions/revenue collected	92.4	22.0	22.7	40.3	34.0

Source: TRA Flash Reports.

There is a possible problem with using the tax/GDP ratio to measure progressing in raising revenue in Tanzania as we have been doing. Critics have argued that the official GDP measure is overvalued; as some informal activities are included yet do not pay tax. Thus, they argue that the tax/GDP ratio understates the true tax-burden on the formal sector. If we remove the non-monetized parts of the national accounts, the tax/GDP ratio still rises to only 15–17%, however (Table 3.5). And as we will discuss later in section 6 some evidence suggests that the informal sector is actually taxed rather heavily, and that the tax-burden is thus quite similar in the formal and informal sectors.

Table 3.5: Tanzanian GDP ratios (percent) by type of tax, 1996–2002

	1996	1997	1998	1999	2000	2001	2002
Income taxes	3.6	3.4	3.3	3.3	3.2	3.1	3.3
Customs and excise tax	4.2	4.1	3.9	3.7	4.7	5.6	5.6
Sales Tax/VAT	5.1	5.0	4.3	3.9	3.4	3.1	3.3
Tax/GDP ratio (including informal sector)	12.9	12.5	11.5	10.8	11.3	11.8	12.3
Tax/GDP ratio (excluding informal sector)	18.1	17.8	16.3	15.2	15.8	16.7	17.2

Source: URT (2002) and Tanzania Revenue Authority

4. Revenue projections and incidence analysis

The tax-system has undergone some major changes since the mid-1990s, and the reform-process is expected to continue. Some of the important changes expected are: a simplification of the tax-regime, including broadening of the tax-base; rationalization of the exemption-system to avoid further erosion of the tax-base; and review/change of tariff-rates and introduction of revenue-raising measures to compensate for possible losses arising from further liberalization of the trade-regime.

This section provides empirical evidence and analysis regarding tax-policy issues that may come up. The first relates to the discussion above on the dynamics of the tax/GDP ratio: Assuming no changes in tax-policies, would it increase over time? The second is the distributional impact of broadening the VAT-base. Finally, the macroeconomic and welfare implications of further reduction in tariffs of a revenue-neutral reform are considered.

4.1 Revenue projections and the tax/GDP ratio

In the current Poverty Reduction Strategy a number of important macroeconomic variables were projected and are being monitored by both policymakers and donor-agencies. Realistic fiscal projections are keys to the success of an effective strategy, and a crucial indicator is of course the tax-GDP ratio, which together with aid-inflows, determines the resource-envelope. An important question is would the tax/GDP ratio increase over time, assuming no changes in tax-rate structure? Using a dynamic neoclassical general-equilibrium model, a scenario was simulated with tax-rates unchanged and GDP expected to grow at 5%.⁸ The tax/GDP ratio remained constant and there was virtually no change in the various tax-instruments (Table 4.1). Thus, government-revenue grew at the same rate as GDP.

⁸ The model is a recursive dynamic CGE model: In each period, the capital stock was adjusted by the previous periods' investment, the labour force was assumed to grow by 1% and productivity was assumed to increase by 3%. Government expenditures and foreign capital inflows were updated exogenously.

Table 4.1: Fiscal indicators

	Period 1	Period 2	Period 3	Period 4	Period 5
Tax/GDP ratio	12.0	12.0	12.0	12.0	12.0
Import duties	1.2	1.2	1.2	1.3	1.3
Indirect taxes	4.4	4.4	4.4	4.4	4.4
Income taxes	1.2	1.2	1.2	1.2	1.2
Corporate taxes	1.5	1.5	1.5	1.5	1.5
Value added tax	3.6	3.6	3.6	3.6	3.6
Refunds, intermediate goods	0.2	0.3	0.3	0.3	0.3
Refunds, capital goods	0.2	0.2	0.2	0.2	0.2

Source: Own calculations

Some experiments were also undertaken to explore whether growth patterns mattered. The result (not shown) was that the tax/GDP ratio still remained rather constant. For example, when a higher growth-rate was assumed in the manufacturing sector, where the value-added tax-rate is relatively high, a resulting reduction in domestic prices kept the tax-base unchanged.

It seems, then, that a growing economy alone will probably not increase the tax/GDP ratio. Since the government does not plan to increase tax-rates, additional revenue can only originate from two sources: either broadening the tax-base or improving the efficiency of tax-collection.

4.2 Distributional impact of broadening the VAT

The experience from other countries is that broadening the VAT base cannot be achieved without increasing the tax-burden of the poor.⁹ Addison and Levin (2004) therefore argue that broadening the VAT-base should be a low priority, and only implemented in countries where the net fiscal-incidence is favourable to the poor. What would be the impact of broadening the VAT-base in Tanzania? Would it hurt the poor?

4.2.1 Tax incidence of broadening the VAT-base – partial equilibrium approach

A common approach in tax-incidence analysis is to use the statutory tax-rates and the observed pattern of demand for taxed goods (Sahn and Younger, 1999, and Younger, 1996). If we are interested in ranking the progressivity of indirect taxes on various commodities, a comparison of concentration-curves is a good starting point. These are similar to Lorenz curves in that they plot households by percentile from the poorest to the rich on the horizontal axis, with cumulative household expenditure on each good by percentile on the vertical. If poor households spend proportionately more on a certain good (measured relative to their per-capita expenditure) then taxing that particular good will hurt the poor. Graphically this means that the concentration curve will lie between the 45-degree line and the expenditure-per-capita line. Goods whose concentration curve lies below the per-capita household-expenditure line would then be more appropriate for taxation.

Figure 4.1 (below) and Figures in the appendix show concentration-curves for a variety of goods and services based on information from the 1990 Household Budget Survey (HBS). To make a comparison of the

⁹ Most fiscal studies in developing countries study either tax incidence or the incidence of public expenditures. However, even if a tax is regressive, the overall impact may not be if the revenue is spent in a progressive manner. Thus the central issue is the net incidence of fiscal policy (Devarajan and Hussain, 1998).

burden of taxes, the egalitarian line (45-degree line) and the expenditure curve are taken as reference points. For example, Figure 4.1 shows that taxes paid on clothing, textiles, leather, beverages and wood seem to be progressive as their concentration curves lie below the expenditure curve.

Table 4.2 summarises the concentration curves and thus the poverty-impact of broadening the VAT-base. Food products, except for wheat, coffee, and oil, are disproportionately purchased by the poor, and taxing them would thus hurt the poor. Most non-food commodities, on the other hand, are not much purchased by the poor, so taxing them would hurt the poor less. Shifting taxes away from necessities (such as maize) to luxuries (such as electricity) would thus improve the welfare of the poor. If the VAT-base were to be broadened then non-food products and private services would seem to be the preferred targets.

Figure 4.1: Concentration curves – Beverage and consumer products

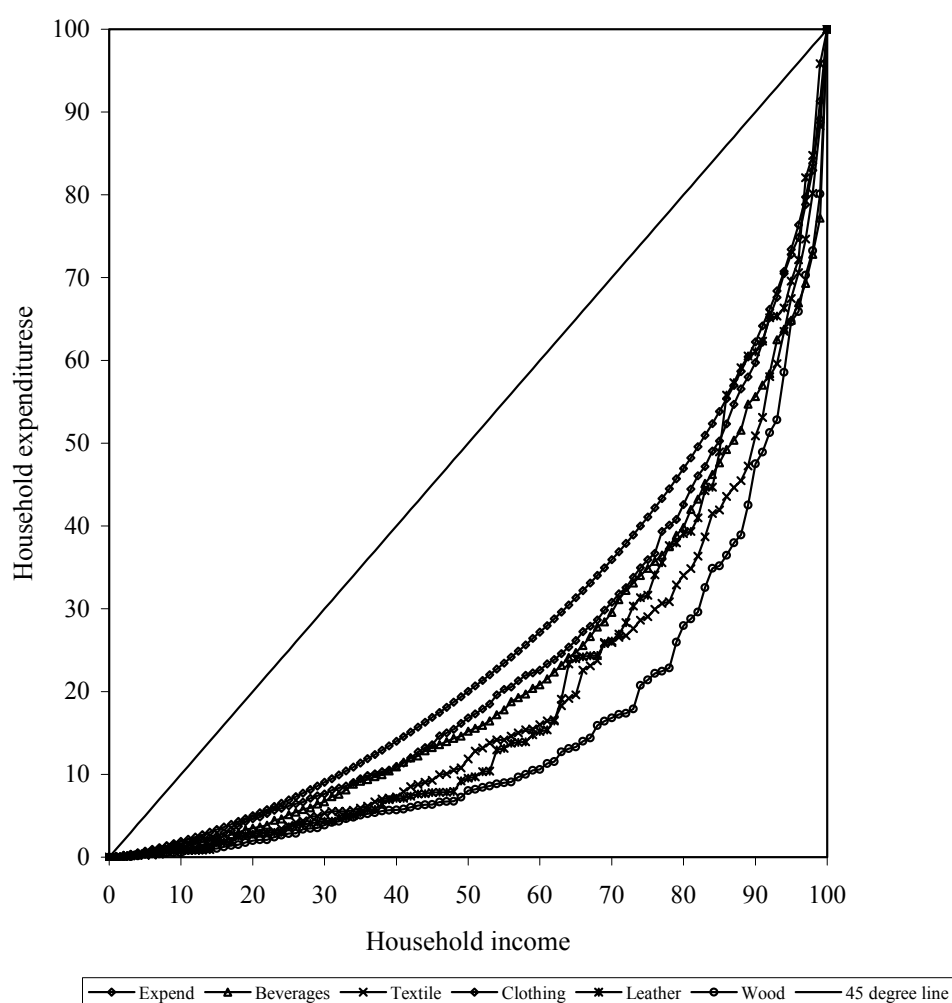


Table 4.2: Poverty-impact of broadening the VAT-base

Tea	+	Fish	+	Cement	?
Coffee	-	Meat	+	Metal products	-
Maize	+	Food	+	Electricity equipment	-
Wheat	-	Beverages	-	Transport equipment	-
Paddy	+	Textile	-	Electricity	-
Sorghum	+	Clothing	-	Water	?
Beans	+	Leather	-	Hotels/restaurants	-
Cassava	+	Wood	-	Transport/communication	+
Root	+	Paper	+	Real estate	-
Oil	-	Chemicals	+	Business services	-
Sugar	+	Fuel	?	Public services	+
Other horticulture	+	Plastic	-	Other services	-
Livestock	+	Glass-			

Source: Own calculations

Addison and Osei (2000) argue that fuel-taxes may have spill-over effects not captured by incidence-analysis alone, because with a rise in the price of fuel, all households are affected by the resulting increase in the cost of transportation. For example, the farmers who sell their products to market-traders are likely to be hurt, as the traders offer them lower prices because of higher transport-costs. The indirect effect on the poor could be substantial, and might worsen the distribution of income. Thus commodities such as fuel cannot be analyzed with simple concentration curves, which ignore such indirect effects (Sahn and Younger, 1999). The next section addresses this issue.

4.2.2 Tax incidence of broadening the VAT-base – general equilibrium approach

A computable general equilibrium model of the Tanzanian economy was used to evaluate the indirect effects of broadening the VAT-base.¹⁰ The model allowed for imperfect substitution between domestically-produced and imported goods. It also included inter-industry transactions through the input-output table. Effective tax-rates were used, actual tax-revenue divided by its base. Short-term impact was analyzed, assuming fixed sectoral capital-stocks. Calculations of VAT took account of refunds of taxes paid both on inputs and on investment-goods, including an efficient parameter which measured the share of refunds to the various sectors.

The VAT-rates used were based on actual recent collection-rates, not on the statutory rates. Thus the rates differed between sectors, reflecting leakage as well as different coverage in the various sectors. Table 4.3 shows the sectoral pattern of actual VAT-rates paid as percent of value-added, consumption-expenditures and output. Consumption goods, coffee and tea, food-producing, and manufacturing were high on all three measures, but overall the total VAT paid was rather small, only 4.8% of value added, 1.6% and 1.7%, respectively, of consumption and output. This is possible because sectors which paid low rates – such as agriculture and private services are the biggest sectors. Those two sectors, plus building & construction, would seem to have the highest potential to generate additional revenue.

¹⁰ The model is based on a new Social Accounting Matrix (SAM) for the year 2001 developed by Wobst and Thurlow (2003). The SAM is aggregated into 8 sectors with 9 different labour categories and 12 household groups. The model is described in Appendix 2.

Table 4.3: Sector size and value-added tax paid, 2001 (%)

	VAT paid as share of value added	VAT paid as share of consump- tion expen- ditures	VAT paid as share of output	Share of value added	Share of consump- tion ex- penditure	Share of output
Agriculture	1.4	0.5	0.7	45.2	20.8	34.4
Building & Construction	0.5	0.2	0.2	6.3	6.5	6.7
Consumption goods sector	30.4	11.0	10.6	4.0	5.5	4.0
Coffee and tea	20.8	10.6	8.0	1.0	1.0	0.9
Food process- ing sector	24.6	6.2	5.4	5.8	11.5	9.3
Government	0.4	0.1	0.1	6.2	10.5	9.5
Manufacturing	29.2	4.2	9.0	3.7	12.7	4.2
Private services	0.4	0.2	0.1	27.8	31.6	30.9
Total	4.8	1.6	1.7	100.0	100.0	100.0

Source: Thurlow and Wobst (2003)

The simulation began from a baseline with VAT-paid as a percent of output as above. It was assumed that 50% of the refunds were paid back to the private sector. The VAT-rate in each sector was then increased to 11%: Table 4.4 shows the revenue-impact. Obviously, it was greatest in the largest sectors, such as agriculture and private services, which coincidentally have currently the lowest effective-rates.

Table 4.4: Revenue impact of broadening the VAT base (% of GDP)

	Base	Agricul- ture	Food process- ing	Cons. goods	Building & cons.	Private services	Public services
Tax revenue	12.0	17.5	13.1	13.1	12.8	17.2	13.7
Import-duties	1.2	1.3	1.3	1.2	1.2	1.2	1.2
Indirect taxes	4.4	4.5	4.4	4.4	4.4	4.4	4.4
Income-taxes	1.2	1.3	1.2	1.2	1.2	1.3	1.2
Corporate taxes	1.5	1.5	1.5	1.5	1.5	1.4	1.5
Value-added tax (gross)	4.1	10.1	5.3	5.6	5.4	10.5	6.3
Value-added tax (net)	3.7	9.0	4.8	4.8	4.5	8.9	5.5
Refunds, int. goods	0.2	0.8	0.3	0.4	0.4	1.4	0.7
Refunds, capital goods	0.2	0.2	0.2	0.4	0.4	0.2	0.1

Source: Own calculations. Note: Assuming 50 percent refund.

The revenue-impact is not nearly as large in any of the other cases, partly because they are smaller sectors with higher current effective-rates. But part of the explanation is also that relative prices change with higher VAT-rates and this alters the behaviour of both producers and consumers. While the taxed-sector reduces output, other sectors expand, changing household incomes, which in turn change consumption.

To evaluate the impact on household groups of broadening the VAT-base equivalent-variation was used. This is the amount a consumer would be willing to pay to avoid the tax increase. The consumer's utility

following the tax increase was calculated, and the income necessary to attain this utility-level at the prices the consumer faced before the change. Equivalent variation is the consumer's base-level income minus this hypothetical income. For a welfare-gain, the consumer needs more income at the original prices, so the calculation yields a negative number.

Assuming 50% refund aggregate welfare improved in almost all cases regardless of the sector in which VAT was raised. The 100% and 0% cases are shown in Tables A.1 and Table A.2 in Appendix 3. However, aggregate welfare was quite different across the various experiments; Raising VAT on food was worst, leading to an aggregate welfare-loss.¹¹

Table 4.5: Welfare impact of broadening the VAT base (equivalent variation)

	Base	Agriculture	Coffee	Food
Rural (below food-poverty-line)	-3.1	-2.1	-3.1	-0.6
Rural (between food and basic-needs-poverty-line)	-5.4	-4.9	-5.3	-2.2
Rural (non-poor – head with no education)	-8.0	-12.0	-8.0	-3.1
Rural (non-poor – head not finished primary school)	-2.7	-0.5	-2.7	3.7
Rural (non-poor – head not finished secondary school)	-8.6	-17.4	-8.6	4.9
Rural (non-poor – head finished secondary school)	3.4	-0.7	3.4	6.2
Urban (below food-poverty-line)	-0.3	-1.1	-0.3	0.6
Urban (between food and basic-needs-poverty-lines)	-1.3	-4.5	-1.3	0.6
Urban (non-poor – head with no education)	-1.6	-4.4	-1.6	0.1
Urban (head not finished primary school)	0.7	0.7	0.7	3.3
Urban (head not finished secondary school)	3.8	-3.8	3.8	13.6
Urban (non-poor – head finished secondary school)	14.4	14.1	14.4	18.7
Total (population weighted)	-4.0	-6.1	-4.0	1.0
Total (population weighted and 100% refund)	-21.0	-48.3	-21.0	-16.6
Total (population weighted and 0% refund)	17.4	41.2	17.4	23.5

Source: Own calculations. Note: Assuming 50% refund except the last two rows.

Table 4.6: Welfare impact of broadening the VAT base (equivalent variation)

	Base	Capital & intermediate	Building & construction	Private services	Public services
Rural (below food-poverty-line)	-3.1	-11.1	-15.4	-31.8	-16.2
Rural (between food and basic-needs-poverty-lines)	-5.4	-16.3	-21.7	-43.5	-23.0
Rural (non-poor – head with no education)	-8.0	-24.8	-32.8	-67.0	-35.5
Rural (non-poor – head not finished primary school)	-2.7	-17.6	-27.7	-62.9	-30.0
Rural (non-poor – head not finished secondary school)	-8.6	-42.6	-61.7	-131.8	-66.1
Rural (non-poor – head finished secondary school)	3.4	2.7	-0.6	-3.5	0.4
Urban (below food-poverty-line)	-0.3	-2.2	-3.5	-7.8	-3.8
Urban (between food and basic-needs-poverty-lines)	-1.3	-5.2	-7.4	-15.3	-7.8
Urban (non-poor – head with no education)	-1.6	-5.3	-7.4	-14.9	-8.0

¹¹ Assuming 0 or 100% refund leads to different results. With 0% refund, raising VAT on any sector yields a welfare loss, whereas with 100% refund they all yield gains.

Urban (head not finished primary school)	0.7	-3.4	-5.9	-15.2	-6.6
Urban (head not finished secondary school)	3.8	-10.3	-19.7	-49.7	-21.7
Urban (non-poor – head finished secondary school)	14.4	18.9	17.5	27.1	21.9
Total (population weighted)	-4.0	-17.2	-24.6	-52.1	-26.2
Total (population weighted and 100% refund)	-21.0	-42.8	-51.6	-109.8	-62.3
Total (population weighted and 0% refund)	17.4	21.1	18.0	29.0	17.7

Source: Own calculations. Note: Assuming 50% refund except the last two rows.

Would raising VAT hurt the poor? Two rural household-groups and two urban household-groups are considered to be poor, and the impact on them differs. The rural poor experience welfare-gains when regardless of the sector in which VAT is raised, whereas the urban poor experience a welfare-loss when VAT is increased in the food sector. Based on 50% refund, then the best sectors in which to raise – from the perspective of the poor – would be consumption goods, building & construction and public and private services where welfare-gains would be greatest. This result is basically the same even if we assumed 100%, and is rather similar to the result from partial analysis in the previous section. Of course the number of sectors could be disaggregated further to do a more detailed analysis.

4.2.3 Macroeconomic and welfare impact of trade-liberalisation

As in many other countries, the Tanzanian government has been cautious in liberalising its trade-regime. In particular, the revenue-impact of trade-liberalisation has been of great concern. Because the tax-authorities are already struggling to increase the tax/GDP ratio, and trade-taxes are expected to decline as Kenya, Uganda, and Tanzania finalise the treaty on East African Co-operation, something would need to be done to compensate for the revenue-shortfall caused by any further liberalisation. We will look at simulations of both tariff reduction alone and a revenue-neutral reduction including VAT increase in selected sectors, examining both the macroeconomic and the welfare effects in each case.

The first simulation (Table 4.7 below) shows the impact of cutting import-duties by 50 percent without any compensatory change in other taxes. Lowering import-duties would have a direct impact on imported goods, generally reducing their domestic price. However, taking indirect effects into account the price-changes differ across sectors and do not necessarily fall, because of a depreciating real exchange rate, as increased demand for imported goods has to be financed by increased exports.¹² A reduction in government-revenue also implies that government-savings are reduced, so the pool of credit available to the private sector declines. Thus sectors producing investment-goods, such as building & construction and manufacturing, experience a decline in output and reduced demand for labour. But because of the depreciation, sectors producing exports increase output and demand for labour.

The changes in demand for labour lead to changes in wage-rates, which affect types of labour differently (Table 4.8 below). Female workers experience the highest increase, followed by child-labour. Male workers also experience a higher wage-rate, but not as much.

¹² The real exchange rate is assumed to be the variable which equilibrates transactions with the rest of the world. Imports cannot be financed by foreign borrowing but must be financed by exports.

The second simulation is a revenue-neutral reform again including 50% tariff-reduction, but now including also increased VAT on food processing, consumer goods and capital/intermediate goods, set so as to maintain constant government-revenue. Thus we are only examining the price-distorting effects of the tax, not any generated by fiscal imbalances. Domestic import-prices generally decline, but in those sectors where VAT is raised the decline is less than before because the VAT is also levied on imported goods. In those sectors demand and hence domestic output are also reduced compared to trade-reform only. The combined impact reduces aggregate demand in the economy slightly. Again, there are changes in the labour-market, with reduced demand in the sectors where output falls.

Table 4.7: Changes in quantities and prices (% change from baseline)

	Trade reform						Revenue-neutral reform					
	P _M	P _X	X	E	M	L _D	P _M	P _X	X	E	M	L _D
Agriculture	-5.0	0.8	0.1	0.2	3.0	0.2	-5.9	1.5	0.3	-0.2	4.2	1.1
Coffee/tea	-6.9	0.9	1.3	1.4	4.5	2.2	-7.7	0.5	0.1	0.0	5.3	0.4
Food processing	-4.0	0.7	0.2	0.4	2.5	1.0	-3.6	0.7	0.0	-1.2	2.9	0.0
Consumer goods	-4.5	0.4	0.3	0.6	2.8	0.6	-4.1	0.2	0.1	-0.9	3.1	0.3
Capital and intermediate goods	-1.1	-0.8	-0.3	0.5	-0.2	-1.6	-0.7	-2.6	-0.7	-0.6	-1.1	-4.5
Building & construction	1.2	-0.6	-1.1		-2.0	-2.0	0.2	-2.0	-2.5	0.0	-3.6	-4.6
Government	1.2	0.2	0.1	0.5	-0.4	0.1	0.2	-0.1	0.2	0.3	0.0	0.2
Private services	1.2	0.4	0.0	0.3	-0.5	0.3	0.2	0.2	0.1	0.1	0.0	0.6
Total			0.0	0.4	0.3	0.0			-0.1	0.0	0.0	0.0

Source: Own calculations. Note: P_M= Prices on imported goods, P_X= Output prices, X= Output, E= Exports, M= Imports and L_D= Labour demand.

There is a gender-impact of the revenue-neutral reform (Table 4.8). Child and female labour generally benefit even more than before, while male labour with at least primary education actually loses from the reform. This is because the sectors with increased VAT in the simulation have disproportionately educated male labour. Females with secondary education also do not do as well as before in this scenario.

Almost all household-groups experience welfare-gains under both scenarios (Table 4.9), but the poorer rural and urban groups generally gained less than their richer counterparts. The best educated households also did less well than others, in line with the findings above regarding wage-rates. Welfare gains were generally higher for the revenue-neutral reform, more than twice as high. For the revenue-neutral reform, rural gains were also far more than urban gains, largely because agriculture was exempted.

Table 4.8 Changes in real wage-rate (% change from baseline)

	Trade reform	Revenue-neutral trade reform
Child labour	0.8	1.8
Female labour (no formal education)	0.9	1.9
Female labour (not finished primary school)	0.9	1.8
Female labour (not finished secondary school)	0.9	1.6
Female labour (secondary or higher education)	0.6	0.1
Male labour (no formal education)	0.8	1.4
Male labour (not finished primary school)	0.8	1.1
Male labour (not finished secondary school)	0.1	-0.6
Male labour (secondary or higher education)	0.3	-0.5

Source: Own calculations.

Table 4.9: Welfare impact of trade-reform (equivalent variation)

	Trade reform	Revenue-neutral reform
Rural (below food poverty-line)	-1.7	-4.9
Rural (between food and basic-needs-poverty-lines)	-2.1	-6.5
Rural (non-poor, head not finished primary school)	-4.3	-10.2
Rural (non-poor, head not finished secondary school)	-8.1	-20.9
Rural (non-poor, head with no education)	-3.4	-10.2
Rural (non-poor, head finished secondary school)	-1.7	-1.7
Urban (below food poverty-line)	-0.5	-1.2
Urban (between food and basic-needs-poverty-lines)	-0.8	-2.3
Urban (head not finished primary school)	-1.3	-2.7
Urban (head not finished secondary school)	-4.3	-8.7
Urban (non-poor, head with no education)	-0.8	-2.3
Urban (non-poor, head finished secondary school)	-2.6	0.8
Total (population weighted)	-4.0	-10.1

Source: Own calculations.

The general conclusion in the tax-literature is that distortions created by trade-taxes render them inferior to other fiscal instruments, such as domestic income and consumption taxes, which are more efficient and less inequitable. The empirical results here seem to support this view. The fear of serious revenue-implications from continued liberalisation of Tanzania's trade-regime thus seems unjustified as long as compensating revenue-measures are put in place, and indeed, welfare would likely improve.

5. Taxation of the informal sector

An important question is to what extent the informal sector should be taxed. If it is large and growing over time, policy must attempt to bring it more fully into the tax-base and/or attempt to contain its growth. Possible policy-measures will depend on the causes of its growth. If it is growing because of restrictions on entry into formal activity, then policy must address these restrictions. If, on the other hand, it is growing because of too many taxes, then policy must address the structure of taxation. Addressing these causes may transform informal into formal activity.

Whether the informal sector has in fact been growing faster than the formal sector in Tanzania is a difficult question. Many observers would argue that it has, because of retrenchment of public employees; privatization and restructuring of public enterprises; and slow growth of employment within the private formal sector. But the employment-share in the informal sector seems to have declined from 8.8% to 8.5% from 1990 to 2000.¹³ Nevertheless, because the economy has been growing overall, the informal sector may have grown in absolute terms.

5.1 Problems in taxing the informal sector¹⁴

A recent survey highlighted some important characteristics of the informal sector, important to understand in assessing possibilities for increased taxation and their distributional impact.¹⁵ The informal sector is an important source of income for women and for poor households in particular. It employs many women (51% of the sample). Another factor worth consideration is the length of stay. A majority (56%) of the informal operators had been in business for at least 3 years, about 12% for at least 10 years, and 6% for at least 20 years. Overall 89% of the operators were self-employed with no additional employees, but they were better educated than one might expect. Less than 7% had never been to school, while over 67% had some primary education. Over 16% had some secondary education, and 6% actually had some technical, commercial, or university education.

Unavailability of credit and non-payment of debts by their customers were some of their major problems. Most activities were thus dependent on own-savings or family networks: Over 53% had used their own savings to start their business, about 26% were given money by their

¹³ According to the 1990/91 and 2000 labour force surveys.

¹⁴ This section is based on URT (2001).

¹⁵ A recent survey of the informal sector was undertaken by the Tanzanian tax-authorities in order to assess the revenue-potential of taxing it. The study, carried out in 5 regions (Dar es Salaam, Kilimanjaro, Arusha, Mwanza and Mbeya) included 2284 households. The sampled regions contribute about 90% of the tax-revenue collected in the country. The basis of the selection at regional level was mainly a revenue contribution.

relatives for the purpose, and another 13% got loans from relatives or friends. About two-thirds of the operators had initial capital of less than Tshs. 50,000; clearly the poor dominate the informal sector. Other problems mentioned were lack of capital equipment, lack of adequate business premises, harsh business regulations and enforcement, heavy taxes and license fees, and corruption.

In view of these problems it is very likely that increased taxation of the informal sector generally would negatively affect economic growth, and increase poverty. For example, taxation would reduce savings and thus the availability of investment finance. Improved access to credit would help, but institutions that reach out to the informal sector does not exist at present. Harsh enforcement and corruption undermine the legitimacy of the tax-authorities and increase tax resistance and evasion (discussed more in the next section), a problem that would be compounded if tax-levels were increased.

The mobility of informal operators makes it difficult to bring them into the tax-net. Adequate business premises could be used as an incentive. For example, if the authorities were to construct new business premises and offer them at a subsidised rate conditioned upon registration with the tax-authorities, a win-win situation could result, as operators would improve their performance and the revenue-base, would expand.

5.2 Performance and taxation in the informal sector

If we are thinking about raising tax-revenue from the informal sector, it would be interesting to know how much it is already paying in taxes. According to the survey 43% of informal operators claimed to already pay tax of one form or another (Table 5.1). In particular, 47% of trade/hotel/restaurant sector operators claimed to be paying tax, and 46% of transport operators. In mining, however, no operators reported paying tax and only 18% in construction. Overall and by sector, more operators with higher income reported paying tax, and reported paying higher percent of value-added. Overall, 6% of value-added was reported paid to the Tanzania Revenue Authority (TRA), and 3% to local authorities, for an overall average of 4%, which is not insignificant (compare Table 4.3).

Table 5.1: Compliance and tax paid to value-added by type of industry and tax authority (percent)

Type of Industry	Compliance		Taxes paid in terms of value added			
	Total	Income below Tsh. 540,000	Income above Tsh. 540,000	TRA	Local Authority	Total
Agriculture and Fishing	39	34	39	4	13	6
Mining and Quarrying	0			-	-	-
Manufacturing	35	28	47	10	5	9
Construction	18	10	23	5	5	5
Trade/Restaurants/Hotels	47	36	57	6	2	3
Transport	46	30	62	-	14	14
Community and Personal Services	42	33	48	5	10	7
Total Average	43	33	52	6	3	4

Source: URT (2002)

Manufacturing operators reported paying 10% of value-added to TRA and 5% to local authorities, 9% on average. Approximately 90% (389,663 operators) had annual turnover of less than Tshs. 6 million (Table 5.2), averaging just under TShs 1.5 million; their average operating surplus of about Tshs. 644,000 (43%) per operator was only Tshs. 1764 (slightly more than 2 USD) per day. Those with turnover of TShs 6–7 million had an average operating surplus equal to about 7 USD per day. At the other end nearly 9,000 operators reported annual turnover of 20 million or more. This is the requirement to register with the VAT department. Their average operating surplus was Tshs. 2,310,976 (approximately USD 92) per day.

Could and should, informal operators be taxed more? Yes and no. The 90% averaging about 2 USD per day in operating surplus couldn't contribute much and would be badly hurt by taxation. Possible even those averaging up to, say, 7 USD per day should be exempted. On the other hand, the 2% grossing Tshs. 20 million annually (with surplus more than 92 USD per day) already have a legal obligation to pay, and could make a substantial contribution to tax revenues. Possibly efforts should be made to increase formal registration at that income-level before considering lowering it.

Table 5.2: Number of operators and operating surplus, by annual turnover

Turnover	Number of operators	Operating Surplus (% of turnover)	Average turnover
< 6 million Tsh	389,663	43.0 (53,667)	1,497,685
6<Turnover<7 million Tsh	4,917	33.5 (176,960)	6,338,901
7<Turnover<14 million Tsh	23,776	38.9 (219,800)	9,001,554
14<Turnover<20 million Tsh	4,193	35.2 (474,421)	16,173,430
>20 million and above	8,744	48.4 (2,310,976)	57,296,937
Total	431,293	43.7	3,240,492

Source: URT (2001)

6. Local government taxation

Local authorities in Tanzania levy a large number of taxes, licenses and other fees, and other charges, in addition to taxes collected by the central government. Lack of co-ordination between the central and local levels has led to an excessive number of sometimes duplicate taxes with different rate-structures that are difficult for taxpayers to understand and apply (Fjeldstad and Rakner, 2003). Surveying 50 district councils, Fjeldstad and Semboja (1999) found 10 types of taxes, 18 types of licenses, 41 types of fees and other charges, and yet 16 “other” revenue-sources. The distinctions were often unclear but most could be considered taxes. Recently there has been a national effort to rationalise and simplify local-government taxes. For example, the development-levy was abolished. There was concern because the rationalisation took place very quickly after only limited consultation with local authorities (Fjeldstad, 2004), and as a result some council activities had to be scaled back or postponed.

There has also been a mis-match between taxes imposed by local authorities and the national government’s development-policies. For instance, some councils impose high taxes on export-crops, which is inconsistent with the policy of encouraging export-production (Fjeldstad and Semboja, 2000; Ellis and James, 2003). Many local taxes thus have a distorting effect on resource-allocation inhibiting the start-up of new enterprises and economic growth.

Local taxes can also result in the tax-burden falling more on the poor than on the locally relatively better-off. For example, introduction of taxes and levies at the village-level increased transaction-costs for both farmers and traders (Sen, 2002). Sensitivity analysis has shown that marketing-taxes have a major impact on farmers’ profits. The elimination of all output-taxes on cashews, for example, would increase farmer’s profits by 19–30% (Ministry of Agriculture, 2000). There is little doubt that local taxation has been a major constraint on commercialisation of smallholder agriculture, and thus on attempts to reduce rural poverty via income-diversification.

In a recent participatory poverty-assessment, participants identified four areas with regard to taxation that raised serious concern in local communities (Ehrhart and Mwaipopo, 2003). First, multiple taxation bothers people a lot, because it makes it difficult to enter new businesses and markets. The most affected are poor women and youth who don’t have productive assets and cannot easily access low-cost credit with which to pay for multiple taxes, licenses and fees etc.

There are also complaints that the levies are exorbitant, often charged up-front irrespective of the size of capital-investment. Second, inappropriate timing of tax-collection makes taxation even more impoverishing for vulnerable groups. Taxes are typically collected during the off-season, when people are cash-constrained. Third, there is a lack of transparency with regard to exemptions. Fourth, crude force has been used by some local tax-collectors to coerce payment. There have been cases reported of demands for bribes; intimidation and physical harassment (see the box below). For non-payment, offenders have been obliged to pay additional fines 50% of the tax due.

How people cope with tax payments problem and the accompanying hassles is of great concern within local communities (Ehrhart and Mwaipopo, 2003). There are three basic strategies in response to these problems. One is temporary (or permanent migration) to another area when the “peak of the tax-collection season” approaches (see also Fjeldstad, 2001a; Ellis and James, 2003). Another is to bribe the tax-collectors by giving them personally less than the amount due. A kind of debtor-collector relationship emerges, with individuals remaining perpetually tied to the tax-collector, paying out small sums on demand that may end up totalling more than the original tax avoided. Finally, one can advocate for change through open complaints to public officials or through protests in the streets. Although rare, this does happen.

Taxation, harassment and humiliation

“I paid my development-levy and requested to pay that of my wife after selling my goat at the local livestock market. The same night, the local militia came to our house and broke our door while our two daughters and ourselves were asleep. They started beating us and demanded that I show my levy-receipt. After seeing it they demanded to see that of my wife. I explained that I had already discussed the matter with village officials. However, they kept on insisting to see her receipt and later demanded that she follow them outside (it was midnight). She agreed and went to cover our two children with a blanket, urging them not to cry. One of the men came back, held her by force and tied her hands on her back and beat her. Some of her clothes fell down and she remained with just a piece of cloth around her waist. I followed the militia at a distance as they took my wife and rounded up several other people from other houses. This went on until around 4 o'clock in the morning when they began the journey to the Ward offices.

Since I had no alternative, I went back home and took all of my 4 goats to friends, who on realizing that I had a serious problem offered me little money i.e Tshs. 5000/= per goat. At 10.45 am the next day I arrived at the Ward offices and was told that I had to pay for the local militia's tasks, the lock-up room where my wife was kept, her development-levy and a fine. I paid a total amount of Tshs. 15,000/=. After that they released my wife.

I was shocked when I saw the local militia taking a piece of cloth to her when they called her name. It was then that I discovered that she was locked up with other people naked. I found myself crying. As we went on our journey back to Maliwa, she was so silent. I was afraid and worried about what might have happened to her. I became even more worried when I thought of HIV/AIDS. I am very worried now since I sold all my goats last year, I do not have money to buy fertilisers for my shamba, I do not know what to do this year.”

Source: Ehrhart and Mwaipopo (2003)

7. Conclusions

Although tax-reform has been an important component in Tanzania's economic-reform programme so far, the tax/GDP ratio has still remained low. Tanzania is not alone in this; Ethiopia, Uganda, Mozambique, and Cameroon are all similar. However, Tanzania seems to be lagging behind some other sub-Saharan countries in raising it. One could take a relaxed view on this and argue that performance is improving as long as the economy is growing but the tax/GDP ratio has not improved. Projecting it over time assuming no changes in its rate-structure, even if growth-patterns change, also predicts no substantial improvement. So it seems that a growing economy alone will not increase the tax/GDP ratio. As the government does not wish to raise tax-rates, it can only achieve it from either broadening the tax-base or improving efficiency in tax collection.

The introduction of VAT seems to have been less successful in Tanzania than in some other countries in the region. One important factor is that Tanzania's tax-regime allows for many exemptions. However, the tax-authorities have recently been quite successful in reducing the gap between the official rate and the rate collected. In the late 1990s the gap was about 5% of GDP, but has since come down to about 2.4%. Continued effort to close the gap is needed.

Caution is needed in broadening the VAT-base. Besides closing the gap just discussed – which should be done first – distributional aspects also need to be assessed, to avoid adverse impact on the poor. Partial and general-equilibrium analyses, was used to evaluate the impact of broadening the VAT, producing broadly similar results. Most non-food commodities are purchased disproportionately by the better-off, so that taxation of them would be progressive. Taxing food-products, on the other hand, would hurt the poor. VAT-broadening should thus initially be done in the manufacturing and service sectors. General-equilibrium analysis also revealed that the impact on welfare depends to a large degree on the efficiency of the refund-mechanism. Broadening the base assuming perfect (100%) or partial (50%) refund would improve welfare in most cases. But welfare deteriorates considerably; regardless of which sector is targeted, if the refund system fails (0% refund).

In the context of trying to improve the tax/GDP ratio, there is of course concern about liberalising trade and possible reduction of tariff-revenues. But a revenue-neutral trade-reform, including compensatory VAT on the manufacturing & service sectors, was found to be welfare-

improving. The general conclusion in the tax-literature is that distortions created by trade-taxes render them inferior to other fiscal-policy instruments. A shift to domestic income-and consumption-taxes would be more efficient and less inequitable. The empirical results presented here seem to support this view. Thus the fear of serious revenue-implications from continued liberalisation of its trade regime as long as compensating revenue measures are put in place, seems to be unjustified.

The structure of income-taxes is very important for equity. Analysis of available data by income-deciles suggests that the actual tax-rate is high for the poorest two deciles, then falls and rises for the middle-income earners, before falling again. The richest two decile's rates are lower than the poorest. The low income-tax-threshold in Tanzania – currently about Tshs. 50,000 per month, or approximately 2 USD per day – contributes to this problem. In comparison, the threshold in Kenya is about 5.4 USD per day and has been increasing over time. In the new Income Tax Act in Tanzania there was only a minor adjustment, suggesting that the current income-tax-structure is anti-poor.

Another way to broaden the tax-base would be to bring the informal sector more fully into the tax-net. It is likely, however, that increased taxation of the informal sector would increase poverty and negatively affect economic growth. Ninety percent of the operators already only average about 2 USD per day. And increased taxation would inhibit growth among operators with restricted access to credit, since investment is usually financed by own-savings. But there is certainly a case for taxing the 2% of informal operators who gross over Tshs. 20 million and are thus already legally required to register for taxation.

So far, the reform-agenda has mainly focused on central-government taxes. Some evidence presented in this report, which needs to be substantiated further, is that local-government taxes can have a major negative impact on poor households. In fact, it may be that the most adverse impact of taxation comes through these local-government taxes. The problem is not only that the taxes reduce income, but also how they are collected. Harsh tax-enforcement and corruption, combined with poor service-delivery, undermine the legitimacy of the local government and increases tax-resistance.

Reforming the tax system requires caution. Changing the tax-structure can have adverse supply-side effects by constraining already low private investment, thus undermining growth and the prospects for increasing public revenue in a sustainable manner. A recent investment-climate survey pinpointed taxation as key constraint on private-sector investment. It seems that the current policy of tax-holidays and other investment-tax-incentives is benefitting only a few sectors in the economy. In order to improve the investment-climate for all sectors, a uniform approach would be needed, with lower and simpler taxes.

There is undoubtedly room for improved collection procedures, but attempts to squeeze additional revenues from poorly-designed taxes may exacerbate the negative effects on the economy and on society in general. The push from donors for ambitious overall revenue-targets may, in some contexts, have substantial unintended negative effects on taxpayers' rights through coercive tax-enforcement, and may undermine accountability by empowering the bureaucracy at the expense of elected politicians. It is also unlikely that a substantial broadening of the tax-base can be achieved without increasing the tax-burden of the poor. And improved tax-administration cannot compensate for bad tax-design. Excessive and arbitrary taxation are major constraints on economic and social development.

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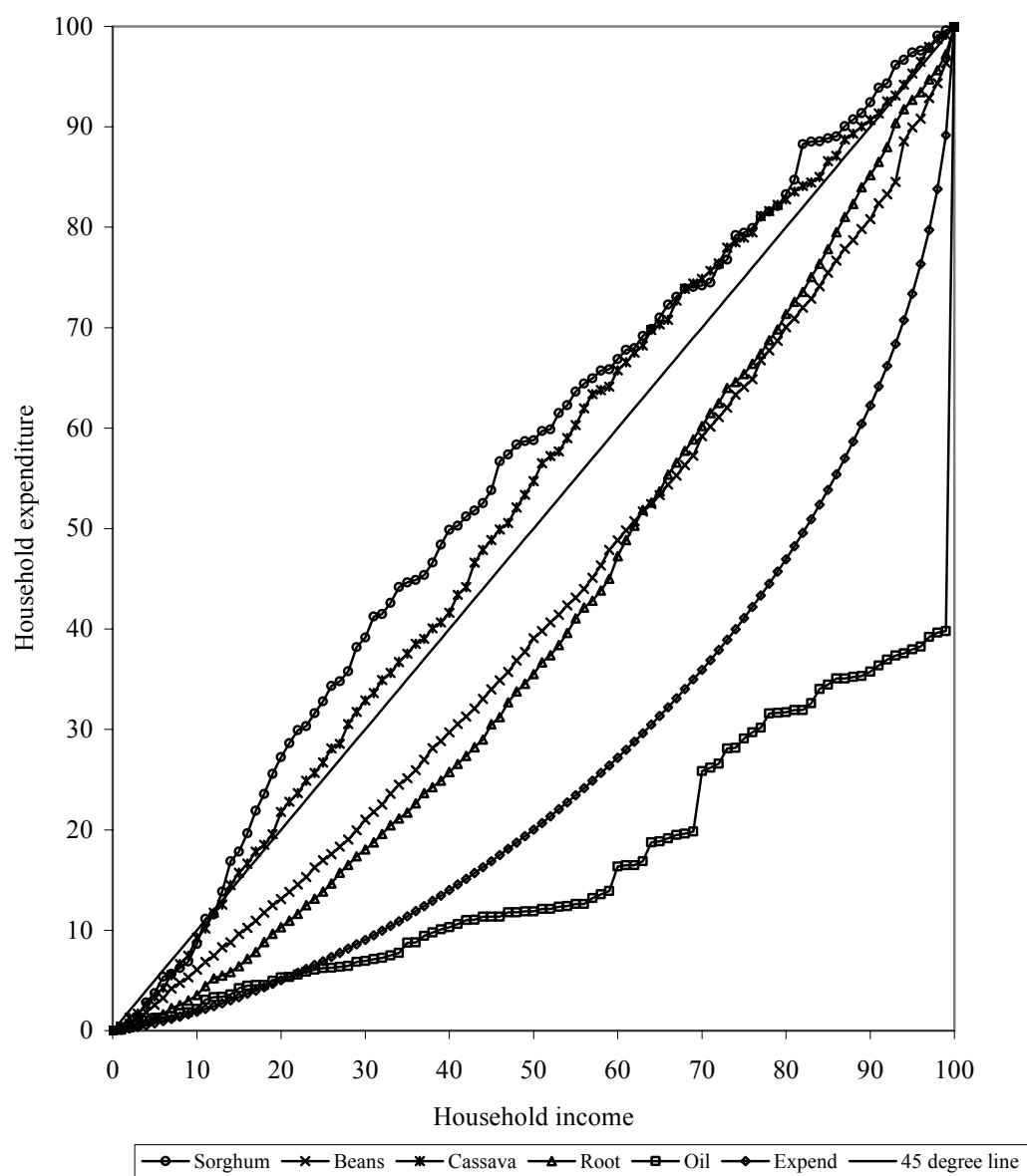
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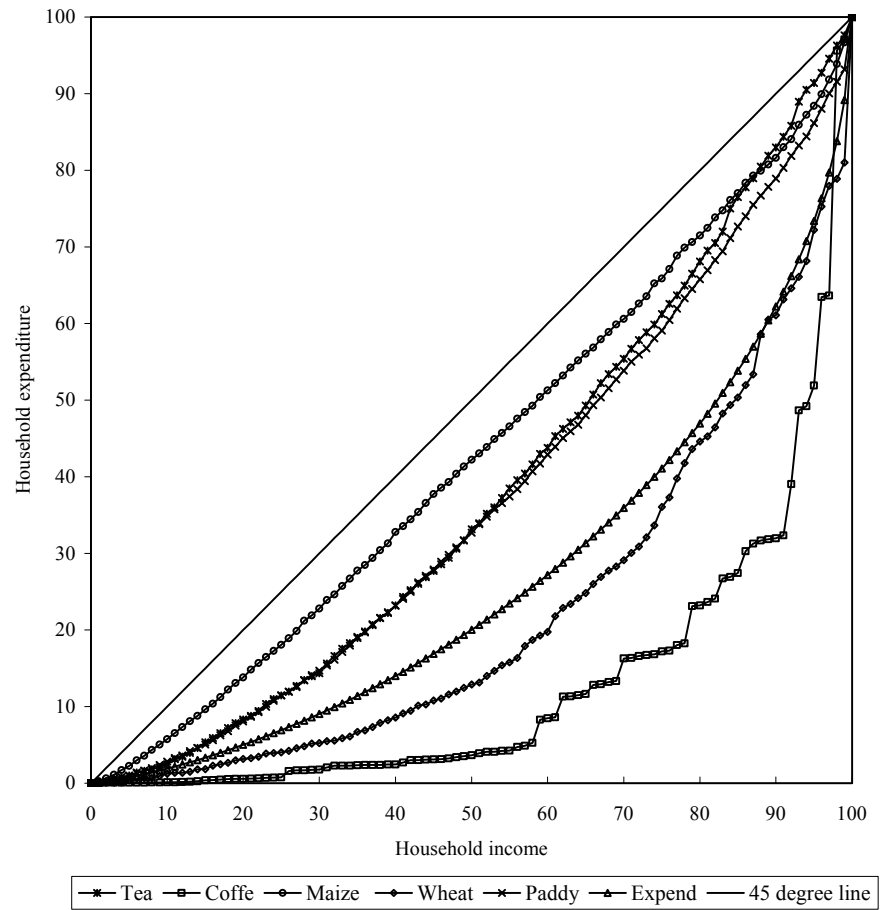
Appendix 1

Concentration curves

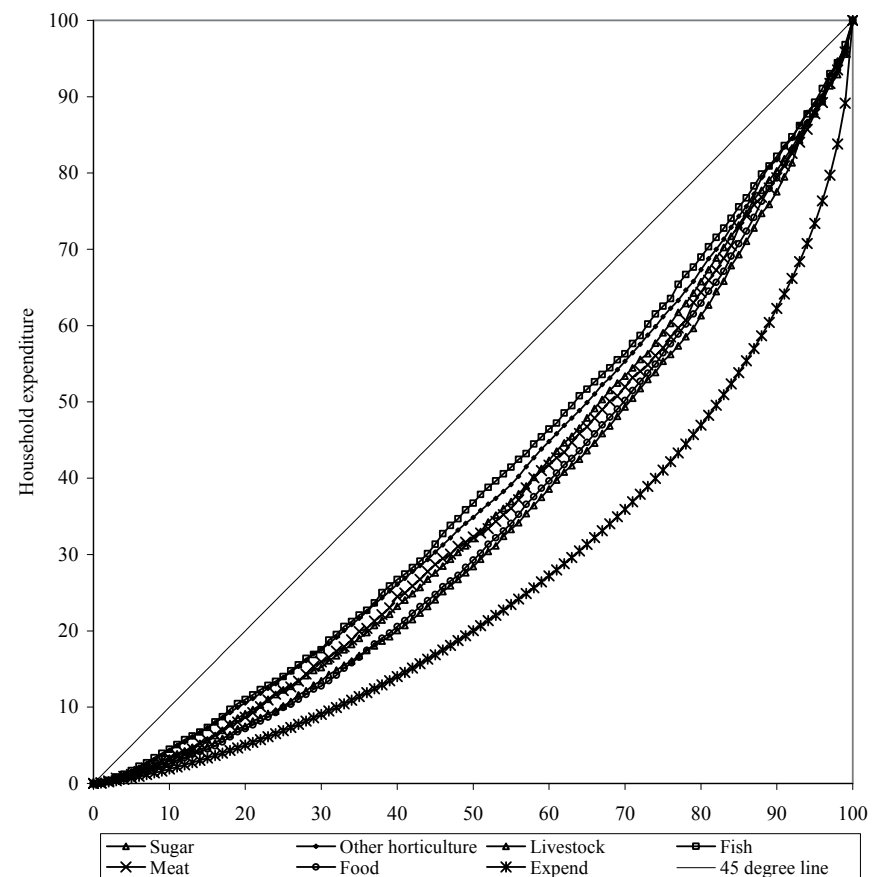
Concentrations curves – Food Products



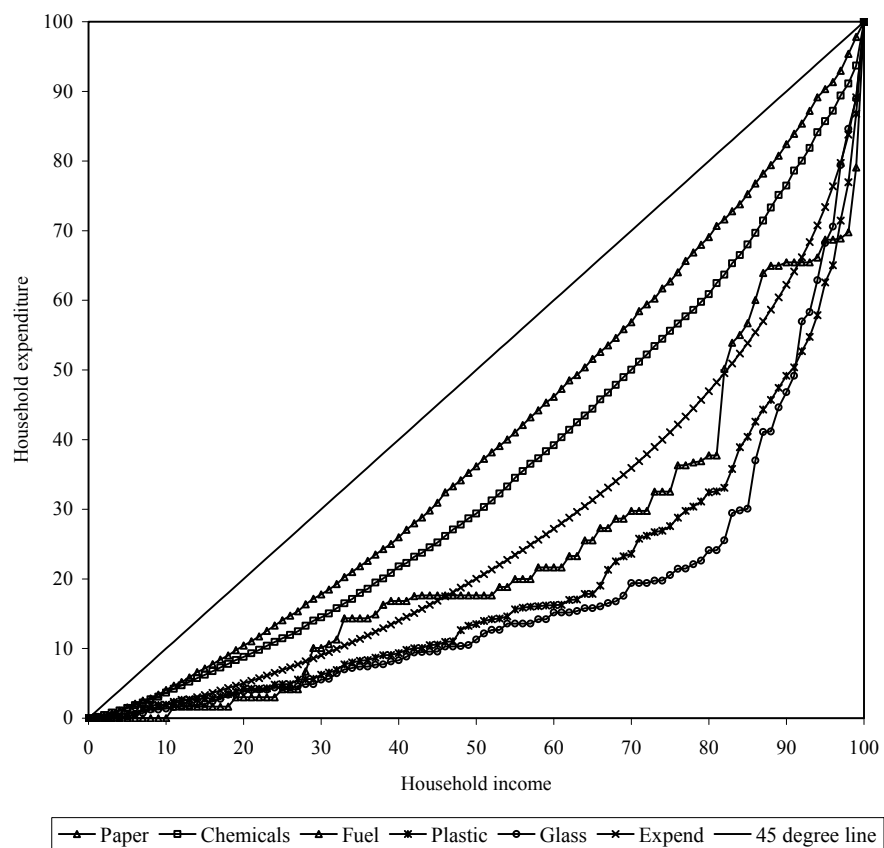
Concentrations curves – Agriculture Products



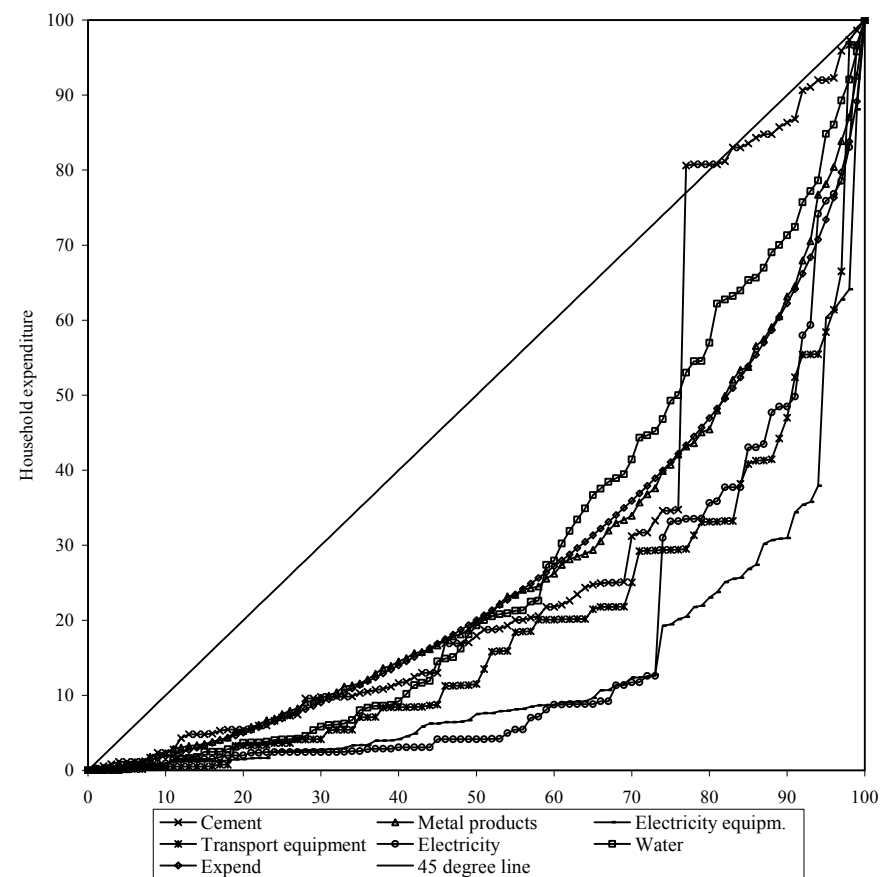
Concentrations curves – Food products



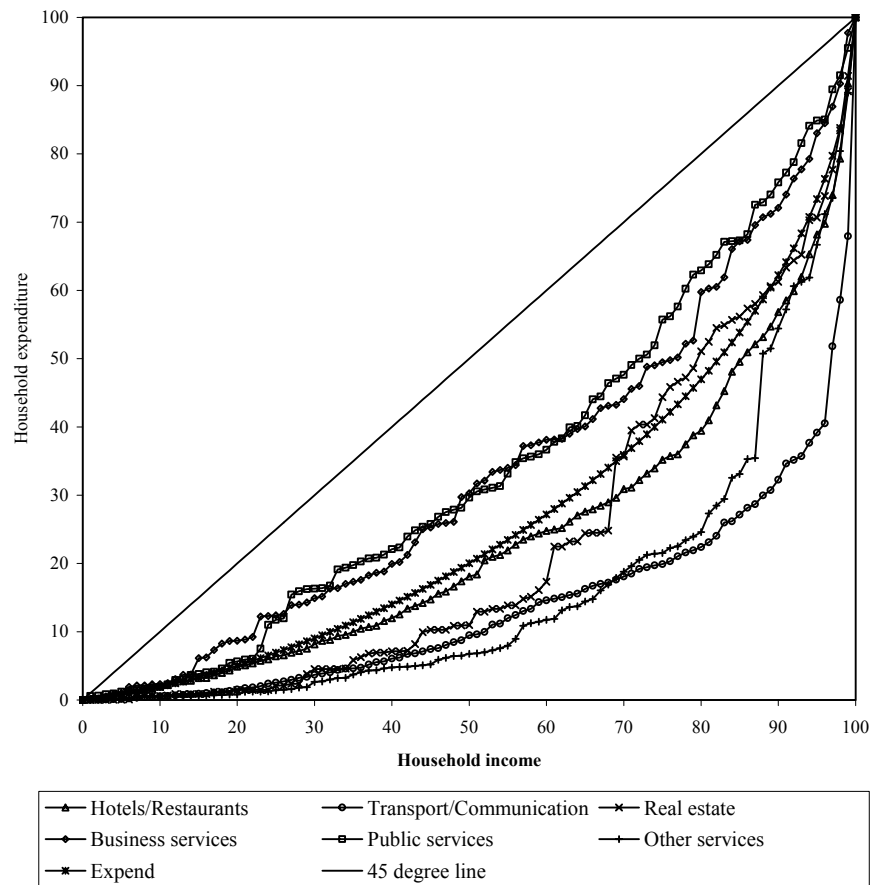
Concentrations curves – Intermediate goods



Concentrations curves – Utilities and other products



Concentrations curves – Services



Appendix 2

A CGE model based on a SAM for the Tanzanian economy

The model used in this study follows the approach popularised by Dervis et al (1982), where the trade and production structure is specified as a multi-level nest of different functional forms. The specification of exports and imports is different from the standard neoclassical trade model, which tends to yield specialisation in production and a one-to-one correspondence between domestic relative prices and changes in trade-policy or world-prices. At the highest level of aggregation, the Armington (1969) specification is used, which defines a composite commodity for each sector as a Constant Elasticity of Substitution (CES) function of commodities both produced domestically and imported from abroad.

Output in each sector is either sold on the domestic market or exported. There are, however, costs involved in reallocation of output between domestic markets and foreign markets, a reflection of product-differentiation or market-penetration costs (Robinson et al, 1990). A Constant Elasticity of Transformation (CET) framework allocates domestic output between exports and domestic sales. Further, downward sloping demand curve is assumed for Tanzanian exports, implying that a lower foreign-currency price is needed to capture a larger market-share. Sectoral gross-output is a CES function of aggregate labour and composite capital, while demand for intermediate goods is given by a Leontief technology. In the three agricultural sectors, composite capital is defined as a CES function of capital, land, and aggregate labour. Aggregate labour is a set of nested CES functions for nine different labour categories. CES functions allow for imperfect substitution at each level. In a nested production-structure, producers choose the optimal mix of primary factors at each stage in the production-process. At any level of the nested structure, primary factors are demanded up to the point where factor-prices, inclusive of sector-specific differentials, equal the marginal-value product of the specific factor.¹⁶

Other assumptions usually made in CGE models concern whether or not stocks of the various factors are fixed within a period and whether or not factors are mobile or not.¹⁷ The current model was run with the assumptions: 1) a mobile labour-force and 2) fixed sector-specific capital

¹⁶ It has been assumed that it is easier to substitute less-skilled workers rather than more-skilled.

¹⁷ In static models the distinction between short-run and long-run is usually made dependent on mobility of capital: Long-run models typically assume mobility of capital between sectors, while short-run models assume fixed sectoral capital-stocks. This is also the case in dynamic models with myopic expectations, with the exception that capital-stocks in each period are augmented by last-period investment adjusted for depreciation.

augmented by investment each period. In the labour market it was assumed that each sector initially had a specific combination of labour-categories. Total supply of each category was assumed constant, demand varying with changes in each category's wage-rate.

Factor-incomes of capital and land were distributed to three institutions: government, enterprises, and landlords. Enterprises were assumed to keep a fixed proportion of capital income, net of taxes, as retained earnings, while the remaining share was distributed to households. In the agricultural sector, factor-income from land was directly transferred to households. Sectoral factor-incomes of the various labour-categories, as well as other sources of income such as remittances from abroad and government transfers, were distributed in fixed proportions to the various households. Households were also assumed to pay a direct tax to the government, while a fixed proportion of household disposable-income was saved. Finally, consumer-demand was given by a Stone-Geary linear expenditure system (LES).

Besides direct taxes, government was assumed to derive revenue from import-tariffs on goods, from transfers from abroad (aid), and from indirect taxes levied on domestic output. Government savings was assumed equal to revenue less current expenditures on goods and services, transfers, and interest-payments on foreign loans. The sum of savings from households, enterprises, and foreign savings equals total savings in the economy. Government-investment was assumed to be exogenous in the model, while aggregate private investment was assumed to be endogenous. At the sectoral, level private investment was determined by fixed coefficients. The amount of goods demanded from the private sector for investment purposes was derived with the help of a capital-coefficient matrix. Fixed expenditure-shares also determine government demand of investment goods.

The final block in the model defines equilibrium in the markets for factors, commodities, and foreign exchange. Given behavioural and institutional constraints, as elaborated above, there is a set of prices in the model-solution that represents market-equilibrium. Domestic prices for imports and exports are products of world-prices (exogenously given) multiplied by the 'nominal' exchange-rate, adjusted for tariffs. The price of the composite good is the sum of total values of domestic sales out of total output and values of imports divided by total output of the composite good. In a similar way, each sectoral output price is defined as the value of domestic sales and exports divided by total output. Price of value added, or the net producer-price, is equal to the output-price, adjusted for indirect taxes, less the cost of intermediate inputs per unit of output. The price of a unit of capital is defined as a weighted average of the prices of capital goods by sector of origin. The aggregate price index, the numeraire in the model, is computed as the ratio of nominal to real GDP. Given the numeraire and assuming exogenous capital-inflows, movements in the exchange rate equilibrate the external account. An increase in the exchange-rate increases tradable relative to nontradable prices, leading to a real depreciation, which increases exports and reduces imports.

Appendix 3

Simulation results

Table A.1: Simulation results of broadening VAT (assuming 100 percent refund)

	Baseline	Agriculture products	Coffee and tea	Food products	Consumption goods	Building % construction	Private services	Public services
Rural (below food poverty line)	-13.6	-27.8	-13.6	-11.6	-26.7	-31.7	-65.2	-37.7
Rural (between food and basic needs poverty line)	-19.3	-39.1	-19.3	-16.9	-37.1	-43.2	-87.5	-51.5
Rural (non-poor – head with no education)	-29.4	-64.4	-29.4	-25.6	-56.5	-65.7	-133.7	-78.9
Rural (non-poor – head not finished primary school)	-24.4	-54.3	-24.4	-19.0	-50.4	-62.0	-135.4	-75.5
Rural (non-poor – head not finished secondary school)	-54.8	-133.1	-54.8	-43.5	-112.3	-134.5	-285.2	-162.7
Rural (non-poor – head finished secondary school)	-0.2	-10.7	-0.2	2.5	-3.1	-6.8	-18.0	-7.9
Urban (below food poverty line)	-3.1	-8.1	-3.1	-2.3	-6.4	-7.8	-17.1	-9.6
Urban (between food and basic needs poverty lines)	-6.5	-17.6	-6.5	-4.9	-13.1	-15.5	-32.1	-18.5
Urban (non-poor – head with no education)	-6.6	-16.8	-6.6	-5.1	-12.8	-15.2	-31.1	-18.3
Urban (head not finished primary school)	-5.1	-13.7	-5.1	-2.7	-12.2	-15.1	-34.8	-18.8
Urban (head not finished secondary school)	-17.1	-57.2	-17.1	-8.2	-42.4	-53.4	-124.0	-66.7
Urban (non-poor – head finished secondary school)	16.1	16.6	16.1	20.5	20.6	18.9	25.9	23.5
Total (population weighted)	-21.0	-48.3	-21.0	-16.6	-42.8	-51.6	-109.8	-62.3

Table A.2: Simulation results of broadening VAT (assuming 0 percent refund)

	Baseline	Agriculture products	Coffee and tea	Food products	Consumption goods	Building % construction	Private services	Public services
Rural (below food poverty line)	9.1	24.8	9.1	12.2	11.0	9.3	15.5	9.2
Rural (between food and basic needs poverty line)	11.0	31.2	11.0	15.0	13.1	11.3	19.6	10.9
Rural (non-poor – head with no education)	17.0	43.6	17.0	23.2	20.3	17.7	29.5	16.5
Rural (non-poor – head not finished primary school)	22.3	54.3	22.4	29.9	27.8	23.2	35.1	22.5
Rural (non-poor – head not finished secondary school)	44.7	100.8	44.7	60.6	53.8	46.5	77.0	45.4
Rural (non-poor – head finished secondary school)	7.4	8.3	7.4	10.3	10.0	7.7	13.0	9.0
Urban (below food poverty line)	2.9	5.9	2.9	3.9	3.6	3.0	4.7	2.9
Urban (between food and basic needs poverty lines)	4.7	9.0	4.7	6.9	5.7	4.9	8.3	4.9
Urban (non-poor – head with no education)	4.2	8.6	4.2	6.2	5.1	4.4	7.6	4.1
Urban (head not finished primary school)	7.3	15.1	7.3	10.2	8.6	7.6	10.8	7.3
Urban (head not finished secondary school)	27.4	48.4	27.4	38.0	32.7	28.8	44.7	28.3
Urban (non-poor – head finished secondary school)	11.9	8.5	11.9	15.9	14.8	13.1	20.1	17.5
Total (population weighted)	17.4	41.2	17.4	23.5	21.1	18.0	29.0	17.7

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