MAKERERE INSTITUTE OF SOCIAL RESEARCH

CONFERENCE PAPERS - JANUARY 1967.

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V. Alvis/P. Temu
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The Marketing of Selected Food Crops in Kenya, Comprising Maize, Beans, English Potatoes, and Bananas.

The current study on the marketing of selected food crops in Kenya is part of a wider project on the marketing of staple foods in Africa which is directed by the Stanford Food Research Institute. Altogether four two-man teams, one based on Sierra Leone, one on Western Nigeria, one on Eastern Nigeria and one on Kenya are involved in it. A graduate student from Stanford University is also conducting a similar study in Northern Nigeria.

The basic research outline was thrashed out by all the teams working together. The idea is that each will be asking about the same questions and gathering similar data in its own environment. In this way it is expected that some comparability of results can be achieved and any interesting contrasts and similarities highlighted.

Agreement was reached on the general criteria to be followed in choosing the commodities to be studied and the geographical area to be covered. Each team was to choose a central city as a focal point. Four or five starchy staples defined as the most important calorie providers in the local diet were to be isolated for study. The geographical boundary of the study was to be the entire supply hinterland of the central city with respect to the commodities in question. Within that area the marketing of each commodity was to be studied, tracing the transfers of each one from the producer to the consumer. All intermediaries, whether or not they take title to the commodity, be they transporters, processors, distributors, wholesalers or retailers fall within the scope of the study.

For Kenya the central city selected was Nairobi and the commodities chosen were maize, beans, English potatoes and bananas. (Initially, wheat and rice had been included and bananas excluded). The study has not yet advanced far enough to yield results and data so far gathered have yet to been processed and evaluated. The purpose of this paper is therefore not to present findings or to develop hypotheses: it is simply to define the scope of the study, our approach to it and what we hope to achieve.

Scope

Our first task is to discover for each commodity the main exchange levels, defined as the principal points where title to the commodity is transfered from one intermediary to another, We need to know the precise geographical locations of markets, shops, warehouses or farms where these transfers take place, the comparative significance of various levels of transfers, when (before or after harvest) do they occur, in what form is the commodity transfered, on what terms, etc.

Next, the intermediaries at each stage will be examined to see if they exhibit any interesting characteristics which could mark them off as a group from others in the society, Thus we are interested for instance in the sex, religion and ethnic group of each type of intermediary, as well as his employment history, his type of business organization, and so on.

Having identified the personnel involved in the marketing chain for each product we need to know something about the market facilities used. For the most part these will be physical facilities such as markets, shops and storage depots, but they also include credit facilities and any other facilities of a non-physical nature which assist market agents in their trading operations. Whatever the facility, certain key questions will be asked - eg. where are they located, how accessible are they, who allocates them and on what criteria, who owns and maintains them, what is their capacity, are they adequate for needs, is utilization seasonal or continuous, and similar questions.

Attention will also be given to the manner in which marketing agents conduct their operations. For example, how is market information passed on through the entire chain of intermediaries concerning supply and demand conditions? How complete or incomplete is such information, is it accurate and current, or relatively unreliable and out of date? Is there any kind of code of behaviour binding market participants? Are there any legal or social sanctions which could be invoked against market participants whose conduct was thought to be illegal, unethical or otherwise unacceptable?

The study will also attempt to appraise the effect of forces operating on the marketing system and in particular to balance the incentives against the disincentives to the entry of new firms. Once again the nature of incentives as well as barriers to participation in the market is to be widely explored to cover the range of official sanctions, social traditions and the like. Special attention is to be paid to the question of economic or monetary incentives and the extent to which these are enhanced or retarded by non-economic forces. The purely physical obstacles to efficient distribution will also be taken into account, eg. inadequacy of transport facilities, physical inaccessibility due to bad weather, lack of communications, and bad topography.

Governmental policies not directly concerned with marketing may nevertheless have an important bearing on market organization and performance with respect to the commodities under study. It is therefore intended to pinpoint official policies in other sectors of the economy which have a major impact on the marketing of the food staples selected and to see whether such policies, if enforced, might facilitate or encumber distribution. In this connection special attention is to be given to the content of the national development plans, to taxation and fiscal policies which have an indirect effect on marketing, and to the policy of official price control. The effect of these measures on the demand and supply of the commodities in question, on resource allocation within the marketing sector, on risk and profitability and on other related matters will be noted.

Approach

In collecting data we have to rely both on secondary sources and on original research based on interviews. We have been able to get very little information from published sources. Even on a commodity like maize which has attracted so much public attention and is marketed through official channels, comparatively little is known about the marketing and disposal of that portion of the crop (which in a normal year may be 90% or more) not handled by the Maize and Produce Board, a point which is little realised. Of this maize some is consumed by the growers directly, some is bartered in the rural or village markets, some is moved illegally from district to district within Kenya and some is smuggled out of Kenya and sold for better prices across the border. By and large, what is true of maize is also true of beans though these are less stringently controlled. In all cases the relative magnitudes involved, the price structure in markets outside the controlled channel and the effect of having two parallel price structures side by side - the official and the unregulated - are questions which well merit investigation. For those commodities - maize and beans - marketed through a statutory board reliance has been placed primarily on depth interviews with the intermediaries involved. These have included the marketing board officials themselves, millers, transporters, wholesalers and officials in relevant ministries. Fairly reliable information can thus be obtained but this is information concerned largely with that portion of the commodity which is handled through the official channels.

Mass interviews at the retail level, involving shops and retail markets in both rural and urban areas are being carried out on a sample basis. For example a 25% sample of bean and potato traders has already been completed for the Nairobi retail markets, and it is intended to tackle the village and barter markets in the same way. One modification will be that because the latter are so numerous and heterogeneous it may be necessary to choose perhaps a stratified sample of markets in addition to interviewing a sample of traders in each market. It will be clear that to be able to choose a meaningful sample, whether of traders or of markets, it is necessary to know

approximatel, the number of traders in each market, and for each commodity, and likewise the total number of markets within the area of study. The task of enumerating individual traders and visiting each market individually is evidently beyond our means but we have found the county council officials and others very helpful in assisting us to locate markets in the rural areas, and in classifying them into useful categories.

One big problem is to find capable interviewers who understand both English and the local vernacular to conduct interviews in the various places where they are needed. A second problem is to overcome the suspicion of many traders who, despite every assurance to the contrary, still feel that there is some sinister motive behind our 'prying' into their business. The third is the amount of time spent travelling enormous distances in trying to cover pratically the entire area from Bungoma to Kitui.

Objectives

You may well ask what we do with the data once we have got it. It is hoped that information obtained in this and similar studies will be used to evaluate marketing performance with respect to different commodities and different areas. More specifically, the study singles out some five major criteria by which the performance of the marketing function should be tested and evaluated. These are:-

1. Performance in the eyes of participants - how far the market intermediaries at each level are satisfied or dissatisfied with the marketing process as they see it, and the reasons therefor;

2. How far does the market approximate the economist's model of a perfect market in which price differences reflect cost differences, where price 'signals' are effectively communicated and the price system determines the economic allocation of resources;

3. Are there ways in which the technical efficiency of marketing could be increased through a re-allocation of existing marketing resources;

4. Are there ways in which new net investment could contribute significantly to marketing efficiency; and

5. Are there extra-economic goals which the marketing system is supposed to meet, how far are those goals in fact being met, and at what cost.

It will be clear that informed opinion on these questions will only be possible when all aspects of the study as spelt out above have been covered and the quality of the results will of course depend largely on the quality of the data.

Apart from these somewhat qualitative judgements it is hoped that the study, while not yielding accurate quantitative data, will none the less provide rough orders of magnitude on the volume of each commodity passing through each level of intermediary. For example, approximately what proportion of maize product is marketed and of that marketed approximately what proportion is sold to the agents of the Maize and Produce Board and what proportion outside? How much maize meal do the shops handle relative to market places - and so forth.

Some price data are also being gathered which may be useful to future policy. It is well known that even for maize and beans which have a fixed producer price great quantities are in fact sold in the free and unregulated markets. These channels are perfectly legal and must not be confused with illegal black market channels which are also, at times, of considerable significance. We are collecting weekly wholesale and retail price data over a period of 12 months or more both in the town and in remote rural and village markets. It may be that some interesting price behaviour especially in the so-called 'barter markets' will be observed. The fact

that these markets are situated physically close to places where official agents buy at fixed prices means that the small maize or bean farmer has the option of selling either to an official agent at a fixed and known price or in the unregulated markets at the competitive price. The prices ruling in the barter markets should therefore offer an interesting comparison with those fixed by authority and it should be worth pondering whether substantial discrepancies between these two prices, if they occur, could affect significantly the volume of produce offered for sale to the official agents at different times of the year.

Of the four commodities being studied two - maize and beans - are centrally marketed, the control on maize being far more rigorous than that on beans; the remaining two, bananas and English potatoes, are not subject to such control but are sold wholly under competitive conditions. Here again one may expect our study to shed some light on the merits and demerits of controlled marketing or partially controlled marketing on the one hand, and uncontrolled marketing on the other, subject to the limitation that results based on a study of only four products cannot claim general validity.

It is also hoped that it will be possible to test some of the more popular hypotheses which have gained currency in recent years concerning marketing behaviour in Africa. They include allegations such as -

1. that a free market is subject to wide seasonal fluctuations which could be reduced by controlled marketing;

2. that the free market has too many intermediaries making inordinate profits at the expense of the consumer and the producer;

3. that prices in different markets tend to move erratically, suggesting ignorance of supply and demand conditions;

4. that unregulated markets are not sophisticated enough to supply the big cities and that reliance must therefore be placed on organized marketing;

5. that many Africans cannot succeed as traders because of the demands of the extended family; and

6. that a higher price is not offered for a higher quality of the product because somehow the price system fails to transmit information.

Let us emphasize again that our study is one with the four West African studies and too much weight must not be attached to any one of them in isolation.

TABLE I.

AFRICAN BUSINESS PROMOTION LIMITED -

ANNUAL BALANCE SHEET (£)

LIABILITIES	1963	1964	1965
Share Capital			
Authorised: 100 Ordinary Shares of Shs.20/- each (1963)	100		
250,000 Ordinary Shares of 20/- each (1964)		250,000	250,000
Issued: 2 Ordinary Shares of Shs.20/- each fully paid	2	2	2
249,998 Ordinary Shares of Shs.20/- each Shs.2/- paid (1964)	-	25,000	25,000
Revenue Reserve			
Unappropriated Profits	9,102	45,922	85,104
Current Liabilities and Provisions			
Holding Company - UDC. Ltd.	1,639	75	1,179
Fellow Subsidiary Company	-	11	11,179
Creditors, Provisions and Accrued charges	10	1,257	6,034
Taxation	5,460	23,508	21,900
Total	16,213	95,775	150,398

ASSETS	1963	1964	1965
Fixed Assets:			
Motor Vehicles	-	548	-
Furniture and Equipment	-	2,183	2,615
Associated Companies Share at Cost			
Hogg Robinson & Capel-Cure(U) Ltd.	-	3,900	3,900
Equatorial Agencies Ltd.	-	10,000	9,000
Associated Traders(U) Ltd.	-	10,000	10,000
Nyanza Textile Industries Ltd.	-		700
Uganda Cement Industries Ltd.	-		650
Uganda Crane Industries Ltd.	-		800
Uganda Consolidated Properties Ltd.	-		480
Current Assets:			
Stock of Umbrellas and Hoes at Cost		-	713
Debtors, Deposits and Prepayments		1,601	71,599
Current Account - Fellow Subsidiary Company	7,631	27,060	22,074
Deposit - Ugadev Bank Ltd.- Fellow Subsidiary Company		37,040	8,925
Cash at Bank and in hand	8,446	3,443	18,962
Intangible Assets:			
Formation expenses	136	-	-
Total	16,213	95,775	150,398
Guarantees Outstanding on behalf of customers		4,275	74,182

Source UDC. Annual Reports

TABLE 2

SCHEDULE OF PAYMENTS

HIRE-PURCHASE SCHEME WITH GUARANTEE BY AFRICAN BUSINESS PROMOTION LIMITED

	Cortina 1500cc Sal.	Cort.1500 East.Car	Corsair1500 D/Luxe Sal.	Zephyr 4 Saloon	Lorry K./300 5ton	K.500 5ton Truck	K.700 7ton Truck	Anglia350 7cwt.Stand	Anglia350 7cwt.D/luxe	Thames 800 Rear Door.
Retail Price	19,000/-	20,000/-	20,000/-	21,800/-	35,700/-	42,500/-	45,500/-	14,900/-	15,500/-	20,600/-
Amount of Deposit	4,750/-	5,000/-	5,000/-	5,450/-	8,925/-	10,625/-	11,375/-	3,725/-	3,875/-	5,150/-
Nett Balance	14,250/-	15,000/-	15,000/-	16,350/-	26,775/-	31,875/-	34,125/-	11,175/-	11,625/-	15,450/-
Interest	912/-	960/-	960/-	1,046/-	1,713/-	2,040/-	2,184/-	715/-	745/-	990/-
Total H.P. Balance	15,162/-	15,960/-	15,960/-	17,396/-	28,488/-	33,915/-	36,309/-	11,890/-	12,370/-	16,440/-
17 Monthly Payments	842/-	887/-	887/-	966/-	1,583/-	1,884/-	2,017/-	660/-	687/-	913/-
1 Final Payment	848/-	881/-	881/-	974/-	1,577/-	1,887/-	2,020/-	670/-	691/-	919/-
Discount payment to A.B.P. to cover costs of scheme operation.*	950/-	1,000/-	1,000/-	1,090/-	1,785/-	2,125/-	2,275/-	745/-	775/-	1,030/-

Payment of Deposit, Insurance for total period of hire, License and Fees, to be paid cash prior to delivery. Insurance to be endorsed with Uganda Company's interest and registration to be done in the Joint Names of Uganda Company and Hirer. No vehicle to be hired or delivered, without a letter of authority from the General Manager, African Business Promotion Limited.

* African Business Promotion Limited on collection of discount at the conclusion of the credit term, will pass half of the rebated sum to the hirer if the agreement has been fully honoured and the account satisfactorily conducted.

Source: Files of ABP.

TABLE 7

SMALL INDUSTRIES DEVELOPMENT FUND - PERFORMANCE RECORD

No.	Industry	Code	Organization		Amt. of Loan Advanced	Existing	Failures	Amt of Loan written off	Loan Repaid in full	Amount of Loan Outstanding
			Single	Others	£			£	£	£
2	Agriculture	010	2		2,776		2	1,376		1,224
6	Forestry,Hunting&Fishing	021-099	5	1	10,444	4	2			9,044
2	Mining	122	1	1	3,750		2	2,921	1	170
10	Manufacturing Food Prod.	200-219	5	5	21,524	3	2	454		11,212
1	Knitting	232		1	1,180	1				565
1	Manufacture of Footwear	241	1		2,780	1				2,158
5	Tailoring	243	5		3,936	1	4	1,557		109
9	Carpentry	250	7	2	6,885	5	4	1,073	1	5,184
1	Cane Weaving	260	1		450		1	450		
2	Printing	280	2		1,012		2	988		
1	Tannery	292	1		370		1			350
2	Manufacture of Chemical Pro.	312&319	1	1	1,175		2	1,000	1	
4	Block Making	331	2	2	8,214	3	1	15		7,258
2	Pottery	339	1	1	2,186	2				1,535
2	Light Engineering	350	2		550	2				190
1	Electrical Engineering	370	1		94	1			1	47
4	Boat Building	381	1	3	4,133	3	1		1	419
3	Repairing Motor Vehicles	384	3		3,777	3	1	1,487	1	1,408
3	Construction	400	2	1	21,887	2	1	4,750	1	2,487
1	Petrol Retailing	612	1		443		1	332		
1	Transportation	714	1		235		1	235		
1	Hair Dressing	845	1		250	1				27
64	-	-	46	18	98,051	36	28	16,638	6	43,387

Source: Files of the Development Division of the UDC.

TABLE 4

ABP PERFORMANCE RECORD

CREDIT - GUARANTEES	January 1965	December 1965	October 1966
No. of Credit - Guarantees	14	194	324
Total Value	£10,175	£74,475	£126,800
Amount Operative	4,375	42,325	72,572
Tea Guarantees	-	110	
Default on all Guarantees	Nil	710	1,549
Less recovered from sale of assets	-	531	n.a
		179	
Credit - Guarantee Commission Received	13	117	n.a
Income to date	27	525	1,584
CONFIRMING			
No. of Confirming approved	4	11	13
Total Value	£ 6,000	£11,750	£13,750
Amount operative	2,284	3,709	4,752
Commission Received	Nil	551	411
Defaults	Nil	Nil	Nil
DISCOUNTING			
No. of Traders Discounting operative	1	35	48
Amount operative	£ 507	£19,581	£24,839
Commission Received	3	64	n.a
Commission and Interest Received to date	29	669	2,148
HIRE - PURCHASE SCHEME			
No. of Guarantees on vehicles	-	-	22
Total Value	-	-	£41,898
Commission Received	-	-	2,090

Source: Files of ABP

G.R. Bosa
U.S.S. Conference
December 1966

AFRICAN BUSINESS FINANCING SCHEMES IN UGANDA

This paper is part of a wider study on "Financing Small-scale Enterprise in Uganda". It does not attempt to argue the case for small businesses or the role they play in the economic life-especially- of underdeveloped countries. Its purpose is more narrowly based. For among the many problems which confront small-scale enterprise in under-developed - as in developed - countries, few have proved to be as difficult to solve as those of financing. And where African small businesses are concerned, these problems are even many, many times fold more intractable. Until recently, the domination of expatriate banks has been one of the most important features in Uganda as elsewhere in East Africa. But these banks, having close connections with British Banking interests and deriving much of their traditions and attitudes from the British Isles, have contributed precious little in the promotion especially of African small businesses. In Uganda, various schemes have been tried in an attempt to overcome this foundamental constraint in the promotion of Africans in business and the purpose of this paper is to review and assess the successes and failures of some of these schemes.

Establishment of the Small Industries Development Fund

One of the first experiments in development financing in Uganda was the establishment of the Uganda Credit and Savings Bank as was the establishment of the Uganda Development Corporation in the early 1950's. The operations, successes and failures of the Uganda Credit and Savings Bank have been the subject of an earlier paper in this study.[1] While the two institutions were Government owned and were conceived at about the same time, their objectives were radically different. The one was designed to promote small African enterprise by facilitating loans to African commercial and industrial - in addition to agricultral- enterprise; the other was designed to promote large industrial undertakings in Uganda usually in partnership with outside finance. While the Uganda Credit and Savings Bank was capitalized with an intial fund of over £½ million, the Uganda Development Corporation was capitalized with an initial fund of £5 million and the latter's activities now run into several million pounds worth of business per annum.

In 1955, however, after three and a half years of successful operation of large undertakings, the Uganda Development Corporation found it fit not to be associated in the public's mind solely with the development of large projects. This would probably not be good for public relations. The Uganda Development Corporation therefore conceived of a small industries project and in 1955, set up a "Small Industries Fund" by allocating £20,000 from its profits which amounted to £263,049 in that year.

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[1] See G.R. Bosa, Uganda Credit and Savings Bank, EDRP. No.98

This special reserve fund was increased by a further appropriation of £50,000 in 1957. The purpose of the fund was to provide assistance to individuals or groups of individuals in setting up new enterprise or in expanding exisiting enterprise in conditions where normal sources of industiral finance were not available and entreprenerical ability was lacking. It was thus not intended to assist well developed businesses which had access to other sources of finance. Rather, its object was to assist the small man with technical knowledge, business experience and capital.

Though in many ways a forerunner of the African Business Promotion Limited, the Small Industries Scheme was not geared solely to the promotion of Africans in business. For instance, "the first £20,000 loan to which no conditions had been attached, was rather quickly taken up by two loans - one to a European firm which might well have found other sources of funds and which did not need technical knowledge." [2] The sum of £20,000 could, obviously, have served more people or firms, or served persons or firms in greater need. It was probably because of this that in 1957 conditions such as "the Corporation should only enter into schemes where technical knowledge and guidance are essential features" and that "full publicity should be given by the Corporation to the existence and purpose of the fund throughout the Territory" were attached by Governor-in-Council. Still the thinking which led to the formation of ABP was partly a result of the accumulated experience from the operations of the Small Industries Development Scheme.

Establishment of African Business Promotion Limited

During the course of administering the Small Industries Scheme, the Uganda Development Corporation incidentally made some contribution in teaching African applicants for loans some of the elementary principles of conducting their businesses. But by 1962 these training facilities had not been set up in an organised way though the need for a much greater effort in this field had been fully recognised. In addition, the need to encourage the participation of Africans in the country's distributive trades was also fully recognised. The Uganda Development Corporation therefore proposed the formation of a new subsidiary to be known as African Business Promotion Limited, with a broad objective of training Africans in all aspects of business at all levels of business employment. It would also offer services to small businesses. The World Bank had recommended that the Uganda Development Corporation organisation should have as its main objective the training and development of entrepreneurs. It recommended that the Uganda Development Corporation organisation should work closely with the various loan funds; expand business training schemes; help in the interpretation and simplification of business regulations; and create a business advisory bureau and commercial services agency. [3] With regard to the latter function, the A.B.P. would be the means of providing commercial services to African traders. The A.B.P. would achieve this by the employment of supervisory staff to assist

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[2] C.T. Richardson, Final Report Small Industries Development, April 1961.

[3] I.B.R.D., The Economic Development of Uganda (Baltimore: John Hopkins Press, 1962), pp.291 - 292.

individual African businessmen; it would institute a credit guarantee scheme to guarantee their credit with importers and manufacturers, or with shippers and merchants overseas; it would give assistance in assessing the market, in the submission of indents, on insurance, on freight and clearance, and on how to organise storage, sales and costing. These then were the considerations which led to the formulation of a scheme which would meet the recommendations of the World Bank, as well as the primary objective of assisting in the training of Africans at all levels of business employment.

By 1963, discussion had reached final stages and on 17th July, 1963, African Business Promotion Limited was incorporated as a new subsidiary company of the Uganda Development Corporation.

Finances of the African Business Promotion - The liabilities and assets distribution of ABP is shown in Table 1. The ABP was originally financed by an initial issue of 2 shares of £1 each which were fully paid. The company did not become fully operative until 1964 when its authorised share capital was raised from £100 to £250,000 and fully paid up capital raised from £2 to £25,002. However, in the period 17th July to 31st December 1963, the company still made a trading profit of £14,562 from which £5,460 taxation was deducted leaving a balance of £9,102 unappropriated profits to be carried forward. The ABP was initially operated as a subsidiary of the Small Industries Development Fund and had no personnel and over-heads of its own. Since the company was appointed distributing agent of many of the UDC products, notably cement, it was possible for the ABP to make a substantial profit during this formative period.

Apart from increasing the authorised as well as paid up share capital in 1964, retained profits have been the biggest source of funds for the ABP. The Company made a trading profit of £62,804 in 1964 and after providing for taxation, a balance of £39,296 was added to the unappropriated profit of £9,102 brought forward from 1963, making a total of £48,398. Of this, £1,476 formation expenses was written off and 5% interim dividend-accounting for £1000 - was declared, leaving an unappropriated profit balance of £45,922 to be carried forward. The trading profit for the year 1965 was £67,649 and after taxation of £23,467 and an interim dividend amounting to £5,000 which was declared during the year, left a consolidated balance of £85,104 to be carried forward.

The assets structure of the Company shows a very high liquidity ratio. In 1963 virtually 100% of the company's funds was in the form of cash and current account with a fellow subsidiary company. In 1964 and 1965 liquid assets on current account or in the form of cash, time deposits and current debts, accounted for 72% and 81%, respectively of the total assets. These liquid assets were considerably more than adequate to back up credit guarantees of £4,275 and £74,182 outstanding on behalf of customers in 1964 and 1965.

OPERATIONS OF THE SIDF & ARP

Appraisal of Loan Applications (SIDF). - In general, any individual or group of individuals in industry or who are wanting to set up business in industry, could apply for a loan in writing to the SIDF executive setting out the purpose for which the loan was being applied. In addition to the provisions laid down in 1957 by Governor-in-Council previously mentioned, four other provisions were imposed by the UDC itself in order to safeguard Government's intentions in allowing the Fund to be set up and for internal guidance. These were: "(a) that the application falls properly within the title of the fund - Development of Small Industries;

(b) that the applicant knows what he wants to do exactly and has a definite scheme which he is qualified to carry out;

(c) that the applicant has a record of proven performance in business life;

(d) that the application is not for the development of retail trade." [3]

"Small Industries" was defined by the UDC as "any project which will operate within a loan limit of £5,000 with the possibility of a further £2,500 for expansion." [4] In the light of experience these conditions were subsequently amplified in order to ensure, among other things:

(a) " That there is adequate evidence of

(i) necessary technical skills, whether by previous experience or by training.

(ii) sufficient commercial knowledge and experience to manage and operate the business and to maintain proper records and books of account; or alternatively of the ability to learn, given reasonable assistance.

(iii) Character and integrity of the applicant.

(b) That a full investigation is made of each application, that detailed capital and trading estimates are prepared and that these reflect reasonable prospects of success.

(c) That reasonable security is furnished in addition to a charge on the assets to be created by the loan." [5]

Also, in 1957, the Board of Directors agreed to establish a Small Industries Committee made up of three members of the Board, in order to ease administrative problems and ensure speedy processing of applications. As experience was gained the standard procedure for dealing with applications which finally evolved, involved the following routine.

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[3] Quoted from Henry B. Thomas, Case Studies on the Uganda Development Corporation, February 1963, pp. 3 - 4

[4] Files of the Development Division of UDC.

[5] Ibid.

All new applications are scrutinised by the Senior Executive in charge of the Small Industries Scheme. Applications which are clearly inadmissible are rejected and the applicant accordingly informed. Applications which are considered as potentially suitable for Small Industries Loans are processed by a Small Industries Section. Each application is investigated by a member of this Section's staff in accordance with the principles laid down in "Guide to Project Investigation" - the "Bible" as this document is popularly known! It lays down the detailed procedure to be followed in making feasibility and viability studies of a project and assessing the merit of applications.

On completion of each investigation, a full report is submitted to the Senior Executive in charge. It includes such things as: description of the project, summary of the investigation with conclusions, amount of loan and specific purposes for which the loan is required, period of grace considered necessary, period of loan and method and amount of repayments, security offered and form of security, method of advancing the loan, an estimate of follow-up service considered necessary, recommendation, and appendices giving factual, financial and costing data. If the application is considered to be unsatisfactory, it is either referred back for further information or amendment, or is rejected and the applicant informed. Applications considered satisfactory and endorsed by the Senior Executive in charge are forwarded to the General Manager of the UDC for the necessary investment authority.

The Chairman of the UDC has authority to approve loans not exceeding £1,000. Loans of over £1,000 but not exceeding £5,000 have to be approved by a committee of three Directors and loans of over £5,000 are approved by the UDC Board.

The period between submission of application and final grant of the loan, may vary between one or two months to several months. If the amount involved exceeds £5,000 there might be considerable delay pending a full meeting of the UDC Board.

Appraisal of Assistance to Traders Applications (ABP) -

The ABP procedure of assessing the merits of applications is essentially similar to the basic standard procedure of the SIDF except that the ABP's procedure is modified to suit its special conditions and the kind of facilities it offers. In the first place, ABP does not give any loans but only offers facilities outlined below. In the second place, ABP assists only going concerns in trade and it does not deal with anyone wishing to set up in business for the first time. Hence application for assistance takes the form of answering a fairly lengthy and comprehensive, printed questionaire. It includes such particulars as name and address of the applicant, type of business engaged in, type of legal organisation of the business, detailed present value of the business, purpose and detailed expected costings and revenues of the proposed expansion, the security to be offered, the standard of books of account, experience, ownership composition, size of family, etc. As the ABP has four field officers - one in each Region-plus one field accountant for accounting services, it is possible for the ABP to quickly visit the premises of the applicant for an initial on-the-spot investigation and to check up on the statements given in the questionaire. Much of the original sifting of applications is done at this stage.

Applications which are clearly inadmissible are rejected at this stage and the applicant informed. Any applications considered as potentially suitable are forwarded together with full reports, analyses, conclusions and recommendations, etc. to the ABP Board of directors for consideration. Very few applications are rejected at this stage since much of the basic groundwork will have been done in the field. However, approval of applications is heavily influenced by three things namely, the record of past performance and experience, the presence of security - usually in the form of stock-in-trade - whose value should be greater than the requested amount of assistance, and the standard of books of account.

Facilities Offered by the ABP. - The ABP at present operates five main schemes and three main services. The schemes include credit-guarantees, discounting, confirming, hire-purchase guarantee and commercial bank loans; the services include auditing/accounting, wholesaling and distribution.

The philosophy behind the ABP Credit-Guarantee Scheme is that most traders operating efficiently and in good localities could increase their sales if they carried more stocks. But many are unable to obtain credit from their suppliers as the lack of integrity in others has resulted in a reluctance to develop credit-trading in East Africa. Often the suppliers who do give credit only do so in order to off-load dead-stock. However, a good wholsaler will neither cheat nor refuse to give credit if he has some assurance that in gaining sales he is not risking bad debts. Nor will he charge more for his services.

If the ABP therefore finds a good retailer buying from a good wholesaler, it is prepared to guarantee 30 or 60 days credit supply of stocks against a 1% commission. This enables the retailer to sell all or most of the goods before payment, thus promoting his sales and profits. His normal capital would still be available for low-sale lines - the credit-guarantee applying only to his main lines, i.e. those items which he can buy in wholesale quantities from one or two selected and bona-fide wholesalers. (A wholesaler/retailer who competes against his own customers is not considered to be a bona-fide wholesaler).

Normally, the ABP does not permit the credit-guarantee to exceed 25% of a trader's independent stocks. However, it can allow the guarantee to operate as often as desired, providing the total credit outstanding at any time does not exceed the amount guaranteed. But as sales and stocks increase, it can increase the ceiling of the guarantee.

The argument for the ABP's Discounting Scheme is that many African traders desire to compete in tendering for supplies to Hospitals, Schools, Prisons and other institutions but, too frequently, they find that the period between supply and payment is too long for them to lay out their precious capital. The business therefore passes to the traders with more capital to spare.

The ABP can pay 90% of any account to those traders who have successfuly tendered and supplied goods to their respective buyers, on presentation to the ABP offices of invoices or delivery notes certified by whoever is in-charge. The remaining 10% less 1½% commission is then paid after collecting the payment from the buyer. This scheme thus brings tendering down to almost "cash" business.

There are hardly any conditions for traders who are interested in utilising this cheme. All they have to do is to either apply personally or in writing to ABP. Then ABP will write to the institutions asking them to pay the accounts to ABP instead of the trader when due for settlement. However, the business men's accounts have to be submitted to the ABP Executive Committee as in the case of the Credit-Guarantee and Confirming Schemes.

Bigger traders who wish to enjoy direct-imports and consequently low prices may ask ABP to "confirm" their indents. This is mainly in cases where the traders are unknown to the exporters or where the exporters have no guarantee of payment. The order is passed through ABP who guarantee payment on delivery. ABP releases the goods to the traders on 60 day credit terms. This enables the trader again to sell his goods before payment. The ABP charges a commission of 2%, plus the bank rate of interest on the capital employed. The ABP's argument behind this scheme is that the trader should naturally gain a considerable increase of profit as an importer unless, of course, he buys more than he can sell within a reasonable period thus tying down his own capital. The ABP therefore advises in every case where it is consulted whether importing is preferable to dealing through a local manufacturer's representative and whether the quantities abroad would attract a lower price.

The case for the Hire-Purchase Guarantee Scheme is that where an African Company requires a vehicle to undertake essential deliveries or remove expensive hire charges on collecting goods, the ABP can consider acting as guarantor in a Hire-Purchase Agreement. The Finance Company or dealer will then usually agree to a low rate of interest on the payment of instalments. However, the buyer must produce at least 25% of the vehicle cost in cash or a vehicle in part-exchange. Details of various vehicle prices and repayment schedules are shown in Table 2.

In connection with Commercial Bank Loans, it is only in extremely exceptional circumstances that ABP will act as guarantor on loans made by the Uganda Commercial Bank to African traders recommended by ABP. These would be at a reasonable interest rate but would never be granted where credit facilities could equally suffice.

In addition to these schemes, the ABP provides the services of an Auditor/Accountant to African traders who request him. He is able to advise on methods of book-keeping, to audit the accounts of private traders and partnerships, and to prepare for audit the accounts of Limited Liability Companies. ABP charges nothing for advisory services but nominal charges are asked for audits and audit preparations.

ABP is also at present doing every thing possible to establish and strengthen African Wholesale Companies especially in rural areas where African trade cannot satisfactorily develop whilst Asian retailer/wholesalers are the main sources of supply.

ABP itself has started importing for direct sale to African traders particularly goods which have hitherto gone through many non-African hands in an extended chain from Mombasa to the rural villages. It has imported rice, crokery, cutlery, hardware, and clothing to the value of £180,000. These goods will go direct to African Companies at true wholesale prices. ABP is also itself a main distributor for cement, chillington hoes and other locally produced products. It distributes through African Wholesale Companies and where not possible through its depots in different regions.

ABP is also assisting African exporters to get established in European markets, particularly for fruit and vegetables, and building up a national Export Company operating through the proposed National Trading Corporation.

ANALYSIS AND APPRAISAL OF OPERATIONS OF THE SIDF AND ABP

The performance record of the SIDF is shown in Table 3. In all, 64 small industries have been assisted involving a total sum of £98,051 in loans advanced. This represents an arithmetical average of £1,532 per project assisted. However, the individual amounts of loans advanced range from as low as £25 to £10,500. The list of projects which have been assisted ranges from agriculture, forestry and mining through miscellaneous manufacturing industries to tertiary services such as transportation and hair dressing. Of the 64 small projects assisted, 52 were owned and operated by Africans and the remaining 12 were owned by Africans and the remaining 12 were owned and operated by non-Africans. Again, out of these 64 small firms, 46 firms (72%) were individual proprietorships and the remaining 18 firms (28%) were either co-operatives, partnerships or private companies.

Out of the 64 loans granted, 6 loans (9%) involving a total amount of £11,775 - accounting for 12% of the total volume of loans granted - have been paid in full. Of these 6 firms, 2 were registered companies accounting for £11,000 of the £11,775 - the remaining 4 firms being individual proprietorships accounting for £775 of the total £11,775 fully paid. Twenty eight or 44% of the total projects have been failures partly as a result of which £16,638 or 17% of the total volume of loans granted has been written off. Of these 28 failures, 24 were owned and run by individual proprietors; the remaining 4 firms were registered companies. Among the failures, construction and mining carried the greatest weight by volume accounting for £7,671 or 46% of the total amount of loans written off. Tailoring and carpentry were the biggest culprits by number 8 out of 28 or 29% of the total failures - accounting for 16% of the total amount of loans written off. Thirty six projects (56%) are still in existence and are partly responsible for the total amount of £43,387 of loans still outstanding-accountingfor 44% of the total volume of loans granted.

There is no doubt that theSID scheme of the UDC has performed a positive function in the economy of Uganda. It has played a big role in stimulating and assisting African enterprise in the field of small industries. It has made it possible to launch a number of industrial projects with African participation but which projects would never have been successful. It has thus played a valuable educational function in addition to offering credit facilities to Africans upon whose enterprise the economic future of the country is ultimately to depend. To that extent therefore, the SIDF scheme of UDC has been an instrument of economic development in Uganda.

It would seem, however, that there is still considerable room for improvement. Perhaps the whole concept of small industries needs to be revised. There probably have been too many small loans lent out to individuals who never were full-time industrial businessmen but who took to small one-man show manufacturing industries as a sideline to supplement their income from a full-time job elsewhere. As would be expected, the consequent lack of full-time supervision and attention would but result in high proportion of failures of those projects.

Though small businesses in Uganda are really very small, the standard of small industries in Uganda will perhaps have to be raised. The UDC will perhaps have to raise its investment in small industries. For only then is it possible to acquire some qualified people on functional bases. To successfully launch and operate a vegetable canning project, for instance, one would need to have a chemist, a marketing and perhaps a research officer. This kind of project would of course involve bigger laons and possibly UDC equity participation to begin with. But people who take bigger loans are perhaps better risk as they can afford to hire competent and responsible assistants. Assisting this kind of industrial project would be in sharp, contrast to assisting say a carpenter (or a fisherman) whose only equipment would be one or two saws (or one or two boats) and on whom UDC would have no control whatever. If the UDC with all its vast experience in big industries, should find a small industry project viable, a good procedure would be that the UDC should look around for how much private indigenous equity capital was likely to be forthcoming, and the UDC should invest the balance with a view to selling out its share capital to Africans when the project had been run firmly into the ground, say after five years. If a small industrial project shows good signs of promise, then the UDC should actively participate in it and have active management in it at least in the project's formative years.

Table 4 shows the performance record of ABP. There would seem to be no doubt that the ABP has started off on the right foot. For in the short space of three years of its existance, the ABP has managed to bring £500,000 of business through its Credit Guarantee Scheme alone. This figure is calculated from the commission ABP receives from suppliers based on the credit sales involved. Though there has been some amount of defaults this has clearly been minimal. Only about one third of the commission income has been lost to ABP on the honouring of their guarantees following defaults.

However, Bill Discounting is perhaps ABP's best scheme so far. For ABP has now paid out £500,000 for supplies to Hospitals, Schools Prisons and other Government institutions and later recovered the same amount from Government Departments. Previously this kind of volume of business was virtually completely closed to Africans as they could not raise sufficient capital to make several large purchases whilst awaiting payments. The scheme is understood to be gathering momentum rapidly and it is hoped that in the coming year more lenders will pass through indigenous hands.

The Confirming Scheme, on the other hand, has had a rather limited use mainly because few African traders are big enough yet to import directly. Nevertheless goods worth over £10,000 have been imported by a few progressive merchants around Kampala.

Through its Hire Purchase Guarantee scheme ABP has assisted some 22 African Companies to acquire lorries in order to enable them to undertake essential deliveries or to remove expensive hire charges on collection of goods.

CONCLUSIONS

In a survey of finance for small-scale enterprise carried out recently in Uganda,[6] one finding stood out very clearly. This was that small business in Uganda - as in other parts of the world - depended very heavily on self-finance. In Uganda, in particular, this was true both in regard to long-term finance as in short - and medium-term finance. The highly successful Asian small businesses depended very heavily on self-finance - which was also inter-locking family finance. In other words, family finance was the largest source of the highly successful businesses in Uganda. However, where African businesses are concerned, this fundamental source of finance for small businesses would seem to be a closed avenue. In the first place, in many African families, there usually are hardly any funds to start off with. In the second place, the cultural fabric of African society does not seem to be conducive to capital accumulation especially in small distributive trade businesses. For as soon as a Musoke is seen to be successful in trade, every Tom, Dick and Mukasa begin to feel that they should demand their social rights in sharing their relative's prosperity. Musoke usually can resist frittering away his precious capital only at the expense of becoming very unpopular or a social outcast.

Be that as it may, it seems doubtful that family funds are going to play as fundamental a role in developing African small businesses as it has played in those of non-Africans. And if it is desirable that the great imbalance in industrial and commercial activities should be redressed, then it seems that, no matter how formidable the difficulties are, development financing simply has to be made successful in one form or another.

If a Uganda Credit and Savings Bank, for instance, finds the costs and default rates of lending to small African businesses very high, the solution would seem to be not so much in turning into a fully fledged commercial bank and doing all the things that the expatriate banks do - and profitably too - as in tackling more vigourously the fundamental problems of lack of business knowledge, skills, experience, teachability and financial integrity. All these things would, of course, take time, more imagination and money. But perhaps they would be well worth trying. And having started on this course of action, the SIDF and ABP will perhaps render great contribution to the cause of African enterprise, if they redouble their efforts in this direction.

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[6] See G.R.Bosa, "Results of a Survey of Financial Demand by Small-Scale Enterprise in Uganda", EDRP.111.

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ALTERNATIVE DEVELOPMENT STRATEGIES FOR LOWLAND MACHAKOS FARMS

The aim of this paper is to show how a linear programming analysis of a group of small farms in lowlan Machakos is able to throw light both on the potential for improvement through the modification of farm production constraints, and on the relative merits of alternative crop innovations on the farms.

The paper begins with a description of lowland Machakos and a summary of the linear programming model and the data on which it relies. A discussion of the results of the farm production analysis follows this, and the paper then ends with a summary of conclusions about the use of linear programming in the analysis of small peasant farms.

1. Lowland Machakos

Lowland Machakos is an area of low and uncertain rainfall and poor soils, marginal for agriculture, but too densely populated for the people to depend on livestock activities instead. It is an area where a semi-subsistence agriculture produces substantial surpluses in years when rainfall is high, but where there are serious famines when rainfall is low, roughly once in every five years. Masii, the location of the study, is about 18 miles east of Machakos town, in the centre of the district. It has a population density of over 300 per square mile and a livestock population of nearly 200 as well. The average holding is roughly 10 acres, some of it unusable gullies and sand rivers, as much as possible cultivated, and the remainder poorly eroded 'grassland' left for cattle. The group of farmers studied cultivated from $\frac{1}{2}$ to $6\frac{1}{2}$ acres each, and had widely varying residual areas of grazing for their undernourished cattle. The ownership of both arable and grazing land is individual, or shared between brothers who will later subdivide. The traditional system, with its communal grazing rights, has been discouraged since the 1930's, as part of the Government soil conservation campaign.

The crops, grown almost exclusively in mixtures, are maize, pigeon peas, beans, finger millet, bulrush millet, and sorghum. Cassava, sweet potatoes, cowpeas, grams, melons, pumpkins, gourds, and bananas all appear in scattered patches, but these are minor and regarded as negligible in the mixtures treated here. The major innovation is cotton, which was reintroduced in Masii in 1962/63 after a gap of over 20 years.[2] The other important development has been in drought-resistant maizes which have been continually improved at the local experimental station, and which now appear to be attractive for field conditions on small farms.

There are two agricultural seasons each year in Masii, the major season from October-November to March, and the minor season from March to August-September again. Most crops are planted in October-November, but some can be harvested in time for a second planting in March, when maize and beans are grown. Cotton is planted in October-November and harvested from May to September. Pigeon peas also take two seasons in the ground.

Livestock are of very poor quality, but they are used for ploughing by everyone, and also for milk. One of their major functions, however, appears to be as a store of wealth, the family savings reserve. Goats and sheep are kept as well as cattle. Small quantities of manure find their way onto the land, but there are no crop rotations bringing livestock into a fully mixed farming pattern.

Sisal, which is used to mark plot boundaries everywhere, is a useful supplementary source of cash, particularly in times of famine. Decortication, mainly the work of women and children, takes place in seasons that are slack on the farm, and sisal supplies are too limited to occupy people for more than a small part of the year. Farmers and their families also engage in other part-time activities such as beer-brewing, petty-trading, and local crafts.

Masii is generally regarded as one of the more progressive of the lowland locations in the district, and both Masii and the area as a whole have a history of intensive administration and agricultural development, centred on efforts to arrest the gradual deterioration of the soil. Soil conservation work started in the 1930s and there was an unprecedented effort throughout the 1950s in Machakos, which is celebrated. Standards of cultivation are now high, and the extent of soil conservation works is impressive.

In Masii as elsewhere there is a keen demand for education, probably intensified by the poor quality of life at home, an active community organisation based on traditional clans, and an enormous amount of self-help activity directed towards the building of schools, roads, clinics, etc. It is against this background of intense pressure for a better life, combined with extremely adverse natural conditions that the analysis of production on Masii farms should be seen. While farming is still at the subsistence level, this is the result of adverse physical conditions rather than any lack of incentive to put in hard work.

II. The Model

The model used to analyse the group of farms was described in some detail in an earlier paper[3] and also in the full account of the final analysis.[4] Briefly, it involves the maximisation of the value of production, subject to resource constraints on the farm, given a range of alternative crop activities among which there is choice.

The model can be summarised as follows:

$$\text{Max.} \quad \sum c_j x_j$$

$$\text{where} \quad x_j \geq 0$$

$$\text{and} \quad A_{ij} x_j \leq b_i$$

and c_j is the output per acre of activity j;

x_j is the number of acres of activity j;

A_{ij} is a matrix containing elements a_{ij} which represent the number of units of resource i used in the production of one acre of activity j;

b_i is the number of units of resource i available.

The model is used to show the way in which physical constraints limit production, the sorts of returns attainable, and the impact of cotton and drought-resistant maize, on Masii farms. In maximising the value of production the model gives results for farm patterns in which resources are optimally allocated between the crop mixtures considered, and in this sense it is unrealistic. But if it is remembered that the discussion is always in terms of attainable returns and income levels, and that in practice there is not very much difference between actual and optimal patterns, this does not present any serious difficulties.

The objective function maximised in the model is the market value of production. Although the economy is predominantly a subsistence economy it is assumed that market values do reflect adequately the values of the main crops grown. Farmers are well aware of market prices and have frequent contact with the market at all times. If market prices were substantially different from local values, they could specialise and exploit the difference. Otherwise, it seems fair to assume that their values are much the same.

The resource constraints considered in the model are land and labour at different times of the year. Management is also considered important, but this is treated by using different basic matrices representing different management levels, rather than directly in the model. It was not possible to quantify management factors sufficiently well to incorporate them directly as constraints. Capital was not considered a constraint, given levels of knowledge and techniques available in Masii at present. There is no reason why capital should not become an important constraint as research and education bring new possibilities within reach of Masii farmers in the future, though.

Activities between which there is choice with respect to the objective function include crop activities alone, mostly crop mixtures cultivated in different ways. Livestock and other activities which compete for labour or land are compared with crop activities through the shadow prices of resources involved in both, rather than directly, here.

The linear programming model involves various limiting assumptions, the most important of which are that there are no economies or diseconomies of scale, that input-output coefficients are fixed for any one programme, and that activities can be represented as discrete rather than continuous choices. Each version of the model is static, but it is possible to use the model parametrically, running series of programmes with changing assumptions about prices, input-output coefficients, etc. to introduce variations in basic conditions. The assumptions of constant returns to scale are more serious, although even here one can take discrete ranges of a non-linear function where scale effects are important. Within the range of farm sizes considered in this study, returns to scale could reasonably be considered constant, though. Discrete activity choices do present problems, making choices and farm patterns appear more rigid than in fact they are. There is little that can be done about this.

Risk is extremely important in lowland Machakos where major problems arise from the large year to year variations and famines. Risk is notoriously difficult to deal with analytically, and the data problems involved in an area such as Masii are even greater than the analytical ones. The linear programming model can be adapted in various ways to cater for risk, but the data required for a formal treatment were simply unavailable for Masii. In order to deal with the year to year variations in production, 3 different rainfall situations were postulated, and the analysis was then undertaken with respect to each of these. Accurate observations were available only for one year, in which rainfall happened to be high. So the high rainfall results are based on detailed observations from the field. For the years of low and average rainfall, returns were estimated from all the information available about the sorts of changes that take place, and since many of the changes are substantial it was considered that these estimates were adequate to show at least the direction in which they influence results. The range of variation was shown by using the three different rainfall situations, but not the relative weights which are attached to each. It is these which would also be needed for a more formal treatment of risk factors in Masii.

III. The Data for the Model

Linear programming is always open to the objection that it depends critically on the particular assumptions and coefficients used. The analysis is never any better than the data on which it rests. For an account of data collection and assumptions, including a presentation of much of the raw data used, the reader is referred to the presentation of the analysis in full.[3] Here we mention only briefly the data that were used.

Data were collected from September 1962 to 1963, by the author personally, working with an interpreter, and by schoolchildren recording labour data every second day. The data cover a complete agricultural year, starting with the preparations before the major rains and ending with these again for the following year. Thirty farms were studied initially, but complete production information was eventually obtained for only 16 of these, and the data from these 16 holdings form the basis of the results discussed here. The farms were chosen to cover as many different economic situations as possible, differences in resource availability, farmers' outlook, family structure, and activities being the major ones sought. They were chosen as case studies not randomly selected farms.

The data were collected as carefully as possible, but there were occasional gaps occurring through lack of foresight or fortuitous circumstances. Much more important were the data which could not be collected from case study farms, however careful the data collection process. These include such things as the influence of time of planting on yield, not only in the high rainfall but also in the low rainfall years, the influence of crop mixture on individual crop yield, etc. For these sorts of factors, field data had to be supplemented by data from experimental work, and it is in these areas that judgement was bound to play a major part.

Once the data had been collected and assembled in an intelligible form, it was necessary to compile linear programming matrices, consisting of activities between which

there was choice, and resource constraints. The procedure used for resource constraints was to programme for a range of land and labour resources in every case, assuming a given distribution of labour available through the year. As constant returns to scale were assumed, it was only necessary to programme for the relevant ratios of labour to land. The results for any particular combination could easily be deduced from these. The range for which most programmes were run was from 0 - 6 acres of land with 1 unit of labour, a labour unit being an adult-equivalent available through the year. This corresponded to a range of 0.8 to 4.2 acres per unit of labour in the field.

More difficult was the treatment of the management variable. There was a wide variety of input-output relationships which necessitated a recognition of management variations. A given set of inputs produced substantially different outputs on different holdings, because factors other than those measured were also influencing outputs obtained. Land was measured in acres and labour in hours on different operations at different times. The quality of land and labour could not be taken into account. Other factors excluded were the quality of seed, the density of plant populations, the efficiency of pest control measures, and the condition and training of oxen in the ploughing team. The most important of the excluded factors were felt to be the quality of land, the condition and training of oxen, and the methods and intensity of work put in per hour. All of the items excluded were lumped together in a residual 'management' variable, the argument being that the most important items were susceptible to change and depended on whether the farmer had managerial ability or not. These 'management' differences were incorporated in 5 hypothetical management levels, from among a range of input-output relationships observed. For each management level input-output relationships were changed. These hypothetical management levels were chosen in preference to the more usual procedure of taking typical farms, as it was felt that this accentuated the real differences involved.

Crop activities were defined according to the time of planting, the time and intensity of weeding, and the crop mixture concerned. Activities have to be discrete points rather than continuous production functions, as already mentioned, and it is necessary to decide how fine the distinctions should be. Here, three different times of planting were allowed, and three different times and intensities of weeding. Crop mixtures were defined by the crops they contained, but no variations in crop proportions were allowed. There are problems involved in translating field observations into activity vectors, but these are too technical to discuss in detail here. On the whole, frequency distributions of individual coefficients were used, and modal values then taken for the model.

IV. Some Major Analysis Results

The linear programming model is well suited to an analysis of constraints that operate on farm systems, their relative importance, and the way in which they govern production patterns. It is also valuable as a means of identifying optimal farm systems, in different situations, and thus as a means of comparing alternative innovations that are possible.

In lowland Machakos the alternative production possibilities are limited, and the problem of resource allocation does not appear to be a complex one. It was felt that there was more to be gained from a detailed analysis of constraints, and a thorough understanding of the working of the farm systems, and attention was therefore focussed on constraints. Nevertheless, there were two important innovations which were investigated, ..

cotton and drought-resistant maize. There is thus some analysis of alternative farm production patterns in addition to the major analysis of constraints.

The detailed analysis, in which many different situations were covered, would take far too long to present fully h here. Only some of the more important results are summarised to give illustrations of the sort of results that were obtained.

a) Returns to Land:

Diagram 1 shows the shadow price per acre of land over the range of land/labour ratios found in Masii, when traditional food crops alone are grown, assuming the modal level of management. Shadow prices are shown for high rainfall, average rainfall and low rainfall years. At high labour/land ratios shadow prices in the different rainfall conditions vary substantially, but as lower ratios of labour to land are reached the values converge. When cotton is introduced, the shadow price of land at high labour/land ratios rises considerably, beginning above Sh.500/- in the high rainfall years, but after $1\frac{1}{2}$ acres per unit of labour there is little difference between the value with cotton and without. When Katumani maize, the drought-resistant maize, is allowed, land values show a general tendency to increase, particularly in the low rainfall years.

These shadow prices can be compared with the value of land in alternative uses. As the sale of land in lowland Machakos is rare, and little renting or hiring of land takes place, there is little to be gained from a comparison between shadow prices and market values though.

The major alternative use for arable land in Masii is in livestock, and some farmers still keep livestock on part of their arable land. It is not easy to estimate returns to livestock, but rough estimates from Masii field data suggested a maximum of Sh.60/- per acre of arable land, in years when rainfall is high. It does not thus appear to be workh keeping livestock on arable land in Masii, except at land/labour ratios considerably higher than those found in general, and while livestock do sometimes compete with crops, they are much more often kept on poorer land that is not fit for cropping at all.

This comparison takes livestock as they are at present, and it is quite possible that improved livestock could yield higher per acre returns.
co . It is also possible that livestock could make a valuable contribution in a rotational system including fallow breaks on arable land. But until these alternatives are investigated, it appears that livestock cannot compete with crops on Masii arable land.

b) Returns to Labour:

We consider here the value of labour permanently on the farm, labour that is available throughout the agricultural year. The role of labour at different times of the year is discussed in the next section. Here again it is interesting to compare the average return over the year with alternative possibilities.

Annual returns to farm labour vary as Diagram 2 shows. Returns per labour unit are shown for different acreages of arable land, in high, average, and low rainfall years, for systems with and without cotton. (Note the relatively small improvement when cotton is grown. This is brought up later in the paper.) Even with 6 acres of land per unit of labour,

a man can only get Sh.400/-, Sh.700/- or Sh.900/-, depending on rainfall conditions. This is equivalent to Sh.33/-, Sh.59/- and Sh.75/- a month, including the value of food, and only with relatively high land acreages. These returns can be compared with wages of Sh.50/- and Sh.70/- in Masii, and anything from 120/- in Kenya's urban areas.

The farm returns given are for modal levels of management, but the modal level is likely to be comperable with minimum wage jobs. People with higher management abilities can undoubtedly command higher wages too, and the opposite is probably true for those whose management abilities are poor. They might find it difficult to get a job at all.

The figures suggest that farming is unattractive in Masii, and this is born out by the fact that about 67% of Masii's adult males are absent at any one time.[6] For those who remain, and for the women who make up the majority of farmers in Masii, the alternative opportunities are few. It is extremely difficult for a peasant woman to get employment elsewhere, and many of the men who are left are likely to be unemployable too.

c) <u>The Role of Land and Labour in Determining Production Patterns</u>:

The way in which labour and land govern production patterns is shown in Diagram 3 for the high rainfall situation in which cotton and traditional food crops are allowed as activities between which there is choice. Production patterns that are optimal change as the ratio of land to labour increases, as shown. Diagram 4 shows the corresponding changes in the shadow price values of constraints.

In Diagram 3, crop mixtures are identified as shown in the key. The groups of letters associated with the food crop mixtures show whether the particular mixture is planted early (E), medium (M), or late (L); weeded early, medium or later; and weeded high (H), medium (M), or low (L). With cotton the time of weeding distinction is slightly different, the numbers referring to early and medium weeding (1), and medium and late weeding (2) respectively. Cotton is generally weeded twice in Masii.

Optimal production patterns change as different constraints become limiting. The levels at which the different limits enter are indicated on the right of the diagram, with land always limiting, then each of the 7 labour constraints entering in turn. Early planting labour is the first to limit, at less than $\frac{1}{2}$ an acre, and the production pattern then changes from early planted cotton alone to some early and some medium planted cotton. The medium planting constraint limits next, and some late planted cotton is included as a result. When early weeding also becomes limiting some of the cotton is replaced by maize/beans/peas mixtures which use less early weeding labour. Just after 2 acres per unit of labour, both medium weeding and September harvesting labour begin to limit production possibilities and the pattern is adjusted again. Finally, as labour becomes really scarce, more food crops enter and cotton is reduced to a relatively small acreage on the farm.

Thus we have an example of continually changing optimal patterns, governed by the degree of limiting constraints. It is not only labour as a whole that is important, but more particularly labour at different times of the year, and in order to make the most of the resources available, the production patterns are continually adjusted according to the relevant resource constraints.

Diagram 4 shows the corresponding changes in resource constraint values. For land, we have the familiar decreasing marginal returns as the quantity of land is increased, and labour remains at a constant level, the pattern already shown in Diagram 1. For labour, we have marginal products rising and then falling and then rising again, in some cases, as the supply decreases relative to land. This is due to the simultaneous variation of all the labour factors together, relative to the quantity of land. Any rising shadow price of labour, as its supply increases, can be traced to other labour factors the scarcity values of which are decreasing, allowing the factor concerned to increase towards its full value in relation to land. Similarly it is possible for the marginal values to fall and then rise again, through the interaction of other labour factors that are scarce.

The shadow prices of labour constraints can be compared with casual labour hiring rates, and returns to labour in part-time activities at different times of the year. The values of planting resources have to be treated slightly differently, though, because while they are measured in terms of man-days of labour, their availability pre-supposes the availability of oxen and plough, so they really represent the value of all three, labour, oxen and plough, rather than the value of labour alone.

The casual labour rate is about Sh.4/- a day at peak seasons, and this can be used as a basis for comparison. At first sight it would appear to be worth hiring casual labour, in the situation represented, for weeding at many land/labour ratios, and for September harvesting for ratios of land to labour that are high, but not for any other operations. But this is only so for a high rainfall year, and the hiring of labour has to take place at a time when the outcome of the year in question is unknown, so it can only really be decided in the light of high, average and low rainfall considerations taken together. This is done in the full analysis, where it is shown that in general it is hardly worth hiring casual labour, and that the times of the year when labour is really scarce are so few that the hire of permanent labour appears to be even less worth while. There is also a comparison of part-time actitity returns, in which it is shown that beer-brewing, and crafts which require unusual skills are the only activities which can compete with labour at peak periods, but that many rural activities can compete at other times of the year.

In general, it is clear that given present levels of management, knowledge and techniques, and given the climate and ecological conditions and therefore the crop possibilities, returns to labour in Masii are extremely low. While it may be true that "shortages" of labour at particular times of the year govern production patterns, it is not true that there is a labour shortage in any economic sense. Rather, there is a problem of finding more remunerative occupations for labour already around.

d) Management in Masii:

One of the major results of the analysis was its demonstration of the central importance of the management variable. There was an investigation of the role of management in traditional food crop systems in high rainfall conditions. (This was the only situation for which sufficiently detailed information on management variations was available.) Diagram 5 shows the range of management levels (labelled A to E) that was found. The best managers in the group observed were able to make 3-4 times as much as the worst, with any given level of

land and labour resources. This is a wide range, and indicates the vital role of this residual variable. Considerable space was given in the full analysis to a discussion of the major components of the management variable, the room for improvement in this area, and the policy implications that follow. It was suggested that a great deal could be gained from an expansion and improvement in the agricultural extension services, but that there was also a need for much more basic research into such things as the development of improved tools and implements, improvements in methods of work, the suitability of different husbandry techniques applicable to small farms, and the development of crop rotations to improve the long-term fertility of the soil.

e) The Introduction of Cotton and Katumani maize:

We have already seen, in diagram 2 and the section on returns to labour above, that cotton does not represent very much of an improvement over traditional food crops, and that systems in which cotton is grown give only slightly higher returns at the lower land/labour ratios. At the higher land/labour ratios, the advantage of systems with cotton is almost completely eliminated, because cotton is a labour-intensive crop which cannot play a prominent part on holdings where land is plentiful and labour is scarce. Cotton was assumed to command its 1963 price, for the purposes of the analysis, and when the likelihood of reductions in the cotton price in the future are taken into account, its position becomes even less favourable. Clearly cotton is not a very attractive innovation, especially when its yield advantages over food crops in years when rainfall is low are obscured by a susbtantial rise in the major food crop price.

In discussing both cotton and the new Katumani maize it is important to consider briefly the maize price structure as it affects farmers in Masii. The maize price in Kenya is set in such a way as to fluctuate widely depending on whether the district as a whole has a surplus or a deficit at any one time. When the district has a surplus of maize, the national producer price of about Sh.20/- (1963) rules; when the district has a shortage, the national consumer price of Sh.50/- (1963) becomes operative. The surpluses and shortages of Masii farmers tend to follow those of the district as a whole: in years when rainfall is high, the maize price is low; in years when rainfall is low, the maize price is high. Although maize yield fluctuations are wide, returns to maize do not vary very much.

This maize price structure is somewhat artificial, in that it relies on the control of all inter-district marketing which can only take place through the national marketing board at the official rates. It has the unfortunate effect of encouraging maize production in areas such as Masii, where natural conditions are unfavourable, and discouraging specialisation in areas where maize grows well. Areas which frequently have maize shortages because natural conditions are unfavourable have production determined by a higher effective price than areas which always produce surpluses. In the best maize-producing areas, which do not suffer shortages, the price is always about Sh.20/-. In the less favourable areas the price is sometimes Sh.20/- and sometimes Sh.50/-, and maize production is influenced to a considerable extent by the Sh.50/- price.

The relative advantage cotton has over maize, in dry areas, in that its yield is much more stable, is obscured by the distortion in the present maize price. Conversely, the new drought-resistant Katumani maize is substantially more attractive when the present Kenya maize price structure rules. Katumani maize gives considerably improved yields when rainfall is low, without very much of a reduction over local maize when

rainfall is high. It thus has a tremendous advantage over local maize, and indeed over all other crops, in the low rainfall years. A reasonable yield is combined with an extremely high price in these years. The cash value of production, when Katumani maize is grown, becomes much higher in low rainfall than in high rainfall years, because of the increase in the maize price. Neither cotton, nor any traditional food crops can compete with Katumani maize when the present maize price system rules. Both cotton and traditional food crops are slightly better than Katumani maize systems in the high rainfall years, but the improvement is so small as to be insignificant compared with the outcomes in years when rainfall is average or low. The food position in the low rainfall years does not improve as much as the cash position, of course, but this is also considerably better when Katumani maize is grown.

Table 1 shows the difference between the different systems.

TABLE 1

	Sh./Man, 6 Acres Land		All Acreages
	HIGH RAIN	LOW RAIN	% VARIATION
I. Traditional Food Crops			
Low rain optima	620	450	40-70
Average rain optima	880	380	70-100
High rain optima	900	380	70-100
II. Traditional Crops with Katumani Maize			
Low rain optima	780	1220	20-40
Average rain optima	850	1180	20-30
High rain optima	900	380	70
III. Traditional Crops with Cotton & Constant Maize Price			
Low rain optima	820	300	90
Average rain optima	850	270	90-100
High rain optima	900	240	100-100

Ignoring the third alternative for the moment, the traditional food crop systems can be compared with the systems in which Katumani maize is also allowed. Optimal production patterns for each level of rainfall are valued according to whether rainfall proves to be high or low. The percentage variation for each optimal pattern is shown in the third column. It is clear that systems with Katumani maize are far superior to those in which traditional food crops alone are considered (and similarly to those in which cotton is included, which are substantially the same as traditional food crop systems).

But the cash value of production is insufficient, if the value of the major food crop varies so much from the high rainfall to the low rainfall years, and if a major preoccupation is with the food position in the famine years. Food positions were therefore also compared, and it was found that whereas with traditional food crops 3 people could be fed per unit of labour with 6 acres of land in years of famine, when Katumani maize was

introduced this figure was raised from 3 to 7. Thus the introduction of Katumani maize represents a clear advantage in many ways.

However, there are disadvantages which also need considering. Katumani maize appears to be so attractive, that there may be a danger of people in lowland Machakos moving into patterns of farming that include maize and virtually nothing else. The optimal farm patterns when Katumani maize is introduced in the analysis all contain Katumani maize, mixed with a little pigeon peas, and no other crops. A virtual mono-culture of Katumani maize while appearing to solve a lot of problems in the short run, could have very serious consequences for the long-run fertility of the soil. This is a possibility which has to be borne in mind as long as the present maize price structure rules.

Also, if lowland Machakos farmers really do move into maize production to the exclusion of all else, this will result in the production of maize surpluses, even in the famine years, and the maize price facing these farmers will change. Farmers will no longer be able to take advantage of the high maize price of the famine years, exchanging some of their maize for the other foods they eat, and the improvement in their food position will then be somewhat less substantial than that indicated. Instead of being able to feed 7 people per unit of labour with 6 acres of land, even in a low rainfall year, they will be able to feed 5 to 6.

It is now instructive to consider the effect of a constant price for maize. This could come about through the surplus production of Katumani maize in the low rainfall as well as the high rainfall years, or it could be the result of a deliberate price policy.

For the purposes of comparison, a constant maize price of Sh.20/-, the price which rules in the maize surplus years at present, was assumed in some versions of the model. With these constant maize price assumptions, cotton becomes attractive, both when compared with traditional food crop possibilities and when compared with Katumani maize. Patterns in which substantial quantities of cotton appear, supplemented by some traditional food crops, but not much Katumani maize, become optimal in all rainfall conditions. As Table 1 shows, though, the values in low rainfall years are substantially reduced even compared with traditional food crop systems. The food position in famine years in these cotton systems, is slightly better than when traditional food crops alone are grown, it now being possible to grow cotton and exchange it for maize at a much lower price. It is possible to feed 4 people per unit of labour with 6 acres of land, as opposed to 3 at present with traditional food crops and a high maize shortage price.

Thus if cotton is to be at all successful in lowland Machakos in the longer run, something must be done to make Katumani maize less attractive. This can be done by changing the maize price structure as it effects farmers in Masii. If, on the other hand, it is decided that it is not worth pursuing cotton, but that Katumani maize should be promoted as the best answer to the famine and food position, care must be taken to ensure that this does not endanger the long run position of the soil.

V. Conclusions

We have shown how the linear programming model can be used to throw light on the structure and working of peasant farm systems through an analysis of the way in which constraints

determine production patterns. In lowland Machakos, in Masii location, the analysis has been able to show the value of arable land, and the importance of a thorough understanding of the relationship between livestock and crops, because otherwise livestock cannot be justified; it has shown that returns to labour are extremely poor, and that while the shortage of labour at particular times of the year does determine production patterns, labour cannot be considered scarce at present return levels; and it has indicated the major importance of factors included in a residual management variable, many of which are subject to influence in a way that has been discussed in the full account. It has brought out the interrelationship between cropping patterns and resources, and the way in which cropping patterns change with different resource constraints. It has also indicated the impact the introduction of one new crop can have, in requiring adjustments right through the farming system.

While the more important results in lowland Machakos relate to constraints, it has also been shown that the linear programming analysis can throw light on choices where major crop innovations are concerned. This has been illustrated here with cotton and Katumani maize and a comparison between systems including these and systems in which traditional food crops alone are grown. Whereas in Masii, the scope for choice between different innovations is limited, in other parts of East Africa this aspect of a linear programming analysis could be much more important. In Kenya, the guidance it could give to the choice of farm patterns for settlement schemes, and the choice of crop and livestock combinations for high potential areas where the possibilities are numerous are two important examples. Others could undoubtedly be found for Uganda and Tanzania.

J. Heyer
December 1966

REFERENCES

1. The analysis has been presented in full in: J. Heyer, Agricultural Development and Peasant Farming in Kenya, Ph.D. Thesis, London, 1966, unpublished.

2. Cotton had been tried for a short time before the war, but by 1940 it had completely disappeared and no attempts were made to revive it until the 1960s in Masii.

3. J. Heyer, A Linear Programming Model for Peasant Agriculture in Kenya, E. A. I. S. R. Conference Papers, January 1965.

4. J. Heyer, Agricultural Development and Peasant Farming in Kenya, op. cit.

5. Op. cit. again.

6. Kenya Government, Population Census, 1962.

DIAGRAM 1 : SHADOW PRICES OF LAND IN HIGH, AVERAGE AND LOW RAINFALL YEARS, TRADITIONAL FOOD CROP SYSTEMS

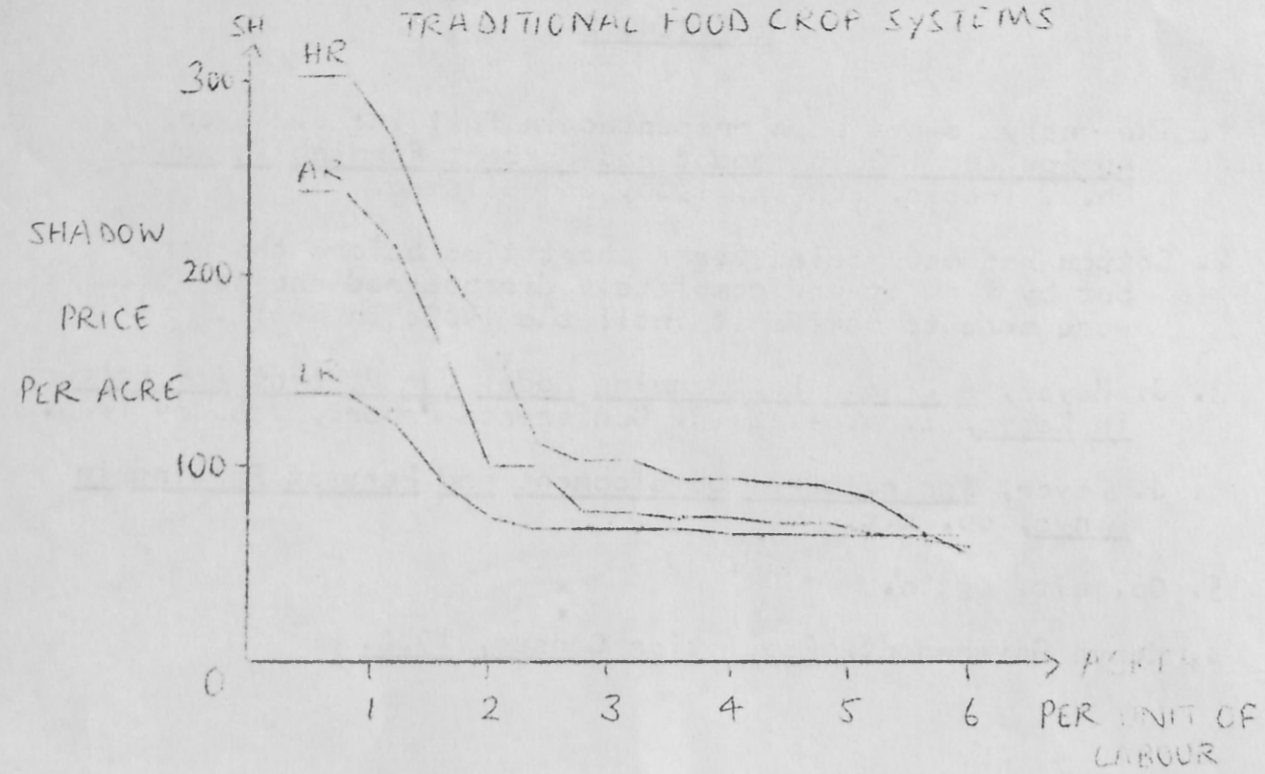


DIAGRAM 2 : RETURNS TO LABOUR IN HIGH, AVERAGE AND LOW RAINFALL YEARS,

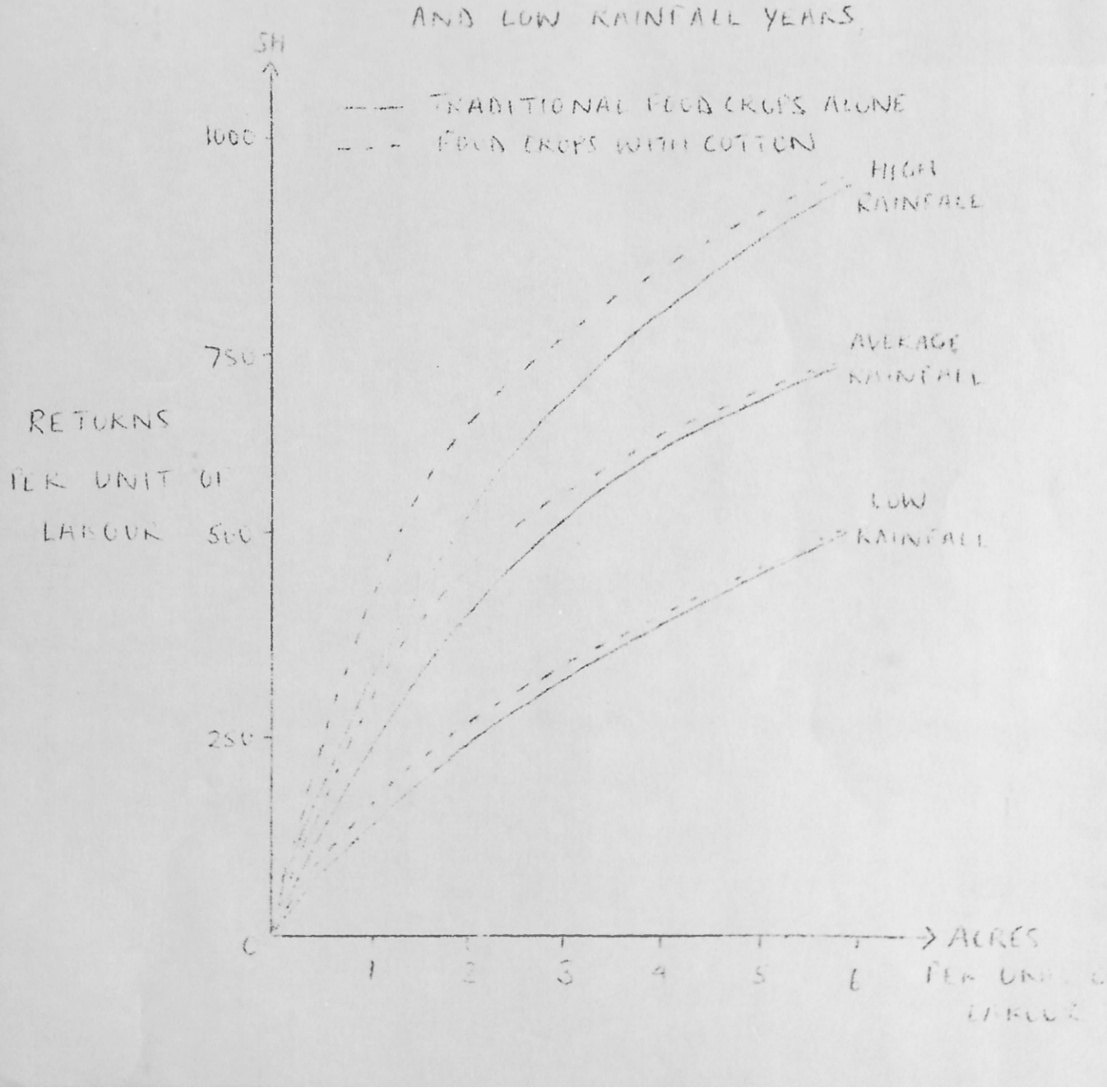


DIAGRAM 3. CHANGING PATTERNS OF OPTIMAL LAND USE AS LAND PER LABOUR UNIT RISES.

TRADITIONAL FOOD CROPS WITH COTTON, HIGH RAINFALL YEAR

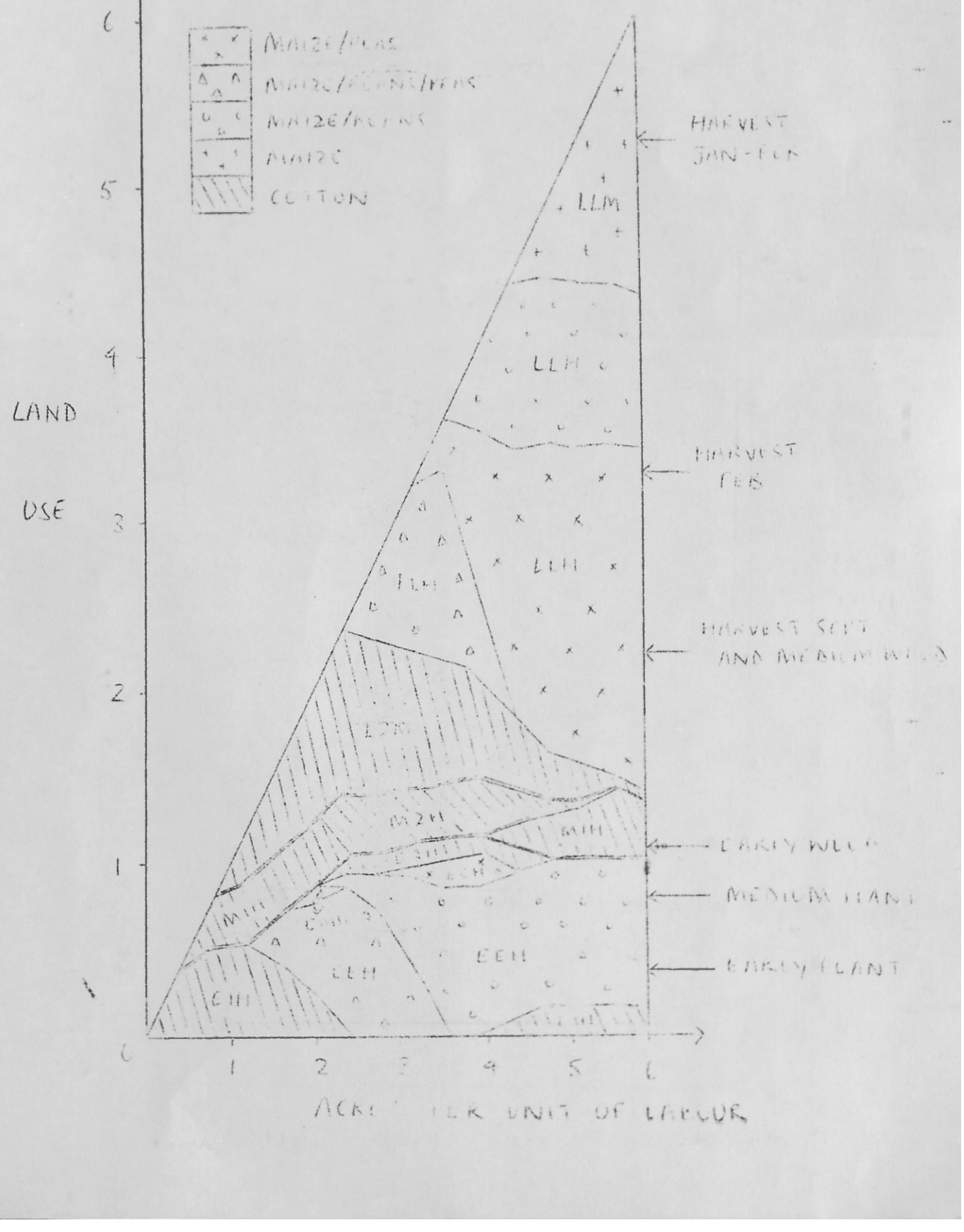
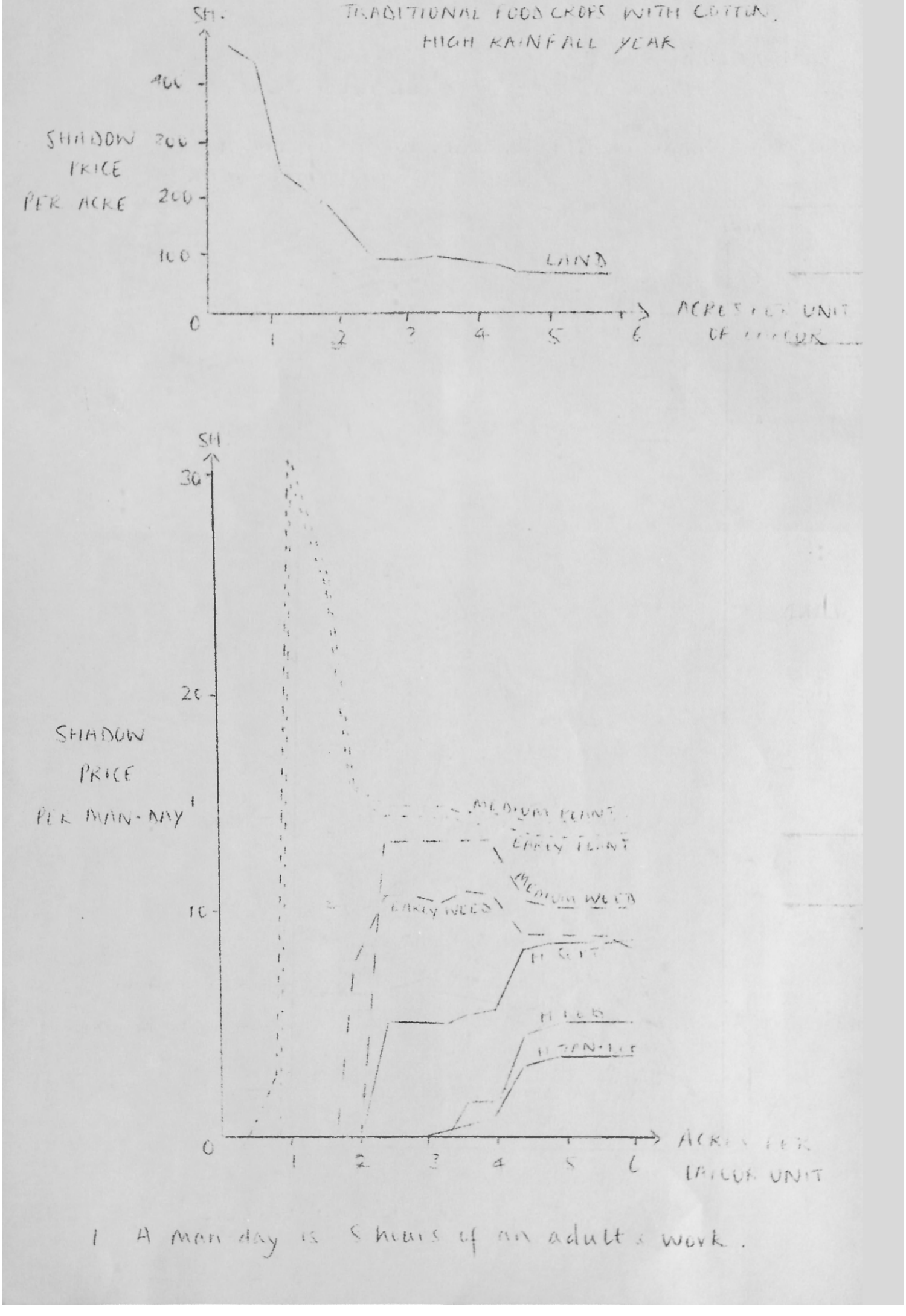


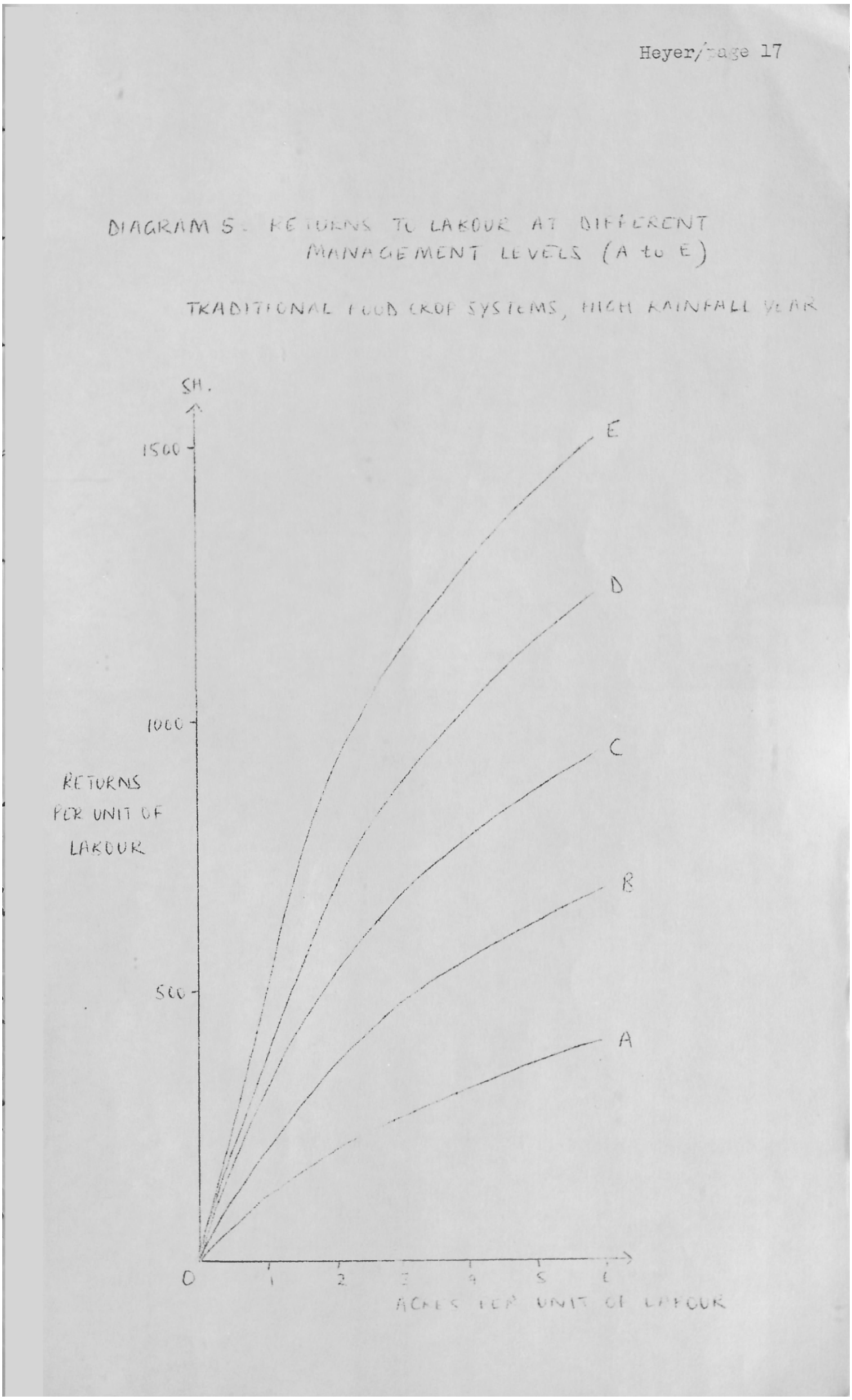
DIAGRAM 4: SHADOW PRICES OF LAND AND LABOUR CONSTRAINTS, AS LAND PER LABOUR UNIT RISES



1 A man day is 8 hours of an adult's work.

DIAGRAM 5. RETURNS TO LABOUR AT DIFFERENT MANAGEMENT LEVELS (A to E)

TRADITIONAL FOOD CROP SYSTEMS, HIGH RAINFALL YEAR



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Dr. G.K. Helleiner,
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EC 3-2.

AGRICULTURAL EXPORT PRICING STRATEGY IN TANZANIA.

1. INTRODUCTION.

It is a commonplace that the East African economy is based primarily upon agriculture. About 60% of gross domestic product is earned in the agricultural sector, 80% of total employment is found there, and 80% of total export earnings originate there. The development plans seek to move the economies away from this extreme degree of dependence upon agriculture but, even so, substantial proportions of their capital programmes are earmarked for agriculture. At the same time, a large proportion of the revenues drawn from the economy for the use of the government originates in the agricultural sector. It is essential for governments, in these circumstances, to have a clear, consistent overview of their policies in the agricultural sector.

The greates emphasis, in this respect, has conventionally been placed upon the problem of allocating government efforts and expenditure upon agricultural development - as between various approaches, various crops, and various regions. The overview has usually taken the form of an attempt to arrive at an agricultural development plan. This is an important aspect of governmental efforts in the field of agriculture - one of which we still know too little and in which our techniques are still sadly deficient. But the planning and execution of government agricultural development schemes and services is not the whole picture. Regardless of whether it is a planned, free, or mixed economy the outcome in the rural sector is also bound to be greatly effected by the level and structure of agricultural prices. In most underdeveloped areas, and East Africa is no exception, the government exerts considerable influence upon these prices.

At the very least, agricultural price policy must be consistent with the rest of the agricultural programme of the government. Stated more positively, pricing policy can be a useful instrument in the pursuit of agricultural policy targets. Evidence continues to accumulate to the effect that peasant producers in Asia and Africa are, contrary to the earlier views normally price-responsive. In certain circumstances, the responses are muted as a result of socio-cultural forces, middlemen's operations, transport difficulties, etc. but the responses are there. One cannot ignore them in the formulation and implementation of agricultural plans; indeed, one should seek to emply them.

It is an interesting feature of the East African arrangements that the three member countries have considerable freedom of action in this sphere. Export duties are levied by each government independently. Local authority cesses are established on a national or sub-national basis. Agricultural

Marketing Boards, with or without price-setting powers, are national, not East African, institutions. This permits flexibility, experimentation, and innovation in policy-making on the national level in the sphere of agricultural pricing. This paper will examine the recent Tanzanian experience with agricultural pricing policy. The discussion will be confined to the pricing of agricultural exportables, since the problems of domestic foodstuff (particularly maize and rice) price policy involve a variety of extra issues which I would prefer to avoid. Since the establishment of domestic producer prices for exports is essentially a matter of deciding as to the amount by which they should differ from world prices, this discussion might equally be described as one of agricultural taxation policy.

The governmental decisions with respect to agricultural prices (or taxes) must be taken at three levels:

1. The share of total product which the government appropriates for its own uses - part of which must come from agriculture - must be established.

2. The agricultural sector's share of the total tax burden on the economy must be decided. This may also be phrased as the question of urban-rural income distribution.

3. The allocation within the agricultural sector of its contribution to the aggregate must be decided.

2. THE AGGREGATE TAX BURDEN AND AGRICULTURE'S ROLE THEREIN.

It is not the purpose of this paper to discuss the appropriate aggregate tax burden to be placed upon the Tanzanian people for the sake of the current needs of the government and the public development effort. This will be taken as given-established at the highest level on the basis of primarily political criteria. Some background data placing this issue in perspective may, however, be useful.

The Tanzanian government extracts a small proportion of gross domestic product in the form of taxes and other revenues by the "normal" standards of other underdeveloped areas.[1] Recurrent revenues amount, according to official data, to roughly 18 per cent of gross domestic product, and 25 per cent of monetary GDP (See Table I). According to a recent study by Hinrichs, a country at Tanzania's stage of development and with its degree of "open-ness" would be "expected" to have government revenues amounting to

1. So do the governments of Kenya and Uganda.

TABLE I

Government Revenue and Gross Domestic Product in Tanzania 1962-65
(£000's)

	1962	1963	1965	1965(Est'd)
Central Government[21]	25,028	28,265	33,505	35,727
District Councils[32]	3,407	3,518	5,201	6,408
Town & Municipal Councils[2]	1,131	1,339	1,514	1,623
Total Government Revenue	29,566	33,122	40,220	43,758
Gross Domestic Product (current prices)	193,504	227,356	240,257	239,249
Monetary GDP (current prices)	134,839	150,563	169,555	171,356
Total Revenue as % of GDP	15.3	14.6	16.7	18.3
Total Revenue as % of Monetary GDP	21.9	22.0	23.7	25.5
Central Government as % of GDP	12.9	12.4	13.9	15.0
Central Government as % of Monetary GDP	18.6	18.8	19.8	20.8

[1]Fiscal years beginning in the calendar year stated. Background to the Budget, p.62.

[2]The Treasury. Grants have been deducted from Town and Municipal Councils' revenue. "Other recurrent revenue" has been deducted from District Council revenes.

about 21 per cent of the gross national product.[2] Since independence Tanzania has gradually been approaching "normality" - its government now collects 86 per cent instead of 78 per cent of the "normal" proportion of GDP (See Table II), but its government is still relatively poor at revenue-

TABLE II

Actual and "Normal" Government Shares of GDP, Tanzania, 1962-65.

	1962 %	1964 %	1965. %
Actual G/Y	15.3	16.7	18.3
"Normal" G/Y (5% ½" open-ness" ration)	19.7	19.6	21.2
Actual as % "Normal" G/Y	78	85	86

2. Hinrichs found that government's share of GDP was not affected by per capita income within the underdeveloped world but, rather, with the "open-ness" ratio, imports as a proportion of GNP. For countries having per captita income of less than £ (U.S.) 300 per year, he obtained the rough rule that the government revenue share would "normally" be 5% plus half the "open-ness" ratio. For those having per capita income of under £ (U.S.) 150 this share was 3.24 plus .556 times the "open-ness" ratio. Taking 32% as Tanzania's "open-ness" ratio in 1965 these rules both yield and "appropriate" government share of 21% for Tanzania. In Tanzania's case we need not bother with the distinction between GNP and GDP. H.H. Hinrichs, "Determinants of Government Revenue shares Among Less-Developed Countries" Economic Journal Vol.LXXV, No.299, September, 1965, pp.546-556.

raising. (These proportions and trends are not affected by the conversion to constant prices of government and GDP). There is, of course, nothing correct or proper about the "normal" proportion but the fact that Tanzania, with its heavy emphasis on socialism, should be well under the average indicates that more attention might profitably be given to raising further tax revenues.

Implicit in his results is the possibility that Tanzania might fairly easily make a once-for-all jump (or, alternatively a gradua rise) to a higher government share of GDP, after which government revenues would, for the foreseeable future, be expected to increase at the same rate as the national income (i.e., the normal income-elasticity of government revenues is unity at Tanzania's level of income, but Tanzania is beginning from a below-normal base). In fact, just such a jump has been made during the 1963-65 period, during which constant-price GDP remained unchanged but the government's share thereof rose from about 15 to 18 per cent.[3]

The most obvious objective of the government's tax and pricing policy in the agricultural sector is the raising of the revenue necessary for the financing of its own activities. (Viewed in the context of macroeconomics this constitutes the reduction of the effective demand emanating from the rural sector in order to free resources for the use of government. Underlying this approach is the assumption that the economy is in a state of quasi-full employment). As long as the requirements of government remain modest and there is no particularly aggressive public development policy, there may be no need for special emphasis upon taxation of agriculture. The traditional British colonial fiscal pattern was one heavily based for central government purposes, upon customs duties - especially import duties. In a fiscal system employing import duties as the principal tax instrument, there is no a priori reason for expecting the source of the revenues to be urban or rural. The frequent role of agriculture as the major foreign exchange earner and source of cash income ensured that a large share of the revenues originated from this sector; but this share was proportional, in a rough sense, to its place in the economy and involved no inequity and no special burden.

As soon as the government embarks upon an accelerated development programme, however, pressures for the increased revenue which it requires

3. Official constant price data show considerable growth in GDP during this period since they measure volume changes. When an adjustment is made for the terms of trade-deflating export value by import prices rather than export prices - as is appropirate for this consideration of tax revenues, this growth vanishes. The data are as follows:

TABLE III

Alternative Measures of Constant Price Tanzanian GDP at Factor Cost
(£ millions at 1960 prices)

	1962	1963	1964	1965
Official	189.0	195.6	210.4	215.5
Revised	194.6	203.4	212.8	203.4

will focus upon the agricultural sector as the principal source of "mobilisable surplus". This is both because of its obvious size and because of its relatively small political power. (This should not necessarily be portrayed as a "squeezing" of agriculture. It is likely that, even if the bulk of the government development effort is not in the agricultural sector, government is sufficiently active there that it still benefits, on balance, from governmental fiscal and expenditure activities). This trend towards increasing reliance upon agriculture as a source of finance is clearly discernible in Tanzania in recent years.

Taxes upon the sale of agricultural produce, which were miniscule in 1960 (on balance, there was probably a subsidy), had by 1965-66 reached a total of about 85 million (sh.100 million). These comprised export duties, development levies on exported commodities, produce cesses imposed by local authorities, and surpluses earned by Marketing Boards.[4] If one were to add the various levies imposed by co-operatives and growers' associations upon their sales - above and beyond those necessary to meet normal administrative and marketing expenses, the total would be higher still. (Import duties, incidentally, made up about 272 million shillings, excise duties about 103 million, and income and corporation taxes about 144 million shillings in 1965-66). These increases in agricultural revenues have accounted for a substantial (though not the major) share of increases in total government revenues since 1960.

3. URBAN-RURAL INCOME DISTRIBUTION.

It is not the function of this paper to analyse the states of or trends in the nation's urban-rural income distribution any more than to analyse the government's share of GDP. The question of agricultural pricing and taxation does, however, have an obvious bearing upon this broader issue. And, while it is close to impossible to say anything about relative levels at a point in time, it may be worthwhile spotlighting some recent trends. To the extent that equity effects upon urban unemployment, and the need to make the most of the nation's agricultural potential are criteria in the formulation of an "incomes policy" (or in an agricultural pricing-taxation policy), the most relevant data to focus upon are the alternative earning opportunities of unskilled workers in the cities and peasant farmers on the land.

Wage rate data in the form of a series on wages paid to unskilled labour are not available in Tanzania. There are, however, data on median wage rates.[5] Increases in these wage rates will overstate the true rise in unskilled wage rates if there is quality improvement during the period in question; but this is unlikely to reduce the usefulness of the available data greatly.

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4. In 1966-67 the burden of these taxes was eased somewhat.
5. Background to the Budget, p.60

Table IV shows indices of money and real wage rates in Tanzania in recent years. With independence (1962) there occurred a large sharp increa increase of from 30 to 40 per cent. There was then a year's pause, before the real wage rose again. This time, however, the increases were held down to slightly more reasonable rates. Between 1964 and 1965, money wage rates rose by 9;6% in the public sector, and 8.7% in private commerce. In real terms, as far as can be established, these increases were only 3.8 and 2.9 per cent respectively.

What was transpiring in the rural areas at this time is somewhat more difficult to establish. Table V employs the national accounts data to obtain the relevant measures of real incomes and prices. One cannot, of course, place much confidence in these data but it is nevertheless worth milking them to the maximum to extract their implications. These price data based on the national accounts do not take account of the various taxes on agricultural produce; these will be introduced later.

TABLE IV

Indices of Wage Rates, Money and Real

1962-65

	1962	1963	1964	1965
Public Sector-money wage[1]	100	131	132	145
Private Commerce-money wage[1]	100	135	137	149
Agricultural money wage[1]	100	127	126	145
Wage-earners Retail Price Index, Dar es Salaam[2]	100	98	99	105
Public Sector-real wage[3]	100	134	133	138
Private Commerce-real wage[3]	100	138	138	142
Agricultural real wage[3]	100	130	127	138

[1]Calculated from Background to the Budget

[2]Calculated from Monthly Bulletin of Statistics. Original base year was 1951.

[3]Money wage index deflated by wage earners retail price index, Dar es Salaam.

On average, it seems that the rural peasants, even before taxes, has not fared as well as the wage-earner. Between 1962, and 1965, assuming growth in the labour force of only 1.5% per year,,a conservative guess, total real per worker smallholder income before taxes rose only 8%. Even if the 1964-65 decline is taken as an aberration, it still rose at less than half the rate of real wage rates. If we could ignore the 1964-65 difficulties and the upward lift to wage rates in 1962-63, the rates of growth of real smallholder income and real wage rates are not quite so divergent. The former, if it had remained in 1965 at its 1964, level, would have grown since 1962 at an annual rate of 4.5%. In actual fact it grew at a rate of 2.6%. Real wage rates, it will be remembered have grown in the last two years at 2.9 to 3.8% per annum.

Cash crop production, of course, fared considerably better than total

TABLE V.

Indices of Pre-Tax Smallholder Agricultural Prices, Incomes, and Productivity, 1962-65

	1960-62	1963	1964	1965
Index of Real Subsistence per worker[1]	100	102	105	95
Index of real per worker (smallholder) cash output[2]	100	112	132	128
Index of total real per worker (smallholder) income[3]	100	105	114	108
Index of real smallholders' average cash price[4]	100	100	105	94
Implicit cash crop physical productivity per man[5]	100	112	126	136
Implicit total physical productivity per man[6]	100	105	112	108 (115)[7]

[1] Subsistence output at constant prices, taken from Background to the Budget, p.14, deflated by an arbitrary (and conservative) growth rate of the agricultural labour force of 1.5% per year compounded.

[2] Net smallholder cash output at current prices, taken from Background to the Budget, p.14, deflated by the (adjusted base) wage-earners' retail price index from the Monthly Bulletin of Statistics, to obtain real cash output and then deflated by the assumed growth rate of agricultural labour of 1.5% per year.

[3] Subsistence output at constant prices plus real net smallholder cash output, as obtained above, deflated by the assumed growth rate of agricultural labour of 1.5% per year.

[4] Index of smallholders' average price implicit in the current and constant price data on net smallholder cash output was calculated and then deflated by the wage-earners' retail price index as above.

[5] Index of total real per worker (smallholder) cash output deflated by the index of real smallholders' average cash price.

[6] Index of subsistence output per worker and index of cash crop physical productivity were weighted by their values, at 1960 prices, in the 1960-62 period.

[7] Assuming that 1965 subsistence performance was abnormal and that physical productivity in that sphere was the same as in 1964.

smallholder agricultural production. Between 1962 and 1965 on a per worker basis, it increased by 28% in real terms. Between 1962 and 1963, and 1964 and 1965 the cash crop producer fell back relative to the urban wage earner; only in 1963-64 did he improve his relative position.

The rural peasant's position looks considerably worse when account is taken of the taxes which have been imposed on his cash crop production. As has been seen, these taxes are made up of export duties, produce cesses, Marketing Board surpluses etc. all of which reduce the prices for his produce. Tabe VI summarizes the position.

Real peasant income per worker is approximately the same in 1965 as it was in the base period 1960-62. (Actually, it is very slightly higher-by 0.4%). Even if 1965 is regarded as an exceptionally unfavourable year and is ignored, real per worker after tax income was still only growing at 5%

TABLE VI

Indices of After-tax Smallholder Agricultural Prices and Incomes, 1962-65[1]

	1960-62	1963	1964	1965
Index of real per worker (smallholder) cash output-after-tax	100	107	120	110
Index of real per worker (smallholder) total output-after tax	100	104	110	100
Index of real smallholders' average cash crop price-after tax	100	96	95	81
Index of real smallholders' average total price-after tax	100	99	98	93

[1] The methods employed in the construction of this table are identical to those employed in Table V. From net smallholder cash output at current prices has, however, been substracted rough estimates - they are nothing more-of total agricultural commodity taxes on smallholder output. These totalled:

1960-62 - £650,000 (subsidy)
1963 - £450,000
1964 - £2,000,000
1965 - £3,600,000

annually in the 1962-64 period. Real wage rates have grown over the 1962-65 period at 11-12% annually; over the 1962-64 period, at 13-17%. Clearly, the income distribution policy implicit in Tanzania's wage and agricultural price policies, has worked to the increasing disadvantage of the smallholder agricultural sector. Is this purposeful? Is it desirable? In view of the impending foreign exchange problems and the growth of urban unemployment, one must at least have some doubts.

It is worth highlighting the figures on productivity which are implicit in the national accounts data. (See Table V) Total physical productivity per man has increased by 8 per cent between 1960-62 and 1965; if the bad 1965 year is regarded as abnormal, it increased by 15 per cent. These productivity figures overstate actual technological progress in that they include the output effects of increased inputs such as labour per man, land, and capital; if the growth rate of agricultural labour is understated, this also imparts an upward bias to the productivity data.

These biasses are increased in the case of the productivity data on cash crops by the bias caused by shifts from subsistence to cash crop farming which distort the productivity data in the latter's favour. Still the measured productivity gains in Tanzania cash crops have been considerable. Between 1962 and 1965 it rose by 36% - at an annual rate of 10.8 per cent. Even allowing for the various upward biasses this is a substantial rate of progress in agricultural productivity.

These trends are illustrative of those which can be expected in the coming years. The gains in per capita income which the nation achieves are likely to be distributed in broadly the same manner as in the recent

past. Urban wage rates will rise steadily with per capita income; they must not in future, however, be permitted to rise more rapidly than per capita income. Agricultural producer prices (after taxes) will remain unchanged or will even continue to fall. The farmers will therefore share in rising per capita income through increases in productivity or not at all. It must therefore be part of a national "incomes policy" to encourage agricultural improvement as much as to regulate agricultural prices and urban wage rates.

4. SOME ASPECTS OF AGRICULTURAL TAX-PRICE STRUCTURE.

Taxes upon the sales of cash crops have generally not found favour with the economics profession because of their tendency to encourage movement into leisure, untaxed agricultural (primarily subsistence) production, urban unemployment, services, petty trade, etc. and their frequent inequity. Still, because of the difficulty of collecting direct taxes from the rural sector, and the fear that there are limits to the increases in import duties which are possible without setting off urban wage pressures and price inflation, levies on agricultural exports will continue to be an important source of government revenues.

Given this fact, it becomes the task of the economist to devise a tax-price system which minimizes the economic costs of tax-induced resource misallocation. More positively, his task is to ensure that the incentives in the structure, as opposed to the level, of these taxes are working in the appropriate direction. Since elasticities are undoubtedly greater as between alternative crops than they are between agricultural cash crop production and the other pursuits mentioned above, the structure of taxes and prices may well be more important than their levels.

The most important considerations in such policies are:[6]

1. effects upon national income
2. effects upon foreign exchange earnings
3. effects upon export processing possibilities
4. equity or neutrality

(i) An Illustrative Digression:-

It may be worth illustrating the fact that differing objectives may give the policy maker very different pricing policy conclusions with a simple example drawn from the recent literature on commodity schemes. In Harry Johnson's recent study of commodity issues he criticises the simpliste approach to commodity policy which seeks as its objective the maximization of foreign exchange earnings for its neglect of the resource costs of the commodity's production.[7] He offers recommendations based instead upon the

[6] I have consciously omitted stabilisation as an objective of pricing policy in this discussion.

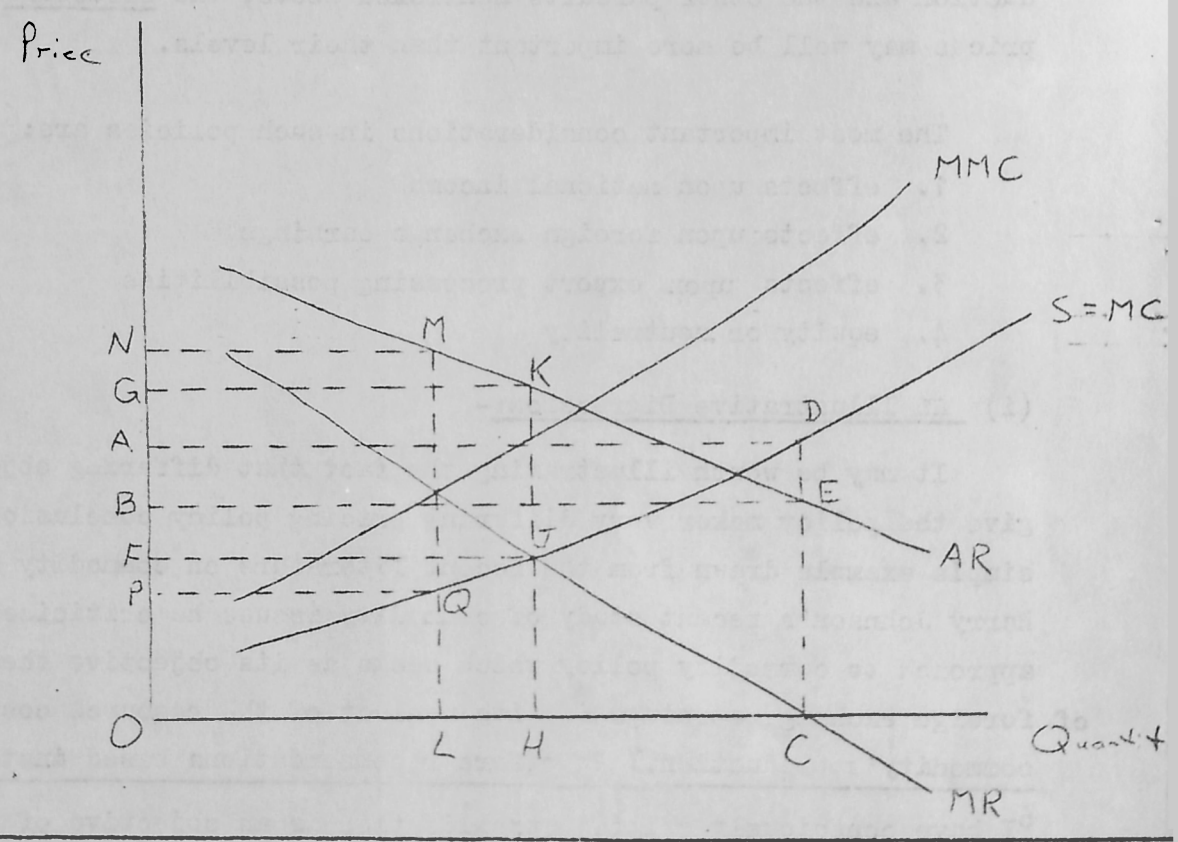
[7] Harry Johnson U.S. Economic Policy Towards the Less Developed Countries: A Survey of Major Issues. (Brookings: 1966).

objective of income maximization. It is possible, however, despite his strictures, for a government quite consciously to pursue the objective of foreign exchange earnings maximisation. I have elsewhere suggested the possibility of a third commodity policy objective - that of the maximization of government revenues.[8] One can easily think of others. But let us, for the sake of illustration, stick with only these three.

In diagram I, AR is the world demand curve facing the country which is to make the commodity (domestic) pricing decision. The marginal revenue curve based on this world demand is shown as MR. The supply curve which is also the economy's marginal cost curve, is labelled S (=MC). In order to maximize foreign exchange earnings one would want to produce to that level at which marginal revenue falls to zero. Clearly, the producer price should be set at OA (=CD). This involves a subsidy to the producer; he is paid a price higher than that which his output will earn on the world market, OB (=CE), because of the high value imputed by the government to the foreign exchange which his produce earns.

If, however, income maximization is the objective, the marginal revenue must be equated with the marginal cost to the economy, as shown by the supply curve. The domestic producer price should then be set at a lower level, OF (=HJ). The world price earned per unit when this price is paid is OG(=KH). This is higher as a result of the reduced output coupled with the country's market power.

DIAGRAM I



[8] G.K. Helleiner; "The Fiscal Role of Marketing Boards in Nigerian Economic Development, 1947-6" Economic Journal Vol.LXXIV, No.295, September,1964, pp.604-605

Now suppose that the policy objective is to maximize government revenues. Then the marginal revenue to the government (=MR) must be equated with the marginal cost to the government which now acts as a monopsonist as well as a monopolist.

The curve labelled MMC is a curve marginal to the supply curve which shows the marginal cost to the government at each price and output. Tax revenues will be maximized, through the exertion of maximum monopsony power, by paying a still lower price, OP (=LQ), to the producer. At this producer price, the nation will earn a still higher price, ON(=LM), on the world market.

Thus the pursuit of three different policy objectives, based on the needs for foreign exchange, income, and tax revenues, clearly results in three quite different pricing policies. In our case, the need for tax revenues is assumed to have already determined the aggregate tax burden to be borne by agriculture. Thus it is foreign exchange and income effects upon which we should focus in determining tax-price structure. And Johnson's case for using the latter rather than the former seems to me correct for East Africa today.

(ii) Input Prices and Processing Possibilities.

The effects of agricultural tax and pricing policies upon processing possibilities may not be so obvious. Policies which result in lower domestic prices for agricultural inputs to processing establishments than would be paid upon world markets for these inputs constitute subsidies to domestic processing. Taxes on raw material exports can therefore be industrial subsidies.[9] Thus the development levy which is applied to Tanzanian sisal exports provides an implicit subsidy to Tanzanian twine manufacturers since it is not applied to the sisal content of the final processed product. The effective protection offered to processing is the amount of the subsidy divided by the value added in the process.[10] In this example, taking an f.o.b. sisal price of £70 per ton and using the value added data from the 1963 Industrial Survey,[11] Tanzanian sisal processing receives effective protection from this development levy to the extent of 9.5% of value added. These implicit subsidies may partially offset the heavy effective protection offered to processing industries in the industrial nations through the "escalation" in their tariffs, (i.e., the increase in rates with higher stages of processing and production). In the case of sisal processing, European processors, receive effective protection (using their data) at a rate of 32% of value added. Table VII

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[9] Taxes on imported or non-exportable inputs to industry, of course, are disincentives to industry.

[10] See, for example, W.M. Corden, "The Structure of a Tariff System and the Effective Protection Rate," Journal of Political Economy, Vol.LXXIV, No.3, June 1966, pp.221-237.

[11] Which showed that sisal inputs constituted 85% of the value of gross output of the sisal processing industry in Tanzania.

roughly estimates the effective protection offered to developed country processors of some of Tanzania's exports, and those levels of export tax upon the primary products which would be required to provide incentives for Tanzanian processing sufficient exactly to offset the European protection of processors. These estimates can be improved but it is clear that fairly modest taxes on some materials can overcome substantial protective barriers in the developed nations. For example, British protection of 80 per cent for its groundnut crushers can be offset by an export tax on groundnuts of 11 per cent. The same factor which tends to produce higher effective protection rates in the developed countries, a high material input component in the total value of output also increases the ease with which raw material exporters can offset them. (It is worth noting that as the prices of exports rise, in those cases in which progressive export duties are applied to agricultural products, the effective (percentage) protection for domestic processing also rises. When taxes are specific, however, this percentage effective protection falls with price increases).

TABLE VII.

Export Duties and Effective Protection for Processing Activities

	Value Added in Processing Per Unit Value of Final Output	Effective Protection in		Export Duty Required to offset effective protection in*	
		U.K. %	EEC %	U.K. %	EEC %
Rope, cordage, twine	.40	22.5	32	15	21
Processed coffee	.40	3	45	2	30
Groundnut oil	.12	65-80	140	9-11	19
Castor oil	.10	32.5	80	4	9
Soyabean oil	.06	88	160	6	10
Cottonseed oil	.30	34	34	15	15

*The difference between c.i.f. European and f.o.b. East African prices has been ignored. These figures are therefore slightly understated. The possibility that the exchange rate of the East African currency is over-valued is also ignored.

Sources: 1)

1) Value added data come from different sources. Processed coffee and castor oil are outright guesses. The remainder are derived from Harry G. Johnson, U.S. Economic Policy Towards the Less Developed Countries: A Survey of Major Issues (Brookings, 1966), Rope, cordage, twine is cited directly therein. The remainder are implicit in the tariff rates and Johnson's effective protection figures.

2) U.K. and EEC tariffs were applied to the value added data to obtain effective protection, as follows: $f = \frac{t-m(1-v)}{v}$

where f is the European effective protection on processing, v is the value added in processing per unit value of final output, t is the European tariff on the processed product, and m is the European tariff on the raw material input.

3) Export Duty Required data were obtained from the U.K. and EEC effective protection and the value added data, as follows:

$x = \frac{fv}{1-v}$, where x is the necessary offsetting export duty.

(iii) Equity or Neutrality

If the desire is to raise government revenues with a minimum of distortion of the incentives which would result in the absence of such taxes and a minimum of discrimination (inequity), an attempt should be made to achieve equi-proportionate taxes on each crop. What is a neutral tax system in this sense? This is by no means self-evident. It is best defined I believe, as one in which equal proportions of value added by the agricultural sector are deducted in taxes from each. "Value added" as employed in this context is the value of output less the value of all intermediate (non-factor) inputs; this is the same thing as total factor earnings in production - whether they are wages, interest, rent or profit.

5. THE STRUCTURE OF AGRICULTURAL PRICES AND TAXES IN TANZANIA.

(i) Tax Rates on Tanzania's Major Export Crops.

Figures on grower prices and grower costs of production are notoriously hard to come by in most underdeveloped economies. Tanzania is no exception. The figures which follow must therefore be treated with extreme caution. It follows that many of the conclusions concerning relative tax burdens and so forth must remain quite tentative.

Table VIII presents the rates at which gross producer incomes earned from the major export crops have been taxed in recent years by the Central Government, the Marketing Boards and Local authorities combined. Some of the gross producer income is required to cover the costs of various purchased inputs. This table also, therefore, attempts to take account of these non-factor inputs by calculating the total tax as a percentage of value added (i.e., of total factor earnings). The latter data must be less reliable than the former.

Those familiar with the Tanzanian agricultural scene will realize that there are also private or semi-official bodies which influence agricultural prices. The most important of these are the co-operatives which are, to some extent, subject to the authority of the Ministry of Commerce and Co-operatives. But co-operatives are, after all, independent organizations - albeit receiving considerable official support. It is a nice question as to how much they should be regarded as or made an arm of the government, rather than formulating their own independent policies. The other private growers associations - notably those associated with estate production are more clearly unofficial in that they do not receive governmental assistance in any form. Decisions to withhold part of the price for the sake of the growers' associations work are presumably made by the growers themselves in their own self interest. The discussion here will, in any case, confine itself to government price and tax policy which is not pushed below the level of the Marketing Boards and the local authorities.

Of the major export crops, it is clear that cotton is taxed by far the least. Sisal is also taxed at a relatively low rate, whereas coffee

(especially robusta) and cashew nuts pay relatively high taxes. Some rough sort of case can be constructed for the relative rates of taxation for every crop except cotton. Sisal prices are in a disastrous slump, and wages and profits earned on the estates are, in any case, taxed in addition to the amount shown. The tax on sisal should therefore be relatively light. Coffee production is already far in excess of Tanzania's quota under the International Coffee Agreement and its further production should be discouraged by high taxes; coffee taxes are relative high. Quality improvement is the sole hope for raising the value of coffee sales under the Agreement so that the heavier tax on robusta is also justified. (In view of the rapid increases in yields, the considerable overproduction with respect to the ICO quota, and the low marginal revenue from further production which must be sold on non-quota markets, there is indeed a strong case for raising taxes on coffee (see below). There was actually a tax reduction last year). The high tax rates on cashew nuts can be defended on the basis of the government's need for revenues and the fact that prices apparently remain sufficiently attractive to stimulate continued rapid growth in production (supply elasticity appears to be low). But what can justify the relatively low tax on cotton? Production is increasing rapidly, yields are rising, and the world price prospects are bleak. There would seem to be a strong a priori case for increasing the tax on cotton.

TABLE VIII

AGGREGATE TAX RATES (CENTRAL, LOCAL, AND MARKETING BOARDS) ON GROSS POTENTIAL INCOMES AND NET VALUE ADDED, MAJOR EXPORT CROPS, TANZANIA, 1964-65 TO 1966-67.

	1964-65		1965-66		1966-67	
	On Gross Potential Income %	On Net Value Added %	On Gross Potential Income %	On Net Value Added %	On Gross Potential Income %	On Net Value Added %
Sisal[1]	5.0	n.a.	3.4	8.7	3.4	10.4
Coffee - arabica[1]	n.a.	n.a.	19.1	22.8	14.6	17.4
Coffee - robusta[2]	n.a.	n.a.	27.1	35.0	20.2	26.1
Cotton	2.0	3.2	3.4	5.6	2.5	4.3
Cashew nuts	29.6	29.6	17.6	17.6	23.3	23.3

[1]Taxes on estate profits are additional to this.

[2]Arabica and robusta data are not strictly comparable since the former are based on KNCU data, the latter on BCU data.

Sources:

Data were obtained from a variety of official and unofficial sources and were supplemented, where necessary, by guesses. The vaule added figures are especially weak since there exist no firm data on costs of production. The tax rate data on gross potential incomes are fairly reliable except in the case of cashew nuts, where the size of the Marketing Boards trading surplus has been guessed.

(iv) DISTRIBUTION OF REVENUE BETWEEN CENTRAL GOVERNMENT AND LOCAL AUTHORITIES.

Taxes upon agricultural produce are, of course, only one facet of the tax relations between the Government of Tanzania and the local governments. It is still important to consider the distribution of the revenues earned from this type of tax as between the centre and the local authorities. This is shown in Table IX.

The highest local shares are those for the products in which the total tax burden is lightest (cotton and sisal). This suggests that it is the central government's revenue which is more variable from crop to crop. Local government produce cesses are fairly stable in their incidence. The introduction of sliding scale export duties and the price - setting power of the Central Marketing Boards emphasize this point.

What does the present system imply for the future distribution of revenues? If export prices rise, the central government's export duties rise more than proportionately. If, on the other hand, as is more likely, volume increases with prices unchanged or reduced the present proportions are unchanged - or turned in the local government's favour. Is this desired?

TABLE IX

LOCAL TAXES AS A PERCENTAGE OF TOTAL TAX TAKE, MAJOR EXPORT CROPS. TANZANIA. 1964-65 TO 1966-67

	1964-65 %	1965-66 %	1966-67 %
Sisal	22.5	52.8	52.8
Coffee-arabica	n.a.	22.7	6.0
Coffee-robusta	n.a.	19.1	5.1
Cotton	100.0	58.8	83.3
Cashew Nuts	12.5	26.0	18.5

Sources: Same as Table VIII.

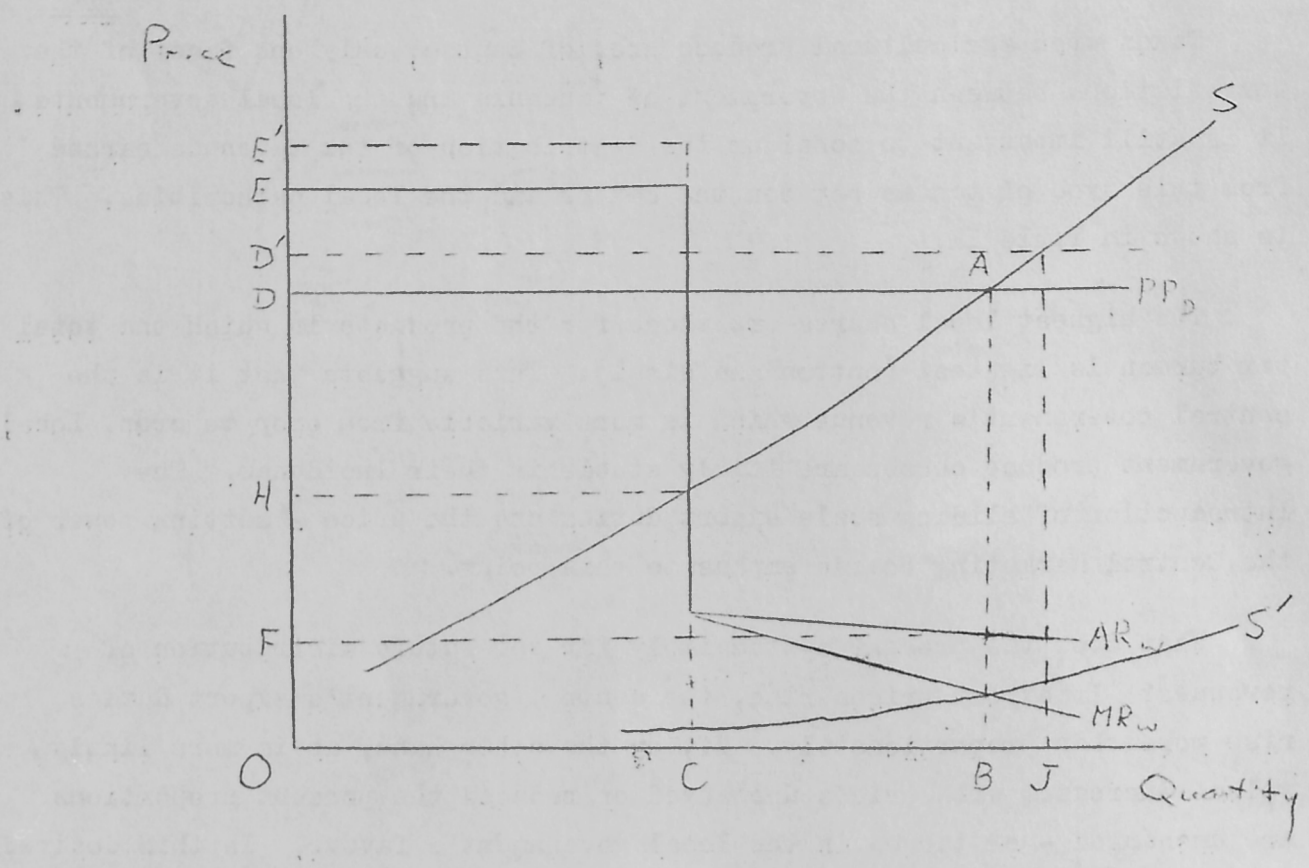
(v) The Special Case of Coffee.

The world demand schedule facing an individual coffee producer like Tanzania today is a discontinuous one, a sharp break occurring once sales volume (or production) reaches the country's ICO quota. The marginal revenue curve, shown in diagram II is also discontinuous. The domestic producer price, shown by pp, is unaffected by this discontinuity. So, of course, is the economy's supply curve.

The Tanzanian situation is represented by the point A, at which output is OB although the quota is only OC. Domestic producers are paid OD. Sales on quota markets earn OF, on nonquota markets OF. Clearly, marginal costs to the society are equated with marginal revenue at the ICO quota output; if national income maximization is the objective it is not being attained.

If foreign exchange earnings are the objective, higher than quota sales are called for.

DIAGRAM II



Can this policy be rationalised? If the land at present under coffee has no or limited alternative uses the society's marginal cost curve (the supply curve) will be much lower than the one shown - say S^1. If the true supply curve is S^1 OB is the appropriate level of production. But then, of course, the producer price should only be OG, much less than the actual producer price. Only if the marginal cost to society shown by S^1 is lower than the private supply curve of the producer, S, can the present producer price policy achieve the postulated income maximization. There is no reason of which I am aware for believing this to be the case.

Subsidies to encourage total sales volume greater than the ICO quota might be justified by the desire to raise (even maximize) foreign exchange earnings. But this does not seem to be consistent with the taxes which are everywhere else incurred on export production. Nor can one easily find alternative rationalizations of the present pricing policy. The producer price ought to be set at that level which results in the quota output, OH. This has the added advantage of producing healthy government revenues, perhaps even of maximazing them.

It is possible that the distribution of production cutbacks which would result from a coffee price slash, such as is being suggested, would be politically unacceptable in that estate production might suffer the least, smallholders the most. The possibility of this outcome is unclear without further investigation. Whatever the likely outcome, the distribution of costs could to some extent be controlled through a quota system of sales for

the estate sector, limiting their share of Tanzania's coffee quota. Any Coffee Board purchases from estates additional to their quotas could be at prices which were related to prices earnable on non-quota world markets. If necessary, some form of adjustment assistance could be provided for those forced out of coffee. Further research is required on the most profitable alternatives.

(iv) Revenue Implications of the Tax Structure.

Apart from the present level of taxes on the important export crops, what are the revenue implications of their structure? The future Central Government revenue likely to accrue from the various taxes on agricultural exports varies considerably from crop to crop.

The export tax on coffee is specific. The bulk of the world price changes are therefore passed directly on to the producer. There is proportional 1% district council cess). Price decreases on the world market will therefore be fully felt on the farms and will presumably result in the desired reduction in output. Unfortunately, however, price increases (on quota markets) will also be distributed to the grower, despite the absence of any change in the marginal revenue (earnable on non-quota markets) which might make it socially profitable to produce more coffee or even that amount already being produced. When OE rises to OE^1, the producer price rises immediately from OD to OD^1, producing an increase in supply from OB to OJ. This type of tax and pricing system is highly unsatisfactory.

The specific tax must be altered or supplemented so that further incentives to raise production beyond the quota are eliminated or greatly reduced. At best, a confiscatory tax for prices beyond OH is called for. A steeply progressive tax would, however suffice.

Taxes of this type have been opposed by the industry because of their possible effect upon the quality composition of output. Robusta and arabica are grown, however, in different areas and do not really compete so that the choice between them is unlikely to be affected. One could establish separate scales of taxes, or even quotas, for each if this were considered a serious problem. There is little reason to believe it would be. There may, however, be deleterious quality effects within the arabica sector. The best compromise is therefore probably to move to a much higher level of tax with a moderately progressive scale similar to the export tax at present imposed upon other agricultural exports. A specific tax could be incorporated within the new coffee tax arrangements, if this were considered desirable.

Taxes on cotton, cashew nuts and the other oilseeds are ideally structured in the sense that Marketing Boards control the prices and therefore can establish on a year to year basis, the size of the tax burden on each crop. The only function of the tax system, then, is to determine the distribution of the revenues as between Marketing Board and government.

This conclusion requires, of course, the acceptance of these Boards as, among other things, (fiscal) agents of the Government; the prices they establish must be recognised as based on the national rather than the growers' interest.

If the Marketing Boards cannot be so regarded, or if they need to be buttressed in this new role, it becomes necessary again to devise a tax system with the desired price effects. Broadly speaking, the sliding scale export duties which apply to sisal, cashew nuts, pyrethrum, copra, groundnuts, caster seeds, simsim and sunflower seeds are of the appropriate sort. These duties incorporate an automatic progressiveness with respect to price which is desirable. They suffer from one major defect in that income gains resulting from increases in volume rather than in price are not taxed at a progfessive rate. Since the price prospects for most of these commodities are not very favourable while the prospects for productivity gains are substantial, the present tax seems likely to be income-inelastic in the foreseeable future. This defect could be remedied through the application of a basic specific duty in addition to the sliding scale. (Such a duty already exists in the case of sisal in the form of a twenty shilling development levy).

6. CONCLUSIONS.

A variety of thoughts, suggestions, and examples has been strewn throughout this paper, which has undoubtedly ranged too widely, making it difficult for me to summarize the whole. The most important points made were the following:

1) agricultural pricing policy must be employed positively as a major instrument of governmental agricultural development policy; it can be so employed independently by each East African government.

2) The Tanzanian government's revenue-share of GDP has risen in recent years but it remains below "normal" for underdeveloped nations of comparable "open-ness".

3) the growing need for government revenue produces pressure for greater revenues specifically from the agricultural sector, both because of its size and its relatively weak political power.

4) this pressure and other factors have resulted in a growing disparity between unskilled urban wage rates and agricultural smallholder prices and incomes in Tanzania, which, in view of the need for further export earnings and the presence of urban unemployment, seems undesirable.

5) in the future, urban wage rate increases should be held down to the rate of growth of aggregate per capita income; small-holders are unlikely to share in this growth except through productivity gains.

6) once the average agricultural price level (or tax burden) is established, the chief criteria for intercrop pricing strategy are national income effects, foreign exchange earning effects, effects upon processing possibilities, and equity - all of which may offer mutually incompatible answers.

7) the heavy effective protection offered to developed nations' processing industries by their "escalated" tariff structures can be offset by input subsidies which are implicit in taxes upon raw material exports in the underdeveloped areas.

8) equity or neutrality in intercrop price (or tax) policy involves the withholding from the producers of equal proportions of their value added.

9) while justifications can be found for the relatively light tax burden upon sisal and the relatively heavy tax burdens upon coffee and cashew nuts, there seems no reason for the present relatively low tax rates upon Tanzanian cotton.

10) in view of the low marginal revenue from further coffee production, the price of coffee should also be considerably reduced; research upon the possible differential supply effects and measures to modify undesirable ones is required.

11) the Central Government's revenue from agricultural taxes is more variable than that of the local authorities, and is more income-elastic than local revenue only with respect to price changes, which are unlikely to be favourable.

12) the Central Government's taxes upon coffee should not only be increased, but they should also be changed from purely specific to at least partially ad valorem taxes applied on a progressive basis in a manner simmilar to that at present employed for the oilseeds.

13) A specific tax element should be added to the Central Government's sliding scale export duties upon the oilseeds and pyrethrum to ensure that these taxes will be suitably income-elastic in cases where productivity gains are accompanied by world price reductions.

14) The Marketing Boards which control the prices for cotton, cashew nuts and the oilseeds should be viewed as serving the national interest rather than that of the growers; the difference between the world price and the producer price should be recognized as a tax burden.

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JOB SECURITY IN TANZANIA DRAFT NOT TO BE QUOTED

by F.R. Livingstone

Labour relations in colonised Africa revealed very clearly the economic, political and psychological relationship between colonies and colonised. Employers found their workers amongst the indigenous population by using poll taxes and forced labour where enthusiasm was not in evidence. Labour was brought on a temporary basis to the places where it was needed; families stayed behind. Employers bemoaned the expense of recruitment and paid phenomenally low wages. Workers were unwilling and necessarily regarded work as a temporary expedient and not a way of life. Labour was cheap and employers accepted without optimism the inefficiency and lack of enthusiasm of their workers. economically it was not to their disadvantage. A large labour turnover is not of importance when only unskilled labour is being used. Expense of recruitment was offset by low wages and "bachelor" accommodation and food. Although there was a constant labour shortage, it never assumed unmanageable dimensions. Inefficient use of labour was formalised in the practice of ticket contracts whereby a man was expected to complete 30 days work within a 42 day period and even that limit was not strictly adhered to.

Local legislatures introduced "protective" legislation under pressure from the colonial office and the ILO and always apologetic to the employers, Such legislation concerned itself with the necessary calory consumption of employees, the necessary accommodation (not more than 4 men to a room,) the repatriation of recruited workers, and other matters concerning their physical survival. On the other hand penal sanctions were used to keep them at work; dismissal was not a threat and so imprisonment was used to deter breach of contract. Furthermore, the sentence of imprisonment served, the workers was still bound by the contract he had attempted to break.[1]

In Tanzania in the 1940s and 1950s many of these penal sanctions fell into disuse. In 1953 the legislature went so far as to introduce minimum wages machinery re assuring the employers in the meantime "there is no intention, if this Bill is enacted and becomes law, of following it up by the issue of a spate of orders establishing Wages Boards and Wages Councils throughout the Territory".[2]

Independence in 1961 necessitated a complete rethinking of the social attitudes to work both of employer and employee. Where many years of trade union pressure were required to attract governments' attention to the hardship of the working class in the colonial countries, in Tanzania this hardship was readily recognized. The recent national experience of degradation increased sensitivity to the need for dignity in work. Employment had been one of the closest points of contact with colonialists and indeed, after independence, many of the employers continued to be either aliens or members of racial minority groups. The awakened international awareness of workers' problems provided an ideal setting for the introduction of legislation to strengthen the worker's social position and status.[3] It was felt socially desirable that there should be a permanently urbanised labour force which had reasonably good living conditions rather than a mass of semi-urbanised migrant workers. In August 1962, the Ministers of Labour in East Africa met in Kampala to determine future labour Policy They rejected ticket (KIPANDE) contracts; they considered that "more effort should be made in the future to provide workers with homes as against just bed spaces." They determined that in spite of the dangers of a contraction in investments and of unemployment, East Africa should move towards a high wage economy. An East African Conference of employer's representatives, labour leaders and government Ministers, held in November 1962, endorsing the decisions made in Kampala resolved that:

> "Unemployment was a constant threat which had to be taken into account when deciding the pace of movement towards a high wage economy. It must not, however, be used to stop any such movement since it was felt in the long run it was better to have a smaller but satisfied and efficient labour force rather than a large badly paid and frustrated labour force". The need for social security and old age pensions was recognised at both meetings; the later meeting suggested an additional reference to unemployment relief.[4]

In Tanzania the political philosophy of the government led to the early introduction of legislation along the lines envisaged; minimum wage legislation was not however the only area which received close attention. Much thought and administrative energy was spen in the creation of laws a job security.

The need for legislation was made more immediate by the course of development of trade unions since independence. The role of labour organisation in the struggle for independence gave them a strategic inportance which was disproportionate to their numericalrepresentation. Between 1962 and 1964 the government brought the T.U. movement within the political framework of the one Party state : in 1962, the right to strike was controlled by legislation, in 1964, NUTA was created. In the same period the Severance Allowance Act the (2) Security of Employment Act and the (3) Nation Provident Fund Act were introduced; it is these legislative measures, their effect on the employee and the employer and their implications as regards work and society which are to be considered in this paper.

In the United Kingdom the concept of freedom of contract has dominated the legal aspects of the employment relationship, to the exclusion of any consideration of the social implications of that relationship. An example the way in which the English courts have dealt with employment problems as if they were more contractual questions is revealed as the decision of the judge in the following case: a colliery was temporarily closed down for safety reasons and the judge decided the workers' entitlement to wages on the following basis, "I am satisfied that employer would have consented to agree that the workmen should be free to withhold their work if the nine became dangerous through no fault as his part and yet should be entitled to be paid their wages". [5] Termination of employment has been subject to the same reasoning. The employment can be terminated by the employer within the limits of the contract: either a period of notice given by the employer or a fundamental breach of the contract by the employee will suffice. Where the employer gives notice, he need produce no justification or explanation for terminating the employment and the employee is entitled to no compensation for loss of the job. Where there is a breach by the employee, the employer has the power to summarily dismiss him without consultation with a workers' committee, a T.U., or any other industrial or judicial body. The dismissed worker may have subsequent recourse to the courts for damages for breach of contract.

Although there is the possibility of redress in cases

of summary dismissal, the procedure on the basis of breach of contract lends a certain ineffectuality to the employee's "rights". The dismissal has already become a concrete fact : the man has lost his job and his wages have ceased. His redress is to take an action to the civil courts and there, after the event, claim the damages he has suffered. Needless to say, the lapse of time between dismissal and damages will not be short.

Various arguments are put forward in defence of the regulation of the employment relationship by individual contractual agreement. One argument is that the employee himself had the opportunity to agree to or reject the terms of his employment; this is in practice specious reasoning since the individual bargaining strengths of employee and employer are so blatantly unequal. Another argument is that the presence of the T.U. is sufficient protection; indeed many unofficial strikes do result from disputes over individual dismissals but can strike action be considered the most suitable solution? The dismissed employee may have had already to seek new employment by the time terms are negotiated; the strikers lose their wages; the industry loses working days. Furthermore not all employees are unionised and dismissal is a problem of the non-unionised as of the unionised employees.[6]

Kenya, Uganda and Tanganyika inherited this common law on termination of employment; since independence only Tanzania has introduced legislation to change it, in the United Kingdom itself some minor changes have been made since 1963: minimum periods of notice have been laid down[7] and severance payments must now be made if an employee is made redundant, by the closing down of or rationalisation of employment in the industry

The basic precise underlying these legal provisions in the United Kingdom is that a man's job can be defined by his relationship with his employer, The wide social context of work is not considered, only the individual relationship between employer and employee. The law then is quite in keeping with the unawareness of the (18th and (19th of the social significance of employment practices, but it is now the (20th and, while sociologists, economists and psychologists discuss and analyse the worker's relationship with society the law remains almost unchanged.

Other capitalist countries, too, accept the basic concept that employment is an individual relationship and

not a social right or function In the French Labour Code it is laid down that "an engagement made without limit of time may always be terminated at the will of either pa rty"[9] However legislation in France has gone further than that in the U.K. in limiting the arbitration of the employer's right to terminate. Whether he gives notice or not, the employer will be fined if he dismisses an employee without consulting the Manpower Service; he must consult the workers' committee where he intends to reduce staff; he will be liable to pay damages for "abusive" dismissal if he terminates where there are legislature or collective agreement provisions to the contrary or where he has malice or fails to investigates fully; he cannot dismiss elected works representatives without the consent of the workers committee or the labour inspector.

The Federal Republic of Germany has gone even further than France in limiting the employer's right to dismiss. In 1951[10] laws were passed whereby employees were protected against "socially unwarranted" dismissal. A socially unwarranted dismissal is "any dismissal not based on reasons connected with the person or the conduct of the employee or on pressing operational requirements which preclude his continued employment in the undertaking". The employer must consult with the Works Council before making any dismissal; if he makes a dismissal which is disputed, the matter can be brought before a labour court and, if the dismissal is held to be socially unwarranted, it will be without effect. This legislation makes enormous strides forward in protection of the worker in comparison with provisions in England. France, U.S.A.[11] It nevertheless continues to rest on the assumption that the employer has the right to dismiss in general although the exercise of that right may be held ineffective by a labour court. The employer himself is not forced to establish a right to dismiss before he does so; works council must be consulted but they have no power to forestall or reverse the dismissal.

Legislative limits on the employer's power to dismiss in the Western Countries have been primarily motivated by humanitarianism concession to trade union pressure. Full employment was perhaps instrumental in facilitating the introduction of these limits. There has been some recognition that loss of a job is not exactly like the

termination of a commercial contract. In full employment, a man may be easily able to find new work but his rhythm of life may be nevertheless disturbed. Change of area of residence, loss of Seniority, loss of accumulated benefits may result. The suspension of his weekly wage for even a short time may have harsh effects : he may be unable to meet his commitments (rent, H.P. payments etc.). Future employment opportunities may be prejudiced by the fact of his dismissal. Furthermore the arbitrory breaking off of works relationships may have demoralizing effect both as the dismissed man and on his work mates. Other rights of employment, such as the right to organise or the right to take maternity leave, become meaningless if the employer's right to dismiss is not curtailed in such circumstances.

In socialist political thought as in socialist law a man has a duty and a corresponding right to work. This right to work is not a protective measure based on humanitarianism; it is the basic right of a citizen, and is inseparable from his right to be a member of the society. The basic assumptions are totally different from those of capitalist thinking a man's job is not a contractual relationship betweem himself and his employer, it is his function in society. During the Stalinist period, a worker could be summarily dismissed for less labour forces than would have legitimated his dismissal in Czarist times.[12]

"The Socialist industrialisation of the country required that labour law --- serve the successful struggle for the productivity of labour and the strengthening of labour discipline."[13]

These high demands made on the workers are in no way inconsistent with the right to work guaranteed by the various socialist constitutions because that right was not guaranteed in order to mitigate the hardship of the worker; it was a rationale analysis of the meaning of his membership of the society.

> "The Declaration [Declaration of Rights of the Toiling and Exploited People 1918] speaks of fundamental civil obligations side by side with fundamental rights of the toiling; and exploited people. Therein is one of the differences between proletarian declarations and bourgeois declarations. As a rule the bourgeoisie avoids speaking about obligations in declarations, prefering to speak of then in ordinary laws rather than in the

ostentatious declarations invoked to adorn the facade of the bourgeois democratic state."[14]

The present Soviet Constitution states that citizens have the right to guaranteed employment and payment for their work in accordance with its quantity and quality. Until 1956 the duty to work was strongly emphasised: if a man left his job without legal justification he was liable to criminal penalties. In 1956 the law was changed and now an employee may give notice to quit. The easing of the position of the employee who wishes to terminate his employment is certainly a move away from a concept of man's absolute duty to work as directed in society and a move towards a more flexible concept of dismissal procedures in Soviet law are designed in accordance with the right of the employee to his job. The employer has no right to dismiss. A man cannot be dismissed without the prior consent of the works committee or the local trade union. In all ca ses of dismissal, whether occasioned by the misconduct of the worker or otherwise, this consent must be obtained before the man loses his job. The circumstances in which dismissal may take place are exhaustively defined by the legislation.

In Czechoslavakia too the concept of a job as a man's function in the society necessarily leads to a totally different analysis of termination of employments; there is no mystical right vested in employer or employee to terminate the relationship. "Absolute freedom of an employee to terminate his labour relation at any time would jeopardize fulfilment, and overfulfilment, of the economic plan, both being prerequisites for the satisfaction of steadily increasing needs, both material and cultural of the population. On the other hand, if we give complete freedom to the employer to give his employee notice at any time, this kind of termination of a labour relation would be contrary to the principle of the constitution ensuring the right to work."

Since an approval of the country peoples' committee is necessary for the termination of employment by either side, employer or employee, the reasons for the notice [notice to terminate] must be communicated to the county peoples' committee or to the shop committee, as the case may be, so that one [of these agencies] can examine the

the seriousness of the reason."[15] Furthermore proper termination of the previous employment is a prerequisite for new employment; since a job is not an isolated employment relationship but rather a continuous function in the society, the circumstances of termination of one job are relevant to the commencement of another.

Tanzanian legislation has in the Severance Allowance Act 1962 and the Security of Employment Act 1964 regulated the employer's power to dismiss the employee and his duties to the dismissed man.

The first of these Acts has imposed an obligation on the employer to make a payment proportional to the length of the employee's service, on termination of employment. The definition of termination is extremely wide and results in severance allowance being payable except where there is a degree of fault on the part of the employee. Even when the employee himself terminates, severance allowance will be payable if he has certain prescribed reasons for doing so: illness, old age, unlawful assault by the employer.

The Security of Employment Act sets up a procedure which the employer must utilise if he wishes to dismiss summarily an employee. Workers' Committees must be established in every business where more than ten union members are employed [16]. The employer must inform his Workers' Committees of his intention to dismiss summarily and give them the opportunity to make representations to him [17]. If the Committee does make representations and ** employee concerned the opportunity to refer the matter to a Conciliation Board [18]. The Board has wide powers to confirm, reverse or vary" [19] the summary dismissal; the employee, with the Committee's support, can appeal from its decision to the Minister of Labour. Small business establishments with less than ten employees who are union members are not outside the terms of reference of the Act: they must consult the Labour Officer. The occasions on which an employer can summarily dismiss a man are exhaustively determined by the Disciplinary Code[20].

Part IV of the Act is designed to deter employers from terminating contracts of employment unless there were justifiable reasons for doing so, but it has not yet been brought into force. The employer is therefore left entirely free to terminate a man and pay him his severance allowance without explanation or justification. Some of the reasons which are given in Part IV as justifying termination are the winding up of the business, suspension *** employee, redundancy or the existence of circumstances which would have justified the employer in summarily dismissing the employee. If the employer were to terminate the employment unjustifiably then the employee could, with the support of the Workers' Committee, make a claim for statutory compensation to the Conciliation Board.

The third piece of legislation under discussion, the National Provident Fund Act, does not at first glance appear to bear relation to termination of employment. Its relevance becomes clear, however, in the amendment which the Act makes to the Severance Allowance Act: where the employer has made contributions to the National Provident Fund, those contributions are deductable from the Severance Allowance which is payable. Since Provident Fund contributions are 5% of the employee's income while severance allowance is two weeks pay per year, wherever the employee is a member of the National Provident Fund he will not be entitled to any severance allowance at all[21]. Provident Fund benefits are paid in cases of old age, sickness or death.

The sum of Tanzania's provisions does not amount to the introduction of a "right to work". Termination is still entirely a question of the employer's own judgement and choice; it is only when the employer wants to dismiss a man summarily that he need consult a Workers' Committee or that his decision is subject to review by a Conciliation Board. Even if Part IV of the Security of Employment Act were to be brought into effect, the employee could only seek financial compensation and would not be entitled to retain his job. A legal right to work in a society where underemployment and the decrease in employment opportunities are grave economic problems would, at any rate, be illusory. Furthermore, while the economy is not fully centralised, but divided between a private and a public sector, employment cannot but be regulated partially by market demands.

** fails to reach agreement with the employer then the employer must give the

*** of work for reasons beyond the control of the employer, inefficiency of the

Although Tanzania suffers from inefficiency in employment and a high labour turnover there has been no legislative limitation of the employee's right to leave his job with a minimum period of notice. However the loss of severance allowance means that the employee will suffer some disadvantage if he leaves his employment prematurely. While these laws do not introduce a right or a duty to work, the procedures and benefits which they provide have a profound effect not only on employment relationships but necessarily on the society as a whole. Since more than a third of Tanzania's employees are employed by government a good part of the cost of severance allowance and provident fund contributions is paid by the tax payer. The wage earning sector is only 3.3% of the population and is already a privileged group; the question arises whether this additional expenditure on their behalf is in the interests of a just allocation of resources [22]. In the private sector, additional costs can be easily borne by the bigger employers and the Federation of Tanzania Employers does not protest against them. As for the small employers the severance allowance costs will be harder to bear and accounting costs for the National Provident Fund may become a problem but as yet employers of less than ten men are not within the scheme. By improving the lot of employee's, the government is making urban employment more attractive and an increased movement into towns may result. Such a movement would be disastrous when there is no expansion in job opportunities. Those at present employed would suffer repurcussions from an increase in the underemployed in towns since they themselves would have difficulties in finding new employment opportunities.

Within the wage earning sector itself, the effects of the legislation are diverse. The decrease in movement of labour between village and town has led to a greater dependancy of employees on their wage earnings. In Kenya in 1962, the International Bank presumed "that loss of employment is becoming an increasing hardship as people gradually divorce themselves from the Security of a traditional rural community". IBRD advised against the introduction of temporary unemployment relief schemes on the grounds of cost of [their] and ineffectuality in bringing the employee fully into the wage economy. In Tanzania, when the Minister for Health and Labour, Mr. Kamaliza, introduced the proposals for payment of a severance allowance to the Assembly he said that "the most important effect is that it enables the discharged worker to bridge the gap between his previous employment which has been terminated and the next one".

In the movement towards a stabilised work force it is essential that the loss of one job should not necessitate either immediate hardships or return to the shamba. Severance allowance must certainly be considered fully justified as a means of enabling the dismissed man to seek reemployment. The payment of severance allowance might be more effective in promoting a stabilised work force if further provisions were introduced compelling employers to fill their work vacancies through employment exchanges. These latter could give priority to the employment of workers who had already been in employment and had remained in the urban area in search of further employment. Reemployment of experienced workmen is likely to encourage efficiency; the knowledge that low priority will be given to new work seekers would discourage the drift to the towns.

The virtual replacement of severance allowance with provident fund benefits is in this respect disastrous: old age security may be important for the growth of a permanently urbanised work force in that it allows complete dependance on wage earnings but the two payments are entirely different in their effects. Severance allowance is even more important than an old age security in enabling the employee to spend his active years in the employment sector.

Both severance allowance and provident fund benefits may encourage the employee to remain far longer periods in his employment since he is accumulating savings. Severance allowance could have an opposite effect if the employee, wishing to liquidate his future gains, could encourage his employer to terminate him, without giving grounds for summary dismissal. If this tendency were encouraged it could be checked by making severance payments progressively greater per year of employment [23] and by tightening work discipline so that any conduct which would provoke termination would also justify summary dismissal.

The Disciplinary Code lists 17 grounds for summary dismissal. The first 6 of these grounds require that the employer give various warnings and only on the forth or fifth offence can he dismiss the man. Furthermore there must be four or five repetitions of the very same offence [24]. These 6 "minor offences are concerned with absenteeism lateness for work, neglect of duty and "failure to comply with the employer's instructions relating to work (including without prejudice to the generality of the foregoing those designed to increase efficiency or output)". The remaining offences justify summary dismissal on the first breach; amongst these are inability "to perform work efficiently by reason of the use of alcohol or the improper use of drugs". Nowhere in the Code is general inefficiency alone [25] sufficient to justify summary dismissal and where failure to comply with the employer's instructions designed to increase efficiency justifies summary dismissal, it does so only after there have been four breaches.

As was argued earlier in this paper, work psychology in Tanzania is not geared to long term or efficient labour. While correcting the former by the introduction of security legislation and financial incentives the latter should be corrected by the introduction of a disciplinary code which would be extremely harsh on the inefficient [26A] employee. Summary dismissal is a meaningful penalty, where the workor loses his severance allowance, and it should be used to encourage efficiency of labour. Whether there was or was not inefficiency will of course be considered by either the Workers' Committee or the Conciliation Board, who can safeguard the genuine interests of the worker.

Efficiency for these purposes must be related to the training given by the employer to the employee and to the performance of the employee during the probationary period. Inefficiency is as likely to be the result of bad management practices as the fault of the employee. The potential for increase of efficiency by the efforts of both management and employees is enormous, as can be seen from evidence in the Sisal Industry where sizeable reduction of the work force has nevertheless been followed by an increase in production [27].

The procedure which the employer must follow to make a summary dismissal may in some cases be cumbersome. While workers are as concerned in problems of dismissal and efficiency as management, many workers' committees are still inexperienced in understanding management problems. Furthermore employers may have to go long distances to regional labour officers or Conciliation Boards. Nevertheless the participation of employees in decision making is a movement towards a cohesive and constructive work psychology. NUTA does provide Workers' Education programmes for the Workers' Committees and, with experience and training, dismissals will it is hoped, be largely concluded by agreement between the employer and the Work Committee. The Workers' Committee is a corner stone in the dismissal procedure and the possibilities of lack of understanding of management problems or, on the other hand, of corruption of Committee members raise grave doubts. Complaints have been voiced that fair minded workers' Committees become extremely unpopular with their fellow workers. There is an unfortunate trend for employers to allow their Workers' Committee chairman and in some cases, it appears, all the members of the Workers' Committee to spend their entire time on their industrial relations functions. The future of the procedure for summary dismissal depends on NUTA's ability to train the Workers' Committees so that they are aware of their responsibilities to both management and employees.

FOOTNOTES

1. Master and Native Servants Ordinance 1923. s.34.
2. Regulation of Wages and Conditions of Employment Bill, 1950 (Second Reading).
3. Human Rights and International Labour Standards, C.Wilfred Jenks. 1963 I.L.O. Recommendation 119, Termination of Employment on the Initiative of the Employer.
4. Minutes of a Meeting of the Tripartite Labour Conference of East Africa, Dar es Salaam, November 1962.
5. Browning v. Crumlin Valley Collieries (1926)1K.B.522.
6. The reason behind an employee's dismissal may be his attempt to introduce union activity to a plant where no such activity already exists. In such circumstances the argument that the T.U. can sufficiently protect the individual becomes totally unmeaningful.
7. U.K. Contracts of Employment Act, 1963.
8. U.K. Redundancy Payments Act,1965.
9. France Labour Code Book I, s.22.
10. Germany Act of 10 August 1951, Legislative Series1951 (I.L.O.)
11. In the U.S.A. termination is not regulated by legislation; the only limiting provisionsare contained in collective bargaining contracts.
12. Some of the critcs of socialist law describe the move away from this kind of legislation as a move into capitalist thinking.
13. Denisov No.74(A)p.90.
14. Vyshinsky, Law of the Soviet State. p.556.
15. Czechoslavakia Pracovna Pravni Predpisy No.642p.8.
16. Security of Employment Act Schedule I. The members of the Committee must be union members and are elected by union members.
17. Ibid s.21(3)(a).He must wait for 3 days.
18. Ibid s.21(3)(b).He must wait for 7 days.
19. Ibid s.24(1)(a).
20. Ibid Schedule II.
21. National Provident Fund Act Fifth Schedule.
22. The cost of the Severance Allowance Act was very high in the [illegible] starting years, both in administration and in payments of allowance however running costs are likely to be lower once people are [illegible] familiar with the scheme and there is no longer a baklog of payments to be made
23. So that for the first two years severance pay might be at the rate of one weeks salary per annum, the taking four years two weeks'salary per annum and so on.

24. The "minor" offences -- the Disciplinary Code should be bracketed together. The possibility of hopping from one breech to another without raving a fine or a dismisal is ludicrous.

25. See Security of Employment Act S.39(2)(e) and (1), where circumstances of inefficiency and circumstances of justifying summary dismissal are recognised to be different.

26. The distinction between inefficiency and lack of skill would not be of importance is a revised disciplinary code since employees earning more than 700/- per month are outside the scope of the security of Employment Act.

27. Guilleband, The Sisal Industry in Tanzania.

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John Loxley,
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December, 1966
Ec 1-3.

Financial Intermediaries and their Role in East Africa

The purpose of this paper is:

(a) to examine the role of financial intermediaries in the development process through their impact upon savings, investment the balance of payments, and the money supply, and

(b) to see now the most important East African intermediaries have behaved in recent years, with particular emphasis on non-bank financial intermediaries.

1. Financial Intermediaries

The ex-post identity of savings and investment in the economy as a whole does not necessarily, nor normally, hold for individuals, institutions and sectors within the economy. Unless investment is self-financed as is the case with subsistence investment and re-investment of profits by firms, the acts of saving and investment will be accompanied by the creation of financial assets and liabilities. Some spending units (households, firms, or government) will spend more than their current receipts in any period while others will spend less. The units running deficits will finance their excess of expenditure over receipts by borrowing (net of any lending) an identical amount from surplus units. That is, they will issue net claims against themselves to surplus units to the extent of their own deficits. Surplus units whose expenditure is less than their receipts will either hoard or lend the difference, in the latter event acquiring claims on deficit units. Since saving is always equal to investment ex-post, or since total receipts are always equal to total expenditure for the economy as a whole, the surpluses of some units will exactly match the deficits of other units so that total claims issued in any period will always be equal to total claims acquired.

Allowing for the existence of the foreign sector, financial surpluses of domestic sectors will be used either to acquire financial claims on other domestic sectors, or to purchase foreign financial assets; while deficits of domestic sectors will be financed by borrowing from (issuing claims to) other domestic sectors or the foreign sector. The sum of the foreign financial transactions will be exactly offset by the financial surplus or deficit of the external sector represented by the balance of current account in the balance of payments.

In the absence of direct contact between surplus and deficit units, the satisfaction of their needs will have to be met by financial intermediaries which issue claims on themselves to surplus units and acquire the debt of deficit units. Thus the transmission of financial resources between a lender and an ultimate borrower now finds expression in the

contd..... /2.

balance sheet of a third party, the intermediary.

In an expanding economy financial intermediaries will perform a vital role not only in the transmission of savings into investment channels, but also in encouraging savings and dishoarding*1 by offering the surplus units subsidiary facilities and attractions such as safety of funds from theft and physical damage, a rate of return, an opportunity to gain the social prestige which often comes with a deposit receipt or a cheque book, insurance for life, property, or crops, and even the chance to borrow funds at some future date.

Initially, the establishment of intermediaries will undoubtedly increase total investment hitherto restricted by the difficulties of self - and direct - financing. By amassing large numbers of contributions, each small relative to the aggregate, and by making these funds available in the right place and at the right time, they allow "entrepreneurs" to think in terms of investment projects much larger in cost than either their own finance, or borrowing by approaching individuals directly, would permit. Also, in addition to offering specialised debt satisfying a large number of needs - safety, income, wealth, power, prestige and insurance - intermediaries also specialise in the debt they acquire, combining varying amounts and maturities at various cost, with special advisory and technical services.

In short, financial intermediaries are essential to all but subsistence and primitive cash economies, and their function is much more than simple "transmission" of funds.

The neglect, until recently, of non-bank financial intermediaries can be likened to the traditional neglect in economic theory of domestic trade and commerce, which likewise stemmed from an ignorance of the true role of "middlemen".

Commercial and Central Banks have of course always received adequate attention since, after all, it was obvious to everyone that they could "create" debts which circulated as money. It is simply because claims issued by banks and the monetary authority circulate as the payments medium, whereas those created by non-bank financial intermediaries do not, that the latter have been ignored. Both types of intermediary are credit creators and the increase in credit creation in any period "depends not on the banks role in administering the payments machinery but instead on the preference of spending units for deposits and currency to hold as against other financial assets to hold."*2

Since the claims issued by non-bank financial intermediaries normally carry a rate of return and usually offset a more specific liability for the public than do demand deposits or cash, they will tend to replace the latter in the asset portfolio of the public up to a point where liquidity considerations become important. Their growth will indicate a diversification of public's asset holdings, a broadening of the financial services available in the economy and hence an increasing sophistication of the monetary and financial system as a whole.

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The term 'non-bank financial intermediaries' encompasses such private institutions as building societies, insurance companies, hire purchase companies, pension and provident funds, credit unions and even, on the I.M.F. definition of money, the time and savings deposit sections of commercial banks. In the Government sector there will be those institutions designed to invest directly in securities offered by private institutions for which there is no market in the private sector (e.g. development banks) or those designed to offer services to the public which are not provided by private institutions, or are provided but not in a manner satisfactory to Government (Price Assistance Funds, Loan Schemes, Provident Funds and even savings banks).

Since these non-bank financial intermediaries hold some assets in the form of demand deposits with commercial banks, that is, they themselves bank with the commercial banks, their growth will be important not so much because they reduce the growth of the money supply but because they reduce the proportion of the publics assets held in the form of money; for transfers by the public of demand deposits to other institutions will not reduce the total of these deposits but merely alter their ownership. At the same time however they will increase the total volume of claims outstanding against non-bank intermediaries. It is even possible to show that under certain conditions, intermediaries can expand liabilities by a multiple of such an initial increase in their assets, in the same way as the banking system can.[3]

Increases in the outstanding claims against intermediaries can also have a direct depressionary effect on the absolute growth of money supply, in two cases. Firstly, on the I.M.F. definition of money supply a shift in asset holding by the public from demand deposits to time or savings deposits in commercial banks. Secondly, and much more significant, where the claims issued by intermediaries are offset by sterling assets then their growth involves a loss of sterling by the monetary institutions (commercial banks and central bank) and will therefore reduce the growth in the money supply to below what is otherwise would have been. If in the latter case, however, the alternative to acquiring the claims on the intermediaries, and thus to sending funds abroad indirectly, was not the acquisition of claims on purely domestic financial intermediaries, but the direct investment of surplus funds abroad, then the growth of the intermediaries would not make any difference to the potential growth of the money supply.

Where export proceeds are the main determinant of incomes the foreign reserves of some intermediaries will rise with income e.g. Marketing Boards, insurance companies pension funds or savings banks, and will therefore constitute compensatory items in the balance of payments, but apart from Marketing Boards, falls in reserves will tend to be autonomously determined. Thus, like the Marketing Boards, the other intermediaries may partially prevent secondary monetary expansion (through the banks) by reducing primary money supply in times of trade surpluses, but unlike the Boards they will not necessarily tend to increase primary money supply in response to export-induced trade deficits, by monetising foreign reserves.

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Non-bank financial intermediaries can also have a significant impact on the overall demand for money by encouraging the growth of a speculative motive, by reducing the need for precautionary balances, or even by reducing the need for transactions money. Even with a given stock of money the development of intermediaries may find expression in the turnover of demand deposits as non-bank financial assets replace demand deposits in the asset portfolio of the public and as the intermediaries demand credit. Thus, a demand deposit transferred by the public to the account of an intermediary in exchange for a claim against the intermediary, will find its way back into the hands of the public as the intermediary increases its lending. Although the total of demand deposits will not increase the turnover will. Thus while intermediaries which send funds abroad will tend to have a depressionary effect on both local money supply and local incomes, the existence of those investing locally will enable a given stock of money to finance an increasing volume of transactions.

2. The East African Monetary Institutions 1950-1965.

It has been concluded elsewhere [*1] that, in a dependent economy operating under expatriate banks and a Currency Board System, the money supply will be determined by

(a) The balance of payments, defined as the balance of current account plus or minus autonomous and compensatory government and private capital flows, including changes in the foreign assets of non-bank financial intermediaries.

(b) The extent of fiduciary issues and profit distributions of the currency Board.

(c) The Policy of commercial banks in response to increases in "primary" money caused by (a) and (b) and also their ability to act independently of such changes. These will be determined by the availability of local lending opportunities, the size of their accumulated sterling reserves, and their ability to maintain actual or "implied" overdrafts on head office account.

The main features of the behaviour of East African monetary institutions between 1950 and 1965 have been the introduction by the Currency Board, of fiduciary issues which have been accompanied by falls in the sterling backing of the currency; and a similar but much more spectacular substitution of local for foreign assets by the commercial banks. (see table 1).

contd..... /5.

Borrowing from the currency Board by East African Governments between 1956 and 1965 amounted to some £20 million while over the same period the Boards sterling reserves fell by £13.4 million; the overall increase in sterling between 1950 and 1965 being due to an increase of £30.5 million between 1950 and 1955/6. On balance, therefore, for the first six years of this period domestic surpluses, held in the form of cash assets, were offset by foreign deficits or claims on, or gurauranteed by, the British Government, while in the remaining years net domestic surpluses were offset by domestic deficits or claims against the East African Governments.

One complicating factor is that since 1951 autonomous increases in claims against the British Government (broadly, sterling reserves) arose on account of interest payments on the original claims. These had no counterpart in the form of domestic cash assets once 100% reserve coverage was achieved. Over the period the Board paid out most of these profits - £14.7 million to East African Governments, equal to about ¾ of the actual amount they borrowed during these years.. No local government asset appeared in the Board's accounts because these distributions were actually gifts.

Fiduciary issues (and profit distributions) resulted in increases in local cash liabilities of the Board equal in amount to that portion of issues (distributions) which did not leak away, either directly or indirectly, into imports as a result of the expenditures. Whether currency Board - financed Government expenditure resulted in a substitution of local for foreign assets with no increase in the Board's cash liabilities, or whether it merely increased local assets and local cash liabilities with no change in foreign assets, the net effect was to reduce the proportionate coverage of sterling reserves to local currency outstanding. In 1950 this coverage, for the East African countries alone, was 99.4%; in 1965 it was down to 76.3%. At this latter date foreign assets were just sufficent to cover three months imports.

Table 1 also shows the extent to which the commercial banks have acquired local earning assets at the expense of foreign reserves. Net sterling balances of £32 million in December 1952 have been drastically reduced. Table 2 shows the territorial distribution of the East African totals.

Table 2.

Net Sterling Surpluses or Deficits of Banks £ Million

31st December	Kenya	Tanzania	Uganda	East Africa
1959	8.4	2.1	1.6	12.1
1960	- 6.6	0.1	0.4	- 6.0
1961	- 1.0	4.8	0.7	4.5
1962	4.0	3.1	-0.8	6.3
1963	- 1.2	2.5	-4.0	- 2.4
1964	-15.4	5.9	0.8	- 8.8
1965	- 0.3	2.1	-6.4	- 4.7
30th June1966	+ 7.7	3.5	-5.5	+ 5.6

conta..... /6.

In 1950 net sterling reserves were 49% of total bank assets; in June 1965 they were only 2% and even this was a big improvement on the negative balances of the previous three years.

The direction of causation was, in most years, that expanding local investment opportunities led to credit expansion which in turn led to import leakages. The exception to this was in 1960 when the outflow of funds from Kenya prompted the banks to expand credit - to the extent of £4.6 million. Deposits fell by £6.6 million and the remainder of the £15 million overflow implied in table 2 is accounted for by borrowing by Tanganyika and Uganda banks to help offset their decline in deposits.

Since this time the East African banks have never deliberately remitted funds to London for investment on the grounds of insufficient opportunities for lending locally and all figures of positive net foreign balances represent ordinary trading balances in which the banks play a passive part. Not so the negative balances and the implied overdrafts however, which indicate local expansionary policies based deliberately upon Head Office support.

It is important to note that even where banks have had positive net foreign balances in the last seven years they have, with the exception of Kenya in 1959, been highly dependent in the last resort upon Head Office in London. This can be seen in table 3 which shows that local credit expansion policies in recent years have been conducted on the basis of "implied" overdraft facilities at head office: that is actual liquid assets were much lower than the 30% of total assets which these banks tend to maintain on their world-wide operations.

The large implied overdrafts of Uganda banks have, with the exception of 1965 and 1966, been caused as much by constant indebtedness to Kenya (and to some extent Tanzania) as by deficiencies of sterling reserves. In 1964 Kenya was actually borrowing from abroad for on-lending to Uganda banks, and this accounts for the large negative foreign balance for Kenya in that year (see table 2). With the introduction of exchange control with the sterling area and the announcement to establish separate central Banks Uganda's indebtedness was transferred from Kenya to London. Thus, in May 1965 Ugandan banks owed Kenya banks £15.9 million net; in June Kenyan banks were slightly indebted to Uganda banks while the latter owed London about £7 million.

Uganda's indebtedness, either to East African Banks or to London, has reduced her net liquid assets (though not of course her gross) position to a negative figure since 1959. But even with positive net liquid assets both Kenya and Tanzania have had implicit reliance upon head office and this reliance has increased to significant proportions in recent years.

The effect of this expansion has been to increase the ratio of local earning assets to total deposits from about 35% in 1950 to 92% in June 1966. Allowing for the fact that government deposits now stand at about one third of total deposits while loans to government account for only about one sixth of the total, the ratio of non Government credit to non Government deposits reached the staggering figure of 118% in June 1966.

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In 1964 the local earning assets and number of branches were both five times the 1950 equivalents - the former rising from £22 million to £122 million, the latter from 64 to 326. At the same time there are strong indications that this expansion will soon come to a halt. Figures below show a very large fall since 1954 in G.D.P. per office, Deposits per office and deposits as a % of G.D.P.

Table 4.	1954	1962	1964
Deposits per office £M.	0.8	0.35	0.37
Deposits as % G.D.P.	33.1	26.6	25.3
G.D.P. per office £M.	2.5	1.3	1.6

It is on the grounds of the high advances to deposit ratio, the frequent indebtedness to head office and these declining ratios, that bankers strongly claim that East Africa is overbanked. Certainly the rate of increase of new bank offices has slowed down very noticeably recently, as banks become less keen to open unprofitable business.

Before examining the implications of this state of affairs an outline will be made of some aspects of non-bank financial intermediation during the period. This is because it is felt that the present overbanked pisitior in East Africa will place constraints on the future actions of non-bank intermediaries. By looking at past behaviour of the three main types an insight may be gained into how severe these constraints are likely to be.

3. Non-Bank Financial Intermediaries 1950-1965

(a) Insurance Companies

These are the most important non-bank intermediaries in East Africa having had uninterrupted growth since the end of the war. Their investments in local assets (held here or in London in the case of securities) were £33.3 million in 1964 and were mainly in the form of bonds mortagages equities and real estate (see table 5). Of these £25.3 million were held in Kenya and the rest split more or less evenly between Uganda and Tanzania. This 75% of total local investment figure for Kenya should be seen from the point of view of net premiums, only 55% of which originate in Kenya. There has, therefore, been a flow of insurance funds from Uganda and Tanzania to Kenya, which is to be expected since the local head offices of most East African companies are in Nairobi. While some of these may have been on account of reinsurance this cannot account for the whole and is likely to be insignificant since most reinsurance is contracted abroad and even this amounts to only about 10% of annual net premiums.

For Uganda and Tanzania this outflow is now just the same as if insurance companies invested in London, and there is reason to believe that pressures are being put upon companies, particularly life assurance companies, to invest funds in the country of origin.

contd..... /8.

Apart from this inter East Africa flow of insurance funds there is a known outflow from East Africa to London or elswhere. There have, however, been no published attempts to date to obtain a rough order of magnitude of this flow. There is therefore no estimate of what the total assets of East African companies are. The pooling of contingency funds and reinsurance premiums at foreign head offices makes it difficult to allocate specific assets to branches in specific areas. The very nature of all but life insurance means that "risk spreading" is essential and hence from the point of view of East African branches the matching of local liabilities and local assets is neither desirable nor possible. This does not mean to say however, that where local investment opportunities exist they should be ignored in favour of a customary habit of investing abroad or in a deliberate attempt, for one reason or another, to avoid local control of insurance business.

Since 1959 it has been possible to calculate how much leaves and enters East Africa on account of reinsurance and the net outflows between 1959 and 1964 amount to some £5.2 million. Fitting the annual figures for reinsurance into the table of annual aggregates (table 6) and subtracting gross claims, management expenses and net reinsurance outflows from gross premiums and income from assets, one is left with some form of a "surplus". In the absence of any other data one might then assume that this surplus was available for investment but as can be seen from the table, this is not, in most years, invested in East Africa. The overall discrepancy between the surplus and the increase in local assets between 1960 and 1964 is in fact £11.7 million.

Too much weight should not be attached to this total as giving a precise figure of investment outflows. To begin with the value of East African securities held by the societies is given at market price so it is impossible to determine which holdings have increased or decreased during the year; or whether fluctuations are caused purely by market price alterations. Secondly societies claim they remit some funds to England to build up general contingency reserves, as opposed to reinsurance which is for specific liabilities. Thirdly one would also have to deduct costs of administration of East African business incurred by overseas offices before one could calculate the real surplus of funds remitted. Such costs appear not to be calculated separately. Finally income from assets is taxed but on a rough calculation of 7/- in the £ this has never reached £700,000 per annum.

On the other hand income will be earned on whatever East African premiums have been invested abroad. No income payments on this account are received by East African branches. This has the same effect from the point of view of the East African balance of payments as the remittance of local investment earnings to London.

There is another, overall, approach which can be adopted to determine outflows. A fairly reliable estimate of accumulated net premium income (gross premiums minus gross claims) received by East African companies between 1945 and 1964 is £80 million. Cumulated management expenses amounted to some £36.5 million (this extremely high figure is supposedly due to high agency commissions), and about £33 million has been invested locally. This leaves about £10 million unaccounted for in addition to the annual local asset income which in aggregate might be some £10 million net of tax, over the period. The important point

contd..... /9.

is that table 6 suggests that over a half of this £20 million or so was probably remitted in the last four years for which figures are available. Since no one knows the true extent of East African premiums invested in London, these and the income they earn need never be repatriated and can be assumed to be lost to to East Africa for ever.

Life insurance accounts for about a half of total annual premiums and the total amount insured in 1964 was £163 million. The East African Statistical Department unfortunately tends to give a false impression by dividing annual additions to sums insured (currently around £30 million) by total population. The resulting figure is of no consequence whatsoever since only 136,428 policies were outstanding in 1964 - i.e. only 0.5% of the total population is involved. Very few of these policies are held by Africans although the number must now be on the increase. Under the "Control of Life Assurance Business with Natives Ordinance" 1945 in Uganda, and the "Control of the Business of Life Assurance with Africans Ordinance" 1945, in Kenya, elaborate prooodures were instituted which effectively safequarded the African from the security offered by Life assurance! Thus in Kenya those wishing to undertake this business had to be approved by the Governor in council, the Chief Native Commissioner was to approve all forms of proposals and policies, and no canvassing was allowed without the permission of the Provincial Commissioner. In Uganda four separate licenses were required to enable canvassing business throughout the whole country.

In the early 1950's however, insurance companies, like commercial banks, saw themselves as providing a service almost entirely to the expatriate community and had little interest in the admittedly more difficult African business. Such problems as identification, age estimation and the drawing up of life tables, encountered when extending business to Africans are however being rapidly overcome as the pressure of competition increases. This would seem to be a field in which the National Insurance Corporation should try to expand. As yet these institutions are insignificantly small in size being relatively new and their importance lies more in the fact that they are the deliberate creations of Government in a field which was dominated by expatriate companies.

(b) Building Societies

In 1959 five societies in Kenya had deposits of £10.4 million between them. In 1962 this total was only £4.5 million and yet total mortgage assets at this date were only £0.6 million less than the 1959 total of £9 million. The cause of this was the outflow of expatriate funds from Kenya and the precise effects can be seen in Tables 7 and 8 which are more or less self-explanatory. Like the commercial banks the building societies lost deposits but unlike the banks they had no foreign head offices to fall back upon. In order to meet withdrawals without prematurely calling in loans the three large societies had to borrow substantial amounts, mainly from abroad. Since 1960/61 there has been no new lending over and above the transfer of existing mortgage loans, with the exception of relatively small amounts by the East African Building Society.

The First Permanent Building Society and the Kenya Building Society were both reconstituted as limited liability companies (the First Permanent (East Africa) Ltd in 1961, and the K.B.S. Ltd in 1963) under the 1956 Kenya Banking Ordinance and taken over by the Commonwealth Development Corporation. This latter has since declared a policy of running them both down.

CONTD..... /10

The Savings and Loan Society Ltd has very successfully paid off the C.D.C. and Pearl Assurance Loans as mortgages have matured. In 1965 it was taken over by Pearl Assurance who then deposited £140,000 which is, of course, a form of special assistance, and is now called the Savings and Loan (Kenya) Ltd. It is in the process of building up a reasonable liquidity ratio since this was still only 11% in March 1966 (compared with 19% in 1958), and is the only large society to have succeeded in building up deposits over and above the 1959 level.

With the exception of about 15%, all the business of Savings and Loan was conducted in Kenya and only the First Permanent operated on any scale in all three territories. The figures below (table 9) show the distribution of First Permanent's business in 1962 and 1963 and illustrate quite clearly that both Uganda and Tanganyika were affected by the 1960 outflow, since mortgage loans were in excess of deposits in those years. The differential between deposits and mortgages would seem to indicate however, that these outflows were small relative to those experienced in Kenya.

Table 9.

TERRITORIAL DISTRIBUTION OF BUSINESS. FIRST PERMANENT (EAST AFRICA) LTD. 1962 AND 1963

£ DEPOSITS	1962	1963
KENYA	1,381,940	1,335,439
TANGANYIKA	1,422,646	1,572,076
UGANDA	536,726	591,963
ZANZIBAR	144,644	142,319
EAST AFRICA	3,485,956	3,641,797
MORTGAGE LOANS OUTSTANDING		
KENYA	2,960,839	2,772,247
TANGANYIKA	1,901,521	1,669,877
UGANDA	747,185	631,414
ZANZIBAR	66,737	61,381
EAST AFRICA	5,676,282	5,134,919

The repayment of foreign assistance over the last four years also implies a capital outflow and the only difference between this and the other alternative in 1960 is that it has allowed mortgage loan holders to repay as scheduled and the capital outflow to be planned.

In November 1965 C.D.C. and the Kenya Government announced the establishment of the Housing Finance Company of Kenya with a capital of £50,000, owned 60% by C.D.C. and 40% by Kenya Government, and an initial loan capital of £500,000 from the former and £150,000 from the latter. As far as C.D.C. is concerned they believe that the time is now ripe for new building society lending but not through the First Permanet or K.B.S., which will eventually disappear as the Kentanda did in 1965.

(c) The Post Office Savings Banks

These banks were established in Kenya in 1926, Uganda and Tanganyika in 1936, with the object of providing, in the words of the Savings Bank rules, "a ready means for the deposit of savings and so to encourage thrift." It is an outstanding achievement ofthe banks that the number of depositors has increased every year since 1950. Not so the value of deposits which has steadily fallen since 1955, even though it now appears to have levelled off in Tanzania (see table 10).

The original Savings bank legislation provided for an investment of not more than 1/3rd of total assets in local Government securities and even though this rule was subsequently relaxed e.g. to 50% in the case of Uganda in 1958, in 1962 80% of total assets were held in the form of sterling. Until 1965 this proportion was approximately maintained owing perhaps to the unwillingness of the banks to convert the sterling securities when their prices were so low. For instance market values of securities in 1962 were some 20% lower than their cost price. In addition the predominantly sterling portfolio reflects the inability of banks to make even small net investments since 1958 as the total of deposits steadily declined.

The reasons for the fall in deposits and in deposits per head would appear to be:-

(a) The growth in other financial intermediaries post 1955 especially building societies, offering a much higher rate of interest than the 2½% of the P.O.S.B. - a rate which has not altered since the banks' inception.

(b) Increased competition from existing intermediaries especially commercial banks. In February 1956 for the first time since 1950 commercial banks offered a higher rate of interest on savings deposits than did the P.O.S.B., and since that date there has always been an interest differential favourable to commercial bank savings account holders.

(c) The P.O.S.B's were also affected by the flight of expatriate capital during the 1959-61 independence negotiations. Between these years the following sums were lost by the savings Banks:-

	£
Kenya	2,184,000
Uganda	578,000
Tanganyika	684.000
East Africa	3,446,000

It is not likely that much, if any, of this were attracted to other institutions during these years. Thus to obtain a figure for the real loss of sterling reserves in 1960 one should also include losses in Savings Bank reserves which are outside those of the monetary authorities whereas falls in building society deposits due to the outflow had a sterling counterpart only in falls in monetary reserves

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(d) Given the excellent branch coverage (633 in 1964) the P.O.S.B. movement still attracts African depositors but their deposits are on average about ¼ those of Asians and Europeans. The average size of new deposits has therefore fallen in the following manner:-

£	Kenya	Uganda	Tanganyika
1950	14.1	10.8	11.3
1955	13.8	13.8	10.2
1962	5.2	5.6	4.5

The inability of the banks to sell sterling securities without loss and consequently to acquire liquid assets to meet withdrawals, necessitated Governments coming to their aid. In accordance with the legislation, Government must meet deficiencies and at 31st December 1962 the accumulated deficiencies were Kenya £1.6 million, Uganda £0.6 million and Tanganyika £0.26 million, equivalent to 26.0% of the total assets of Kenya Banks, 35.1% of those of Uganda Banks and 16.5% of those of Tanganyika banks.

In addition to these deficiencies on reserve account the low interest rates on the sterling securities, acquired in the early 1950's, created problems on the income (expenditure accounts. Up to December 1962 the respective Governments had financed cumulated deficits of £239,900 in Kenya, £132,000 in Tanganyika, and £9,200 in Uganda. Tied down by the low interest on assets the Banks have been unable to offer higher rates of interest on deposits than their traditional 2½%, and hence have lost to other intermediaries any "interest elastic" funds that there might be in East Africa.

As the securities gradually matured the East African Governments would have regained what they contributed to reserve deficiencies and the only losses of a permanent nature would be revenue/expenditure account losses. Although no precise details are available, it is known that between 1963 and 1966 the outstanding sterling securities of all Post Office Savings Banks were converted into East African Government securities. In the circumstances this conversion of reserves was sensible since it freed valuable sterling for use elsewhere and local securities carry a much higher rate of return than did the P.O.S.B. sterling reserves. While this may allow the banks to compete more with other intermediaries as regards interest on deposits, it may also, and this would be much more important, remove the aura of decay surrounding the movement and give incentives to the central administration to take advantage of their extensive branch coverage in promoting the saving habit. It is, however, highly unlikely that this will be the case since the decay has been there for too many years now.

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Summary of 1950-1964 Aggregates

It can be seen from table 11 that banks have expanded credit at a relatively faster rate than the growth in income between 1954 and 1964, implying that opportunities for profitable lending also rose much faster than the rise in income, particularly between the years 1954-1956 and 1962-1964, and of course in the special year of 1960. Given a fairly constant ratio of cash to G.D.P., the rise in the velocity of circulation over the period reflects the fact that expansion of credit induced large import drains. Since bank credit would respond to changes in local incomes, as would imports, it is difficult to isolate the effect of bank credit itself upon imports, and no attempt has been made to do this. Suffice it to say that because of import leakages the autonomous expansion in local earning assets by the banks did not find full expression in the growth in demand deposits.

From the point of view of the demand for money the public has maintained a fairly constant proportion of cash to income since 1959, while the growth in money G.D.P. has outstripped the growth in money supply. Public holdings of deposits as a proportion of income have therefore fallen. The reasons for this would appear to be a fall in the demand for money as the monetary and financial system became more developed. This shows itself in the doubling of the transactions velocity of demand deposits between 1950 and 1964. implying that a given stock of demand deposits was used to finance twice the value of transactions at the end of the period than at the beginning. The growth in non-money financial assets is given in table 12. The main omission from this table is local equity holding. Unfortunately it is impossible to obtain figures of this for the years 1950 and 1956, but the 1964 E.A.C.S.O. Statistical Department "Investment Survey" puts this at a minimum of £52 million. Non-Money financial assets are therefore now more than 100% of money supply.

The proportion of cash to total money supply in East Africa has been stable since 1956 at about 36%. This reflects the apparent stability of subsistence transactions relative to money transactions in the economy, and the fact that the remote rural areas have no substitute for cash. This proportion compares very favourably with that of other independent African states e.g. In 1963 the ratio in Ethiopia was 74.0%, Ghana 56.5%, Nigeria 63.0%, Somalia 55.9%, Sudan 58.0% and U.A.R.(Egypt) 66.9%

The relatively large expatriate money sector probably explains why it is so low for East Africa as a whole. Using approximate territorial distributions of currency calculated on the basis of the 1965 currency issue the territorial ratios of currency to total money supply for 1964 would be approximately as follows:-

Kenya	27%
Tanganyika	38%
Uganda	47%.

The other African territories mentioned above are in general less developed financially, having less complete bank branch coverage than East Africa and never having had the same degree of expatriate influence that East Africa had from colonisation. In comparison with more advanced countries however, where the ratio is about 20%, East Africa's ratio is still quite high and will remain so until bank expansion into rural areas becomes more profitable.

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In the circumstances little can be hoped for from the Post Office Savings Banks although they can be expected to continue introducing more and more people to elementary "banking".

It looks very much therefore as if the existing "large" institutions, with the possible exception of insurance companies if they were tightly controlled, have very little to offer in the way of contributing to a short-run increase in velocity. Expansion of the Stock Exchange is a possibility but in the absence of a significant number of new issues this expansion may well take the form of an undersirable increase in the turnover of a given stock of speculative funds which, while undoubtedly increasing the velocity of demand deposits, will have little effect on real transactions.

If the scope of participation in Stock Exchange activity is to increase significantly in the near future then small savings may have to be institutionalised through investment trusts or unit trusts. In its September/October 1966, issue 'East African Trade and Industry" complained that one unit trust had so far failed in its aim of attracting African investors. The smallest lot which can be purchased in this trust is 2,000 - 5/- units; not really a size which testifies to the sincerity of the trust aim.

The doubling of the share price index between 1962 and 1966 indicates the renewed interest in the Exchange. More new issues are needed to minimise the possibility of spiralling speculation.

It may be necessary for Uganda to attempt a slight reversal of the known Uganda/Kenya capital outflow by establishing her own Stock Exchange with the Uganda Development Corporation acting as jobber and even broker. There is evidence to suggest that the right types of shares are possessed by U.D.C. and that if it relaxed its "Uganda citizens only" policy when selling shares, it might build up a sound local exchange which might even attract Kenyan investors.

Certainly it can be said that creation and expansion of the desired intermediaries will require some degree of official intervention, to minimise overseas investment by existing companies, to replace them with government bodies, or to establish intermediary functions where more exist.

There are already clear signs that official non-bank financial intermediation will assume importance in the future. The new Housing Finance Corporations and Development Finance companies with foreign capital participation are important examples. They increase velocity but carry no foreign reserve problems.

Recently all three Governments appointed experts to assess the possibilities of providing social security benefits to employees on a national scale and each was advised that a National Provident Fund could suitably perform the welfare functions desired and at the same time provide investable funds for Government. Each report *8 recommended that approximately 200,000 employees should initially be covered by the Fund for retirement benefits. It was estimated that combined contributions of employers and employees would yield £3 million annually in the case of Kenya, and £1.75 million in Uganda and Tanganyika.

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Actual implementation of the National Funds was delayed owing to administrative difficulties, especially concerning arrangements for existing private and public schemes. These latter mainly invested their funds abroad. Thus the Pensions and Provident Funds of the E.A.C.S.O. had total investments of £2,161,000 in 1963 of which £1,656,000 was invested in sterling securities.

The Tanganyika fund is now well off the ground and is reported to have been an important factor in the placing of quite large amounts of Tanganyika Government stock recently. The Kenya Fund started operation a few months ago but as yet there is no sign of a similar move in Uganda. Tanganyika has always been progressive in this respect and as early as 1962/3 it attempted to prevent the local Authorities Provident Fund from remitting £135,000 for investment in England. It succeeded in diverting £40,000 to the 6½% 1969 stock then on issue. In future central pooling of monthly contributions from both the public and the private sector will constitute a regular and calculable source of funds for Government.

As opposed to the forced saving principles inherent in a National Provident Fund Scheme Uganda and Tanganyika have attempted to woo potential small investors by offering them the chance to win much larger sums than their initial investment. In Uganda 5/- premium development bonds repayable after 5 years and eligible each year for two draws for prizes, have been successfully issued in the last two years. Tanzania's approach has been to attempt to divert the growing volume of funds annually attracted to England by lotteries and football pools agencies. In 1964 £465,000 net left East Africa for these purposes, £105,000 from Tanganyika. A National Lottery has been initiated which hopes to raise this amount annually. Kenya and Uganda have so far not emulated this move although there have been many suggestions to the effect that they should.

The creation of non-bank financial intermediaries is determined as much by social and political motives as by economic, and this makes it doubly difficult to predict which types will develop in the near future. It does however seem to be fairly obvious that Government is going to have a much bigger say in which institutions will be created and how they and the existing ones will be governed. This will show itself in the asset portfolios of the public and in the balance sheets of the intermediaries, which in five years time should look much different from their present form

Table 1.

SOURCES OF CHANGE IN THE EAST AFRICAN MONEY SUPPLY
1950 - 1965

£ Million.

A.	Change in Currency with Public	+ 38.0
B.	Change in Demand Deposits	+ 36.9
	Change in Total Money Supply	+ 74.9
D.	Change in Non Money Bank Deposits	+ 34.6
E.	Change in Currency Board's Sterling Assets	+ 17.0
F.	Change in Net Sterling Assets of Banks	- 38.5
G.	Increase in Currency Board Credit	+ 20.1
H.	Increase in Bank Credit	+ 107.8

Notes. A.E.F. and G excludes Aden throughout and cover only Kenya, Tanganyika, Uganda and Zanzibar.

E & F should together be equal to E.A. balance of payments surplus or deficit. They have not been so called because of readjustments needed to exclude Aden, and also sterling securities have been calculated at cost to exclude increases/decreases due to sterling security appreciations/deprecations.

C + D will never be fully offset by E,F, G and H, as it theoretically should be, owing to accumulated surpluses of the currency Board and to minor residual items in the E.A. bank figures such as inter bank balances which do not fully net out.

The Future.

The main factors influencing future trends in the monetary system will be the fact that certain past phenomena are not capable of repetition - notably the great expansion of local assets at the expense of foreign reserves by the monetary institutions.

It has been argued by Walter Newlyn* 7. that the local earning assets ratio of commercial banks has reached a maximum. Given the short-run stability of the publics cash to deposits ratio, and in the absence of any substantial increase in foreign reserves, he argues that any attempt by the public to save in the form of bank deposits will be frustrated. There will be no net increases in bank lending over and above relending what is repaid in any period and such savings attempts will result in increased hoarding in the banks and a fall in the velocity of circulation of demand deposits. He concludes that "The institutional development which is necessary to offset the deflationary effects of such hoarding is the establishment of non-bank financial intermediaries and money markets which induce the owners of idle bank deposits to transfer such deposits, through the banks, into activity."

It should be added that even without any institutional development. it is theoretically possible to avoid the deflationary effects of such hoarding by by-passing non-bank financial intermediaries altogether through expanding self-financing and/or direct financing. Since the introduction of exchange control self-financing of investment through undistributed profits which were previously remitted, may well have increased in importance. In the absence of a comprehensive flow of funds account for East Africa it is impossible to tell. As far as direct financing is concerned, this would have the same effect as Mr. Newlyn desires i.e. an increase in non-bank financial assets relative to a given stock of cash and deposits.

More important than this however is the choice of intermediaries to effect this transfer of idle funds into activity. If non-bank financial intermediaries are predominantly the type which invests abroad then further expansion of these will first of all increase the turnover of a given stock of demand deposits (as demand deposits are transferred to the account of the intermediary and then back to the bank), followed then by a reduction in that stock of deposits as an equal block of foreign reserves is lost, and this may induce even further local credit contractions. There would be therefore an exacerbation of the basic problem of inadequate foreign reserves and stagnant money supply. This might be the result of encouraging insurance company activity without proper control over remittances. On the other hand closer supervision of insurance companies together with increased Government support of the National Insurance Corporations could have significant effects on the local money market

Expansion of building society activity is highly unlikely as increases in the deposits of the two active societies (one lending one not) are more than offset by the fall in deposits of the inactive societies which still owe quite a lot to overseas creditors.

contd..... /15.

Table 3.

TOTAL NET ASSETS,[1] LIQUID ASSETS RATIOS,[1] AND IMPLIED OVERDRAFTS OF COMMERCIAL BANKS 1959-1966

31st DECEMBER	KENYA			TANZANIA			UGANDA		
	T.N.A. £M	L.A.R. %	I.O/D £M	T.N.A. £M	L.A.R. %	I.O/D £M	T.N.A. £M	L.A.R. %	I.O/D £M
1959	63.0	31.4	+0.5[2]	27.6	28.3	-0.5	21.4	8.9	-4.5
1960	63.2	13.0	-10.8	25.9	15.8	-3.7	20.3	-8.9	-7.9
1961	60.2	22.4	- 4.9	35.3	18.1	-4.2	22.9	-0.4	-7.1
1962	68.2	26.2	- 2.6	38.6	24.1	-2.3	20.9	-5.7	-7.6
1963	70.3	16.9	- 9.6	42.1	29.0	-0.4	25.3	-25.3	-14.0
1964	90.4	13.2	-15.1	48.2	15.6	-7.0	39.2	-12.5	-16.7
1965	95.2	13.8	-15.4	59.3	7.7	-13.2	47.0	-6.6	-17.2
June 1966	108.3	17.4	-13.9	63.9	9.7	-13.0	64.4	-0.5	-19.6

Notes

1. Using net East African and net Foreign balances in the calculation of both liquid assets and total assets.

2. The 'Plus' sign means a surplus of liquid assets over and above 30% of total net assets. i.e. no implied overdraft.

Table 5.

EAST AFRICAN ASSETS HELD BY INSURANCE COMPANIES 1964

	£'000
Mortgages and Loans	9,342
Government and Local Government Securities	11,448
Treasury Bills, Development Bonds	11
Stocks, Shares, Debentures	3,714
Real Estate	3,311
Cash	1,937
Agents balances, outstanding Premiums	2,289
Other	1,218
TOTAL	33,271

Source: East African Insurance Statistics 1964.

TABLE 6

AGGREGATE BUSINESS OF EAST AFRICAN

1959-62

	Gross Premiums	Gross Claims	Management Expenses
1959	10,903,812	4,024,136	2,591,135
1960	11,814,210	4,964,608	2,913,168
1961	11,772,350	5,901,689	3,152,899
1962	13,111,880	5,965,885	3,553,576
1963	12,451,814	5,775,179	3,424,329
1964	13,195,147	6,794,465	3,725,422

Source: East African Insurance Statistics 1959, 60, 61,

INSURANCE COMPANIES

Net Reinsurance Transfers	Income from assets	Surplus	Increase in Local Assets
691,463	965,863	4,562,941	n.a.
930,559	1,244,594	4,250,469	5,147,538
700,619	1,426,852	3,443,995	1,407,176
1,282,014	1,516,984	3,827,389	711,896
834,523	1,644,032	4,061,815	725,537
759,109	1,899,047	3,812,198	-332,473

TABLE 8.

SPECIAL ASSISTANCE £

FIRST PERMANENT 31.12

	BANK	CSCF *	KENYA GOVT.	TANGANYIKA GOVT	NORTHERN RHODESIA GOVT	CDC	TOTAL	AID AS % MORTGAGE LOAN OUTSTANDING
1961	238,700	420,000	270,000	----	----	860,000	1,788,700	58
1962	27,462	---	250,000	150,000	980,635	1,240,300	2,648,397	46.6
1963	72,000	---	250,000	150,000	952,817	728,633	2,081,451	40.5
1964	---	---	250,000	150,000	925,000	593,300	1,920,300	40.5

KENYA BUILDING SOCIETY 31.12

	BANKS	NORWICH UNION	CDC	TOTAL	AID AS % MORTGAGE LOANS OUTSTANDING
1961	330,000	3,000	620,000	953,000	48
1962	326,000	109,000	650,000	1,085,000	60
1963	350,000	230,650	832,124	1,412,664	90
1964	315,000	207,150	772,045	1,294,195	96.6

SAVINGS AND LOAN SOCIETY LTD. 31.3

	CDC	PEARL ASSURANCE	TOTAL	AID AS % M/LOANS
1961	201,666	427,883	629,549	14.8
1962	585,000	620,000	1,205,000	30.6
1963	500,000	620,000	1,120,000	30.8
1964	200,000	250,000	450,000	13.7

SOURCES:-

Reports of the Commonwealth Development Corporation 1961, 1962, 1963.
Registrar General Annual Reports for Kenya 1961, 1962, 1963.
Kenya Appropriation Accounts 1962/3 page lv
* Cereals and Sugar finance corporation Annual Report 1962.
Annual Reports of Societies and Interviews with Society managers.

TABLE 10

POST OFFICE SAVINGS BANKS

	KENYA			TANGANYIKA			UGANDA		
	a Depositors	b Value of A/cs. £'000	$\frac{b}{a}$ £	a Depositors	Value of A/cs. £'000	$\frac{b}{a}$ £	Depositors	Value of A/cs. £'000	$\frac{b}{a}$ £
1950	140,567	6,895	49	59,493	1,785	30	76,641	1,581	20.6
1955	216,545	10,306	48	86,209	2,605	30.2	97,869	2,523	25.8
1962	428,535	6,249	14.6	152,153	1,562	10.3	137,017	1,361	9.9
1965	na	4,695	na	na	1,637	na	na	1,165	na

Source: Annual Reports of Banks 1950, 1955, 1962

East African Econ. & Statistical Review June, 1966 for 1965 figures.

Table 11

Some Indices of Velocity of Circulation 1954-1964 East Africa

	Ratio of Money Supply to GDP	Ratio of Publics Cash to GDP	Ratio of Demand Deposits to GDP	Ratio of local Earning assets to GDP	Debits to Current A Account	1. Transactions Velocity of Current Accounts
1954	0.40	0.12	0.28	0.135	186	130
1955	0.38	0.12	0.26	0.168	248	166
1956	0.35	0.12	0.23	0.181	254	202
1957	0.33	0.12	0.21	0.170	261	216
1958	0.30	0.11	0.19	0.178	266	222
1959	0.28	0.10	0.18	0.170	284	218
1960	0.27	0.10	0.17	0.207	309	264
1961	0.27	0.10	0.17	0.176	314	234
1962	0.27	0.10	0.17	0.196	351	242
1963	0.28	0.10	0.18	0.209	387	255
1964	0.26	0.09	0.17	0.214	437	257

Source: East African Economic and Statistical Reviews.

Notes

1. Equals the Growth in debits to current account deflated by the growth in demand deposits 1950 = 100.

Table 12

GROWTH IN SOME FINANCIAL ASSETS 1950-1964

£M.

	1950	1956	1964
Net Insurance Premiums	4.7	15.0	36.7
Bank Savings Accounts	1.8	7.6	21.5
Bank Time Deposits	4.3	9.9	14.9
Building Society Shares/Deposits	c.2.0	c.5.0	6.3
Post Office Savings Bank Deposits	10.3	14.8	7.9
Uganda Credit & Savings Bank Deposits	0	0.2	1.7
Land Bank Deposits	-	0.4	1.0
Hire Purchase Deposits	-	-	0.4
TOTAL	23.1	52.9	90.4
MONEY SUPPLY	91.1	117.9	137.7
ASSETS SHOWN AS % MONEY SUPPLY	25.4	44.9	65.6

Notes (to table 12)

Net Insurance Premiums are calculated by subtracting gross life claims from gross life premiums and cumulating this for all years for which figures are available i.e. 1947-1964. On top of this, for each year given in the table, is added gross non-life premiums for those particular years. This is justified on the argument that non-life premiums are yearly so that while cumulating net totals would be the right thing to do in looking at Insurance companies assets, it is not when looking at public's assets except in the case of life assurance. For non life even net premiums are not appropriate since thepolicy does not expire after a claim. It could, however, be argued that it is not premiums paid which represent public's assets but value of policy i.e. anount insured for.

Source: 1947-1951 - Quarterly Economic and Statistical Review No.21 September, 1953.

1951-1964 East African Insurance Statistics 1950, 1958, 1960 1964.

Hire Purchase Deposits - Credit Finance Corporation only.

Money Supply - Excludes Non-East African countries covered by Currency Board.

Notes

1. It is of course not necessary to create intermediaries to offset hoarding. Provided the extent can be calculated within reasonable limits, and the present operation of currency redemptions may present an ideal opportunity for this, the Government could offset it by printing money. Dishoarding on any scale at a future date would, however, create inflationary problems.

2. J. G. Gurley and E. S. Shaw. "Financial Aspects of Economic Development." American Economic Review September 1955 page 522. See also their "Money in a Theory of Finance" The Brookings Institutions, Washington 1960 pages 191-246.

3. See for instance R.S. Thorn. "Non-Bank intermediaries, Credit Expansion and Monetary Policy." IMF Staff Papers November, 1958 pages 369-393.

4. J. Loxley "The Development of the Monetary and Financial System of the East African Currency Area 1950 to 1964.' Ph.D thesis University of Leeds. 1966.

5. Implied overdrafts being defined as:-
30% of total assets (the actual liquidity ratio maintained by the expatriate banks on their world wide operations) minus the actual net liquid assets of the banks - cash, bills, net East African balances and net foreign balances. This shows the reliance in the last resort of local banks upon foreign head office after allowing for actual reserves or overdrafts.

6. For a fuller account see J. Loxley 'Building Society Instability in Kenya.' Centre for Economic Research, Nairobi, Discussion Paper No.9. December, 1964.

7. W. T. Newlyn "A Theoretical Basis for Financial Projections." E.D.R.P. No.112. November, 1966.

8. Report of the Government of Tanganyika on an Exploratory Society Security Survey with a view to establishing a National Provident Fund. I.L.O. Geneva, 1963.
'Provision for Old Age' A Report by E. Turner Kenya June 1963.
"Report on the Setting up of a Contributory Social Security Scheme with Particular Reference to the needs of Persons in their old age"
E. Turner, Uganda. February, 1964.

SOME FACTS ABOUT THE LARGEST MANUFACTURING INDUSTRIES IN KENYA AND UGANDA 1963

KENYA

	Industry	1. No. of Establishments	2. Total No. of Employees	3.(2÷1) Average No. of Employees per Establishment	4. Value added '000 SH	5.(4÷2) Value added per employee SH
1.	Railway Rolling Stock	1	6392	6392	20 240	3170
2.	Sown Timber	64	5299	83	17 880	3370
3.	Textile Footwear & Clothing	27	3701	137	31 680	8560
4.	Printing & Publishing	73	2977	41	44 500	14950
5.	Metal Products	48	2870	60	36 380	12680
	Five largest industries	213	21231	99	150 680	7097
	All manufacturing industries	775	49829	64	571 600	11470
	Five largest industries as % of total manu.	27.5	42.6		26.4	

Source. Kenya Census of Industrial Production 1963.

UGANDA

	Industry					
1.	Textiles Footwear & Wearing apparel	28	3250	116	35 583	10950
2.	Sugar and tobacco	11	2550	232	58 470	22930
3.	Sawmilling & plywood	21	2411	115	9 216	4820
4.	Metal Industries & engineering	31	1868	60	23 158	12400
5.	Glass cement & concrete products	16	1422	89	13 019	9160
	Five largest industries	107	11501	107	139 446	12120
	All manufacturing industries	299	19220	64	205 873	10710
	Five largest industries as % of total manu.	35.8	59.9		67.7	

Source U.G. Survey of Industrial Production 1963.

No. 445.
Donald C. Mead,
U.E.A. Social Science Conference,
December, 1966.
EC 2-3

Uganda's Balance of Payments Position During the Second Five-Year Plan [1]

I

This paper is an attempt to evaluate the balance of payments implications of Work for Progress, Uganda's second five-year plan. As a first step in this discussion, I have made rough estimates of the relationship between imports and expenditures in major categories over the period 1960-65. The derivation of the import and expenditure categories are discussed and presented in greater detail in Appendices I and II. The following general comments are in order:

1. Imports:

a. Wherever possible I have allocated intermediate inputs to the specific category of final use where they were finally absorbed, thereby reducing to a minimum the size of the unallocated item "intermediate inputs".

b. Current government imports include only direct imports by the government, and hence considerably understate the true import content of current government spending. There is an offsetting upward bias to the private consumption import propensities.

c. The most serious problem with all these figures concerns the proper markup to be used in evaluating the cost to Uganda of imported goods; the reported figures give an undifferentiated mixture of CIF Mombasa prices and 70% of Uganda border prices. The compromise estimate we have used is crude.

2. Expenditures:

a. The government expenditure figures are good, I believe.

b. The capital formation figures are at least consistent within the series. We know that they are incomplete, but as long as there are consistent estimates, for the past as well as the future, this may not be too serious.

c. The consumption figures, being a residual of everything else, are subject to a wide range of possible sources of errors. Among the more serious of these are the following:

i) They use estimates of the balance of payments, current account. The problems here include those in I above, as well as the estimation of invisibles; these problems are serious.

1/ The author would like to thank Drs. John Loxley and Clive Gray for helpful discussion during the writing of this paper and in the course of the Nairobi conference. Thanks also go to Mr. M. Kironde for research assistance.

ii) Since there are no estimates of inventory changes, these get included with C in this presentation.

iii) We have restricted ourselves to money income, and hence money consumption. This is debatable, although the inclusion of the subsistences sector probably would not affect the final conclusion in a major way.

The figures which result from this exercise are presented in Table I below. I have computed a regression equation only in the case of private consumption, where an upward trend in the average propensity to import is evident, and where it seems more plausible to project this trend into the future than in the case of (say) capital formation. The result is as follows:

$M_c = -25.0 + 0.65C \qquad r = 0.982$

where M_c = Consumer goods imports,

C = Private consumption,

both in millions of pounds.

Table I: Relationship of Imports to Expenditures, 1960 - 65

	Imports (£ millions)	Expenditures (£ millions)	M/E (%)
Private Consumption			
1960	19.8	66.2	29.9
1961	20.3	69.4	29.3
1962	19.4	66.7	29.1
1963	23.6	78.1	30.2
1964	26.3	78.1	33.7
1965	32.1	91.6	35.0
Capital formation (private plus public)			
1960	8.7	18.6	46.8
1961	8.6	18.0	47.8
1962	8.1	17.7	45.8
1963	11.0	20.0	55.0
1964	12.9	24.2	53.3
1965	17.5	32.3	54.2
Current government expenditures			
1960	0.8	18.3	4.4
1961	1.1	20.2	5.4
1962	1.1	23.1	4.8
1963	1.1	25.9	4.2
1964	1.5	29.1	5.2
1965	2.4	36.2	6.6
All other imports		*	
1960	6.9	103.1	6.7
1961	7.1	107.6	6.6
1962	7.3	107.5	6.8
1963	8.0	124.1	6.4
1964	9.8	131.4	7.5
1965	10.8	160.1	6.7

* Total absorption

Notes and Sources: See Appendices I and II.

II

The next step in the analysis is to project the level of imports which would prevail during the second 5-year plan, if these import propensities continue unchanged into the future. The major and serious problem here is that the national income estimates in the Plan are not consistent with those for previous years. There are two problems: The national income figures in the plan are stated at constant prices of 1964; beyond this, they have been estimated on a new basis, yielding a result over 10% higher than earlier figures. In this situation, applying the older import propensities to revised income totals would not be valid. The approach which we have used here, which is explained in detail in Appendix III, is to devise expenditure estimates for 1966 which are comparable to the earlier series; we then apply indices to these figures, the indices reflecting the percentage increases which the plan sets for each of the expenditure categories. To these expenditure figures we can apply the import propensities derived for earlier years, to give us an estimate of the commodity import bill for 1971, assuming that the propensities are unchanged. Once again, the detailed work is left to the appendix; the figure which comes out of these manipulations is an estimate of 1971 imports of £110.0 million, compared to an estimate in the plan itself of £91.8 million. This means that the planners are hoping to change the import propensities through import substitution in such a way as to be able to reduce the annual import bill by approximately £18 million by 1971.

III

Let us comment briefly on the other components of the balance of payments. With regard to commodity exports, one of my colleagues has made a more detailed study than I am able to undertake, and has concluded that the export targets may be somewhat on the high side.[1] For the moment, I shall accept the plan figures as given. In the case of invisible exports, the major explanation for the rapid increase is in the categories transport and travel. The targets here do look feasible, although not without some effort. On the payments side, expenditures for travel and (particularly) transport are implausibly low. Nearly half the transport item consists of foreign purchases of East African shipping companies and airlines; we might expect this component to rise at the same rate as overseas earnings of these organizations. Since the 1966 estimate of transport payments seems high compared to other information available, however, the 1971 figure may be reasonably accurate.

Before commenting on the item of international investment income, I should like to turn to the projected developments in the capital account and in transfer payments. There are two tables in the Plan which are relevant here, and which purport to be consistent (see para. 2.79). The first of these, Table 14, tells the target level of foreign aid and loans in relation to the financing of domestic capital formation. This table tells us that the central government and parastatal organizations are anticipated to receive £70 million in grants and loans during the five years of the plan, while private

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1/ See Y. Kyesimira, forthcoming article in East African Economic Review.

borrowing abroad will amount to £15 million.[1] Both these figures, presumably, are net of repayments; the latter figure consists almost entirely of reinvested earnings of foreign companies.[2] Turning to Table 15, the corresponding items in the balance of payments match reasonably well; using trend figures, gross receipts of official transfers (foreign aid) plus net official capital inflow should amount to £63 million, while the net private capital inflow would aggregate to £14 million. How realistic are these figures?

Everyone knows that it is extremely difficult to predict official receipts from foreign loans and grants. Uganda starts off from the relatively strong position of having unexpended foreign aid commitments of £14.5 million at the outset of the plan.[3] It is also true, however, that the figures in the balance of payments are net figures; repayments of long-term loans by the central government and government enterprises had reached nearly £1 million in 1964, and have been rising since then. One incomplete estimate of total official repayments due during the plan period came to £18.8 million.[4] This implies that, in order to attain a net official capital inflow of £63 million, the gross inflow would have to be over £80 million. On the whole, it seems clear that the aid targets are very - one might almost say, wildly - optimistic. Incidentally, of the £63 million target for official funds, £14 million is listed as inward transfers (grants), the rest as capital flows (loans).

When we come to the private capital flows, a further weak spot appears in the plan projections. It is common knowledge that the large negative item of net errors and omissions in the balance of payments reflects almost solely unrecorded private capital outflow. Beyond this, it is extremely difficult in practice to distinguish between short-term and long-term private capital flows. For the moment, let us add together these three categories, private long-term capital flows, short-term capital (private only, if this is

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1/ I have lumped together the central government and parastatal organizations since, in the balance of payments, both are presumably included as official capital.

2/ See Green, EDRP Paper No. 103, p. 8. Mr. Newlyn has pointed out to me in conversation that if all reinvested profits of foreign companies are counted under foreign sources of financing, then the (private) local component of £75 million looks far too high. Perhaps we might also point out in passing that the "local financing" column in Table 14 does not measure aggregate domestic savings required during the planning period, since some additional savings will be necessary to match gross official and net private transfer payments abroad. On the basis of aggregation of trend figures, these two amount to £7.5 million and £6.5 million respectively, over the five years of the plan. If domestic savings out of GDP was 12% in 1966 (see para. 2.20) and we must generate £169 million of domestic savings during the five fiscal years of the plan, MPS must be 27%, not 23% as specified in para. 2.19 of the plan

3/ See Background to the Budget, 1966-67, p. 54.

4/ This figures includes the £9 million UEB loan, due for repayment in 1969. The UEB has been building up a sinking fund to cover this commitment, amounting to approximately £2 million as of June 30, 1965, but as far as can be judged from published statistics, these funds are invested in Uganda government securities, thereby shifting the burden of finding foreign exchange onto the government's shoulders.

separately specified), and net errors and omissions, to give a measure of the total private net capital flows, whether recorded or unrecorded. The plan figures for this total are as follows: (£ millions)

1964	1966	1971
-6.1	+1.8	+3.8

The planners seem to have felt that, with the institution of exchange control, short-term capital movements as well as unrecorded capital flows could be eliminated, although in 1964 their figures show an outflow in these two items of £7.8 million. Even this figure is surely a considerable underestimate, which is as low as it is in the plan estimates only because of the insertion of a £9.1 million "coverage adjustment." According to other estimates of the balance of payments, the total private outflow for 1964 was not £6.1 million, as referred to above, but £17.5 million. This is an abnormally high figure, reflecting capital flight to Britain as a result of discussion of the institution of a national Central Bank (among other things). The average annual private capital outflow 1961-64, measured in the same way, was £13.0 million. This figure dropped to £5.7 million in 1965, as exchange control was instituted half way through the year; still the idea of stopping the capital flight entirely, and in fact converting an overall negative figure of £5.7 million in 1965 to a net inflow of £1.8 million in 1966, growing to £3.8 million in 1971 and cumulating to £14 million over the five years of the plan, seems quite unrealistic.

Alternative projections of the efficacy of exchange control are bound to be extremely rough. The assumptions we shall make are that the reinvestment figures in the plan are accurate, and constitute the largest part of the net recorded private capital inflow; beyond this, unrecorded private capital outflows - private short-term capital plus net errors and omissions - are not reduced immediately to zero, as the plan suggests, but fall only to £2 million in 1966, declining to £1 million in 1971.

We are now in a position to go back to the remaining current account item, international investment income. An unrecorded capital outflow should in principle bring some offsetting benefits to the balance of payments, in the form of receipts of interest and profits. It is clear, thought, that this is not relevant to Uganda's situation; the profits are received primarily by people who are only temporarily resident in Uganda, so that these funds will (for the most part) never be brought to Uganda. The figures in the plan which we have discussed above indicate that the target figure for recorded private capital inflow is £14 million, while the net increase in official indebtedness is £40 million (exclusive of grants). If the average rate of return on these capital flows is 5%, then the annual interest costs will rise by some £3.1 million over the plan period, which agrees well with the plan targets; compared to later estimates, however, it seems that the base year estimates in the plan (1966) may be £1.5 - 2.0 million too low, suggesting that stated current investment payments may be too low by that amount every year throughout the plan period.

IV

Before we bring together these various comments on the balance of payments estimates, perhaps we should say a few words on the need for overall balance. Dr. Green has pointed out that the plan projections move from an overall deficit of £4 million in 1966 to overall balance in 1971. Since these are trend figures, the implication is that the external reserves of the monetary authorities would fall by some £12 million during the five years of the plan.[1] I am not in a position to make any estimate of the size of Uganda's net external reserves; it does seem highly probable, though, that they are currently very close to the statutory minimum, and that, far from being in a position to finance a deficit, the overwhelming need will be to increase the level of official reserves during the plan period. Basically, this means that a trend improvement which eliminates a £4 million deficit over six years is not good enough. The need will be to reduce the overall deficit to virtually zero in 1967, with a growing surplus thereafter, to provide a base for credit creation. A conservative target might be the attainment of a £1 million overall surplus by 1971.[2]

V

We can summarize our discussion to this point as follows. Assuming that the full burden of adjustment in the balance of payments is made to fall on commodity imports, what degree of import substitution will be required? The implication of our preceding discussion is that, by 1971, the "capacity to import" will be at most some £3.5 million[3] below that posited in the plan, i.e. (for commodity imports as a whole), approximately £88.3 million rather than the total of £91.8 million shown there. This might be compared with an import figure derived by projecting past import propensities of £110.0 million. These adjustments appear considerably more impressive

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1/ See R.H. Green, EDRP Paper No. 103, p. 22 of Appendix.

2/ Mr. Walter Newlyn has kindly made some rough calculations for me of the order of magnitude of the necessary increase in monetary reserves, as follows:

target GDP (monetary) = £82.0 million

if $^{M}/_{GDP} = \frac{1}{4}$, then required M = £20.5 million;

if $^{C}/_{M} = \frac{1}{3}$, then required C = £7 million;

if $^{R}/_{C} = 40\%$, then required R = £2.8 million.

(M = money supply, C = current liabilities of the Central Bank, R = external reserves of the Central Bank.)

These figures suggest that, over the five years of the plan, external reserves would have to rise by £2.8 million, implying an aggregate overall surplus of that amount. Since in the best case the 1967 position might be one of overall balance, this requirement is fully consistent with the 1971 target specified in the text above.

3/ This figure is made up of the following components:

unrecorded private capital flows, £1 million;

understatement of interest and profit payments, £1.5 million;

overall surplus required for accumulation of external reserves, £1 million.

if we measure their importance not during the final year of the plan alone, but aggregated over the five years of the plan. On this basis, our adjusted figures suggest that aggregate imports would have to be below those implied in the plan by at least £27 million.[1] Clearly this is bound to put very heavy strains on the economy.

The figures in Appendix III suggest that, in absolute terms, the largest part of the increase in imports with unchanged propensities would be in consumer goods, the same area where the plan has greatest hopes for import substitution. To put the full burden of adjustment on this sector alone would require an absolute decline in consumer goods imports of £3 million, at the same time that total consumption spending was rising by approximately one-third.[2] This seems to have been roughly the planners' expectations. Let us look at the broad outlines of the production figures in the plan, to see if they are consistent with this degree of import substitution in the area of consumer goods. Starting with food, the plan tells us that, "in order to meet the food requirements of a growing population, an increasing portion of which will be living in urban areas, food crop production must increase by 20 per cent during the five years." (para. 4.101). It is not clear whether this refers to total food production, or only cash crops; a comparison with Table 21 (p. 76) suggests, however, that it probably refers to total food production, including subsistence. If on top of this we add an estimate of the target production of meat and dairy products (p. 76) along with value added in the manufacturing of food products (p. 91), we can estimate in a very rough way the total food supply (cash

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1/ This incorporates the following components:

a. unrecorded private capital flows, on trend basis, from £2 million in 1966 to £1 million in 1971,	- £7.5 million
b. understatement of interest and profit payments, £1.5 million per year for five years	- £7.5 million
c. difference between implied overall deficit (£12 million) and "required" overall surplus (£2.8 million)	- £14.8 million
d. offsetting item: overstatement of transport expenses in early years	+ £2.5 million
Total	£27.3 million

2/ In Green, op. cit., p. 22 (appendix), we find the following indices of imports, by categories:

	1966	1971
Food	100	80
Consumer manufactures	100	100
Raw materials	100	170
Fuel	100	150
Construction materials	100	140
Capital goods	100	175

I have not been able to trace these figures, although they are consistent with discussion of import substitution needs in the Plan itself (e.g. para. 2.45) as well as in the ext above.

plus subsistence) from domestic production, as follows:

	(£ millions) 1966	1971
Crop production[a]	64.4	77.4
Meat and dairy products[b]	33.6	42.4
Value added, food processing[c]	4.0	6.7
Total food production	102.0	126.5

Notes: a. Groundnuts and other crops (p.76). Sugar has been excluded since most of the increase will be for export.

b. Subtotal, animal industry, excluding hides and skins, and animal by-products (p.76).

c. p. 91.

In addition, we must make some adjustments for food imports. These may have amounted to £7 million in 1966; if the figures in footnote 2 (p. 7) are accurate, then achievement of the overall import substitution targets imply a 20% decrease in this figure by 1971. This in turn would imply the following picture for total domestic food consumption, along with total private consumption (cash plus subsistence):

	(£ millions) 1966	1971
Total apparent food consumption	109.0	132.1
Total cash consumption	123.9	165.4
Total subsistence consumption	63.1	73.8
Total consumption	187.0	239.2

These figures imply an income elasticity of demand for food, including subsistence income and output, of 0.75. This appears to me to be unreasonably low, although some recent cross-section data for selected areas in Kenya imply an even lower level.[1]

One would like to go through a similar exercise for other consumer goods. Unfortunately the production data in the plan simply are not adequate to do this. Perhaps for illustrative purposes we can push the figures given above one step further, taking the difference between food consumption and total consumption, and relating this to non-food consumer goods imports, as follows:

	(£ millions) 1966	1971
Apparent non-food consumption	78.0	107.1
Non-food consumer imports	25.0	25.0
Difference: domestic production for home use of non-food consumer goods	53.0	82.1

1/ B.F. Massell, Expenditure Patterns in the Central Province of Kenya: A Preliminary Analysis, Institute for Development Studies Discussion Paper No. 29, Sept. 1966, p. 11.

The annual growth rate which these figures imply is just over 9 per cent, surely, not a priori an impossible target; in fact the stated target growth rate for gross output of miscellaneous (i.e. non-food) manufacturing is considerably above this figure (see pages 91 and 93 of the plan).

VI

On the whole, the plan comes out rather well from this exercise, at least from the point of view of internal consistency. The question remains as to whether the targets set out in the plan are feasible. The two weakest spots here appear to be the production targets in import substituting industries, and the projected inflow of official capital from overseas. Beyond this, one might ask if the growth path which was chosen is the most efficient one; it might have been preferable, for example, to pay more attention to export promotion and less to import substitution. These are important questions, which we have not been able to go into here. The analysis does suggest, however, that in spite of balance of payments problems which at the moment appear to be serious, Work for Progress does present a consistent set of targets for which to strive. Their feasibility is much more questionable.

Appendix I: Imports, by Categories.

(£ millions)

	1960	1961	1962	1963	1964	1965
Non-government Consumption						
A. a. Food, Drink and Tobacco	4,665	5,113	4,840	5,128	6,426	7,154
b. Other, non-durables	9,766	10,607	9,613	12,010	12,595	14,970
c. Durables	3,642	3,284	3,327	4,686	5,025	6,342
d. Intermediate inputs	1,781	1,298	1,593	1,791	2,295	3,646
Total	19,854	20,301	19,373	23,616	26,341	32,111
Capital goods (government and private)						
B. a. Industry	1,336	1,660	1,507	1,862	2,643	3,388
b. Agriculture	1,514	1,955	1,420	2,088	3,265	3,791
c. Commerce	144	176	198	255	295	394
d. Transport equipment	3,289	2,422	2,832	3,998	4,502	6,467
e. Building materials	2,464	2,352	2,181	2,827	2,163	3,481
Total	8,746	8,564	8,138	11,031	12,868	17,521
C. Other producer materials (private)	5,694	5,813	5,902	6,420	7,804	10,046
D. Miscellaneous (private)	1,218	1,247	1,419	1,555	1,985	1,734
E. Government component of A, C and D	773	1,092	1,096	1,094	1,513	2,414
Total	36,286	37,018	35,927	43,717	50,509	63,827

Appendix I

Notes and Sources

The classification scheme followed here is based on that undertaken by EACSO, by stage of production and end use; adjustments have been made primarily in their Heads 2 and 4, as follows:

Sub-head 21: parts to Aa, Ad, and C
22, 25 and 26, complete, to C
23 parts to Ab, Ad, and C
24 to Be
Sub-head 41 parts to Ac and Bd
42, complete, to C.

We have reclassified interterritorial trade on the same basis.

Interterritorial imports are presumably valued at the Uganda border. In the case of imports from outside East Africa, however, this is not the case. There are two major categories of imports from outside East Africa: A. direct imports (consigned to an importer in Uganda) and B. indirect imports (originally consigned to one of the other two countries and later transferred to Uganda). This second category is in turn made up of two parts: B1. transfers in their original packing, and B2. those which are broken bulk. For A and B1, imports are valued CIF Mombasa (or wherever they enter East Africa); this means that, to give a measure of the cost at the Uganda border, we must raise them by a) docking and harbor charges, b) transport costs to the Uganda border, and c) for B1, any commission charged by the original consignee. For imports in category B2, they are reported to the customs department at a value called "selling price," which is probably close to the cost at the Uganda border; but the figure in the Annual Trade Report is not this value, but 70 per cent of it (on the assumption that the CIF Mombasa price, on which duty was paid and hence the basis for allocating tariff receipts, is 70 per cent of the "selling price"). To make matters worse, the Trade Reports do not differentiate between B1 and B2; they only present A and total imports, so that even the total B is not presented directly, but must be obtained residually.

Our approach has been to ignore B2 as a separate category. This does not mean that the imports are ignored, but that from a mark-up point of view, they are treated just like the other categories. The justification for this is that we have been informed that the category is "small" relative to total B. How small we have not been able to determine.

For direct imports (category A), we have estimated docking and harbor charges at 2% of the value of imports. For transport charges, there are large variations, depending on the bulk/value ratios; for some goods with a very high ratio, transport costs might add 50 per cent or more to the Mombasa prices; at the opposite extreme are commodities with a very low ratio, where transport might only add 1-2 per cent to Mombasa prices. Overall averages will not be very meaningful. The compromise we have adopted is to assume that transport costs add 5 per cent to the prices of capital goods, and 15 per cent for all other imports.

For category B1, harbor and transport charges will be the same, but on top of this there will be a trade margin for the original importer. This has been estimated by EACSO at 12.4%.

This suggests the following pattern of percentage mark-ups:

		Machinery	All others
A	Direct imports	7	17
B1	Indirect, not broken bulk	20	30

In our detailed reclassification we have not separated A from B1; this means that, in the end, we have been forced to use a weighted averaged of A and B1, with the weighting dependent on the relative importance of these two components in total imports; this results in a mark-up for capital goods of 12%; for all other imports, 22%.

We have subtracted reexports from the resulting figures, using values given in the Annual Trade Reports, and reclassified in the same way.

Appendix II: Allocation of Output

(£ millions)

	1960	1961	1962	1963	1964	1965
1. GDP (monetary at factor cost	110.8	111.2	107.9	126.6	140.8	150.8[p]
2. Plus indirect taxes	8.3	9.0	10.7	12.4	14.6	17.4
3. Minus subsidies	9.3	7.5	6.2	6.5	5.9	4.6
4. Equals: GDP (monetary) at market price	109.8	112.7	112.4	134.5	149.5	163.6
5. Plus net factor income from abroad	-0.8	-0.6	-3.0	-2.5	-5.0	-5.2
6. Equals: GNP (monetary) at market price	109.0	112.1	109.4	132.0	144.5	158.4
7. Plus net imports of goods and services	-5.9	-4.5	-1.9	-7.9	-13.1	1.7
8. Equals: Total absorption	103.1	107.6	107.5	124.1	131.4	160.1
9. Current government expenditures	18.3	20.2	23.1	25.9	29.1	36.2
10. Total capital formation	18.6	18.0	17.7	20.1	24.2	32.3
11. Residual: private consumption	66.2	69.4	66.7	78.1	78.1	91.6

Appendix II

Sources

1. GDP (monetary) at factor cost 1960-61: Uganda Government, 1964 Statistical Abstract, p. 81. 1962-65: Uganda Government, Background to the Budget, 1966-67, p. 6.

2. Includes only import duties and excise taxes. 1965 figures use approved estimates for 1965/66. Calendar figures in every case are averages of fiscal year figures. Source: Uganda Government, Statistics Division, Ministry of Planning and Economic Development, The Government Accounts of Uganda, 1959/60 - 1964/65 (Sept. 1966).

3. These figures are from the same source as row 2. The 1965/66 figure used in deriving the calendar 1965 estimate is assumed to be equal to 1964/65.

5. 1961-65: EACSO estimates. 1960 is estimated on assumption that change 1960-61 for Uganda is in same percent as this item for all East Africa.

7. 1961-65: EACSO estimates. 1960 estimated as follows: Starting with 1961 balance of payments figures, the merchandise category is adjusted in proportion to the size of the surplus in reported trade statistics; for investment income, see item 5 above; for all other items in the current account, 1960 is assumed to be the same as 1961.

9. Figures refer to wages, salaries, and other current purchases of goods and services, and include central and regional governments, urban and local authorities. Where accounts are presented on a July-June fiscal year basis, we have taken a simple average for calendar years. Figures for 1960 and 1965 involve some estimation; in particular, in 1965, we have proceeded as follows: for the central government, we have used the approved estimates, as actual expenditures are not available; for other governmental units, we have assumed that 1965 expenditures were the same as 1964. Source is as for row 2.

10. 1960-63: Work for Progress, p. 24. 1964-65: Background to the Budget, 1966-67, p. 7.

Appendix III: Expenditure and Import Projections

(£ millions)

	1	2	3	4	5	6	7
	Work for Progress			Back-ground to the Budget	Implied Imports	Implied Expendi-tures	Implied Imports
	1966	1971	1971/1966	1966	1966	1971	1971
1. GDP (monetary) at factor cost				154.9			
2. Plus indirect Taxes				19.4			
3. GDP (monetary) at market price	197.7	279.7		174.3			
4. Plus net factor incomes from abroad	-5.1	-8.1		-5.1			
5. GNP (monetary) at market prices	192.6	271.6		169.2			
6. Plus net imports of goods and services	9.3	16.8		9.3			
7. Total absorption	201.9	288.4		178.5		257.5	
8. Current government expenditures	43.0	63.0	1.465	45.6	3.0	66.8	4.4
9. Capital formation	35.0	60.0	1.714	35.0	19.3	60.0	33.0
10. Residual: Private consumption	123.9	165.4	1.335	97.9	38.6	130.7	60.0
11. (Other imports)					8.8		12.6
12. (Total imports)					69.7		110.0

Appendix III

Notes and Sources

Columns 1 and 2: It is not clear whether the plan figures are at factor cost or market price. We have treated them as market price, although in the way we have used the figures, it would not make much difference.

Row 6: excludes transfers; assumes that half of coverage adjustment is in current account, rest in capital account and transfers.

Row 8: Work for Progress, p. 22. Includes Central Government only, but includes appropriations-in-aid.

Row 9: Work for Progress, p. 24.

Column 4:

Row 1: Background to the Budget, 1966/67, p. 3.

Row 2: Average of 1965/66 and 1966/67, approved and draft estimates, for import and excise taxes.

Row 8: Green indicates that the differences between the W.f.P and B. to the B. estimates in this sector refer to wage increases between 1964 and 1966. We have adjusted the Plan figures upwards by 6.15% to express them in 1966 prices.

Row 9: We have assumed that, whatever adjustments have been made in the GDP estimates, the capital formation figures are not affected (they are a consistent series). The implication of this approach is that all the revisions in GDP figures (apart from prices changes in the government sector) refer to the level of production of consumer goods.

Columns 5 and 7:

Row 8: 6.6% of expenditures

Row 9: 55% of expenditures

Row 10: M = -25.0 + 0.65C

Row 11: 4.9% of total absorption. This is lower than the figures in the recent past (see table I), and is adjusted as a residual figure to give 1966 import estimates via this procedure equal to those in the balance of payments estimates of the plan.

Column 6: column 3 x column 4.

No 404

W.T. Newlyn.
U.E.A. Social Science Conference,
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EC 1-1.

MONEY MARKETS

There was a time when it was thought, in the best places, that in order to justify the establishment of a central bank it was absolutely necessary to have a securities market and a bill market in which the central bank could perform the traditional text-book open-market operations which are so central to the history of the Bank of England's control of the British monetary system.

This view was particularly enshrined in two reports on the advisability of setting up central banks in two African countries which were at that time British colonies. The first, in 1951, was the Trevor Report on the Gold Coast,[1] from which the following quotation is taken:-

> "In order to operate the currency and credit system of the country to its advantage, it is essential that all flexible instruments necessary to an advanced economy should be available in the form of a Government securities market, a bill market, a stock exchange, banking and insurance systems."

In 1952 the Fisher Report[2] followed on Nigeria and came to similar conclusions. It conceded, however, that

> "Given further development of the indigenous banking system and growth in the financial mechanism, the establishment of a central bank would be a logical and useful step in due course."

At that time, the present writer and Professor D.C. Rowan challenged this "received opinion" arguing for a central bank because of "the capacity of such an institution to assist economic development by encouraging and guiding the development of the indigenous banking system and growth in the financial mechanism".[3] Whether as a result of a change in received opinion or of the pressure towards financial independence associated with political independence, all the African colonies acquired central banks prior to attaining political independence, with the exception of East Africa. This exception is not difficult to explain: the delay in establishing central banks in East Africa was entirely due to the failure of the colonial administrators and subsequently the independent governments to decide between the two alternatives of an East African central bank or three separate national central banks. All having now got central banks without any money markets in which to operate the question arises as to whether central banks should take special measures to develop money markets and, if so, in what form?

S.N. Sen starts his book "Central Banking in Under-Developed Money Markets"[4] with the following sentence:-

> "One of the most remarkable features in all discussions on central banking is that unanimity with which all writers regard a developed money market as essential for the effective functioning of the central banks."

Professor J.S.G. Wilson favours "encouraging the growth of new money markets and indeed, where the emergence of appropriate institutions has proceeded rather too slowly, even their artificial creation".[5] Professor E. Nevin states that "because of the importance of liquidity to the allocation of savings, the creation or encouragement of rudimentary markets in long and short term loans within underdeveloped territories is a task of the first importance".[6]

The purpose of this paper is to initiate a discussion on the validity of these claims in the East African situation. Although not wanting to be pedantic about a definition it will be convenient to define a money market in the following terms -- a collection of specialised institutions (other than banks) engaged in the employment of short term funds, mainly in the discounting of bills. In a sense there is always some sort of money market in a money economy, but it is proposed to use the term here in this special sense which it has come to possess in connection with the discussion from which the quotations have been taken. Again, without wishing to claim that the classification is ideal, it will be convenient to consider the arguments for a specialised money market under five headings:

1) the retention of funds in the domestic economy;
2) the ability to offer short term assets to banks;
3) the ability to facilitate the operations of the central bank;
4) the ability to facilitate the short term borrowing of Government;
5) the ability to increase the efficiency of the mobilisation of savings;

1. Retention of Funds in the Domestic Economy

The countries of East Africa are in any case net borrowers overseas so that the argument applies only to that element of their domestic savings which would be transmitted abroad in the absence of opportunity for employment in domestic money markets. Under the colonial system these countries derived considerable benefit from the close association with the London market which was characteristic of the rigid link represented by the currency board system. The absence of opportunity for short term employment of funds by the banks was offset by the low cost of transfer to the London market and this enabled the banks eventually to employ a larger proportion of their funds in advances than would have been possible in a closed banking system. Furthermore, under the Colonial Stock Act of 1877 securities of colonial governments were treated as trustee securities in the United Kingdom and as a result colonial governments were able to borrow at a cost virtually the same as that of the United Kingdom government. Even though this latter facility no longer obtains it might well be argued that there is still some /.....

some advantage to be obtained in lending short in a highly efficient external money market and borrowing long in the same market. However the arguments in favour of financial independence are strong enough to produce considerable pressure for short circuiting this process and an outstanding example of the lengths to which a central bank in Africa has gone in this direction is provided by the experience of the Federation of Rhodesia and Nyasaland.[7]

Shortly after the establishment of the Central Bank in 1956 two acceptance houses (Merchant Bank of Central Africa Ltd. and Rhodesian Acceptances Ltd.) opened for business. Two years later two discount houses were established (The Discount Company of Rhodesia and The British and Rhodesian Discount House Ltd.). The formation of the Discount House of Rhodesia, which started operations in March 1959 with the backing of Gillett Brothers, one of London's foremost discount houses, was the first occasion on which the Bank of England had given permission for a London discount house to take a direct capital interest in a similar institution overseas. The British and Rhodesian Discount House Ltd. was established with capital participation by Smiths Aubyn of London but the majority of its capital was subscribed by institutions closely associated with the Anglo-American group of companies, who were also the sponsors of Rhodesian Acceptances. Modelling themselves meticulously on the pattern of the London money market and with the blessing of the Bank of England and important London connections, these institutions nevertheless required a considerable amount of artificial intervention by the central bank in order to get established. This intervention involved a) the regulation of their sources of funds and b) considerable pressure on the commercial banks to retain larger balances in Rhodesia. The opportunity for profitable business was, in any case, exceptionally good in Rhodesia at that time because of the large volume of short term funds owned by the copper companies and the British South African Company and because at this stage in their development, the banks still had considerable excess balances employed in London.

Treasury Bills held by the discount market rose from zero to just under £12 m between 1961 and 1963 absorbing a similar increase in total Treasury Bills outstanding and accounting for half of the total issue. The commercial banks call money increased to the same extent but by 1963 net London balances had been reduced to zero so that there was no further scope for diverting bank funds into the local money market.

retention

Certainly the successful/of funds in the domestic economy is a good point to be noted in connection with this experiment but it remains to question whether the establishment of specialist externally dependent institutions based upon the London model was the only way of doing it. Certainly everything should be done to see that as great as possible range of assets is available at an attractive rate to match any idle funds that may be available in the economy but with this as an inducement should not the coercion of an efficient exchange control be sufficient?

2. Short Term Assets for Banks

This was an argument which was of considerable importance at the time when the banks were failing to employ the majority of their funds in the domestic economies in Africa but it clearly no longer applies to the expatriate banks in East Africa. It may, however, have some significance in connection with the development of domestic banks. The basic question to be answered here, however, is this - in those cases where it has proved possible for an intermediary institution such as a discount house to set up in business and find employment for short money from the banks why could the banks not find this employment for their money themselves? The answer is that by borrowing short and lending longer they are increasing the overall liquidity of outstanding financial assets. Where there is a large variety of idle funds this argument can be important, but the need for such liquidity can be met to a considerable extent by flexible borrowing by the banks. Indeed the banks do already make ad hoc arrangements in respect of large lenders of short term funds such as the para-statal bodies.

3. Facilitating the Operations of the Central Bank

I have no difficulty in rejecting this argument for setting up a money market since this is a particularly flagrant example of generalisation for the special case. The United Kingdom, in particular, developed a highly specialised money market based first on the internal bill of exchange, while the bill was the major credit instrument before bank advances had emerged, and then on the international bill on London arising out of London's special position as a centre of capital-export, merchanting, shipping and insurance; this lasted to the middle thirties, after which the Treasury bill became the principal instrument and since the war has dominated the London market. The argument for the retention of the money market in London is certainly not that it plays (in textbooks at least) an important role in the Bank of England's control of the commercial banks, but rather that it's there. It continues to be convenient to the other financial institutions largely because of its significance in acting not only as a reservoir in the domestic economy but in connection with external balances. The development of specialist institutions forming a money market in important international financial centres should not be used as an argument for the establishment of similar institutions in countries with entirely different requirements. In many parts of the world it has been clearly demonstrated that central banks can maintain effective control over commercial banks by the use of direct controls such as minimum ratios and special deposit requirements and that, to a large extent the use of even these may be unnecessary provided they exist as a last resort.

4. Facilitating Short Borrowing by Government

That the existence of specialised institutions adds anything in this respect is largely a fallacy. The most extreme case in which it would appear that the arrangements in the money-market are closely related to the government's short term borrowing requirements is provided by the London /.....

London money market where the "syndicated" bid for Treasury Bills together with the agreement by the discount houses to cover the tender, ensure that the Government will always be able to sell as many Treasury Bills as it puts on offer weekly. That this is due to something inherent in the money market is an illusion; in fact the market has no capacity to act as lenders of last resort and it is only because the Bank of England stands ready to adjust the supply of cash to the Treasury Bill demand whenever there is a deficiency at the approved rate the system works in this convenient way. The reason why the money market is used is that it is a means of ensuring that all available funds have been utilised before resort is made to the Bank of England, combined with a strong British prejudice against direct borrowing by the Government from the central bank.

5. Efficiency of Mobilisation of Savings

One of the most generally used arguments under this head is that the existence of a money market makes it possible for the commercial banks to reduce their cash reserves; but this too would seem to be a fallacy. To the extent that a money market matches calls and placements by the commercial banks this can be done by the banks by themselves by use of a clearing house. To the extent that the money market acts as a reservoir (releasing and absorbing funds) this can also be done by instituting a market in bank funds (as in the United States).[8] Indeed an embryonic market already exists in Nairobi where, although there is a daily clearing, settlement is only affected at "call". No interest is paid on balances due the arrangement being based on mutual convenience. Alternatively, the central bank can set up a call money system by offering interest bearing call deposit facilities, as has been done in Nigeria[9] and Sierra Leone.[10] Finally, to the extent that a money market is able to give elasticity to the money supply by drawing additional funds into the system, it is the central bank not the market institutions which make this possible.

Before applying these generalisations to the East African situation in order to come to some tentative conclusion, it is pertinent to note a change which has taken place in the character of the banking system as a reflection of the separation of the monetary systems. It has always been a feature of the system that the integrated bank coverage made East Africa a single area as far as the deployment of bank funds was concerned. The major inter-country lending has, in the past, been occasioned by Uganda's peak requirement for the cotton crop which revealed itself in the December inter-bank indebtedness figures showing a sharp increase in Uganda's net liabilities to Kenya and Tanzania (recently mainly Kenya). This pattern changed in 1965 - the Uganda banks switching their source of funds from Kenya to London as is shown in the table overleaf.[11]

Changes in Bank Indebtedness (Net)

Dec 31 1965 relative to Dec 31 1964	- Decrease in claims or Increase in Liabilities + Increase in claims or Decrease in Liabilities		
	Other East Africa	Foreign	Net
Kenya	- 13,290	+ 15,126	+ 1836
Tanzania	+ 1,312	- 3,852	- 2540
Uganda	+ 8,037	- 7,173	- 864
E.A.	(-3,841)*	+ 4,104	- 1578

Note* The discrepancy from a zero total is due to the fact that the other E.A. figures for both dates include balances due and from banks in the same country and Currency Board balances. The aggregate is broken down for the first time in January 1965.

Source: Economic and Statistical Review.

This reflects a separation exercise which is almost certain to be matched by financial and commercial organisations operating on an East African basis: there will tend to be a decentralization of funds from Nairobi. The effect of this will be to lessen the possibility of the natural development of such specialised financial institutions because of the reduction in the scale of business with separation of the financial systems. The question remains whether they should be artificially created as Wilson advocates.

The special arguments which have been examined above for money market institutions as such do not seem to the writer to be at all convincing. Even in London the case for a discount market is marginal: the Radcliffe Report concluded[12]

> "It is no service to claim that the discount market is indispensable to the functioning of the monetary system; but the fact remains that the discount market, by smoothing out irregularities in the ebb and flow of funds among the commercial banks and others, does simplify the functioning of the banks and enables them, free from the embarrassment of temporary disturbances in their liquidity, to concentrate on their major task of providing credit for the production of goods and services. It would not be beyond human ingenuity to replace the work of the discount houses; but they are there, they are doing the work effectively, and they are doing it at a trifling cost in terms of labour and other real resources."

But what about the general argument that any financial intermediary will mobilize idle funds? This would be true only /.....

only to the extent that it attracted money from institutions other than banks who would otherwise hold idle bank deposits, the opportunity for increasing loanable funds by increasing the banks local asset ratio has passed. This being so it would seem that efforts should be concentrated on other financial institutions - particularly the encouragement of a stock market. The same reservation applies about natural development being retarded by the creation reduced scale due to separation but the case for artificial/ is here much stronger.

The following quotation from R.S. Sayers seems to be a fitting conclusion to this paper.[13]

> "This hothouse development of short-money markets is only the latest phase of a not very happy tendency for the less developed countries to follow too closely the patterns of financial structure seen to exist in the more highly developed centres. If progress in the development of financial institutions is really to contribute to economic growth, it must be based on a thorough understanding of the problems rather than on a slavish imitation of what now exists in the countries whose financial institutions developed first."

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No. 417.
Nixson.

FACTORS INFLUENCING THE LOCATION OF INDUSTRY IN UGANDA.

Introduction.

This paper attempts to give a brief description of the factors influencing the location of industry within Uganda. It should be kept in mind that it is not the intention of this paper to evaluate the role of the common market on the distribution of industry between the three member states. Although this is a problem of great interest and significance, circumstances have prevented the present writer from working on this topic, and thus the analysis must be confined to locational factors within a single country, namely Uganda.

The difference between this paper and E.D.R.P. 108 (1) is essentially one of approach. The latter presented the incomplete results of a questionnaire survey carried out in Uganda and gave a brief description of the locational characteristics of the different industrial sectors. The present paper attempts to give a more systematic analysis of location factors per se and assesses their importance within Uganda. The analysis used of such factors is essentially that adopted by Greenhut. (2)

General Comments.

Although the location of a plant or industry depends on several factors, in many cases we find that one factor is basic or governing i.e. it is of over-riding importance in the locational decision. If the governing factor leaves alternative sites, the other factors which decide the ultimate choice of location, are secondary. Thus the governing factor is the most influential one in determining location, and limits the range of choice to a certain area or certain type of site. The secondary factors then determine the ultimate choice.

In many cases it is, of course, extremely difficult to isolate the governing factor, and in the absence of quantitative data which may clearly illustrate the prime locational force, the governing factor has to be determined by qualitative reasoning alone. This may lead to errors of judgement, but these are inevitable in the absence of the relevant data.

The paper has four main sections:-

1. Transportation and Plant Location
2. Processing Costs and Plant Location
3. The Demand Factor and Plant Location
4. "Personal" Considerations.

Transportation and Plant Location.

Transportation determines location through:

a. the cost of transport, and,
b. the type of services offered.

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(1) E.A.I.S.R., EDRP Working Papers, No. 108. F.I. Nixson, 'Some Results of a Survey of Industrial Location in Uganda', 7.10.66.
(2) See: M.L. Greenhut, 'Plant Location in Theory and Practice', The University of North Carolina Press, 1956. Part 2, 'Location Factors', pp. 103 - 177.

In those industries where differentials in transport costs outweigh differences in processing costs, the tendency is towards the decentralisation of industry, and where the market is scattered over a wide area and products are non-homogenous, decentralisation is the logical locational pattern. Transport costs are in fact a form of protective tariff to local industries. The higher is the cost of transfer, the greater is the degree of dispersion.

In the western, industrialised countries, transport costs have been of decreasing importance for the past thirty years, due mainly to the development of road transport. (3) In the case of Uganda, it is not possible to give comprehensive road transport cost data - it was possible to collect such data from only a few firms - but the data that was collected clearly illustrates the importance of transport costs, and in many cases, they are the governing factor in the location decision.

A. Transport Cost of the Raw Material.

This factor has been given a prominance in the literature on the location of industry which is no longer justified by present day conditions. The power of raw material attraction depends primarily upon the importance of transport costs in the total costs of production, and one cannot refer to raw materials in general as attracting an industry - there must be one dominant material for this factor to be important in determining location e.g. limestone for the production of cement. Improvements in technology and transport have lessened the influence that raw materials once exerted on location, for example, the growth of assembly activity has reduced this dependence, and in the case of Uganda, the most important raw material oriented industries are cement, fertilizer and to a lesser extent, matches.(4) In all three cases, nearness to raw material supply is the governing factor in the location decision.

The cement factory at Tororo uses approximately 200,000 tons of limestone p.a., and even though the plant is only $3\frac{1}{2}$ miles away from the quarries, monthly transport costs total shs. 60-70,000/-. Although the limestone deposits at Kasese are of a higher quality than those at Tororo (it is, in fact, planned to construct a factory at Kasese), it was decided to locate the factory at Tororo because it was nearer to the major market areas, Kampala and Jinja (where the Owen Falls Dam was the major customer). Thus we see that although raw material availability was the governing factor in the location decision, the ultimate location choice was based on the secondary factor, nearness to markets.

The same considerations governed the location of the fertilizer plant. The Sukulu Hills are estimated to contain a 200 million ton deposit of ore containing phosphate and pyrochlore, and it is obviously essential to be as near to the raw material supply as possible. Secondary considerations were the availability of a suitable site with convenient rail facilities.

The match factory at Jinja is basically raw material oriented. The availability of a constant supply of peeler logs for the matchboxes was considered to be the governing locational factor, such timber coming from Busoga. In the absence of cost data, it is difficult to estimate how important this cost factor is, relative to other factors. Of possible equal importance, is the fact that the headquarters and the majority of the Madhvani Group of companies in Uganda are located at Jinja. Senior staff are employed directly by Madhvani, rather than an individual company, and there is a considerable interchange of personnel between the different companies, often on a day-to-day basis. Supervision and rapid consultation are made easier if the major companies are in the same vicinity, and common purchasing and

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(3) See: S.R. Dennison, 'Location of Industry and the Depressed Areas', London, 1939, p.44.

(4) The survey of Ugandan industry did not include the basic agricultural processing industries, mining activities and grain milling, which are all raw material oriented.

transport facilities are also possible. These considerations, if not the governing factor, are an extremely important secondary factor, although it is impossible to assess their quantitative importance.

Nyanza Textile Industries is an example of an industry where it is difficult to isolate the governing factor in the absence of cost data. The returned questionnaire stated that raw material availability was the most important locational consideration, but the subsequent interview placed water ($3\frac{1}{2}$ million galls. per day) and power availability as the most important factors. Given the political manoeuvrings behind the establishment of Nyanza Textiles and the desire to see Jinja become a major industrial centre, it seems likely that these factors, plus water and power availability were more important than nearness to raw material supply, and thus this industry is not raw material oriented.

A common pattern is found in all industries oriented to raw materials:

1. transportation costs vary more widely than do other costs at alternative locations
2. the raw material loses weight in conversion to the final product, and,
3. the transport rate on the raw material is equal to, or greater than, the rate on the final product, or even if it is lower, it is not so much less as to overcompensate the weight discrepancy.

Conditions (1) and (2) are no longer as important as formerly, especially the decreased loss in waste due to technological improvements. Given the fact that such technological improvements are being "imported" into the developing countries, it would appear likely that raw material oriented industries (insofaras their locations are tied to raw material deposits) will not assume the importance in the industrialisation process of the developing countries that they enjoyed in the industrial revolutions of the developed countries.

B. Transport Cost of the Finished Product.

The market factor influences industrial location in three ways:-

1. it exerts a governing force when a particular market offers the greatest profits, either because of the absence of competition or because there is no other market
2. it is the governing factor when a market oriented location yields large savings in transporting the finished product
3. it is a governing consideration when a location near to the consumer is a pre-requisite to, or greatly enhances, sales.

Point (1) is not really relevant to industrial location within a country such as Uganda. It furnishes us with a reason why a company, requiring the whole of the Uganda market, should wish to begin production there, but it does not determine the specific location chosen. It would be applicable to a smaller company, requiring only a part of the national market, which locates in a certain area to exclude rival products, but no examples of this type of behaviour were found in the companies investigated.

Point (2) is of greater relevance and importance to Uganda. This form of market orientation indicates maximum gains when:

a. the finished product is more expensive to transport than the raw material, and,
b. the finished good is perishable (although the perishability of the final product demands a market orientation as a means of avoiding more expensive methods of transport). (5)

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(5) See Greenhut, op. cit., p. 119.

The importance of market oriented industries in Uganda's industrial structure is very marked. Such industries include miscellaneous food manufacture (with the exception of meat processing), beverages, cordage, rope and twine, furniture manufacture, rubber and rubber products, structural clay products and some firms in the metal industries and engineering sector. Other market oriented industries not included in the survey are: bakery products, the smaller footwear manufacturers (this excludes Bata), made-up textile goods, printing and publishing and motor vehicle repairs.

As a general rule, the heavier and more bulky is the finished product (relative to the raw material used), the greater is the likelihood of a market orientation, and thus one must consider both the relative transport rates and the relative weights of the final good and the raw material. One of the best examples of a market oriented industry in Uganda is the soft drinks industry. Transport costs on the final product are very heavy - within a fifty mile radius of a Kampala plant, a uniform price is charged and distribution costs average shs. 2/50 /- per crate (approximately 22% of the retail price). Outside of this area, the price rises with the increase in transport costs, and thus it is essential to be as near to the consumer as possible. This factor explains the existence of quite a large number of small producers scattered throughout Uganda, although many of these have gone out of business since the recent excise duty increases. As markets expand, branch plants will be set up and the industry will become more decentralised.

One of the most familiar cases of a market oriented industry is the process requiring a ubiquitous factor, for example, water. This means that the final product is heavier than the transported raw materials, indicating a location near to the major market. The brewing industry is a case in point, where nearness to markets is essential, but where the governing factor in the location decision is an adequate water supply. These remarks are of course applicable to the soft drinks industry to a large extent, although the minimum economic scale of production (6) is smaller, thus allowing a greater degree of decentralisation than is the case with brewing.

Three other major market oriented industries in Uganda are bicycle tyres and tubes, agricultural hoes and industrial gases. All three consider nearness to markets to be the major locational consideration.

The industrial gas producer is located in Kampala, this decision being based on a survey of potential industrial development in Uganda, carried out by the company in 1953/54. It has since become apparent that Jinja is the main market for industrial gases, and if Jinja continues to expand at the present rate over the next five years, the Kampala location will no longer be economic and steps will have to be taken to move (in some form) to Jinja. Cylinder handling is the company's major problem and to save both time and money, it is essential to be close to the main consumers.

In the case of agricultural hoes and bicycle tyres and tubes, Uganda is the major East African consumer, and thus these two industries fall under Point (1) discussed above. Nearness to markets dictated a Uganda location, but other factors were instrumental in determining the actual site chosen. (7)

The third case of market orientation is when nearness to markets enhances sales, because consumer demand may be extremely volatile and it is necessary to meet changed requirements as quickly as possible. The manufacture of fish-nets in Kampala is probally the prime example of this kind of situation.

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(6) The break-even point is approximately 50,000 cases per month.

(7) In the case of agricultural hoes, there is some confusion as to whether this is in fact a market oriented industry. Raw materials account for 60% of the final price of the hoe, and given the heavy transport costs involved, it is advantageous to be near the raw material supplier - in this case, the Jinja steel works.

Fish-nets had been imported by the parent company for thirty years and when it was decided to begin production in Uganda, Kampala was the obvious location. The market is concentrated mainly on the shores of Lake Victoria, and the demands for different types of net varies with the season and the weather. The need to satisfy these varying demands as quickly and efficiently as possible, plus the fact that Kampala is the main market for fish and the fishermen usually buy their nets when they sell their fish, make a Kampala location essential.

It is interesting to briefly compare the above observations on market oriented industries with conditions prevailing in England. A survey carried out in the 1930's (8) records proximity to markets as being of major importance, but except in a few cases, the cost of transport to the market was not an important item. The desire to be close to the market involved other elements, namely:

a. the need to maintain close contacts with consumers
b. the development of "service" in the supplying of various products
c. the need to speedily fulfill orders.

'As industry becomes diversified, as the needs of consumers grow and their interests become more closely served, the market exerts a stronger attraction...' (9)

Although this factor is not of significant importance in Uganda at the present time, its influence will be increasingly felt in the future with the development of a greater number of consumer goods industries.

Processing Costs and Plant Location.

If raw material and demand considerations have only a weak locational pull, the selection of a site may be due to processing cost factors (or, of course, personal factors). This would be particularly relevant in the case of compact products with low transfer charges but involving a complex production process.
The most important processing cost factors are:-

1. land - availability and cost
2. labour - wages, productivity, turnover, supply and labour laws
3. capital - availability and cost
4. managerial talent - availability and cost
5. taxation

Other processing cost factors such as utility charges, climate, health and education and institutional factors will not be systematically dealt with but only mentioned when considered to be relevant.

Land.

Land is completely immobile and this gives rise to large differentials in price (rent). All the industries investigated in Uganda were urban based, and thus rent differentials between urban and rural sites did not enter into the picture. But the availability of land is an important locational consideration. (10)

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(8) the survey was carried out by the magazine 'Business' in 1935. Quoted in Dennison, op. cit., p.61 - 72.
(9) ibid. p. 72.
(10) 40% of the firms returning the questionnaire considered the availability of a suitable site to be an important locational determinant within Uganda.

Land suitable for industrial development is now non-existent in Kampala, and the growth of Jinja in the past few years is in large part attributable to the fact that it has ample land, with good rail facilities, suitable for such development. The establishment of an industrial estate in Kampala will allievate this problem to a certain extent, but Jinja will continue to grow because of the availability of good sites and other facilities.

Few firms have received government assistance to develop the site and improve on local transport facilities - either a feeder road or rail siding to the factory, and most firms developed their own sites.

Labour.

Human resources are relatively immobile in the short run, and this helps to explain differentials in real wages between regions. These are costs to the industry and must therefore be taken into account in the location decision. Supplies of suitable labour have always been stressed in the past as being an important factor, but this is not a general feature, relevant to all industries. Labour supply is created at those points where industry is located for other reasons, and the existence of a supply of labour therefore, has less attractive force than that exerted by other factors.

Although most firms in Uganda mentioned an adequate supply of unskilled labour to be an important locational consideration, no labour supply problems were encountered in any of the urban and semi-urban centres. At all locations there exists an excess supply of unskilled labour and this factor is therefore not a determinant in any location decision. Although some employers did mention a preference for workers from certain tribes, the labour force of all the factories investigated was of a very mixed tribal composition, the area in which the factory was located usually supplying the largest proportion of workers. No significant differences were observed in aptitude or ability between different tribal groups with respect to industrial work.

It is surprising to note that the availability of skilled labour was not considered to be a locational determinant of any importance, except in the case of seven firms where it was thought to be an influential consideration. Only one firm (in the engineering sector) considered it to be the governing locational factor, and in the other cases it was secondary to more important factors. Most of the large companies train their own labour on the job, and the majority of their labour force is considered to be semi-skilled. Difficulties were encountered in recruiting skilled mechanical staff, but such difficulties are encountered throughout Uganda, and no one centre was at an advantage in this respect.

Wage differentials in different parts of Uganda are not important with respect to location. Other factors e.g. transport facilities, far outweigh any influence wage differentials could exert on the location decision, and the same is true of possible productivity differences at various locations. This is not to deny that such considerations will not be important in the future. Once adequate infrastructure facilities are extended to the present semi-urban centres, and industrialists begin to consider these centres as viable locations, the lack of a permanent, semi-skilled labour force in these centres could be an important drawback to their development. It remains to be seen if lower wage costs in these centres will offset the advantages that Kampala, Jinja and Tororo will enjoy in terms of an experienced industrial labour force.

Labour turnover was no longer considered to be a significant problem among the firms investigated, and in most cases, labour turnover was only about 1 - 2% p.a. of total labour force. A permanent, urban industrial labour force has been slowly developing in the past 6 - 7 years in the main centres, and, as mentioned above, this factor will assume greater importance as a locational determinant in the future, than it at present enjoys.

Labour laws are not important in a country such as Uganda (insofaras they influence location), but if major differences appear in the labour laws of the three East African countries in the future, this could have important locational consequences. But within any one country, they are unlikely to be important. These remarks also apply to the influence of trade unions on industrial location.

Capital.

In any general theory of location, the availability of capital in different areas will probably have some influence on location. Capital in fact, has a three-fold significance:-

a. availability of funds
b. cost of funds
c. availability and cost of capital to consumers and suppliers of the locating industry.

The availability of capital is rarely, if ever, a significant determining factor in the location decision of the larger companies, but for small companies, the availability of loan capital is often a limiting factor in location, more important than the interest rate charged. The larger company may be indirectly influenced in its location decision by the availability of capital to its customers and suppliers, but no examples of this type of situation were observed in Uganda. Very few firms stressed the importance of capital availability as a factor in their location decision, and those that did (seven in number) were small, private companies (the availability of capital to the smaller companies will be discussed in a later section). As a locational factor in the decisions of the large expatriate and U.D.C. companies, capital availability is of no significance.

Managerial Talent.

Managerial ability will only be found in the larger centres, and this factor can be important in the location decision via its influence on processing costs. But it is of more relevance to a developed, than a developing, country. A very large proportion of managerial staff is expatriate, employed by the parent company abroad or on secondment to U.D.C. companies. They are made available to a firm, whatever its location, but they do not influence that location (at least not within Uganda). The availability of local managerial ability is so limited as to be unimportant (as a locational factor) at the present time, but as a nucleus of African managerial talent forms, this could be a quite important consideration in the future.

Taxation.

Taxation has been found to be a minor factor in plant location decisions (11), and there is little evidence to assert either that high taxation drives away capital or that low taxation attracts it. It may be the deciding factor in individual cases, when one location must be selected from several satisfactory locations, but in general, its effect on industrial location is not significant, this being especially so in the case of Uganda.

Processing Costs and Industrial Concentration and Dispersion.

There are a number of processing cost savings that take the form of concentration advantages:-

1. if a large supply of labour is available at a particular centre, those industries with seasonal labour demands or those enjoying economies of large scale operation, will benefit from this factor in the form of lower costs.

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(11) See Greenhut, op. cit., p. 137.

2. it is possible to obtain cheaper and quicker replacements of parts for machines from subsidiary companies in the larger urban centres
3. other factors are more favourable in the larger centres e.g. insurance and commercial facilities, power and fuel availability, availability of capital, etc.

But there are strong decentralising forces at work:-

1. higher wage rates in the larger centres plus the possibility of more labour disturbances
2. there may be higher transport costs to distant markets - this leads to branch plant dispersion e.g. soft drinks industry
3. higher rents (Kampala - non-availability of land)
4. higher water processing and waste disposal costs.

It is extremely difficult, if not impossible, to isolate quantitatively the external advantages of a location in a large urban centre i.e. the advantages of agglomeration (or external economies of scale).(12) They do not appear to be significant within Uganda, and the only factors of any significance refer to Kampala. They are:-

a. a greater range of insurance and commercial facilities are available in Kampala, than at other locations in Uganda
b. it is often easier to obtain service and maintenance facilities in Kampala than elsewhere, although many spare parts have to come from Nairobi
c. nearness to an international airport (Entebbe) is considered to be of importance in some cases investigated.

One of the most important deglomerative forces in operation has already been mentioned, namely the non-availability of land for industrial development in Kampala.

External economies only become significant on an East African basis - Nairobi enjoys agglomerative advantages not found in Kampala - but within a country at Uganda's stage of development, they do not appear to be important. An assessment of their importance within Kenya is the basis for future research.

The Demand Factor and Plant Location.

Cost considerations present only one side of the location problem; the demand factor also helps to explain plant location and therefore it must be briefly mentioned here.

When consumers are scattered over an area, each seller is a monopolist with respect to consumers located near to his plant, and thus sellers tend to disperse to monopolise as great a part of demand as possible. The least-cost location becomes not merely the site at which the firm sells greater at the given market price and achieves greater gains per unit sale; it also enables the firm to undersell its rivals at several consuming points and thus places a wider market area under its control. Both cost and demand factors have to be taken into account. (13)

The Ugandan market is too small for such considerations to influence

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(12) See Nixson, op. cit., p. 9.
(13) This paper is not the place for a detailed description of these theories. See Greenhut, op. cit., pp. 140 - 162, and references given there. In E.D.R.P. No. 84 (22.10.65) the present writer attempted to apply current location theory to East African conditions.

location within the country, but it is a possible explanation of why some firms comes to Uganda. It remains to be seen how important this factor is in East Africa as a whole. The enamellware industry is a case in point (with plants in Kampala, Dar es Salaam and Mombasa), but the above considerations do not appear to be important in this particular example.

Personal Considerations and Plant Location.

The influence of personal considerations on plant location has often been stressed. But this factor is a complex one, and a closer analysis reveals many aspects which are similar to cost and demand factors.

Personal factors can influence location in three ways:

1. indirectly affecting cost
2. partially determining demand - indirectly related to costs
3. providing non-pecuniary rewards - these are "purely personal considerations".

Greenhut (14) makes the distinction between pure cost and revenue factors and cost-reducing and revenue-increasing factors.

Cost-reducing factors refer to certain gains arising from agglomeration or deglomeration (the advantages of agglomeration referred to above are a mixture of cost and cost-reducing factors), and the cost-reducing factor is distinguishable from the cost factor in that it emphasises the relationship between physical distance and costs other than in terms of transportation costs and labour costs e.g. the price of a raw material is a cost factor, but its availability, apart from its price, is a cost-reducing force. Revenue-increasing factors are those forces of an agglomerating - deglomerative type which affect sales e.g. need for quick delivery. It is not intended to discuss these factors in greater detail - reference has already been made to their original formulation and analysis - but of particular importance to Uganda are Personal Cost-Reducing factors and Personal Revenue-Increasing factors, and the remainder of this section is devoted to a discussion of their importance within Uganda.

Personal Cost-Reducing and Revenue-Increasing Factors.

Personal Cost-Reducing factors are cost savings that arise from the personal relationships between seller and buyer. An entrepreneur may seek a location near to a particular raw material supplier or banker because he believes (or knows) that friendship will influence the availability of materials or funds. The emphasis is on personal contact. From the revenue-increasing point of view, many entreproneurs believe that already existing contacts with customers (whether at the wholesale or retail level) promote sales.

Purely Personal Considerations.

In many cases, entrepreneurs are limited in plant site selection by preferences in home environment, and psychic income considerations may dominate the plant location. These considerations are indirectly related to cost and demand factors insofaras they affect the sales of products or purchases of factors through their influence on the entrepreneur's own service. The connection between purely personal considerations and price thus lies primarily by way of imputed cost. Personal contentment at a certain location may enhance the entrepreneurs sales ability, but this type of factor is basically non-pecuniary.

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(14) op. cit., p.163 - 175.

The Case of Uganda.

The influence of home environment was found to be very strong in the case of Uganda. The Asian entrepreneur dominates all sections of Ugandan industry (especially medium and small scale industrial enterprises) and in most cases it was found that the entrepreneur had established his business in the area where he lived. Examples of this development can be seen in the following sectors: miscellaneous manufacture of food, wood and furniture, oil milling, soap and other chemical products and engineering. The question that must be answered is whether this situation was due to purely personal considerations or whether cost-reducing and/or revenue-increasing factors were at work.

The majority of Asian industrialists (both large and small) have probally been in Uganda between 30 and 50 years. Most of them were engaged in trade, commerce and to a lesser extent, agriculture (the most notable example of the latter being Madhvani). Once capital had been accumulated (or became obtainable) and the decision taken to go into manufacturing, the entrepreneur would almost inevitably remain in the area where he lived, and it would appear that cost-reducing and revenue-increasing factors were of far greater importance than purely personal considerations. A good example is found in the soap industry. The (at present) largest soap factory in Uganda was established in the 1930's, the founder having good connections with local wholesalers and retailers. These contacts were useful in developing a sales organisation, and the established sales network was later the most important reason for the expansion of the business.

This example seems to represent a fairly typical development. Founders of enterprises developed business and social contacts, of value in both the establishment and expansion of the business. Because of personal contacts, capital and credit were more easily available and raw material supplies could be more freely obtained because of this personal factor. The major decision to be taken was therefore not where to produce, but what to produce. It is estimated that the location of about 37% of the firms investigated was strongly influenced by such cost-reducing and revenue-increasing considerations. No example was found where purely personal considerations dominated the locational choice.

The above method of analysis helps us to obtain a clearer picture of the locational pattern existing within Uganda. It is not enough simply to state that nearness to home was the major locational consideration - this factor has to be investigated in greater detail, and it is to be hoped that the above analysis has made the picture a little clearer.

Conclusion.

This paper has attempted to isolate and define those factors considered to be of importance in influencing industrial location within Uganda. It is essentially qualitative, and thus open to dispute, because of the absence of quantitative data, and also because of this, it is difficult to say which are the most important factors. It would appear that transport cost considerations (especially the transport cost on the final product) are of predominant importance, closely followed by the cost-reducing and revenue-increasing factors discussed in the preceeding section. Processing cost factors do not appear to be of significant importance within Uganda. Finally it should be remembered that in many cases, no single factor can indicate a location, and many influences are at work. Some margin of error is to be expected in the absence of quantitative data.

Np. 443.
Idrian N. Resnick,
U.E.A. Social Science Conference,
December, 1966
EC 1-2

CONVERTIBILITY IN EAST AFRICA:

THE TANZANIA POSITION

I. Introduction.

With the break up of the East African Currency Board, a new policy question has been raised requiring detailed economic analysis: is it in the best interests of any of the three members of the East African Common Market to maintain convertibility between their currencies and those of the other two countries.[1] While it is true that the governments of Tanzania, Kenya and Uganda have all, on various occasions, affirmed their commitment to continued convertibility, it is not at all clear whether this will continue to be their policy, or whether full convertibility is possible or desirable in light of various economic phenomena and policies in each country.

This paper is addressed to some of the aspects related to the policy decision that will have to be made by the Tanzanian Government. After some background material has been presented, the economic consequences of continued convertibility will be examined separately and the likelihood of continued convertibility will then be discussed.

II. Background.

Formerly, the question of interterritorial currency convertibility did not arise with respect to the three East African countries. Apart from the fact that it would have been impossible under the single currency system, it was not a real policy issue. Each country maintained the same exchange control against non-East African currencies, and it was presumably no easier, therefore, to export capital by first sending it to another East African country. And from the point of view of development and trade within East Africa, there is little indication that the single currency system did more than facilitate exchange; the main impact of a single currency, a central monetary authority, was missing in East Africa. The development within the common market, and the expansion of interterritorial trade apparently took place relatively independent of the fact that there was a single currency. Even the differentials in the rates of growth and the transfers of income from buyers to sellers resulting from higher prices being paid for protected imports from other East African countries, must be traced to real, rather than monetary, factors.

However, there is one feature of the Currency Board system that deserves fresh analysis -- its impact on the availability of foreign exchange for individual countries within East Africa. The system had a somewhat peculiar dimension with respect of foreign exchange. Because of the requirement that foreign exchange be held by the Currency Board for all issue except the fiduciary and crop finance, each Government had to secure East African shillings before it could claim the foreign exchange of the Board. The net reduction in the Currency Board's foreign assets, thus, resulted from a corresponding net reduction in the currency in circulation. This is an old story. What is worth repeating, however, is that East Africa had to undergo a net reduction in the volume of currency in circulation in order to use foreign exchange that had formerly been earned through balance of payments surpluses. Ordinarily such surpluses are regarded as postponed claims on imports, to be picked up at a later date. Under the Currency Board syste, however, these claims could only be used at the expense of equal currency withdrawals. For an individual country the system meant that earned foreign exchange might be used by other members of the market. This was augmented when countries ran import surpluses with their neighbours; there was a

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[1] Throughout this paper convertibility will mean the absence of exchange controls on capital or current account payments between one country and another.

transfer of purchasing power from importer to exporter and these transfers were claims on foreign exchange. Where interterritorial import prices were higher than external import prices, the transfer constituted a net loss of foreign exchange.

However, the loss of foreign exchange was an indirect loss. That is, there was a loss of real income which brought about a monetary shift (in the form of currency and/or demand deposits) from one country to another, and this money represented a claim on foreign exchange. There was no direct claim on the foreign exchange assets of any particular government, however, as they were not involved in the monetary transfers which took place.

In a single market, or currency area, the effects on the use of foreign exchange of protesting domestic industries are the opportunity costs of using foreign exchange to purchase the import content of protected industries. It is entirely possible, ignoring secondary effects, that the foreign exchange outlay on a particular product will be less if it is produced locally than if it is imported. This will occur if the value of the total import inputs is less than the value of the import cost of the final product. In any case, such industries are evaluated with respect to their net impact on the entire market.

In the case of East Africa, however, the market and the currency area have not been synonymous with the nation. And the nation, although having little significance as a concept in economic theory, has great significance within the context of economic policy. Each nation, therefore, has the task of allocating its resources most efficiently and the use of foreign exchange is one of the allocation problems facing East African governments. In one sense this is a problem of spending foreign exchange on those imports which contribute most to development. In another sense, however, it is a question of maximizing the supply of foreign exchange available for such imports and this involves maximizing exports and foreign aid (and perhaps foreign loans, if a short-run view is taken). The scarcity of foreign exchange also necessitates the husbanding of foreign exchange expenditure, and with respect to non-East African countries, Tanzania has used commercial policy to accomplish this on the current account and exchange control to affect it on the capital account. In the past, however, it has not been possible to pursue foreign exchange policies in relation to Kenya and Uganda.

The situation has changed with the creation of central banks in East Africa. First, while it is still true that the external exchange controls prevent foreign leakages to any greater extent in one country than another, interterritorial balance of payments deficits will now result in direct claims on foreign exchange. Second, it is now possible to use monetary policy as a conscious development instrument, although there are still limiations. Third, there is no longer any need to maintain external reserves equal to the volume of currency in circulation and, in fact, in an underdeveloped country every reason why these reserves should be kept at a minimum and excesses used for development imports. Fourth, the central banks will now be charged with the protection of the reserve position of the country, hopefully with the management of the balance of payments. And, fifth, separate balance of payments accounts will be kept for each country; it will, therefore, be possible to determine whether or not interterritorial capital movements which are detrimental to development efforts and/or balance of payments stability of any particular country are taking place.

The endless discussions in recent years concerning the gains and losses of continuation of membership in the East African Common Market have concentrated on the possibilities of using commercial policy to bring about certain adjustments in the location of economic activity and, therefore, in interterritorial current account balances. The question of using exchange control as a means of conserving scarce foreign exchange has only arisen with the introduction of separate currencies in East Africa. But it is a legitimate question and should be systematically evaluated. The evaluation may be undertaken on the basis of historical data and an analysis of the probable effect of the recent changes in the monetary system in East Africa.

III. Recent Experience.

While it may be argued that balance of payments accounts between one country and specific other countries generally have little relevance for economic analysis, through these accounts it may be possible to gather some information which can be used as a basis for deciding whether or not Tanzania should introduce an exchange control against other East Africa currencies. Table 1 shows Tanzania's balance of payments with Kenya and Uganda for 1963-1965. Several significant things ore observable from this table.[2] Tanzania experienced sizeable current account deficits with Kenya and Uganda in all three years. Tanzania's interterritorial imports have amounted to about £ 20 million per year.[3] Exports to Kenya and Uganda increased by a little more than 11 per cent in 1965, while imports from those countries remained almost constant after having increased 22 per cent in 1964.[4]

Table 1

Tanzania's Balance of Payments with Kenya and Uganda 1963-1965
(in £ '000)

	1963			1964			1965		
	Current Account								
	Credit	Debit	Net	Credit	Debit	Net	Credit	Debit	Net
Goods and services	3,719	18,044	-14,325	5,684	22,028	- 16,344	6,337	22,035	-15,698
Transfer payments	-	300	- 300	-	600	- 600	-	-	-
Total current account	3,719	18,344	-14,625	5,684	22,628	- 16,944	6,337	22,035	-15,698
	Capital Account								
	Liab.	Assets	Net	Liab.	Assets	Net	Liab.	Assets	Net
Private Longterm	1,449	-537	1,986	1,594	-591	2,185	750	300	450
Private short-term	654	164	490	719	180	539	325	15	310
Govt. Long term	-	-	-	-	-18	18	-	-7	7
Commercial banks	-	2,362	- 2,362	3,944	-3,875	7,819	3,807	5,169	-1,362
Total capital account	2,103	1,989	114	6,257	-4,304	10,561	4,882	5,477	- 595

Source: East African Statistical Department; and East African Statistical Department, Economic and Statistical Review, March 1965 and December 1965, Table I.1.

[2] The figures contained in the table are estimates. There are a variety of flows, particularly of a capital nature, that do not appear in any recorded form and are, therefore, omitted. These may be quite significant.

[3] These imports represent about 26 per cent of the country's total imports of goods and services.

[4] This relative decline in interterritorial imports was most likely due to restrictive measures introduced by Tanzania during the period.

The capital account presents almost the opposite picture. Net capital movements are shown to have taken place from Kenya and Uganda to Tanzania. Not only have private long term flows moved in this direction, but in 1963 and 1964 Tanzanians liquidated about £550 thousand per year of their long term assets held in Kenya and Uganda. In 1965 the inflow of private investment from Kenya and Uganda fell to nearly half of what it had been in the previous two years, and Tanzanians increased their holdings of other East African long term assets by £300 thousand. Short term capital also moved to Tanzania but there was no significant change in 1965. It will be recalled that in 1965 it was announced that separate currencies would be introduced and exchange controls on capital movements outside East African came into effect. Both the press and private discussions named Tanzania as the culprit and, although there is no evidence to substantiate these accusations, the uncertainty thus generated with respect to Tanzania's policies undoubtedly had an effect on private interterritorial capital movements. Net interterritorial private long term and short term capital movements to Tanzania thus decreased from £23 and £25 million in 1963 and 1964 respectively, to about £750 thousand in 1965. The changes in the positions of the commercial banks show net outflows from Tanzania took place in 1963 and 9165 and a sizeable inflow occurred in 1964.

In the recent past, therefore, the accounts show capital movements from Kenya and Uganda to Tanzania which have had the effect of reducing the large deficits incurred on current account. These reductions have not been particularly large; however, the pattern seems to indicate that most of the capital movements were autonomous, rather than equilibrating. Furthermore, the question arises as to what happened to the remainder of the current account deficits. Had they been resolved through the banking system, the transactions would have appeared in the balance of payments. At first it seems that the £14, £6 and £16 million balance of payments deficits which occurred in 1963, 1964 and 1965 respectively, were financed through unrecorded cash payments. However, this is an untenable conclusion, Tanzania simply could not withstand a £36 million cash outflow over a three year period, and there is no indication that the country has ever had that much cash in circulation.

It is difficult to analyze the implications of exchange control introduction in East Africa unless the nature and magnitude of flows becomes clear, and in order to evaluate interterritorial capital flows it is necessary to have some explanation for the large errors and omissions in the interterritorial balance of payments. There are several possible sources of error and omission. First, unrecorded trade takes place between Tanzania and the other two countries. However, it seems unlikely that this would result in export surpluses for Tanzania, and certainly not to the extent of £6 - £16 million. Second, unrecorded short term credits may have been advanced by firms in Kenya and Uganda to firms in Tanzania. This would occur if firms exported goods to branches in Tanzania and only demanded payment after these had been sold, but it would be expected that over a period of years as payments were eventually made to exporters, the short term credits would be liquidated and, if these were unrecorded, the errors and omissions would move from a credit to a debit position. However, it may be that there has been a growing volume of this form of credit over the past several years as new firms have been established in Tanzania and that, although old credits have been settled, new ones have more than offset the flows from Tanzania to Kenya and Uganda. Third, Kenya and Uganda firms with head offices overseas may sell exports to Tanzania branches who make payments directly to the head office rather than to the Kenya or Uganda exporter. Fourth, some Tanzania firms pay for interterritorial imports by drawing on their accounts overseas. It is not necessary for the transaction to go through any of the East African monetary institutions if payment is made by drawing a check on a foreign bank and paying to a foreign office which deposits it in another foreign bank. If the check is paid to the Kenya or Uganda exporter, the deposit will show up in the balance of payments as an increase in the foreign assets of commercial banks in those countries, provided the check is deposited with them.

In neither case will the payment appear in the Tanzanian balance of payments. Given the structure of business and banking in East Africa, all of these and other payments mechanisms contribute to the unsolved payments mystery and together probably explain most of it.

The importance of the errors and omissions in terms of a discussion on inter-East African convertibility is that there is at least some and potentially a large amount of unrecorded capital flowing from Kenya and Uganda (probably predominantly from Kenya) to Tanzania. To the extent that there are hidden cash payments, there will be revealed by the new currency arrangements, but it is unlikely that these account for a very significant proportion of the missing flows. Therefore, unless there is a change in the system of payments and accounting in East Africa, at the official level and among business and financial institutions, the chances are great that the unexplained residual will continue to be unexplained. From a foreign exchange point of view, to the extent that this system continues, Tanzania's foreign exchange position is less threatened that if all current account transactions were resolved through the commercial banks or the Central Bank. As long as these deficits are not settled through the monetary system, it means that capital inflows of some nature are occurring, either from Kenya and Uganda or from overseas, and to this extent Tanzania is better off from the point of view of its foreign exchange position than it otherwise would be.

In addition to interterritorial banking, and private long and short term flows, there is some subsidization of Tanzania's share of the East African Common Services Organization which is also missing from the balance of payments. The non-self contained services have been estimated to provide a net subsidy to Tanzania of somewhat less than £100,000 per year,[5] and Arthuer Hazelwood put the subsidy to the Tanzanian branches of the self-contained services at an upper limit of £1.4 million in 1965.[6]

Thus far it appears that East African convertibility has benefited Tanzania with capital inflows from Kenya and Uganda. However, another look at the statistics indicates that there may be a hidden capital outflow. It is not possible, for example, to determine whether the changes in the commercial banks' net position constituted capital inflows to or outflows from Tanzania. They may have stemmed from Tanzania banks drawing down their assets and transferring the funds to Tanzania. Alternatively, assets might have been drawn down as a result of checks, written by Tanzanians as payment to Kenyan and Ugandan exporters, which were cleared through Tanzanian commercial banks' accounts with commercial banks in the other two countries. The opposite may have been the case during the years in which Tanzanian banks increased their assets in Kenya and Uganda. While it is true that both types of transfers constitute capital movements interterritorially, there is no way of telling from the present statistics whether these transfers stem from decisions on the part of individuals and firms as to where to hold their balances or make their payments, or whether they originate from the commercial banks lending to one another. It should be remembered that these figures are total changes that take place over a period of a year and while there will be seasonal movements of funds appearing, particularly at the end of the year when large sums move to Tanzania, these will be smoothed out from one year to the next. However, it is not possible to determine whether these changes were equilibrating, in the sense that they were payment for current account deficits, or of a capital nature, in the sense that they stemmed from a decision to transfer capital. Moreover, if the latter were the case, it is not possible to determine whether the changes constituted decisions on the part of the banks to bring funds to Tanzania, or on the part of individuals to send capital to Kenya

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[5] East African Statistical Department, Territorial Incidence of the E.A.C.S.O. General Fund Services, 1960-1965, Nairobi: East African Statistical Department, Mimeographed, 1966.

[6] A. Hazelwood, Economic Integration in East Africa, International Seminar on Economic Cooperation in Africa, Nairobi: University College, 13-19 December, 1965, p.24

and Uganda. Ordinarily, these distinctions would not be important, and in fact, have no consequences for the balance of payments. However, if analysis is being undertaken to determine whether or not an exchange control should be introduced, it is of crucial importance to know whether or not capital outflows are taking place. It is not possible to answer this question on the basis of present balance of payments statistics.

In some circles it was expected that large capital transfers would take place from Tanzania and Uganda to Kenya when the conversion of the East African shilling into local currencies began. However, there is no evidence that they have occured. The coversion of East African shillings into Tanzania shillings has proceeded at approximately the rate expected on the basis of estimates of the pre-conversion distribution of currency in circulation. That is, it appears as if Tanzania will turn in to the Currency Board about £20 million in East African Currency Board notes and coins.

However, another form of capital flight may have taken place from Tanzania, which does not appear from the balance of payments accounts. Table 2 shows the net change in the foreign assets and liabilities and assets and liabilities with other East African banks of Tanzanian commercial banks. Although shown as changes from one year to the next, these figures would appear as balance of payments entries in the second year. In each year from 1961 to 1965 the commercial banks' position with respect to other banks in East Africa moved in the opposite direction to changes in their position with respect to overseas banks. At first glance it seems as if commercial bank overseas capital exports were more or less offset by capital imports from Kenya and Uganda and vice versa. However, as was indicated above, it is not possible to determine from the statistics on changes in assets and liabilities whether or not these constitute capital inflows or outflows. Thus it is not possible to tell whether net increases in balances due from East African banks, such as occurred in 1961/62, 1962/63, and 1964/65 were offset by the decreases in assets held overseas, or whether these liquidated overseas assets remained overseas through some unrecorded transactions. The opposite is true in the case of decreases in balances due from East African banks; if drawn-down balances remained in Kenya and Uganda in some form missed by balance of payments records, they did not offset the increases in the holdings of overseas assets by the commercial banks in those years. It is possible, therefore, that net capital exports took place, either as a form of capital flight or otherwise, in all years from 1960 to 1965 and what appears to be cushioning of capital exports to overseas may really have augmented those flows. At this time, however, the answer is simply not known.

Table 2
Change in the Foreign Assets and Liabilities of the Commercial Banks in Tanzania: 1960 - 1965
(in £.000)

Year	Net change in assets and liabilities with East African Banks (capital outflow = (-))	Net change in assets and liabilities with overseas banks (capital outflow = (-))
1960/61	1,073	-4,471
1961/62	-2,544	1,640
1962/63	-2,362	637
1963/64	7,819	- 3,318
1964/65	-1,362	3,597

Source: Computed from East African Statistical Department, Economic and Statistical Review, March 1965 and December 1965, Table I.1

From all points of view, therefore, with the exception of the possibility that net changes in Tanzania commercial bank assets have constituted hidden capital outflows, capital has been flowing to Tanzania from its East African neighbours rather than the other way around. For Tanzania, therefore, there is little or no conclusive historical evidence to support the introduction of an exchange control with respect to the other two East African currencies; if anything, the evidence suggest that Tanzania would stand to lose rather than gain from such a policy.

IV. Consequences of the Separate Currencies.

With the introduction of separate to currencies in East Africa, pressures for interterritorial exchange control may now be released. These pressure may come from two sources: the level of reserves, and capital outflows. If the level of reserves is relatively high, balance of payments problems even these stemming from capital outflows, can be sustained, at least in the short-run. In the case of Tanzania, the question is not so much level of reserves but the level of "free" reserves. The Central Bank Act specifics that the Bank maintain a level of foreign reserves equal to four months of the average annual imports for the previous three years. Table 3 shows an estimate of Tanzania's foreign reserve position as of 1965. Total imports from 1963 to 1965 averaged £62.9 million. Thus, the external reserve requirement at the end of 1965 was about £21 million. However, these reserves must be held by the Central Bank and are not generally available to settle balance of payments deficits, although some flexibility is implied in the Bank Act's provision that the required reserves shall be maintained by the Bank's "best endeavours." Consequently, "free" reserves in 1965 were about £1.7 million. For the moment, therefore, Tanzania does not appear to be experiencing pressures on its foreign reserves - pressures which might suggest the introduction of exchange control with respect to Kenya and Uganda currencies.

Table 3
Tanzania's Foreign Reserve Position in 1965
(in £'000)

Item	Total
1. Central Government foreign assets[a]	6,047
2. Assets of Currency Board represented by currency in circulation[b] (30 June 1965)	19,980
3. Fiduciary Issue (30 June 1965)	6,197
4. Share of Currency Board assets (item 2. minus 3.)	13,783
5. Gold Tranche of I.M.F. quota	2,857
6. Total external reserves (items 1. + 4. + 5.)	22,687

[a] This figure was calculated by adding the change in Government holdings of foreign securities for the years 1964 and 1965, as contained in EACSO's balance of payments estimates for Tanzania, to the Government sterling assets reported in the 1964 issue of the Statistical Abstract.

[b] The East African Currency Board estimated that in 1965 Tanzania had 33.3 per cent of the total currency in circulation in Kenya, Uganda, Tanzania Mainland, and Zanzibar; that is, 33.3 per sent of £60 million.

Source: United Republic of Tanzania, Statistical Abstract 1964, Dar es Salaam Government Printer, 1965, p.117; East African Statistical Department; East African Currency Board, Report for the Year Ended 30th June, 1965, Kenya: Government Printer, pp. 25 and 39; International Monetary Fund, International Financial Statistics, Washington: IMF, (month), 1965, p.

The reserve requirement, however, will necessitate the expansion of foreign reserve holdings as imports expand. The extent of the expansion will depend upon the future level of imports. Paul Clark[7] estimated that Tanzania's imports would expand to £102.3 million by 1970, and the Tanganyika Five Year Development Plan projected an import level of £100 million by the same year.[8] Table 4 shows the external reserves implied by these two projections. Since they were both made with 1964 as a starting point, 1965 and 1966 contain both projected and actual values of imports in the three years average, whereas 1964 is a three year average of actual import values and the figures for 1967 through 1970 are averages of projected values. Assuming there are no balance of payments deficits throughout the period, the reserves shown in Table 3, £ 22.7 million, will be inadequate to meet the reserve requirement by the end of 1966. By 1970 reserves will have to be expanded by £9.2 million, if the Clark projection is correct, or £8.6 million, if the Plan projection is accurate. Such increases can only be obtained if balance of payments surpluses are experienced and these would have to be in the range of £1.8 million per year. It is unlikely, particularly in light of the estimated 50 per cent import content of the development plan, that such surpluses will occur. Therefore, whatever might be said of the rationality of statutory foreign reserve requirements, as long as this requirement remains in effect, Tanzania will experience pressure of a not insignificant magnitude on its reserve position in the very near future.

Table 4

Projected Tanzania Foreign Reserve Requirements Equal to Four Months Imports
(in millions of pounds)

Year	Three Year Average of total imports (including re-exports)[b]		Implied external reserve requirements	
	Clark	Plan	Clark	Plan
1964	58.2[a]	58.2[a]	17.6	17.6
1965	63.4	63.2	21.1	21.1
1966	70.2	69.8	23.4	23.3
1967	76.6	75.8	25.5	25.3
1968	83.0	81.8	27.7	27.3
1969	89.4	87.8	29.8	29.3
1970	95.8	93.8	31.9	31.3

[a] actual

[b] It was assumed that imports would expand linearly from 1964 - 1970 at an annual rate of £6.4 million for the Clark projection and £6.0 million for the Plan projection.

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[7] P. Clark, Development Planning in East Africa, Nairobi: East Africa Publishing House, 1965, p.16.

[8] United Republic of Tanganyika and Zanzibar, Tanganyika Five-Year Plan for Economic and Social Development, 1st July 1964 - 30th June 1969, Dar es Salaam: Government Printer, 1964, Volume 1, p. 98.

If balances of payments deficits occur, the pressure will be more severe. There are various policy alternatives open to the Government in attacking such balance of payments problems. However, it has been shown that the experience of the past three years does not support the imposition of an inter-East African exchange control as one of these policy measures. This is an important fact which does not appear at this stage in the analysis; balance of payments problems and drains on the stock of foreign exchanges in Tanzania which might occur in the next few years will stem from the capital account. While it is true that it is possible to introduce exchange restrictions on current account payments, the existence of import licenses in Tanzania precludes the necessity of using this form of exchange control. It might prove desirable to impose other restriction on interterritorial trade, if balance of payments problems are experienced in the future, but inter-East African convertibility has not yet become a problem.

The question arises, however, as to what might be the effects of the introduction of the new currencies, particularly in light of possible divergences in monetary policy among the three countries. Given the fact that it is a relatively simple matter to transfer money among the three countries, it would appear that significant differences in monetary policy would not be possible. Tight money policies in one country which were not followed, or which were perhaps the opposite of those pursued by another country, would result, in the first instance, in interest rate differentials. To the extent that money markets in the three countries are interlocked, however, flows would be released which would tend to equalize interest rates. That is, it would not be possible for any significant length of time to pursue divergent monetary policies in the three countries. However, there are no money markets to speak of in East Africa, and until now, there does not appear to have been any interest rate differentials among the commercial banks for non-bank borrowers and lenders to take advantage of by shifting from one market to another. On the surface, therefore, there does not appear to be any danger of monetary policies being thwarted by capital transfers among the three countries.[9] In the near future it is entirely possible that one of the East Africa governments will use the new credit-expansion facilities of their Central Bank more vigorously than the other two governments. In terms of the pressures for exchange control, it is important to understand what effects differential fiscal and monetary policies will have on interterritorial capital flows. Since the nature of the payments mechanism, and the way in which consumers, savers and investors react to expansions of the money supply in East Africa are not known, economic theory must be looked to for some guide.

If there is slack in the expanding economy, there is no reason why capital should be demanded or attracted from the other two countries. Let us assume, however, that there is full employment in the expanding economy, and that only one of the three countries uses expansionary measures. Furthermore, let us assume that fiscal policy, in the form of deficit financing by the sale of securities to the Central Bank, is the method chosen for expanding the money supply. The prices of those goods and factors purchased by Government with the new money will rise in the first instance. In a simple model higher prices result in a decrease in the quantity demanded on the part of the private sector and goods and factors are, thus, effectively transferred to the public sector. To the extent that the private producers sell to Government, output is not changed-only the buyer is altered. Where factors are bid away from one industry to another in order to satisfy the higher Government demand, the composition of output will change. However, a more detailed analysis reveals other possibilities.

The increase in the money supply results in higher money incomes and rising consumer prices reduce real incomes. If consumers resist the reduction in real income, they will use their higher money incomes to buy the goods they were consuming before prices rose and

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[9] At this point, for all intents and purposes, there is one monetary system in East Africa with the three "regional" central banks and no head.

there will be a further increase in prices. Rising prices will increase the transactions demand for money; if this is not equal to the full increase in the money supply, the remainder will find its way into the banking system , and provide a basis for a multiple expansion of credit.

There will be an increase in monetary consumption, equal to the change in monetary income times the marginal propensity to consume. If investment is partly a function of income, there will tend to be an increase in monetary investment also.[10]

Internal equilibrium will be reached when the increases in Government spending, monetary consumption, and monetary investment are equal to the increase in monetary income. The increase in monetary income will be equal to the increase in the money supply times the increase in the price level (assuming velocity constant). The relative shares of domestic product going to Government, investment, and consumption in the new equilibrium will depend upon the relative strength of their marginal propensities to spend higher money incomes and the extent to which relative prices of goods bought by these three sectors change.

An important question is whether or not borrowing rates rise during this process. On the one hand, there is an increase in the money supply arising from the initial government deficit and the multiple expansion of credit within the banking system. On the other hand, there is an increase in the demand for liquidity on the part of the non-bank public for transactions purposes, and an increase in the demand for loanable funds on the part of investors in order to carry out higher monetary investment. If the increase in the supply is greater than the rise in demand, equilibrium will be found at lower interest rates. If supply expands less than demand, rates will rise; and if they increase by the same amount, rates will be the same in the new equilibrium as the old. If we assume that one of the characteristics of this open economy is that loanable funds are perfectly mobile with respect to other monetary centers, a fall in interest rates will induce a capital outflow, and a rise in rates will result in a capital inflow. A capital outflow will produce an income equilibrium lower than it would have been had the flow not occurred, an a capital inflow will result in a further inflation of income to a higher equilibrium.

Within the East African context, divergent fiscal policies among the three countries (assuming little or no unemployment of complimentory factors) may result in either capital outflows from or inflows to the country expanding more rapidly than the other two. From a foreign exchange point of view, the expanding country would lose from the capital outflows, but would gain from the point of view of controlling domestic inflation. The country expanding relatively less rapidly (with respect to the money supply) would gain foreign exchange from capital inflows but experience domestic inflationary pressures and from capital outflows it would lose foreign exchange and experience deflationary pressures. Therefore,[11] it is possible that future differences in economic policy among the three East African countries will create foreign exchange problems. It is not possible to determine from what quarter these pressures will come, but the possibility stems from the close monetary links among the three countries.

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[10] Some of the increase in monetary income will spill into imports, because of the decrease in their relative prices. The external balance will be disturbed, but this can be ignored for our purposes.

[11] The analysis is not complete, of course, and in order to determine the full consequences of these policy differences, the relative effects on the balance of payments of changes in imports and exports, as well as capital flows in all three countries would have to be examined.

In the event that economic or political instability occurs in one East African country relative to the other two, some form of capital flight may be expected to occur. However, policies directed against the Asian community, or which are intepreted to be directed against it, will also generate capital flight to "safer" havens elsewhere in East Africa. However, there is no evidence of economic instability now or in the near future in Tanzania and the political progenestications are not within my abilities.

Another unknown factor in the converibility question is the effect of the new arrangements which appear to be on the horizon for the East African Common Market. It is almost certain that there will be some provision for the location of new industries in Tanzania. What form this will take is yet to be seen. If it involves encouragement for location of branches of Kenya firms in Tanzania, a capital flow to Tanzania may be expected. If new Tanzanian firms are to be protected against competition from Kenya and Uganda firms, local capital will have an incentive to remain in Tanzania and Kenya and Uganda capital will have a motive for moving to Tanzania. In either case, exchange controls introduced on Tanzania's part would hinder, rather than aid these flows.

V. Conclusions.

In conclusion several things may be said. First a strong case may be made for the introduction of exchange control with respect to Kenya and Uganda currencies on the part of Tanzania, if capital movements to those countries take place because of divergences in monetary and fiscal policies, economic and/or political uncertainties, or in response to better investment opportunities. Second, it is too soon to tell whether monetary and fiscal policies will differ significantly among the three countries, economic and political uncertainties do not appear to be Tanzania's agenda in the near future, and investment opportunities are likely to shift in Tanzania's favour. Third, the present statistics do not provide important information regarding interterritorial capital movements and it is not possible, therefore, to base a decision regarding convertibility on available historical evidence. Fourth, Tanzania's balance of payments and reserve position do not seem to be in difficulties but the reserve requirements of the Central Bank Act may create pressures on reserves in the immediate future.

Finally, since the overall conclusion is that continued concertibility between the Tanzanian shilling and the Kenya and Uganda shillings is presently in Tanzania's best interests, no mention has been made of the consequences of inter-East Afrian exchange control. These might be widespread indeed and must be fully examined before there is a change in the current policy, should the case arise. On a prior grounds, the implications of such a change for East African economic cooperation seem to be so grave that every attempt should be made to find alternatives to inconvertibility.

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M.J.H. YAFFEY

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DISCUSSION PAPER:
BALANCE OF PAYMENT PROJECTIONS - TANZANIA

Part 1: REVIEW OF PREVIOUS WORK.

Tanzania has no permanent institution or organization for making projections of the balance of payments, nor is the routine compilation of balance of payments statistics undertaken in Tanzania at present. The compilation for the whole of East Africa is undertaken by the East African Statistical Department in Nairobi, with the help of data-elements received from institutions in the three countries, among which is the Central Statistical Bureau in Dar es Salaam. This is a bureau which is attached to the Ministry of Economic Affairs and Development Planning, and one of its statistical officers spends a part of his time on balance of payments work. There is one economist in the same Ministry and one economist in the Treasury, who count "balance-of-payments" among their fields of work.(1)

Small as this number is, it is quite creditable for a country at Tanzania's stage of development; there are many countries of comparable poverty which do not go beyond compiling import/export statistics. Nevertheless, more manpower is, I believe, going to be put into balance of payments compilation and analysis, for two reasons:

(i) The development effort is increasing Tanzania's imports very rapidly, and the availability of external finance is recognised as an important planning constraint.

(ii) The introduction in July 1965 of new exchange controls makes it possible to collect certain balance of payments data in a new way which is not only more accurate and speedy but lends itself to short-term forecasting procedures.(2) It is my personal hope that the staff, equipments and techniques needed to exploit this opportunity will be functioning in East Africa before the end of 1967,(3) and in this paper I will mention some of

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(1) Information obtainable from "Tanzania Directory".

(2) For the application of these forecasts to policy-making, see "Balance of Payments Management", ERB paper 1966/1.

(3) Identical conditions presumably exist in Kenya and Uganda, and I would expect that technical consultations would be very fruitful. I have no idea which of the three countries is most advancedin this field.

the techniques which might be used, though I must stress that they cannot be considered as valid until they have been vindicated in practice under local conditions.

So far as long-range forecasting is concerned, several attempts have been made to project the balance of payments for Tanzania (mainland) up to 1970, or 1971, mostly on the basis of an econometric model.

There is the projection in the Five Year Plan, Vol. 1, page 101, which gives "Exports of Goods and Services" as £95.0 million in 1970, a figure which is incompatible with the projection on page 98 which shows visible exports alone at £95 .0 millions in the same year. There is a second inconsistency: imports of goods and services are shown at £108.5 millions (page 101), comprising goods, £100.0 million (page 98) and services (presumably £8.5 millions). The balance on current account (page 98) is shown as minus £25.3 millions, which implies that exports of goods and services come to only £83.2 millions. This is very curious. Possibly this second inconsistency is to be explained by the transfer account. This is not mentioned at all in the Plan, so possibly it is included in the item "Balance on current account". The balance of goods and services is £(95.0 - 108.5 = -13.5) million, so if "balance on current account: £-25.3 m." includes the transfer balance the net transfers must be minus £11.8 million, a peculiar figure as the balance of transfers is regularly positive. We cannot, in short, make much use of the Five-Year Plan as a balance of payments projection, as it stands.

Next we have three models of the economy: that of Professor Clark,(4) the revised version of Messrs. Howe and Karani written in Nairobi,(5) and the further modified version of A.van de Laar produced in Dar es Salaam very recently.(6) It is gratifying to find a fairly close agreement between the figures projected by these three

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(4) Paul G. Clark, "Development Planning in East Africa".
(5) C.W. Howe and H. Karani, 'A Projection Model for the Kenya Economy".
(6) A.J.M. van de Laar, "A Possible Framework for Tanzania's Second Five-Year Plan" (ERB Paper 1966/4).

models and those of forecasts based primarily on commercial considerations rather than macro-models. Nevertheless, I would venture two criticisms of these models:

(a) When one wishes to up-date them it is very difficult to reconstruct the data-processing techniques used as sufficient details are not given.

(b) The models cannot give a satisfactory analysis of invisibles nor of transfer payments.

The Report of the British Economic Mission "("Ross Report") last year contained some balance of payments estimates. This document is still confidential and I will only say that although I have no reason to doubt the soundness of its judgement, I find it disappointingly brief, only aggregated figures being given, and the interesting question of whether the balance-of-payments constraint or the domestic savings constraint will be dominant was left unresolved.

Some forecasting was undertaken by the Central Statistical Bureau with the help of the E.A.S.D. on a medium-term basis, in connexion with the Sterling Area technical conferences, and no doubt similar exercises were performed for Kenya and Uganda. These were not required for policy-making and were not the subject of detailed analysis. The outcome was a table of figures without comment or explanation and no doubt simple extrapolation was the principal technique.

The most recent attempt was one which I wrote(7) for the Treasury and the Bank of Tanzania quite recently, which is a forecast up to 1971. Having criticised everybody else's work I ought also to criticise my own. Some criticisms will doubtless emerge from the following exposition of methodology; but at this point I will say that some of the commercial forecasts were compiled with reckless haste; that the ICOR is not a sufficient means of projecting GDP; that I failed to ferret out certain important information which would have been helpful and was extant, and one of the Annexes is terribly confused.(8)

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(7) ERB Restricted Paper 1966/2.

(8) I wish to acknowledge the help of Mr. Anonsen and Miss Thornhill, of E.A.S.D., G.K. Helleiner, Don Mead and Hans Dahl of the University of East Africa, and Reg Green of the Tanzania Treasury, with method problems.

Part 2: METHODS AND PROBLEMS OF LONG-RANGE FORECASTING.

In principle we should analyse exports and imports by commodity with reference to cost trends (supply conditions) and market or income trends (demand conditions) which requires some study not only of the country in question but also of the economic trends of its trading partners. There are certain difficulties in doing this, as follows:

There is not a state of perfect knowledge regarding the future behaviour of the economics of the trading partners. The Vietnam situation, the rainfall in India, the severity of unemployment in the U.K., the choice of Chancellor in West Germany - these are unpredictable factors which will materially affect the GDP of Tanzania's main trading partners outside East Africa. As to trade within East Africa, much depends on the outcome of the Philip Commission's work - what the Commission has proposed, whether it will be ratified, and what results are to be expected from its proposals - which is still secret, and I have no information on it at all.

This only means that one cannot pretend to have any exact forecast of the demand for exports or the cost of imports. Nevertheless in projecting exports one must have a price estimate as well as a quantity estimate (in most cases) and this means some judgement as to the state of the primary product markets. (For import costs one can be forgiven for making the assumption of constant import prices when one is expecting a period of marked world recession). But in most cases the behaviour of the economy of the foreign importer is not the main consideration. One cannot say that the main influence upon demand for sisal is the growth rate of GDP in Western Europe because whether it grows at 4% or 8% the chief factors will be a) the competition from synthetics, b) the development of new uses, c) the policy decisions of Chinese and Eastern European importers, d) the indeterminate behaviour of oligopsonists confronted with oligopolists, and e) the outcome of the East African negotiations with the EEC. With the other major crops the same unpredictable elements - or most of them - hold sway, with the additional uncertainty in some cases of the rate of releases from U.S. stockpiles. We do not know whether the price of cotton in the next five years will fall by 5% or 25%, and I would quote almost as wide a range for sisal, which could be between zero and say, 15% below its present price; for coffee, which is sold in separate markets

at separate prices, the prospect is similar to that of sisal. Now, the falls could be quite modest (reckoning from present price levels, which are already depressed); or they could be severe. That is the range of our ignorance for these three commodities, which are, of course, Tanzania's three most valuable exports.

What I suggest one should do in such a situation is to start with quantity and price estimates taken from businessmen active in the markets; collecting these in Tanzania in 1966 one gets a composite picture of expectations of a recession which I can best describe by saying a) that it is moderately severe by contrast with a good year, b) that it is only slightly worse than 1965/66, c) that it is expected to be at its worst in 1969 and to hold steady thereafter until 1971, d) that one or two exceptional commodities will not be affected, e) that businessmen (I do not include producers) contemplate the prospects with stoicism rather than desperation. Then, in order to take into account the possibility of this composite estimate being wrong, one can calculate the effects of export prices falling more or less severely than this. Ignoring the thorny question of overall supply elasticity, it is an easy matter to work out 5% and 10% of the estimated exports in each future year, and to say that if the export price (index) is 5% or 10% lower than the businessmen anticipate, than exports will be so much lower. 1% gradations should in fact be used because even 1% makes an enormous difference to a net balance of payments which is as fine as that of Tanzania. Then it is necessary to estimate the effect on imports of these hypothetical falls or rises in exports. Strictly speaking they are not falls or rises over time but different possibilities existing at the same time; so no downward multiplier effect should be taken into account. Even with the most pessimistic price assumptions the valueof exports will probably continue to rise; there is no question of creating unemployment in the export sector.(9) It is therefore correct to say that a given "fall" (negative difference) in exports causes an equal "fall" in projected GDP and not a multiplied fall. The "fall" in GDP then causes a "fall" in those categories of imports which are correlated with GDP; taking the correlation from historical data and assuming it to remain constant, one can calculate the effect on imports. (There is a complication here connected with import substitution, which I will discuss later).

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(9) Taken as a whole. For individual commodities (sisal, gold) there could well be a local downward multiplier effect.

Into what categories should exports and imports be broken down? For exports one would clearly take the leading commodities, or where data are impossible to get in that form, the export sales of the large enterprises; leaving a residue of miscellaneous exports. Since these miscellaneous exports inevitably include a large number of small manufactured items it is probably better to assume that they will grow as fast as GDP rather than take the (slower) growth rate of the other export items.

For imports I think it is a good idea to break out those commodities for which a definite import substitution programme is planned, the extent of which is known or can be estimated with reasonable accuracy; these can readily be identified, for East Africa, from the Plans. The rest can be divided into, at least, consumer, intermediate, capital and miscellaneous goods and correlated with whatever projectible element of the social accounts they can be conveniently be correlated with. The correlation must, of course, be causally plausible, and if possible it should be a close correlation as revealed by the historical data. In deciding which items to include in each category it is, I think, helpful and legitimate to delineate categories in such a way as to get close fits in the correlation (that is for difficult borderline cases).

It is not, I think, helpful to break down capital formation into government and private capital formation. Some economists, I know, have done this, notably Dr. Van Arkadie, taking as a rule of thumb the belief that the import content of government investment is 50% except for construction (30%). I doubt whether the studies on which these figures are based are sufficiently accurate; one must take into account government purchases ex stock from commerically-imported stores, government purchases from East Africa (not distinguished in the Trade Returns), and ideally the indirect (multiplier) effects of government spending. Figures shown to me by Dr. Idrian Resnick indicate that historically there has been no significant relationship between government investment and government imports.

One must, therefore take capital formation as a whole as an explanatory variable and this for Tanzania shows a very close correlation with imports of capital goods - as one would expect, since local production of capital goods is very small. One would expect a very close correlation also for Uganda and a less close correlation for Kenya.

For intermediate goods a plausible correlation is with GDP, and in fact even if the fit were a poor one on the historical

data, if would be difficult, I think, to link it with anything else. (The historical data are in any case not very reliable and limited to very few observations).

For consumer goods it is tempting to put in a relationship with consumption rather than with GDP, but there are difficulties with this. First, the historical data are somewhat weak, since consumption has been calculated as a residual in the national accounts. Second, how is one to project it? If we assume consumption is a constant fraction of GDP, the relationship is with GDP (and this the simplest way out). If we assume it is a constant fraction of total resources, or of total resources minus exports, the incorporation of these other trade items is a further source of possible error (and a large one). A solution of this difficulty which may be more attractive is to examine historically consumption as a fraction of GDP and in the light of the fraction aimed at in the Plan estimate by how much further it can reasonably be expected to be further depressed. One can then project consumption from projected GDP; then, imports of consumer goods as a percentage of total consumption show a trend (reflecting the import substitution programme) which can be extrapolated to project imports of consumer goods.

Another category which I have found it convenient to deal with separately is imports of transport equipment. This includes capital, consumer and intermediate goods in indistinguishable proportions; in Tanzania, historically it shows a close correlation with GDP, as one would expect, and can be projected accordingly. In this I differ from Professor Clark who includes, for example, the import of lorry chassis (Tanzania imports many lorries in this form, before adding a simple wooden superstructure) as intermediate goods; but clearly this is a debatable point.

Miscellaneous imports (SITC category 9) include gold, postal packets, small-arms and live animals. Conventionally one assumes that the growth rate of this category is equal to that of all other imports. I believe, however, that in some cases it may be better to regard it as a variable fluctuating randomly around a certain mean and accordingly, one should project it as a constant.

So far I have made no mention of imported goods which are subsequently re-exported. In certain categories these are substantial; fortunately, not in many. If the goods are essentially

goods in transit[10] they should clearly be excluded from both imports and exports. If the goods are processed in some way they will be more valuable when they leave, and to deduct the full reported value of re-exports from the imports would be to understate the imports. In certain cases one can test this by observing that if the full value is so deducted the resultant series for imports behaves in a way which is inversely correlated to the plausible explanatory variable. In such cases one must either use the gross figures as they stand or deduct an arbitrary percentage (possibly 60% or 70% of the re-exports as reported) from both sides, reflecting the presumed value of the goods other than value added locally.

Fortunately the problem of re-exports from Tanzania to Kenya and Uganda does not arise, since such goods are reported as the Net Imports of the country in question and are not reported at all in the statistics of Tanzania. The figures would be available if required but it seems safe to assume that the value added by Tanzania on goods destined for Kenya and Uganda can be neglected.

However, goods entering Kenya, destined ultimately for Tanzania or Uganda have a substantial value added as they pass through Kenya. Even when no processing is undertaken, the transportation charges are considerable. A survey conducted by the EASD has established that the value added averages 15% on top of the original import value. This is accordingly entered into the Tanzanian and Ugandan balance of payments statistics as a debit entry in the import valuation adjustments. (Actually I should suppose that the figure should be above 15% for Uganda and below 15% for Tanzania). How is this to be taken into consideration in the projection of imports? Ideally one should have these costs broken down according to the categories of imports, and mark up the historical data accordingly, beforerunning the regressions against the historical data of explanatory variables. However, this breakdown is not available, and for the Customs or EASD statisticians to produce it would be a substantial exercise even to get one year's results. The only alternative is to regard these costs as a general charge on imports. Then they can be projected to grow at the same rate as imports in general. The only modification which might be necessary is if we suppose that owing to the development of new harbour

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(10) Goods which at the time of importation are known to be in transit are supposed to be excluded from the Trade Returns.

facilities or other external input points, the proportion of imports coming via Kenya is likely to fall. This is indeed a reasonable supposition in Tanzania's case, but it is difficult to make the appropriate correction without being somewhat arbitrary.

The orders of magnitude may be seen from the following rough calculation which arbitrarily supposes that in some future year imports via Kenya will have grown by a half while direct (retained) imports have grown by three-quarters.

	1965 £ million	1965 + x £ million
Total Imports of Tanzania	67	111.25
Less: Imports originating in Kenya and Uganda	17	29.75
Imports from outside East Africa ("Net Imports")	50	81.50
Less: Imports not entering via Kenya ("Direct Imports")	26	45.50
Imports via Kenya ("Indirect Imports")	24	36.00
15% value added	3.6	5.4
Value added as % of total import bill	5.38%	4.85%

One other point in connexion with the valuation basis of imports and exports is that the present method of valuable is not entirely satisfactory. On trade outside East Africa it is generally believed that a systematic over-valuation of imports and under-valuation of exports is practised. This presumably does not happen in trade within East Africa, but the Customs practice of allowing some merchants to state their exports c.i.f.(11) while others report them f.o.b.(12) must generate some error in the balance of payments and without further surveys it is clearly impossible to enter an adjusting item in the accounts.

I want now to discuss import substitution. The methods described above of projecting imports are based on historically observed relationships with GDP etc., and what they in fact predict is "potential imports". If new import substitution programmes come into operation in the next few years the actual imports will differ from potential imports (consumer

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(11) Insurance is generally not used in this trade which is predominantly overland, but the freight costs may be considerable.

(12) Information given me by the Principal Collector of Customs, Dar es Salaam.

goods below, capital goods above) because there will be a departure from historical relationships owing to a structural change in the economy. At least we hope so.

The problem is simplified by the fact that substitution of imported capital goods can be neglected, and that of intermediate goods is very small, that of "miscellaneous imports" can also be neglected. This leaves those categories of imports which were broken out precisely because the import substitution programme for them is known, and the large category of general consumer goods.

Given the forecast of "potential imports" of consumer goods we have to deduct the estimated forecast of that local production which will be on sale other than what was on sale in the historical period used for forecasting potential imports. But this period covered several years In the case of Tanzania we can say that no serious import substitution programme was undertaken (or at least, brought through its gestation period) until late 1965 or 1966; the development of the consumer goods industry (other than the production of raw foodstuffs, which can be excluded as it is non-competitive against imports) cannot be said to have begun until 1966, and the year 1965 (or 1964/65 average) can be used as a base year from which to measure new import substitution.

Given the GDP projections, if one breaks out the projections for the government services and export sectors, one is left with production of goods for the domestic market and broadly speaking this can be regarded as a projection of import substitution, but some of it (e.g. monetary pombe brewing) is essentially non-competitive against imports. Assuming, however, that this type of production will be stagnant, the absolute increase in the remainder will be genuine import substitution. The possible error in this assumption does not seem likely to be large.

As regards the import content of import substitution, in principle we should take into consideration additional imports of capital goods (initial investment and replacements), intermediate goods (recurrent inputs), and consumer goods (the indirect effect via the income multiplier).

The additional import of capital goods presents no problem since the projection of "potential" imports of capital goods is based on a projection of capital formation which already reflects planned import substitution.(13)

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(13) This has to be based on the National Plan, modified in the light of latest expectations.

The additional import of intermediate goods likewise is zero since these imports are based on GDP projections which also embody the import substitution programme already.

For capital and intermediate goods there is no reason to suppose that the changes in the composition of capital formation and of GDP will affect the import content pro rata.

But for consumer goods - although the projections of "potential imports" are already inflated by the expanded GDP - it is likely that the new import substitution will generate a) urbanization, and b) the spread of wage employment, thus giving rise to i) a change in the value of the expenditure multiplier, probably with an increase in the velocity of money circulation, and ii) a shift in consumption patterns in the direction of more sophisticated goods, which despite the import substitution programme still means more imported goods. There are a number of unknowns here, including for example:

1) social attitudes to public versus private transport;
2) the locations of the new investments;
3) consumers' preference for local products;
4) the extent of the demand for cash balances;
5) the growth in the volume of consumer credit;

and I see no way of making an appropriate correction for this structural factor, though I admit that if none is made, imports are likely to be understated.

In the case of a country like Kenya where no abrupt take-off at the end of 1965 can be postulated but rather a gradual expansion in the manufacturing sector during the period from which historical data are taken, the above method cannot be applied; but since a longer time-series is available it might be possible to break the period into two and examine the structural changes that already occurred, and somehow project the process of structural change[14]. This is evidently a trickier task.

The method I have been describing clearly relies a great deal on the capital formation and GDP projections of the official Plan. It is hardly necessary to add that if the financial requirements as revealed at the end of the balance of payments study[15] seem excessive, these targets need to be revised downwards. In particular there is a strong possibility for all three countries in East Africa that the export performance may cause GDP to fall short of plan targets.[16]

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(14) I am alluding here to the work of Mr. H.E. Dahl, in Nairobi.
(15) A test must also be made of the savings constraint and possibly of the manpower constraint.
(16) Exports account for about 42% of Tanzania's monetary GDP.

Before leaving the trade section of the balance of payments I would like to mention that, if data were available, the incomes of different sections of the population should throw more light on imports of consumer goods and transport equipment. It would be helpful especially to know the import content of spending by expatriates, while a forward estimate of the numbers of expatriates could be deduced from the manpower Plan. It would be interesting to know if this has been attempted elsewhere.

There is little to say about invisibles and transfers. Genuine services can be estimated on a growth-rate basis with reference to the Plan, as modified. Pensions, gratuities and severance pay to expatriates can be calculated fairly accurately with the help of official sources. The growth of tourism may be provided for in official plans but if there are in an unfinished state only a rough guess can be made. Emigrants' transfers depend partly on official policy regarding expatriate employment and partly on political uncertainty: in East African conditions no firm estimate can be made. Then we have investment income. Investment income on Government account can be estimated to some extent. The interest burden on existing debt can be calculated. An estimate of the burden of future debt can be roughly made but must be reconciled with the amount of official investment which seems likely to be borrowed in the light of the final result of the study. On the credit side there are sinking funds bringing in an income and the official foreign exchange reserves which also provide a revenue; both can be very roughly estimated. For private investment income there is a sad lack of data, both historical and current, and some assumption probably has to be madeto the effect that it grows at the same rate as GDP or as private capital formation with a lag. But the proportion of investment which will be private (a fortiori the proportion which is foreign private), however it may be declared in the Plan, must, I think, be regarded as unknowable. A coward's way out is to take historical data for the outflow of public and private investment income together[17] and assume a future growth rate equal to that of GDP. The growth rate of the credit item will be small if there is no outward capital movement from the country and no change in foreign exchange reserves, the only increase being in revenue from Government sinking funds. If these assumptions

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(17) Over the period 1960-65 the outflow shows a jump when there was a capital outflow; high profits are a form of capital outflow. This can be roughly measured and corrected for.

are made, and additions to the sinking funds are being made in a regular fashion, and if the sinking funds are earning a yield which can be regarded as stable, then the credit item is calculable. It is fairly clear that the credit item will grow more slowly, and start at a lower initial level, than the debit item.

The capital account also suffers from a lack of data. There can be no question of estimating the marginal efficiency of capital, the mobility of capital, the supply schedule of loanable funds or other such sophisticated concepts with the data now available; I am unrepentantly dogmatic on this. Instead I find it convenient to calculate the net inflow of foreign long-term capital and donations as a proportion of gross domestic capital formation. This brings out the political factor very clearly. Up to 1962 it was 35%-40%; with political disturbances it fell sharply, to virtually zero in 1964; in 1965 it rose again but not to its former level. We can perhaps talk of the period of dependence on the U.K; the period of loss of confidence; and the period of independence with confidence for the most part restored and money coming in from new sources. Barring any new political shift we may therefore expect the percentage to be, say, 25%-30% in the next five years.(18) This should tally with the requirements arising from the other sections of the balance of payments; if it is too low, the whole growth perspective is too ambitious. If it is too high, some rise in reserves can be expected.(19)

Part 3: SOME THOUGHTS ON SHORT-TERM FORECASTING

At present the E.A.S.D. prepares balance of payments statistics on an annual basis; a major component of the data is the Investment Survey return, which companies fill in once a year with reference to whatever date suits them best for accounting or other purposes. Certain other elements are of an annual nature such as diplomatic spending estimates, but apart from minor items, the whole of the current and transfer account could with little difficulty be put onto a quarterly basis and even a monthly basis with some interpolation. The

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(18) The Plan originally anticipated considerably more than this.

(19) The question of optimum reserves need not be looked into here though it is one which is far from being overlooked in Tanzania.

same is true of official capital movements, so that if we are content to leave private capital (net) as a residual we can if we wish obtain a very much more up-to-date balance of payments than we now have. By extracting seasonal trends and by utilising certain forward indicators, a short-term projection could then be made, on a rolling basis.(20)

The reason why this is now possible (and was not possible before July, 1965) is that we have exchange control governing payments to non-East African account. The forms used are of course indicators of approvals rather than transactions carried out, but it should be an easy matter to have a detachable slip or extra page on which the banks can record the transaction, stating merely the amount in shillings and the value-date (the serial number of the form together with its colour indicating the motive of the payment). Each form would have to correspond with a category of visible or invisible trade or transfers, demarcated in a way considered most suitable for the balance of payments.(21) The different types of transaction within each category could be listed and the applicant asked to indicate the appropriate one(s); this would assist the exchange control and serve as a population from which a sample could occasionally be drawn to obtain a more exact description of what is going on.

The detached slips should be collated according to category (using a colour code) and grouped month by month according to the date of the transaction.

Governmental payments should be recorded in separate categories, the transactions being noted by the central bank, and the authorising officers being asked to identify the nature of transactions.

Where at present the banks are authorised to sanction certain payments without reference to Exchange Control, simple additional forms would need to be used to record the transactions.(22)

This would provide all necessary data on payments outside East Africa in a steady stream and in convenient form.

Receipts from outside East Africa are more difficult, but not impossible.

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(20) See footnote (2).

(21) For a useful list of invisible transactions see "Code of Liberalisation of Current Invisible Operations", OECD. Dec. 1964. This needs to be reconciled with the items of the IMF manual and the particular characteristics of E.Africa, and it should preferable be uniform through E.Africa. I am now attempting this reconciliation.

(22) Some forms should also be used for operations across inter-company accounts which at present get Exchange Control approval without the use of special forms.

Exports are recorded steadily by Customs. Gold movements are recorded equally promptly by customs, if the gold crosses a frontier, and should be recorded by official licensing, where a change of sector within the country is concerned. Insurance data couldbe obtained by asking additional questions in the quarterly questionnaires now in service. Transportation data could be obtained from major carriers and harbours at reasonable intervals; minor enterprises could probably be ignored for transactions outside East Africa. Receipts from foreign-travel (at present estimated from immigration records) could be estimated from immigration records on a monthly basis. Investment income accrues mostly(23) to official accounts or monetary institutions and could be notified by them in a steady stream. The seasonal pattern of the private receipts would have to be estimated from bankers' knowledge, and fitted to an extrapolation of the year-to-year trend. In this connexion it might be useful to have a question included in income tax questionnaires on the amount of these receipts even though they are not taxable.(24)

Apart from official transactions, and payments to missions and churches, which are easily notifiable, the remaining current and transfer receipts are so minor that one could divide the annual figures by 12 to get monthly figures with negligible error.

This gives us a balance of payments for transactions outside East Africa with net private capital movements (and errors and omissions) as the residual. (On the annual basis only errors and omissions are the residual item).

Transactions within East Africa are more difficult; only trade is officially notifiable at present; invisibles, transfers and capital movements are not. My approach would be to attempt to get estimates of invisible transactions, treating transfers and capital movements together as the residual. Since a transfer is frequently a capital movement in its essential character this would not be a serious weakness, probably.

It would be inexpedient to attempt to secure data on both receipts and payments for invisibles in East Africa. Re-

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(23) In Tanzania, 1964, 87%; 1965, 62%

(24) This method of estimation and this suggestion might also be relevant to the treatment of undistributed profits on the debit side.

ceipts alone could, however, be obtained fairly easily from insurance companies, carriers, harbours, banks, film rental agencies, publishing houses and possibly other enterprises; and by exchanging these data either directly or through the E.A S.D. the three countries would have a fairly complete set of accounts. Investment income receipts could be dealt with through income tax returns and exchanged in the same way.

This is essentially what is done at present through the E.A.S.D. but I see no reason why it should not be done on a quarterly basis.

Having established such a system the preparation of short-term forecasts based on the use of seasonal trends and the registers of exchange control approvals should be feasible.

I should perhaps emphasize that this type of projection will only give a two or three month forward forecast, but this would be quite an advance compared with the situation where you get the figures of each year in the middle of the next.

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1st December, 1966.

No. 447.

A. Mascarenhas
U.E.A. Social Science
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ASPECTS OF FOOD SHORTAGES IN TANGANYIKA (1925-45)*

Introduction.

The problem of food hunger and shortages has attracted the attention of scholars from a number of different disciplines. Members of the medical profession are interested in the problem largely because of its direct physiological manifestation. A school in anthropology considers food production as a vital determinant of human behaviour. Indirectly classical economists Ricardo, Malthus and Adam Smith give food production a critical index in economics. Only a few geographers, however, have made food shortages or hunger their major field of interest.

Despite the paucity of geographers explicitly working on food shortages, a number of geographers with an African interest have drawn attention to the problem. The earliest such attempt is that of Renner entitled "A famine zone in Africa",[1] H. R. Jarret, a much later contributor, has explored the situation in Gambia.[2] The problem has been popularised by the term "hungry season" - most regional texts also make references to food shortages.[3]

Interest in the present project was brought about by a number of factors. The occurrence of disastrous famines in parts of East Africa during the internationally sponsored "Freedom From Hunger Year" in 1963 spotlighted the problem dramatically and visually through posters. Secondly, after scrutinising the literature on food shortages, this writer felt that the gross climatic aspects, especially tropicality were too readily presented as explanation. This approach tended to make food shortages in the tropics totally an environmental problem. The significant break from the rather similar ideas expressed by many writers was a paper by Miracle entitled "seasonal hunger - a vague concept and an unexplored problem"[4]. Miracle's valuable paper concerned itself mainly with a theoretical classification of variations in food supply and the examination of the explanation of "seasonal hunger" as applied to West Africa. No attention, however, was paid to the cultural factor in food shortages.

This paper attempts to study the problem of hunger in Tanganyika. Tanganyika affords the opportunity to study food shortages in a relatively smaller area in a somewhat detailed manner. From the point of view of the problems, availability of information and size of territory, the country affords a good balance.

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*Progress Report.

The purpose of this paper is both substantive and methodological. The substantive aim is to investigate the occurrence of food shortages in Tanganyika in the period 1925-1945. Attempt has been made to investigate the causes and nature of food shortages in a broad physical-cultural basis rather than purely from an evironmental point of view. This analysis should be useful in further interpretation and in planning.

The methodological aim was the application of geographical techniques to the problem of food shortages. Most geographical works on the problem have hitherto been macro-studies with a deterministic approach with the overall emphasis being laid on climate.

Sources of Information.

The Colonial Office Reports to the League of Nations between 1924 and 1938 generally gave a picture of the state of agriculture of each district in Tanganyika. Information on famines was scattered in different sections of the reports often under climate or agriculture. A more detailed picture is available from the Annual Provincial Commissioners Reports from 1930 to 1945. A still further source of information would be the District Books. Unfortunately, all these sources mentioned have their limitations.

First-hand reports such as the amount of people affected by the famine or food shortage, the delimitation of the area affected, the duration of the famine or food shortage are all rare. With access to funds, time and a team of field workers it would be possible to get some of the invaluable first-hand additional information. Some of the additional information could be found in the district files of the agriculture department, district books and of course by interviewing persons who experienced the famines.

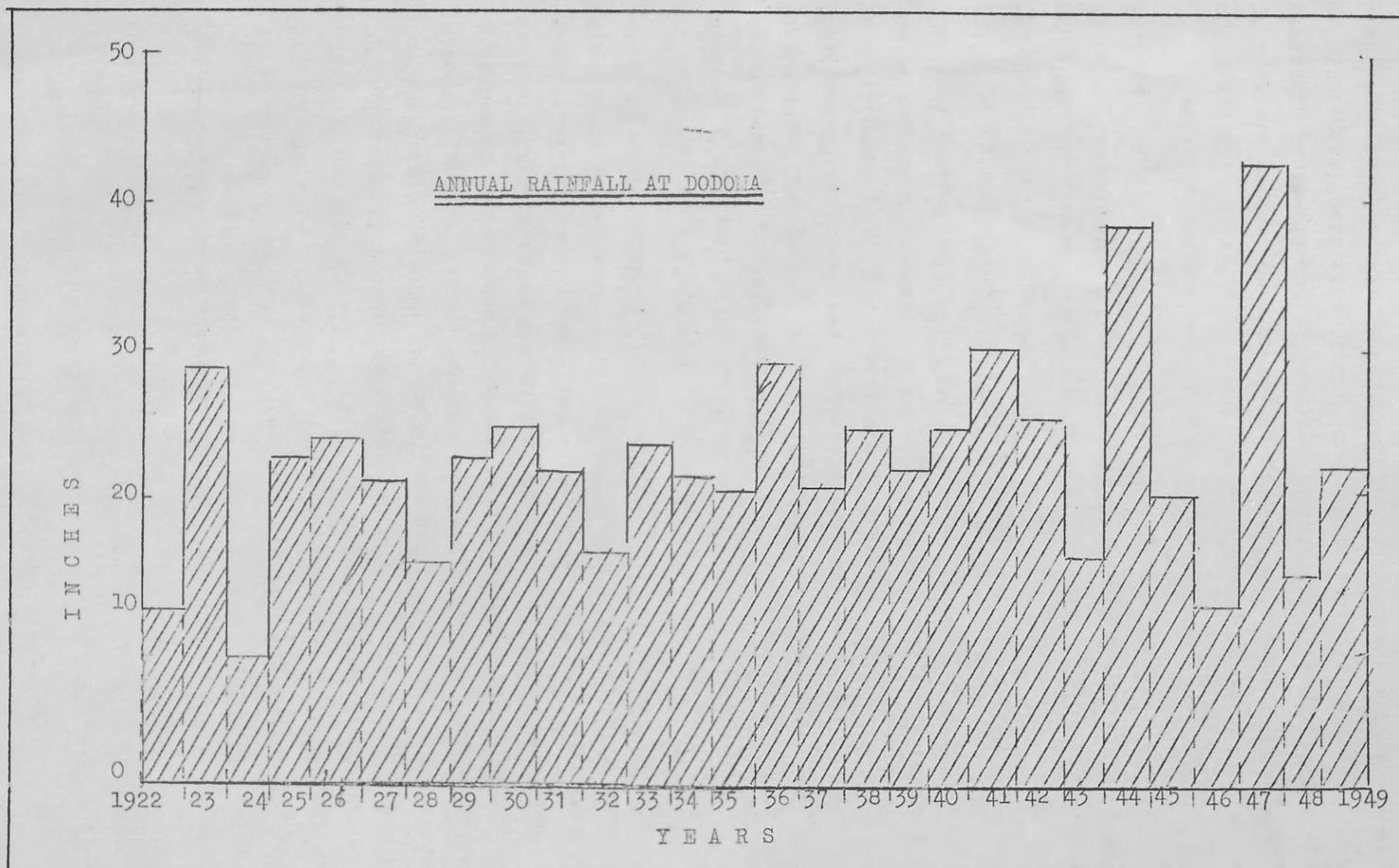
However, even with the information that was readily available it was possible to transfer the information on to maps. Secondly, it was possible to get out of the groove of studying the environment and analyse famines.

Methodology.

To the writer it seemed that in order to get a clear picuture of the trends of the food situation in Tanganyika it was necessary to map the information available. It is obvious that information which was readily available and could be easily mapped were the two extremes of food status: 1. extensive acute food shortages
2. surplus

Between these two discrete points it seemed necessary to introduce at least two other discernible levels: 1. partial food shortage
2. localised food shortages

A. Mascarenhas



SOURCE: Collected climatological Statistics for East African Stations, East African Meteorological Department, Nairobi (n.d.)

FIG 1

Blank spaces were left on the map when there was no statement made about the food status of the district. In all probability, such areas had adequate food but this provincial or district adequacy is not plotted on the map unless information was expressly available.

For obvious technical reasons, the author regrets that in the papers handed out only a schematic diagram (Fig. 1) showing food shortages and famines could be included.

A re-appraisal of the climatic factor.

In the Great Plains of the United States, great variations in the yield and even absolute failures of grain crop have occurred frequently[5]. Yet this zone is not referred to as "famine belt". In dealing with Africa, however, there is an all too ready acceptance of explaining human problems by environmental factors especially climate. What is therefore being cautioned in this paper is the direct correlation of a generalised climatic type to a human problem, in this case food shortages and hunger. A glance at the schematic diagram or maps reveals that even for a small part of Africa such as Tanganyika climate presents a great deal of variation. It is precisely for this reason that in no one year has famine ever taken place in the whole of Tanganyika - famines have occured only in parts of Tanganyika.

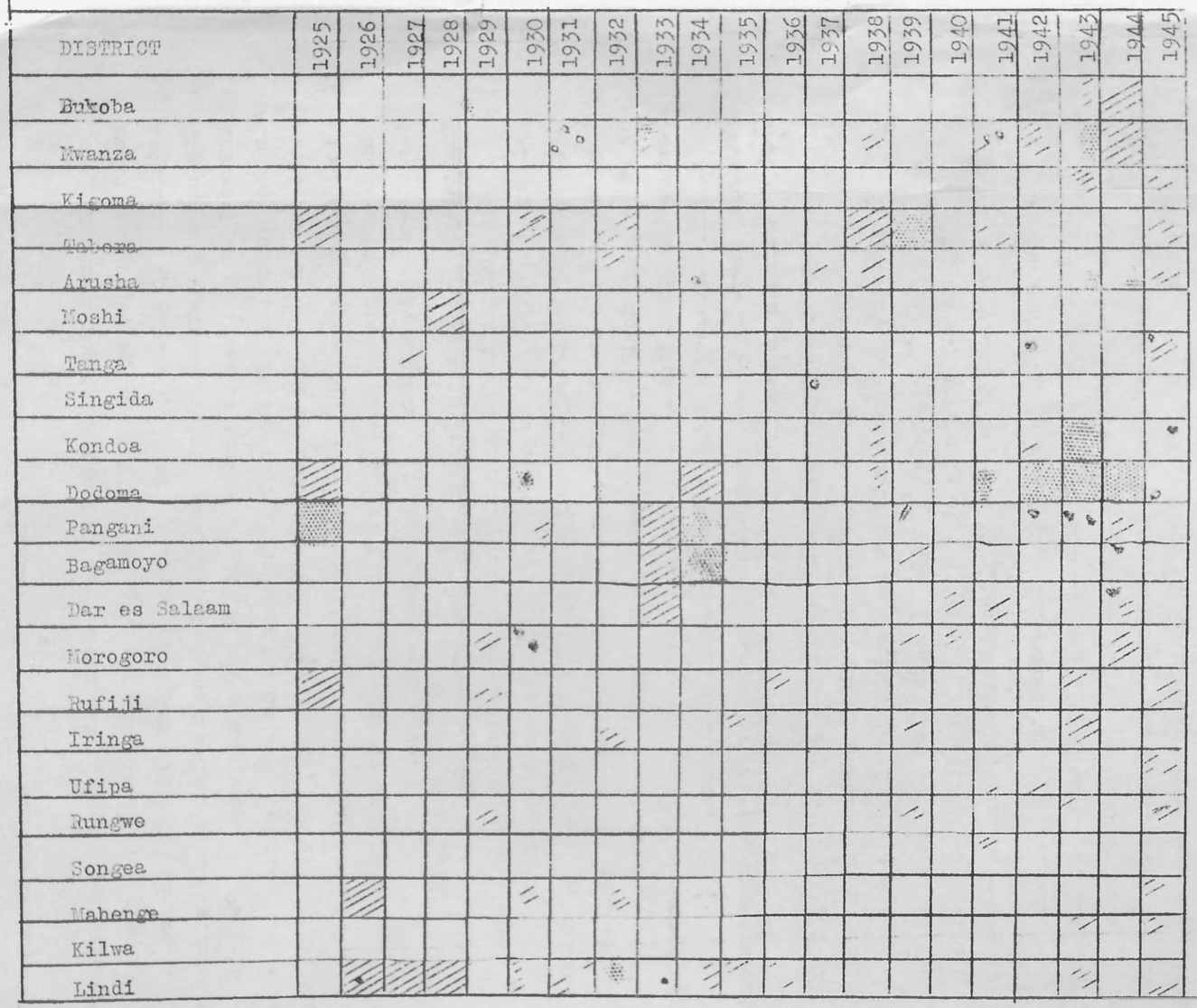
The foregoing does not deny that crop failures have taken place because of climatic factors. What it is intended to emphasise is that the correlation is complex. The acute famines and rainfall figures (fig.2) for Dodoma illustrate this point. There were poor harvests in 1923, 1924 and 1925. Widespread famine relief was undertaken in 1934 and in the following year, despite the lower rainfall there was a good harvest. Another spate of famines hit extensive sections of the area from 1941 and were quelled only after the first few months of 1945.

It is noteworthy that in 1928, despite the great dip in the rainfall figures, no mention is made of any famine and the unfavourable weather only brought a reduction of groundnuts. In 1929 famine was prevented because the sale of grain was prohibited and grain was imported from Kondoa.

Generalizations about climate made in the early years of colonial administration especially on the question of 'seasonality' and typology of climatic regions must be looked at with great sceptism. Instead of stressing macro-climatological aspects there is a real need for micro-climatological generalizations. Some of the pointers in this direction have begun to appear in the post-war period. Thus, Griffith working as a bioclimatologist and producing his rainfall regions[6], Thompson stressing the importance of the time of the day in which rain falls to agriculture[7] and Brazell, working on rainfall reliability and showing that great disparity can arise even by an altitudinal variation of 100-200 feet[8], are a few examples of the new trend.

TANGANYIKA FAMINES AND FOOD SHORTAGES 1925/ 5

A. Mascarenhas



Partial Food Shortages

Localized Famines

Acute & Extensive Famines

FIG 2

To stress the climatological factor for all famines and food shortages would in fact be saying that the carrying capacity of a given area is determined by climate. Conceptually, such a view would be incorrect. The success story of evolving mankind has been the countless agricultural innovations to increase production in all given climates. Man's role in the production of food represents a synthesis of activities and processes involving not only the environment (land and climate) but also his technological accomplishments, his social organization and attitudes and his choice of decisions. The rest of this paper aims to examine some of the non-climatic factors which cause food shortages.

Limitations Inherent in Traditional Subsistence Agriculture.

The acquisition of food in traditional societies was generally a primary activity. The amount of food available was among other things a question of technology, labour effort, and type of crop. The pursuit for food was not always precarious, neither must one be tempted to think of it as being idyllic. No attempt is being made to reconstruct the precolonial agricultural patterns than to make few general observations which will subsequently aid in the arguments put forward. Briefly, obtaining food, be it as an agricultural pursuit or hunting or gathering must be examined in the following light:

1. For the most part it was the responsibility of the family which was the main unit of labour. The effort expended in agricultural pursuit, however, must not be examined in isolation but in the context of a greater complex of activities that regulate the day to day existence of the tribe. Production in individual cases could be reduced by illness, rituals, etc.

2. The capacity for production was geared to a general self-sufficiency of varying discrete units such as the family, or extended family and even clans. With certain exceptions, there was a fine balance between production and consumption. This balance was not determined in statistical units but by a notion of subsistence requirements. Such a system based on impressionistic judgement is open to a great deal of variation on a tribal and even family basis.

3. The major agricultural activity was the production of crops for subsistence of the group. Acreages given to production were hindered by the unsophisticated technology of traditional agriculture. Therefore, any surplus was incidental and also limited by the period in which the crop would remain without perishing.

The Dilemma of Change.

The imposition of elements of colonial policy vis-a-vis traditional agricultural systems created a situation which inevitably had great impact on food supplies. The end of the colonial status has not resolved tensions and the problems of the past are still present today. Briefly the factors affecting food supplies will be considered under the following headings:-

1. Provincial self sufficiency
2. Repercussion due to the introduction of cash crops
3. Prices and Marketing
4. Communication
5. Other causes.

Provincial Self-sufficiency.

One of the fundamental misconceptions of the early administrators was to regard the whole environment of the country as suitable for the production of food crops. The administrative response to this concept was crystallized in the theory of provincial self-sufficiency in food and was especially stressed during World War II. At times there was merit in this scheme, but often this principle had to be compromised though it was never abandoned. In pursuing this policy there was a complete disregard of basic ecological safety valves especially among groups whose predominant concern was pastoralism. Thus, among the Gogos the keeping of large herds, misguided as the system was, acted as a safety mechanism. Despite the literature stressing the great love that pastoral groups had for their cattle, there are examples when these same groups were prepared to sacrifice their cattle during periods of stress. Cattle were in fact, exchanged for grain in times of hardship, and in the famines which lasted up to the 1920's, cattle were sold at a ridiculously low price of a rupee a head[9]. Hardship, in this case, was a result of World War I. During the thirties and the forties the attempt to persuade the Gogos to grow cassava which was the usual panacea for combating famines was reluctantly adopted by the Gogos. They logically argued that root crops tied them to the land and their precious cattle could not be fed on this root. In a recent study by Rigby[10] there is evidence that the Gogos who had suffered severely from famines seemed in their social sphere to have tried to adjust to the harsh ecological conditions. Thus residential mobility was high because of pastoralism and hoe cultivation of sorghum and bulrush millet in uncontrolled and unalienated land. Every Gogo, too, belongs to one of the eighty-five patri-lineal clans, the majority of whom were dispersed.

The preoccupation with provincial self-sufficiency had many elements of contradiction. It ignored among other things the fact that the optimum use of a particular area might not be a food crop but a cash crop. Even worse it relegated food crops to a constant low price and this has been a basic factor why foodcrops have not been commercialised.

During the worst famines of the 1940's in Gogoland grain eventually had to be imported from the neighbouring areas to fill the silos. The construction of silos was a new conception of relief measure. A department of grain storage was formed but it was found expensive to maintain and in the late fifties the department was abolished.

Repercussion due to Introduction of Cash Crops.

Agriculture for the purpose of cultivating products other than food crops was insignificant in traditional societies. The introduction of cash crops especially non-consumable ones such as cotton, sisal, tea and pyrethrum therefore, in many cases brought disruption in the cultivation of food crops. It was inherent in colonial policies to stress and have a positive approach to the whole question of cash crops. Certainly, the research undertaken, money expended, and the increasing export tonnage all reveal the fact that there was an emphasis on cash crops. Yet, the indigenous cultivators were expected to grow their own food and be self-sufficient. In pursuing this policy, colonial governments, (present national governments have not escaped this either), perpetuated the transition stage in which cultivators are neither commerical nor subsistence farmers. If one accepts the idea that in traditional societies calculations of food requirements were based on emprical notions rather than scientific measurements, one can see that miscalculations could easily be made and adjustment because of the introduction of cash would take time. For obvious reasons examples of food shortages being caused by the growing of cash crops would not be good politics on the part of colonial administrators. However, one does get examples. In 1931 the Provincial Commissioner for the Eastern Province indirectly hits at the pre-occupation of the administration with cash crops when he states:

> "It is not out of place to mention here that an increased production campaign is about to be launched, but, one hastens to add, increased production is not synonymous with cotton"[11]

As recently as 1945 the Provincial Commissioner for the same Province remarked:

> "Essentially the people of the coast tend to rely upon sale of copra to support their wants and most are reluctant to produce sufficient food even for their needs. If the price of copra shall fall, they will find themselves with insufficient food and no money to purchase it from neighbours".[12]

If the traditional practice of growing food has to be integrated with production of cash crops one has to assume that the cultivators had to:-

1. work harder than before
2. sacrifice a great deal of leisure
3. cut down on the acreages given to food crops
4. look for alternatives for obtaining cash

The last assumption best manifests itself on the whole question of labour which will presently be dealt with.

One has to admit that in certain areas it was feasible to have a reliable cash/food crop association especially where the latter demanded little labour. The Chagga and the Haya with the banana/coffee complex are a good example. In many cases, however, the duality could not work. In fact, to the local inhabitants in these areas advice and instruction during the late 20's and 30's must have seemed very contradictory. They were asked to increase the acreage under crops and yet prices paid for crops sold were decreased. They had to grow food stock and yet grow for export; they had to increase acreages and yet keep maintaining the fields to new standards. Some of the cash crops were not food crops and in many ways useless if not sold.

Labour:

An alternative source of obtaining money, apart from cash crops was to enter the labour market and this response had great social effects among groups like the kinga and Ha. Obviously, it is easy to see one of the consequences mentioned earlier, namely, since the family was the unit of subsistence economy, disruptions would take if this unit was interfered with. Agrarian systems would immediately be affected especially among groups where menfolk performed the difficult tasks such as clearing the forests or breaking for the first time. In the Wilivana chiefdom of Singida, after a series of food shortages, it was realised that the customary practice of the men leaving their homes in the planting season to work for food in the Iramba part of the district meant there was insufficient cultivation in their own area.[13]

The repercussion of the lavish use of labour has yet to be studied in detail and in fact, has been an under-played factor. Specific references can be found both at the source and the receiving ends. Best examples of the latter are to be found in the Tanga Region where in 1936 the number of alien Africans was clearly in excess of 50,000 men for whom food had to be procured. It is therefore not surprising that the administrator for Tanga in 1942 categorically stated.

> "Any further transfers from native agricultural production to work on estates would have dangerous repercussions on the food supply"[14]

In the Southern Highlands where much of the labour originated from the Provincial Commissioner, in 1943, warned that further calls for labour within or without the Province would probably endanger the foodstuff position and locally grain would be insufficient to feed the employed labourers. The administrator had calculated that out of 125,250 tax-payers, 28,050 were employed within the district and 12,626 had 'volunteered' for the army and 10,700 labourers were outside the district[15].

Another aspect of the same problem which Major Orde Browne brings out strikingly in his report is the colossal use of labour for unproductive purposes* and the very great distances which they had to travel. He also states that along routes frequented by labourers, produce sellers and government employees there were, at times, results approaching famine.

> "Owing to the short-sighted sale of too much food or the anxiety of the local authorities to furnish supplies to travelling government servants"[16].

These are just a few aspects of the impact of labour on food supplies.

Prices and Marketing

The dilemma of growing both a cash crop and a subsistence crop not only strained the organization of traditional agriculture but in addition there were a number of economic piffalls related to marketing and prices. Uncertainty of prices made adjustment difficult. If a farmer emphasised a cash crop and the prices fell he would run the risk of not having enough money to buy food. It is noteworthy that the depression of the 1930's determined for many farmers the course they should follow and despite the great locust invasion the supply of food in most parts of the country was not unduly bad. Conversely, the best years in the country were seon after the recovery of the cash crop prices in the middle 30's. This brief statement only paints the gross picture. The true relation between prices cash crops/subsistence agriculture is a field in itself too large to enter in the existing paper.

Generally marketing was not well developed over most of the country in the 1920's and in many parts of the Southern Province even in 1944 there was no marketing system. When markets were opened in the following year,

> "they were regarded with suspicion by the Africans and with antagonism by the merchants and missions"[17].

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* At Kilosa Railway Station in 1924 the government needed 400,000 working days of porterage to supply a small detachment of soldiers in Songea.

Depressed markets also affected sales and production. When prices of rice fell by 50% in 1931 the cultivators in parts of Mahenge area refused to sell, and finding that they had more rice than they could consume, used it for brewing beer. The Administrative Officers seemed to realise that the danger for in their words:-

> "The danger emanating from all this, which will have to be watched, is that they may become despondent and grow less rice. The marketing arrangements of the rice trade are at the root of the trouble ....."18.

Communication.

Considering that in no one year has the whole of Tanganyika suffered from famine or food shortage, the significance of communications becomes obvious. At a territorial level then, a sound communications system gives a greater latitude for dealing with famines.

In the 1920's head porterage was the only method of transportation in many parts of the country. The position in such areas becomes precarious if they were unfortunate to experience any decline of food supplies. Two decades later the famines of the 1940's could also have been prevented by a good transportation system between the Southern Highlands and the Central Province. Ironically intense wartime drives to produce more food had brought about a surplus in the former area. There was a surplus of several thousand tons of rice, only 300 tons of which eventually could be dispatched via Lake Nyasa to Beira and eventually to Zanzibar.

The lack of understanding between the rulers and the ruled adds a new dimension to the study of communications and response to famines. The following observation of an administrator made after a famine in the Ukaguru area in which 15 people are alleged to have died, reflects the problem.

> ".....it is only the better class of chiefs who fail to do so (report a famine). He only appeals to the administration when affairs go beyond his control. There is, of course, the whining class of chief who immediately upon a partial shortage of food in his area reports a famine".19

In one of the comparatively well documented accounts of famine in Tanganyika which took place at Bugufi in 1929, this problem of communication is once again well illustrated. Briefly, the only line of communications in 1929 between Bugufi and the Administrative station at Biharamulo, 113 miles away was by porter track. When the District Officer received the call for help he could not

> "imagine why they cannot get on and do something for themselves and anything I send must be necessarily very dear"20.

In fact, he did not attach much importance to the appeal. In defence, it must be admitted that when in 1928 a complaint of starvation was received the District Officer found out that only mtama had been exhausted. In the 1929 famine the distress was real; 500 persons perished. Because of administrative rigidity, there was a delay of 25 days between the first reports of death and the first issue of food.

There is still one level of communication that needs examining. At the head of the social stratification of the Bugufi people were the Batusi who claimed that the shortage was normal. The suffering of the lowly peasants upon whom they contemptously looked down did not directly concern the aristocratic Tusis. In fact, with their great reliance on cattle they were not too incovenienced by the shortage of grain.

As an epilogue to the Bugufi famine, roughly 2,000 people were affected, and 500 deaths took place. Five tons of rice were needed to tide them over, and the expenditure was approximately £250. In fact by the time relief did come they were beginning to harvest their own crops.

Other Causes of Famines.

There are other causes of famines and food shortages which cannot be dealt with fully in this brief paper. Innumerable examples of very localised food shortages caused by the depredations of wild animals and insect pests is one. Superstition and social disharmony between groups provides yet another category. For example the precursor of the Bugufi famine is to be found in the prophecy of a witch-doctor who claimed that the ruling dynasty would die if cultivation in the swamps was not stopped. The sudden demand for food from areas adjacent to famine areas can cause food shortages in areas asked to provide relief. The 1929 Bugufi famine was thus part of a large famine in Urundi. Inflated prices* in the famine area easily leads to un-inhibited disposal of food. Finally, the absence of certain foods among groups who have strict food preferences can cause an induced type of famine.

Conclusion.

This study of famines in Tanganyika demonstrates the danger of applying a climatic generalization to a human problem. The typology "Tropical climate" which is often associated with famines is such a gross generalization with so many variables that even in a relatively small area like Tanganyika it has severe limitations in its application. This is demonstrated by the localised nature of famines in the country.

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* In 1942 the Warangi and Wanyaturu readily disposed their surplus because the prices of grain had risen from 1/50 to 8/- a debe.

While there is no doubt that the immediate cause of famines has often been micro-climatological factors, one cannot even then always conclude that hunger is directly related to the environment. Famine is a human problem. It therefore must have some human causes and solutions. Some of the human factors of famines have their origin in economic, technological, social and even transportational factors. The equation of man's production of food is environment plus culture. Famines and food shortages cannot therefore be rigidly tied to the environment.

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