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TOWARDS AN INCOME ELASTIC TAX STRUCTURE IN UGANDA.

Introduction: This paper represents the culmination of my research on the income elasticity of Uganda tax structure. In previous papers I have attempted to study the growth of tax revenue in Uganda in the post-war period and the structure and income elasticity of the current tax system[1]. It might be useful, by way of introduction to the present study, to summarize some of the relevant findings of our research on the income elasticity of Uganda tax system. Perhaps the most important finding of our researches is the demonstration that if the Uganda economy follows a growth path charted in her Development Plans, the proportion of tax revenue to Gross Domestic Product will tend to fall over time i.e. the existing tax structure is income inelastic. The main reason for this is that the two most important Central Government taxes - import and export duties -, accounting for anything between 60 to 75% of the total tax revenue, are likely to be income inelastic; and the same is true of excise taxes. Corporate and individual income tax are likely to be buoyant, but are unlikely to affect significantly the income elasticity of the tax system as a whole owing to their relatively small importance in the present tax structure. Our conclusions, if valid, pose a serious dilemma for the public authorities. The Development Plans of all the East African Countries assume an increasing role of the public sector in the three economies; but if their tax structure are inflexible, the task of raising additional resources for the public Sector will become exceedingly difficult.

One way out of the impasse is to rely on continuous changes in tax rates and tax sources to raise additional revenue to finance increasing public expenditure. This has been the practice in the last four to five years and will no doubt continue in the future. But for a variety of reasons outlined in an earlier paper,[2] this method of raising additional revenue suffers from some serious defects. It would be preferable, if at all possible, to have a built-in flexibility in the tax structure, so that as incomes rise, revenue will increase by a greater proportion, thus facilitating an increasing role for the ublic Sector in the economy. The central concern of this paper, and indeed of my researches over the past year, is to put forward proposals for enhancing the income elasticity of the tax structure in East Africa. Our proposals will be made with specific reference to Uganda, but since the tax structure of the three East African Countries is basically similar, our proposals have a relevance for all the three countries. One other point needs to be mad our proposals must satisfy the test of administrative fe bility and be not unacceptable on other economic ground such as their

1. (a) "Income elasticity as a tax criterion in developing countries" EDRP 25.
   (b) "Growth and structure of Central Government tax revenue in Uganda: 1948-61% EDRP 29.
   (c) "Tax rates and income elasticity of some important taxes in East Africa". EDRP 38.
   (d) "Economic Growth and tax revenue in Uganda: 1962-70 EDRP 55.
2. D.P. Ghai: "Income elasticity as a tax criteion in developing countries". EDRP 25.

effect on the allocation and growth of resources. With these preliminary remarks, we can now proceed to tackle the main problem of this paper.

Increasing income elasticity of tax system: operating on tax rates.

The income elasticity of any given tax is determined by the relationship between the marginal and avarage rates of taxation and by the share of its tax base in the national income. With a proportionate tax rate, a given tax will be income elastic provided the share of its base in national income rises over time. Alternatively with a constant tax base/national income ratio, a tax will be incone elastic provided the marginal rate of taxation is greater than the average rate i.e. the tax has a progressive rate. In this section we shall be concerned with the possibility of enhancing the flexibility of the tax system by operating on the tax rates of important tax sources, reserving for next section manipulation of the tax bases to achieve the same purpose.

It must be emphasized that the rates must be progressive with respect to the tax base and not any other varibale; a simple example will illustrate the point. Export taxes in Uganda are progressive with respect to price increases but not necessarily with respect to their base i.e. export income from Cotton and Coffee. If export incomes rise because of price increases, the ratio Export tax revenue/value of exports will also rise, but if the value of exports increases because of an increase in the quantity of Cotton and Coffee exported, the above ratio remains constant. It will, therefore, be seen that according to this definition of a progressive tax rate, there are relatively few tax Sources which possess a progressive tax structure. What is more, there are relatively few taxes which can possess a progressive rate structure in this sense. It will be shown below that of all the important taxes in Uganda, individual income tax is the only one which unambiguously possesses a progressive rate structure. We shall now discuss briefly the rate structure of each of the important Central Government taxes in Uganda. This has been done in detail in another paper[3]. Export Taxes: have a progressive rate only if increase in exports is at least partly due to an increase in export prices. With declining export prices for Cotton and Coffee, the ratio tax revenue/ export earnings will also decline, even if the total export earnings increase because of a sufficiently rapid expansion of quantities of Cotton and Coffee exported. What is likely to be the trend in the export prices of Cotton and Coffee? It is, of course, impossible to predict with any degree of certainty what this trend is likely to be. Most of the studies concerned with the projection of demand for and supply of Cotton and Coffee seem to indicate a gradual decline in the prices of both these products. We made a similar assumption in our projection of tax revenue[4]. If this assumption is realistic, the average tax rate will decline over time; and unless the share of Cotton and Coffee exports in national income rises adequately to offset this decline, export tax income will tend to be income inelastic.

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3. D.P. Ghai: "Tax rates and income elasticity of some important taxes in East Africa". EDRP 38

4. "Economic Growth and tax revenue in Uganda EDRP 55.

Our next question is: Can the tax rates be so structured as to make them progressive in the face of likely price declines? Tax rates may be related to three possible bases: prices (as in Uganda now), or quantity (as for Coffee export tax in Kenya and Tanzania), or value of exports. If prices are expected to decline, the first possibility must be ruled out. The third possibility i.e. relating tax rates to value of exports, is theoretically attractive but raises formidable administrative and equity problems. Export tax rate could be made progressive either with respect to aggregate export earnings or with respect to individual income from exports. In either case, taxes could only be collected in arrears, when the total value of exports of Cotton and Coffee or the incomes of individual farmers therefrom, were established. With considerable annual fluctuations in individual as well as aggregate earnings from Cotton and Coffee exports, assessment and collection of taxes in arrears would be a source of great hardship and inequity, In any case, an assessment of individual farmer's income from Cotton and Coffee exports would pose insuperable administrative problems and must therefore be rejected on grounds of administrative feasibility. The difficulty with using the aggregate value of Cotton and Coffee exports as a base for export taxes is that it ignores completely the export incomes of individual farmers and may therefore impose considerable hardship on unfortunate farmers whose output stays constant or actually declines while the total value of exports experiences a sharp increase. For these reasons, we must reject export earnings as a base for export tax.

We are, therefore, left with the second possibility i.e. relating tax rate to the quantity exported. If prices remain constant, the tax rate will also be constant. On the other hand, a price rise will lower the average tax rate; while a price fall will increase the average tax rate, and thus contribute to the enhancement of the income elasticity of export taxes. If prices are expected to decline, say over the plan period, the best alternative is to have a specific export tax i.e. one relating to quantities exported; as prices decline, the average tax rate would tend to go up. The main disadvantage of this proposal is that it will not have a stabilizing effect on the economy. There is also the further difficult problem of determining the rate of duty per unit of export. Despite these difficulties, a fixed tax per unit of export is the only practicable way of assuring a progressive rate in the event of a gradual decline in export prices.

Import duties: The average rate of import duties is a function of rates on different categories of imports, and of the volume, price and composition of imports. We saw in our earlier studies that the average rate of import taxation may be expected to decline over time mainly because of the expected changes in the com sition of imports but also because some of the dutie re levied on a specific rather than ad valorem basis, a with the increase in import prices, the average rate of import duties will tend to decline.

Correspondingly, there are two ways in which the decline in average rates can be moderated: firstly, by the conversion of specific into ad valorem rates, and secondly, by altering the pattern of import duties in such a way as to impose higher rates on imports which are expected to increase their relative importance. This in effect implies higher rates on construction materials, machinery and equipment and intermediate products. The disadvantage of this proposal is that it will make capital goods more expensive and hence may have disincentive effects on capital formation. It is, of course, not possible to say how serious these adverse effects might turn out to be. Such costs will have to be weighed against the expected benefits from larger tax revenue. Another beneficial by-product of the proposed changes in the pattern of import duties will be a stimulus to labour-intensive techniques of production - a thoroughly desirable effect. There are, however, strict limits to the height to which import duties on producers' goods can be raised. Even if the two proposals mentioned here are implemented, the best that can be hoped for is a moderation of the decline in import tax rates, rather than a reversal of the direction of change, unless of course import duties on producers' goods are to be raised to uneconomically high levels.
Excise duties: We need not spend too much time on a discussion of excise duty rates, as the analysis of the last section applies here. The only difference is that all excise duties are levied on a specific basis; with an upward trend in the prices of excisable goods, the average rate will tend to decline. In order to prevent this decline, it is necessary to convert the specific into equivalent ad valorem rates. The disadvantage of this proposal is that it might prove administratively more difficult than the levying of specific rates, but the difference will only be a marginal one. The other method of imparting an upward bias to the average tax rate is to levy relatively higher rates on commodities with a relatively high income elasticity of demand. Of the main excisable commodities, our calculation showed that cigarettes are the most responsive to changes in disposable income and tobacco the least responsive[5] with sugar and beer somewhere in the middle. Therefore, relatively higher tax rates on cigarettes will impart an upward bias to average excise duty rates, and hence enhance their income elasticity.

Corporate tax: as in most other countries, is levied at a proportionate rate. It is, of course, possible to levy a progressive tax rate on the income of companies, on the same lines as individual income tax; but corporate incomes are hardly ever subject to a progressive tax. The main reasons for this are administrative inconvenience, considerable possibilites of evasion through break-up of integrated industries, and disincentive effects on efficient, enterprising firms.
Besides the usual rate on corporate income is fairly high - between 35 to 55% in most countries; - in order to raise the same amount of revenue from a progressive tax, the rates will have to be very steeply progressive. For all these reasons, it is preferable to levy corporate tax at a proportionate rate.

Individual income tax: already possesses a steeply progressive rate. In fact, of all the taxes we have considered, individual income tax is the only one which has an unambiguous progressive tax Structure. Other things being equal, an increase in the incomes of persons subject to income tax will push them into higher income brackets and hence into higher marginal tax rates.

5. "Economic Growth and tax revenue: 1962-70 "table IX EDRP 55.

But it must be emphasized that the accrual of additional income to persons who are liable to marginal rates of taxation lower than the average rate on the total taxable income will have the effect of lowering the average rate of taxation despite the progressive structure of the income tax. In general, we may say that if the weighted average of the marginal tax rates payable by individuals receiving additional income exceeds the original average rate of individual income taxation, the tax will tend to be income elastic. Thus even with a progressive tax structure, the pattern of distribution of incremental income will determine whether the marginal rate will exceed the average rate. The policy implication of this is clear: a policy of favouring increasing inequalities of income is most conducive to revenue maximization.

To round off our discussion of tax rates, we may conclude that it is rather difficult to devise progressive rates for most of the taxes under consideration, and therefore an automatic increase in tax rates may be expected to contribute relatively little, if at all, to the enhancement of the tax structure in Uganda. If most of the tax revenue were to accrue from individual income tax and/or from a progressive expenditure tax of the type advocated by Kaldor, the progressive structure of tax rates could make a powerful contribution towards the flexibility of the fiscal system. But in East African Conditions, where direct taxes on income are relatively unimportant and most of the tax revenue is derived from indirect taxes like export, import and excise duties, the scope for manipulating tax rates to increase the income elasticity of tax structure is rather limited. The strategy for revenue maximization over time must concentrate on structuring indirect taxes in such a way as to levy relatively higher rates on goods and services with a high income elasticity of demand. This point will be pursued further in the later sections of this paper.

<u>Increasing income elasticity of tax system: operating on tax basis.</u> We must now consider the second determinant of income elasticity of a given tax viz: the share of its tax base in the national income. The tax bases for most of the taxes under consideration here are either some component of income or of expenditure. The former is true of export duties, individual and corporate income tax while the latter holds for import and excise duties. We shall discuss each of these taxes in turn.

<u>Export duties</u> have as their base Cotton and Coffee expor-. In our projection of tax revenue in Uganda[6] it was assumed that the share of Cotton and Coffee exports in the economy would tend to decline over time. This assumption was made dependent on the pursuit of a certain strategy of development, emphasizing diversification of the economy, considerable import substitution and a sharp increase in the share of investment. To the extent that the development policy continues to concentrate resources on expansion of agricultural exports, our assumption about the decline in the relative importance of Coffee and Cotton exports may not materialize. However, Cotton and Coffee exports already account for such a high share of G.D.P., that they are unlikely to increase their share. Our conclusion must, therefore, be that the relative share of Cotton and Coffee exports in the national income may be expected to fall over time.

6. "Economic Growth and tax revenue in Uganda: 1962-70"

The above trend can be partly offset by broadening the base of export taxes by the imposition of export duties on other agricultural products. This would have the efffect of increasing once-for-all the ratio of tax base to G.D.P. but it will also moderate the fall in this ratio over time, as the relative share of agricultural exports as a whole in the economy may be expected to decline more gradually than that of Coffee and Cotton exports alone.

Import taxes. It is more difficult to predict the likely trends in the share of imports in G.D.P. In our projection of tax revenue we saw that imports as a proportion of G.D.P. were lower in 1970 than in 1962 if the economy grew at a rate of 8.2% p.a., and were higher if the economy grew at 6.6% p.a. There is little that can be done to widen the import base, apart from imposing import duties on inter-territorial imports. But this possibility raises many other complicated issues which are irrelevant to our problem and will not therefore be pursued further.

Corporate tax: In our study of economic growth and tax revenue, we came to the conclusion that the share of corporate income in G.D.P. is likely to increase over time. There is another way in which the base for corporate tax can be increased: by elimination or reduction of investment and accelerated depreciation allowances. The benefits of additional tax revenue from this change will have to be weighed against the stimulus to investment given by such tax concessions. If investment and accelerated depreciation allowances have a powerful effect on the volume of investment, then clearly the present concessions must continue; if their effect on investment is only marginal, consideration must be given to reducing some of these allowances in order to increase tax revenue. Without much further investigation it is not possible to say how important these tax concessions are in stimulating investment.

Corporate tax base can also be broadened by the encouragement to the conversion of unincorporated into corporate enterprises. The former are subject to individual income tax; but the average tax rate on corporate income is substantially in excess of that on personal income. Therefore, the conversion of unincorporated into corporate enterprise will result in a substantial net increase in tax revenues.

Individual income tax base is also likely to increase its relative importance over time for reasons mentioned in my paper on "Economic Growth and tax revenue in Uganda: 1962-70". Furthermore, there are other possibilities of increasing the share of personal taxable income in G.D.P. and of making it elastic over time. Introduction of P.A.Y.E. can be expected to bring about an improvement in coverage and assessment, at the same time eliminating the time-lag between the receipt of income and collection of income tax. This proposal would have the effect of increasing once-for-all the ratio of personal taxable income to G.D.P.; it will also improve the flexibility and stabilizing quality of the tax system by relating taxes revenue to current income rather than to the past income.

Another reform which would result in a considerable once-for-all increase in the base is reduction of simple and marriage allowances. It will also make the tax base more income elastic. Pursuit of policies designed to increase or at least to perpetuate existing income inequalities will tend to increase the share of taxable incomes in G.D.P. Finally, a progressive improvement in coverage and assessment would introduce another factor contributing to the increase of the [illegible] of tax base. [illegible]

Other measures designed to increase the elasticity of the tax system. With the reforms we have proposed above, the flexibility of taxes on income will be greatly enhanced. There does not appear to be further substantial scope for additional taxes on income or for raising additional revenue from the existing taxes on income. The elasticity of the tax system must somehow be srengthened by the inclusion of appropriate consumption - based taxes in the fiscal armoury. It was seen earlier that a progressive expenditure along the lines proposed by Kaldor could be a highly income elastic tax, but it has had to be rejected on grounds of administrative feasibility. Two possibilities remain ; (1) A general sales tax levied at the wholesale stage; (2) A purchase, excise or wholesale tax on selected goods and services; and of course a combination of (1) and (2).

(1) Few of the sales taxes are really general; most of them exempt basic necessities and producers' goods. If a sales tax on semi-necessities and luxuries is levied at the wholesale stage, and that is the only practicable level at which it can be levied in East Africa, the tax base will prove fairly buoyant, as the ratio of consumption of semi-necessites and luxuries to G.D.P. might be expected to increase over time with the improvement in the standard of living of the masses.

(2) A selective indirect tax at a relatively high rate on goods and services which have a high income elasticity of demand will also contribute significantly to the flexibility of the entire tax system. A lot more work needs to be done to determine the income elasticities of demand for various goods and services. But it is clear even at this stage that services like hotel, various forms of entertainment, travel, education, catering, electricity etc. have a high income elasticity of demand and could form suitable objects of taxation. Likewise, goods such as textiles, clothing, household effects, bicycles, transistors, are generally considered to have a high income elasticity of demand. Inclusion of goods and services of this kind in consumption - based taxes, either by themselves or in addition to a low rate general sales tax, could greatly strengthen the flexibility of the entire tax structure and ensure adequate revenue for the expansion of the public sector.

Conclusion. By their very nature, most taxes cannot be made progressive with respect to their base. We have seen that individual income tax is the only truely progressive tax in Uganda, and that export taxes may become progressive if export earnings are at least partly due to an increase in export prices of Cotton and Coffee. We have made some proposals whose effect will be to enhance the progressivity of tax rates for certain tax sources. But the more promising revenue to increase the income elasticity of the entire tax system is to operate through the tax bases. Apart from increased reliance on taxes on income, the basic strategy should be to choose expanding tax bases for indirect taxes. We have made several proposals to bring about this result. If all these proposals are implemented, the

effect will be to greatly improve the flexibility of tax structure and to obviate the necessity of continuous changes in tax rates and tax bases to raise more revenue. Owing to lack of adequate statistical data, it has not been possible to give quantitative estimates of the increase in revenue to be expected from the implementation of the proposals outlined above. However, once the necessary data become available, it should not prove difficult to translate the qualitative proposals into their quantitative equivalents.