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PROGRESSIVITY-REGRESSIVITY
PROPERTIES OF THE KENYAN, UGANDAN
AND TANZANIAN TAX SYSTEMS.
GOVERNMENT VS. PRIVATE SECTOR
CONSUMPTION AND SAVINGS.

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Progressivity - Regressivity Properties of the
Kenyan, Ugandan and Tanzanian Tax Systems.
- Government vs. Private Sector Consumption
and Savings.

Summary.

This paper assumes that direct as well as indirect taxation "behaviour" may be summarized through progressivity/regressivity parameters. Such parameters have been computed for the Kenyan, Ugandan, and Tanzanian tax systems. The Ugandan and Tanzanian tax systems seem progressive according to the definition used.

After having discussed briefly the increased savings and economic growth possibilities which may be inherent in the three tax systems, the paper continues to look at private and government consumption patterns (through sectoral income elasticities of demand) in the three countries. The idea is that it is not enough from an investment/economic growth point of view to have a progressive tax system, if government consumption is highly elastic with respect to tax income.

The result of these computations, however, are inconclusive, as the income elasticities estimated seem not to be significantly different from unity.

I. Introduction. ^{x)xxx)}

During a study of savings- and trade-gaps for the East African economies [1], I attempted to incorporate the income and demand pattern of the public sector in a way similar to what is usually done with the private sector.

The growth in government tax income was linked to the growth in gross domestic product¹⁾, so as to assess the progressivity-

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- 1) Gross domestic product (at market prices) was used as a proxy for gross national product. The reason for adopting this proxy was that net factor payments to abroad were only available for half (1961-65) of the period under study (1956-65).

x) I have benefited from discussing some of the underlying ideas of this paper with M.P. Todaro, Research Fellow and Victor P. Diejomaoh, Visiting Research Fellow - both of the Institute for Development Studies, University of Nairobi. My colleagues of DERAP, Messrs. K. Fiskvik and M. Skaar have read the manuscript and have suggested valuable improvements. I have not been able to follow up all suggestions - especially when the choice between the concepts buoyancy - vs. progressivity/regressivity parameters are concerned.

xx) References [] are included on p. 18.

regressivity properties [2] of a tax system as a whole.²⁾³⁾

The next step in the analysis was to find out what were the properties of the two main tax subcategories - viz. direct and indirect taxes.

Going from the income side of government⁴⁾ accounts, the next step was to link current government income to current government expenditure. In other words, what would a simple, unsophisticated "government consumption function" look like ? Would for instance total government demand be elastic with respect to income, i.e. would total government expenditure increase faster than government income ?

- 2) Johansen's argument in [2, pp. 211-214] relates to individual tax functions and direct taxes only. I have, however, extended the argument to include total direct tax payments as well as to indirect taxes. Intuitively one may see the aggregation of individual (micro) tax functions to a macro-function as a logical extension of Johansen's analysis. When a macro tax function for indirect taxes is concerned, one may perhaps regard its "reaction" to changes in income as what happen when consumers switch from goods with lower indirect tax rates to higher taxed goods as income increases. In other words a type of Engel's law effect. When firms are concerned, the case is less clear cut; the net effect being perhaps a combination of inter-industry demand changes generated by changes in technology, but also by substitution of production factors. Thus progressivity/regressivity parameters computed for indirect taxsystems are a mixture of various behaviouristic as well as technological forces. When the East African tax system(s) are concerned, however, the effect measured is perhaps mainly due to consumer behaviour, as intermediate goods hardly were taxed during the period reviewed.
- 3) Thus neglecting as variables of importance changes in the distribution of income, family size, changes in tax-rates and tax-laws, as well as changes in the effectiveness of tax collection; the idea was to find some measure for what happened to (total) tax payments when income changes - for instance increases. One question one would like to see answered was specifically: did tax-income increase faster than income as a whole ?
- 4) Central, local and EACSO General Fund Services.

A discussion of these matters naturally leads to a discussion of the possibility (given the present government income structure and expenditure reactions) of government savings out of current income.

The results of this analysis were not incorporated in the studies mentioned above [1] - the final needs of the "gap-studies" were met at a higher level of sectoral aggregation.

The 'results' derived in our 'sub-models' of government income and expenditure may, however, be of some relevance to East African tax-studies [3] as well as they may constitute a starting point for a comparative study of the income patterns and expenditure reactions of the three East African governments in a period where tax-laws of the three countries to a large extent were identical. I therefore take the opportunity to present in this paper a broad outline of the main results of this exercise.

The notation used is given in the notes.⁵⁾ In Appendix A, I include the logarithmic regressions run in comparable triples (Kenya, Uganda and Tanzania) in order to facilitate comparisons.

5) Notation used :

GDP	:	Gross domestic product at market prices
T	:	Total tax-income
T _D	:	Direct tax-income
T _{IND}	:	Indirect tax-income
t	:	Trend variable
C _P	:	Private consumption
C _G	:	Government consumption
S	:	Total savings
K	:	Kenya
U	:	Uganda
TA	:	Tanzania (mainland only)
ln	:	Natural logarithm.

In Appendix B, I have included the data used.⁶⁾

II. Some Definitions.

Without stretching the regressions run too far I have extracted from Appendix A some of the relevant regression parameters estimated. Before doing this, however, let me define a few tax-concepts. (For notation see⁵⁾).

I have assumed that T , T_{IND} and T_D may be expressed as continuous functions of income, (for which GDP at market prices has been used as a proxy) and of a trend variable. (Although I have indicated that other variables may be relevant as well, such variables have not been included) :

$$(1) \quad \left\{ \begin{array}{l} T = f(\text{GDP}, t, \text{other}) \\ T_{IND} = f_{IND}(\text{GDP}, t, \text{other}) \\ T_D = f_D(\text{GDP}, t, \text{other}) \end{array} \right.$$

It is further assumed that the first order partial derivatives exist. In order to simplify even more, I shall in the following comments limit myself to looking at T , T_D and T_{IND} as functions of one variable only - viz. GDP. Appendix A then gives the results obtained when the trend variable is included.

6) Note that Kenya's national accounts now have been revised for the years 1963-65 - however in a way that does not much affect 'trends'. The revisions carried out mostly had the character of adding 'lump-sums' to the existing statistical base - through the plugging gaps and elimination of statistical deficiencies.

A progressive tax system with respect to income will now be defined by the following property :

$$(2) \quad \delta \ln T / \delta \ln GDP > 1 \quad \text{or} \quad d \ln T / d \ln GDP > 1$$

E.g. the overall tax-income increases by a larger percentage than does income. Another term which may be used is that the tax-system is elastic (with respect to income). [4] 7).

- 7) This concept may be seen as a parallel to the term elastic demand with respect to income or prices. The similarity to for instance income elasticities of demand is also worth mentioning from another point of view.

These elasticities are defined as a partial elasticities of demand functions with respect to income. Other variables influencing the demand are the "classic" ones as "all prices" and (perhaps) some measure of changes in the skewness of distribution of income. Now if the income elasticities are estimated from a multiple natural logarithmic regression equation, this "simultaneity effect" is specified while the partial derivatives (equalling in this case the partial elasticities) with respect to income are easily obtained. If only income is specified in the demand function, however, the influence of other variables are left out or has to be represented through income alone - which of course may be strongly correlated with the variables neglected. If this is not the case, however, the elasticities thus estimated may after all not be pure income elasticities.

The same type of arguments may be used against the notion of calling a tax system (and parts thereof) progressive or regressive. As long as measures for changes in the skewness of income distribution, family size, tax base and tax laws etc., have not been specified, the effects measured may be said to be the buoyancy of the tax system only. (An underlying factor which may be of special importance to the tax-revenue in a developing country is the rate of monetization in the economy through its direct influence on the tax base.) Dharam Ghai [4] uses the above mentioned arguments against calling such estimates elasticities of (government) income of the tax system as a whole.

This reservation becomes especially important when estimation and interpretation of such parameters enters into the picture. As long as the discussion is kept at a theoretical level, the distinction is perhaps not that important. However, in order to link empirical results directly to Johansen's basic concepts, I have nevertheless chosen to interpret my estimates as progressivity/regressivity parameters. As is pointed out by Ghai [4 ; p. 64] this may not at all be the case.

Now if we have :

$$(3) \quad \delta \ln T / \delta \ln GDP < 1 \quad \text{or} \quad (d \ln T / d \ln GDP < 1),$$

the system is said to be regressive with respect to income.

The same observations may be made with respect to the sub-systems T_D and T_{IND} .

III. Taxation and Economic Growth.

A progressive tax system will (cet.par.) increase government revenue faster than total income increases. This extra government revenue may be used for extra capital formation, or for other types of expenditure which may be said to be beneficial to economic growth^{and welfare} (for instance current expenditure on education and health). Now then, if the progressive tax system in itself does not decrease savings in the private sector (a usual assumption being that the 'extra' tax-income hits at potential household consumption expenditure instead of at savings), total savings and investments in the economy may increase and a progressive tax-system may thus foster economic growth. This assumption is not always justifiable as is pointed out in an article by Leff. [5] 8). (A discussion of the links between domestic savings and foreign aid is carried out in an article by Griffin and Enos [6]. The evidence assembled here indicates that domestic savings ^{perhaps} may decline as foreign aid increases. This is in a way a parallel to the taxation/domestic savings case discussed by Leff.)

8) The discussion in Leff's article [5; p. 620], does also include foreign capital inflow among those factors which may influence negatively domestic savings of a given country. Leff's article deals with Brazil - a developing country - and his discussion may thus very well be extended so as to include development aid. In a recent article by Griffin and Enos [6; p. 326], the authors conclude that "..., aid may have retarded development by leading to lower domestic savings, by disturbing the composition of investment and thereby raising the capital-output ratio, by frustrating the emergence of an indigenous entrepreneurial class, and by inhibiting institutional reforms."

There are of course other factors to be considered as well. Government savings and investment may take place in sectors where the 'pay off' may be difficult to measure, or where the yield is very low. Thus even if total savings and investments in the economy are increased, economic growth may not follow suit.

Skipping these arguments, let us make as if increased savings and investments in the economy as a whole are good things. Further, let it be assumed that a progressive taxsystem may bring about such an increase in overall savings and investments. Now then, in order to assess how the tax system behaves from the point of view of economic growth, it might then prove useful to obtain estimates of the progressivity-regressivity parameters of the system. Is the tax system really withdrawing an increasing share of income for government use ?

IV. Some Numerical Results and Tentative Conclusions
Concerning Progressivity - Regressivity Properties
of the East African Tax Systems.

Let us now look at the progressivity-regressivity properties (as described in equations (2) and (3) above) of the tax systems of the three East African countries as summarized in table 1.

Table 1. Progressivity - Regressivity Parameters Estimated.

	K e n y a		U g a n d a		T a n z a n i a	
	Regression Coefficient Estimates ^{x)}	Equation No.:	Regression Coefficient Estimates	Equation No.:	Regression Coefficient Estimates	Equation No.:
$d \ln T$ ----- $d \ln GDP$	1.2511 (0.1273)	(1 K)	1.5184 (0.1184)	(1 U)	1.3918 (0.0910)	(1 TA)
$d \ln T_D$ ----- $d \ln GDP$	0.6927 (0.2117)	(4 K)	1.0018 (0.3127)	(4 U)	1.1843 (0.2134)	(4 TA)
$d \ln T_{IND}$ ----- $d \ln GDP$	1.7374 (0.1255)	(10 K)	2.1208 (0.2102)	(10 U)	1.5551 (0.0464)	(10 TA)
$d \ln T_{IND}$ ----- $d \ln (GDP-T_D)$	1.6851 (0.1265)	(7 K)	2.1365 (0.1661)	(7 U)	1.5788 (0.0507)	(7 TA)

x) See Appendix A.

For simplicity reasons I am comparing the equation sets (1), (4) and (10) instead of (1), (4) and (7). I feel safe to do so as there is hardly any difference between the $d \ln T_{IND} / d \ln GDP$ and the $d \ln T_{IND} / d \ln (GDP - T_D)$ results.

Taking the standard derivations into account, table 1 may roughly be summarized as follows :

- a) Kenya: The tax system as a whole may just be progressive. The direct tax system seems to be 'significantly' regressive with respect to income, while the indirect tax system seems 'significantly' progressive - but probably not enough to 'outnumber' the regressive influence of the direct taxes.
- b) Uganda: The direct system of taxes seems 'neutral', while the indirect tax system is highly progressive with respect to income. The net effect of the two sub-components is to make the system as a whole progressive.⁹⁾
- c) Tanzania: The effect of the direct tax system seems indeterminate, while indirect taxes seems highly progressive - thus making the system as a whole 'significantly' progressive with respect to income.

9) Ghai's buoyancy parameter estimated for the Uganda tax system as a whole, $\sqrt{4}$; p. 64 $\sqrt{}$, (1.044 with a standard deviation of 0.054), is roughly of the same order of magnitude when standard deviations are taken into account. One factor which may account for my estimate probably being somewhat higher, is that Ghai's estimate covers the period 1948-63, while this paper covers the 1956-65 period. The "trend" of the Uganda tax system as a whole in recent years is positive - the elasticity being roughly 1.5, with a standard deviation of 0.1184.

A next step may be to test more stringently for differences in elasticities as between the three countries, as well as within countries. One observation which seems possible to make straight away, is that while the three indirect tax systems seem progressive, the outcome is not so sure when direct taxes are concerned. Perhaps differences in the rate of monetization may account for this variation?

As I have mentioned earlier in this paper, the tax-laws and -regulations have to a large extent been identical in the three countries over the period. Changes in these have more or less occurred at the same time. If elasticity-parameters are found to be significantly different between the three countries, this may point to differences in the tax payers' reaction to changes in income.¹⁰⁾ Such differences may, however, also be due to changes in other factors³⁾ influencing the taxpayers and thus the tax-revenue. I have not been able to look into such factors.

V. Government and Private Sector Demand Reactions.
Some Numerical Results.

Earlier (in footnote 7) I have introduced the notion of elastic demand and commented upon its similarity to the progressivity property.

10) Variations in the quality and coverage of income statistics may of course account for some of the differences. So may also variations in the level of economic development.

If private sector demand is elastic with respect to income, household savings relative to income will then decline. Absolute savings may decline as well.¹¹⁾

The same argumentation may be used when government consumption is concerned.

Thus it may be said to be beneficial to increased (government or household) savings (and finally to economic growth through investments) that consumer demand in the two sectors is inelastic with respect to income. By inelastic I mean sectoral income elasticities of demand less than unity.

In Table 2, I include estimates the relevant elasticity parameters for the three countries. Note that these elasticities are not partial derivatives from fully specified demand equations of the "classical" type - but that they have been derived from functions with one explanatory variable only.

11) Consider the following example involving one sector only. Income increases by 5 %, from 100 units to 105 units per year. Assume a savings rate of 20 % in the baseyear - i.e. 20 units. Assume further an income elasticity of demand of 1.1. The increase in consumption then is 4.4. Savings thus increase by 0.6 units. Savings in absolute terms may consequently still increase if income is elastic. It is important to note that the savings rate however, is (already) declining in this case. The rate of savings (S/GDP) may be expressed as $(1 - C/GDP)$. A declining savings rate is defined as follows : $d(S/GDP) / dGDP < 0$. Derivation of S/GDP with respect to GDP yields: $C(I-E) / GDP^2$, where E is the income elasticity of demand. If $E > 1$, we have $d(S/GDP) / dGDP < 0$. If the E is high enough, even savings in absolute terms may decline. An income elasticity of 1.3 (in this case) gives this result. To be precise, 1.25 suffices to wipe out any savings increase in absolute terms.

There are some constellations of government/private sector income elasticities of demand which may be beneficial to domestic savings and capital formation. Before commenting upon the estimates presented in table 2, let me briefly comment upon such "wanted" elasticity combinations.

Table 2. Aggregate Consumer Reactions in the Private and Government Sectors in Kenya, Uganda and Tanzania, 1956-65.

	K e n y a		U g a n d a		T a n z a n i a	
	Regression Coefficient Estimates	Equation No.: x)	Regression Coefficient Estimates	Equation No.:	Regression Coefficient Estimates	Equation No.:
$d \ln C_p$	0.9048 (0.0852)	(12 K)	0.8471 (0.0828)	(12 U)	1.1522 (0.0920)	(12 TA)
$d \ln C_g$	1.0609 (0.0715)	(15 K)	1.0080 (0.1846)	(15 U)	0.9424 (0.0873)	(15 TA)
$d \ln T$						

x) See Appendix A.

Table 3 below shows combinations of E_p and E_g (short for private and government sector income elasticities) where one or both are less than unity. Each of these five cases may yield increased savings in one or both sectors.

Table 3. Private Sector and Government Sector Income Elasticities' Combinations.

$E_g \backslash E_p$	< 1	1	> 1
< 1	I	II	III
1	IV		
> 1	V		

In footnote 11) it is shown that income elasticities above unity at least are associated with declining average savingsrates (S/GDP). It follows that elasticities smaller than unity are associated with $d(S/GDP) / dGDP > 0$. Case I then deals with increased average savingsrates in the two sectors. This combination of elasticities assures that increased income will yield increased savingsrates in the two sectors.

Case II yields an increased savingsrate in the government sector, while the savings effect (thus measured) in the private sector may be termed "neutral".

Case III indicates that it is through the government sector that increased savings possibilities exist, while the private

sector is likely to consume extra income. The net effect on savings of increased income distributed on the two sectors depends on the distribution of income as between the two sectors.

Case IV is the opposite to case II, the government sector has what we may call a savings "neutral" consumption pattern, while extra savings possibilities seem to exist in the private sector only.

Case V indicates that extra savings seem most likely to be generated in the private sector, while the government sector has a declining savings rate. The net effect of extra income distributed on the two sectors is hard to assess. See case III.

For obvious reasons I have not discussed the remaining four possible E_p and E_g combinations.

Returning to the estimates of E_g and E_p in table 2, taking into account the standard derivations of the coefficients, it does not seem possible to group the elasticity pairs of each country into the five typologies I have outlined above - as none of the elasticity estimates seem significantly different from unity.

Perhaps the inclusion of post 1965 data might yield results lending themselves more easily to this type of analysis ?

VI. Concluding Remarks.

The tax systems of Kenya, Uganda, and Tanzania as a whole all seem progressive with respect to income during the period under review. The difference between the three systems as a whole on this score is not striking.

It is interesting to note, however, that while Kenya's system of direct taxation appears to be highly regressive, the two other taxsystems seem "neutral" at this point.

All three systems seem to yield progressive indirect taxation effects.

When government and private consumption is concerned, the tendencies observed through income elasticities of demand seem to display a pari passu effect.

REFERENCES :

- [1] See for instance J. Faaland and H.E. Dahl:
The Economy of Kenya in: Trade Prospects and
Capital Needs of Developing Nations, pp. 104-148.
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New York 1968. Similar studies were also made
for Tanzania (op.cit. pp. 187-230) and Uganda
(op.cit. pp. 231-274).
- [2] See Leif Johansen: Public Economics, North
Holland Publishing Co., 1966, pp. 211-214.
- [3] See Victor P. Diejomaoh: Tax Mobilization and
Government Development Financing in Kenya.
Staff Paper No. 45, Institute for Development
Studies, University College, Nairobi 1969.
- [4] Dharam P. Ghai: Taxation for Development. A Case
Study of Uganda. East African Publishing House 1966.
- [5] See N.H. Leff: Marginal Savings Rates in the
Development Process: The Brazilian Experience.
Economic Journal, September 1968, pp. 610-623,
especially p. 620.
- [6] K.B. Griffin and J.L. Enos: Foreign Assistance:
Objectives and Consequences. Economic Development
and Cultural Change, April 1970, pp. 313-327.

APPENDIX A. Logarithmic Regressions Run.^{x)}1. Tax Equations.

$$(I K) \quad \ln T = -4.7315 + 1.2511 \ln GDP$$

$$(0.1273)$$

$$R^2 = 0.92 \quad DW = 0.85 \quad F = 96.64 \quad \bar{t} = 9.83$$

$$(I U) \quad \ln T = -7.6677 + 1.5184 \ln GDP$$

$$(0.1184)$$

$$R^2 = 0.96 \quad DW = 0.74 \quad F = 164.39 \quad \bar{t} = 12.82$$

$$(I TA) \quad \ln T = -6.4884 + 1.3918 \ln GDP$$

$$(0.0910)$$

$$R^2 = 0.96 \quad DW = 0.74 \quad F = 233.79 \quad \bar{t} = 15.29$$

$$(2 K) \quad \ln T = 10.1882 + 0.2148 t$$

$$(0.0596)$$

$$R^2 = 0.62 \quad DW = 0.45 \quad F = 12.97 \quad \bar{t} = 3.60$$

$$(2 U) \quad \ln T = 9.7183 + 0.2513 t$$

$$(0.0930)$$

$$R^2 = 0.48 \quad DW = 0.49 \quad F = 7.31 \quad \bar{t} = 2.70$$

$$(2 TA) \quad \ln T = 9.4600 + 0.3536 t$$

$$(0.0764)$$

$$R^2 = 0.74 \quad DW = 0.45 \quad F = 21.71 \quad \bar{t} = 4.66$$

$$(3 K) \quad \ln T = 10.2853 + 1.7206 \ln GDP - 0.1096 t$$

$$(0.2393) \quad (0.0502)$$

$$R^2 = 0.96 \quad DW = 1.69 \quad F = 73.43 \quad \bar{t}_{GDP} = 7.19$$

$$\bar{t}_t = -2.18$$

x) \bar{t} is the Student statistic. t -bar has been chosen to represent this statistic as the ordinary notation already has been used for the time variable. F and DW are the Fisher and Durbin-Watson statistics.

$$(3 U) \quad \ln T = -9.2383 + 1.6583 \ln GDP - 0.0431 t$$

$$\qquad\qquad\qquad (0.1816) \qquad\qquad\qquad (0.0425)$$

$$R^2 = 0.96 \quad DW = 2.27 \quad F = 83.01 \quad \bar{t}_{GDP} = 9.13$$

$$\qquad\qquad\qquad \qquad\qquad\qquad\qquad\qquad\qquad \bar{t}_t = -1.01$$

$$(3 TA) \quad \ln T = -10.8681 + 1.7774 \ln GDP - 0.1237 t$$

$$\qquad\qquad\qquad (0.1856) \qquad\qquad\qquad (0.0546)$$

$$R^2 = 0.98 \quad DW = 1.54 \quad F = 179.81 \quad \bar{t}_{GDP} = 9.58$$

$$\qquad\qquad\qquad \qquad\qquad\qquad\qquad\qquad\qquad \bar{t}_t = -2.27$$

$$(4 K) \quad \ln T_D = 1.2925 + 0.6927 \ln GDP$$

$$\qquad\qquad\qquad (0.2117)$$

$$R^2 = 0.58 \quad DW = 0.59 \quad F = 10.71 \quad \bar{t} = 3.27$$

$$(4 U) \quad \ln T_D = -2.2787 + 1.0018 \ln GDP$$

$$\qquad\qquad\qquad (0.3127)$$

$$R^2 = 0.56 \quad DW = 0.79 \quad F = 10.26 \quad \bar{t} = 3.20$$

$$(4 TA) \quad \ln T_D = -4.8649 + 1.1843 \ln GDP$$

$$\qquad\qquad\qquad (0.2134)$$

$$R^2 = 0.79 \quad DW = 0.75 \quad F = 30.80 \quad \bar{t} = 5.55$$

$$(5 K) \quad \ln T_D = 9.5885 + 0.0950 t$$

$$\qquad\qquad\qquad (0.0590)$$

$$R^2 = 0.24 \quad DW = 0.50 \quad F = 2.59 \quad \bar{t} = 1.61$$

$$(5 U) \quad \ln T_D = 9.3190 + 0.0819 t$$

$$\qquad\qquad\qquad (0.1067)$$

$$R^2 = 0.07 \quad DW = 0.61 \quad F = 0.59 \quad \bar{t} = 0.77$$

$$(5 TA) \quad \ln T_D = 8.7506 + 0.2727 t$$

$$\qquad\qquad\qquad (0.0991)$$

$$R^2 = 0.49 \quad DW = 0.54 \quad F = 7.57 \quad \bar{t} = 2.75$$

$$(6 K) \quad \ln T_D = -8.0913 + 1.4858 \ln GDP - 0.1852 t$$

$$(0.3937) \quad (0.0826)$$

$$R^2 = 0.76 \quad DW = 1.05 \quad F = 10.56 \quad \bar{t}_{GDP} = 3.77$$

$$\bar{t}_t = -2.24$$

$$(6 U) \quad \ln T_D = -10.5314 + 1.7364 \ln GDP - 0.2264 t$$

$$(0.3602) \quad (0.0843)$$

$$R^2 = 0.76 \quad DW = 1.45 \quad F = 12.73 \quad \bar{t}_{GDP} = 4.82$$

$$\bar{t}_t = -2.69$$

$$(6 TA) \quad \ln T_D = -15.3335 + 2.1058 \ln GDP - 0.2956 t$$

$$(0.4287) \quad (0.1261)$$

$$R^2 = 0.88 \quad DW = 1.35 \quad F = 26.79 \quad \bar{t}_{GDP} = 4.91$$

$$\bar{t}_t = -2.34$$

$$(7 K) \quad \ln T_{IND} = -10.4860 + 1.6851 \ln (GDP - T_D)$$

$$(0.1265)$$

$$R^2 = 0.96 \quad DW = 1.46 \quad F = 177.34 \quad \bar{t} = 13.32$$

$$(7 U) \quad \ln T_{IND} = -15.4135 + 2.1365 \ln (GDP - T_D)$$

$$(0.1661)$$

$$R^2 = 0.96 \quad DW = 1.74 \quad F = 165.47 \quad \bar{t} = 12.86$$

$$(7 TA) \quad \ln T_{IND} = -9.1639 + 1.5788 \ln (GDP - T_D)$$

$$(0.0507)$$

$$R^2 = 0.992 \quad DW = 2.13 \quad F = 969.89 \quad \bar{t} = 31.14$$

$$(8 K) \quad \ln T_{IND} = 9.4105 + 0.3192 t$$

$$(0.0676)$$

$$R^2 = 0.74 \quad DW = 0.56 \quad F = 22.29 \quad \bar{t} = 4.72$$

$$(8 U) \quad \ln T_{IND} = 8.6605 + 0.4525 t$$

$$(0.0871)$$

$$R^2 = 0.77 \quad DW = 0.52 \quad F = 26.98 \quad \bar{t} = 5.19$$

- (8 TA) $\ln T_{IND} = 8.758 + 0.4225 t$
(0.0636)
 $R^2 = 0.85$ $DW = 0.53$ $F = 44.14$ $\bar{t} = 6.64$
- (9 K) $\ln T_{IND} = -14.6769 + 2.0421 \ln (GDP - T_D) - 0.0843 t$
(0.3006) (0.0649)
 $R^2 = 0.96$ $DW = 1.92$ $F = 97.12$ $\bar{t}_{GDP-T_D} = 6.79$
 $\bar{t}_t = -1.30$
- (9 U) $\ln T_{IND} = -10.1962 + 1.6683 \ln (GDP - T_D)$
(0.1984)
 $+ 0.1376 t$
(0.0467)
 $R^2 = 0.98$ $DW = 2.85$ $F = 186.37$ $\bar{t}_{GDP-T_D} = 8.41$
 $\bar{t}_t = 2.94$
- (9 TA) $\ln T_{IND} = -9.1639 + 1.5788 \ln (GDP - T_D)$
(0.0507)
 $R^2 = 0.996$ $DW = 2.13$ $F = 969.89$ $\bar{t} = 31.14$
- (10 K) $\ln T_{IND} = -11.2760 + 1.7374 \ln GDP$
(0.1255)
 $R^2 = 0.96$ $DW = 1.57$ $F = 191.67$ $\bar{t} = 13.84$
- (10 U) $\ln T_{IND} = -15.4695 + 2.1208 \ln GDP$
(0.2102)
 $R^2 = 0.92$ $DW = 1.06$ $F = 101.80$ $\bar{t} = 10.09$
- (10 TA) $\ln T_{IND} = -8.9959 + 1.5551 \ln GDP$
(0.0464)
 $R^2 = 0.992$ $DW = 2.46$ $F = x)$ $\bar{t} = 33.51$

x) Not printed by the IBM 360/50 Computer programme. Reason: F statistic "larger" than space allocated in the standard programme.

$$(11 K) \quad \ln T_{IND} = -13.4975 + 1.9251 \ln GDP - 0.0438 t$$

$$\qquad\qquad\qquad (0.2955) \qquad\qquad\qquad (0.0620)$$

$$R^2 = 0.96 \quad DW = 1.74 \quad F = 90.09 \quad \bar{t}_{GDP} = 6.51$$

$$\qquad\qquad\qquad \qquad\qquad\qquad\qquad\qquad\qquad \bar{t}_t = -0.71$$

$$(11 U) \quad \ln T_{IND} = -8.9381 + 1.5395 \ln GDP + 0.1792 t$$

$$\qquad\qquad\qquad (0.1879) \qquad\qquad\qquad (0.0439)$$

$$R^2 = 0.98 \quad DW = 2.39 \quad F = 158.64 \quad \bar{t}_{GDP} = 8.20$$

$$\qquad\qquad\qquad \qquad\qquad\qquad\qquad\qquad\qquad \bar{t}_t = 4.08$$

$$(11 TA) \quad \ln T_{IND} = -8.3694 + 1.5000 \ln GDP + 0.0177 t$$

$$\qquad\qquad\qquad (0.1224) \qquad\qquad\qquad (0.0360)$$

$$R^2 = 0.992 \quad DW = 2.40 \quad F = 508.44 \quad \bar{t}_{GDP} = 12.25$$

$$\qquad\qquad\qquad \qquad\qquad\qquad\qquad\qquad\qquad \bar{t}_t = 0.49$$

2. Private Consumption Equations.

$$(12 K) \quad \ln C_p = 0.7943 + 0.9048 \ln (GDP - T_D)$$

$$\qquad\qquad\qquad (0.0852)$$

$$R^2 = 0.94 \quad DW = 2.16 \quad F = 112.85 \quad \bar{t} = 10.62$$

$$(12 U) \quad \ln C_p = 1.3666 + 0.8471 \ln (GDP - T_D)$$

$$\qquad\qquad\qquad (0.0828)$$

$$R^2 = 0.92 \quad DW = 1.47 \quad F = 104.60 \quad \bar{t} = 10.23$$

$$(12 TA) \quad \ln C_p = -2.2231 + 1.1522 \ln (GDP - T_D)$$

$$\qquad\qquad\qquad (0.0920)$$

$$R^2 = 0.96 \quad DW = 2.21 \quad F = 136.93 \quad \bar{t} = 12.53$$

$$(13 K) \quad \ln C_p = 11.4776 + 0.1712 t$$

$$\qquad\qquad\qquad (0.0381)$$

$$R^2 = 0.72 \quad DW = 1.00 \quad F = 20.23 \quad \bar{t} = 4.50$$

$$(13 U) \quad \ln C_p = 10.9732 + 0.1390 t$$

$$(0.0542)$$

$$R^2 = 0.45 \quad DW = 0.68 \quad F = 6.57 \quad \bar{t} = 2.56$$

$$(13 TA) \quad \ln C_p = 10.8573 + 0.3211 t$$

$$(0.0417)$$

$$R^2 = 0.88 \quad DW = 0.81 \quad F = 59.19 \quad \bar{t} = 7.69$$

$$(14 K) \quad \ln C_p = -1.5113 + 1.1012 \ln (GDP - T_D) - 0.0464 t$$

$$(0.0454)$$

$$R^2 = 0.94 \quad DW = 2.39 \quad F = 57.25 \quad \bar{t}_{GDP-T_D} = 5.24$$

$$\bar{t}_t = -1.02$$

$$(14 U) \quad \ln C_p = -0.8491 + 1.0460 \ln (GDP - T_D)$$

$$(0.1146)$$

$$-0.0584 t$$

$$(0.0270)$$

$$R^2 = 0.96 \quad DW = 1.88 \quad F = 78.77 \quad \bar{t}_{GDP-T_D} = 9.13$$

$$\bar{t}_t = -2.17$$

$$(14 TA) \quad \ln C_p = 0.7401 + 0.8900 \ln (GDP - T_D)$$

$$(0.2420)$$

$$+ 0.0818 t$$

$$(0.0701)$$

$$R^2 = 0.96 \quad DW = 2.17 \quad F = 82.69 \quad \bar{t}_{GDP-T_D} = 3.68$$

$$\bar{t}_t = 1.17$$

3. Government Consumption Equations.

$$(15 K) \quad \ln C_g = -0.6288 + 1.0609 \ln T$$

$$(0.0715)$$

$$R^2 = 0.96 \quad DW = 2.38 \quad F = 219.89 \quad \bar{t} = 14.83$$

- (15 U) $\ln C_g = -0.2337 + 1.0080 \ln T$
(0.1846)
 $R^2 = 0.79$ $DW = 0.63$ $F = 29.80$ $\bar{t} = 5.46$
- (15 TA) $\ln C_g = 0.5917 + 0.9424 \ln T$
(0.0873)
 $R^2 = 0.94$ $DW = 0.70$ $F = 116.47$ $\bar{t} = 10.79$
- (16 K) $\ln C_g = 10.1546 + 0.2446 t$
(0.0583)
 $R^2 = 0.69$ $DW = 0.66$ $F = 17.59$ $\bar{t} = 4.19$
- (16 U) $\ln C_g = 9.3677 + 0.3822 t$
(0.0553)
 $R^2 = 0.86$ $DW = 0.48$ $F = 47.82$ $\bar{t} = 6.92$
- (16 TA) $\ln C_g = 9.4465 + 0.3753 t$
(0.0545)
 $R^2 = 0.86$ $DW = 0.58$ $F = 47.34$ $\bar{t} = 6.88$
- (17 K) $\ln C_g = 0.6275 + 0.9351 \ln T + 0.0437 t$
(0.1081) (0.0295)
 $R^2 = 0.98$ $DW = 2.98$ $F = 127.39$ $\bar{t}_T = 8.65$
 $\bar{t}_t = 1.48$
- (17 U) $\ln C_g = 4.1238 + 0.5396 \ln T + 0.2466 t$
(0.0943) (0.0343)
 $R^2 = 0.98$ $DW = 1.71$ $F = 135.12$ $\bar{t}_T = 7.19$
 $\bar{t}_t = 5.72$

$$(17 \text{ TA}) \quad \ln C_g = 3.3987 + 0.6393 \ln T + 0.1477 t$$

(0.1200) (0.0500)

$$R^2 = 0.98 \quad DW = 1.11 \quad F = 118.88 \quad \bar{t}_T = 2.95$$

$$\bar{t}_t = 5.33$$

APPENDIX B. Data Used.1. Kenyan Direct and Indirect Taxes and Some Selected National Accounts Aggregates, 1956-65.

The most important direct taxes in Kenya are income taxes and export duties to the Central Government. Note that export duties have been treated as direct taxes. The reason is that Kenyan exporters have to take world market prices as given. The graduated personal tax, which up to 1964 was paid to the Central Government and from then on to the Local Government, is also important. See Table 1.

The most important indirect taxes are import and excise duties, business and trading license fees, stamp duties and transfer duties - all payable to the Central Government - and various "taxes/fees" payable to the Local Government. It should be noted that a large part of the fees collected by the Local Government is school fees. These are not proper taxes but payments for purchases of school services and ought to have been excluded. However, as data do not permit us to separate school fees from other fees and licences, school fees have been included as indirect taxes. For indirect taxes, see Table 2.

Data on taxes and subsidies are generally available only on a fiscal year basis. We have estimated calendar year figures by averaging and adding adjoining fiscal year figures. This has inevitably tended to even out fluctuations present in the original fiscal year time series.

The most important information on subsidies is available on a fiscal year basis in the Kenya Statistical Abstracts. Again we have converted fiscal year figures to calendar figures. Subsidies not detailed in the Statistical Abstracts were included in our series by rough estimates.

Finally some national accounts aggregates are given in Table 3.

Table 1. Kenyan Direct Taxes 1956-65.

	£ '000.										
	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	
<u>Central Govt.:</u>											
Income Tax											
GPT and Other	11,978	13,325	13,757	13,093	12,120	11,944	12,248	12,696	13,594	14,933	
Export Duties	927	78	-	-	-	-	5	90	539	854	
Total Dir. Taxes: Central Government	12,905	13,303	13,757	13,093	12,120	11,944	12,253	13,059	14,133	15,787	
<u>Local Govts:</u>											
General Government				1,973	2,148	1,941		2,481	n.a.	4,683 ¹⁾	
Council Assigned Rev. Other	n.a.	n.a.	n.a.	519	531	492		306			
				227	266	263	n.a.	0.632		2,241 ²⁾	
				210	138	391		n.a.		347 ³⁾	
				-	-	-		33			
Total Dir. Taxes: Local Government	2,692 ⁴⁾	2,771 ⁴⁾	2,850 ⁴⁾	2,929 ⁵⁾	3,083 ⁵⁾	3,087 ⁵⁾	3,270 ⁶⁾	3,452 ⁷⁾	6,317 ⁸⁾	7,279 ⁹⁾	
Total Dir. Taxes	15,597	16,074	16,607	16,022	15,203	15,031	15,523	16,511	20,450	23,058	

Table 2. Kenyan Indirect Taxes 1956-65.

£ '000

	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
<u>Central Govt:</u>										
Import Duties	8,923	8,289	8,828	10,101	10,330	10,856	12,734	13,726	14,793	16,100
Excise Duties	2,723	2,791	3,051	3,203	3,413	3,728	4,654	5,732	6,131	6,292
Other ¹⁾	2,603	2,762	2,655	2,583	2,793	3,066	3,223	3,448	3,626	3,781
Total Ind. Taxes, Central Government	14,249	13,842	14,534	15,887	16,536	17,650	20,611	22,906	24,550	26,173
<u>Local Govts:</u>										
Licenses and Fees ²⁾	n.a.	n.a.	n.a.	611 ⁶⁾	730 ⁶⁾	784 ⁶⁾	n.a.	1,926 ⁷⁾	n.a.	4,064 ⁸⁾
Cesses	n.a.	n.a.	n.a.	330 ⁶⁾	279 ⁶⁾	279 ⁶⁾	n.a.	353 ⁷⁾	n.a.	415 ⁸⁾
Total Ind. Taxes, Local Governments	761 ³⁾	821 ³⁾	881 ³⁾	941	1,009	1,063	1,671 ⁴⁾	2,279	3,929 ⁵⁾	4,479
Total Ind. Taxes	15,010	14,663	15,415	16,828	17,545	18,713	22,282	25,185	28,479	30,652

Notes for Table 1.

- 1) Graduated personal tax.
- 2) Site and other rates.
- 3) Estimate, based on information supplied by Mr. A.A. Shah.
- 4) Estimate, assuming that the 1959-61 trend also is present in the 1956-58 figures.
- 5) See D.A. Lury and A.A. Shah: Local Government in Kenya. Income and Expenditure 1959-61. The East African Economic Review, Vol. 2, pp. 69-86.
- 6) A linear growth between 1961 and 1963 assumed.
- 7) Figures obtained from Mr. Parmeet Singh - The Statistics Division, the Ministry of Economic Planning and Development.
- 8) The 1963 increase is assumed to be larger than the 1965 one. Arbitrarily 75 per cent of the increase between 1963 and 1965 is assumed to occur in 1964.
- 9) Figures obtained from Mr. A.A. Shah.

Notes for Table 2.

- 1) Business and trading licenses, stamp duties and transfer duties etc.
- 2) School fees included.
- 3) The 1959-61 trend is assumed to be present also in the 1956-58 figures.
- 4) The 1964 figure is obtained assuming a linear growth between 1961 and 1963.
- 5) The increase in 1964 is known to be much larger than in 1965. We have thus assumed that 75 per cent of the increase between 1963-65 is assumed to occur in 1964.
- 6) Figures obtained from the Lury/Shah article.
- 7) Figures obtained from Mr. P. Singh.
- 8) Figures obtained from Mr. A.A. Shah.

Table 3. Kenyan Selected National Accounts Aggregates 1956-65.

K.
£ '000.

Year	Monetary GDP at Factor Cost ⁽⁶⁾ (1)	Indirect Taxes (2)	Subsidies (3)	Monetary GDP at Market Prices ⁽⁴⁾ (4)	Monetary Private Dispos- able Income ⁽⁵⁾ (5)	Private (Monetary) Consumption (6)	Government Consumption (7)
1956	145,150	15,010	0,307 ¹⁾	159,853	144,256	104,066	29,420
1957	154,220	14,663	0,294 ¹⁾	168,589	152,515	115,174	29,833
1958	155,500	15,415	0,263 ¹⁾	170,652	154,045	104,049	34,159
1959	161,760	16,828	0,426 ³⁾	178,162	162,140	109,153	30,904
1960	175,320	17,545	0,426 ³⁾	192,439	177,236	126,679	33,397
1961	176,810	18,713	0,426 ³⁾	195,097	180,066	128,224	35,831
1962	180,870	22,282	0,760 ¹⁾	202,392	186,869	129,798	39,366
1963	192,430	25,185	0,585 ¹⁾	217,030	200,519	137,186	42,066
1964	212,790	28,479	0,345 ¹⁾	240,924	220,474	144,855	50,214
1965	222,290	30,652	0,240 ⁴⁾	252,702	229,644	163,475	55,048

1) Average fiscal year figures taken from the Kenya Statistical Abstracts.

2) Column (1) plus column (2) less column (3).

3) The arithmetic mean of the 1956-58 and the 1962-64 subsidies.

4) The percentage decrease from 1963 to 1964 is assumed to continue.

5) Column (4) less direct taxes.

6) National accounts figures have been revised later on.

2. Ugandan Direct and Indirect Taxes and Some Selected National Accounts Aggregates, 1956-65.

The most important direct taxes in Uganda are export taxes (coffee and cotton) and various income taxes. Export taxes have been treated as direct taxes. A breakdown of Central Government direct taxes is given in Table 4.

The most important indirect taxes are import and excise duties, payable to the Central Government - and various "taxes/fees" payable to the Local Government, see Table 5. Fees are usually not distinguishable from "usual" indirect taxes.

Data on subsidies are taken from the Government Accounts 1959-60 to 1964-65. The most important part of the Uganda subsidies has been the government grants to the Cotton and Coffee Price Assistance Funds. In the Local Government sector subsidies through deficits on Local government housing schemes appear to be important.

Data on Central Government taxes and subsidies are available only on a fiscal year basis. We have estimated calendar year figures from fiscal year figures.

Finally, some national accounts aggregates are given in Table 6.

Table 4. Ugandan Direct Taxes 1956-65.

£ '000

	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
<u>Central Government</u> ¹⁾										
Income Taxes	3,160	3,077	3,231	3,533	3,543	3,566	3,669	3,724	3,998	4,407 ²⁾
Export Taxes	6,166	6,256	5,661	4,986	3,302	2,175	2,542	5,576	8,764	7,118 ²⁾
Other	590	643	699	674	647	599	372	551	1,125	1,118 ²⁾
Total direct taxes: Central Government	9,916	9,976	9,591	9,193	7,492	6,340	6,583	9,851	13,887	12,643 ²⁾
Total direct taxes: ³⁾ Local Government	2,500 ⁴⁾	2,607	2,811	3,340	2,837	2,766	3,269	4,197	4,682	4,750 ⁴⁾
Total direct taxes	12,416	12,583	12,402	12,533	10,329	9,106	9,852	14,048	18,569	17,393

1) Source: Uganda Statistical Abstracts. The totals differ from what is given in the Government Accounts.

2) Including half of the approved estimates for 1965-66.

3) These figures include both Urban Authorities as well as Local Authorities. The former accounts for less than 1 per cent of the total.

Source: Government Accounts of Uganda.

4) Estimates.

Table 5. Ugandan Indirect Taxes 1956-65.

£ '000.

	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
<u>Central Government</u> ¹⁾										
Customs Duties	4,221	4,177	4,693	5,340	5,913	6,307	7,706	8,994	10,002	11,065 ³⁾
Excise Duties	2,055	2,523	2,473	2,285	2,424	2,675	2,959	3,448	4,374	5,753 ³⁾
Other ²⁾	418	480	613	709	647	654	784	881	1,152	1,248 ³⁾
Total	6,694	7,180	7,779	8,334	8,984	9,636	11,449	13,323	15,528	18,066 ³⁾
<u>Local and Urban Authorities</u>										
Urban Authorities ⁴⁾	n.a.	n.a.	n.a.	n.a.	395	361	405	505	600	650 ⁵⁾
Local Authorities	n.a.	n.a.	n.a.	n.a.	522	479	461	462	576	625 ⁵⁾
Total	600 ⁵⁾	650 ⁵⁾	700 ⁵⁾	750 ⁵⁾	917	840	866	967	1,176	1,275 ⁵⁾
Total Indirect Taxes	7,294	7,830	8,479	9,084	9,901	10,476	12,315	14,290	16,704	19,341

1) This specification of Central Government tax income is given in the Statistical Abstract.

2) Mainly licences and fees, but not available on a completely, comparable year-to-year basis.

3) Including half of the approved estimates for 1965-66.

4) From the second half of 1962, the townships of Kampala, Jinja, Masaka and Mbale have had separate accounts. These townships account for the main part of the total Urban Authorities' indirect taxincome.

5) Estimates.

Table 6. Ugandan Selected National Accounts Aggregates 1956-65.

£ '000

Year	Monetary GDP at Factor Cost (1)	Indirect Taxes (2)	Subsidies (3)	Monetary GDP at Market Prices (4)	Monetary Private Disposable Income (5)	Private (Monetary) Consumption (6)	Government Consumption (7)
1956	102,778	7,294	8,000 ²⁾	102,072	89,656	62,323	13,466
1957	109,375	7,781	8,500 ²⁾	108,656	96,073	64,893	15,090
1958	106,347	8,430	9,000 ²⁾	105,770	93,368	59,672	17,281
1959	107,746	8,889	9,500 ²⁾	107,135	94,602	64,213	17,451
1960	110,815	10,396	9,310	111,901	101,572	66,847	18,877
1961	111,170	10,981	7,533	114,618	105,512	71,481	20,715
1962	107,928	12,451	6,324	114,055	104,203	68,571	23,721
1963	128,597	14,947	6,678	136,866	122,818	80,109	26,705
1964	140,807	19,807	6,076	154,519	135,950	86,511	30,040
1965	150,820 ¹⁾	21,276 ²⁾	5,390 ²⁾	166,706	149,313	97,240	34,035

1) Provisional.

2) Est.

3. Tanzanian Direct and Indirect Taxes and Selected National Accounts Aggregates, 1956-65^x.

The most important direct taxes in Tanzania are the company and personal income taxes and export duties to the Central Government, and various taxes levied by Local Government. Note that export duties have been treated as direct taxes.

The most important indirect taxes are import and excise duties, payable to the Central Government - and various "taxes/fees" payable to the Local Government, see Table 7. Note that fees are usually not distinguishable from the "usual" indirect taxes. In Table 8 we give separate series for major items of Central Government indirect taxes as derived from budget sources. In the Tanzania Statistical Abstracts and in the Background to the Budget publications we also find estimates of total government indirect tax receipts. This series is given in the last line of the table.

The most important data on subsidies are published in the Tanzanian Statistical Abstracts.

Data on Central Government taxes and subsidies are available only on a fiscal year basis. Calendar year figures have been estimated from fiscal year figures.

Finally some national accounts aggregates are given in Table 9.

x) Before the union with Zanzibar in 1964 - Tanganyika. The figures presented here cover mainland Tanzania only.

Table 7. Tanzanian Direct Taxes 1956-65.

£ '000.

	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
<u>Central Government</u>										
Income Tax:										
Company Tax	4,287	4,174	3,904	3,653	4,135	4,611	5,031	5,675	6,509	n.a. ¹⁾
Personal Tax	1,350	1,288	1,360	1,311	1,314	1,282	1,044	925	1,038	n.a. ¹⁾
Other ²⁾	322	362	454	513	399	212	53	32	88	n.a. ¹⁾
Export Duties	26	24	25	35	54	58	352	778	2,164	n.a. ¹⁾
Total Dir. Taxes: Central Government	5,985	5,848	5,743	5,512	5,902	6,163	6,480	7,410	9,799 ⁴⁾	12,300 ⁵⁾
<u>Local Governments:</u> ⁶⁾										
Town Councils	131	169	203	213	231	243	195	246	275 ⁷⁾	325 ⁷⁾
District Councils	1,443	1,635	1,755	1,983	2,094	2,438	1,973	2,067	4,031 ⁸⁾	4,775 ⁸⁾
Dar es Salaam City Council	159	154	142	130	125	151	153	250	256	271
Total Dir. Taxes: Local Government	1,733	1,958	2,100	2,326	2,450	2,832	2,321	2,563	4,562	5,371
Total Dir. Taxes	7,718	7,806	7,843	7,838	8,352	8,995	8,801	9,973	14,361	17,671

Table 8. Tanzanian Indirect Taxes¹⁾²⁾ 1956-65.

£' 000.

	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
<u>Central Government:</u>										
Import Duties	5,263	5,156	6,001	7,232	7,734	7,881	8,696	9,868	11,059	n.a.
Excise Duties	1,716	1,959	2,077	2,263	2,455	2,492	2,981	3,658	4,122	n.a.
Vehicle Licences	366	631	875	705	486	478	538	563	725	n.a.
Other	641	694	653	630	675	614	534	690	864	n.a.
Total Central Government Indirect Taxes	7,986	8,440	9,606	10,830	11,350	11,465	12,749	14,779	16,770	n.a.
Total Indirect Taxes, Social Account Concepts	7,760	8,771	9,206	10,775	11,178	11,841	14,350	16,800	19,000	20,700 ³⁾

Notes for Table 7.

- 1) Details not available. See note 5 below.
- 2) Such as estate duties, education fees and municipal taxes etc.
- 3) While the accounts of the various Local Governments are on a calendar year basis, those of the Central Government are originally on a fiscal year basis.
- 4) Based on the 1963/64 accounts and the 1964/65 approved estimates.
- 5) Based on the 1964/65 and 1965/66 estimates, but reduced as suggested in The Background to the Budget.
- 6) This section of the table gives a breakdown of direct local taxes by tax authority.
- 7) Provisional.
- 8) Estimates.

Notes for Table 8.

- 1) Source: Various Statistical Abstracts and Background to the Budget publications.
- 2) Fiscal year data have been converted to calendar year figures.
- 3) Provisional.

Table 9. Tanzanian Selected National Accounts Aggregates, 1956-65.

£ '000.

Year	Monetary GDP at Factor Cost (1)	Indirect Taxes (2)	Subsidies (3)	Monetary GDP at Market Prices (4)	Monetary Private Disposable Income ²⁾ (5)	Private (Monetary) Consumption (6)	Government Consumption (7)
1956	97,107	7,760	0,230	104,637	96,919	56,582	14,871
1957	101,027	8,771	0,201	109,597	101,791	68,139	16,290
1958	106,466	9,206	0,217	115,455	107,612	67,253	17,356
1959	115,473	10,775	0,270	125,978	118,140	76,143	18,215
1960	122,703	11,178	0,282	133,599	125,247	74,040	20,171
1961	126,244	11,841	0,249	137,836	128,841	87,711	24,000
1962	134,839	14,350	0,270	148,919	140,118	100,469	26,700
1963	150,564	16,800	0,300	167,064	157,091	105,908	27,800
1964	169,602	19,000	0,200	188,402	174,041	113,317	31,700
1965	171,549	20,700 ¹⁾	0,200 ¹⁾	192,049	174,378	117,554	35,200

1) Provisional

2) Column (4) less direct taxes.