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FUTURE TRADE, BALANCE OF PAYMENTS
AND AID REQUIREMENTS OF EAST AFRICAIntroduction.

1. This paper sets out to analyse some of the factors which will determine the size of the foreign aid bill necessary to achieve desirable rates of growth in East Africa during the period 1965-1970. The study was prepared before the authors had access to details of the new Tanganyika plan and, of course, with no knowledge of the nature of the coming Kenya plan. However, in view of the method adopted, this should not detract from the interest of the paper and may be partly an advantage, as it does provide an independent view of the magnitudes involved.

2. The fundamental approach adopted is as follows. Aid and private capital movements are necessary because East Africa wishes to purchase from the rest of the world goods and services in excess of those which could be paid for by East African foreign exchange earnings. An attempt to estimate aid needs must therefore involve an exercise in estimating this gap. This exercise involves an analysis of the future influence, and the one most obviously involved in movements of real resources, is the balance of visible trade. Apart from this, there are a diverse group of other influences which demand consideration - trade in invisibles, foreign investment income in East Africa, and short-term capital movements being the most obvious.

3. In pursuing the analysis, the method has been to investigate the relationships involved in quantitative terms. The advantage of this is that it lends an air of concreteness and reality to the discussion and builds a structure which might be useful to others in pursuing estimation for purposes of practical policy. The disadvantage is that it lends an air of spurious exactness to a speculative chain of reasoning. The reader is to be warned, therefore, that there is much judgement and speculation in the subsequent figures: other economists might well make differing judgements. However, a detailed account of the basis on which the estimates are made is offered, so that the reader can adjust the result according to the degree to which he finds particular elements unrealistic. Projection

* The authors would like to thank Prof. P. Clark for advice in writing this paper. Of course, he is not responsible for any of the remaining faults.

and forecasting is not a very respectable activity among academics, particularly where the data is as flimsy as in most underdeveloped countries. Yet the policymakers cannot avoid this activity, often in the most detailed form; it therefore seems churlish for the academic to defend his reputation by avoiding the risks involved.

4. East Africa currently possesses a monetary system which prevents the brake on development from appearing as a balance of payments constraint; the limit on development will rather appear as a domestic finance problem. Probably, for the period which is being analysed here, there will be a fully operating East Africa Central Bank which will translate the problem more clearly into terms of a foreign exchange limitation. That is the assumption implicit in this analysis.

5. The analysis proceeds as follows:

I. Visible trade.

A. Export earnings.

B. Imports, capital formation, and the rate of growth.

C. The balance of trade.

II. The Balance of Payments.

III. Total aid and long-term private investment.

I. Visible trade.

A. Export earnings.

i) The importance of exports.

6. Exports are important both because they form such an important part of the economic activity of East Africa and because they are the main means of earning the command over foreign currency necessary to finance the import bill required for development. This is a familiar story in many parts of the world; to cite a recent F.A.O. reports:*

"The unfavourable outlook for export earnings from agricultural exports raises a major problem regarding the economic development of non-industrialised countries since agricultural commodities account for more than 60% of their total exports towards the rest of the world while about 80% of their own imports from the industrialised countries consist of manufactured goods, including capital equipment since earnings from agricultural exports are not expected to rise substantially . . . it becomes important that other sources of foreign exchange should increase more rapidly, especially if the higher rate of economic growth is to be achieved . . . the shortage of foreign exchange will remain a major problem in the low-income countries . . . and the need for further expansion of the net capital inflow into these countries, largely in the form of economic aid, should be stressed." *

* F.A.O. Commodity Review 1962, Special Supplement, E/CN.13/45

7. The crucial importance of domestic export earnings for East Africa is shown in table I, in which exports are shown as a percentage of the monetary gross domestic product of each of the East African Countries for the years 1954 to 1962, the years for which comparable estimates of gross domestic product are available. It is probable that in the earlier years the ratios were even higher. The ratio can be seen to be particularly high for Uganda and Tanganyika. In Kenya this ratio has been fluctuating around 20% during this period, in Uganda it has been about 40, but falling while in Tanganyika it has been as high as 45%.

8. Although dependence on exports as such is not necessarily an evil, much apprehension has been caused by the East African dependence on just a few primary products. Table 2 indicates that some twelve agricultural exports contributed an average of 78.5%, 84.9% and 74.0% of total domestic exports of Kenya, Uganda and Tanganyika respectively in the period 1960-1962.

Taking the three most important agricultural exports of each country we get the following picture of their weight in total exports in the three years 1960-62:

<u>Kenya:</u>	Coffee	28.8	<u>Tanganyika:</u>	Sisal	29.0
	Tea	12.5		Cotton	14.9
	Sisal	<u>12.1</u>		Coffee	<u>12.3</u>
		55.4			56.2
Uganda	Coffee	43.0			
	Cotton	33.7			
	Tea	<u>4.2</u>			
		80.9			

Taking the most recent figures (1963) and again looking at the three most important agricultural commodities of each country, we see that in Kenya, Uganda and Tanganyika these same commodities contributed 55.2, 84.6 and 63.3% of total domestic exports; or £24.2 mn, £43.6 mn, and £40.2 mn respectively.

9. Because of this concentration, the level of East African export earnings is potentially highly unstable. The causes of fluctuations are two fold: instability in (a) the output of the important commodities; and (b) the prices at which these exports sell. In East Africa the fall in the level of export prices has been responsible for the poor performance of exports in recent years. In Uganda in particular export earnings have been falling from 1957 through 1962; and this decline would have been more pronounced but for an increase in the quantity exported. Looking at the three countries together, quantity exported increased by 71% between 1954 and 1962, while the unit

*Y. Kyesimira, "The Agricultural Exports of East Africa." EDRP 27, page 5.

value declined by 24%. Thus the total value of East African domestic exports would have been £166.0 million in 1962 if the prices of 1954 had held, instead of the actual value of £126.8 mn. recorded in that year.

10. In the period 1946 to 1952, domestic exports provided a very powerful expansionary force in East Africa, primarily because of the Korean War commodity boom. After that boom, however, growth in East Africa has been much slower especially in Uganda and Tanganyika, because of the drastic fall in the growth of export earnings. In fact much of the growth which was recorded between the end of that boom and the end of the decade was due to very rapid expansion in the government expenditures. In part this expenditure, especially in Kenya, was financed by foreign loans and grants, especially from Britain.

11. The expansionary effects of the Korean boom indicate the tremendous possibilities resulting from successful export expansion; the subsequent difficulties faced by the East African economies are a good indication of the dangers of the dominant position of this sector. The source of the difficulties of the post-Korean period is evident from the Table 3. ** Whereas export prices have been falling steadily in the last eight years (and have fallen by 24.6 since 1954), the import prices have been, up to 1960, higher than their level in 1954 and only in the last two years have they actually gone below the 1954 level. The terms of trade facing East Africa have been deteriorating up to 1960 and only in the last two years have they shown a sign of improving, although they are still 20% worse than in 1954.

(ii) Forecasting export earnings

12. For the purposes of this paper it is necessary to make forecasts of East African export earnings. In any such forecasts there are a number of grave difficulties. Ideally there are three elements which should be considered: export prices, export quantities, and export commodity composition. For agricultural exports each country's total exports and indices of quantity and price are shown in Table 2. For total East African exports, price indices and terms of trade are shown in Table 3. Examination of these figures would indicate that as far as prices are concerned

* Between 1946 and 1952 Uganda and Tanganyika increased their export earnings by more than five times.

** The import price index is much less reliable than the export price index and should be viewed with some suspicion. Nevertheless, the picture which emerges of a very strong negative swing in the terms of trade throughout the 1950's is undoubtedly correct.

past performance offers little comfort; for since the Korean War commodity boom the prices of major agricultural exports have been generally declining, the price index having fallen by twenty-four points between 1954 and 1962. It is possible that this trend will continue in the next decade, if only because world supply is likely to continue to be chronically above world demand for major East African crops, as the FAO commodity projections for the next decade indicate.*

13. Properly any attempt at forecasting exports should involve a detailed analysis of both production and marketing possibilities, crop by crop. Such a detailed, disaggregated account would be out of place in this paper. Rather, aggregate projections are made to illustrate how the export performance must be fit into the broader picture. It is important to realize that in this sector any estimates, however careful, are very liable to be quite far from the mark, particularly as regards performance in any particular year. It is certainly not within the ability of even the best economic planner to forecast the vagaries of the East African climate (and it should be realized that year to year price movements may depend on the climatic vagaries of some other parts of the world in the case of particular crops). Because of the inherent instability of this sector it is important to realize that an aid programme must do two things: it must be based on the best possible forecast of likely trends in this sector, but it must also contain an element of flexibility to allow for gaps between forecast and performance. Particularly in the absence of any world-wide effective programmes of income stabilization for primary exports, aid programmes will need a stabilizing as well as a growth element.

14. For the purposes of this study, therefore, forecasts have been based on projections of past rates of growth of export earnings. Such projections involve implicit assumptions about price, quantity and composition effects, without going into explicit consideration of the problems involved. Even in such "naive" projection of past trends there are two obvious problems: (a) the choice of base year will have tremendous effect on the size of the projected series, and (b) the past years used to establish a projected growth rate will greatly affect the result.

15. The importance of the choice of base year is easy to illustrate. Taking changes in quantity, price and commodity composition of East African exports, the rate of growth of East Africa's export earnings between 1954 and 1962 was 3.3% per year. At this rate these export earnings would be

*FAO, Commodity Review 1962, Special Supplement, E/CN.13/45
CCP.62/5

£176 million in 1972, or 39% greater than 1962 level. However, in 1963 there was a dramatic increase in these export earnings -- from £126.8 mn in 1962 to £158.9 mn in 1963, or an increase of £32.1 mn. Recalculating the rate of growth from 1954 to 1963 we get an annual rate of 5.6% and at this rate export earnings would be £275 mn in 1973.*

For the purpose of this paper projection have been made in the following way: instead of using the year 1963 as the base year for the purpose of projection, we have worked out an average figure of the value of East African domestic exports for the years 1961 to 1963 -- and this we found to be £136.3 million. This takes into account the bad years 1961 and 1962, and the good year of 1963; and this is the kind of pattern that we can expect for East African exports in the next decade. We have then used this base to project the value of exports using a growth rate of 3.3% (the one achieved between 1954 and 1962); a growth rate of 5.6% (the one achieved between 1954 and 1963); and a rate of 4.5% which was achieved between 1953/55 and 1961/63. The results were £176 million, £211 million, and £194 million respectively by the year 1970. (See Table 4).

16. With very favourable price effects (for example, if there were no future declines in prices), all of the projections could be on the pessimistic side. However, at the moment it would seem that the only likelihood of a floor at the present level on East African export prices would come as a result of commodity agreements for each of the major export crops, which would probably result in the application of quotas on the quantity of output. In such a case, agricultural expansion would have to concentrate on expansion of crops which East Africa does not produce in large quantities at the moment and which are not subject to world-wide over-supply. The introduction of new crops would very likely involve losses in the rate of increase of the quantity of production. The most optimistic projections made here should be achievable if price declines could be held in the region of 1% per annum without further extensions of already existing restrictions on output expansion.**

* Of this increase in export earnings in 1963, £27.3 mn was due to increases in the earnings of sisal (10.2mn), cotton (9.4 mn) and coffee (7.7 mn). Thus this increase was very concentrated, representing an increase in diversification and leaving the economy as vulnerable as ever to the behaviour of these three commodity markets.

** Steady output growth of the order of 7% per annum has been achieved in the past, but this has included substantial production expansion in coffee, a crop for which East African sales are now subject to quota in the major markets.

B. IMPORTS, CAPITAL FORMATION AND THE RATE OF GROWTH.

1. The foreign exchange requirements for East African economic development depend both on the size of the development effort and the composition of the plan. The composition of an investment plan will have a considerable influence on its impact on the import bill. Detailed estimates of foreign exchange requirements should be produced by the planning authorities who possess both the detailed knowledge of the planning strategy and ready access to data necessary for such an assessment. However, from existing knowledge of the structure of the East African economy and understanding of the development process the outside observer can offer an outline of the relationships and orders of magnitude involved. In an economy as subject to economic, social and political change as that of East Africa the use of historical data for the purposes of forecast is hazardous and this should be kept in mind while reading the following pages. Nevertheless, a beginning must be made somewhere with the hope that time and experience will reduce the speculative component and increase the hard content of this sort of analysis.

2. This section is organized into two parts:

- a) an examination of the total capital requirements of development in the coming decade;
- b) a discussion of the effect of the capital spending programme on the import bill.

a) Capital formation and East African development.

3. All economists would agree that capital formation is an extremely important part of the development process. There is now a much wider recognition that there may be many other things which are equally important, but this does not negate the truth that economic growth without a steadily increasing capital stock is highly unlikely. However, it is much easier to accept this truism than it is to specify how much capital formation is necessary to achieve different desired rates of growth, partly because the productivity of capital depends so much on other aspects of public policy. The simplest way of handling this problem is to assume that there is some fairly fixed amount of capital necessary to produce a given increase in production and to estimate this relationship (the capital-output ratio) from empirical data drawn from the recent experience of the countries under study. For detailed planning purposes this procedure is dubious, as one of the prime objectives of policy may well be to change this ratio so that it becomes a variable subject to policy rather than a constant, part of the data of policy making. Moreover, there is only small justification for the belief that the relationship will prove constant over time. Yet it is widely used, because it is straightforward and does provide a crude insight into the likely orders of magnitude which may be experienced in the future. It is in such a spirit that the concept is used here.

4. Because of the crucial nature of the result for the rest of the discussion and because of the large element of personal judgement involved, the process of estimation of a probable capital-output ratio is set out in some detail. Capital formation and gross domestic product figures are set out in table 5. This table indicates, rather startlingly, that capital formation has declined from a peak in 1955 both in relative and absolute terms. Moreover, in the years 1961 and 1962 the low levels of capital formation were associated with virtual stagnation in gross domestic product. Because of the depressed state of the economy during the final two years in the table it is best to consider the period 1954-1960. What was the capital-output ratio for that period?

5. If it is assumed that investment undertaken one year will not result in increased productive capacity until the following year, then the difference between the capital stock in 1960 and 1954 consists of the investment during the period 1954-1959. There are two difficulties involved in using the data in table 5 for the purpose of computing the change in capital and the increase in output between 1954-1960: (i) during those years prices changed, and (ii) recorded investment was in gross terms, some part of which went to replace worn-out equipment. In order to arrive at a net capital/output ratio it is necessary to allow for both of these effects.

6. There is a lack of comprehensive and reliable data on price changes in East Africa. There has been only one published attempt at providing estimates of domestic product at constant prices an effort which inspired so much adverse criticism as to

suggest that the results are of no great reliability. Surveying the various evidence offered by Haddon-Cave and the various indices available the following assumptions are made here:

- (i) export prices fell by the amount shown in table 3
- (ii) the price of non-export domestic production rose by $1\frac{1}{2}$ per cent per year.
- (iii) Investment goods prices rose by $1\frac{1}{2}$ per cent per year. (The dubious nature of the import price index and the lack of other data make this figure a tenuous guess.)

** Net only in the sense that the capital stock calculations are adjusted for replacement.

* C.P. Haddon-Cave "Real Growth of the East African Territories 1954-1960" East African Economics Review, Vol. 8, No. 1, June 1961.

7. On the question of replacement there is even less evidence to draw on. A recent Kenya government publication* suggests that in 1962 replacement spending was at about one tenth of monetary gross domestic product. Although it may well be true that certain items included in the capital stock estimates of East Africa have a high rate of deterioration (especially automotive equipment), this estimate seems to be extraordinarily high. Much of the current capital stock consists of buildings and other construction items. For East Africa as a whole, building construction and works formed 56 per cent of gross capital accumulation during the 1954-59 period for example.

One would assume that this element in the capital stock would require a very low rate of replacement. Even allowing for the decline in the rate of growth of the economy, it seems unlikely that the rate of replacement could be as high as suggested by 1962. In this analysis the assumption will be made that during the 1950's the rate of replacement was 5 per cent of monetary gross domestic product, that by 1962 it had risen to 7 per cent.**

* The Growth of the Economy, 1954-1962. Economics and Statistics Division Ministry of Finance and Economic Planning, Government of Kenya, Dec. 1963.

** A rate of replacement of 7% of gross monetary product in 1962 implies replacement of £29 million (1962 prices). During the period 1954-1959 transport equipment spending averaged £16 million a year (including railway and air equipment as well as cars and lorries), while other machinery and equipment averaged £20 million. Assuming replacement of transport equipment was equal to the annual spending of that period and that of other machinery and equipment was at one half that level (both liberal assumptions) replacement (with no allowance for price changes) would be at £26 million. Note however that if the economy were working at full steam in 1962 gross domestic product would have been higher. The replacement level of the earlier period is assumed to be lower because of the very high rates of growth experienced during the early 1950's, the extremely high rates of capital accumulation resulting in a very low average age for the capital stock. Of course, it should be realized that depreciation will accrue at much higher rates than replacement.

Restoration of higher rates of growth for a period will reduce this retirement rate, reducing the capital formation rates necessary for given levels of growth accordingly.

8. The application of these assumptions to the data set out in table 5 leads to results, in 1954 prices as follows:

Growth in monetary gross domestic product
(1954 prices) 1954-1960 = £131. million
Growth in capital stock (1954 prices)
1954 - 1960 = £394.0 million
Capital/output ratio = 3.00

If the rate of replacement during this period were as high as 7.0% of gross domestic product, then the capital/output ratio during this period was only 2.69.

9. In The Growth of the Economy, 1954-1960 it is suggested that the Kenyan capital/output ratio lies in the region 2.5 to 3.0; the ratio chosen in that paper for projection purposes is 2.8 * This analysis, using data on an East African wide basis, supports that estimate. In future it may be possible to stimulate the adoption of more labour intensive methods, both in order to reduce the capital requirement and to expand employment opportunities at a faster rate than the recent dismal experience. However, until there is concrete evidence of the possibility and viability of such efforts, it is probably wiser to operate on the fairly pessimistic assumption that future development will require as considerable an effort in capital formation as the expansion of 1954-1960.

10. Having estimated a capital/output ratio, albeit through a long chain of approximation, certain other information is necessary before this can be translated into a picture of capital requirements for development. One thing which distinguishes the low income countries of the modern world from the more prosperous (and from those countries during their industrial revolutions) is the extremely high rates of population growth. If the population is growing some of the growth in real output must go to maintaining the additional people - real output must grow faster than the growth in population for there to be any increase in output per head.

11. The most recent and authoritative estimates of East African population growth suggest that Kenyan population is growing at 3.0% per year, while Uganda and Tanganyika are experiencing somewhat lower rates of growth. From this source it would seem reasonable to assume that the current rate of population growth for East Africa as a whole is of the order 2½-2¾% per year. For this analysis the higher estimate is chosen, as the immediate prospect is that the growth rates of Uganda and Tanganyika will rise to that of Kenya, rather than vice versa.

* op. cit. pages 8-9

** J.G.C. Blacker "Population Growth in East Africa", East African Economic and Statistical Review, no.8., September 1963.

12. The second complication that arises is that some of the real growth achieved may be lost through declines in the price at which East African countries can sell their products on the world markets. With so many primary producers engaging in major programmes of agricultural expansion there is no reason to be optimistic on this score. Between 1954 and 1962 export prices fell at an average rate of 3.4% per year; from 1956 to 1962 at the somewhat lower of 2.6% per year. For this analysis the possible effects of price decline cannot be ignored; it is therefore assumed that export prices decline at a rate of 3.0% during the coming few years. Exports accounted for 31 to 34% of gross monetary domestic product during the period 1954 - 1961 (see table 1). Thus it is possible that as much as 1.0% of gross domestic product per year will go merely to offset the decline in export prices.

13. Therefore the conclusion is reached that for purposes of realistically conservative projection, as much as $5\frac{3}{4}\%$ growth must be achieved each year before any growth in real output per head is recorded. If this conclusion is added to the estimates of the capital output ratio the results in table 6 are obtained. The table indicates the rate of capital accumulation necessary if it is assumed that replacement equals 7% of gross domestic product, if it is as low as 5% then the necessary rates of capital formation would all be 2% points lower. If high rates of growth are sustained over considerable periods then it is likely that the 5% replacement rate will apply. A range of capital/output ratios are indicated both because of the speculative nature of the estimates and to provide some indication of the gains to be achieved from reducing the capital/output ratio. *

14. What are reasonable goals for East African growth? Ultimately this must be partly a political decision, involving a choice about the amount of effort and sacrifice with the society is willing to make. A growth rate of 2% per capita per year would double per capita output in 35 years, 3% in 24 years and 4% in 18 years. No doubt even a 4% rate, which would by no means make East Africa wealthy in two or three generations, sounds discouragingly slow. However, for reasons suggested above, during the coming few years a growth rate of 4% per capita may require a growth in total output of as much as $7\frac{3}{4}\%$, although less pessimistic assumptions about population growth and export prices would make the task appear that much less arduous. **

* The problem is, of course, much more complex than is suggested because of the possibility that adjustments in the capital out-put ratio might have some effect on the future rate of saving attainable (e.g. increases in labour intensity might increase the wage share in national income and lower the rate of saving).

** In considering growth rates, it should be remembered that they represent averages. For a given growth rate to be realized, for many years rates much higher than the goal must be achieved because, for one reason or another, it must be expected that there will be some unfortunate years which will bring stagnation and maybe actual decline. Also an aggregate growth is an average of the performance of many sectors of the economy, some of which will inevitably stagnate or decline, so that other sectors will have to achieve growth faster than the goal for the economy as a whole.

15. As this paper is being prepared Tanganyika is in the process of unfolding the first comprehensive plan that has been attempted for any East African country; this paper has been written without detailed knowledge of that plan and without a clear picture of the effort that the other two East African countries are likely to be willing to put into development and the goals they expect to achieve during the coming period. Although there will be wide difference of opinion on this question, this paper proceeds on the basis that the minimum growth necessary in East Africa is in the region of 2-3% per capita and that the goals of the governments may be a good deal higher. Therefore an analysis is made of the implications of a development goal of $2\frac{1}{2}\%$ (the minimum goal) and of a $3\frac{1}{2}\%$ (which is more likely to be near the official objectives.). These two goals would imply a rate of growth of total product of $6\frac{1}{2}\%$ and $7\frac{1}{2}\%$ respectively.**

16. In addition to the desire for increase wealth as such, the need to expand employment opportunities faster than population growth suggests that growth rates of 2% - 3% per capita are a bare minimum. Recent employment experience suggests that the growth in employment is likely to be well below the growth in output. The reasons for this are by no means clear, but the experience seems persistent and is typical of a large number of developing economies. It is quite likely that in East Africa an increase in total output of as much as 6% per year will be necessary to expand employment at fast enough rate to maintain the working force at the same small proportion of the total population which it represents at present. *

** More optimistic assumptions regarding export price and about population growth would translate such rates of growth in total output into higher rates of growth of per capita output than are recorded here. Of course, the longer the period of projection the more the creation of forecasts based on recent experience becomes a process of simple guesswork. As the assumptions made here are, on the whole, on the pessimistic side it is open to planning authorities to be a little more hopeful and to conclude that the overall growth rates suggested will in fact double output in shorter periods than those suggested here.

* This is a preliminary judgement based on the recent performance of the East African economy and information from a number of similar economies.

17. Reference to table 6 suggests that the achievement of the goal will require a rate of gross capital accumulation in the region of 24% of gross domestic product, while the likely objective will require a rate as high as 27%.

18. Examination of table 5 suggests that the goals set out are within the bounds of possibility but are by no means a simple task. The years 1954 - 1958 produced a performance of the same order to magnitude as that suggested. However, the picture is disturbing in that the best performances are all in the early years, the trend of capital formation has been downward both in absolute and relative terms, and the performance from 1959 onwards, if continued, would not result in the desired growth rates. In fact, comparison of tables 5 & 6 suggest that capital formation during the years 1961 and 1962 was hardly high enough to maintain real output per head. Moreover the performance of those years is particularly depressing, for a very low proportion of output was devoted to capital formation during years when the level of output was itself depressed. Capital formation, if represented as a proportion of the potential full capacity output of those years would have appeared even lower.

19. It must therefore be concluded that capital accumulation must be raised above the levels achieved during the 1959-1962 and, indeed, the attempt must be made to regain the boom levels of the mid-1950's. That boom resulted from a confluence of differing favourable effects - the high export prices of the previous years, the inflow of capital and the high levels of government spending. The fortuitous reproduction of those conditions is unlikely.

20. At 1962 output levels, the minimum goal of 24% gross capital formation would have required a gross investment of £98 million (compared to the £75.6 actually achieved). However, in a situation with less than full capacity utilization the achievement of higher levels of investment is likely to result in increases in real output. Realistically, therefore it would seem that the achievement of the desired goal would have been associated with gross capital formation of £105-110 million from a domestic product of £440-455 million. In other words, there was a short-fall of capital formation in 1962 of the order of £30-35 million. This is not as depressing from the long term point of view as it might seem at first sight. 1961 and 1962 were depressed years partly because of negative climatic conditions, which it must be hoped will not be a regular feature.

Also during recent years the energies of East Africa have been concentrated on political and social change, with high turnover of personnel and much of the organization talent in the society being devoted to tasks of political and social reconstruction. Much of this effort is of a once and for all nature, and with its completion there will be a redirection of the energies of the society into tasks more directly concerned with economic expansion.

21. The data at hand only carries the story as far as 1962. There seems to be a good likelihood that the years 1963 and 1964 will prove to be much more successful for all the East African economies, largely because of the successful export record of 1963. The task ahead for East Africa is to build on this restoration of fortunes, attempting to achieve the desired rate of capital formation in 1965 and expanding along the desired growth path from that point. The goal suggested is fairly limited and the implications of failure potentially explosive enough to suggest that the following estimates are of a minimum nature.

Assuming that:

- (i) there is a higher rate of growth during the 1963-1965 period than during 1960-62.
- (ii) $2\frac{1}{2}$ - $3\frac{1}{2}$ % per capita real growth is achieved by 1965 (with similar population and export price level assumptions as made in the previous analysis) then the gross capital formation requirements for 1965 - 1970 are shown in table 7.

b) Capital formation and the import bill.

1. The foreign aid needs resulting from a given development programme cannot be deduced through some simple formula. There are many minor considerations, but the crucial variables are two: the degree to which capital accumulation can be matched by domestic saving, and the degree to which domestic saving can generate the foreign exchange requirements of the plan. Neither of these variables is susceptible to simple manipulation.

2. If domestic savings are less than the planned level of capital accumulation then the gap must be made up through a net transfer of foreign resources or the result will be inflation rather than real expansion. However, even if domestic savings release resources equivalent to the value of the planned investment bill these resources might not be the right kind for the purpose at hand.

Typically in countries at the East African stage of development a substantial proportion of investment goods have to be imported. The low level of industrialization precludes the development of a heavy engineering industry which would provide the basic capacity of investment goods production. Therefore, although enough domestic savings is generated to cover the planned investment bill, there might still be a scarcity of foreign exchange to buy that portion of the investment goods bill which is inevitably imported. The economy might, in this circumstance, be faced with a surplus of domestic resources at the same time as having a critical scarcity of foreign exchange.

3. As an understanding of this relationship is crucial to the understanding of the foreign aid problem, it is worthwhile belabouring the point with a numerical example. Let us assume that the import content of investment goods is one half, whereas that of consumption goods is one quarter. Take the example of the situation where the planners decide to expand investment by £10 million and, aware of the need to release resources to do this, take measures to ensure that domestic savings rise by £20 million. Then the import bill will be increased by £5 million by virtue of the investment expansion, but only reduced by £2.5 million resulting from the increase in domestic saving. This would result in a net increase in the import bill and in foreign exchange needs of £2.5 million, so that if foreign exchange resources had been previously fully utilized the investment programme would be curtailed for lack of foreign exchange. The planners would then be faced with the necessity (in the absence of additional foreign capital movements) of reducing consumption still further to release the foreign exchange. In the example here, a level of domestic saving of £20 million would be necessary to provide the foreign exchange requirements for the £10 million investment increase. This will have two evil consequences. It will render an already large burden of savings for a low income economy that much greater, and the necessary reduction in domestic spending will have deflationary consequences on the domestic economy.

4. Faced with this situation the alternative strategy would be to attempt to change the import content of domestic spending. This could be done in two ways - by a policy of rationing, which when used in moderation is a sensible policy, but which has serious consequences if carried too far. In dealing with the demand for consumer goods attempts may be made to restrain domestic purchases through higher duties and currency restrictions. Such a policy is sensible and is consistent with the ambition to expand demand for domestically produced consumer goods.

Additionally, the attempt may be made to bias the investment programme towards those types of projects which are less expensive in terms of foreign exchange. This is surely one sensible criterion for influencing the balance of an investment programme, but it may well conflict with others, so that there will be limits to the degree to which the import content of investment goods can be reduced.

5. By the end of the decade, the expansion of domestic manufacturing activity should provide for the domestic production of many goods now imported. However, this will not necessarily lead to as great a reduction in the proportion of imports to domestic economic activity as might at first be hoped. The net import substitution will be much less than the gross output of the new industries, because of the continuing necessity to import many of the inputs for the new industries. Also, many of the consumer goods currently imported are of such a character that it may be expected that demand for them will rise faster than the rise in incomes, thus partly offsetting the effect of import substitution.

6. Table 3 & 5 suggest the possibility of a strong relationship between capital formation and the import bill. Except for 1961 and 1962 this table shows more stable relationship between capital formation and imports than between either of these and gross domestic product. The relationship is unlikely to be simple if only because the composition of investment can have an important effect on the import bill, in particular, because of the structure of the East African economies projects involving building and construction probably give rise to smaller quantities of imports for a given initial expenditure than projects involving machinery and equipment purchase.*

7. 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 9. 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 9 also shows imports (other than those used in 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.

* See Brian Van Arkadie, "The Structure of the Kenya Economy", E.A.I.S.R. Conference, December 1963 for some evidence on this point.

In due course one of the effects of an investment programme will be to change the import content of domestic spending. The basic strategy of any programme of industrial development is likely to be one of import substitution which will have its impact in particular on the import content of non-investment goods.* In projecting future imports needs some attempt must be made to allow for this effect. The assumption made here is that there will be a process of import substitution which by the end of the period (1970) will have resulted in a net reduction in import dependence which seems feasible from a direct evaluation of the current import bill and the existing industrial structure.** The possibility of great reductions in import content through a swift transformation in domestic spending patterns is, like the possibility of raising savings partly a political question, depending on the willingness of the community to accept discomforts and restrictions in consumers' range of choice in purchasing. (Before it is assumed that substantial changes in these relationships can be made very swiftly it should be realised that at current (1962) levels of spending a £3 million reduction in imports would be necessary to reduce the import content of non-investment spending by 1%, and that as income grows that figure will itself grow.)

9. The second complication which must be faced is that the degree of import dependence is partly a function of the level of the investment effort. As the investment effort is increased and pressure is put on the limits of domestic productive capacity (either in one sector or overall because of difficulties in raising the savings rate), the import content of domestic spending will rise. At the extreme, when domestic capacity is fully extended, an additional domestic expenditure could give rise to an equal expansion in imports.

* See Brian Van Arkadie, "Import Substitution and Export Promotion as Aids to Industrialization in East Africa", E.D.F.P. 24, E.A.I.S.R., 6th March, 1964.

** See Brian Van Arkadie, op. cit. The net reduction is £25 million by 1970, given the higher rate of growth; for the lower rate the net reduction is only £9 million.

For the purpose at hand the assumption is made that if the minimum investment level suggested above is achieved then the import content of investment spending will be at the lower end of the range of recent experience (45%). If the "likely goal" is achieved, then this must apply a considerable pressure on resource and therefore it is assumed that import content will be at the upper end of the range for recent experience (50%)

10. Using these various simplifications, the import bill may be estimated by applying the following relationship for each year:

$$\text{IMPORTS} = \left(M + \frac{N(1 - S)}{S} \right) \text{GROSS CAPITAL FORMATION}$$

where M = import content of investment
N = import content of non-investment gross
gross domestic product.
S = gross capital formation as a proportion of
G.D.P.

This relationship is applied to the projected capital formation shown in table 7 to derive the results shown in table 10.

C. The Balance of Trade.

1. The estimates of export earnings can now be combined with the estimates of import requirements to provide an estimate of the balance of visible trade which will have to be financed during the period being considered. This is done in table 11, where four estimates are offered, based on two alternative growth objectives and two alternative projections of export earnings.

2. The results shown in table 11 may seem surprising. If the "highly optimistic" export results are achieved, these estimates suggest that the minimum growth goals could be achieved with an excess of exports over imports! The export price projections which would be implicit in such an achievement are by no means utopian and could be achieved if the decline in prices was moderated rather than reversed. Moreover, if such a moderation in price declines were achieved, then the minimum growth objective would result in higher per capita growth rates than suggested above, because of the unduly pessimistic export price assumptions adopted for those estimates.

3. Even the largest of these represents a very small percentage of gross domestic product (about 3%). Another way of viewing the same thing is to note that the excess of imports over exports only comes to 10% of total imports in these calculations. If the only net debits in the balance of payments accounts were derived from visible trade then the foreign investment and aid problem might be of quite small proportions, and would probably be largely a technical and personnel aid problem, rather than a question of finance.

II. The Balance of Payments.

1. The exercise which has been undertaken so far in this paper has attempted to estimate the visible trade gap which will have to be financed during the coming period of East African development. To transfer these estimates into foreign aid and capital flow needs another and even more speculative exercise is necessary. The foreign exchange needs of a country depend not only on its trade flows but also on capital movements, income flows and invisible trade. Private individuals or companies may wish to shift financial assets either into or out of East Africa. Services may be purchased or sold which do not appear in the trade accounts (e.g. insurance, tourism). Some assets in East Africa are owned by residents abroad, so that part of the domestic income accrues to them and is potentially transferable abroad. Also, many of the residents of East Africa are of expatriate origin with intention of eventual return and may be interested in transferring part of their current incomes either in expectation or on the occasion of their departure.
2. No one would deny that such movements in and out of East Africa have been large in the past decade. It is much less possible to be certain about the size and nature of such movements. The basic data available consists of the official East African Balance of Payments estimates available for the years since 1956 (unfortunately at the time of writing only available until 1961). The size of the "errors and omissions" item in 1960 and 1961 was much larger than the items under any of the major sub-headings of the accounts, indicating the difficulties the official statisticians face in tracing down the exact origin of many of the flows.
3. This lack of detailed knowledge renders forecast much more speculative even than the tasks already undertaken. Without knowledge of the origin of the net effects which can be identified it is difficult to make even a rough judgement of the degree to which the flows which have been experienced in recent years can be checked through such steps as exchange control and tax inducements, or how far they have been once-for-all movements of accumulated liquid assets rather than transfers of current income receipts.
4. Table 12 summarizes the information which is available on the East African Balance of Payments. Although based on the official balance of payments tables, adjustments have been made to render the balance of trade item as close as possible as that which can be derived directly from the Annual Trade Reports. The final item, derived as a residual, consists of recorded short-term capital movements, net private donations

and errors and omissions. The errors and omissions item may be assumed to result in the main from unrecorded short-term capital movements and the transfer of current incomes in addition to that amount already recorded as foreign investment income. *

*For a description and discussion of the official estimates see A.G.T. Carter, "The Balance of Payments of East Africa 1956-1961", The East African Economics Review, Vol.10, no.2, December 1963 pages 75-87. See also The Balance of Payments of East Africa 1959, 1960 and 1961, East African Statistical Department.

5. For the purpose of estimating aid, a forecast of the separate items in these accounts would be necessary. This paper goes as far as analysing the factors which will influence the amount of aid plus long-term private investment which will be necessary, leaving largely unanswered the question of the degree to which this gap will be closed by aid and the degree to which it will be met by private flows.

6. The remaining task, then, is to analyse the possible influence of the other items affecting the balance of payments.

These may be grouped under three headings:

- (a) invisibles
- (b) foreign investment income
- (c) short-term capital movements, private donations and errors and omissions.
- (d) miscellaneous government outflows.

(a) Invisibles.

(7) Data on invisibles, consisting of a series of net items, the result of balancing invisible imports and invisible exports in each account shown in table 13. Under each of these headings it seems clear that the "invisible imports" side of the accounts will be strongly related to the size and spending power of the expatriate community. Foreign travel, foreign education and insurance * were certainly strongly supported by the expatriate community. Insofar as Africans are now receiving overseas training

* Insurance of imports is not included under this item, while transport costs of imports are not included under the transport heading.

this will to some extent affect the balance of payments, but to a considerable extent will be through the agency of scholarship schemes which are likely to affect neither side of the accounts.*

* Although if there were a complete accounting system, such scholarships would appear as aid and such spending as an invisible import.

As it seems likely that the role of the expatriate community will decline, particularly in the civil service, so that any increase in per capita income for expatriates is likely to be offset by declines in number, it seems likely that these items will not expand as fast as they have in past years.

8. The "invisible exports" side of the accounts consists mainly of tourist expenditures in East Africa and of the sale of transport services (particularly the East African Airways). The number of tourists to East Africa has shown a steady upward trend over the years. The judgement must be that in the future the export side of the invisible account should grow faster than the import side and that the net effect should provide for somewhat smaller outflow than in the past.

9. The crude assumptions made are based on a slight modification of Carter's judgement, * assuming a slight decline in the debit items by 1965, with a subsequent further decline,

* op.cit., page 84.

and a steady rise in tourist income. These assumptions are applied in table 14 to provide an estimate of the future net influence of invisibles. Under the assumptions made the suggestion is that by 1967 invisibles, as defined for the East African accounts, could become a source of net foreign exchange earnings. **

** If the insurance and transport on imports were accounted for as an invisible import then this item would remain a large debit, while the balance of visible trade would appear that much more favourable.

(b) Foreign investment income.*

10. In the long-run this item will be mainly influenced by the amount of new foreign investment which takes place. In the short-run it must depend mainly on the success of the existing foreign holdings within the East African economy. The trend of the official estimates for the years available is upwards, at a faster rate of growth than the growth in the economy as a whole. However, it is also true that this item is strongly subject to cyclical effects.

* Foreign investment income in the East African Balance of Payments Accounts includes interest payments on national debt to non-residents.

11. It should be recognised, in evaluating this item, that to the extent that this income represents undistributed profits it is matched by a balancing item on the other side of the accounts. Even in this case the accrual of such incomes raises the potentiality of transfer, if future dividend policy is changed, or if a foreign investor attempts to realize the value of past accruals through sale of stock or assets on the local market and subsequent transfer of funds overseas.

12. Simple extrapolation of past rates of growth would provide a very high figure for foreign investment income during the latter half of the decade. For example, projecting the rate of growth from 1956 to 1959-1961 (taking the average of the last three years), from a 1960 base, would provide for an income of £21 million in 1965 and £43 million by 1970. Although there is no reason why such a projection should be adopted, it does suggest the potentiality that this heading could become one of the most important elements in determining the balance of payments needs of the country.

13. The method of forecast of foreign investment income was as follows. The rate of growth of foreign investment income may be looked upon as depending on the rate of growth of profits and changes in the proportion of foreign owned profits to the total. Ignoring cyclical effects, the rate of growth of profits is likely to be much the same as the rate of growth of total output (that is, some stability of the profit share in total income is assumed). What will determine the proportion of foreign profits in total profits? In the absence of other evidence there is little alternative but to assume that the relative profit performance of foreign owned and domestically owned assets is constant. This leaves the comparative rate of growth of foreign owned and locally owned assets as the major determinant of foreign earnings.

14. Foreign owned assets will be growing faster than locally owned assets if the proportion of the foreign contribution to gross capital formation is greater than the average ownership can be estimated then the relative rates of growth can be related quite straightforwardly to the current foreign contribution to capital formation.

15. During the 1956-1961 period, for which data is available, the net long-term capital inflow into East Africa was \$150 million during a period when gross capital formation was estimated at \$500 million. It is quite possible that some part of the flow recorded as a capital movement went to finance activities which do not fall within the definition of capital

* Including government long-term borrowing from abroad.

formation used in compiling the official estimates of gross domestic capital formation. Nevertheless, this proportion (30%) must be taken as the first estimate of the proportion of foreign ownership of new capital assets during this period. During the period 1956 - 1960 a net increase in long-term capital held in East Africa of £92 million (1956-1959) resulted in an increase in net foreign investment incomes of £6.5 million (1956-1960), implying a rate of return on net additional foreign investment of 7.0%. These net figures allow for changes in East African owned foreign assets and earnings therefrom. The rate of return indicated might seem lower than would have been expected, but it should be remembered that during the period under review equity investments formed between only one third and one half of the total. ** The return on fixed interest investments was presumably somewhat below 7.0%, leaving room for equity investments to bear a somewhat higher rate.

** Estimate of the Balance of Payments of East Africa, 1959, 1960 and 1961.

16. Applying the 7% rate of return to the net foreign earnings in 1956 would suggest a net foreign ownership of East African assets, as defined for these purposes, of £82 million. This would suggest, therefore, that net foreign holdings of East African assets by the end of 1961 would, as an upper limit estimate, be of the order of £230 million. (It should be remembered that this is ownership of corporate assets and government long-term obligations). This suggests net foreign ownership of the capital stock, in the sense used here, was more than 20% by 1961 and almost certainly less than 25%. This would also suggest that the proportion of foreign ownership had been rising during the period in question. (i.e. the marginal contribution of foreign ownership was above the average.)

17. Concluding this line of reasoning, the likelihood would seem that as long as foreign financing, through equity or fixed interest loan expansion, remains at less than 25% of total gross capital formation, then the net drain on the balance of payments from investment income flows will not grow faster than the growth in overall incomes. (Similarly, as long as foreign interests finance a fixed proportion of gross investment the rate of growth of foreign investment income will eventually approach the overall rate of growth.)

18. It has already been pointed out that the question of the relative role of aid as compared to investment is not to be analysed in this paper. For the purposes of this projection, however, there is an inter-dependence, which properly should be subject to simultaneous solution. For this part of the analysis it

will be assumed that the contribution of foreign, non-aid finance will be somewhat less than 25% of total gross capital formation. Therefore it will be assumed that in the future the growth of the debit side of the international investment income account will be at the same rate as the growth in income as a whole, and the credit side will be fairly constant.* 1960 is used as a base year and the results are shown in table 14. It should be recognised that if a more ambitious role is envisaged for such finance then, for the future, foreign exchange needs would have to be adjusted accordingly.

c) Short-term capital movements, donations and errors and omissions.

19. As the official balance of payments estimates only cover corporate capital and investment income movements in the private sector, there is a large volume of flows which only get recorded in the estimates as a residual. This is likely to be particularly unfortunate for an economy such as the East African, where there is a large amount of economic activity in the hands of unincorporated enterprises, medium-sized farmers and the professional people. As members of this community are likely to be more sensitive to their future political and social status in the society than the large companies covered by the statistics, their capital and investment income movements are not only of general economic importance, but have also been a highly volatile element in payments flows.

20. Although the details of the origins and directions of flows under this heading are not recorded, the fact that they became very large in 1960, with a major flight of funds, and that this flight has continued to some extent, subsequently at a much abated level, is quite clear from the data which is available. Presumably some part of this flight has resulted in a decumulation of liquid reserves and therefore cannot be continued. Also, considering the long period, the phenomenon of net emigration from East Africa will eventually exhaust itself. Also, it would be strange for groups of people to stay for very long periods during which they indulge in continuous transfer of funds because of their continued lack of confidence in the future! ** On the other hand it would be wishful thinking to suppose that there will be a complete disappearance of this phenomenon.

* The amount of non-aid foreign investment this would imply can be estimated from table 7. Although these levels may seem large it should be realized that it will include public borrowing and undistributed profits of foreign owned companies in East Africa.

** Although this phenomenon is not unknown, among the wealthier elements of some Latin American societies, for example...

21. Eventually it seems likely that some form of foreign exchange control will be introduced if these flows continue at the level recently experienced. No East African government will be able to accept a continuous strain on the balance of payments deriving from transfers by East African residents. Therefore, after the initial period of emigration and adjustment there will be a limit to the outflow of private funds either through a voluntary adjustment or through actual restrictions.

22. Such restriction, however, is not likely to be complete both because of difficulties of enforcement and because willingness to allow transfer of funds may be necessary to retain the services of some part of the expatriate community needed during that period. To complete the account in Table 14, we have simply entered an arbitrary value of £15 million per year, which is less than in 1960 and 1961, but more than in earlier years. If, for one reason or another, the displacement of expatriate communities takes on an increasing pace it is likely that the strain on the balance of payments will be much more serious; if, on the other hand, the process of displacement ends towards the beginning of the period, then the balance of payments effect might be much less. Any forecasting which does not allow for this item and does not leave flexibility to adjust to its high degree of volatility is certain to be inadequate. The value chosen, therefore, merely provides for the representation of this source of outflow.

d) Miscellaneous government outflows.

23. The debit side of this item in the balance of payments accounts has, in the past, consisted of pensions, leave payments, passages etc. paid to non-residents working for the East African governments. In future it may be expected that the maintenance of consular services will also become an important debit item on this account, but will be matched by a comparable credit item with the expansion of foreign consular services within East Africa.

24. For the purposes of forecast it is assumed that the acceleration in pension payment obligations, resulting from the displacement of the old colonial civil servants, will be largely covered by British payments, which should not be properly viewed as aid or long-term capital movements. However, it must be assumed that overseas personnel will continue to be employed, all of whom will not be covered by the special arrangements entered into with the British government. In particular, the employment of technical personnel on government programmes will involve payments outflows which, although

they may be met by payments directly from some foreign source, must be viewed as part of the bill which aid or capital movements must cover. How far this should enter into this calculation depends on the accounting methods of the donor agencies. The assumption made here is that some rise in this debit account is possible. The figure offered here, £4 million, could be adjusted in the light of greater knowledge of the size and accounting methods of technical aid programmes. The sum chosen is one third higher than the 1960 value under that heading in the balance of payments accounts.

III. Total Aid and Long-term Capital Movements.

1. Table 15 summarises the results of sections I and II, offering four estimates of the aid and capital movements needed, based on the estimates of payments flows and the four estimates of the visible trade accounts.
2. These figures cover a fairly wide range. Columns (i) and (iv) must be judged the most likely alternatives, in that the achievement of the high growth goal is much more likely if high earnings are realized and, similarly, moderate export earnings are more likely to result in the necessity to accept the minimum growth goal. These two columns are fairly close together and must be taken as the final judgement, with all the provisos made along the way, of the likely capital movements and aid necessary.
3. The sum is large, in that it comes to one-tenth of the gross domestic product in the initial years. However, it seems that in the mid-1950's the inflow of long-term capital must have reached similar proportions in comparison to the gross domestic product. In 1961 the total of long-term capital movements and grants was also at that level; however, this included large grants from the British government for the compensation of retiring civil servants, which have been specifically excluded from both sides of this calculation.
4. The actual aid bill will depend on the degree to which the capital inflows are supplied from private sources. Unesco has defined economic aid as outright grants plus net long-term lending, for non-military purposes, by governments and international organization.* The estimated aid bill will therefore consist of the total in table 15, less any private long-term capital transactions. This latter item cannot be realistically predicted at this time. The official estimates show this to have been a highly unstable figure in the past. If private capital movements are assumed to roughly correspond with the capital transactions of the private sector (i.e. that private foreign ownership of government debt has been fairly unimportant), then they have been as high as more than 20% of gross capital formation and as low as less than 10% during the 1956-1961 period. In table 16, aid needs are shown under the assumptions that the figures in either cols. (ii) or (iv) of table 15 apply (high growth and high or medium exports) and that the private foreign contribution to capital formation is 15%.

* U.N. Economic and Social Council, International Economic Assistance to the underdeveloped countries in 1956/57, report to the Secretary General. Notes that in this paper grants made

Footnote cont'd)

For civil servants compensation and pension, mentioned in the previous paragraph, have been excluded.

5. Column A is the minimum estimate for aid, given a growth objective of $7\frac{1}{2}\%$ per year. For a number of reasons readers may feel that this is over-optimistic - in particular, because of export price expectations, and of the assumption regarding the degree to which such a growth effort can be undertaken without raising the import content of domestic spending. The figures, as they stand, ignore cyclical effects. The balance of payments in any given year will be influenced by short-term fluctuations in a large number of unstable items. Perhaps at best, aid arrangements would be planned over a fairly long period with disbursements organized to counter-act the destabilizing effects of other payments flows. In this way, aid would be budgetted for the whole planning period and, in the years in which growth in exports exceeded the estimated trend, disbursements would be reduced, and when there was a short-fall disbursements would be increased.

6. Implicit in the approach throughout this paper is a very definite view of the function and appropriate mechanism for handling the aid problem. Aid should be planned in a framework of aggregative programming for development and should be organised to match the aggregate needs. The aid need is related to the total growth programme, not just to particular projects. Thus a project which does not obviously use foreign resource may result in an increase in import levels, in the manner suggested in the discussion. The tying of aid to particular projects and expenditure on particular imports might, in the end, have a similar effect, but it reduces the planning process to producing a shopping list of projects designed to catch the eye of the donor. Ultimately, if aid is to be a continuing important influence, some method of co-ordination and planning must be devised by which the combined aid effort is designed comprehensively to meet the needs of the developing country, rather than aiming at an amount through a haphazard set of bilateral negotiations.

TABLE 1.

MONETARY G.D.P. AT FACTOR COST AND TOTAL DOMESTIC EXPORTS, 1954-62, in S'million.

	1954	1955	1956	1957	1958	1959	1960	1961	1962	(1963)
<u>KENYA.</u>										
Monetary G.D.P. (A)	112.5	134.7	145.2	154.4	155.5	161.8	175.3	176.8	180.0	
Domestic Exports (B)	20.5	25.7	29.0	26.4	29.3	33.3	38.2	35.3	57.9	43.8
B% of A	18.1	19.1	20.0	17.1	18.8	20.6	20.1	20.0	21.1	
<u>UGANDA.</u>										
Monetary G.D.P. (A)	92.8	102.0	108.8	109.4	106.3	107.7	110.5	111.7	106.4	
Domestic Exports (B)	40.6	41.9	40.4	45.9	45.4	42.1	41.6	39.2	37.6	51.5
B% of A	43.8	41.1	39.3	42.0	42.7	39.1	37.6	35.1	35.3	
<u>TANGANYIKA.</u>										
Monetary G.D.P. (A)	79.1	81.8	89.3	92.9	97.9	106.2	114.4	113.5		
Domestic Exports (B)	36.2	36.2	44.9	39.4	41.7	45.3	54.9	48.6	51.2	63.6
B% of A	45.8	44.2	50.3	42.4	42.6	42.7	48.0	42.8		
<u>EAST AFRICA.</u>										
Monetary G.D.P. (A)	284.4	318.5	337.3	356.5	359.7	375.7	400.2	402.0		
Domestic Exports (B)	97.1	103.8	114.3	111.7	116.4	120.7	131.7	123.1		
B% of A	34.1	32.6	33.9	31.5	32.4	32.1	32.9	30.6		

Source: Statistical Abstracts of Kenya, Uganda and Tanganyika.

TABLE 2A.*

KENYA: TOTAL AND AGRICULTURAL EXPORTS, 1949-63

Year	Total Exports (£'000)	Agricultural Exports (£'000)	Agricultural Exports	Exports
			Quantity Index	Price Index
			1960-62	1960-62
			= 100	= 100
1949	10,964	8,304	48	61
1950	17,182	13,331	45	104
1951	24,068	18,184	45	140
1952	25,792	20,023	58	120
1953	19,521	14,880	49	106
1954	20,260	15,642	50	109
1955	25,667	21,295	64	116
1956	28,983	23,773	77	117
1957	26,331	21,429	71	109
1958	29,300	23,617	84	98
1959	33,306	26,648	89	105
1960	35,191	28,308	99	100
1961	35,326	27,690	101	96
1962	37,913	29,858	100	104
1963	43,832	34,230	116	105

Notes: (a) Twelve major agricultural commodities were taken to represent agricultural exports. See Paul Clark and Yoeni Kyesimira: "Compensatory Financing for Export Fluctuations", E.A.I.S.R., March, 1964.

* The data in Tables 2A, 2B and 2C are taken from a forthcoming paper by our colleague, Mr. Y. Kyesimira.

TABLE 2B.

UGANDA: TOTAL AND AGRICULTURAL EXPORTS 1949-63.

Year	Total Exports (£,000)	Agricultural Exports (£,000)	Agricultural Exports	
			Quantity Index	Price Index
			1960/62 = 100	
1949	28,433	20,921	67	94
1950	28,669	25,774	65	119
1951	47,197	43,738	70	187
1952	47,223	43,249	72	179
1953	33,379	29,407	65	135
1954	40,575	36,582	77	141
1955	41,902	38,733	81	143
1956	40,418	36,991	85	150
1957	45,857	41,102	89	138
1958	45,409	40,848	94	130
1959	42,091	36,266	97	112
1960	41,588	35,056	105	100
1961	39,195	33,458	101	99
1962	37,635	32,018	94	102
1963	51,475	44,804	127	106

TABLE 22.

TANGANYIKA: TOTAL AND AGRICULTURAL EXPORTS, 1949-63.

<u>Year</u>	<u>Total Exports</u> <u>(£'000)</u>	<u>Agricultural</u> <u>Exports</u> <u>(£'000)</u>	<u>Agricultural Exports</u> <u>Quantity</u> <u>Index</u> 1960-62 = 100	<u>Exports</u> <u>Price</u> <u>Index</u> 1960-62 = 100
1949	19,233	15,559	43	97
1950	23,768	18,601	42	119
1951	39,343	33,933	49	184
1952	47,020	35,607	58	162
1953	34,545	26,972	60	120
1954	36,251	27,934	64	115
1955	36,188	26,800	69	102
1956	44,805	33,742	83	108
1957	39,431	28,247	77	97
1958	41,707	29,680	86	91
1959	45,287	32,142	89	95
1960	54,854	40,444	103	104
1961	48,667	34,833	94	98
1962	51,241	37,876	103	97
1963	63,553	48,566	109	118

TABLE 3.

IMPORT AND EXPORT PRICES INDICES, 1956-1962.

<u>Year</u>	1954 - 100		
	<u>Import Prices</u>	<u>Export Prices</u>	<u>Terms of Trade.</u>
1956	103	89	116
1957	103	87	118
1958	101	81	125
1959	101	79	128
1960	105	78	135
1961	99	77	129
1962	91	76	120

Source: Economics and Statistics Review, EACSO, June 1963.

TABLE 4.

PROJECTED EXPORT EARNINGS.

	£'million.		
	(i) 5.6% growth	(ii) 4.5% growth	(iii) 3.5% growth
1965	161	156	150
1966	169	163	155
1967	179	170	160
1968	189	177	165
1969	200	185	170
1970	211	194	176

This table is computed from a base of £136.3 millions in 1962.

TABLE 5.1. 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	83.6	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. Capital formation does not include subsistence activities, for which an estimate is offered in the Tanganyika accounts. There is some difference in definition of capital formation in the accounts of the three countries. The most serious difference is that private automobiles are excluded from the definition in Uganda but included in Kenya and Tanganyika. In this table the practice of the East African Statistical Department is adopted and no adjustments are made for these differences. They are likely to create error mainly when inter-territorial comparisons are made.

The data do not include estimates for Zanzibar.

TABLE 6

ESTIMATED CAPITAL REQUIREMENTS FOR EAST AFRICAN DEVELOPMENT

Capital-output ratio	2.6	2.8	3.0
Growth rate (% per cap.)	Proportion of G.D.P. to be devoted to Capital formation.		
	%		
0	16.75	17.50	18.25
1	19.35	20.30	21.25
2	21.95	23.10	24.25
3	24.55	25.90	27.25
4	27.15	28.70	30.25
5	29.65	31.50	33.25

This table is compiled under the assumptions that:

- (i) replacement forms 7% of G.D.P.;
- (ii) population grows at the rate of $2\frac{3}{4}$ % per annum.
- (iii) there is an annual decline in the real value of G.D.P. of 1% resulting from a saving in the terms of trade.

TABLE 7.

CAPITAL NEEDS FOR DEVELOPMENT.

<u>Year</u>	<u>Minimum Needs *</u>	<u>Likely **</u>
	£ million	<u>Goal.</u>
1965	115	130
1966	122	139
1967	138	150
1968	147	161
1969	156	172
1970	166	185

* Assuming: G.D.P. in 1965 = £475 - 480 million

Capital formation = 24% G.D.P.

Annual rate of growth of G.D.P. = $6\frac{1}{2}\%$.

The annual rate of growth of G.D.P. of $6\frac{1}{2}\%$ may be divided, under the assumptions made, into $2\frac{1}{2}\%$ real growth per capita, $2\frac{3}{4}\%$ population growth and a 1% rise to compensate for falling export prices.

** Assuming: G.D.P. in 1965 = £475 - 480 million

Capital formation = 27% G.D.P.

Annual rate of growth of G.D.P. = $7\frac{1}{2}\%$.

In these estimates, the only price change allowed for is the estimated decline in export prices.

TABLE 8.

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	135.9	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.

TABLE 9.

IMPORT CONTENT OF DOMESTIC ECONOMIC ACTIVITY.

	1958	1959	1960	1961	1962
Gross capital formation (£ mill.)	82.3	79.2	83.6	74.0	75.3
Capital goods imported (£ mill.)	36.5	35.5	40.1	37.6	35.5
Import content of capital form- ation (%)	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 as outlined in table 5.

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.

TABLE 10.

PROJECTED IMPORT BILL: 1965 - 1970

Year	<u>Minimum needs.</u>	<u>Likely goal.</u>
	£ million	
1965	161	170
1966	167	179
1967	174	188
1968	180	196
1969	186	207
1970	194	217

Assumptions:

Minimum needs: Capital formation (derived from table 7) is 24% of G.D.P.; the import content of capital goods is 45%; the import content of non-investment gross domestic product is 30% in 1965 and declines 1% annually.

Likely goal: Capital formation (derived from table 7) is 27% of G.D.P.; the import content of capital goods is 50%. the import content of non-investment gross domestic product is 30% in 1965 and declines 1% annually.

The decline in import content of non-investment domestic product represents a process of import substitution which, by 1970, reduces imports by £25 million from the total which would have been experienced with a constant import content.

TABLE 11.

BALANCE OF TRADE FORECASTS.
(IMPORTS MINUS EXPORTS)

Years	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
	\$ million.			
1965	5	14	0	9
1966	4	16	-2	10
1967	4	18	-5	9
1968	3	21	-9	9
1969	1	22	-14	7
1970	0	23	-17	6

Column A = estimate assuming minimum ($6\frac{1}{2}\%$) growth goals and moderately optimistic export earnings (4.5% growth).

Column B = estimate assuming likely ($7\frac{1}{2}\%$) growth goals and moderately optimistic export earnings (4.5% growth).

Column C = estimate assuming minimum ($6\frac{1}{2}\%$) growth goals and highly optimistic export earnings (5.6% growth).

Column D = estimate assuming likely ($7\frac{1}{2}\%$) growth goals and highly optimistic exports earnings (5.6% growth).

For the derivation of the growth and the projected export earnings see Table 7 and 10 respectively.

TABLE 12.

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 shown by negative entry)	- 0.8	5.1	- 0.8	4.2	+15.9	-6.4
Net Inflow on Government and Private Account.	+21.1	25.5	8.5	-0.7	- 8.4	14.8
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	31.0	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 (Net Outflows)	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 have been adjusted by the authors, so that ships stores are included as a visible export rather than an invisible item under the transport account.

TABLE 13.

(i) INVISIBLES

NET IMPORTS (PAYMENTS OUTFLOWS)

	INSURANCE	FOREIGN TRAVEL	TRANSPORT	MISCELLANEOUS	TOTAL
	£ million.				
1956	1.9	1.0	2.2	2.3	7.4
1957	3.7	0.7	2.4	3.1	9.9
1958	2.3	1.7	3.0	3.5	10.5
1959	4.0	0.6	2.7	3.9	11.2
1960	3.8	1.0	2.3	4.3	11.4
1961	2.7	0.5	2.1	4.3	9.6

Source: Carter, op.cit. Transport does not include transport costs on imports. The figures shown here differ from Carter in that ship stores sales have not been included as a credit item on the transport account.

Miscellaneous includes education and overseas office expenses.

(ii) GOVERNMENT INFLOW

	GRANTS	OTHER (INC. MINITARY)	LONG- TERM	LOANS SHORT- TERM	TOTAL GOVERNMENT
	£ Million.				
1956	5.2	-1.7	13.0	3.8	20.3
1957	7.2	-4.4	14.2	-2.9	14.1
1958	2.9	-1.7	4.5	7.9	13.6
1959	4.6	1.1	2.8	-3.1	5.4
1960	3.9	8.0	12.8	4.0	28.7
1961	17.7	8.3	18.3	-6.1	38.2

Source: Carter, op.cit.

TABLE 14.

PAYMENT FLOWS PROJECTIONS*

Year	NET OUTFLOWS				Total.
	Net Invisibles	Foreign Investment Income.	Short-term movements & errors & omissions.	Misc. Govt. Outflows	
£ million.					
1965	5	19	15	4	43
1966	3	21	15	4	43
1967	1	25	15	4	45
1968	-2	25	15	4	42
1969	-3	27	15	4	43
1970	-5	30	15	4	44

*The method of derivation of these figures is described in the text. These outflows do not include net payments flows from the visible trade account.

TABLE 15.

Year	<u>TOTAL AID PLUS LONG-TERM CAPITAL MOVEMENTS.</u>			
	(i)	(ii)	(iii)	(iv)
£ million.				
1965	48	57	45	52
1966	47	59	42	52
1967	47	61	38	52
1968	45	63	33	51
1969	44	65	29	50
1970	44	67	27	50

Column (i) = Column A from Table 11 plus the Total from Table 14 (Minimum Growth Goals and Moderate Export Earnings).

Column (ii) = Column B from Table 11 plus the Total from Table 14. (High Growth Goals and Moderate Export Earnings).

Column (iii) = Column C from Table 11 plus the Total from Table 14. (Minimum Growth Goals and High Export Earnings).

Column (iv) = Column D from Table 11 plus the Total from Table 14. (High Growth Goals and High Export Earnings).

TABLE 16.

Year	<u>FOREIGN AID BILL.</u>	
	A. High Growth, <u>High Exports</u>	B. High Growth, <u>Medium Exports.</u>
	£ Million	
1965	32	37
1966	32	38
1967	30	39
1968	27	39
1969	25	40
1970	23	40

"A" Based on Column (iv) Table 15

"B" Based on Column (ii) Table 15.

These figures calculated on the assumption that private long-term investment is 15% of Capital Formation.