

SOME ASPECTS OF CHANGES IN KENYA'S IMPORT  
STRUCTURE

By

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Changes in the structure of imports in a developing country are closely associated with the level and progress of industrialisation. Industrialisation in these economies at the initial stage tends to be restricted by the available level of skill and organisational ability, to the simpler processes which are typical of non-durable consumer goods. At this stage obviously imports of intermediate and capital goods increase, but it is also evident from the empirical studies that the imports of consumer goods increase, even those which are now manufactured domestically, but to the expansion of the size of the market. Income elasticities of demand for consumer goods at the initial stage of industrialisation appear to be high in these economies<sup>1/</sup>. With the progress of industrialisation new skills and organisational abilities emerge, while the expanding markets allow new industries - in course of time intermediate and capital goods producing industries. These would naturally lead to changes in the composition of imports.

It is also to be noted that with the progress of industrialisation the import content of total supplies (i.e.  $M + D_p$ ) would go on declining, particularly of consumer goods. Growth of industries, or in other words import - substitution, in these economies is expected to result in the declining share of imports of total supplies, particularly of consumer goods, and may cause at the same time a rapid increase in imports of these goods at the initial stage because of the high income elasticity of demand for consumer goods. Domestic industrialisation, or import substitution, is also expected to result at the beginning in the increasing share of imports of producer orientated products (i.e. intermediate and capital goods) of their total supplies, for obvious reasons.

Kenya has started industrialisation, which is expected to have effects on the composition of her imports of manufactures. An attempt has been made in this paper to examine the changes in the composition of Kenya's imports.

The study covers the period from 1954 to 1963. During this period, it appears that manufacturing production (excluding mining and construction) has increased by 72.4%, while total gross domestic product has increased by

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<sup>1/</sup> A. Maizels observes on the basis of estimates of apparent consumption of manufactures per head in a wide variety of countries, for selected years back to 1899, that regression analysis shows that in most countries consumption of manufactures rises at an appreciably faster rate than real income. A. Maizels: Industrial Growth and World Trade. ch. 6.

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64.5%. The share of the manufacturing sector in total G.D.P. has also increased from 23.3% in 1957 to 28.7% in 1963 (based on gross manufacturing production data given in the Censuses of Manufactures, 1957 and 1963). This expansion of the secondary sector has been mainly concentrated in the final stage manufacturing and processing of consumer goods.

The manufacturing industry in Kenya enjoyed an increasing but small share of total capital formation in the form of machinery and transport equipment during this period (e.g. 17.3% in 1954 and 25.8% in 1963).

It is to be noted, however, that there has been a decline of £6.3 million in the growth of capital formation from 1954 to 1963, and that the extent of the decline appears to be much greater when compared with 1957 (e.g. a decline of £16.6 million)<sup>2/</sup>. There has been an absolute decline in capital formation in the form of machinery and transport equipment to the value of £1.7 million and £0.6 million respectively over the period. The decline has been most remarkable in the case of building and construction which amounts to £14 million from 1957 to 1963 (i.e. a decline of more than 111%). This decline appears to be due to the 1958 slump in export prices and political developments.<sup>3/</sup>

During the period 1957-63, the total supply (i.e. import + domestic production) of manufactured consumer goods (e.g. processed food, clothing, footwear, etc.) increased by 52.3%, and per capita supply of these products from £5.1 to £6.5 i.e. by 27%. Kenya's domestic production of consumer goods enjoys a major share of the total supplies (Tables 2a and 2b).

The total supply of capital and intermediate products (i.e. import + domestic production) has shown an increase of 15.7% and this small increase is due to the fall in capital formation. The supply of intermediate good (e.g. textile materials, metal products, glass, paper, rubber etc.) shows a much higher rate of increase. (Table 2a.).

With these facts of Kenya's progress in industrialisation in mind, we would examine the changes in the composition of imports of manufactures in relation to the growth of industries, or in other words, import substitution that has taken place in Kenya during this period.

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<sup>2/</sup> Statistical Abstract, 1964.

<sup>3/</sup> I.B.R.D Report on Kenya, p. 15.

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Import substitution can be considered either as an absolute magnitude meaning entire increase in home output of manufactures and substituting for imports<sup>4/</sup> or as a relative concept. According to the relative concept, only a "greater proportionate increase in home output than in home consumption of manufactures would qualify as import substitution".<sup>5/</sup> We have used both these concepts separately. We have used the first one to assess the progress of import substitution in different sectors and the second concept to measure the effects of import substitution on imports and of expansion in demand on imports.

We shall concentrate our study in the following aspects:

- (a) changes in the composition of imports of manufactures (Tables 1, 2a, 2b).
- (b) changes in the domestic industrial production or, in other words, the import substitution that has taken place in different sectors of industrial production. (We have considered import substitution in the absolute sense in this context). (Tables 2a, 3).
- (c) Effects of import substitution on imports and demand expansion on imports (Table 4).
- (d) An attempt to forecast the composition of imports for 1970 on the basis of trends observed during the period from 1957 to 1963 (Table 5).

## II

### (a) Changes in the Composition of Imports of Manufactures.

In the present section an attempt has been made to examine the changes in the share of imports of manufactures distributed by end use. In an industrialising economy it is normally expected that changes in the import structure will be revealed not only in the greater share, but also in the increasing share of imports of producer oriented products (i.e. intermediate and capital goods).

Table I shows the changing share of imports of manufactures in Kenya. It is evident from the table that no pattern of structural change in imports during the

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<sup>4/</sup> I am indebted to Professor W. Newlyn for valuable suggestions. I am, however, responsible for any error in the paper.

<sup>5/</sup> Maizels: Industrial Growth and World Trade, p. 150

period 1954 to 1963 is discernible. The share of imports of consumer orientated products has in fact increased from 14.6% in 1957 to 18.4% in 1963 (while compared with 1954 it appeared to have remained constant), whereas that of producer orientated products has declined from 60.4% in 1954, and 59.0% in 1957 to 58.0% in 1963. It is to be noted, however, that the increasing share of imports of manufactured consumer goods has been mainly due to an increase in the import of processed food, while the fall in the share of imports of producer orientated products has been caused by the fall in imports of metal products, machinery and transport equipment. Imports of these items are a function of the rate of gross capital formation which has declined during this period as stated earlier. It is to be noted in this connection that shares of most of the items of intermediate products included in the producer orientated goods, appear to have increased. That no change has taken place in the structural pattern of imports, relevant and normal for an industrialising economy, may be explained as having been due to abnormal conditions in gross capital formation associated with the end period i.e. 1963. Due to depression in capital formation (in terms of imports in these economies) the share of consumer goods imports of total imports may be said to have gone up. Under these circumstances increasing shares of imports of most of the items of intermediate products may be considered as a feature to indicate some structural change in the composition of imports. This may be supported, although indirectly, by the fact of the changing share of imports of manufactures by end use of total supplies (M + Dp).

Changes in the total supplies (i.e. import + domestic production) show (Table 2a) an increase of 52.3% in the case of consumer goods and 15.8% in producer orientated products. The small increase in the case of the latter may be explained by the fact that total supplies of cement have declined due to a fall in capital formation in building and construction, a fall in imports of private motor vehicles and in capital formation in transport equipment. Domestic production in these two sectors also shows decline by 17.1% in cement and 5.2% in transport equipment. Total supplies of intermediate products show a considerable increase during this period.

But when the shares of imports in total supplies are taken into account, it is found that there has been a decline in the case of consumer goods and an increase in the case of producer orientated products (Table 2b). Among the products included in the group consumer goods, only the share of imports of processed food of total supplies shows a rise, by 4% over 1957<sup>6/</sup>.

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<sup>6/</sup> We have confined our analysis of total supplies in the period from 1957-63 because of the availability of systematic domestic production data from 1957 through the Censuses of Manufactures.

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Thus although the share of imports of consumer goods in total imports appears to have increased and that of producer goods declined, the share of consumer goods imports in total supply has declined and that of the producer goods imports has increased. This may be regarded as a significant feature of changes in the composition of imports emerging out of the progress of industrialisation. Empirical evidence of other underdeveloped countries at this stage shows that imports of manufactured consumer goods, even of goods identical with those now made at home, may well increase even above the predevelopment level due to the enlargement of the size of the market caused by industrial expansion and agricultural improvement.<sup>7/</sup>

#### (b) Changes in Domestic Industrial Production

An analysis of changes in the import structure must be accompanied by a brief review of the changes in the structure of domestic production.

In this section an attempt has been made to assess the changes in the composition of domestic industrial production (Tables 3, 2a) in Kenya. Import substitution is considered here in the absolute sense i.e. the entire increase in home output of manufactures by end use that has taken place in Kenya during this period.

Experience of other developing countries show that the initial stage of industrialisation takes the form of growth of traditional industries like food, beverages and tobacco, clothing, footwear and similar consumer goods. This is true also of Kenya.

There has taken place an increase (Table 2a) of about 58% in home output of manufactures of consumer goods which may be considered as substituting for imports. In this group of products of traditional industries, it is found that clothing and other "made-up" textiles show an increase of 200%, footwear and other consumer goods by about 82% and processed food by 47%. In other words, Kenya appears to have progressed to a "normal" extent in the traditional industries of food, clothing etc., but not in the production of beverages and tobacco. It is to be noted that total demand for tobacco has not shown a significant rise during this period, in contrast to the other three products where increases in total demand vary from 40% to 50%. The share of domestic production in total supply shows considerable increase in the case of footwear and other consumer goods, clothing, beverages and tobacco, but not in processed food. In 1963 the share of domestic production in total demand stood around 80% to 85% in all consumption

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<sup>7/</sup> R. Nurkse: Patterns of Trade and Development, p. 46

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goods except clothing (i.e. 30.6%), despite the fact that domestic production of clothing etc. has increased by 200% during this period. This indicates the sharp rise in demand due to the increase in consumer spending power during this period.

Despite the rise in output of 58%, the share of consumer goods production in total domestic manufacturing production has increased by only 1% during the period 1957 to 1963 (i.e. from 60.3% to 61.4%). But it appears to have declined by about 3% when compared with 1961. This fall is mainly due to the decline of the production of beverages and tobacco. The share of products of producer orientated industries in the total domestic production has declined by 2.4% from 1957 to 1963; but when compared with 1961 the decline in the share seems to be yet smaller. This decline may be explained by the fall in capital formation during this period, as mentioned above.

Thus the share in total domestic production of consumer goods has increased in the case of footwear and other consumer goods, and clothing, but has declined in processed food and beverages, despite the fact that the total demand has increased.

In conclusion it is observed that import substitution in Kenya is at its initial stage which is mainly concentrated in the traditional processing and non-durable consumer goods producing industries. This is also supported by the changes in the composition of imports with producer orientated products enjoying the greater share and the intermediate products an increasing one.

(c) Effects of Import Substitution on Imports and of Expansion in Demand on Imports.

In the previous section we have studied the growth of import substitution in Kenya as an absolute magnitude. In this section we make an attempt to measure the effects of import substitution and of the expansion in demand on imports. It would be of interest to assess the relative effects of those two influences on the structure of imports.

Maizels' approach has been followed in measuring these effects. According to Maizels the effects of import substitution may be measured "as the difference between actual imports at the end of the period (i.e.  $t_1$  or 1963 in the present study) and what they would have been had they formed the same proportion of total consumption as at the beginning of the period" (i.e.  $t_0$  or 1957 in the present study). Following Maizels we may put it as follows:  $s_1 (m_1 - m_0)$ .

The demand expansion effect on imports may according to Maizels be measured as the difference between imports of manufactures at the beginning of the period and what they would have been at the end (i.e. 1963 in the present study) had they changed in the same proportion as total consumption of manufactures. Maizels puts it as follows:  $m_0 (s_1 - s_0)$ .

In both these cases "s" represents total supplies (i.e.  $M + dp$ ) and "m" represents imports. The subscripts 0 and 1 refer to the base and current periods.

$$\text{Thus } dm = s_1 (m_1 - m_0) + m_0 (s_1 - s_0) \frac{8/}{}$$

Industrialisation in these economies is essentially import substitution and naturally import substitution that has taken place in Kenya as well as the changes in demand during this period must have its effects on imports. Measurement of these effects would give us an idea as to the changes in the composition of imports in relation to industrialisation.

Table 4 shows that the import substitution effect is relatively small in relation to the growth of demand in the case of the consumer goods and producer goods industries, though there has been a large absolute increase particularly in the production of manufactured consumer goods, classified as import substitution in the previous section. This seems to have had little effect in replacing imports. Comparing 1963 with 1957 import substitution appears to be 16.6% of the import in 1957 in the case of consumer goods producing industries and 12.6% in producer orientated industry; while expansion of demand has occurred by 52.0% and 28.3% respectively during this period. The proportion of imports of total consumption in the case of processed food and chemicals was higher in 1963 than it was in 1957 signifying that import substitution is lagging far behind the expansion in demand for these products.

The effects of import substitution in the consumer goods may be said to have resulted in the expansion of demand for intermediate goods.

In the case of footwear and other consumer goods, import substitution has been substantial (i.e. more than the imports in 1957); but because of the expansion in demand for these products imports in 1963 were greater than in 1957. But in the case of other products in this group, import substitution has been small in relation to the growth in demand, indicating the necessity of further expansion of production in these industries.

Among producer orientated goods, import substitution has made modest progress in the case of intermediate goods, although the demand for these products has expanded causing further increase in their import. But in the case of capital goods production, import substitution appears to have made negligible progress, and the demand for these products seems to be in one case stagnant and in the other negative.

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8/ Maizels: Industrial Growth and World Trade, p. 151-152.

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On the basis of the trends observed in the composition of imports from 1954 to 1963<sup>9/</sup>, an attempt has been made to forecast the future composition of imports of manufactures (by end use). Table 5 shows the estimated pattern of structural change in imports by 1970. When compared with 1963, the share of imports of manufactured consumer goods shows a decline and that of producer orientated goods a rise. The estimated decline of the former is only 1%, whereas the increase of the latter is considerable (i.e. by 11%).

These figures are an estimate of conditions at the end of the First Five Year Plan, assuming present trends to continue.

But it must be pointed out that the structural change in imports may be much more distinctive, with greater decline in the share of consumer goods imports and large increase in imports of producer orientated products because of the emphasis given to capital formation and industrialisation in the Plan.

### Conclusion

On the basis of the above discussion, the following significant features of the changing composition of imports in Kenya may be said to have come out.

(a) The increased share of manufactured consumer goods in total imports, indicating a deviation from the normal pattern of structural change in imports in an industrialising economy, may be explained as a result of fall in capital formation during the period. Capital goods imports enjoy the major share of total imports. The share of intermediate goods imports (i.e. 32.6% in 1957 and 24.6% in 1963) has increased, indicating a similarity with the normal pattern of structural change in imports.

There has been also an absolute increase in import of consumer goods which may be regarded as a consequence of increased industrialisation generating increased demand, but with a rapid increase in total supplies, imports of consumer goods are a declining proportion of total supplies.

(b) A declining share of imports of consumer goods and a rising one of imports of producer orientated goods in total supply indicate, although indirectly, a changing feature of composition of imports normal for an industrialising economy. This may be regarded as a basis for predicting a structural change in imports in favour of producer orientated goods in the near future.

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<sup>9/</sup> With the help of the least square regression equation, we have found out the trends.



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(c) Progress in domestic production of manufactured consumer goods and also of producer orientated goods through import substitution appears to have taken place, which as a result, had led to the increased consumer demand. A part of this is being supplied by imports, demonstrating the need for further import substitution.

(d) The import substitution effects on imports appear to be small in the case of both consumer goods and producer orientated goods in relation to the growth of demand for these products.

(e) The composition of domestic manufactured production shows that economies like that of Kenya lay greater stress on import substitution of less expensive but essential consumer goods (the production of which requires simple technology) at the initial stage of industrialisation.

(f) The forecast of the composition of imports for 1970 shows that a pattern of structural change, although a mild one, in imports normal for an industrialising economy is emerging at the end of the First Five Year Plan of Kenya.

This is likely to be much more distinct because of emphasis laid on the industrialisation programme - i.e. the Plan.



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TABLE - Ia  
Percent Changes in Imports, 1954 - 1963

<u>Manufactured Products</u>	<u>1954</u>	<u>1957</u>
	<u>1963</u>	<u>1963</u>
1. Processed Food:	34.7	92.6
2. Beverages & Tobacco:	-62.9	-10.9
3. Clothing & Madeup Textiles:	29.4	9.9
4. Foot Wear & Other Consumer Goods:		10.5
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Consumer Goods:	13.7	35.8
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5. Rubber & Rubber Products:	- .3	4.8
6. Paper and Paper "	122.5	45.6
7. Glass and Glass "	62.4	25.9
8. Textile Materials:	.9	27.1
9. Chemicals:	109.9	11.4
10. Cement:	93.0	-27.9
11. Metal Products:	-2.5	-5.2
12. Machinery:	41.9	-2.4
13. Transport Equipment:	-24.9	-5.9
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Producer Orientated Products:	-21.6	15.7
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All Manufactures:	15.7	22.1
All Imports:	16.0	7.3
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TABLE - "a  
Changes in Total Import + Domestic Production  
 (i.e. Total Supplies)<sup>1/</sup>

	1957	1963	$\frac{1957}{1963}$	Changes in Domestic Production & Import Substitutions (in the absolute sense) in %
				$\frac{1957}{1963}$
1. Processed Food:	20,705	31,976	54.1%	47.2
2. Beverages and Tobacco:	8,922	9,325	4.5%	4.3
3. Clothings & Other Madeup Textiles:	2,510	3,546	41.2%	200.2
4. Foot Wear and Other Consumer goods:	5,876	13,120	55.2%	81.7
All Consumer Oriented Products:	38,013	57,907	52.3%	57.7
5. Textile Materials:	5,282	7,882	49.2%	87.2
6. Pulp, Paper, etc.:	2,452	4,218	72.0%	153.5
7. Rubber:	1,474	1,729	17.3%	57.8
8. Basic Chemicals:	5,335	7,018	31.5%	25.7
9. Cement etc.:	3,057	2,505	-17.7%	-17.1
10. Metal Products:	12,229	14,651	19.8%	125.1
11. Mechinery:	10,053	10,043	-.1%	31.8
12. Transport Equipment:	12,215	11,521	-5.7%	5.2
13. Glass and Glass:	379	143	.96%	22.0
All Producer Oriented Products:	52,476	60,710	15.8%	55.5

<sup>1/</sup> By Total Supplies we include here Import + Production (locally Total Sales should have been included).

TABLE - 2b

Import as % of Total Import + Output i.e. Changes in the Imp. Context

1957 - 1963

	1957	1961	1963
1. Processed Food:	16.3	18.7	20.0
2. Beverages + Tobacco:	16.4	14.6	14.0
3. Clothings & Other Madeup Textiles:	85.6	76.4	69.4
4. Foot Wear & Other Consumer Goods:	41.3	20.3	20.2
Consumer Oriented Goods:	25.3	21.7	22.5
5. Textile Materials Glass & Glass Products:	97.3	90.2	82.9
6. Pulp, Paper & Paper "	75.5	67.4	63.9
7. Rubber & Rubber Products:	76.6	68.3	68.5
8. Basic Chemicals:	55.7	60.4	55.7
9. Cement:	8.3	4.3	7.7
10. Metal Products:	88.8	66.8	63.4
11. Mechinery:	93.2	87.5	91.1
12. Transport Equipment:	64.8	73.5	64.6
All Producer Oriented Products:	73.1	69.5	74.5

TABLE - 3

Gross Production of Manufactures 1957 to 1963

Sectoral Distributions, 1957, 1961 & 1963

	1957	1961	1963	Change in the Domestic Production
				<u>1957</u> 1963
1. Processed Food:	35.9	35.6	34.1	47.2
2. Beverages + Tobacco:	15.4	11.8	10.7	4.3
3. Clothings & Other Madeup Textiles:	.7	.9	1.4	20.2
4. Foot Wear & Other Consumer Goods:	8.3	15.7	15.2	81.7
	60.3	64.0	61.4	57.7
5. Glass & Glass Prod.:	.7	.6	.6	22.0
6. Textiles Materials:	.2	1.1	1.7	87.2
7. Paper & Paper Prod.:	1.1	1.9	2.3	153.5
8. Rubber & Rubber "	.7	.6	.7	57.8
9. Basic Chemicals:	5.1	3.7	4.1	25.7
10. Cement:	5.7	5.1	3.0	-17.1
11. Metal Products:	4.8	5.6	7.0	125.1
12. Machinery	1.2	3.8	1.2	31.8
13. Transport Equipment:	8.9	5.3	5.4	5.2
	28.4	27.7	26.0	55.5
14. Miscellaneous Products:	11.3	93.7	12.6	

If we exclude the share of Cement + Transport Equipment, we find that the share of producer oriented products has increased from 13.8 to 17.6 of total domestic production.

TABLE - 4

Effects of Import Substitutions and of Expansion in Demand  
On Imports. (in £,000)

	M 1957 (1)	Effect of l.s. (2)		Effect of Expansion in demand (3)	Total (2+3) (4)	M 1963 (5)
1. Processed Food:	3.3	1.2	+	1.9	3.1	6.4
2. Beverages & Tobacco:	1.4	-0.2	+	0.1	-.1	1.3
3. Clothings & Other Madeup Textiles:	2.1	-0.5	+	0.8	+.30	2.4
4. Foot Wear & Other Consumer Goods:	2.6	-2.9	+	3.2	+.3	2.9
	9.4	-2.4	+	6.0	+3.6	13.0
5. Rubber:	1.1	-0.2	+	0.2	.0	1.1
6. Paper:	1.8	-0.4	+	1.3	+0.9	2.7
7. Glass:	0.3	-0.4	+	0.3	-1	0.2
8. Textiles:	5.1	-1.1	+	2.5	+1.4	6.5
9. Cement:	0.2	-0.6	+	0.5	-0.1	0.1
10. Chemicals:	2.8	+0.2	+	0.9	+1.1	3.9
11. Metal:	9.8	-2.4	+	1.9	-.5	9.3
12. Machinery:	9.3	-0.2	+	0	-.2	9.1
13. Transport Equipment:	7.9	-0.1	+	.4	-.5	7.4
	38.8	-4.9	+	11.0	+6.1	44.9

TABLE - 5

Composition of Imports of Manufactures in Kenya

(A forecast for 1970)

Manufacturing Products	Share of Total Imports in 1970 (in Percentage)
1. Processed Food:	7.9
2. Beverages and Tobacco:	-1.0
3. Clothings and Madeup Textiles:	5.5
4. Foot Wear and Other Consumer Goods:	6.1
All Consumer Goods:	17.4
5. Rubber and Rubber Products:	1.2
6. Paper and Paper Products:	2.8
7. Textile Materials:	8.8
8. Glass and Glass Products:	1.5
9. Chemicals:	7.1
10. Cement:	.4
11. Metal Products:	9.5
12. Machinery:	12.1
13. Transport Equipment:	9.3
Producer Oriented Products:	52.7

The remaining is distributed among miscellaneous manufactures and other imports.



TABLE - 6

Per Capita Supplies of Manufactures (by end use)  
from 1957 to 1963

	<u>1957</u>	<u>1963</u>
1. Processed Food:	2.7	3.7
2. Beverages & Tobacco:	1.2	1.0
3. Clothings & Other Madeup Textiles:	.3	.4
4. Foot Wear & Other Consumer Goods:	.7	1.4
All Consumer Goods:	5.1	6.5
5. Rubber and Rubber Products:	.2	.2
6. Paper and Paper Products:	.3	.4
7. Glass and Glass Products:		
8. Textile Materials:	.7	.8
9. Chemicals:	.7	.8
10. Cement:	.4	.2
11. Metal Products:	1.6	1.6
12. Machinery:	1.3	1.1
13. Transport Equipment:	1.6	1.3
All Producer Oriented Products:	7.0	6.3
All Manufactures:		

Source of all Tables: (a) Statistical Abstract, 1964, Govt of Kenya.

(b) Census of Manufactures, Kenya, 1957, (1961) and 1963.



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