ON THE CALCULATION AND INTERPRETATION OF NATIONAL ACCOUNTING MATERIAL IN EAST AFRICA[1]

by T. A. Kennedy, H. W. Ord and David Walker
(*University College of East Africa*)

INTRODUCTION

By East Africa is meant the three adjacent British territories in that part of the continent; the Uganda Protectorate, the Trusteeship Territory of Tanganyika, and the Colony and Protectorate of Kenya. These three territories constitute an area which is bounded in the north by the Sudan, Ethiopia, and Somalia; in the west by the Belgian Congo; in the south by Nyasaland and Portuguese East Africa and in the East by the Indian Ocean. In total the three countries have an area of about 681,000 square miles and a population of over twenty million people.

One feature of the East African scene which is of fundamental importance is its considerable diversity, and a recognition of this is essential to a proper understanding of the statistical data.

Over the years Kenya has come to acquire a position of economic leadership in East Africa. The reasons for this are partly historical and partly geographical. The growth of Nairobi as a political and commercial centre for the whole region, the development of Mombasa as the principal port, and the relatively large and compact area of European settlement with climatic conditions making possible a development of mixed farming, have all combined to give the Kenya economy characteristics which are not shown by either of the other two territories. Kenya provides an important distributive link with the outside world for the whole of Uganda and for a large part of northern Tanganyika, and along with the expansion of commercial activity which this has brought into being there has also been a significant growth in secondary manufacturing

[1] The bracketed numerals to be found in the text refer to the numbered items in the bibliography, but not all the items are indicated, since many of them are of a general character. We wish to state that although from time to time we are critical of the material produced by the East African Statistical Department we acknowledge our great indebtedness to the Department's work. In our view it is an outstanding achievement for the Statistical Department to have produced so much material of such high quality in extremely difficult conditions and with such limited resources.

industry. A large proportion of the country's agricultural wealth is derived from European farming; if one excludes the subsistence sector about 80 per cent of the gross product of agriculture is derived from European farms. On the other hand, it is only recently that Africans have begun to enter the cash sector of the economy, except as wage-earners and the growth of African cash crop farming is a great potential source of expansion. One should also take into account the indirect economic effects of the Mau Mau emergency which lasted from 1952 until 1959. This involved large-scale Government expenditure of all kinds, the receipt of substantial grants in aid from the United Kingdom, and it gave impetus to the complete reorganization of African agriculture and village life in the populous Central Province. This heavy Government spending on current account in part financed from overseas, combined with a considerable inflow of capital on both private and public account, has enabled Kenya to run a heavy deficit on her balance of trade in all post-war years.

In contrast the Uganda economy for many years enjoyed large budget surpluses which have enabled her to cushion the effects of the recent commodity recession, and her balance of trade, too, has been consistently favourable for many years. More fundamental, however, is the fact that the Uganda economy has been narrowly based on the production and export of two main cash crops, cotton and coffee, both of them grown almost exclusively by African peasant cultivators; some 40 per cent of her money national income is derived from exports and of this total 80 per cent comes from cotton and coffee. The role of the immigrant races, much fewer in number than in Kenya has been small in primary agricultural production and has been confined to the processing side of the two industries and, outside Government and missionary fields, to trade and commerce. The marketing of the two main crops is controlled by statutory boards which pay seasonally guaranteed prices to growers and also maintain funds for price stabilization purposes. Apart from a small number of industries directly serving the consumer market, industrial activity has been centred on a few large projects; a copper mine and smelter, a textile factory, a cement works, in which the role of Government both directly or through its agency, the Uganda Development Corporation, has been considerable. Uganda is completely landlocked and nearly the whole of her foreign trade is carried through Kenya to or from the port of Mombasa.

Tanganyika is considerably larger, both in size and population than Kenya or Uganda, and her centres of economic development are more widely dispersed. The coastal strip, the coffee-growing region around Mount Kilimanjaro, the southern and western shores of Lake Victoria and the southern Highlands provide a perimeter of development around a vast central area of low rainfall and sparse population. In such a situation communications are of paramount importance, but the basic poverty of the country has limited railway development to the line from the Coast to Lake Tanganyika and Lake Victoria and another line in the north which is linked to the Kenya and Uganda system. Diversity of production, especially in agriculture, is another significant feature of the Tanganyika economy; whereas in Uganda two crops comprise over 80 per cent of export earnings, in Tanganyika five crops account for just over half of all exports. Not only in crops but also in methods of marketing and production is there diversity: plantations, European mixed farming, African co-operatives on a large scale, as well as peasant cultivation produce the cash crops, while a mixture of free marketing, co-operatives and statutory boards are responsible for its marketing. Industrial development, apart from mineral exploitation, is mainly limited to the Dar es Salaam area but is now increasing rapidly with strong Government support although the main problem with such a scattered population is that of access to markets; for instance, the populous districts in the north of the country and around Lake Victoria are more cheaply and easily served from Nairobi in Kenya, with respect to the former, and from Kampala in Uganda, with respect to the latter.

Each of the three territories has its own Government and Legislature: each will in the near future emerge as an independent state, though there is some chance that after obtaining independence they may decide to come together in some sort of federation or union. Nevertheless, although they are separate countries with separate governments which often pursue diverse policies in all sorts of ways, they combine to run jointly a number of enterprises and services on an East African basis. They also come together to form an East African Customs Union.

The main links and economic arrangements between the three East African territories may be summarized as follows. There is a common external tariff, with very minor variations, against goods entering East Africa from the rest of the world. There are no customs barriers between the three territories and with certain exceptions, mainly in the field of agriculture, no physical limitations on the free movement of goods.

There is a common currency and all the territories are served by international banks with headquarters outside East Africa. There is complete freedom to move funds within East Africa from one territory to another. Moreover, as the East African countries are members of the sterling area and the controls over capital movements from East Africa to the rest of the world are very similar to those that exist in the United Kingdom, there is very considerable freedom to move capital into and out of East Africa.

There is a virtual absence of control over the movement of Africans within East Africa and considerable migration does, in fact, take place from one territory to another.

There are, with minor exceptions, common excise rates and the collection of both customs revenue and excise revenue is in the hands of an interterritorial department. In the case of the income-tax the basic law is interterritorial as is the collecting and assessing machinery. The individual territories, however, have the power to fix the actual rates and allowances, although at the present time there is very little difference between them.

A number of national accounting problems emerge from the arrangements already noticed. Firms operate in more than one territory, and there is the problem of how to apportion their contribution to the East African economy between the three territories. This applies particularly to profits and head office expenditure. Then with the common monetary and banking system and the freedom of capital movement it is extremely difficult to make estimates of territorial balance of payment flows and thus to move from domestic to national income calculations.

More problems arise from the joint services which are run under the auspices of the three East African Governments. These are of two main types. First, the so-called non-self-contained services which are completely dependent upon Government grants for their finance. We have already mentioned the departments which collect customs and income-tax revenue. There are many others, particularly in the field of research, and in total nearly £4,500,000 is spent by the various departments which operate on an East African basis; some £3,500,000 being found from the three East African Governments and organizations. Considerable balance of payments and other national accounting problems arise from these flows of Government revenue from the territorial Governments to a central organization and its eventual disbursement in the various territories.

There are two main self-contained services, the East African Railways and Harbours Administration and the East African Post and Telecommunications Administration. These are self-accounting bodies which operate on commercial lines in each of the three territories with head offices in Nairobi, Kenya, and are required, taking one year with another to cover their costs. Interesting and complicated national accounting problems are thrown up by the existence of these organizations.

Very close contact is maintained between the Governments of the three East African countries, and meetings of Finance Ministers, Education Ministers, Agriculture Ministers, etc., regularly take place. In addition there is a fairly elaborate formal structure to exercise general control over the inter-territorial services, and which in its present form dates from 1948. In January of that year the East African High Commission, which consists of the Governors of Kenya, Tanganyika and Uganda, came into being. The Governor of Kenya acts as Chairman of the High Commission, and when it is not in conference the Chairman has certain powers to act on its behalf. For purposes of administration the various services are grouped under the four principal Executive Officers of the High Commission; the Administrator who generally watches over the non-self-contained services, each of which in turn is headed by a Director; the Commissioner for Transport who is in general charge of the East African Railways and Harbours Administration (headed by a General Manager) and the East African Directorate of Civil Aviation; the Finance Member who takes general responsibility for the two revenue departments, Income Tax and Customs and Excise; and the Postmaster-General who is in charge of the East African Post and Telecommunication Administration.

On the 'legislative' side there is the East African Central Legislative Assembly. This Assembly is composed of twenty-four members plus a Speaker, made up, on the one hand, of a small number of High Commission officials and, on the other hand, of representatives of the three territories who are either elected by their respective Legislative Councils or are appointed by the Governor. One Arab member is appointed by the High Commission. The Assembly can only legislate on matters on which it has been given permission by the three territorial governments and legislative councils. Its other role is to consider the estimates of the various High Commission services and provide a forum in which these services can be discussed.

The High Commission has no tax revenue of its own. The self-contained services are, of course, self-financing, but the others are financed by grants voted by the legislative councils of the three territories, from the United Kingdom, and from other governments and organizations.

In this paper considerable attention is given to the operations of the High Commission services. This is for two main reasons.

First, because these services are very important from an economic point of view. As we have already noted, nearly £4,500,000 a year was spent by the non-self-contained services in 1959. The revenue and expenditure of the East African Railways and Harbours amounted to about £25,000,000 (11), and the revenue and expenditure of the East African Posts and Telecommunications amounted to over £5,000,000 (12) in the same year. These money flows amounting to some £35,000,000 a year take place arising out of the activities of the High Commission services. This amounts to over 10 per cent of East Africa's domestic production in the money sector of the economy.

The second reason why we spend a considerable time with the High Commission services, and indeed with interterritorial problems generally, is because we believe that they raise interesting theoretical and statistical issues. It is rare for there to be important services operated jointly for three Governments by a central quasi-autonomous organization. It is also rare for three countries to be joined together in a customs and currency union.

The collection and publication of statistics, including national accounting material, rests with an interterritorial body, the

East African Statistical Department. Its powers and authority are derived from the Statistics Act which was passed by the Central Legislative Assembly in 1949. The Act provided for the setting up of a Statistical Department and the appointment of a Director, and constitutes the legal authority in Uganda, Tanganyika and Kenya for the collection of statistics.

An embryonic statistical service on an interterritorial basis had been in existence long before 1949 serving the periodical meetings of the East African Governors conference. In its present form, however, the service dates from 1946, when it was revived after the war.

From 1946 to 1955 the Statistical Department was organized on the basis of small offices in each territory, and a larger central office responsible for the final production of statistics relating to a wide variety of subjects. In 1955–6 a reorganization of the Department took place and separate, fairly independent units were established in each territory under the control of a senior official known as the Deputy Government Statistician.

The Department is now organized in five sections. There is the office of the Director/Statistical Adviser. The Director/Statistical Adviser is head of the Department and also statistical adviser to each of the three East African Governments. In this latter capacity he has the right of direct access to Ministers in each of the three territories and as Director he is responsible for planning and over-all control – particularly on technical, definitional, and methodological matters.

The units in each territory have considerable autonomy, however, and the Deputy Government Statistician in charge of each unit is responsible (in consultation with the Director/Statistical Adviser, who has the last word on technical matters) for executing the plans and requests of the Government concerned.

Finally, there is the East African unit, which is headed by the Deputy Director of the Department, which is responsible for those statistical series which are collected and published on an East African basis. Such statistics are those relating to external trade, the balance of payments, money and banking, railway transport, and the postal, telephone and telegraphic services. Most other statistics are the responsibility of the separate and semi-autonomous territorial units.

The object of the present organization is to obtain the advantages both of a centralized system (specialization of personnel and statistical comparability as between countries with close economic relationships) and of completely independent units which ensure that the production of statistics will be closely linked to the needs of those responsible for policy-making. The extent to which the 1955–6 compromise has been completely successful is debatable and three separate departments will come into being in the near future. The important fact is that although national accounting material for Uganda, Kenya and Tanganyika is nominally produced by one organization, the East African Statistical Department, it is produced *for* three different Governments which by no means face identical problems, and *by* three different units which have taken from time to time different views on definitions, coverage, and general approach to the problems of national accounting.

One final introductory point: this is a paper about national accounting and not about the general statistical position in East Africa. It is obvious, however, that the ability to construct accurate estimates of the national product and related aggregates depends to a very considerable extent upon the quantity and quality of the basic statistical information. The East African Statistical Department recognizes this, and its policy has been to concentrate scarce resources upon developing the basic stock of information concerning the economy rather than directly upon national accounting matters. Shortage of staff and finance has limited this development during the last fifteen years or so, and the Department has accepted that there must inevitably be many gaps and weaknesses in their national accounting estimates.

I. NATIONAL ACCOUNTING DATA IN EAST AFRICA

In writing this section it has been assumed that the reader has access to the various official publications mentioned. Without this assumption it would have been impossible to have kept within tolerable space limits or to have written in a fairly orderly manner.

I(1) *Tanganyika*

In 1959 the Tanganyika Unit of the East African Statistical Department published *The Gross Domestic Product of Tanganyika, 1954–57* (47) which provided estimates of the gross domestic product sector by sector for the four years mentioned.

The main total product table is divided into fourteen sectors and in various subsidiary tables these sectors are broken down into their component parts. The agriculture sector, for instance, is analysed under no less than eighteen sub-sectors; manufacturing into six sub-sectors, etc. Each of the main sectors is also shown broken down as between that part which arises in the monetary sector and that part which arises in the non-monetary or subsistence economy. All estimates are of domestic rather than national product; they are gross of depreciation; and they are at factor cost. A rather wider coverage of subsistence or non-marketed production has been attempted than in many other underdeveloped countries.

No estimates are provided of the break-down of domestic income or domestic expenditure, but separate tables show gross capital formation both at factor cost and at market values, and there is also a distinction between the monetary and non-monetary economy. Government expenditure, too, on both capital and current account for both central and local government is shown broken down functionally and economically. Estimates are also provided of the domestic product on a provincial basis, though not in the same detail as for the economy as a whole.

It will be clear from the above that there now exists in Tanganyika the basic skeleton upon which as time goes on flesh and muscle can be built, and yet only five years ago there was little material available, and Tanganyika was well behind Uganda and Kenya, both of whom had published estimates of the domestic product as early as 1950. With the exception of some very inadequate 'back of the envelope' type of estimates prepared for the East African Royal Commission in 1953, no systematic work was done by the East African Statistical Department on Tanganyika's domestic income till the late 1950s. However, in 1955, partly perhaps as a result of increasing pressure from the Trusteeship Council of the United Nations, the Tanganyika Government and the Colonial Office invited Professor Peacock to undertake an enquiry into the national income of Tanganyika. Peacock enlisted the help of Mr. Dosser, and the results of their calculations were made available to the Tanganyika Government early in 1957 and published in 1958 (46). Their report not only provided estimates for 1952, 1953, and 1954, but it has provided the conceptual framework and general methodological approach for the subsequent official Tanganyika calculations referred to above. Moreover, it seems to have had a significant influence on those working in the national accounting field in Kenya and Uganda as well.

It is believed that the Peacock and Dosser report introduced three new emphases into national accounting calculations in East Africa. First, the detailed basic estimates were made from the product side rather than the income side. It is true that, as we will notice below, Kenya has produced a product table for ten years, but these estimates are derived for the most part from an income approach. In Uganda no product estimates have been made since the first attempt for 1950 (32). Second, the estimates are of gross product rather than of net product. At the time that Peacock's report was published both the Uganda and Kenya estimates were on a net basis. It might be thought that a net approach is better than a gross approach and that, anyway, it would be necessary to calculate gross figures before net figures could be obtained. This would, of course, be so if depreciation had been calculated directly. But in Kenya, for instance, many of the estimates of net value added had been obtained by applying a ratio to the wage/salary bill and direct calculations had not been made. Similarly, in Uganda income-tax material had played an important part in the calculation of net profits and once again no direct calculation of depreciation had been made. It is considered that not till the Peacock/Dosser research had been done were the possibilities of a proper gross product approach really explored and appreciated. They calculated the gross value added for fourteen individual sectors of the economy and drew upon employment and wage statistics only for a minority of the sectors. They found, moreover, that the reliability of gross value added figures derived from published accounts and direct research was of a much higher order than the individual constituent income components such as wages and salaries or profits. The third point is their attitude to the subsistence sector. They took the view that subsistence output should be considered to be an integral part of the domestic product and that, therefore, as wide a coverage as possible was desirable.

The approach and results of Peacock and Dosser would not have been possible without a good deal of direct research. In considering this it must be remembered that Peacock and Dosser had a full year to do their work and were not operating under the very tight time-table requirements that beset official statisticians who have many other things to do in the course of the year. By visiting most parts of Tanganyika they found it was possible to gain a better knowledge of the importance of such subsistence activities as livestock ownership, the collection of forest products, hunting and fishing, 'cottage industries' and hut building. Similarly, by direct contact with business firms and trade associations they were able to obtain information on gross value added which would not have been possible with the limited resources and time schedules of an official organization.

I(2) *Kenya*

The East African Statistical Department first published estimates of the territory's 'Geographical Income and Net Product' in the December 1950 issue of the *Quarterly Economic and Statistical Bulletin*, which presented estimates for the years 1947, 1948 and 1949, and at the same time published a separate booklet explaining the background to the estimates.

These calculations thus preceded the publication of many of the statistical studies by international and national bodies which have so greatly assisted the production of national accounting material in underdeveloped countries. Indeed, the Colonial Office itself was probably without much experience in the field at that time and Kenya was one of the first of the colonial territories to have official estimates of domestic income and product as an annual time series.

Estimates using the 1950 definitions and approach continued to be published up to and including 1958. In 1959, however, there was published *Domestic Income and Product in Kenya: a description of sources and methods with revised calculations from 1954 to 1958* (20). This publication – a booklet of nearly 100 pages – provides information in striking contrast to anything previously available. It provides very full estimates for the years mentioned and explains in great detail the sources and reliability of the data used and the difference between the new and the old calculations. Moreover, it explains at length the definitions and the methodology adopted. On this latter point it includes as an appendix 'The Recommendations of a Departmental Study Group on the National Income of Kenya, Tanganyika and Uganda' which indicates the present agreed approach of the

East African Statistical Department to national accounting matters.

In this new publication emphasis has been placed – as in Tanganyika – on the preparation of estimates of the gross domestic product by using the product or value added method.

A gross product table divided into fourteen main sectors is made available and a number of these main sectors are in turn subdivided. In addition, each of the main sectors is, whenever possible, shown divided up as between employment income and profit/surplus income thus providing an income table as a by-product of the product table. In no sense, though, have the two approaches been independently estimated. The same data have been used to extract both the product and income table.

The estimates in this new publication have been made more reliable, and the coverage much wider, by the development that has taken place in recent years in the basic statistical knowledge of Kenya. Material from recent non-African agricultural censuses, and from the surveys of industrial production which were carried out in 1954, 1956 and 1957 have yielded much information; and the greater density of agricultural field staff and administrative officers in Kenya has enabled more accurate information about African agriculture to be made available than is possible in the other two territories – though it is still not good. Again, much of the output of Kenya agriculture that is sold on the market is sold through public marketing boards and the statistics provided by such bodies are very useful to the compilers of the national accounts.

Estimates are provided of subsistence production, but a rather narrower view of the subsistence sector has been taken than in Tanganyika, for example; craft industries and native hut building have been excluded.

Estimates of gross capital formation are made available, but no other estimates of components of total expenditure are provided. In particular, no attempt has been made yet to publish an analysis of Government expenditure classified on an economic basis.

I(3) *Uganda*

In December 1952 the East African Statistical Department published *Preliminary Estimates of the Geographical Income and Net Product for the years 1950 and 1951* (32). The net product estimate was only published for 1950 and for subsequent years only details of geographical income have been made available. In the absence of detailed surveys of industrial production, distribution and agriculture the omission of a product table is understandable, although the availability of data from the annual enumeration of employees might have produced some information about certain sectors which could have been used, in a way similar to that adopted in Kenya.

In 1957 there was published a special booklet *The Geographical Income of Uganda, 1950 to 1956* (34) in which revised estimates for the earlier years were provided and full details of the methods of calculation, etc., which were used were given. These figures have been kept up to date from year to year. Within the next few months the Uganda unit of the East African Statistical Department will publish new estimates and explanatory material similar to that of Kenya and Tanganyika.

At the time of writing, however, there is available a geographical income table which is divided into five main sections. First there is the income of African enterprises, mainly the income of African farmers, but also of African businessmen. Second, there are the profits and surpluses of non-African enterprises, public and private. Third, there is the wage and salary bill. Fourth come rents and, lastly, African subsistence income, which is defined very narrowly and is really only an attempt to estimate the value of food consumption. Though it is not explicitly stated, it is understood that the figures are net and not gross, though, as indicated earlier, no real estimate of depreciation is made. In addition information is given about gross fixed capital formation in the money economy, and sector accounts relating to the important African enterprise sector are also provided. The salary and wage bill is also broken down as between industries and by race.

For 1957 a break-down of African money income by administrative districts was provided, subdivided into income from farming, other business income and wages and salaries.

At the moment the Uganda figures are the least elaborate of the three territories. On the other hand, the economy is basically simpler than that of either Kenya or Tanganyika.

I(4) *East Africa*

A summary of the information available about the three territories is provided in Tables I–IV below and in the notes in

TABLE I

Summary of information on domestic income and product, 1957

All items £m.

Item	Total output			Monetary output			Non-monetary output		
	Kenya	Tanganyika	Uganda	Kenya	Tanganyika	Uganda	Kenya	Tanganyika	Uganda
Product/income estimate as published	205·9	162·4	122·2	154·2	92·9	92·1	51·7	69·4	30·1
Agriculture	61·1	76·5		23·8	32·6	42·4	37·3	43·9	
Livestock	19·8	14·6		8·1	3·7	9·0	11·7	10·9	
Forest products	3·1	6·0		0·7	3·8		2·4	2·1	
Fishing and hunting	1·2	2·1		1·0	0·1		0·2	2·0	
Total primary production	85·2	99·1	83·6	33·5	40·2	53·2	51·7	58·9	30·1
Craft industries		5·6						5·6	
Construction	9·6	10·3		9·6	5·4			4·9	
Rent of dwellings	6·6	3·1		6·6	3·1				
Distribution	27·5	7·7		27·5	7·7				
Transport	18·6	10·2		18·6	10·2				
Electricity and water	2·1	0·6		2·1	0·6				
Banking and misc. services	14·9	4·5		14·9	4·5				
Manufacturing	19·8	5·7		19·8	5·7				
Central Government	20·2	10·4		20·2	10·4				
Salaries and wages	85·7		31·0	85·7		31·0			
Profits (African)	59·2		80·2	7·5		50·1	51·7	69·4	30·1
Profits (Non-African)	52·1		10·0	52·1		10·0			
Surpluses of public enterprises	2·2		0·4	2·2		0·4			
Rentals	6·6	3·1	0·6	6·6	3·1	0·6			

TABLE II

Adjusted published product/income estimates

£m.

Item	Total output				Monetary output				Non-monetary output			
	East Africa	Kenya	Tangan-yika	Uganda	East Africa	Kenya	Tangan-yika	Uganda	East Africa	Kenya	Tangan-yika	Uganda
Product/income estimate as published	490·5	205·9	162·4	122·2	339·2	154·2	92·9	92·1	151·2	51·7	69·4	30·1
Adjustment for craft industries and hut building	−10·5		−10·5								−10·5	
Depreciation adjustment	±8·0			±8·0	±8·0			±8·0				
Gross domestic income/product at factor cost: standardized	488·0	205·9	151·9	130·2	347·2	154·2	92·9	100·1	140·7	51·7	58·9	30·1
Net indirect taxes	+28·9	+13·6	+8·2	+7·1	+28·9	+13·6	+8·2	+7·1				
Gross domestic income/product at market prices: standardized	516·9	219·5	160·1	137·3	376·1	167·8	101·1	107·2	140·7	51·7	58·9	30·1

TABLE III

Fixed capital formation:
Published and adjusted statistics. 1957

All items £m.

	Kenya			Tanganyika					Uganda		
	Public	Private	Total	Public	Private	Total (monetary)	Non-monetary	Grand Total	Public	Private	Total
Published estimates: at market prices	16·5	30·4	46·9	9·8	14·3	24·1	5·4	29·5	8·9	11·5	20·4
Residential building	1·7	6·9	8·6	( )	( )	3·7	5·4	9·1		( )	
Non-residential building	3·6	4·5	8·1	(7·8)	(5·0)	4·7		4·7		(3·7)	
Construction	8·5	2·0	10·5	( )	( )	4·4		4·4		( )	
Plant and machinery	2·0	8·7	10·7	( )	( )	5·8		5·8		6·2	
Transport equipment	0·7	8·3	9·0	(2·0)	(9·3)	5·5		5·5		1·6	
Adjustment for private motor cars		−2·3	−2·3		−0·7	−0·7		−0·7			
Adjusted estimate of fixed capital formation	16·5	28·1	44·6	9·8	13·6	23·4	5·4	28·8	8·9	11·5	20·4
Residential buildings	1·7	6·9	8·6	0·9	2·8	3·7	5·4	9·1	1·7	1·4	3·1
Non-residential buildings	3·6	4·5	8·1	3·0	1·7	4·7		4·7	2·6	1·3	3·9
Construction	8·5	2·0	10·5	3·8	0·5	4·4		4·4	3·5	1·0	4.5
Plant and machinery	2·0	8·7	10·7	1·4	4·4	5·8		5·8	0·8	6·2	7.0
Transport equipment	0·7	6·0	6·7	0·6	4·2	4·8		4·8	0·3	1·6	1·9

Appendix I. Certain East African aggregates can be calculated by adding together territorial estimates, though great care must be taken only to add like to like.

It will be noted that no official estimates are available of the balance of payments of any East African country and thus it is not possible to estimate national incomes. The official statisticians have taken the view that territorial balance of payments estimates could not be calculated with sufficient accuracy to make them worth doing or publishing. One can sympathize with their point of view, for the existence of the various interterritorial economic arrangements mentioned above would make the operation a hazardous, though not in the writers' view a hopeless, proposition.

Official estimates have been prepared, however, of the balance of payments of East Africa as a whole. In 1958 the East African unit of the Statistical Department published a booklet *An Estimate of the Balance of Payments of East Africa for the year 1956* (6). Estimates for 1957 and 1958 have since become available (7) (8) and it is the Statistical Department's intention to maintain these estimates as an annual series. A current account and a capital account table is provided, and some information on a territorial basis is shown. There is a full discussion in the booklet of the definitions used, of methodological problems encountered, and a description of the way in which the calculations were carried through. Some of the material is referred to in later sections of this paper. A summary of the position in 1957 is given in Table IV below.

TABLE IV

East African balance of payments, 1957 £m.

Item	Receipts	Payments	Balance
Merchandise transactions (including gold)	116·5	139·8	−23·3
Foreign travel and transportation	11·8	12·4	− 0·6
Insurance	5·3	9·0	− 3·7
Investment income	6·3	12·0	− 5·7
Miscellaneous transactions and donations	7·3	14·7	− 7·4
Total current transactions	147·2	187·9	−40·7
Grants			+ 7·2
Private capital transactions			+17·9
Public capital transactions			+11·2
Monetary system			+ 5·1
Total net capital transactions			+41·4
Net errors and omissions			− 0·7

II. SPECIAL PROBLEMS

In this section we consider four problems which are of rather special interest and difficulty in the field of East African National Accounting: the treatment of the East African High Commission Services, the balance of payments, private firms operating in more than one territory, and the lack of basic statistical data. The first three of these problems arise in part because of the various interterritorial links and arrangements which we have already described.

II(1)(a) *High Commission services* (general)

It is desired first of all to notice the political background to the general problem of the High Commission services before proceeding further. If the High Commission is considered to be merely a forerunner of eventual East African federation, then certain *ad hoc* methods of treating the transactions of these organizations, such as the equal division of certain items between the territories, will be sufficient. In other words, if in five years the political and economic relations of, say, Kenya with Tanganyika, will be comparable with those between England and Scotland, then it would hardly be worth while at the present time to devote much effort to allocating between the three territories the contribution to economic activity of the interterritorial services. If, on the other hand, the present arrangements are likely to break up or be substantially modified, then it would probably be desirable to estimate the respective contributions to domestic product and to treat interterritorial transactions as part of balance of payments flows between separate economies.

Though it is believed that eventually there will be an East African Federation, it will take a long time to come into being and it may well be that the High Commission services, or at any rate the non-self-contained services, will disappear or be drastically modified during a transitional period.

Our political assumption is that for a considerable time to come the three East African territories will remain separate political and economic units and that some interterritorial organizations may disappear while others remain. It is believed to be important, therefore, to have a method of treating the various interterritorial services so that it becomes possible to

TABLE V

High Commission non-self-contained services, 1957

(i.e. General Government services including Royal East African Navy, but excluding E.A. Land Forces Organization)

Revenue account £'000

	Receipts from						Payments in						
	Total	Ex.-E.A.	E.A.	Kenya	UG.	T'KA		Total	Ex.-E.A.	E.A.	Kenya	UG.	T'KA
Official grants	3,960	862	3,098	1,360	746	992	Cash wages and allowances	2,568	308	2,260	1,760	190	310
Rents	54	—	54	43	5	6	Passages and pensions	502	21	481	375	40	66
							Total employment income	3,070	329	2,741	2,135	230	376
Interest	55	55	—	—	—	—	Other goods and services	724	107	617	341	86	190
							Total expend. on goods, etc.	3,794	436	3,358	2,476	316	566
Other receipts, sales, etc.	139	15	124	104	8	12	Contributions to govts.	56	—	56	46	2	8
							Interest paid	26	—	26	21	2	3
Total current receipts	4,208	932	3,276	1,507	759	1,010	Total current expend.	3,876	436	3,440	2,543	320	577
							Balance	332	496	DR164	DR1,036	439	433

TABLE V—*cont.*

High Commission non-self-contained services, 1957

(i.e. General Government services including Royal East African Navy, but excluding E.A. Land Forces Organization)

Capital account £'000

	Receipts from						Payments in						
	Total	Ex.-E.A.	E.A.	Kenya	UG.	T'KA		Total	Ex.-E.A.	E.A.	Kenya	UG.	T'KA
Surplus on current account	332	496	DR164	DR1,036	439	433	Gross fixed cap. form.	541	48	493	437	36	20
Loans raised (pension fund)	274	(10)	264	200	24	40	Increase in stocks	N/A					
							Sinking fund cont.	2	—	2	1	½	½
							Loans repaid	12	—	12	12	—	—
							Advances to staff	11	—	11	7	1	3
							Total cap. expend.	566	48	518	457	38	23
							Balance. Addition to financial assets	40					
Total capital receipts	606	506	100	DR836	463	473		606	506	100	DR836	463	473

Note: Ex.-E.A. = Extra-Territorial; E.A. = East Africa; UG. = Uganda; T'KA = Tanganyika.

see clearly the interterritorial income flows between the three territories and the respective domestic and national product contributions of the various interterritorial organizations.

Our detailed comments below must be seen in the light of the views of the East African Statistical Department in this field as recorded in the *Recommendations of the Departmental Study Group* (20). The relevant recommendations are as follows: 'That surpluses or losses of public interterritorial organizations, such as the East African Railways and Harbours, should be divided arbitrarily between Kenya, Tanganyika and Uganda in equal proportions, but that for wages and salaries the place of residence would be used as a basis for territorial division; that the fixed assets of interterritorial organizations should be divided according to the place of construction, but that all mobile assets such as transport vehicles (road, rail and air) should be divided equally among the territories.'

In our discussion of the High Commission services, and in particular of the self-contained services, we have in addition to the political judgement already mentioned two other beliefs very much in mind. First, that the accounts of these authorities can be used for national accounting purposes to a much greater extent than they have been used by the East African Statistical Department. Detailed sector accounts can be provided, based on these accounts, for each of the self-contained services and for the non-self-contained services as a whole, and from these accounts there can be derived directly much valuable information relevant for domestic and national product calculations and balance of payments purposes.

Second, it is our belief that it is necessary to have a set of principles and logical definitions continuously in mind when considering the national accounting problems of these interterritorial organizations. Administratively simple formulae may well be appropriate for certain limited purposes, but if the eventual aim is to produce a fairly full set of national accounts for each territory it will be found as time goes on that simple expedients that were adequate for limited purposes prevent the right approach in other fields of national accounting when it becomes possible to extend the accounting coverage.

II(1)(b) *High Commission (non-self-contained) services*

Table V is derived from the accounts of the High Commission services (10). From it one can derive fairly easily the contribution to gross domestic product in each of the three territories from the non-self-contained services (Table VI) and also the relevant balance of payments flows (Kenya's is illustrated in Table VII).

The basis of territorial allocation is the location of expenditure, and it is possible to derive this fairly accurately by reference to the place of employment of staff and location of the service. The difference between the revenue provided by a territory's Government and receipts from its residents on both current and capital account and expenditure in that territory constitutes an interterritorial or overseas balance of payments flow.

The tables show how the transactions of the non-self-contained services can be allocated for the year 1957. All non-self-contained services operated by the High Commission are included. Some departments earn revenue from the provision of goods and services, the most important being the sale of sera and vaccines by the East African Veterinary Research Organization, but these receipts at best only cover current costs of production and there is no trading surplus. Revenue and expenditure for the Royal East African Navy is included for simplicity and in order to show the full extent of these services. Since

TABLE VI

East African High Commission non self-contained services contribution to territorial products in 1957

£'000

	Total	Ex. East Africa	East Africa	Kenya	Uganda	Tanganyika
Employment income	3,070	329	2,741	2,135	230	376
Rents of buildings	54	—	54	43	5	6
Total gross domestic products	3,124	329	2,795	2,178	235	382
Income from abroad (interest) allocated to pension fund, etc.		(−55)	55	43	5	7
Total national product (excluding imputed rent of occupied buildings)			2,850	2,221	240	389

TABLE VII

Kenya: balance of payments flows of East African High Commission non-self-contained services, 1957

£'000

Receipts from Kenya		*Payments to Kenya*	
Revenue Account			
Government grants	1,360	Total current expenditure	2,543
Rents	43	Total capital expenditure	457
Other income	104		
Total	1,507	Total expenditure in Kenya	3,000
Capital Account			
Internal loans	200		
Total Kenya receipts	1,707	'Deficit' to be found from outside Kenya	1,293

Balancing account

Receipts and expenditures, excluding Kenya

	Uganda			Tanganyika			Ex. East Africa		
	Receipts	Expenditure	Balance	Receipts	Expenditure	Balance	Receipts	Expenditure	Balance
Revenue account	759	320	+439	1,010	577	+433	932	436	+496
Capital account	24	38	− 14	40	23	+ 17	10	48	− 38
Total	783	358	+425	1,050	600	+450	942	484	+458

Available 'surplus'	
(Uganda, Tanganyika, Ex. East Africa)	1,333
Funds required for Kenya (see Table V)	1,293
Balance: increase in financial assets	40

certain services cover more than the three East African territories it is also necessary to allocate receipts and payments to a 'fourth territory' made up mainly of Zanzibar and neighbouring territories in the Indian Ocean and the Arabian Peninsula and the Horn of Africa, where the Desert Locust Survey – one of the High Commission services – conduct most of their operations.

What is considered of interest is the fact that these tables have been entirely derived from a detailed examination of the accounts of the High Commission services; a source of information which except for very broad aggregates has been very largely ignored by the official statisticians. The sector account set out as Table V reveals in a very clear manner the territorial domestic product contributions, the territorial balance of payments flows, and important information with respect to the finance of capital formation.

II(1)(c) *East African High Commission (self-contained) services*[1] *(11) (12)*

There are four possible methods of dealing with the self-contained services in addition to the official view noted above. First, and easiest, would be to calculate all national accounts on an East African basis. At the present time when there are three separate Governments this is patently of little use to Governments and others interested in particular territories. Second, the services might be regarded as 'a fourth state' operating in the three territories, but with certain head office overhead expenses and the surplus excluded from territorial estimates. Each territory could have transactions with this fourth state as if it were 'overseas'. However, since all the employees of these services are residents of particular territories, owing income-tax and other obligations to them, and, since practically the whole of the expenditure on both current and capital account takes place in one or other territory, this method would seem to introduce unnecessary balance of payments flows and would only be suitable – if then – if the organizations had equity capital held by overseas investors. As it is, in the last resort the Territorial Governments own and control these services. Third, since in all cases the head offices of these organizations are in Kenya and the

[1] Since the tables and associated notes on which this section is based are lengthy and rather complicated they have been placed separately in Appendix II.

majority of the expenditure takes place there, these services might be regarded as Kenya resident enterprises operating abroad. In this case Uganda and Tanganyika would make international payments for services and would be credited with expenditure incurred locally by the organization. Peacock and Dosser discuss this method and suggest that this treatment is unsuitable for organizations whose ultimate owners are the three East African Governments (46). Their view, which is the one we accept, is that the best method is one which involves splitting the activities of these self-contained organizations and treating them almost as three separate territorial organizations.

This operation involves transferring a share of head office overheads to a particular territory before arriving at the domestic product, which thus consists of the local wage bill plus locally earned profits and taking account of a share of overheads.

Thus to obtain the appropriate domestic product contribution involves a number of calculations: first, the appropriate employment income contribution, which is a relatively simple operation, and, second, the gross profit element, which is much more complicated. Details of the calculations are given in the notes to the Tables in Appendix II, but the following operations are necessary. The gross revenue being earned by the High Commission service from a particular territory has to be estimated. Then the appropriate non-employment expenses to be charged against this gross revenue has to be determined. Finally, the appropriate wage/salary charges have to be estimated. This will not be the same as the employment income component of gross domestic product, as an adjustment has to be made for head office employment expenses, otherwise those territories in which the head office is *not* situated – Uganda and Tanganyika – will have too little charged against their gross revenue and thus have too high a gross profit component and therefore too high a gross domestic product component. Kenya, in which the head offices of the two main self-contained services are situated, would, on the other hand, show too large an employment charge and therefore too small a profit component and domestic product contribution. It is clearly necessary to examine in detail Kenya's wage and salary bill and purchases of goods and services generally in Kenya, then to determine what part of this should properly be regarded as head office expenditure and finally charge an appropriate part of it to the other territories, thus reducing their profit figures. These head office wage/salary and expenses adjustments do not of course, affect the wage/salary component of domestic income; they affect the profit component.

It may be useful at this stage to contrast our view with the official view. In our opinion national accounting calculations are an attempt to record economic transactions and relationships which actually obtain. Given this view we would argue that head office expenses should be apportioned between the territories before a proper estimate of territorial profits can be derived. If this can be done on some reasonable basis, it seems to us desirable that it should be done rather than split profits equally between the three territories which is the method followed by the East African Statistical Department. Moreover, under the 'one-third rule' there is no satisfactory method of treating depreciation when the time comes to develop net estimates. Net income calculations should provide for the using up of capital located in an economy, but if gross surpluses are allocated independently of where they actually arise, it is possible to envisage a situation in which Kenya, for example, has no statistical net surplus after providing for depreciation, because most of the assets and head office expenses are located there, even though in a real sense she has a substantial surplus. Indeed, if profits are allocated equally, there is a case for allocating depreciation equally. This in turn, however, would distort any calculations that might be made of net fixed capital formation, since, for example, Kenya would be providing too little for depreciation and Uganda, for example, too much. It would also distort territorial balance of payments estimates, since one-third of the Railways debt payments for instance, would then be shown as paid by Uganda, as nearly one third of the capital might be imputed to her; whereas Uganda might, in fact, have borrowed very little either within East Africa or overseas.

Again and again one comes up against the problem that if in one sector one does something which seems reasonable on grounds of simplicity this may prevent one following the reasonable and appropriate policy in other parts of the accounts.

We consider that in their treatment of the High Commission services, and in particular of the self-contained services, the East

African Statistical Department have been unwise to adopt the methods they have adopted. We suspect they adopted them because they seemed simple and straightforward and not obviously bad. To a limited extent they *are* satisfactory, but their great disadvantage is that they lead to difficulties when one presses forward to construct more ambitious sets of accounts.

Another reason for their adoption may have been a confusion between methods appropriate for domestic product calculations and methods appropriate for national product calculations. This arises with particular reference to the role of the operating surplus. From the point of view of domestic product calculations it is necessary to estimate the share of profits that arise in a particular territory through operations in that territory. On the other hand, for national product calculations one begins with the definite fact that the three East African Governments are the joint owners of the railway, for example, and that in the last resort it is appropriate for national product calculations that any surplus should be divided equally between the three territories. There is a temptation to carry into domestic product calculations what is quite appropriate for national product purposes.

If there had been no alternative way of dealing with these High Commission services one could have accepted the Statistical Department's approach as one making the best of a difficult situation, but as we have argued above and show in our calculations in Appendix II, there is an alternative approach, the production of sector accounts of the self-contained services on a logical and consistent basis which readily throws up both domestic product contributions and balance of payment flows.

Tables A and B in Appendix II are sector accounts for the two main High Commission self-contained services, the East African Posts and Telecommunications Administration and the East African Railways and Harbours Administration. (Tables C and D in Appendix II show this latter organization split up as between its two component elements.) Some details as to how the figures have been obtained are given in the notes to the tables, and they have been drawn up on the basis of the principles set out above.

From these basic sector accounts it is possible to produce fairly easily estimates of the domestic product contributions, national product contributions, and the relevant balance of payments flows. As an illustration of the sort of estimates that can be readily presented we have included as Table E in Appendix II a summary table showing the contribution of East African Posts and Telecommunications and East African Railways and Harbours to the domestic and national products of the three East African territories, and in Tables F and G we provide a summary of the interterritorial income flows. In Tables VIII and VIII(a) below we compare our domestic product estimates for Kenya with those of the East African Statistical Department.

It may be thought that there is not an enormous difference between the results of the two methods. From an overall domestic product aspect this may well be so, but there is a significant difference in connection with the profit estimates.

Our view that sector accounts should be produced for these large and important interterritorial organizations in the way we have done is based only in part on our belief that such accounts will improve the reliability of gross domestic product estimates. Our main argument is that the construction of these accounts on a consistent and logical basis is desirable in itself as revealing the complicated income flows generated by these High Commission organizations, and that it is a necessary prelude to more advanced national accounting work in the sphere of

TABLE VIII[1]

Comparison of two methods of calculating the contribution of the East African Posts and Telecommunications Administration to the gross domestic product of Kenya in 1957 (£000's)

Item	Private method [2]		Official method [3]	
Wage bill	1,517		1,460	
Pensions and passages	318		375	
Total employment income	1,835		1,835	
Gross operating surplus	445		295	
of which: net operating surplus		239		NA
depreciation		206		NA
Gross value added	2,280		2,130	
Adjustment				
Gross value added: standardized basis	2,280		2,105	

Differences on same Coverage

Gross value added (standardized basis): £175,000 (8 per cent) above official estimate.

Gross operating surplus (standardized basis): £150,000 (51 per cent above official estimate). *See Appx. I for notes.*

TABLE VIII(*a*)[1]

Comparison of two methods of calculating the contribution of the East African Railways and Harbours Administration to the gross domestic product of Kenya in 1957

£000

	Item	Private method[2]		Official method[3]	Differences = excess of private over official method
A	Cash wages, etc.	5,489	Reported wage bill	7,399	DR. 1,910
	Pensions and passages, etc.	1,050	Pensions and passages	838	212
	Total employment income	6,539		8,237	DR. 1,698
B	Net revenue surplus Railways	2,359	One third of total E.A. Railways	1,794÷3= 598	
	Harbours	796	Net revenue or surplus Harbours	781÷3= 260	
	Railways and Harbours	3,155	Railways and Harbours	2,575÷3= 858	2,297
C	Add depreciation (renewals cont.) Railways	1,043	One third of total E.A. depreciation Railways	1,921÷3= 640	
	Harbours	182	Harbours	307÷3= 102	
	Railways and Harbours	1,225	Railways and Harbours	2,228÷3= 742	483
D	Add reimb. for losses				
	Railways	None in Kenya	One third of total E.A. Reimbursement for losses Railways	347÷3= 116	
	Harbours	None in Kenya	Harbours	35÷3= 12	
	Railways and Harbours	None in Kenya	Railways and Harbours	382÷3= 128	DR. 128
E	Less rebate on Govt. traffic (rail only)	Regarded as a distribution of profits in appropriation account. Not deducted	One third of total E.A. Railways Rebate on Govt. traffic	−156÷3= −52	52
B+C+D+E	Gross operating surplus	4,380	One third of total E.A. Railways	3,906÷3=1,302	
	of which railways 3,402		Harbours	1,123÷3= 374	
	of which harbours 978		Railways and Harbours	5,029÷3=1,676	2,704
	Gross product (A+B+C+D+E)	10,919		9,913	1,006

Note. See App. I for notes.

national product and balance of payment estimates. The more sophisticated are the accounts which it is hoped to develop, the greater is the need for firm and logical foundations.

A detailed analysis of the accounts takes a great deal of time and may not be possible every year, particularly if estimates are required quickly, but they do constitute a mine of useful information.

II(2) *Balance of payments*

We noted in the first part of the paper that balance of payments estimates are only available for East Africa as a whole (6) (7) (8), and having explained the various interterritorial economic arrangements that exist this probably occasioned little surprise.

The Statistical Department faced many problems in preparing an estimate for the region as a whole. Because a large proportion of East Africa's external transactions are with sterling area countries – particularly with India and the United Kingdom – between which there is no system of exchange control, the only way in which accurate information could be collected for many transactions was through a direct approach to the individuals and companies thought to have financial dealings outside East Africa. With this method there is always the problem of the identification of such companies and individuals and of their response to the enquiry as well as the limitations set by the availability of finance and trained personnel. An attempt was made to deal with the business sector by this method. In the first year of the survey 18 per cent of the companies questioned did not reply to the questionnaires and a large number of others claimed that the enquiry was not relevant to their operations. Among the small private companies it is likely that there were many omissions and these firms may well send considerable portions of their profits overseas. The response rate to the 1957 and 1958 enquiries was, however, a good deal better.

An attempt was made to estimate indirectly the financial transactions of individuals with overseas organizations. Such transactions are numerous in East Africa, where so many of the better-off inhabitants are non-indigenous (Europeans and Indians) and have considerable interests and connections overseas. Payments for school fees, insurance premiums, remittances to relatives and friends, etc., are probably quite substantial in East Africa as compared to many other countries, and it is extremely difficult to estimate such items.

When it comes to trying to make estimates on a territorial basis there are all the problems which exist for East Africa as a whole plus many more.

As we have seen, the East African estimates in many cases are based on a direct approach to individual companies. Often, these companies provide their data on an East African basis and it is difficult for them to allocate their returns territorially. Moreover, since East Africa forms a common currency area with a single banking system, it is possible for an exporter to purchase crops in one territory and receive payments for them in another territory. Given the structure of many East African companies it would be difficult to obtain information about this sort of transaction without very detailed investigations indeed. The common monetary system also makes it extremely difficult to allocate in any systematic way the change in net assets of the banks and the currency board as between the various territories.

The above comments are with respect to transactions between individual territories and the world outside East Africa. *A fortiori* transactions between residents within East Africa are likely to be even more difficult to disentangle, particularly as they are often interfirm and interfamily transactions. We have noted above some of the balance of payment complexities which arise with respect to the interterritorial organizations, particularly when no proper sector accounts have been prepared.

There are therefore very serious difficulties involved in making estimates of territorial balance of payments flows. Yet we believe that it is desirable that statistical effort should be deployed in this field. It is by no means certain that the three East African Governments will continue to have such close economic arrangements as exist at the present time. At any rate, it is clearly obvious that these arrangements will come up for review when African Governments are in control. A necessary background for a rational and intelligent review of these arrangements is knowledge of the territorial balance of payments flows. Unless one has got this information it is difficult to visualize the full implications of changing the existing economic arrangements.

Moreover, information is needed for micro-economic purposes as well. At the moment the valuation of Uganda exports and imports, for example, are at Mombasa. This means that the payments that Uganda has to make for transport through Kenya are ignored and therefore exports are overvalued and imports undervalued. Secondly, an appreciable part of Uganda's imports are first consigned to Kenya and then re-consigned to Uganda. In Kenya certain entrepôt services are applied to these imports and the real cost to Uganda is probably some 30 per cent more than the cost as valued in the trade statistics (which is cost at Mombasa), on this count alone. For these and other reasons we believe that territorial estimates are most desirable if economists and others interested in studying the broad picture of the East African economy are not to get a confused picture of the external relationships of the individual territories that comprise the customs union and if national income statisticians are to be able to present full-scale social accounts of their respective economies.

II(3) *Private enterprises*

There are many private businesses operating throughout East Africa. Most of these businesses have their headquarters in Kenya and have branches or subsidiary companies in Tanganyika and Uganda. With all these interterritorial companies there is a problem as to how to measure their contribution to the domestic income and national income of particular territories.

Income from employment is fairly straightforward, but there is a problem as to how to treat profits. The solution adopted by the East African Statistical Department as recorded in the recommendations of the Departmental Study Group is as follows: 'That the profits of private interterritorial organizations be divided on the basis of the Income-Tax Department's estimation of territorial profits.'

It is clear that there is a problem here with respect to the territorial allocation of income-tax as well as for those concerned with national accounting. The East African Income-Tax Department is itself an interterritorial body; firms operate on an interterritorial basis; and yet the individual Territorial Governments obviously wish to get their proper share of income-tax revenue.

The practice of the Income-Tax Department with respect to the profits of companies operating in the three territories is as follows. The legal status of enterprises does not affect the allocation of income-tax revenue between the territories. Assessments are raised according to the *residence* of the enterprise. Thus a company registered in Uganda is assessed in Uganda, but the tax revenue is then allocated between the territories on the basis of the geographical origin of the taxable profits. This process was particularly necessary when rates of company tax differed between the territories. At the present time it may not be so necessary from a company point of view, as income-tax on company profits is identical in the three territories.

Unincorporated enterprises are broken down so as to obtain the individual partners' share of the profits. Assessments are then raised on partners in the country of residence. But if the partners' taxable income is derived from more than one territory then the tax is re-allocated on the basis of geographical derivation.

Dividends are treated in the same way. The company deducts tax at source and pays a lump sum to the income-tax office in the country of residence. This is then re-allocated between the territories on the basis of derivation. In fact, the shareholders eventually pay tax on both distributed and undistributed profits to the three territories on the basis of derivation. But since the individual is also taxed on his total income and obtains an allowance if his over-all rate of tax is less than the standard company rate (or pays more if vice versa) there is another interterritorial adjustment; to reimburse the territory which has given an allowance on tax revenue which it has not received.

Most of the work of allocating profits to country of origin is done by the firms concerned. There is thus some element of guesswork, depending on the way in which firms keep their accounts. However, the place of receipt of income is not considered sufficient, and the Income-Tax Department insists on assessments being on the basis of derivation.

It would seem therefore that in principle income-tax allocations are made in accordance with the usual definition of domestic income. One does have some doubts, however, about the practice. The Income-Tax Department has no great interest in checking the firms' statements as to the origins of their profits so long as rates of tax are the same. It also seems reasonable to assume that firms themselves do not spend a great deal of time over this exercise. Given that there is an interterritorial Income-Tax Department and an interterritorial tax it seems fairly difficult, however, to do other than follow the practice of the East African Statistical Department. There can be no doubt that the existence of interterritorial firms and a common income-tax system make the production of domestic product and income estimates more difficult. And when the time comes to attempt national income estimates there will be still greater problems, as statistics will then be required of the territorial distribution of profits from the point of view of their final ownership rather than their original place of derivation.

II(4) *Availability and quality of the basic statistical data*

In the introduction to this paper we noted how national accounting estimates depend to a very considerable extent on the basic statistical information that is available. The East African Statistical Department has made heroic efforts during the past fifteen years to improve the statistical position, but there are still very many sectors in which the material is barely sufficient for national accounting purposes. It is proposed to indicate this with respect to certain important sectors of the economy, taking first the problems associated with estimates of the subsistence sector, and then particular sectors in the money economy from Uganda, Tanganyika and Kenya respectively.

(*a*) *The subsistence sector.* Almost all families in East Africa have some cash income; there are few families who are entirely dependent upon what they grow themselves for food and clothing and have no source at all of cash. On the other hand, a very high proportion of the population grow for themselves most of the food they consume. In these circumstances the so-called subsistence sector is large and it is most important that attempts should be made to estimate its size.

In the recommendations of the Departmental Study Group referred to above, the Statistical Department recognize this completely and they agree 'that the non-monetary aspects of domestic output should be included in all calculations and that the items should be shown by sectors and not as a total figure'. It is, unfortunate, however, that the estimates of the subsistence sector for the three territories are provided on different bases.

In Uganda estimates are prepared on a 'family budget' basis and are narrowly confined to foodcrops. 'The estimates of subsistence income as computed in Uganda cover the value of foodstuffs produced and consumed within the African farming community. No attempt has been made to put a value on intra-household services. The estimates are based on the food expenditure of African labourers in Kampala as given by the family budget surveys carried out by the East African Statistical Department (39). Quantities of African-produced foodstuffs consumed per head are calculated and multiplied by the current estimate of the African population, assuming that the quantities consumed by children are equal to one-half of those of the adults. The product is then valued at average market prices. From this valuation the value of foodstuffs consumed by the employed Africans and already included in the cash sector is deducted. The value at market prices is then reduced to producer's value.'

The estimate as calculated above is then published as a separate item of the income table. It is clearly possible to make many criticisms of this type of approach: for example, that the definition of subsistence production is far too narrow. Perhaps even more damaging is that food consumption in the towns is likely to be much lower than food consumption in the country, where people grow their own food, and thus the estimate of subsistence production – even as defined – probably underestimates the actual position. But although it is easy to make these critical comments, it is clear that the Statistical Department is well aware of the inadequacy of the method, but with the available staff and financial resources feel they can do no better.

At the opposite extreme to Uganda is Tanganyika. There, following the lead given by Peacock, an attempt has been made to take a very wide view of subsistence production. 'The field covered by subsistence activities includes all the non-marketed crops grown in the territory, non-marketed products of the livestock sector, non-marketed forest products, non-marketed fish, craft industries and African hut building.' The extent to which the official statisticians were helped by the earlier work of Peacock is indicated by the following sentence. 'The valuation for the purposes of this report of most of these activities was at nearest price, but the valuation of non-marketed bananas, poultry products, unrecorded firewood and beeswax collections, African hut building in rural areas, and native craft industries, mainly beer making, presented enormous practical difficulties taking into account staff limitations. Therefore in these particular cases the valuations adopted by Peacock and Dosser have been used with increases shown for subsequent years based on estimated population growth.' (47)

In the latest Kenya estimates the subsistence sector is considered in much the same detail as in Tanganyika, although craft industries and hut building are excluded. This is done on the ground that all non-primary production performed by primary producers outside their own trades and consumed by them should be excluded.

In some cases the information available upon which to base estimates of subsistence production is adequate, but in others it is not so good. As an illustration of the latter situation in Kenya we may take the important foodcrop subsector and the less-important poultry sector.

No comprehensive annual information is available in Kenya on the total quantity of foodcrops produced in African areas, and therefore in order to obtain an estimate the following procedure was adopted. First, all the available data on acreages and yields of foodcrops were studied for the year 1957. Estimates were made for that year of the acreage under individual crops, and to this acreage were applied estimates of yield for the various crops on a provincial basis. These estimates of yields were essentially average yields not taking into account the individual climatic peculiarities of 1957. This enabled an estimate of the production for 1957 to be obtained. There was available for one province a reasonable statistical series showing the changes in production over a number of years. On the basis of this and certain other information it was assumed that production increased at a cumulative rate of 2 per cent per annum. Thus estimates for 1954, 1955 and 1956 were obtained and the same ratio will be applied in future until more information becomes available. Information about prices of food from African areas is made available each year by the Department of Agriculture. This enabled the production estimates to be converted to value estimates. From this total of the value of foodcrops the fairly firm estimates of the amount of African grown foodstuffs purchased for cash was deducted, and by this subtraction the estimate of subsistence production was obtained.

This is clearly a very crude way of arriving at an estimate of such an important sector of the economy, but unless resources are available for intensive sample investigation of acreages yields and production, it is probably the best that can be done.

As regards poultry no firm data existed regarding the number of African poultry, but two field studies in widely different parts of the country indicated that there were roughly eight birds per family, which was about one bird per head of population. Having excluded those tribes in which poultry were not kept, the number of birds was taken as equal to the number of people. This produced a total of about 5·6 million in 1957 with corresponding figures for the other years. It was assumed that at least 50 per cent of these birds were consumed each year giving an offtake of about 2·8 million a year. The prices of poultry from African areas are known, and this figure was applied to the offtake of birds to give the value of bird consumption per year or income from that source. Reasonably good estimates exist of the sales of birds from African areas and by subtraction one obtained the subsistence output.

We may now look at three sectors in the monetary economy: one in each territory.

(*b*) *African enterprises in Uganda.* An important subsector, for which it would be most desirable to have good information in Uganda, is the income of African businesses derived from activities other than farming or fishing. An estimate is given, but its foundations are weak. 'The estimates of income of African traders are largely based on information supplied by the Ministry of Rural Development. Until recently these estimates were derived from a survey of internal trade carried out in 1952 by the then Department of Commerce. The survey gave the number of average income of African traders and this data has been adjusted each year to take into account the changes that have taken place. For 1956 the estimates are based on figures obtained through the offices of the Principal Trade Development Officer, who keeps records on a card index system of African traders. The number of traders is based on the number of licences issued. Their average income is estimated from a sample of cards containing traders' particulars. It must be pointed out that the system is in its infancy, and that the accuracy of this sector's estimates is not very great. The income of Africans running small transport businesses is only roughly estimated. The number of businesses is deduced from the number of commercial vehicles licensed. In the absence of more reliable information, the average income of African owners is assumed to be the same as that of the traders.' (35)

Once again the basis of these estimates of a most important sector is clearly very weak and there is no doubt that if more resources were available the estimates could be greatly improved.

(*c*) *Road transport in Tanganyika.* An important sector of the Tanganyikan economy for which it would be desirable to have information is that of road transport. This is important for a number of reasons, not least because it is an industry into which African enterprise is likely to flow. An estimate is provided of the contribution of road transport to the gross domestic product of Tanganyika, but it is based on quite inadequate data. It was obtained by using the annual statistics of motor vehicles licensed. 'Commercial goods vehicles were classified by size and assumptions made regarding usage and cost per mile for each class of vehicle. The total mileage of all the vehicles in a class multiplied by the cost per mile gave a gross output figure for each class, and the total of all the classes gave a gross output figure for roads goods transport. A similar method was applied to road passenger transport (buses and taxis). The total of goods and passenger services gross outputs gave the total gross output of road transport. Deductions in respect of purchases of petrol, maintenance, etc., then were made and the result was the net output figure. Because of the use of a number of assumptions of varying accuracy the net output estimates are clearly not particularly reliable.' (47) In making the various assumptions referred to above the official statisticians were very much following the approach of Peacock and Dosser. Their actual estimates, however—of such matters as average ton/miles per vehicle travelled—were largely based on impressions gained from talking to a large number of operators. In no sense are the estimates for this important sector based on really firm factual foundations.

(*d*) *Distribution in Kenya.* The last example it is proposed to take is the distributive (wholesale and retail trade) sector in Kenya. Accurate information would be most desirable for this sector of the economy, as an important question is the extent to which Kenya supplies general entrepôt services to Uganda and Tanganyika. An estimate is provided by the Kenya unit of the value added by the distributive sector, but in our view it is inadequate.

As yet it has been impossible to conduct anything in the nature of a census of distribution, and it is unlikely that it will prove possible in the near future. In the absence of such a census estimates have had to be obtained by indirect means. The present estimates rest on two foundations. First an estimate of turnover and second an estimate of margins so that value added can be calculated.

Fundamentally, the estimate of turnover is based on (i) the value of Kenya's imports and exports passing through wholesale and retail channels, and (ii) the value of goods produced in Kenya passing through these channels. Direct imports by Governments and other public authorities and which are known not to pass through the commercial distributive network are eliminated, as also are—as far as possible—all those other imports and exports that do not pass through this network such as the direct imports of many manufacturers. No attempt is made to take into account transactions between wholesalers or transactions between retailers.

The estimates of the margins, which increase the final cost to the consumer and which are necessary to determine the value added by this approach, are based on South African experience as revealed by the Census of Distribution carried out there in 1952. These margins have been checked against confidential information supplied by some of the larger trading firms in Kenya, and so far as can be ascertained at present seem applicable to Kenya conditions.

While the above approach provides an acceptable, and probably in the circumstances the only possible, method of obtaining an aggregate figure, it is subject to considerable deficiencies both from the methodological point of view and also from the limitation on the uses to which it can be put. The value of turnover is not the only determinant of this sectors' contribution to the economy: the country's stocks are largely held by traders, profit margins are very often arbitrary, and therefore the turnover and fixed ratio method neutralizes some of the more volatile elements in this very critical part of the economy. Moreover, the calculation of this sector excludes transactions between wholesalers and between retailers, and this plays a very important part in the total transactions of the bazaar trade. A further and most important weakness arises from the fact that the import and export values which are taken as the basis of the turnover calculation include only Kenya's own domestic exports and her retained imports, and take no account of the very considerable volume of trade originating in, or destined for, Tanganyika or Uganda and from which Kenya resident firms derive substantial earnings. For example, much of Uganda's coffee is sold at Mombasa auctions and on the import side about £15 or £16 millions of Uganda's imports are initially consigned to Kenya annually for subsequent transfer to the other territories. It is difficult to estimate the value of this entrepôt trade to Kenya-resident firms, but there is a lot of evidence to suggest that it is very considerable. It is assumed for purposes of the interterritorial allocation of customs revenue that some of the goods imported from abroad and subsequently transferred interterritorially are 'marked up' by 25–30 per cent so that the amount of import duty finally allocated to the consuming territory is taken as 75 per cent of the duty which would have been payable on the basis of the consignor's valuation. That is, suppose an article to be imported into Kenya with a c.i.f. Mombasa value of £100, and liable to a duty of 22 per cent. Having been warehoused, broken in bulk, documented, etc., by the Kenya importer, it is subsequently transferred to, say, Uganda. The value of this transfer is taken at the consignor's declaration – which might be £130. But if this value were taken as the basis on which Uganda's share of the duty were calculated it would mean that she would receive £28·6. The practice adopted has been to calculate the duty on transfers of this kind on 75 per cent of the consignor's declaration, which in this case would work out at about £98. Not all interterritorial transfers come into this category, of course, only those for which it is not possible, as a result of bulk-breaking for example, to obtain the actual c.i.f. value. Nevertheless, the point is that adoption of this 75 per cent formula implies a considerable mark-up for the performance of this function and this accrues to Kenya-resident firms.

What we wish to stress here is merely the narrow statistical point, that the basis for the estimate of this important sector is a very unsubstantial one.

The object of our comments so far in this section has been twofold. We have indicated that the basic statistical information is quite inadequate in many cases with respect to certain important sectors of the economy, and that this has made it difficult for those responsible to produce national accounting material; and, second, we have noticed that the inadequacy of this basic statistical data and resulting national accounting material is the result to a very substantial extent of the small amount of resources which have been devoted to statistical collection in East Africa.

The final point in this section is a general one with respect to the availability of basic data. There is no doubt that the national accounting material as it exists in East Africa, its form and the extent to which it is comprehensive, is a direct reflection of the basic statistical information that is available. The range and quantity of this basic data depend in turn on the part played by Government departments, other public authorities, and by large-scale commercial enterprises in the economic life of the territory concerned, and by the extent to which they publish and organize the statistics they use in their day-to-day work. With certain obvious exceptions basic data is not collected and produced by the Statistical Department. The exceptions are, of course, important; population censuses, industrial production surveys, consumer expenditure surveys, balance of payments enquiries, some data relating to agricultural acreages and certain employment and wage statistics are deliberately and specially obtained (although the administrative requirements of the Departments of Agriculture and Labour do, to a considerable extent, shape the form of the enquiries). Nevertheless, since the amount of data directly collected is relatively small, much depends on the quality and quantity of the information made available as a by-product of administrative and commercial activities. And if in turn this is not considerable and good, then the task of those responsible for preparing aggregate studies becomes most difficult. In our view this is the position in East Africa.

Given this general lack of data, it is not surprising that individual territorial units seize on what is available, and the national accounting material they produce is very much a reflection of the particular sort of basic information that is available. In Uganda, for example, two public boards are responsible for the marketing of most of the two major cash crops—cotton and coffee. Because of this, good sector accounts are available for these two parts of the economy, whereas information relating to other crops or the operation of African businesses generally is poor. In Kenya much of the produce of the European agricultural sector flows through central marketing institutions and good statistical information is available about it; whereas, as we have seen, information about the African sector is not good. In Kenya, a census of industrial production has been held three times (22); no such survey has ever been held in Uganda and only a limited one has been conducted in Tanganyika (53). Kenya national accounting material relating to the industrial sector is, therefore, much superior to that of the other two territories. In Uganda and Kenya the Labour Department in conjunction with the Statistical Department collects information from employers who employ more than five workers about their wage bill (28) (41). In these two countries, therefore, the raw material is available for the production of a reasonably good estimate of the wage and salary component in an income table; in Tanganyika this information does not exist. In Tanganyika and Kenya there is a system of freight road transport licensing; in Uganda there is not, and national accounting estimates with respect to that sector for Uganda are, therefore, more difficult to prepare. These are all illustrations of a general point that the quantity and quality of the basic data determine to a very large extent the shape of the national accounting material that is and can be produced.

III. THE USES AND INTERPRETATION OF EAST AFRICAN NATIONAL ACCOUNTING MATERIAL

We have already made a number of references to the inadequacy for many purposes of East Africa's national accounting material. It is not proposed to duplicate these references in this section, but rather to take a number of specific problems or questions for the solution or understanding of which national accounting material is normally used and required, and examine the extent to which the East African material would be adequate for the task.

III(1) *Economic growth*

Clearly, one of the main problems in which the East African Governments and others are interested is the extent to which economic development is taking place, and the sectors in which it is occurring. A basic and simple indicator of economic development is a time series of real income *per capita*. In order to calculate such a series not only good and consistent domestic product estimates are required, but also population figures and a price series with which to deflate the domestic product estimates.

We have already noticed gaps and weaknesses in the basic domestic product series which become important if one wants to measure *per capita* incomes: the shortness of the two series for Tanganyika; the break in the Kenya estimates in 1958; the narrow definition of the subsistence sector in Uganda; and many others.

As far as estimates of population are concerned the position is that censuses were held in all three countries in 1948, and have been conducted subsequently in Tanganyika in 1952 (a partial census only) and 1957, and in Uganda in 1959. No useful statistics exist of births and deaths or net migration, and estimates for non-census years are therefore little more than informed guesses. This was clearly shown by the 1959 census in Uganda. The estimate for 1958 had been that the country's population was 5·7 millions, but in the light of the census this was revised to 6·3 millions. It is true that in all the circumstances an error of only about 10 per cent is small, but if the estimates are being used for secondary purposes, such as the calculation of *per capita* incomes, 10 per cent can be significant. Kenya has not had a census since 1948 and, in the light of the Uganda experience, it is doubtful whether much reliance can be put on the official estimates of the population year by year since 1948.

Much more serious than the inadequacies of the domestic product or population estimates is the absence of any comprehensive or even relevant price series. There exists for each territory and for East Africa as a whole an export and an import price index (calculated on the average value method) and derived from them a crude index of the terms of trade. In addition to the figures of import and export prices there is also a cost of living index for Europeans in the three principal cities of Nairobi, Kampala and Dar es Salaam based on budget enquiries carried out among European Civil Servants in Nairobi in 1947 (for the Nairobi and Kampala indices) and in Dar es Salaam for that city (9). Finally, there exist index numbers of retail prices relating to the lower-paid Africans in the three main cities mentioned above. A series for Dar es Salaam has been available since 1950, for Kampala since 1951, and for Nairobi only since 1958 – but we understand that an index for

Nairobi Africans was available for Government use, but not published, before that time. An index of goods consumed by Africans in Mombasa, the main port in Kenya, was published between 1947 and 1953.

In our view none of these price series is adequate, either separately or in combination, to provide a satisfactory deflator of the money domestic product in any of the territories, although they are useful for the limited tasks for which they were constructed.

It is, therefore, not possible to construct a useful series of *per capita* real incomes. Nor, because of the absence of useful price indicators is it possible to produce a satisfactory series showing changes in aggregate real domestic product. Moreover, estimates of average money domestic product have to be treated with extreme suspicion, as both the population estimates and the basic domestic product series are open to question. We feel, however, that the official statisticians have not made as much use of the figures as they might have done, particularly the import and export price indices, to reveal one of the key factors influencing the economic growth of the territories and a factor which tends to affect the three territories somewhat unequally. Although Kenya, Tanganyika and Uganda all conform broadly to the type of underdeveloped economy which exports primary products and imports manufactured goods, the trading pattern and the importance of foreign trade in the three countries is very different. Therefore, changes in import and export prices produce different effects in each. About 40 per cent of money incomes in Uganda and Tanganyika are directly derived from foreign exports, but in Kenya the proportion is only 20 per cent. Furthermore, as we have seen elsewhere, Uganda's export trade is narrowly based on two crops, cotton and coffee; in Tanganyika the range of export products is much wider; similarly in Kenya the range of products is wide and in aggregate their significance in creating money incomes in the country is much less. Thus, the impact on the three economies of fluctuating export prices is very diverse. Between 1954 and 1959, for example, the average unit value of Kenya's exports fell by 13 per cent, those of Tanganyika fell by 15 per cent, and those of Uganda by 32 per cent.

Thus, any general increase in the production of primary products can have different effects on the level of incomes in the three territories depending upon the movement of export prices and upon the relative importance of the export sector in the economy as a whole. The effect of 'production' on 'consumption' or the effect of increases in real 'output' on real 'income' depends on the importance of foreign trade in the economy and upon the relative movements of the terms of trade, and these factors are very different and have moved very differently in the three teritories. During recent years as mentioned above, a great deterioration in Uganda's export prices has prevented what has been a quite substantial increase in production being reflected in higher real incomes. Of course, the opposite is also true. Any improvement in East Africa's terms of trade, providing that it includes a rise in cotton or coffee prices, will bring more immediate benefit to Uganda than to either of the other two territories. This, in fact, occurred during the price boom of the years 1950 and 1951, when there was such a sharp rise in the incomes of African peasant farmers in Uganda, and indeed almost the whole increase in incomes could be traced to the rise in export values. In Kenya, higher export earnings played a less important part in the growth of aggregate incomes in that country, and the expansion of the commercial and manufacturing sectors contributed as much to the country's higher incomes as did exports. This was indicative of an important difference between the two economies which became even more evident when commodity prices began to fall in 1952 and 1953. In Uganda there was a 14 per cent drop in money incomes (all in the export sector), while in Kenya a small increase in total incomes was maintained. This was partly due to increased Government spending following on the outbreak of the Mau Mau rebellion, but also because of the secular expansion and much greater stability of the manufacturing and commercial sectors, and both of these factors helped to maintain the buoyancy of the Kenya economy during the critical period of the middle 1950s.

When agricultural prices recovered between 1953 and 1955 incomes rose again in both Kenya and Uganda, but in the former the rise was much more dramatic. Export earnings played some part, but it was small compared with the continued heavy Government expenditure and the extremely rapid growth of manufacturing output which rose from under £13 millions in 1953 to more than £20 millions by 1955.

In all three territories there has been a substantial increase in physical output during the past five years, but it is only in Kenya and Tanganyika that it has led to a significant rise in real income. In Uganda money incomes have been maintained by disbursements from the price assistance funds of the statutory marketing boards, but there has been little or no expansion in output outside export agriculture. And in this sector the increase has been absorbed by falling export prices, and there has been no substantial offsetting expansion in other sectors of the economy. On the other hand, in Kenya, and to a lesser extent in Tanganyika, there has been some expansion in export agriculture, but as we have seen this is less important as an influence on money incomes than in Uganda. In these two territories a greater proportion of local produce is consumed locally or within East Africa.

From the above brief discussion it is clear that despite the inadequacy of the data for many purposes, it is possible, to draw – in outline – a picture of the extent to which expansion has occurred and – in broad terms – to identify the growing from the stagnating sectors. Indeed, in some cases the information about key sectors is quite excellent: on the peasant coffee and cotton sector in Uganda; or the manufacturing and industrial sector in Kenya; or the plantation sector in Tanganyika. One trend which an economist interested in growth would like to be able to measure is the extent to which the relative importance of the subsistence sector is changing, but the reliability of the estimates that are available would not permit such a comparison. We have seen earlier many other *lacunae* which would render intertemporal or interterritorial comparisons unreliable.

III(2) *Stabilization*

During the last ten years the Uganda Government has pursued policies designed to reduce income fluctuations. (44) To what extent does the national accounting material help in forming a judgement as to the success of these policies? To what extent does it help the Government to carry out this policy?

We noted in the introduction to this paper that a high proportion of Uganda's money national income arose from the export of cotton and coffee. Fluctuations in the export proceeds from these two crops have, therefore, a considerable effect on the value of domestic output as a whole. Considerable fluctuations in export proceeds have occurred during the last ten years and are, of course, always likely. Any policy designed to stabilize domestic income levels must break the direct link between export values and domestic incomes. This has been the aim pursued by the Uganda Government and it has used the following weapons.

Most of the cotton and coffee passes through public marketing boards and in years of high prices surpluses were accumulated by these boards in price assistance funds which are now being reduced. Second, a sliding scale export duty has been levied on cotton and coffee designed to bring in large sums of money when prices are high and small sums or none at all when prices are low. Thirdly, and connected with the first two, a large cash surplus on the Government budget (i.e. revenue greater than expenditure on both capital and current account) was accumulated when export prices were high, and there have been deficits in more recent years. The order of magnitude of these stabilization measures is shown in Table IX.

The fluctuations in the world market value of coffee and cotton is shown directly in the final line of the table, i.e. in the variation of the 'ex farm proceeds' of these two crops; this being the world or export value less transport, processing and merchanting costs. Variations in these proceeds are clearly reflected in the domestic income. On the other hand, it is variations in the actual payments to cotton and coffee growers (line A1) which affect private money income and thus the expenditure of growers. Changes in the difference between ex farm proceeds and growers' incomes from cotton and coffee indicate the extent to which the general level of purchasing power is insulated from export fluctuations by changes in marketing board surpluses and in export taxes (stabilization measure A in Table IX). The enormous difference between the early 1950s and more recent years is very clear. During the three years 1950 to 1952 no less than £60 million was withheld from the growers – amounting to some 60 per cent of ex farm proceeds; in the three years 1958, 1959 and 1960, £6·8 million was withheld, less than 10 per cent of the proceeds. The stabilizing effects of these measures can be seen by comparing growers' incomes with ex farm proceeds or private money income with total domestic income and it can be easily seen that the measures and policy on

TABLE IX

UGANDA

Domestic income and stabilization, 1950–60

£m.

Item	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
A. African enterprises											
1. Cotton and coffee	9·5	13·9	16·3	16·2	20·9	27·8	22·1	23·7	24·6	25·4	21·9
2. Other	9·3	12·1	13·4	16·8	17·6	18·2	19·5	19·5	18·9	20·8	20·9
Total	18·8	26·0	29·7	33·0	38·5	46·0	41·6	43·2	43·5	46·2	42·8
B. Profits and surpluses											
1. Private business	6·4	7·9	8·5	8·6	10·3	11·3	9·6	9·3	8·6	7·0	7·4
2. Marketing boards	8·7	17·1	13·6	2·2	2·4	−3·4	0·7	0·8	−1·7	−2·9	−1·5
3. Public enterprises	0·6	0·8	0·7	0·5	0·5	0·5	0·3	0·4	0·7	0·8	0·8
Total	15·7	25·8	22·8	11·3	13·2	8·4	10·6	10·5	7·6	4·9	6·7
C. Salaries and wages	13·1	16·0	20·9	21·9	23·2	27·3	29·1	31·0	32·5	33·9	35·6
D. Export taxes	4·2	8·1	8·3	4·0	5·5	6·1	5·5	7·4	5·6	4·5	2·8
E. Subsistence income	19·8	20·5	26·0	29·0	30·0	30·2	30·3	30·1	31·0	31·8	32·3
Total domestic income	71·6	96·4	107·7	99·2	110·4	118·0	117·1	122·2	120·2	121·3	120·2
Personal money income A1+A2+B1+C	38·3	49·9	59·1	63·5	72·0	84·6	80·3	83·5	84·6	87·1	85·8
Stabilization measures:											
a. Export taxes plus change in marketing board funds B2+D	12·9	25·2	21·9	6·2	7·9	2·7	6·2	8·2	3·9	1·6	1·3
b. Excess of government expenditure over current revenue	2·7	3·5	0·5	−3·1	−2·4	−3·8	−2·6	−4·9	−3·0	−5·2	−6·1
Cotton and coffee: Ex-farm proceeds	22·4	39·1	38·2	22·4	28·8	30·5	28·3	31·9	28·5	27·0	23·2

stabilization have been quite successful. How far the stabilization measures were desirable is a question beyond the scope of this paper.

The stabilizing measures did not only affect growers' incomes. Changes in growers' incomes and expenditures have secondary effects on other sectors of the economy, and if they had not been stabilized then other sectors would have been affected to a greater extent than they have been by the great fluctuations in export proceeds.

Another major factor influencing the level of demand is the budgetary position. If Government expenditure exceeds the sums currently collected within the economy, then the effect is to generate additional income and vice versa. In the period up to 1953 current collections of revenue exceeded total expenditure, but since then expenditure has increasingly been financed by drawing on assets accumulated in that period or from the marketing board surpluses (stabilization measure B in Table IX).

It seems to us that the national accounting material available in Uganda is adequate to enable the Government to assess the success or otherwise of the stabilization policies it is pursuing. It also seems to us that the material is adequate as regards assisting Government in carrying out such policies. It is true that it would be extremely useful to have available expenditure estimates and some definite knowledge of the relationship between personal incomes and consumption expenditures and of the accelerator and input/output relationships that follow changes in incomes derived from export proceeds or from Government expenditures, but this perhaps is asking too much!

Earlier in the paper we stated that Uganda's national accounting material was less full than that of the other two territories; and yet we are now stating that from the point of view of appraising and assisting the Government in carrying out its stabilization policies the material is adequate. We suspect that there is a moral here; and that simple economies can get by with simple (though accurate) national accounting material.

III(3) *Regional and racial inequalities*

One of the features of development in the East African and similar settings is the extent of regional and local variations; income levels can be very different in the various parts of the country. In Uganda, for example, the average cash income of Africans is about £20 per annum in the Mengo District of Buganda, and yet only 200 miles away in the south-west corner of the country in Kigezi average cash incomes per annum are only about £2 per head.

Tribal allegiances are strong in East Africa, and the existence of very different income levels raises some extremely difficult problems for those responsible for policy with respect to economic development. Should the main objective be to concentrate resources in the less-developed areas so as to increase *per capita* incomes in those areas; should all parts of the country have an equal allocation of development finance; or should a purely national view be taken and investment concentrated in those areas where it will yield most profit – often these will be the areas already most highly developed. It is not easy for Governments to make up their minds on this sort of question. Our point is that in order to make a rational and sensible decision in this field there is need for a good deal of information about regional incomes and production; indeed, of regional national accounting material. This seems to us to be much more important in the East African setting then in Western countries, for the differences are probably greater, and there is much less homogeneity between the peoples.

The difficult decision which would have to be made is the selection of appropriate regional units which were economically and statistically significant. In Uganda, for example, the administrative districts, and in the case of Buganda the province, correspond fairly closely to tribal groups, but in Kenya and Tanganyika this is less true. In these territories a provincial breakdown, with the possible addition of one or two areas analysed at district level, would probably be sufficient. The important thing is that whatever units are chosen they should be in terms of areas having characteristics likely to be of special significance in the determination of national policy, whether they be distinguished by tribal, geographical, political or economic features.

In the first section of the paper we noticed that estimates of district incomes were available in Uganda for 1957, but nothing is available for other years. Similarly, domestic product estimates by provinces are available for Tanganyika in 1957, but nothing is available for other years. No regional national accounting estimates at all are available for Kenya, though information about wages on a district and provincial basis can be found in the annual labour enumerations (28) (31) (41). (Similarly, in Uganda information about wages on a district and provincial basis can be found in the annual labour enumerations.)

We feel that the lack of satisfactory regional series is a serious matter and one which must militate against satisfactory Government economic planning and against public understanding of policy in this sphere.

Almost equally important in East African conditions is the need for information about the role of the different races. As was stressed in the introduction to the paper, East Africa has a substantial number of Europeans and Asians, particularly in Kenya. National accounting material on a racial basis is needed in our view, both to help the Government and the people to assess the success of various policies designed to improve the economic position of the Africans and in order to assess the contributions of the immigrant races to the economy. At a time when great political changes are pending it is most desirable that such statistical information should be readily available so as to provide a factual basis for assessing the contribution of the immigrant races. No information on a racial basis is available for Tanganyika. None as such is available in Uganda, though some information on wages and profits can be indirectly derived. In Kenya there has recently been an important change. In the aggregate tables of the revised estimates it is not now possible to distinguish (as it had been with the 'old' estimates) the relative contributions of African and non-African agriculture, a matter which in the circumstances of the Kenya economy is of considerable importance. It is still possible to obtain this information by referring to the individual sector accounts, but this is by no means satisfactory for the ordinary reader; nor is it likely that the material, other than the aggregate tables, will be published annually.

There are other ways in which racial factors are reflected in the economic life of the three territories. Any consideration, for example, of the incidence of particular taxes in Uganda cannot be undertaken without information on the incomes of the three races, since some taxes (e.g. income tax) are paid exclusively by non-Africans, while others (e.g. export taxes) are only paid by Africans. Again, the whole question of income distribution cannot be tackled in a socially meaningful way without taking account of racial factors, and, for example, the fact that there exists a highly elastic supply of unskilled African labour at a very low wage is essential to an understanding of the wages structure of the countries as a whole. Certain economic legislation, too, is racial in its intention; for example, the restrictions on the purchase of land by non-Africans in Uganda. In relation to changes in *per capita* incomes the size of Asian families and the institution of the extended family is also a characteristic of which account should be taken.

In our view it is particularly disturbing that the decision to drop the racial break-down in Kenya is not a statistical accident but a deliberate policy. Recommendation 3 of the Departmental Study Group was: 'That a racial division of domestic income aggregates should not form a part of presentation for general tables for publication.' On grounds of general economic interpretation of the nature and structure of the East African economy generally and Kenya in particular it is difficult to see the justification for this.

III(4) *Balance of payments*

We consider that the absence of estimates of the balance of payments position of individual territories is a serious gap in East Africa's national accounting material and most unfortunate from the point of view of those interested in understanding the economies of Kenya, Tanganyika or Uganda, and even more so from the point of view of those responsible for economic policy-making. Their absence is particularly serious in view of the dependence of each of the three territories on foreign transactions, and the fact that the degree of dependence is different in each territory. It is also necessary to consider whether at some stage it will not be necessary to move from estimates of domestic product and income to estimates calculated on a 'national' basis so as to indicate the resources actually available to the residents of each country. Again, the difference between domestic and national income is likely to differ considerably from one territory to another. Even before this stage is reached, however, there are a number of basic questions which cannot be fully answered without some information on the external transactions of the territories: What proportion of the domestic product is exported? What proportion of final demand is spent on imports? To what extent is capital formation financed from external sources? Moreover, at the present time the regional estimates that are available are of little use to the separate Governments for policy-making purposes, for they are concerned not with economic policies to do with East Africa but with policies with respect to the individual territories. On this matter it is perhaps worth recalling that the initiative for the preparation of these East African balance of payments estimates came from the World Bank, who were making a loan to the East African Railways and Harbours. This user of the data has requirements for information which are very different from those who are more directly concerned with economic policy in the three countries.

We do not wish to expand on our assertion that territorial balance of payments estimates are required, for we regard this proposition as self-evident. What we do wish to do is to indicate some of the fundamental differences between the three territories which make figures constructed on an East African basis misleading.

It will be remembered from Section II(2) that East Africa as a whole had a balance of trade deficit in 1957 of about £23 million, and a deficit on invisible items of about £17 million; this giving a balance of payments deficit on current account of about £40 million. This was financed in large measure by an inflow of capital and in general the picture seemed a fairly typical one for an underdeveloped country.

The aggregate East African figures conceal, however, important differences between the three territories. Table X below shows the trading position for each of the three countries.

TABLE X

East Africa's visible trade with the rest of the world, 1957

£m.

Territory	Exports and re-exports	Net imports	Balance of trade
Kenya	31·2	72·0	−40·8
Uganda	46·8	28·9	+17·9
Tanganyika	41·1	39·3	+ 1·8
East Africa	119·1	140·2	−21·0

The main inference from the table is that Kenya is the only one of the countries having a balance of trade picture at all like that of East Africa as a whole, and conforming to the pattern of a country whose imports are inflated by the inflow of capital and which has but little to sell in the world market as a consequence of a low level of economic development.

Apart from merchandise trade it is possible to obtain some details of transactions in the official sector on both current and capital account, but these are not sufficient to make it possible to construct a detailed table on a territorial basis. For example, the passage money paid to Government servants on account of leave travel is all paid to foreign aircraft and shipping companies, and the payments and receipts of interest on Government loans as well as other items can be obtained directly from the annual accounts of the territories. Also, some information is available on the changes in assets and liabilities of the monetary system. In the private sector, however, no such sources exist, although some suggestive evidence can be obtained from the reports of the Income-Tax Department, from company reports and elsewhere, and on the basis of these an attempt was made by one of the present writers to calculate estimates of Uganda's balance of payments from 1949 to 1957 (42). The results were inevitably incomplete, but they did confirm the situation suggested by the visible trade figures: that Uganda had a substantial surplus on her current external transactions. If it is assumed that the general pattern of Tanganyika's invisible external transactions are not greatly different from those of Uganda, it is likely that when her visible trade surplus is more than about £3 million a year she has an overall current surplus; that is that the net current invisible deficit is about £3 million.

Our view then is that the general pattern revealed by the official study of East Africa's balance of payments is very much a reflection of Kenya's relationships with the external world, and that the position of Uganda, and Tanganyika is a good deal different (and better). This conclusion – if true – is important as the three countries emerge as independent States.

It is important, however, not to exaggerate the significance of the external trade figures. Trade between the three East African countries is important and Kenya has a substantial favourable balance with the other territories which helps her to offset her deficit with the rest of the world. This is shown in

Table XI, while Table XII shows the role of Kenya as an entrepôt centre for the imports of Tanganyika and Uganda from which – as mentioned above – Kenya earns a substantial revenue. We have also mentioned previously the flow of invisible income to Kenya arising from the fact that Uganda's

TABLE XI

Interterritorial trade in local produce and manufactures, 1957

£m.

		Amount
Kenya:	Exports to Tanganyika	5·4
	Exports to Uganda	6·0
	Total exports	11·4
	Total imports	4·5
	Balance	+ 6·9
Uganda:	Exports to Kenya	3·0
	Exports to Tanganyika	2·3
	Total exports	5·3
	Total imports	6·5
	Balance	− 1·2
Tanganyika:	Exports to Kenya	1·5
	Exports to Uganda	0·5
	Total exports	2·0
	Total imports	7·7
	Balance	− 5·7

TABLE XII

Transfer (entrepôt) trade, 1957

£m.

Territory	Direct imports	Net imports	Net transfers − = Outward + = Inward
Kenya	88·0	72·0	−16·0
Tanganyika	34·6	39·3	+ 4·7
Uganda	17·6	28·9	+11·3
East Africa	140·2	140·2	—

imports and exports pass through Kenya on the East African Railways, and from the existence of so many head offices of East African firms in Nairobi. It is also probable that a considerable quantity of imports which are for East African use are debited against Kenya because they have been ordered through the head offices of East African firms.

The full picture of the external relations of Uganda, Kenya and Tanganyika will not be known till much more research has been done. In Table XIII we put forward what is little more than an informed guess at what the true current account may look like of the three territories in the hope that it may stimulate others to make more accurate estimates.

III(5) *Capital formation*

We saw in the first part of this paper that estimates of capital formation are made available each year for each of the three territories; we noted some of the limitations of these estimates; and showed how some rough comparable figures and breakdowns could be obtained. Governments and economists interested in the economic development of the East African territories are obviously very concerned with the levels of investment and savings and particularly with their relation to the level of output. How far is the national accounting material useful and adequate for this task?

The material does enable one to calculate and compare the level of gross domestic fixed capital formation in the monetary economy with respect to the level of gross domestic product arising in the monetary sector (or, indeed, in the economy as a whole) for each of the three territories. These figures are deployed in Column 5 of Table XIV, and they show that Kenya was investing a considerably higher proportion of her income in 1957 than was Uganda, with Tanganyika roughly half-way between. Moreover, it suggests that all three territories are diverting a quite substantial part of their resources to investment in the monetary sector, particularly when one considers the very low level of *per capita* incomes.

On the whole this is about as far as the official statisticians have gone, and such commentaries as *Background to the Budget* (37) have not taken the analysis any further. The difficulty of obtaining satisfactory estimates of inventory investment and disinvestment – though such changes are probably very

TABLE XIII

Balance of payments: Kenya, Uganda, Tanganyika, 1957

£m.

Item	Kenya			Uganda			Tanganyika			Adjustment	East Africa
	External	Inter-territorial	Total	External	Inter-territorial	Total	External	Inter-territorial	Total		
Visible trade	−41	+ 7	−34	+18	−1	+17	+2	−6	−4	−2	−23
Invisible trade	−11	+ 7	− 4	− 3	−6	−9	−3	−1	−4		−17
Balance on current account	−52	+14	−38	+15	−7	+ 8	−1	−7	−8	−2	−40

TABLE XIV

Capital formation, 1957 £m.

	1	2	3	4	5	6
Territory	Gross domestic product (monetary)	Gross domestic capital formation (monetary)	Foreign investment. Current balance of payments surplus	Total savings/investment. (2)+(3)	$\frac{(2)}{(1)}\times 100$	$\frac{(4)}{(1)}\times 100$
Kenya	168	45	−38	+ 7	27%	4%
Tanganyika	101	23	− 8	+15	23%	15%
Uganda	107	20	+ 8	+28	19%	26%
East Africa	376	88	−40	+48	23%	13%

important – and of depreciation have hindered any further development of domestic investment calculations. Also the lack of balance of payments estimates until very recently, and of official territorial estimates even now, have prevented any attempt at bringing together estimates of domestic and external capital investment. It is not considered that much can be done about stocks and depreciation at the moment, but it is believed that by making use of the rough balance of payments estimates set out in Table XIII some light can be thrown on certain significant aspects of the savings and investment relationship.

In Column 3 of Table XIV we have inserted the final line of Table XIII. Thus the overall East African deficit on the balance of payments is the official estimate (7, 8) and the territorial division represents the present writers' very rough guesses. We then add these estimates of external borrowing or disinvestment to the estimates of domestic investment to obtain in Column 4 what we call 'total savings/investment'.

There are many inadequacies and questionable features of the above manipulation, most of which are set out in the paper. One difficulty which is not discussed, is however, very important. The balance of payments estimates that have been used are those which measure the net balance on current account. Thus they take no direct notice of capital transactions which clearly can have an important effect on internal investment. It should also be pointed out that 1957 – taken because all our other tables are for that year – is untypical for the purpose in hand. In that year the current balance of payments deficit was very large, and there was probably a substantial change in the level of inventories. It is probable that in more normal years the Kenya 'savings/investment' position would be a good deal larger than for this particular year. It has also, of course, to be remembered that the Kenya figure of domestic investment is swelled to an extent not possible to estimate by items of capital purchased by the interterritorial organizations and by private firms with their head offices in Kenya which are destined for the other territories. Nevertheless it is believed that the figures in Column 6 do give some indication of an important difference between the three territories.

It is believed that the vertical comparisons in Column 6 and the horizontal comparisons between Column 5 and Column 6 are of some significance; we feel, for example, that it is of value to 'reveal' that though the level of domestic investment may be high in Kenya in relation to domestic income, the level of local savings is low, and that the opposite is true for Uganda. Also that the high level of domestic investment in Kenya is only made possible by the importation of capital (savings); moreover, that it is quite possible that a good deal of Uganda's 'excess savings' go towards meeting Kenya's 'savings gap'. We cannot be sure that this is the position, but if it is then it is of the utmost importance to those concerned with the respective economies.

At the present time the available official data is not good enough to enable one to form a firm judgement as to the flows of savings and loanable funds from one territory to another or to throw much light on how investment in the respective territories is financed. We feel that this is an important gap.

III(6) *Development planning*

Governments of underdeveloped countries usually wish to have a development plan consisting of a set of interconnected measures designed to increase production and real *per capita* incomes. National accounting data is a desirable prerequisite of such planning. To what extent is the East African material adequate for this task? We can consider this with particular reference to some of the key items usually required in development planning.

East African data is not sufficient to provide satisfactory estimates of marginal and average capital/output ratios. The time series available are too short, sectors are not sufficiently distinct, and the accuracy of the estimates is too suspect. For similar reasons no useful evidence is available on the size of the multiplier, the accelerator, or the propensity to import, etc. Except in Tanganyika, where an economic analysis of Government accounts is available (48), it is hardly possible to make even a beginning at analysing the effects on the economy of a given increase in Government expenditure, and little information on input/output relationships is available. Peacock and Dosser made an attempt at providing such a table (46), but in their view it was hardly worth the effort, as there was such a lack of interdependence in the economy. In Kenya, however, with its more highly developed industrial and advanced European agricultural sectors, the position may be very different, but we do not know, as no attempt has been made at such a calculation.

For development planning purposes an expenditure table is a basic need, but this is non-existent in the three territories.

One difficulty which arises in connection with the use of the national accounting data for purposes of development planning is that the financial year on which the Governments' recurrent and capital budgets are based runs from July until June, while the national accounting data is, of course, calculated on a calendar-year basis. This has two implications: first, that by the time firm estimates have been compiled of the national income and product the Government will have completed its expenditure plans for the succeeding financial year; second, in using Government accounts for national accounting purposes data relating to financial years has to be converted by an averaging process to a calendar year basis. This may have the effect of concealing important fluctuations. For example in Tanganyika in 1959–60 there was a sudden sharp fall in the level of spending on the Government's capital works programme. The reason given was 'insufficient forward planning', and in the year 1960–1 it is planned to raise the level of expenditure to almost double that of the preceding year. When this data is adjusted for the purpose of providing capital formation estimates for the years 1959, 1960 and 1961 this fluctuation disappears to a considerable extent, yet for purposes of economic planning and analysis it is clearly of considerable importance.

Except in the obvious and elementary sense of providing an outline map of the economy, the National Accounting material is not sufficient to be of great help or assistance in development planning; certainly it has not been used in East Africa.

III(7) *Non-Government users*

So far in this section, dealing with the interpretation and usefulness of East Africa's national accounting material, we have for the most part been considering the value of the material to the East African Governments. What is its value to other sections of the community – particularly the business community?

The first point it is desired to make relates to the availability of the material. In none of the East African territories is there an annual domestic product publication such as the annual national income Blue Book published in the United Kingdom. In Uganda there was published *The Geographical Income of Uganda, 1950–1956* in 1957 (34). Then in 1958 there was published *The Geographical Income of Uganda, 1957*. Since then no separate publication has appeared. In 1959 the two new publications relating to Kenya and Tanganyika appeared (30) (47), but there is no promise of a regular annual publication. With the Kenya old method there were special publications in 1949, 1950, 1951 and 1953, but then nothing appeared until the new publication in 1959. Summary estimates are, of course, made available in the Quarterly Bulletin of Statistics, *Statistical Abstracts*, (24) (36) (52), and – in recent years – in the *Economic Survey* (30) accompanying the budget speech, but these are no substitutes for the full estimates which are probably available inside the Statistical Department. A lack of full official information inhibits non-official users.

A deficiency, which has to some extent been recently rectified, has been the lack of official comment making use of the national accounting material. Unlike more developed countries there is no great flow of comment in the financial and economic Press on the current economic scene. There is no economic and financial Press! In these circumstances it is incumbent on the Government, at least once a year – and preferably more often – to set out its view of the economic situation, both as a proper background to its financial policies and in order to help the community to understand the contemporary economic scene.

Such an assessment involves the use of national accounting material. Since 1955 there has been published in Uganda almost every year such an assessment entitled *Background to the Budget* (37). In Tanganyika such a publication has been available since 1956 (49) and in Kenya since 1960 (30). There is in our view more scope for official comment and interpretation as the general level of understanding of the economy is very slight. If the Governments were to give a lead by indicating how the statistical material may be used, business firms would be encouraged to use it themselves. The more complicated the material produced the greater is the need for such guidance. The recent *Surveys of Industrial Production in Kenya* (22) contain a great deal of information of value to the businessman in Kenya, but the material looks very turgid and unattractive and hence is little used. If the official statisticians were able to 'comment and interpret' the data at least to some extent – and perhaps brighten it up – it is more likely to be used.

At the present time national accounting material is probably not used a great deal by business firms. The regional income break-downs are useful to wholesalers and manufacturers wondering whether to try to push a product into a new area, but for the most part business firms are only likely to use the national accounts as an aid in making very general studies or assessments of the prospects for trade; the data for the most part is not detailed enough for much else, and if it was – as are the *Surveys of Industrial Production* – there are hardly any firms equipped at managerial level to take advantage of it. Taken by itself the national accounting material is not, in our view, of much help to business firms. It needs to be supported by a very great deal of qualitative and descriptive material.

BIBLIOGRAPHY

The list of publications that follows has been kept as short as possible and consists only of material having a direct bearing on the paper. Publications dealing with national accounting generally, i.e. not specifically related to East Africa, have been excluded, as have publications dealing with other aspects of East Africa's statistics or economy. Useful lists of publications relating to the former are to be found in (5) and (46) cited below, and to the latter in *Bibliography of Economics in East Africa*, published by the East African Statistical Department. Unless otherwise mentioned the publications are from the East African Statistical Department with Headquarters in Nairobi, Kenya.

For background information on the three territories and East Africa generally a useful first source is the *Annual Reports* of Uganda, Kenya, Tanganyika, and the East African High Commission, published annually by H.M.S.O. – the so-called Colonial Reports.

EAST AFRICA AND GENERAL

1. *The Report of the Royal Commission on East Africa*, Cmd. 9475, London, 1955.
2. E. A. G. Robinson, *The Needs for Economic Research and Investigation in East Africa*, Entebbe, 1955.
3. P. Browning, 'A Note on the Balance of Payments of East Africa, 1946–1953', *East African Economics Review*, July 1955.
4. H. W. Ord, 'An Outline of East Africa's Balance of Payments, 1953–1955', *East African Economics Review*, January 1957.
5. A. R. Prest, *The Investigation of National Income in British Tropical Dependencies*, Commonwealth Papers, No. IV, London, 1957.
6. *An Estimate of the Balance of Payments of East Africa, 1956*, East African Statistical Department, 1958.
7. *The Balance of Payments of East Africa, 1956 and 1957*, E.A.S.D., 1959.
8. *The Balance of Payments of East Africa, 1956, 1957, 1958*, E.A.S.D., 1960.
9. *The East African Quarterly Economic and Statistical Bulletin*, E.A.S.D. quarterly since September 1958.
10. *The East African High Commission* (*Non-self-contained Services*) *Financial statements and Estimates of Revenue and Expenditure*, annually since 1948, E.A.H.C., Nairobi.
11. *East African Railways and Harbours Annual Report and Accounts.* Also *Estimates of Revenue and Expenditure and Estimates of Expenditure on Capital, Betterments and Renewals works*, annually since 1948, E.A.H.C., Nairobi.
12. *East African Posts and Telecommunications: Annual Reports with Accounts.* Also *Estimates of Revenue and Expenditure*, annual since 1949, E.A.H.C., Nairobi.
13. H. W. Ord, 'National Income Accounting in East Africa', *East African Economics Review*, July 1959.
14. H. W. Ord, 'East African Companies', *East African Economics Review*, June 1960.
15. *East African Statistical Department. Annual Report*, Nairobi.

KENYA

16. *National Income and Output of the Colony and Protectorate of Kenya, 1947 and 1948*, E.A.S.D., 1949.
17. *Estimates of the Geographical Net Income and Output for the years 1947, 1948 and 1949*, E.A.S.D., 1950.
18. *Estimates of the Geographical Income and Net Output for the years 1947–1950*, E.A.S.D., 1951.
19. *Estimates of the Geographical Income and Net Product, 1947–1951*, E.A.S.D., 1953.
20. *Domestic Income and Product in Kenya: A description of Sources and methods with revised calculations from 1954–1958*, E.A.S.D., 1959.
21. *Kenya Appropriation Accounts* (*Financial Statements*)*: Colony Estimates, Revenue and Expenditure: Development Estimates*, all annual publications, Kenya Government, Nairobi.

22. *Surveys of Industrial Production, 1954, 1956 and 1957* (3 publications), E.A.S.D.
23. *European and Asian Agricultural Census, 1958:* An Economic Analysis, E.A.S.D.
24. *Statistical Abstracts, 1955, 1956/57, 1958 and 1959*, E.A.S.D.
25. R. L. West, 'An Estimated Balance of Payments for Kenya, 1923–1939', *E.A. Economics Review*, July 1956.
26. H. W. Ord, 'Domestic Income and Product in Kenya', *E.A. Economics Review*, June 1960.
27. *A Wage Earners' Index of Consumer Prices in Nairobi*, E.A.S.D., 1960.
28. *Reported Employment and Wages in Kenya* (1954, 1955–6, 1957, 1958, four publications), E.A.S.D.
29. *Pattern of Income, Expenditure and Consumption of Africans in Nairobi, 1957/8*, E.A.S.D.
30. *Economic Survey, 1960*, E.A.S.D., 1960.
31. J. L. Williams, 'The Purchasing Power of the Wage Bill in Kenya', *E.A. Economics Review*, January 1957.

UGANDA

32. *Preliminary Estimates of the Geographical Income and Net Product for the Years 1950 and 1951*, E.A.S.D., 1952.
33. *Estimates of the Geographical Income for the Years 1950 to 1952*, E.A.S.D., 1953.
34. *The Geographical Income of Uganda, 1950–56*, E.A.S.D., 1957.
35. *The Geographical Income of Uganda, 1957*, E.A.S.D., 1958.
36. *Statistical Abstract* (1957, 1958, 1959), E.A.S.D.
37. *Background to the Budget* (1955 and annual since 1957–8), Uganda Government, Entebbe.
38. *Report on the Accounts and Estimates for the Year*, annual publications, Uganda Government, Entebbe.
39. *The Pattern of Income, Expenditure and Consumption of African Labourers in Kampala* (September 1950, 1951, 1952, 1953, and February 1957, five publications), E.A.S.D.
40. *Index of Retail Prices in African Markets*, Kampala, E.A.S.D., 1957.
41. *Enumeration of Employees*, annual since June 1955, E.A.S.D.
42. T. A. Kennedy, 'An Estimate of Uganda's Balance of Payments, 1949–1957', *E.A. Economics Review*, July 1959.
43. W. T. Newlyn, 'Uganda's Balance of Payments: An Interpretation', *E.A. Economics Review*, June 1960.
44. D. Walker and C. Ehrlich, 'Stabilisation and Development Policy in Uganda: An appraisal', *Kyklos*, Vol. XII, 1959.
45. D. Walker and T. Kennedy, 'Imports and the Uganda Economy', in *Sabens Directory, 1960/61*, Kampala, 1960.

TANGANYIKA

46. *The National Income of Tanganyika, 1952–54*, A. T. Peacock and D. G. M. Dosser, Colonial Research Study, No. 26, H.M.S.O., 1958.
47. *The Gross Domestic Product of Tanganyika, 1954–1957*, E.A.S.D., 1959.
48. *Public Finance in Tanganyika: An Analysis*, E.A.S.D., 1959.
49. *Budget Survey*, annual since 1956–7, Tanganyika Government, Dar es Salaam.

50. *Financial Statements* (*Report on Accounts and Finances*) and *Estimates of Revenue and Expenditure*, annual, Tanganyika Government, Dar es Salaam.
51. D. Walker, 'Tanganyika's National Income', *E.A. Economics Review*, July 1959.
52. *Statistical Abstract*, annual since 1952.
53. 'Survey of Industrial Production in Dar es Salaam, 1954', September 1956 issue of *Quarterly Bulletin*.
54. *Agricultural Census* (non-African), 1958, E.A.S.D.
55. 'Some Estimates of Capital Formation for Tanganyika (Covering the years 1954–1959), in March 1960 issue of *Quarterly Bulletin*.

APPENDIX I

NOTES ON TABLES

TABLE I

1. The Kenya and Tanganyika figures as published are gross of depreciation. The Uganda figure is net of depreciation.

2. The non-monetary sector in Uganda is confined to foodstuffs. In Tanganyika and Kenya it is much more comprehensive. Tanganyika includes craft industries and African hut building, whereas Kenya excludes these two items.

3. Income break-down is available for Tanganyika. And there is no product break-down for Uganda.

4. For the reasons given in 1, 2, and 3 above it is not possible to obtain many East African aggregates simply by addition.

5. A break-down of incomes by districts is available for Uganda and by provinces for Tanganyika. No such break-down is available for Kenya.

6. A break-down as between non-African and African agricultural income was available under the old Kenya method and is available in the new publication for 1957 only. Such a break-down is not available for Tanganyika, or, with the exception of profits and to some extent wages, for Uganda. It is not proposed to continue the breakdown in Kenya.

7. Some of the main items of the product table can be broken down into greater detail.

8. It is possible for the salaries and wages figure to be broken down as between industries for Kenya and Uganda. Some information is also available from the annual reports of the Labour Department for the wage and salary break-down in Tanganyika.

9. All subsistence production is credited to profits (African), though it might be appropriate for part of it to be credited to salaries and wages.

TABLE II

1. The adjustment for craft industries and hut building is the total of the value added for those two sectors in the non-marketed economy as published in the official Tanganyika publication.

2. The depreciation adjustment is a personal estimate by the writers.

3. The standardized G.D.P. excludes craft industries and hut building. It is only roughly standardized in that *inter alia* the Uganda estimate of subsistence production is much narrower than that of the other two territories, whilst its coverage of African cash enterprises is much better.

4. The estimate of net indirect taxes is a personal estimate by the writers.

TABLE III

1. Estimates are available for gross fixed capital formation. No official estimates are available of depreciation and, therefore, of net fixed capital formation or of investment in stocks. In all territories the coverage of investment by African and rural enterprises generally is poor. Tanganyika alone attempts to estimate capital formation in the subsistence sector and then only for native hut building. Further break-downs are available in various ways for one or other of the territories, but no other common break-downs are available.

2. The adjustment for private motor-cars is necessary because all private motor-car purchases are regarded as part of capital formation in Kenya and Tanganyika, but not in Uganda. The essence of the adjustment is to put all territories on the Uganda basis.

3. On the whole estimates for the private sector have been produced by the supply or commodity flow approach; there not being sufficient material to justify the expenditure method. The supply approach tends to have the following disadvantageous effects:

(i) A considerable amount of capital formation using domestically produced capital goods may be excluded.
(ii) A bias in favour of capital investment involving the purchase of imported goods, largely plant and machinery, is therefore possible.
(iii) The supply approach cannot easily allow for changes in stocks of imported capital equipment.
(iv) It does not provide much data for analysis by industrial users, although it does provide a better classification by type of asset.

4. The expenditure approach is limited by the availability of data of users' expenditure derived from published accounts or censuses or special enquiries and regular returns. At the present time information on capital spending is confined to a fairly narrow range of sectors and activities; the public sector, non-African building and agriculture, public corporations and large private companies; this tends to give a bias in favour of urban capital formation, non-African capital formation and capital formation by large-scale enterprises.

TABLE IV

1. *Merchandise trade.* Domestic exports plus re-exports are valued free on board at the point of shipment from East Africa; imports are valued at the port of entry into East Africa, including cost, insurance and freight.

2. *Foreign travel and transportation.* This item includes tourism, leave travel abroad by officials and others, passage moneys paid to non-resident air and shipping companies, and receipts from such companies on account of their expenditure at East African airports and harbours. It does not include payments on account of the transport of merchandise trade which is included in item 1 above.

3. *Insurance.* Since all the companies handling insurance business are of foreign origin, the payments item represents premiums and the receipts item claims and management expenses in East Africa.

4. *Investment income.*This includes interest payments and receipts in both the public and private sectors, and also payments of profits and dividends.

5. *Miscellaneous transactions and donations.* This item includes payments and receipts on account of the maintenance of H.M. Forces in East Africa, pensions, receipts from outside East Africa for the services of the East Africa High Commission, payments of fees and scholarships for overseas education, mission receipts, and personal transfers and remittances.

6. *Grants*. These include colonial development and welfare grants, as well as special grants from the United Kingdom to Kenya and aid from such agencies as the I.C.A.

7. *Private capital transactions*. This item includes both the long- and short-term transactions of companies, statutory boards and local authorities.

8. *Public capital transactions*. This consists of the long- and short-term transactions of the three Governments and the High Commission services, and it includes loans raised on the London capital market, loans from H.M. Government, changes in the level of all funds administered by the three Governments which are held externally, and all short-term transfers of funds.

9. *Monetary system*. Since East Africa's currency is based on a sterling exchange system, changes in the level of currency circulation are reflected in the change in the level of the East African Currency Board's external assets. A proportion of these assets may now be held in local securities, and any repatriation of these would also appear under this head. The item also includes changes in the net balances due from banks abroad to banks in East Africa.

TABLES VIII AND VIII(*a*)

1. These tables quantify the differences resulting from the adoption of different methods of calculating the territorial share of gross product arising from the activities of the E.A.P.T. and E.A.R.H. The differences in the estimates of the wage bill are due mainly to reliance on indirect estimates from published accounts in the case of the private method and a greater use of reported wage data in the case of the official method. Differences in the estimates of gross and net operating surpluses are due to contrasting methods of calculation. The official estimates of gross operating surplus follow the recommendation to divide the surplus equally between the three territories. The private estimates attempt to follow conventional national accounting practices and calculate the income arising from domestic activity without reference to questions of ownership which are to do with national as distinct from domestic product estimates.

2. For sources and methods of the calculations see notes to Table A of Appendix II.

3. For sources, etc., see *Domestic Income and Product in Kenya, 1954–58* (20), p. 55.

TABLE IX

1. *Sources*. All statistics except line b. of stabilization measures have been taken from or calculated from the following:

(i) 1950 and 1951. *The Geographical Income of Uganda, 1950 to 1956.*
(ii) 1952 to 1957. *Uganda Statistical Abstract, 1959.*
(iii) 1958 to 1960. *Background to the Budget, 1960/61.* Figures for 1959 are preliminary estimates and for 1960 a forecast.

The source for 'Government expenditure over current revenue' is the 1959 *Uganda Statistical Abstract* for 1950 to 1957 and *Background to the Budget, 1960/61,* for 1958 to 1960. 1959 figures are 'approved estimates' and 1960–1 figures are 'draft estimates'.

2. There is some double counting in stabilization measure a. and stabilization measure b., as in each case export taxes appear. It is not possible therefore to add up the two stabilization measures.

3. *Ex farm proceeds*. The gross proceeds of the sale of exported produce

minus the costs of processing, transporting, and marketing. It is equal to the payments to the grower plus export taxes and marketing board surpluses.

TABLE X

1. *Source. Statistical Abstracts.*

2. No account is taken in the table of exports and imports from one East African territory to another.

3. Re-exports are imported goods subsequently re-exported without change of form to places outside East Africa. They must be distinguished from 'transfers' (see note 2 (iii) to Tables XI and XII).

4. The over-all balance of trade is less than that given in Table IV. Certain minor adjustments are made to the trade figures for balance of payments purposes (see pp. 7 and 8 of *An Estimate of the Balance of Payments of East Africa for the Year 1956*).

TABLES XI AND XII

1. *Source. Statistical Abstracts.*

2. Definitions:

(i) Interterritorial trade. The exchange of African produce intended for consumption in another East African territory. The values include excise duty and import duty on imported materials used. For balance of payments purposes these excise and customs duty payments need to be removed from the value of – say – export earnings as the importing country in fact, receives a payment from the exporting country equal to the duty paid.

(ii) Direct imports. Goods recorded at the time of importation for consumption or warehousing in Kenya, Uganda or Tanganyika *including* goods which are subsequently re-exported or transferred.

(iii) *Transfers*. Goods originating from outside East African territories which are consigned without change of form from one East African territory to another.

(iv) Net imports. Direct imports plus transfers.

3. The distinction between transfers and interterritorial exports clearly involves 'drawing a line' and deciding when there has been a change of form and when there has not been.

TABLE XIII

1. Visible trade figures for Uganda, Kenya and Tanganyika are official estimates. See notes to Tables IX, X and XI.

2. The East Africa column is from official estimates of East Africa's balance of payments.

3. Adjustment. See note 4 to Table X.

4. Invisible trade is a personal estimate by the writers. The Uganda figure is taken from (42). Estimates for Kenya and Tanganyika are based on even more inadequate information.

5. It follows from 4 above that the final line is also a personal estimate.

TABLE XIV

1. Column 1 is derived from the bottom line of Table II.

2. Column 2 is derived from line 8 of Table III. Inventory investment is, therefore, excluded. It is likely that the Kenya figure is considerably reduced by the exclusion of this type of investment in this particular year, 1957.

3. Column 3 is derived from the bottom line of Table XIII.

APPENDIX II

TABLES AND NOTES ON THE ACCOUNTS OF THE SELF-CONTAINED SERVICES OF THE EAST AFRICA HIGH COMMISSION

The following tables and notes show in some detail the calculations referred to in Part II (1) (c) of the paper. The data, which is presented in a form suitable for national accounting purposes, is derived from the annual accounts of the two self-financing High Commission services: the East African Railways and Harbours Administration (E.A.R.H.) and the East African Posts and Telecommunications Administration (E.A.P.T.).

Table A. E.A.P.T. Sector Accounts, 1957.
Table B. E.A.R.H. Sector Accounts, 1957.
Table C. E.A. Railways Sector Accounts, 1957.
Table D. E.A. Harbours Sector Accounts, 1957.
Table E. Contribution of self-contained services to territorial products, 1957.
(*a*) E.A.P.T.
(*b*) E.A.R.H.
Table F. E.A.P.T.: Balance of payments flows, 1957.
Table G. E.A.R.H.: Balance of payments flows, 1957.

NOTES

TABLE A

General

A. The accounts of the Administration have been analysed to reveal transactions as if there were separate enterprises operating in each of the three territories. Each enterprise has independent transactions with other sectors of the domestic economy and with the rest of the world which includes neighbouring territories.

B. The accounts for East Africa as a whole (and for each 'territorial enterprise') have been reclassified to show a production account, which reveals the gross and net domestic products arising from these 'post office' activities; and appropriation account, which shows the disposal of the gross operating surplus and non-trading income; and a simplified capital account consisting of gross capital formation on the expenditure side and gross retained profits and other capital receipts on the other.

C. The receipts side of the three sector accounts is analysed to reveal the territorial origin of the Administration's revenue from 'sales', 'work done', 'interest on balances', etc., as if here were three separate departments. This break-down was made by reference to information on the volume and value of traffic and the location of staff, officers and capital assets which are available in the Annual Report and elsewhere. Expenditure items were allocated first to the country in which they were made (or to which they were attributable, in the case of overseas payments for the Administration's services). Employment income was allocated by reference to the territorial residence of employees. All other expenditure was allocated by reference to this distribution, to data on the location of assets or for certain items, such as payments to Governments from other sources of information. In some cases traffic data was used when the assumption that expenditure was tied closely to 'business done' was made. The head office expenses were then allocated and transferred on the basis of traffic handled in each territory. Depreciation and interest charges were allocated in accordance with the location of fixed assets which could be estimated from annual expenditure figures and information on assets acquired from the three Governments when the Administration was established on 1st January 1949.

D. Balance of payments data is not revealed in full detail from this analysis. Receipts from and payments to the rest of the world outside East Africa are included within the revenue and expenditure of the territorial enterprises, since to itemize them in this table would complicate the text; for example, receipts from and payments for postal and telecommunications services overseas might be shown or interest payments on overseas debt (both invisible items in the balance of payments), but this would not be the full extent of overseas transactions, which include passages, pensions and visible trade items.

E. 'Head office expenses', including a depreciation charge, must be calculated to arrive at total expenditure to be charged against profits arising in a particular territory. If this transfer is not made, the estimates of domestic product will be incorrect.

Specific Points

(Superscript references to Table A)

1. *Income from Sales* includes sales overseas. Territorial break-down derived from traffic data, location of particular services, etc.

2. *Employment Income* derived from labour enumerations and staff lists. Pensions and passages allocated *pro rata* with bias in favour of residence of senior staff.

3. *Head office overheads* allocated on basis of traffic.

4. *Depreciation* or renewals contribution allocated on basis of location of fixed assets.

5. *Interest*, mainly payments overseas and to pension fund allocated on basis of fixed assets. It shows expenditure by enterprises not receipts to residents of particular territories.

6. *Gross capital formation* allocated by reference to data on 'location' found in the published estimates of expenditure.

TABLES B, C AND D

General

A. The general principles adopted are similar to those for Table A. The activities of separate enterprises operating in each of the three territories have been identified and the sector accounts on a conventional national accounting basis have been prepared.

B. Whereas the income from sales of the E.A.P.T. was based on originating traffic or payments made for services performed by particular services based in a territory, in the case of the E.A.R.H. a clear distinction is drawn between traffic originating from or destined for residents of a particular country and the transport activity actually taking place within territorial boundaries. The first is of application for balance of payments analysis, the second for estimates of domestic product.

TABLE A

East African Post and Telecommunications sector accounts for 1957 £'000

Production account

Revenue arising in territory or earnings by territory from overseas	East Africa	Kenya	Uganda	Tanganyika	*Expenditure incurred in territory*	East Africa	Kenya	Uganda	Tanganyika
Income from sales[1]	4,917	2,926	945	1,046	Cash wages and allowances	2,327	1,517	363	447
Reimbursements	244	132	34	78	Pensions/passages	521	318	83	120
Sales to capital A/C	213	115	43	55	Total employment income[2]	2,848	1,835	446	567
					Expend. on other goods and services	1,714	1,082	295	337
					Total current expend. by location	4,562	2,917	741	904
					Transfer of 'H.O.' overheads[3]	Nil	−189	+108	+81
					Expenditure charged to 'profits'	4,562	2,728	849	985
Total receipts	5,374	3,173	1,022	1,179	Gross operating surplus	812	445	173	194
of which income payments (gross product)	3,660	2,280	619	761	Depreciation[4]	373	206	79	88
Other payments	1,714	893	403	418	Net operating surplus	439	239	94	106
					Total payments and surplus	5,374	3,173	1,022	1,179

Appropriation account

Trading surplus before dep.	812	445	173	194	Interest payments[5]	438	244	87	107
Interest and other income	154	100	20	34	Transfers and other non-rec. items (write-offs)	150	110	17	23
Total receipts	966	545	193	288	Total appropriations	588	354	104	130
					Undistributed profit	378	191	89	98

Capital account

Undistributed surplus before dep. but after assets written off	378	191	89	98	Gross fixed capital formation[6]	2,112	1,126	448	538
Capital grant for renewals	74	74	—	—	Net addition to stocks	135	75	25	35
Total savings and capital grants	452	265	89	98	Gross capital formation[6]	2,247	1,201	473	573
Net borrowing, etc.	1,795	936	384	475					

TABLE B

East Africa Railways and Harbours sector accounts for 1957 £'000

Production account									
Revenue from territorial activity					*Expenditure in territory*				
	East Africa	Kenya	Uganda	Tanganyika		East Africa	Kenya	Uganda	Tanganyika
Revenue from sales[1]	22,359	14,699	1,859	5,800	Cash wages and allowances incl. arrears	8,949	5,489	853	2,607
Government subsidies[2]	370	—	168	202	Pensions/pass./medical	1,461	1,050	110	301
Sales to capital A/C[3]	178	138	—	40	Total employment income	10,410	6,539	963	2,908
Credit from app. A/C	366	232	38	96	Expenditure on other goods and services	7,676	4,630	677	2,369
					Total expenditure by location	18,086	11,169	1,640	5,277
					Transfer of 'H.O. overheads[4]	Nil	−480	+140	+340
					Expenditure charged to 'profits'	18,086	10,689	1,780	5,617
Total receipts	23,272	15,069	2,065	6,138	Gross operating surplus	5,186	4,380	285	521
of which income payments	15,596	10,919	1,248	3,429	Depreciation[5]	2,225	1,225	230	770
Other payments	7,676	4,150	817	2,709	Net operating surplus	2,961	3,155	55	Dr.249
					Total payments and surplus	23,272	15,069	2,065	6,138

Appropriation account

Trading surplus before dep.	5,186	4,380	285	521	Interest payments[6]	2,529	1,525	23	767
Interest	75	29	21	25	Rebate on government traffic[7]	156	90	40	26
Released and retrieved mat.	282	179	—	103	Write-off of capital assets	216	119	21	76
					Transfer to rev. A/C for salary arrears	366	232	38	96
Total receipts	5,543	4,588	306	649	Total appropriations	3,267	1,966	336	965
					Gross undistributed profit	2,276	2,622	Dr. 30	Dr.316

Capital account

Undistributed profit before dep. but after write-offs	2,276	2,622	Dr. 30	Dr.316	Gross fixed capital formation	6,990	5,180	422	1,388
Capital grants from governments	124	—	—	124	Increase in stocks	−149	−100	− 9	− 40
Total savings and grants	2,400	2,622	Dr. 30	Dr.192	Gross capital formation	6,841	5,080	413	1,348
Net borrowing, etc.	4,441	2,458	443	1,540					

TABLE C

East Africa Railways sector account for 1957 £'000

Production account

Receipts					*Payments*				
	East Africa	Kenya	Uganda	Tanganyika		East Africa	Kenya	Uganda	Tanganyika
Revenue from sales	17,743	11,472	1,859	4,412	Cash wages and allowances including arrears	7,941	4,863	853	2,225
Government subsidies for losses	346	—	168	178	Passages/pensions/medical	1,322	959	110	253
Sales to capital A/C	178	138	—	40	Total employment income	9,263	5,822	963	2,478
Credit from appropriation A/C	363	230	38	95	Other expenditure on goods and services	5,305	3,096	677	1,532
					Total expenditure by location	14,568	8,918	1,640	4,010
					Transfer of 'H.O.' overheads	Nil	−480	+140	+340
					Expenditure charged to 'profits'	14,568	8,438	1,780	4,350
Total receipts	18,630	11,840	2,065	4,725	Gross operating surplus	4,062	3,402	285	375
of which income payments	13,325	9,224	1,248	2,853	Depreciation	1,921	1,043	230	648
Other payments	5,305	2,616	817	1,872	Net operating surplus	2,141	2,359	55	Dr.273
					Total payments and surplus	18,630	11,840	2,065	4,725

Appropriation account

Trading surplus before dep'n	4,062	3,402	285	375	Interest payments	1,987	1,200	237	550
Interest	63	21	21	21	Rebate on government traffic	156	90	40	26
Released and retrieved mat.	274	174	—	100	Write-off capital assets, etc.	210	116	21	73
					Transfer to rev. A/C for salary arrears	363	230	38	95
Total receipts	4,399	3,597	306	496	Total appropriations	3,716	1,636	336	744
					Gross undistributed profits	1,683	1,961	Dr. 30	Dr.248

Capital account

Undistributed profit before depreciation but after write-offs	1,683	1,961	Dr. 30	Dr.248	Gross fixed capital formation	4,452	3,060	422	970
Capital grant from government	124	—	—	124	Increase in stocks (E.A.R.H.)	−149	−100	− 9	− 40
Total savings and grants	1,807	1,961	Dr. 30	Dr.124	Gross capital formation	4,303	2,960	413	930
Net borrowing, etc.	2,496	999	443	1,054					

TABLE D

East Africa Harbours sector account for 1957 £'000

Production account

	East Africa	Kenya	Uganda	Tanganyika		East Africa	Kenya	Uganda	Tanganyika
Revenue from sales	4,615	3,227	—	1,388	Cash wages and allowances including arrears	1,008	626	—	382
Government subsidies for losses	24	—	—	24	Passages/pensions/medical	139	91	—	48
Credit from appropriated A/C	3	2	—	1	Total employment income	1,147	717	—	430
Total receipts	4,642	3,229	—	1,413	Other expenditure on goods and services	2,371	1,534	—	837
of which income payments	2,271	1,695	—	576	Total expenditure goods and services	3,518	2,251	—	1,267
Other payments	2,371	1,534	—	837	Gross operating surplus	1,124	978	—	146
					Depreciation	304	182	—	122
					Net operating surplus	820	796	—	24
					Total payments and surplus	4,643	3,229	—	1,413

Appropriation account

Trading surplus before depreciation	1,124	978	—	146	Interest payments	542	325	—	217
Interest and dividends	12	8	—	4	Write-offs and transfer of assets	6	3	—	3
Released and retrieved mat.	8	5	—	3	Transfer to rev. A/C for salary arrears	3	2	—	1
Total receipts	1,144	991	—	153	Total appropriations	551	330	—	221
					Gross undistributed profits	593	661	—	Dr. 68

Capital account

Undistributed profit before depreciation but after write-offs	593	661	—	Dr. 68	Gross fixed capital formation (stocks included in railways)	2,538	2,120	—	418
Net borrowing, etc	1,945	1,459	—	486					

TABLE E

Contributions of self-contained services to territorial products

(*a*) *East African Post and Telecommunications* £'000

	East Africa	Kenya	Uganda	Tanganyika
Employment income	2,848	1,835	446	567
Gross operating surplus	812	445	173	194
Total gross domestic products	3,660	2,280	619	761
Net interest paid aboard (payments net of receipts)	274	(130)	(59)	(85)
Gross national product	3,386	2,150	560	696

(*b*) *East African Railways and Harbours*

	East Africa	Kenya	Uganda	Tanganyika
Employment income	10,410	6,539	963	2,908
Gross operating surplus	5,186	4,380	285	521
Total gross domestic products	15,596	10,919	1,248	3,429
Net interest paid abroad (payments net of receipts)	1,360	(680)	(80)	(600)
Gross national product	14,236	9,239	1,168	2,829

TABLE F

East African Posts and Telecommunications: balance of payments flows, 1957 £'000

	East Africa	Kenya	Uganda	Tanganyika
Current revenue	5,315	3,158	999	1,158
Current expenditure by location	4,937	3,156	802	979
Balance	+378	+ 2	+197	+179
Transfer of overheads		+189	−108	− 81
Gross surplus	378	191	89	98
Gross domestic capital formation	2,247	1,201	473	573
Finance required over and above gross surplus	1,869	1,010	384	475
Financed by:				
(*a*) Government capital grants	74	74	—	—
(*b*) Internal borrowing	789	480	124	185
(*c*) Local loans	− 21	—	− 11	− 10
(*d*) Overseas loans	1,027	456	271	300

TABLE G

East African Railways and Harbours: Balance of payments flows, 1957

£'000

Item	East Africa			Kenya			Uganda			Tanganyika		
	R.	H.	RH.	R.	H.	RH.	R.	H.	RH.	R.	H.	RH.
Revenue from traffic: Included in domestic product	17,743	4,615	22,359	11,472	3,227	14,699	1,859	—	1,859	4,412	1,388	5,800
By origin/destination approach	17,743	4,615	22,359	7,297	2,081	9,378	6,034	1,146	7,180	4,412	1,388	5,800
Other revenue	682	44	727	195	13	208	189	—	189	299	31	330
Total revenue by origin	18,425	4,660	23,086	7,492	2,094	9,586	6,223	1,146	7,369	4,711	1,419	6,130
Current expenditure by location	16,742	4,068	20,810	10,186	2,579	12,766	1,938	—	1,938	4,619	1,487	6,106
Balance	1,683	593	2,276	−2,694	−485	−3,179	4,285	1,146	5,431	92	−68	24
Adjustment for:												
(1) Traffic payments abroad				+4,175	+1,146	+5,321	−4,175	−1,146	−5,321	—	—	—
(2) Head office overheads				+ 480	—	+ 480	−140	—	−140	−340	—	−340
Gross surplus	1,683	593	2,276	1,961	661	2,622	−30	—	−30	−248	−68	−316
Gross capital formation	4,303	2,538	6,841	2,960	2,120	5,080	413	—	413	930	418	1,348
Finance required over and above gross surplus	2,620	1,945	4,565	999	1,459	2,458	443	—	443	1,178	486	1,664
Financed by:												
(*a*) Government capital grants	124	—	124	—	—	—	—	—	—	124	—	124
(*b*) Internal sources	1,500	430	1,930	703	144	847	343	—	343	454	286	740
(*c*) Overseas loans	996	1,515	2,511	296	1,315	1,611	100	—	100	600	200	800

C. As in Table A, transactions with the rest of the world outside East Africa are included within the territorial entries. All payments to and receipts from overseas residents are attributed to the territory actually using or providing the services. Interterritorial transactions between the East African territories take two forms. First, the provision of transport services, mainly railway and harbour services performed by Kenya for Uganda and, secondly, the provision of head office services again mainly by Kenya for the other territories' railways. Included within these head office 'services' are purchases of stores for use in other territories. Transport services performed for the rest of the world have not been identified in the table. Thus revenue derived from transhipment of Congo traffic which contributes to, say, Tanganyika's domestic product has not been deducted in estimating the origin of traffic for the territorial balance of payments analysis in Table G. Thus the total traffic attributed to Tanganyika residents is overestimated. On the other hand, no account is taken of transhipment of Tanganyika traffic via the Kenya/Uganda line.

D. The tables draw a clear distinction between (i) the ultimate source of the revenue which is not considered of application for estimates of domestic product and (ii) the value of transport services taking place within territorial boundaries.

E. In the preparation of the sector accounts and in the domestic product calculations no attention was paid to the question of the ultimate ownership of assets which were regarded as mainly of interest in the field of balance of payments and national product calculations.

F. It follows, therefore, for example, that no contribution to Uganda's domestic product can be made by harbour services. For simplicity the relatively small overhead expenses attributable to Tanganyika harbour traffic which is incurred in Kenya are ignored. Most of this has been allowed for in estimating expenditure by location in any case.

Specific Points

1. *Revenue from sales* include sales within the E.A.R.H. sector. This item represents the value of transport activity actually taking place within territorial boundaries, irrespective of residence or ownership of traffic handled. It was estimated by the following method. First estimates of the origin or destination of traffic were made, using data in the reports and accounts of the E.A.R.H., trade statistics and other data. Secondly, traffic within territorial boundaries was calculated by reference to route mileage and tonnage figures, clearings from ports and stations and data on location of assets and services, such as road and water transport.

2. *Government subsidies* for operating losses were credited to the place of occurrence, since revenue did not cover factor payments. If, however, the Uganda Government paid a subsidy for the losses of operating Mombasa Port, the subsidy would be credited to Kenya and appear as a grant, from abroad.

3. *Sales to capital account* are limited here to wages, pensions and passages of employees working on capital projects. To omit this receipt would depress the operating surplus.

4. *Transfer of 'head office' expenses* represents costs incurred by Kenya chargeable against profits earned in the other territories.

5. *Depreciation.* This is related to the location of fixed assets, but the gross operating surplus is also adjusted to allow for an element of transfer of 'head office' expenses.

6. *Interest* payments, mainly overseas, are related to location of assets, with adjustments for non-interest-bearing capital, largely in Tanganyika.

7. *Rebate on Government traffic* appears in the railway accounts as an appropriation from the trading surplus and not as a discount on sales. The same practice has been followed here.

TABLE E

The item in each part of the table 'net interest paid abroad' is derived from the official estimates of the balance of payments (7) (8); the split-up of the East African total is by the writers.

TABLE F

In the table interterritorial transactions have been identified, but transactions with the rest of the world are not shown. Thus revenue from sales outside East Africa and interest receipts and payments for goods and services from outside East Africa, including interest, have been allocated to the territories affected. In 1957 interterritorial transactions were virtually confined to payments by Uganda and Tanganyika on current account for 'head office' services. The sources of finance for domestic capital formation in fixed assets and stocks were (i) gross undistributed profits before depreciation, but after interest payments (corresponding roughly with the depreciation provisions from gross profits); (ii) capital grants and borrowing from internal sources, principally the pension fund (these internal sources were 'owned' by residents in all territories and so the borrowing was in the last analysis from within the territory); (iii) overseas borrowing: for this item the net receipts appearing in the capital account of the *East African Balance of Payments* in respect of E.A.P.T. overseas assets and liabilities have been shown, and the amount has been distributed so as to balance total capital receipts with capital formation in each territory. The over-all picture indicates that no one territory was relying on undistributed profits earned by its neighbours to finance expenditure in 1957.

TABLE G

1. In the table the interterritorial transactions have been identified. Payments to and receipts from the rest of the world are consolidated within the entries for particular territories. In 1957 Uganda residents, for example, purchased railway and harbour services from the Administration valued at £7·4 million and received in the form of local purchases of goods and services and in employment income some £1·9 million, all on account of railways. Thus there was a deficit on account of these transport activities of £5·4 million, before taking account of overhead charges due to 'head office' adjustments and interest on external debt raised to finance capital assets located within the territory. After transfer of overheads and interest payments abroad the net deficit on Uganda's current balance of payments attributable to railway and harbour services was £5·7 million. Excluding £90,000 for interest payments overseas, the deficit of £5·6 million constituted a net credit to Kenya's current balance of payments.

2. In the above table, as in Tables B, C and D, it has been assumed that traffic originating from or destined for Tanganyika residents is carried only within that territory, so that there is no purchase of transport services from neighbouring countries other than a contribution to 'head office' overheads for the railways. This assumption is broadly true, although some traffic from the lake region of Tanganyika is carried over the Kenya/Uganda line and in some earlier years some Kenya/Uganda traffic was diverted through the port of Tanga on to the Northern Tanganyika line.

3. The entries in this table may be reconciled with those in Tables B, C and D, except for the estimates of 'originating traffic', which were, however, a precondition of calculating the estimate of domestic transport activity which appears as the first entry on the receipts side in all tables. Other current revenue includes subsidies, interest and other non-trading income. Current expenditure by location consisted of total current expenditure on goods and services, including wages, passages and pensions, except in so far as they are part of capital formation, interest payments, largely on account of overseas loans, traffic rebates and non-recurrent items such as capital write-offs.

4. Sources of finance for gross capital formation are shown to assess the degree of territorial interdependence. As in the case of the E.A.P.T., overseas loan receipts are shown net of additions to overseas assets, and the balancing item indicates the probable use of internal funds such as renewals and betterment funds, cash balances, etc. These have been allocated between the territories in accordance with the probable sources of finance used for capital formation in 1957. Although it is not easy to assess the extent, there may be a substantial element of transfer from reserves attributable to gross savings retained by Kenya to finance capital formation in Tanganyika.