

THE STRUCTURE AND BALANCE OF INDUSTRIAL PRODUCTION IN TANZANIA¹

C.E. BARKER,⁺ M.R. BHAGAVAN,⁺⁺ P.M. von MITCHKE-COLLANDE![!]
D.V. WIELD,^{!!} and A.C. COULSON^{!!!}

INTRODUCTION

Social Production has often been analysed with the help of a division into sectors of production. Marx in using two departments (i.e. the means of production on the one hand the articles of consumption on the other) attempted to "lay bare" the innermost workings of the system of reproduction. The two departments were meant to show the weight of the two main classes in capitalist society namely the bourgeoisie and the proletariat. Marx bases his analysis of the exchange between the two departments in the exchange between the two main classes.² Marx goes on to analyse the movement of capital between the classes; thus the variable capital paying for labour power in Department I (means of production) does not return to capitalists in Department I directly. It is used in money form to buy commodities in Department II (consumer goods) and passes in money form into the hands of capitalists in Department II. Only when the capitalists in Department II reinvest in the means of production does the capital return into the hands of capitalists in Department I, and so on.³

Samir Amin describes "peripheral" economies as being originally based on primary product exports. He describes the gradual development of parasitic classes, latifundia, commercial bourgeoisie, kulaks and state bureaucracies, whose needs are manifested internally in the shape of luxury goods production.⁴ This goes along with production for peasants and workers of only absolute necessities, often produced locally on a small scale. Amin goes on to assert that it is possible for larger countries especially, to introduce some capital goods industries, but the existence of these does not alter the economic structures, as they serve the sectors of luxury and export production. He leaves open the question of whether some countries like Brazil and Mexico could not become fully developed provinces of the United States⁵ in the way

⁺Ministry of Health, Maputo, Mozambique.

⁺⁺Development Studies, University of Zambia, Lusaka.

[!]Faculty of Engineering, University of Dar es Salaam.

^{!!}University of Maputo, Mozambique.

^{!!!}Formerly Senior Lecturer, Department of Economics, University of Dar es Salaam, now at the University of Bradford.

Canada has. However, he believes that the general tendency is for the gulf between centre and periphery to get wider.

Within this framework Amin asserts that the dominant relationship in capitalism "at the centre" is between production of capital goods and mass consumer goods, whereas the periphery is between production of goods for export and luxury goods.

We shall analyse Tanzanian industrial production as reflected in the national data available, and data from detailed study undertaken of a cross-section of the larger and more important enterprises of industry in Tanzania. In this analysis we shall attempt among other things to see the extent to which Amin's assertion is reflected in the structure of Tanzanian industrial production.

It is worthwhile to review the work of others who have been concerned with the balance of industry in Tanzania. Siedman,⁶ in an analysis of government controlled National Development Corporation investments up to 1968, breaks down the industries into six sectors: raw materials; producer goods; consumer necessities; luxury consumer goods; export processing; and tourism. Siedman puts both raw materials and producer goods into Department I normally reserved for capital goods. So NDC's investment in Siedman's Department I includes lime products, sisal, and diamonds all of which are exported, and none of which would normally be thought of as the means of production required for self-centred development. The producer goods sector includes construction, motor assembly, plastic pipes, cement and metal boxes - not the base on which Tanzania's industry would naturally grow from a use of natural resources, since metal, tin and chemicals are not locally available for the industries as now set up. Of consumer goods 75 per cent of investments were in luxuries and only 25 per cent in necessities. NDC's investment in export processing was a little below that in consumer necessities. So Siedman's approach gives some indication of the imbalance the so-called producer goods sector and Department I in general. Almost all the minerals coming from the ground are exported and Siedman's producer goods are actually intermediate goods for the construction, export packaging and vehicle assembly industries.

Rweyemamu's⁷ classification of the Tanzanian economy is more relevant for an analysis based on the realities of underdevelopment. He concludes "In Tanzania, as in many of the underdeveloped countries, exports were not only the one autonomous source of income growth but were the dynamic centre of the whole economy". Rweyemamu split industry into six sectors, namely; consumer necessities; luxuries; construction goods; capital (he asserts there are none); producers supplies; and export industries. In his work he looked at all production in Tanzania not just that of NDC. To investigate the export

sector, for example, he went through the industrial branch classification of Tanzanian industry tabulating actual production going on which was mostly for export like tea, sisal, cotton, etc. He does not confuse the producer goods sector like Siedman but shows that there is no capital goods sector in Tanzania. His producer's supplies sector includes petroleum refining and metal products and thus rightly does not confuse these products for Department I production. From his breakdown he is able to show that industrially produced exportables account for 33 per cent of the industrial value added and 34 per cent of employment and goes on to suggest that it is this which makes the Tanzanian economy inflexible. He further shows that in Tanzania mass consumer goods industries have been instituted at a much lower capital intensity than luxury consumer goods industry.

Tschannerl's recent study⁸ uses Samir Amin's four sector model in an attempt to analyse Tanzania's industrial activity and agricultural production. Tschannerl also makes it clear that intermediate goods do not constitute capital goods and is careful to look at the real nature of so-called capital goods industries such as motor assembly. He concentrates on consumer goods, however, and does not go into the quite large and expanding but easily misunderstood intermediate goods sector. His analysis of consumer goods shows that the value of industrial output of export and luxury goods combined equals the value of mass consumer goods production for the Tanzanian workers and peasants.

Tschannerl and Rweyemamu built up their sectoral data from the statistical data of the Survey of Industrial Production⁹ which only classifies production into broad branches as we mentioned earlier. Neither of them attempts to look at specific institutions in Tanzania to observe the actual production of goods going on. Our own approach has been both to use national data and to consider the goods produced in cross-section of factories in Tanzania. Amin's four sector model has been modified and used to consider Tanzanian industrialisation in the knowledge that we are looking at only one aspect of the totality Amin was trying to analyse. This testing against a model has been used since it seems to help classify Tanzanian industry more specifically and economic context within which industrialisation has taken place. We have attempted to expand Tschannerl's and Rweyemamu's theses to consider the nature of the intermediate goods sector, the nature of consumer goods imported to Tanzania and to consider the nature of production in the selected establishments studied in some detail in our survey.

SECTORAL BALANCE OF INDUSTRY-NATIONAL DATA

If the whole socio-economic formation as it relates to industrial production in Tanzania is to be investigated the class nature of product choice as

it relates to the major branches of industrial production must be discussed. If we know for whom goods are produced by using a sectoral breakdown of production according to the class nature of consumption and production then it should be possible to show, for example, how far the relative sophistication of technology is dictated by the necessity to fulfil these needs and how they are fulfilled in Tanzania. If they are controlled by the peasants and workers then we must expect production of their needs and improvement over time in production of quantity and quality of goods, and thus a redefinition over time of what are necessities. If they are not in control of production then we would not expect this sort of sectoral breakdown of production but an emphasis in production of goods to fulfil the needs of a small class in control of the state. This would mean production not just of basic mass consumer goods but of luxury consumer goods too. This in turn would affect the choice of technology in Tanzania since it is fairly clear as a generality that present necessities can be produced with a lower capital intensity.¹⁰

For the purpose of considering industry in Tanzania we will break down the production into four sectors: mass consumer goods; luxury consumer goods; exported manufactured goods, and intermediate and capital goods. Table A shows this sort of sectoral distribution taken from a modification to Tschannerl's sectoral break down brought up to 1972, the latest year for government statistics. Tschannerl did not concentrate on intermediate goods so that the part of the table dealing with that is completely new. By using this sectoral break down of industrial production in Tanzania we hope to give some indication of the progress made towards meeting the needs of the peasants and workers. From this analysis we shall try to show the implications in terms of transfer of technology to Tanzania.

From Table A we can see that the export manufacturing sector comes to about two-thirds of the output value of mass consumer goods. This value is still low compared with the primary unprocessed export of agricultural products and diamonds which totalled 1,423 million shillings in 1972. There is a tendency, however, towards increasing both the proportion of processing of agricultural goods for export, reflected in the recent plans to set up two large sisal rope plants and five cashew processing factories, and in increasing other manufactured exports such as textiles, matches, tyres and other described in more detail later in this section. Even though this export sector is much lower than the primary production for export it makes up a substantial proportion of manufactured production in Tanzania.

Output value of the luxury goods sector was 371 million shillings in 1972, just over 50 per cent of the value of output of the mass sector as estimated by the national data. One difficulty is that of classifying luxury and mass

consumer goods. It was easier perhaps for Marx to write "we may call this entire sub-division consumer necessities regardless of whether such a product as tobacco is really a consumer necessity from the physiological point of view. It suffices that it is habitually such" than to analyse the consumption habits within Tanzania. In Tanzania the consumption habits of various classes are not often clear. It is difficult to know whether milk is consumed by working classes in Tanzania and thus is a necessity of life without knowing who buys milk or even in which areas of the towns milk is distributed. However we have characterised milk and sugar, for example, as mass goods even though it is unlikely that the working classes consume these as much as the upper classes in Tanzania. Thus the mass consumer sector includes the total consumption of these goods in Tanzania, i.e., it includes the consumption by the upper classes as well. There is therefore no measure of what proportion of consumption is done by the various classes in Tanzania. However, the balance of consumption can be estimated sufficiently for certain conclusions to emerge. Local production for luxury consumption is between 50 per cent and 55 per cent of production for necessities.

SECTORAL BALANCES OF INDUSTRIAL PRODUCTION - FACTORY SURVEYS

The sectoral distribution tabulated in the previous paragraphs was taken from only a survey of statistical data and lumps together many sectorally unrelated production activities with no chance of segregation. Because of this our studies on individual factories were able to throw more light on the sectoral distribution of production. In each factory it was possible to check the value of production and the value of each product line. Each product evaluated in terms of whether it was luxury or necessity. This is more accurate than a blanket evaluation of each branch of industry.

Table B shows all the factories investigated in this study, their size in number of employees, and their value of output in 1972. In one case where value has already been added to a product in Tanzania before its arrival at the factory the value added at the factory is noted for 1972. The next column (column 4) then gives a sectoral break down of production in each institution moving from the international branch of industry classification to a break down as in Table A above. The sectoral break down used is export production; mass consumer; luxury consumer; intermediate goods i.e. goods which are used in other production processes; and construction industry. This is similar to the sort of classification which Rweyemamu and Tschannerl made using national statistics. Column 5 describes the actual production observed at the factory. This more accurate direct data allows a quantitative estimate to be made of sectoral balance of each enterprise. Column 6 gives this quanti-

tative estimate using a sectoral break down as follows: export goods; mass consumer; luxury consumer; intermediate goods. The intermediate goods sector is further sub-divided as to whether the goods are in fact inputs to export; mass; or luxury production as described in more detail below.

BALANCE OF CONSUMER GOODS - PRODUCTION FACTORY SURVEY

From the factory survey data estimates were made of sectoral balance into sectors as above. Sectors were chosen by considering which classes consumed the goods produced. Items consumed by urban workers and/or the peasantry were considered as mass consumer goods. Other items were considered as luxury consumer goods. Goods for export could be characterised automatically and directly. In the factories we visited, the mass consumer goods being produced were cotton textiles, plastic rubber and canvas shoes, matches, plastic buckets, one-band radios, sugar, and tea dust.

Table C gives the detailed estimates of production of consumer and export goods in the sample of factories visited. It can be summarised as follows. On the basis of production from factories visited categorised into sectors under the national branch classification (i.e. not from our own observations of production), the following values are derived:

Mass consumer goods	89.8 million shillings
Luxury consumer goods	44.6 million shillings
Export production	57.0 million shillings

Estimates made from the observation of production in factories in our survey gives the sectoral breakdown of:

Mass consumer goods	73.8 million shillings
Luxury consumer goods	50.4 million shillings
Export production	73.1 million shillings

So a study of production in factories which make up about 15 per cent of the total output value of consumer goods and export goods in Tanzania shows that the conventional analysis underestimated production of luxuries by 13 per cent and of exports by 28 per cent whilst overestimating mass goods by 18 per cent. An extension of this sample to Tanzanian production as a whole would give an export sector value of about 630 million shillings, a luxury sector of about 410 million shillings and a mass sector a round 590 million shillings using 1972 figures right through. This extension should be treated with some caution since our sample was not homogeneous. Nevertheless the results do point to the conclusion that earlier calculations of sectors or production erred on the optimistic side in their analysis of whether the Tanzanian economy was moving towards self-centredness.

BALANCE OF INTERMEDIATE GOODS PRODUCTION-FACTORY SURVEYS

We were also able to characterise the intermediate and producer goods produced in Tanzania in a similar way. In Table B we noted this by Intermediary to Mass; Intermediary to Luxury; Intermediary to Export. In this case we looked for the sectors in which the goods were used. For example inputs to mass consumer production from our survey were sisal bags from Tanzania Bag Corporation used for storing maize, steel for some mass consumer building, ploughs and hoes used for production of local mass consumed agricultural crops and so on. This sectoral break down of intermediate goods is given in Table D. Those intermediate products which on investigation were found to be directly consumed or exported have been omitted since they have already been sectorally classified (see Table C). There were more difficulties in estimating the intermediate goods production than the direct consumer goods since it was not possible to know comprehensively what the goods were used for without visiting all the firms using the intermediate goods as inputs. The estimates are thus less reliable than for the directly consumed products. Still it has been possible to estimate with reasonable accuracy. For example, it was possible to estimate for which crops the Tanzania Fertiliser was used and we were able to find out the use of the buildings built by Mecco in 1972, etc. The most difficult product was hoes. In the end we decided to divide this input exactly as the value of crops, i.e. 25 per cent of total agricultural production was for exports in 1972 so we estimated that one-quarter of hoes were used in the export crop sector. This may be an overestimate since it is likely that the export sector is more mechanised. The other estimations were straight forward, e.g. Amboni Central Workshop mends sisal machinery only so is totally export oriented.

From the estimations summarised in Table D we can see that intermediate goods feeding to industries producing mass consumer goods in Tanzania were of the value of 17 million shillings in 1972 in the factories covered by our survey; intermediate goods feeding to luxury consumer industries were of the value of 30 million shillings; and feeding to export production were of the value of 30 million shillings. Thus from our survey which covered about 16 per cent of the value of production of intermediate goods, mass goods inputs were only about one-fifth of the total output value. This plus the almost non-existent capital goods sector shows that the moves towards self-centredness and production for the masses in the economy was very weak, in 1972 at least. This conclusion is of major importance since many development economists point to the growth of an intermediate goods sector as a positive movement towards local self-sufficiency. Tanzania's intermediate goods sector has grown very rapidly since independence but

appears to be oriented towards exports and the luxury consumer sector rather than towards mass consumer or to capital goods sectors.

BALANCE OF IMPORTED CONSUMER GOODS

Moving from domestic production for a moment we shall now consider the sectoral balance of imported consumer goods for 1972. The value of consumer goods imported into Tanzania in 1972 was 828 million shillings.¹¹ Surprisingly, most of this amount consists of primary produce. Manufactured goods imported were of value 280 million shillings, the remainder 548 million shillings being primary goods such as food grains. This at least confounds the simplistic notion that underdeveloped countries export primary goods, and import manufactured goods. 65 per cent of Tanzania's consumer imports in 1972 were of primary goods. We shall concentrate on the manufactured imports since presumably there is a tendency to import substitute for them and thus set up manufacturing industries in Tanzania. We studied the manufactured consumables imported into Tanzania and characterised them sectorally as necessities or luxuries as above in a class based way. The mass consumer sector had a value of about 110 million shillings in 1972. The major items were milk, wheat and maize flour, sugar, yeast, bicycle tyres, mosquito nets, oil burners, plastic rubber and canvas footwear and hurricane lamps. The luxury sector was much higher at about 170 million shillings. This sector contains a large variety of goods, mostly imported in small quantities. It includes, for example, evaporated milk, baby food, preserved vegetables and fruit, honey, soups, wine, spirits, tobacco, synthetic textiles, velvets, glass bottles, cookers, fridges, butter, cheese, sweets, instant coffee, perfume, cars, spare parts, batteries, handbags, leather shoes, wrist watches, records and jewellery. Thus in 1972, 60 per cent of imported manufactured goods were for luxury consumption. If production patterns are following consumption patterns then we would expect a tendency towards increasing luxury production. We attempted to check this by considering government investment patterns between 1966 and 1972 and by looking at new production since 1972 in the factories we visited.

THE BALANCE OF RECENT GOVERNMENT INVESTMENT AND PRODUCTION CHANGES IN FACTORIES VISITED

Recent government investment in manufacturing industry is shown in Table III.2.D of our recent report.¹² If it is split up as in our original aggregate sectoral break down we can see that investment in consumer production between 1966 and 1972 was as follows:

Export	152.3 million shillings
Mass	76.4 million shillings
Luxury	77.8 million shillings

Estimates for 1972-75 could be broken down as:

Export	215.0 million shillings
Mass	91.7 million shillings
Luxury	139.5 million shillings

Clearly neither in reality during 1966-72 nor in planning during 1972-75 was the production of goods to meet the needs of the masses of the people, a priority at the level of government investment. Further we know from the factory surveys that the aggregate sectoral break downs tend to err towards overestimating mass consumer goods at the expense of export and luxury consumer goods.

In the factories visited for the survey we checked the investment increase since 1972 and thus were able to observe what new areas investments were in. In some factories new investments will not change the sectoral balance. In others the sectoral balance will change.

Four factories were investing to increase their proportion of export goods. These were Kibo Match Co., Tanzania Bag Co., Amboni Plastics Ltd., and Sikh Saw Mills - Moshi. Four factories appear to be investing to increase their proportion of luxury goods. Tanzania Shoes will be substitute for fashion leather shoes, Kibo Match have introduced match strip production, Philips are cutting the proportion of one-band radios produced, and Kiltex-Arusha are producing polyester artificial fabrics. No factories were investing to increase the proportion of mass consumer goods produced.

From the factory surveys, from the national statistics of production, from the surveys of government expenditure, and from the study of imported consumer goods there is little or no evidence that any redistribution of resources has taken place towards integrating the economy or towards rapid increase in production of goods to satisfy the basic needs of the workers and peasants.

Table A. Sectoral breakdown of industrial production in Tanzania, 1972.

Branch of industrial activity	Gross output (mill. shs)	Value added (mill. shs)
<u>EXPORT.</u>		
Slaughtering and meat canning coffee and cashew	102.9	6.7
Tea - processing and other foods n.e.c.	164.4	60.7
Cotton ginning	50.0	14.2
Sisal decortication	145.0	?
Cordage, rope and twine	10.4 ⁺	10.4
Misc. chemical products n.e.c.	<u>22.0</u>	<u>?</u>
TOTAL	494.7	
<u>MASS CONSUMPTION.</u>		
Dairy products	20.0	3.1
Grain mill products	214.9	41.7
Bakery products	6.4 ⁺	6.4
Sugar factories and refineries	90.6	38.5
Cocoa, chocolate and sugar confections	2.2 ⁺	2.2
Vegetable and animal oils and fats	113.1	21.1
Spinning and weaving of textiles	110.0 ⁺	110.0
Knitting mills	10.7 ⁺	10.7
Footwear and rubber plastics n.e.c.	50.1	11.2
Made up textiles, wearing apparel etc.	15.3 ⁺	15.3
Paper and paper products	5.9	3.9
Tanneries and leather finishing	29.2	8.0
Soap, perfumes and cleaning goods	<u>55.8</u>	<u>7.9</u>
TOTAL	724.2	280.0

LUXURY CONSUMPTION

Breweries	101.7	53.7
Soft drinks	28.6	8.0
Tobacco manufacturing	108.4	53.5
Furniture and fixtures	23.1	7.1
Non-electrical machinery	23.2	8.3
Electrical machinery	46.5	10.7
Jewelry and other Misc. manf.	<u>39.4</u>	<u>13.1</u>
TOTAL	370.9	154.4

TOTAL CONSUMER GOODS	1589.8
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INTERMEDIATE AND PRODUCER GOODS (not already classified above)

Textiles except wearing apparel	41.3	15.3
Saw milling and plywood	49.5	17.5
Wood products except furniture	19.1	7.3
Printing and publishing	58.9	20.7
Basic industrial chemicals	94.2	17.9
Paints	15.9	3.4
Petroleum refinery	65.0	49.0
Bricks, tiles, cement and glass	61.8	37.2
Aluminium rolling and metal- working	174.6	47.8
Motor vehicle assembly	<u>122.7</u>	<u>30.9</u>
TOTAL	704.0	247.0

n.e.c. not elsewhere classified

+ Value added, not gross output, is tabulated so that some output values are not counted twice e.g. bakeries use grain mill products, textile production uses cotton which has been ginned.

Table B

Factory	No. of Employees	Output value (m/-) shs.	Aggregate sectoral classification using National data	Actual production and tendency	Our estimation of sectoral classification 1972 %age
Kiltex - Arusha	950	6.0	Spinning and weaving of textiles .. (MC)	Tendency to luxury since in 1972 gingham production was started and in 1974 polyester cloth production.	MC 80% LC 20%
Tanzania - Shoe	900	11.2	Footwear .. (MC)	Increase emphasis on luxury consumer production of leather shoes.	MC 77% LC 20%
Tanzania Breweries Arusha	150	22.0 estimate	Luxury (LC)	Luxury. Recent price increases put beer out of range of both peasants and industrial workers.	LC 100%
Kibo Match	380	12.0	Chemical product not elsewhere classified .. export.	Clear error here arising from the board classification. Actually mass consumer good. Recent tendency towards luxury with book match production and towards export.	MC 98% EX 2%
Tanzania Bag	900	7.6	Made up textiles not for wearing .. Intermediate	Produces sisal bags for packing crops e.g. coffee, cloves, maize. In 1974 exports to Iraq.	Int. to Exp. 64% " " MC 36%
Kioo Glass	300	6.3	Glassware Intermediate	Bottles for beer and soft drinks i.e. intermediate. Plans for export.	Int. to LC 100%

Table B (cont.)

Factory	No. of Employees	Output value (m/-) shs.	Aggregate sectoral classification using National data	Actual production and tendency	Our estimation of sectoral classification 1972 %age
Amboni Plastics	60	4.8	Footwear MC	Large export sales. Buckets used in towns. Crates sold to transport beer.	Exp. 31% Int to MC 17% " " LC 50% " " Exp. 2%
Tanzania Fertilizer	800	14.9	Intermediate	Some fertilizer exported Fertilizer is mostly used for export crops.	Exp. 33% Int. to MC 13% Int. to Exp. 54%
Philips Electronics	150	22.6	Electrical machinery LC	Assuming one-band radios are MC, the rest is LC. Exports are high.	MC 10% LC 55% Exp. 35%
Steel Rolling Mill	120	8.0	Intermediate	Mostly used as input to con- struction industry. Therefore must characterise constru- ction industry.	Int to MC 20% " " LC 80%
Mtava	100	1.3	Motor vehicle assembly ∴ Intermediate	Intermediate goods i.e. trucks and lorries.	Int to MC 73% " " Exp. 27%
General Tyre	650	21.7	Footwear MC	Error from early data of aggre- gate classification. Majority of production is passenger tyres and tubes. Tendency to to truck and tractor tyres.	LC 50% Exp. 35% Int to MC 5% " " LC 5% " " Exp. 5%

'Table B (cont.) (3)

Factory	No. of Employees	Output value (m/-) shs.	Aggregate sectoral classification using National data	Actual production and tendency	Our estimation of sectoral classification 1972 %age
Mecco	400	28.0	Construction	Construction and civil engineering market, hotels, port construction	Int to MC 14% " " LC 50% " " Exp. 46%
Mecco Mt. Meru	70	Nil	Construction	Construction of luxury hotel	----
Tanzania Industrial Corporation	250	8.5	Sisal ropes and twine, export	90% of production exported	Export 91% Int. to MC 7% " " Exp. 2%
Kigombe Hecogemin	30	1.2	Chemicals nec. export	All exported for further processing since the establishment is for crude processing only.	Exp. 100%
Tanzania Tanneries	200	5.4	Tanneries, MC	Majority is exported. The rest is used for luxury shoe manufacture. Tendency is to lower exports.	LC 26% Exp. 74%
Condotte	600	Total contract 110.0	Construction	Headquarters of EAC 70/m., Housing 39/m., industrial area 5/m. Lifts will cost 25% of headquarter's cost.	Not started in 1972
Sikh Saw Mills Moshi	225	.07 Production started 1/12/72	Wood and timber products, Int	After 1972 exports important 80% of production is plywood the rest logs.	1972 insignificant 1973 Exp 49% Int to MC 46% " constr. 5%

Table B (cont.) (4)

Factory	No. of Employees	Output value (m/-) shs.	Aggregate sectoral classification using National data	Actual production and tendency	Our estimation of sectoral classification 1972 %age
Sikh Saw Mills Tanga	363	5.9	Wood and timber .. Int.	Basic production is plywood and construction products e.g. doors.	Exp. 51% Int to MC 7% " " LC 8% " " Exp. 34%
Kwankoro Saw Mill	108	Input to Sikh Saw Mills	Wood and timber .. Int.	Timber Sawn	—
Tanganyika Planting Company	470	45.5	Sugar factory .. MC	Similar only high price charged for sugar has cut consumption by peasants and workers.	MC 100%
Karimi Ltd.	75	4.1	Tea processing export	Best qualities are exported. Dust and stalks are used locally.	MC 17% Exp. 83%
Tanganyika Extract	120	26.2	misc. chemical n.e.c. .. Exp.	Products are all exported for further processing.	Exp. 100%
Kigombe Sisal Estate	110	5.0 est.	sisal decortication .. Exp.	mainly for export	Exp. 100%
Amboni Central Workshops	90	2.3	Manufacture & repair machinery .. Int.	Workshop for sisal equip- ment	Int. to Exp. 100%
TAMTU Production Unit	30	0.1	Manufacture and repair of machinery .. Int.	Manufacture of ox-ploughs ox and donkey carts, etc.	Int to MC 75% " " Exp. 25%
Ubungo Farm Implements		3.7	Manufacture and repair of machinery .. Int.	Manufacture of hoes, ploughs ox and donkey carts, etc.	Int. to MC 75% " " LC 25%

Table C Summary of sectoral breakdown of production in surveyed firms;

CONSUMER GOODS.

Factory	Aggregate sectoral breakdown			After factory studies		
	Mass	Luxury	Export	Mass	Luxury	Export
Kiltex Arusha	6.0	-	-	4.8	1.2	-
Tanz. Shoe	11.2	-	-	8.7	2.5	-
Tanz. Breweries	-	22.0	-	-	22.0	-
Kibo Match	-	-	12.0	11.8	-	0.2
Phillips Elect.	-	22.6	-	2.3	12.3	8.0
General Tyre	21.7	-	-	-	11.0	7.7
Tang. Ind. Corp	-	-	8.5	-	-	7.7
Kigombe hecogenin	-	-	1.2	-	-	1.2
Tanz. Tanneries	5.4	-	-	-	1.4	4.0
Sikh Saw Mills (Tanga)	-	-	-	-	-	3.0
TPC	45.5	-	-	45.5	-	-
Karimi Ltd.	-	-	4.1	0.7	-	3.4
Tang. Extract	-	-	26.2	-	-	26.2
Kigombe Sisal	-	-	5.0	-	-	5.0
Kioo glass	-	-	-	-	-	0.3
Amboni plastics	-	-	-	-	-	1.5
Tanz. fertilizer	-	-	-	-	-	4.9
TOTAL	89.8	44.6	57.0	73.8	50.4	73.1
% difference	-	-	-	-18%	+13%	+28%

Table D Summary of sectoral breakdown of production in surveyed firms.

INTERMEDIATE GOODS.

Factory	Aggregate breakdown	After factory studies Intermediate inputs to		
		Mass	Luxury	Export
Tanz. Bag	7.6	2.7		4.6
Kioo Glass	6.3	-	6.0	-
Amboni Plastics	4.8	0.8	2.4	0.1
Tanz. Fertilizer	14.9	2.0	-	8.0
SRM	8.0	1.6	6.4	-
Mtava	1.3	0.8	-	0.5
General Tyre	21.7	1.0	1.0	1.0
Sikh Saw Mills (Tanga)	5.9	0.4	0.5	2.0
Tang. Ind. Corp	0.8	0.6	-	0.2
UFI	3.7	2.8	-	0.9
Amboni Gen. Workshop	2.3	-	-	2.3
TAMTU	0.1	0.1	-	-
MECCO	28.0	4.0	14.0	10.0
TOTAL	105.4	16.8	30.3	29.7

Note. The totals in these two tables do not necessarily add up because there are overlaps in production. Some factories produce both consumer and intermediate goods.

FOOTNOTES

1. This paper is drawn from a report being written for the Institute of Development Studies, University of Dar es Salaam, Tanzania, based on an Interdisciplinary research project conducted from that Institute. We are most grateful to the University of Dar es Salaam for sponsoring this study.
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3. There is an interesting discussion of Marx's reproduction model in Tarbuck's introduction to Luxembourge and Bukharin Imperialism and the accumulation of Capital, New left Books.
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