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CRUCIAL CONSTRAINTS ON EAST AFRICAN ECONOMIC DEVELOPMENT[1]

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1.   Revised version of a lecture delivered to the seminar for University
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The dominant theme of economic policy in East Africa is the achievement of a high rate of growth[2]. The combination of low levels of income with rising aspirations throughout the society (and a high rate of population growth) leaves the policymakers with little choice but to aim at much higher rates of growth than those achieved in recent years. (This is likely to involve the attempt to double per capita output over something like three planning periods (i.e. fifteen years)) With population growing at its current rate, this would mean an overall rate of growth in the region of 7% per year. The subsequent comments will discuss the choices to be made and dilemmas to be resolved in the pursuit of such a high growth goal.

In East Africa, as in many developing economies, a simple planning model must allow for three major resource constraints: the domestic capacity to produce, the availability of foreign exchange and the size of the stock of trained manpower. Any growth strategy must be sensitive to the potential importance of these constraints. In addition to these resource constraints, there are other limitations on policy, imposed by the existense of objectives additional to the overall growth goal.

Any government, if only in the interest of its own preservation, must be responsive to the aspirations of particular pressure groups, particularly in relation to the distribution of income. Similarly, the employment results of the plan must be weighed. The demand for jobs has been rising with the growth in the population and the expansion in educational opportunities. This trend may be projected into the future with more assurance than most economic predictions. In addition, in economies where such a low proportion of the population is employed (circa. 5%), an increasing provision of public facilities and social services will be necessary, so that the plan can have meaning for the unemployed and the self-employed peasantry. Equally capital expenditure on the improvement of the urban environment may be a necessary part of of a long-run strategy, because of the special political importance of the emerging urban communities.

The available stock of trained manpower will not only be subject to the constraint imposed by educational expansion but will also be affected by the policy objectives regarding the reduction of dependence on expatriates. This means that flows of new recruits supplied by the educational system must be used to displace expatriates as well as to expand the total supply of personal.

Such "subsidiary" objectives may be viewed as limitations on the range of policy alternatives in two different senses. In one way they may be viewed as an important and very legitimate part of the set of goals the society is setting itself (in the jargon - they form part of the social welfare function). In other words, they represent what growth is about - a translation of the overall growth goal into the real content of social policy. On the other hand acceptance of many of these objectives may be an important precondition for the achievement of the overall growth objective. The necessity of gaining public acceptance for the plan and maintaining the necessary framework of social and political stability for its implementation must influence the composition of the plan as much as purely technical constraints. It seems unlikely that in the near future, even if it were desirable, that the governments of these countries could carry through policies through means

2. B.Van Arkadie and Paul Clark, "Development Goals for the Uganda Economy in 1981, "Economic Development Research Project, Discussion Paper 42, July 1964 and Tanganyika Five Year Plan, 1964-1969, p viii

which are largely coercive in relation to the mass of their population.

One further constraint on the growth strategy in these sorts of economies is provided by the size of market. The industrialization and diversification strategies available in East Africa are very clearly dependent on the size of the East African market, and explicit consideration of the limitations on import substitution and the implications of this for the future evolution of the industrial structure must be an important part of the framework for a development strategy.

<u>The size of the effort: capital accumulation and economic growth</u>

The first task of development programming is to estimate the size of the effort needed to achieve the overall growth objectives in quite aggregative terms. This is best done initially in a framework which sets the objectives for the more detailed five-year plan, based on a broad view of the aggregates involved. In particular, it will be necessary to assess the rate of capital accumulation required. The purpose at this stage of the analysis is to achieve a sense of orders of magnitude, so that the sheer size of the task can be exposed, particularly to the politicians, who must bear the brunt of interpreting the plan to the society and leading the required mobilization effort.

The possibilities of analysis are limited by the availability of data. The official capital formation series for East Africa are presented in table 1 which carry the story back to 1954, the year from which both the capital formation and domestic product series are available on a continuous basis.

The definitions and coverage of the official statistics are such that the capital formation estimates are exclusive of most of the investment activities in the agricultural sector. This is entirely so in the case of peasant agriculture, while in the case of large scale commercial agriculture little more than the purchase of machinery will be included. Agricultural investment excluded from the capital formation totals is also omitted from current estimates of value added product, however, and thus does not involve any diversion of the current flow of output as measured in the statistics. Capital formation in the official statistics is therefore either devoted to social overhead or to investment in manufacturing, transport and commerce.

These data do not admit to the application of any very sophisticated theory of production in estimating the capital needs for future development. At the moment the planners fall back on the capital-output ratio as the tool to provide guide-lines for aggregate plans. The capital-output ratio has been tried and found wanting by so many academics, that it is embarrassing that it is still with us. Its persistense is based not only on its simplicity, both in principle and application, but also on the essential truth which it embodies, namely that high rates of growth and capital formation go together.

Attempts to estimate the <u>ex post</u> marginal capital-output ratio have been made for Kenya on a fairly crude aggregate basis. I have attempted a similar calculation for East Africa as a whole and for Uganda. The current Kenya plan uses a capital-output ratio of 2.8 while the retirement rate is assumed to be 10% of domestic product. In a recent paper on development goals for the Uganda economy, by Paul Clark and myself, we adopted a marginal capital-output ratio of 3, with a retirement rate 7% of domestic product as a sensible basis for projection. A range around this figure was used as a basis for projection on an East African basis by Philipp Ndegwa and myself[3].

3. Discussion in this section and throughout the paper draws on work undertaken jointly with Philipp Ndegwa ("Future Trade, Balance of Payments and Aid Requirements", University of East Africa Conference on Foreign Aid, Dar es Salaam, Sept., 1964, publication forthcoming) and Paul Clark ("Development Goals for the Uganda Economy in 1981")

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The use of these assumptions gives rise to table 2 in which an estimate of the saving effort likely to be necessary for high growth goals is set out.   Although the details involved will not stand up to careful scrutiny, the dominant picture which emerges must be taken seriously.   To achieve the likely growth objectives an investment effort must be mounted which is proportionately two thirds greater than in the recent past and may even be greater than was achieved in the East African investment boom of the 1950's, in which gross investment was as high as 28.6% of monetary gross domestic product, while Kenya achieved rates of over 30%.

The sheer size of this effort, the mobilization of savings required and the restriction of current uses of output lends urgency to the possibility of economizing on the use of capital. How far can the capital-output ratio be varied through ingenious investment programming?   Formally, the possibilities of modifying the capital-output ratio can be discussed under three heads - the possibility of labour-capital substitution within the industry or project; the possibility of technical improvement increasing the productivity of all factors; and the possibility of shifting the distribution of investment between industries or projects so as to lower the capital-output ratio.

Before considering such possibilities in detail, however, it is well to consider the over-riding effects of the shortage of the local supply of high-level manpower.   This necessarily limits the possibilities of innovation and experiment at all levels, reducing flexibility, which might therefore appear much greater on paper than will prove possible in practise.   The substitution of unskilled labour for capital in the production process may require increases in inputs of high-level and middle management skills, drawing on the cadres which are as critical a shortage as capital resources. In the absense of quantitative evidence or realistic theory it is difficult to incorporate high-level manpower and capital into an analysis of production as substitutable inputs.   Manpower planning techniques tend to treat capital and highlevel manpower as joint inputs.

The possibility of labour-capital substitution within an industry will be limited in the immediate future in East African because of the dependence on foreign technology, a result of the import dependence discussed below.   Probably the greatest possibility for substituting labour for capital would be through multi-shift operation.   Substitution of labour for capital in this sense is more likely to appear in an economy operating with pressure on capacity.

In practise what little evidence there is suggests that in recent years any factor substitution in East Africa has been in the reverse direction, with some tendency to economize on the use of labour.   Certainly output per head has been rising steadily, while in the last few years employment has been <u>declining</u>.   In Uganda, for example, it seems that output per head has been rising by as much as 5% per annum in the non-agricultural sector in the period 1958-1962.   This phenomenon has been widely remarked upon, but little explained.   Partly it might result from the displacement of low productivity unskilled workers following the introduction of minimum wage legislation, and other pressures for higher wages, partly from the improving skills of the work force.   In so far as there is substitution of capital for labour one must suppose that it results from the technical changes induced by trends in the cost structures of the economies from which the machinery is imported.   Also it is interesting to note that tax inducements to encourage investment will tend to favour capital intensive methods of production, particularly in the absence of any comparable tax incentive to train unskilled workers.   One further possibility is that the character of the work force may be particularly unsuitable for the sort of semi-skilled operations which are likely to be the basis of labour intensive processes.

The possibility of any major shifts in technique are therefore extremely hypothetical - a legitimate and important subject for research but not yet anything which can be incorporated into a plan with any confidence.   The most likely possibility would seem to be systematic encouragement of multishift operation.

Many studies of aggregate production functions have suggested that only part of the growth of output can be explained by the increase in capital and labour inputs, a large residual being allocated to "technical improvement".[4]   Most of this evidence has been collected for slow growing, highly developed economies, particularly the United States and some of the economies of Western Europe.   It has been suggested that if a high saving high growth path is achieved, the "residual" will be proportionately much less significant.[5]

Perhaps the most serious potential method of influencing the capital output ratio is through the choice of projects, rather than through variations in the technique adopted within a project.   This is likely to be an important planning variable in practise, because such choices can be made at the central planning level.   Choice of technique within a project is much less likely to be within the sphere of influence of the planner.   The aggregate capital output ratio is a weighted average of the ratios of individual projects; if the range of variation from project to project is large then there is a very real possibility of choice.   The most significant factor influencing the capital output ratio of a project is the distribution of expenditure as between building and construction on the one hand and machinery on the other. Building and construction work once completed makes only a small direct contribution to the subsequent flow of gross value added, with low rates of depreciation and   limited employment involved in   operation. Machinery and equipment typically involve higher rates of gross profit and greater employment.   Of course, the methods of computing domestic product tend to under-estimate the **flow** of services flowing directly from investment in social overhead capital but this does not detract from the essential point.

There is therefore a range of choice open to the central planner in in influencing the capital-output ratios by adjusting the allocation between projects.   This possibility is significant but should not be exagerrated.   The following limitations on this type of adjustment should be noted:

(i) some part of construction spending is a joint input with machinery investment within particular industrial projects - most machines require factories in which to be housed;

(ii) the dangers of dissaggregation are as perilous as those of aggregation-much social overhead investment and construction in service industries may be an unavoidable consequence of the expansion of manufacturing facilities.

(iii) a shift towards machinery will increase future diversions from current output for the retirement of capital equipment.

4. R. Solow, "The production function and the theory of capital" Review of Economic Studies, vol.25, 1955-1956.

5. H. B. Chenry & Michael Bruno, "Development Alternatives in an open economy: The case of Israel", The Economic Journal, March, 1962, pp.82-83.

Historically, in economies for which long series of data are available, there has been fluctuation in the composition of gross investment within a significant range. The most important element of potential flexibility in the plan will involve residential construction spending and the provision of ancillary urban facilities. Provision of urban living facilities is a highly capital intensive activity; in the economic development of Europe and U.S.A. investment in housing involved heavy cumulative investment although this was also an element very subject to cyclical instability.[6]

The East African economies it should be noted, currently have a very low degree of urbanization (even for example, by West African standards). The cities that have developed during the recent decades have been built up under considerable public control over the standards of housing. In practise this has meant that the housing problem has been to some extent "swept under the carpet"; the aesthetic sensibilities of the town dwellers (mainly European and Asian) have been satisfied at the expense of the creation of peri-urban slums beyond the city boundaries. A policy of restriction of residential housing investment could only be sustained through the transformation of the density of occupancy of existing (middle class) housing and the acceptance of the expansion of existing slums both in the cities and in their present peri-urban location.

Income distribution, savings and payments flows.

The degree to which domestic resources and foreign exchange is made available for capital accumulation purposes will depend on the rate of savings and the pattern of spending. Any planning decision to raise the rate of savings involves the reduction in resources at the disposal of individual members of the community for current uses. Insofar as this is achieved by the restriction of disposable incomes or the shift in income to those groups with higher propensities to save, the savings problem is intimately connected with the question of income distribution.

The task is sometimes presented as involving the substantial reduction in consumption standards in the interests of some distant future generation, a postponement of welfare received for long periods of time. This is not true; the surprising thing is that, if the simple arithmetic of the dynamic process is investigated, the postponement of consumption **involved** in sustaining high rates of saving is not of a long duration. This is illustrated in diagram 1, which was used for illustrative purposes in a discussion of the perspective growth horizons for the Uganda economy. This diagram represents the following simple exercise. The "low growth path" for product available for current uses is produced under the assumption that capital formation remains at its current low level during the whole period considered (i.e. gross capital formation forms 15% of gross domestic product) while the "high growth" path shows the impact of a programme to raise capital formation steadily from its 1963 level to the point where it is 30% of gross domestic product by 1971. There is no absolute decline in resources available for current use and by the time the economy has achieved the high growth rates of capital formation, consumption levels are at the level which would have been achieved under the low growth path. From that point the high savings effort can be combined with rates of growth of consumption well in excess of those which would have been achieved under the low growth programme.

6. Simon Kuznets, "Quantitative Aspects of the Economic Growth of Nations - Long Term Trends in Capital Formation Proportions" Economic Development and Cultural Change, July, 1961.

Visualized in such terms, the problem of achieving high saving-high growth may be seen as one of "changing gear". When the economy has achieved the high growth path, consumption can grow along with everything else in the economy at a higher rate than would have been achieved by making the static decision to retain high consumption. Nevertheless, there is a considerable structural adjustment involved. Ex ante it is possible for the planner to view the process over a number of planning periods in these terms, but decisions are made by individuals for whom the choice will not appear in these terms, particularly as only part of the benefits of growth will be enjoyed by the owners of capital. The consumption decision will be made in relation to incomes currently received and the sacrifices involved in saving will be judged in relation to the consumption levels which would have been achieved under some other, hypothetical, growth path. The task of lowering the consumption function for the society is therefore still difficult.

How can the consumption function be changed so as to raise the proportion of domestic product allocated to capital formation? The evidence about past behaviour is scanty. It is possible to sketch out a rough picture of the distribution of income amongst the major income groups in East Africa, but there is little hard evidence regarding the disposal of income by those recipients.

Four major types of cash income may be identified:

 (a) peasant incomes, especially from export crops;

 (b) wages (i.e. incomes of workers other than professionals, managers and high level civil servants).

 (c) salaries (ie. incomes of the employed elite, previously largely expatriate now becoming increasingly African).

 (d) profits (i.e. the profit share of industry, commerce and large scale commercial agriculture).

This classification distinguishes incomes on a functional basis according to the factor services involved. It may also be a useful method of distinguishing groups according to their spending patterns; although the character of such differences is still largely a matter of surmise. It is also important that these classes of income earner are likely to show cohesion as pressure groups attempting to influence economic policy. Although the governments may be devoted to an income distribution policy in principle, perhaps based on abstract criteria of social justice or on some ideological commitment, in any event policy must be sensitive to the pressures brought to bear.

For an income distribution and tax policy geared to growth it would be necessary to know both the savings propensities and the import content of the consumption spending of these four groups. What little evidence there is suggests that wage earners do not save. Peasants must surely engage in some spending which contributes to capital formation in the rural sector, but it is unlikely that voluntary peasant saving could become a significant source of resources for use in investment outside peasant agriculture. The main potential sources of private savings outside peasant agriculture are therefore profits and salaries.

The existense of a very unequal wage and salary structure suggests that salaries are a potential source for savings, but whether they have been so in practise is not known. Profits have probably been the major source of private savings in the past, with considerable re-investment of profits taking place.

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When the balance of payments implications of income distri-
bution are considered, the facts are even less certain. Salary
and profit earners are certainly conspicuous consumers of imported
items, but this does not prove that either their average or margi-
nal propensity to consume imports is higher than that of wage
earners or peasants. From this point of view the transfer of funds
abroad by these income groups is equivalent to consumption spending
on imported goods, except that there are no fiscal benefits to the
government (i.e. no import duties to be collected). This is an
important flow as can be seen by table 3. These figures, although
by no means reliable, indicate the very considerable payments out-
flow in 1960-1961 resulting from the transfer of private funds.
Also, in addition to the transfer of local funds some part of the
profit share takes the form of foreign investment income accruing
directly to residents outside the country. Particularly because
of the tendency since 1960 to transfer profits overseas, great
expectations of an increase in resources domestically available
for investment as a result of a shift towards profits do not seem
justified, even if this were technically feasible and politically
acceptable.

On the other hand, it does suggest that exchange control is
overdue in East Africa.

The case against exchange control rests on two grounds. On
the one hand it can be speculated that recent outflows have been
once and for all transfers of liquid assets resulting from the
uncertainty and emigration engendered by independence. Exchange
control would be closing the gate after the horse has bolted. On
the other hand, the difficulties of inforcing exchange control in
an economy with such a large foreign trade sector have been
emphasized.

The other major possibility is to expand government saving;
this will involve an expansion of revenues relative to current
spending. It seems certain that this source of saving must play
an increasing role particularly in view of the lead the govern-
ments will have to take in expanding investment programmes. The
tools available to increase government saving are:

        (a) an increase in export taxes and marketing board
            surpluses;
        (b) increasing the income tax;
        (c) reducing the cost of government current opera-
            tions through a reduction of government salary
            scales;
        (d) increasing import duties;
        (e) increase in corporate taxes.

The possibility of increasing the burden of tax on the low-
income wage earners seems slight. The structure of the tax system
is already somewhat regressive. (Although part of the burden of
increased import taxes would be born by this group). Income
taxes are low on the middle income groups with generous personal
allowances so there is room for expansion there.

Increasing import duties is consistent with a policy of
import subtitution, but it should be noted that if a protective
tariff is effective, it will eventually result in a fall in
customs revenues. The expansion of import duties to very high
levels for protective purposes may have to be combined with the
imposition of duties on a range of commodities not currently
taxed and the imposition of purchase taxes on a wider range of
domestically produced goods.

An increase in export taxes and marketing board surpluses will have some undesirable effects. Whether the level of prices has a considerable incentive effect on the supply of export crops is not clear, although there is evidence of cross-elasticity between various crops. Such a potentiality exists, however, and has implications beyond the effect on export earnings; too stringent a restriction of rural earnings must increase the tendency for movement to the town, a trend which it is generally agreed has already attained a momentum in excess of the possibilities of urban assimilation. Also, the possible beneficial effects of high rural earnings in stimulating rural transformation over the long period cannot be ignored. Yet it seems inevitable that the rural sector must bear some large part of the brunt of the burden of supplying the surpluses necessary for expansion of social overhead and non-agricultural activities. The degree to which it will be able to do so will depend in large part on the level of export prices. Greater information regarding the cross-elasticity of supply within the agricultural sector would enable the planning authorities to adopt a crop price policy both to raise revenues and shift outputs in desirable directions.

The reduction of current government expenses through changes in the salary structure is a very serious possibility. The elite benefits partly from its own scarcity value and partly from the inherited colonial salary structure. This results in an extremely unequal wage and salary structure, with startling jumps at the point at which positions were typically filled by expatriates in the past. Where the bottleneck on the expansion of the elite is the availability of public educational facilities, rather than the supply of suitable entrants, such unequal rewards for educational achievement have little justification as an incentive. The reasons for the persistense of the existing structure are two-fold: the opposition of the elite to any abrupt adjustment would be very great and there is no way, at present, of chaning the income structure in the private sector. Reduction in the salaries of the publically employed elite would therefore require an introduction of some control over the employment of highly trained manpower.

The political difficulties of attempting to change the salary structure directly, leads to the investigation of more indirect approaches. These would take the form of a slow attribution (already begun) of the fringe benefits characteristic of colonial service and a down-grading of job classifications. Another major potentiality for a shift in the income structure is through inflation. Inflation, through the agency of an expansion in the domestic money supply and a devaluation of the currency, might provide an opportunity to move from the colonial salary structure to an income pattern more suitable to current needs.

Foreign trade dependence and structural change.

The extreme dependence on foreign trade is such a dominant characteristic of these economies that there is hardly a planning problem without an important foreign trade or payments aspect. Any analysis of these types of economy must therefore have as a primary concern the structural relationships which exist between the domestic economy and the rest of the world.

Foreign trade dependence takes the form of:

    (a) dependence on exports of primary crops both as a major source of domestic income and the chief earner of foreign exchange;

    (b) Dependence on imports for the supply of machinery and equipment;

(c) continued dependence on imports for substantial categories of manufactured consumer goods and construction materials;

In addition there are important payments flows which do not have their origin directly in trade. Foreign investment has in the past been an important source of investment funds and as a result there is a growing flow of investment income accruing to overseas owners. Also, as was emphasized above, there has been a considerable outflow originating from the transfers of local residents.

Perhaps some of the most immediate preoccupations of policy-makers in the future will be concerned with international payments flow; questions of exchange control, foreign aid and the promotion of foreign investment will demand much of their attention. The success of such efforts will determine the degree to which foreign exchange will be a decisive constraint on the plan. The economies are sadly vulnerable to the whims of foreign aid donors and investors. In competing for the attention of foreign capital the danger exists that the African countries may bid against each other to their mutual detriment.

The difficulty of engaging in detailed analysis in this area derives both from the inadequate character of existing balance of payments data and the need to consider the problem in the framework of the world economy. The planners at the moment tend to assign to foreign aid and investment the residual tasks not accounted for by domestic efforts. One critical task is to evaluate the feasibility of the planned foreign contribution to the plan. When so much seems to depend on shrewd bargaining skill, it is not clear how far this question is susceptible to economic analysis.

It is, however, possible to be much more explicit about the role of foreign trade. The size of the import bill will be dependent on the structure as well as the size of domestic expenditures. It is the high import content of investment goods which gives rise to the potentiality that a foreign exchange constraint may, at some future date, be a more serious barrier to the expansion of investment than the size of domestic savings. Thus even if domestic savings release resources equivalent to the value of the planned investment bill the domestic resources released will not be directly applicable to the investment programme. Domestic savings would have to be raised to the point at which the reduction in consumption of imports equals the increase in the imports of investment goods. In this circumstance if there is a considerable gap between the marginal propensity to import out of consumption spending and that out of investment spending, it will be necessary to restrict consumption in excess of the desired increase in capital formation in order to increase investment goods imports.

A simple example will illustrate the point. Assume the marginal propensity to import from consumption spending is 0.25 while that from investment spendings is 0.50. An expansion of investment of £10 million which was matched by an equal increase in domestic saving would result in an increase in investment goods imports £5 million, a fall in consumption goods imports of £2.5 million and a net balance of payments effect of £2.5 million. If the trade balance had to be defended consumption would have to be reduced by £20 million, which would double the savings burden and result in a deflationary impact in the domestic economy of the order of £10 million.

Table 4 illustrates the strong relationship between capital formation and the import bill in East Africa. Except for 1961 and 1962 this table shows a more stable relationship between capital formation and imports than between either of these and gross domestic product. The relationship will be influenced by the composition of investment which can have an important effect on the import bill, projects involving building and construction giving rise to smaller quantities of imports for a given initial expenditure than projects involving machinery and equipment purchases.

Analysing the import bill for recent years, it seems that the import content of investment spending during the 1958-1962 period was in the 44-51% range. The evidence for this is set out in table 4 b. The import content of non-investment spending is much more difficult to analyse, because of the lack of independent estimates of consumption. However, as a crude indicator table 4 also shows imports (other than those used investment activity) as a percentage of gross domestic product net of capital formation: this proportion moved over a very narrow range (29-30%) during the 1958-1962 period.

From the planning point of view there are two facets of such structural relationships which are of interest. Programming for expenditures must be concerned with the balance of payment as well as the domestic effects in weighing costs. Also the operation of the plan will begin a process of transformation of this structure. Longer range planning must be concerned both with a strategy for structural change and the effects of such changes, if achieved, on future planning constraints. In evaluating an investment project it is necessary to examine the degree to which it uses currently scarce foreign exchange on the costs side, while on the benefit side the future effects of output from the project on imports must be taken into account.

Import substitution will therefore form an important part of development strategy. This will be both because the potential importance of the balance of payments constraint makes it necessary to reduce some parts of the import bill to achieve the expansion in imports of equipment required, and because of a desire to expand manufacturing output much faster than the growth of the rest of the economy, with reliance mainly on domestic markets.

The evaluation of the feasibility of new industries should be based on estimates of the current size of the market, derived from import data, combined with an examination of the availability of local resources. As a first approximation, the degree of protection offered to existing industries might be viewed as the level which could be awarded new establishments, although an increasing pace of industrialization might demand higher rates of protection. Import data has the virtue that it is available in extreme detail. It should be recognised, however, in identifying import substitution possibilities that the creation of domestic industries will initially lead to a narrowing of the range of choice. As rates of protection rise the consumer will substitute in his budget the limited range of domestic products for the much broader range currently imported. The degree to which a potential market may exist, therefore, depends partly on the degree to which consumers are willing to substitute one good for another in the consumer budget in response to relative price changes. In the extreme, if consumer goods imports are virtually eliminated through prohibitive tariffs and quotas the consumer will be forced to purchase whatever goods are available on the domestic market - night clubs might become substitutes for imported cars.

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There should be a step in the investigation at which an attempt is made to predict changes in the future composition of demand. Such production would be derived from the planned growth in incomes and estimates of the demand functions of the various income groups. This is not currently possible in East Africa, for there is little known regarding current consumption habits and even less on which to base predictions of future consumption behaviour.

. In the East African case, imports supply such a large part of domestic consumption of manufactured goods that it is not difficult to identify a considerable list of import substitution possibilities.[7] The single most important possibility for the coming decade lies in textiles and clothing, which accounted for £24.1 million of the 1961 import bill (about one sixth of total imports). This represents about 40% of the gross possibilities for the immediate future - possibly more, as some commentators might take a more pessimistic view of the range of possibilities. East Africa has already made a start in developing textiles, but has probably not developed as far in this direction as many other African countries. The rest of the possibilities consist largely of other consumer items (including processed foods and drinks currently imported), plus building materials. East Africa is already self-sufficient in cement production and has begun production of a number of other building materials. In the East African case, therefore, examination of the import bill very clearly suggests an important element in the planning strategy for the coming period-namely the ambitions and organized development of textiles and clothings, with a view to a fairly swift attainment of self sufficiency.

This suggested priority does, however, indicate some of the disadvantages of the import substitution strategy. From the point of view of low income countries as a group, it should be noted that in the East African case India and Hong Kong are the major exporters of textiles to East Africa, so that part of substitution process will be at the expense of other low income economies. Also, over the long-run, there is evidence that textiles and clothing have an income elasticity of less than unity. As a result textile production has grown more slowly than manufacturing output as a whole during the past sixty years. (Total manufacturing output grew over three times as fast as textile production 1899-1959); as a general point, it may well be that the industrial possibilities in consumer goods at the early stages of development will be in those necessities which figure even in the meanest budget, but which tend to have quite low income elasticities. Finally, export possibilities in such goods are poor; what is true of East Africa is true elsewhere - these will be the first goods to be manufactured domestically and will therefore be widely protected. Moreover, established exporters in the developed countries have been losing there overseas markets in such lines to the extent that they are able to demand heavy domestic protection for their products.

A crucial factor determining the scope for import substitution is the size of the domestic market. Limitations imposed by the size of market may become more serious as development proceeds and it becomes necessary to venture into industries whose scale could not be sustained purely on local demand. Import substitution is therefore strongly related to the problem of economic integration. East Africa presents a good example of both the advantages and difficulties of economic integration. The common market has been a success in making possible a faster expansion in manufacturing output than would otherwise have been possible, but the unequal distribution of benefits has been a source of great stress. Development will not automatically spread itself smoothly throughout a common market and once one partner establishes a lead in the development of an industrial infra-structure it will be the most serious competitor with the more backward regions. Arguments for protection from competition from abroad will apply a fortiori with respect to the protection of the backward regions from the more developed, which

7. B. Van Arkadie, "Import Substitution and Export Promotion as Aids to Industrialization in East Africa, "to be published January, 1965 in East African Economics Review.

have more direct access than overseas competitors and will have
developed just those industries which the backward region would
now like to establish. The centrifugal forces within the com-
mon market are therefore likely to be potent.

Import substitution programmes should be evaluated with exp-
licit consideration of the inter-industy linkages. This is for
four reasons:

(i)   the net impact of an industrial project may be over
      estimated if the origin of the inputs is not iden-
      tified (i.e. projects resulting in large final
      sales may result in little domestic value added)

(ii) the size of potential backward linkages should be
      assessed;

(iii) possible input bottle-necks should be identified;

(iv) the net effects of the project on the future
      relationship between domestic demand and imports
      should be estimated.

For example, the 1961 Survey of Manufacturing for Kenya indi-
cates that for Kenya industry value added was only 38% of gross
output. Using the same source it may be estimated that about 33%
of the materials used by Kenya industries were imports. These
figures are averages aggregated over a number of industries. If
they may be taken as a rough guide to the marginal impact of import
substitution it may be expected that net import substitution (i.e.
additional domestic value added) would be not more than 65% of the
gross value of the new output. Initially, of course, it is likely
to be much less because of the time needed to create facilities to
supply inputs.

At the margin, the feasibility of industrial projects will
depend upon the degree to which protection or subsidization proves
acceptable, or if the project falls within the public sector, upon
the value accorded to it in comparision with investments in other
projects. It would be easy to pose the issues "industry versus
agriculture" or "import substitution versus export promotion" in
polemical terms; from the planning point of view, however, such
questions arise in more less rather than either or terms. Pro-
perly the planner should be concerned with the optimality as well
as the feasibility of decisions. Certainly the planning process
would be more susceptible to rational analysis if the assumptions
involved in particular decisions were made explicit.

For example, primary goods prices have been weaker on world
markets in recent years than have those of manufactured goods.
This creates a general presumption that the current specialization
in primary production should be reduced. Three sets of specific
information would be needed to translate such a general presumption
into a basis for judging between an agricultural and industrial
project:

(i)   an assessment of the amount as well as the direc-
      tion of future price movements;

(ii) data on the relative physical productivity of the
      two projects (there is some productivity differen-
      tial which will offset the differential price
      expectations);

(iii) a quantitative estimate of the reasonable weight
      to be given to the widely held presumption that
      investment in manufacturing has greater external
      benefits for future development than agricultural
      expansion.

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The terms of trade are important not only for assessments of project alternatives but also because of the effect on the overall success of the plan. The degree of export dependence in East Africa is shown in table 5, in which exports are shown as a percentage of monetary gross domestic product for the three countries, 1954-1962. The degree to which this represents dependence on a narrow range of agricultural exports is indicated by the following figures, showing the three most important agricultural exports of each country as a percentage of total exports over the period 1960-1962:

KENYA Coffee 28,8   TANGANYIKA: Sisal....24.0   UGANDA: Coffee 43.0
       Tea.......... 12,5   Cotton...14.9   Cotton 33.7
       Sisal........ 12,1   Coffee...12.3   Tea... 4.2
                     ────   ────   ────
                     55.4   56,2   80.9

Objections to such a degree of export dependence derive both from the extreme vulnerability to external shocks implicit in this situation and also from the belief that primary export production has few external effects in promoting development. The primary industries provide little forward or backward linkage, as the products are sold as exports with minimal value added beyond initial processing while inputs into agriculture are still quite simple.

The objection to dependence on primary exports is partly conditioned by the terms of trade experience of recent years. Although it is well known that the swings in the terms of trade take on very different appearences according to the time period considered, and that there is small evidence of a persistent swing against primary products over the very long run, the last decade has provided evidence of the negative swing over a decade or more. During the period 1954-1960 the loss in income to East African resulting from the unfavourable terms of trade effect was equivalent to an economic decline of as much as 1% of monetary domestic product per annum.[8]

Although export dependence of this magnitude is widely considered undesirable, it is an economic fact of life and will remain so for a considerable period in the future. Not only will the buoyancy of domestic economic activity be highly dependent on incomes derived from exports, but East Africa's ability to import will be largely dependent on her export earnings.

The considerable difficulties involved in planning estimates of returns from projects of agricultural expansion on an explicit quantitative basis derive not only from the difficulties of making price predictions in the area, but also from the lack of any satisfactory knowledge of the production process which would enable the physical returns from agricultural investment programmes to be predicted. Programmes of organized investment in peasant agriculture imply change in technique from the previously existing situation in which there were no substantial inputs from outside the agricultural sector. This is not true of plantation type projects (e.g. tea, sugar and sisal), however, in which expansion could take place along existing lines with the physical product being as predictable as for investments in the non-agricultural sector.

Four general points are worth making regarding agricultural projects. Prospects for the primary exports of particular economies cannot be derived simply from an expectation about the general level of primary export prices; there have always been sharp differences in the behaviour of different commodity prices.

8. Dodley Sears, "A Model of Comparative Rates of Growth in the World Economy", Economic Journal, March 1962.

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Future returns will be highly dependent on the success in adjusting outputs to fit changing price patterns. Secondly, export price predictions should not be based upon simple extrapolation but should, as far as possible, be based upon examination of demand and supply prospects in particular markets. Thirdly for any likely planning horizon these economies will be dependent on imports for the supply of machinery and equipment; therefore exports are in a sense the investment goods industry which will provide the means of industrialization. Finaly, in the past, despite the disadvantage of primary exports, they have been an important vehicle for spreading incomes throughout the countryside and beginning an important process of social transformation.

TABLE I   Van Arkadie

CAPITAL FORMATION AND GROSS DOMESTIC PRODUCT –
EAST AFRICA. 1954 - 1962

Year	Monetary Gross Domestic Product	Gross Capital Formation	Capital Formation as percentage of G.D.P.
	£ million		%
1954	286.2	75.7	26.5
1955	320.2	91.7	28.6
1956	337.3	90.8	26.9
1957	356.6	90.1	25.3
1958	359.8	82.3	22.9
1959	375.7	79.2	21.1
1960	400.3	85.6	20.9
1961	404.0	74.0	18.3
1962	409.7	75.6	18.5

Sources: This table is based on the official estimates available in the Annual Statistical Abstracts for Kenya, Uganda and Tanganyika and from the East African Statistical Department's Economic and Statistical Review.

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TABLE II.

Likely Capital needs

CAPITAL - OUTPUT RATIO

PER CAPITAL GROWTH %	2.8	3.0
	PERCENTAGE OF G.D.P. DEVOTED TO GROSS INVESTMENT	
3	22.4	23.5
4	25.2	26.5
5	28.0	29.5
6	30.8	32.5

Assumption:-

(1) Population growth = $2\frac{1}{2}$ %. p.a.

(2) Retirements takes up 7% of G.D.P.

TABLE III.

BALANCE OF PAYMENTS: 1956 - 1961.[*]

£ million.

	1956	1957	1958	1959	1960	1961(1)
Balance of Visible Trade	-12.9	-20.7	2.8	7.7	4.0	1.2
Invisibles	- 7.4	- 9.9	-10.5	-11.2	-11.4	-9.6
Net Trade Balance	-20.3	-30.6	- 1.7	- 3.5	- 7.4	-8.4
Monetary Transactions (increase in Reserves show by negative entry.	-0.8	5.1	- 0.8	4.2	+ 15.9	-6.4
Total Government Inflow	20.3	14.1	13.6	5.4	28.7	38.2
Long Term Private Inflow	21.6	14.8	10.2	10.4	21.0	6.1
Investment Income (including interest on Public Debt)	5.8	5.4	7.7	10.7	12.3	9.1
Short-term Capital Movements, Errors, Omissions, and Donations.	-15.0	2.0	-7.6	-5.8	- 45.8	-20.4

(1) Provisional.

[*] Source: A.G.T. Carter "The Balance of Payments of East
Africa 1956 - 1961".

East African Economics Review.

Vol.10 No.2, December, 1963.

The balance of Trade and Invisible havebeen adjusted by the authors,
so that ships stores are included as a visible export rather than an
invisible item under the transport account.

TABLE IV

CAPITAL FORMATION AND THE IMPORT BILL

IMPORTS AND NET FOREIGN INVESTMENT.

Year	Net Imports (£ mill.)	Net Imports as % G.D.P	Net Imports Gross capital formation	Balance of Trade (exports-imports) (£ million)
1954	117.5	41.1	1.55	- 15.9
1955	149.0	46.5	1.62	- 41.3
1956	133.8	39.7	1.47	- 13.0
1957	140.1	39.3	1.55	- 21.0
1958	121.4	33.7	1.48	+ 2.0
1959	121.5	32.3	1.53	+ 7.3
1960	133.9	33.4	1.60	+ 5.8
1961	135.2	33.5	1.83	- 1.6
1962	135.5	33.1	1.79	+ 4.2

Sources: Annual Trade Reports, various years.

IV b

IMPORT CONTENT OF DOMESTIC ECONOMIC ACTIVITY

	1958	1959	1960	1961	1962
Gross capital formation (£ mill.)	82.3	79.2	83.6	74.0	75.6
Capital goods imported (£ mill.)	36.5	35.5	40.1	37.6	35.5
Import content of capital formation (%)	44.3	44.8	48.0	50.8	47.0
G.D.P. - capital formation (£ mill.)	277.5	296.5	316.7	330.0	334.1
Non-capital goods imported (£ mill.)	84.9	86.0	93.8	97.6	100.0
Import content of G.D.P. - capital (%)	30.6	29.0	29.6	29.6	29.9

Sources: G.D.P. and gross capital formation estimates are taken from the same sources. 1

Capital goods imported are estimated with the use of the analysis provided under the heading "Retained imports by end use" in the East African Statistical Department's Economic and Statistical Review. The total shown here includes "producers' capital goods" and "manufactured goods, building materials only" from that table, plus the imports of private automobiles into Kenya and Tanganyika not included in the East African departments definition of producers' capital goods, so as to render the result consistent with the definition of capital formation used in those countries' statistics.