

**SOME ASPECTS OF THE PATTERN AND LOCATION  
OF  
MANUFACTURING INDUSTRY IN NAIROBI, KENYA**

*By*

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The study of manufacturing industry in Nairobi is very interesting, because, though Nairobi is a very new city — established only at the end of the 19th century — it has become the most industrialized city in all Kenya, and probably the most industrialized city in all East Africa .

I had the chance of living in Nairobi for two years (1972-1974) as my husband was deputed there by the United Nations as an expert in industrial economy. While in Kenya I had the chance of carrying out field-work, and having useful discussions with several officials concerning different points studied in this paper.

**A Brief History of the City of Nairobi :**

Nairobi is a very new city whose establishment dates back only to the end of the last century. Its location was completely the choice of the British colonialists. In 1895 Britain colonized East Africa<sup>(1)</sup>, and a decision was soon made to link Uganda with the coast<sup>(2)</sup>. In 1899 work on the railway line had reached a point 327 miles from Mombasa on the coast, while Kisumu, the destination of the railway, lay a further 257 miles to the North-west (Figure 1). Behind lay the relatively easy terrain of the Athi Plains. Ahead lay much steeper slopes and the Rift Valley escarpment presenting great constructional problems; a suitable point for descending the escarpment was essential<sup>(3)</sup>. Thus was chosen the site of Nairobi by the railway executives, and it was given the name of the small river on which

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(1) The previous colony of East Africa comprised present day Uganda, Kenya, and Tanzania.

(2) W.T.W. MORGAN, *Nairobi City and Region*, Oxford University Press, London, New York, 1967, p. 99.

(3) *Ibid.*, pp. 99-100.

it is situated. It is interesting to note that the area where Nairobi was established was almost uninhabited, for it was the frontier between Kikuyu and Masai territories.<sup>(1)</sup>

The railway headquarters moved from Mombasa to Nairobi in August 1899, and the government administration of Ukamba province was moved from Machakos to Nairobi in August 1899. In 1900, Nairobi Municipal Regulations were published, and the township was defined as that area within a radius of  $1\frac{1}{2}$  miles from the present office of H.M. Sub. Commission of Ukamba<sup>(2)</sup>. Its area was only about 30 square miles up to 1927<sup>(3)</sup>.

The area of Nairobi has developed very quickly to reach 684 km<sup>2</sup> according to the population census of 1969<sup>(4)</sup>, while according to the City Council its area was 901 km. in which about 201 km<sup>(5)</sup> was vacant lands <sup>(6)</sup> Nairobi became the capital of Kenya in 1965

The fact that Nairobi started as a railway centre and an administrative one had its influence on the factors affecting industrial location in Nairobi, as will be shown from the analysis in this paper.

#### **The Development of Manufacturing Industry in Nairobi :**

In 1899 the plots in Victoria street — present day Tom Mboya street — were occupied by a hotel, a general store, various trading concerns, a soda water factory, and a post office. Therefore, the soda water factory might be described as the first manufacturing industry to be established in Nairobi<sup>(7)</sup> Therefore the first industry in Nairobi was a consumers goods industry and a market-oriented one. It will be seen from the analysis in this paper that the predominance of consumers goods industries in Nairobi was evident since the beginning of the establishment of manufacturing industry in this city, and has until the present day continued to be a main feature in the pattern of industry. At the same time, market-oriented industries have also continued to predominate in Nairobi.

Development of manufacturing industry in Nairobi was very slow. In other words, industrial activity on any scale came rather later to Nairobi than its other activities. Development in what is now the Industrial Area started in about 1919<sup>(8)</sup>

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- (1) R. W. WALMSLEY, Nairobi, the geography of a new city. East African Local Studies, No. 1, The Eagle Press, Nairobi, 1957, p. 18.
  - (2) Morgan, Op. Cit., p. 100.
  - (3) Ibid., p. 98.
  - (4) Census of the population for 1969, Central Bureau of Statistics. Nairobi.
  - (5) Planning Office, City Council of Nairobi, unpublished study, 1974.
  - (6) Walmsley. Op. Cit., p. 19.
  - (7) Morgan. Op. Cit., p. 100.
  - (8) Ibid., p. 114.

As has been stated earlier, manufacturing industry started as a subsidiary occupation in Nairobi as compared to other occupations, especially services. Unfortunately, no information is available either concerning the number employer in manufacturing, or the number of establishments of manufacturing industry; or concerning land used for manufacturing industry in Nairobi; until as late as 1954, when the Survey of Industrial Production gave figures for employment in manufacturing industry. The following table shows the development of employment in manufacturing industry form 1954-1971, in Nairobi; and compared to all Kenya.

**TABLE I.**

Development of employment in Manufacturing and Repairs in  
Kenya and Nairobi  
1954 — 1971.

Year	Kenya		Nairobi		
	No. employees	Average annual rate of increase %	No. employees	Average annual rate of increase %	% NRB to KEN
1954 <sup>1)</sup>	42,853		15,035		35.1
1957	56,185	9.5	22,915	15.1	40.8
1976	64,197	3.6	32,844	3.7	51.2
1968 <sup>2)</sup>	54,971		27,900		50.8
1971	76,336	11.6	39,261	12.1	51.6

Source : a) 1954 & 1957 Survey of Industrial Production for 1954 & 1957; after R.B. OGENDO, Industrial Geography of Kenya, East African Publishing House, Nairobi, 1972. p. 270.

b) 1967, Census of Industrial Production, 1972.

c) 1968 Statistical Abstract, 1972.

d) 1971, Kenya Statistical Digest, 1973.

1) The survey for the years 1954, 1957 and 1967 included all firms employing 5 or more persons.

2) Surveys for 1968 and 1971 include only firms with 50 or more persons employed.

As can be seen from Table I, the unmebr employed in Manufacturing and Repairs in Nairobi increased from 15,035 in 1954 to 32,844 in 1967. The average annual rate of increase was very high for the first 3 years (1954-57), when it reached 15%, whereas the annual rate of increase for 1957-67 was moderate, reaching 3.7%.

If the increase in the number of big firms only is considered, for the period between the last surveys of 1968 and 1971, which are analysed in this paper (Table I), it is found that the average annual rate of increase reached the high level of 12%. It is noteworthy to say that the average annual rate of increase for all Kenya for big firms was 11.6%, very close to that of Nairobi, for the same period 1968-71.

As for the percentage of those employed in manufacturing and repairs in Nairobi as compared to all Kenya, it is noticed that it has increased gradually from 35% in 1954 to 41% in 1957 (Table I), then it reached the high figure of 51% in 1967. This percentage is for establishments employing 5 or more persons. If one considers the new censuses starting from 1968, when only establishments employing 50 employees or more were enumerated, it is found that the percentage for Nairobi was also 50.8% in 1968, rising slightly to 51.6% in 1971.

#### **Importance of Manufacturing Industry in the Employment Pattern in Nairobi :**

According to the last population census of 1969, the population of Nairobi amounted to 509,286 persons, or 4.65% of the total population of Kenya (10,942, 705). In 1972 there were 178,149 persons employed in Nairobi or about 26% of the total employed in all Kenya. Of the total employment of Nairobi (Table II), those employed in manufacturing industry amounted to 35,563<sup>(1)</sup> persons, or about 20% of the total employment. Manufacturing Industry (20%) took second place in importance after Services (40%), in Nairobi, as shown in Table II. Manufacturing Industry was followed in importance by Commerce (14%). It is thus found that about 75% of total employment in Nairobi went to the three sectors of Services, Manufacturing, and Commerce.

The picture for all Kenya was somehow different (Table II), for while Services still employed by far the largest Percentage which amounted to 35%, it was followed by agriculture (31%), then Manufacturing Industry took third place with about 14%.

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(1) The figures for employment in the different sectors, i.e. agriculture, manufacturing, services, etc., are derived from the annual enumeration of Employees and Self Employed. Therefore the difference in the no. of those employed in the manufacturing sector in NRB. which is 35,563 according to the Enumeration of the Employees and 39,261 according to the survey of Industrial Production — which appears in Table I p. 5, could be attributed to differences in the coverage and method of enumeration.

**TABLE II**

Employment in Kenya and Nairobi in the different sectors, 1971.

Sector	Kenya		Nairobi	
	No.	%	No.	%
1 Agriculture	211,130	31.1	4,733	2.6
2 Mining and Quarrying	2,976	0.4	847	0.5
3 Manufacturing & Repairs	92,803	13.7	35,563	20.0
4 Building & Construction	34,806	5.1	19,548	11.0
5 Electricity and Water	5,157	0.8	2,384	1.3
6 Commerce	46,674	6.8	25,537	14.3
7 Transport	45,582	6.7	18,894	10.6
8 Services	240,599	35.4	70,643	39.7
<b>Total</b>	<b>679,727</b>	<b>100.0</b>	<b>178,149</b>	<b>100.0</b>

(1) The Modern Sector includes the entire urban sector, the entire public sector, large-scale farms and other large-scale enterprises such as sawmills & mines located outside towns.

Source : Employment and Earnings in the Modern Sector<sup>(1)</sup>, 1971, Central Bureau of Statistics, Nairobi, Aug. 1973.

### Pattern of Manufacturing Industry in Nairobi

There are two Censuses published in Kenya which give some what detailed data concerning Manufacturing Industry, these are :—

1 — The Census of employment and Earnings in the Modern Sectors<sup>(1)</sup>, which uses a slightly modified version of the United Nations 3 Digit International Standard Classification<sup>(2)</sup>. This census classifies Manufacturing and Repairs into 19 Major Groups which are subdivided into 49 branches.

I had to use in my detailed analysis the figures of this census, as they were the only figures obtainable for the branches of Industry in Nairobi.

2 — The Census of Industrial Production which as from 1967 used the United Nations 3 Digit International Standard Classification, with some adjustment to suit the specific conditions of industry in Kenya<sup>(3)</sup>. This census.

(1) This census is published by the Central Bureau of Statistics. Ministry of Finance & Planning, Nairobi.

(2) Statistical Abstract, Central Bureau of Statistics. Ministry of Finance & Planning, Nairobi, 1972, pp. 210-236.

(3) Census of Industrial Production, 1967, Statistics Division, Ministry of Finance & Planning. Nairobi, Jan. 1972, p. (iii).



classifies Manufacturing and Repairs into 22 Major Groups, subdivided into 31 branches<sup>(1)</sup>.

**The Classification of Manufacturing & Repairs into Major Groups of Industry:**

The 49 branches of Manufacturing and Repairs will be classified under four headings<sup>(2)</sup>, these are :

- 1 — Consumers Goods Industries
- 2 — Service Industries
- 3 — Intermediate Goods Industries
- 4 — Capital Goods Industries.

This classification is quite comparable with Dr. Fahmy's<sup>(3)</sup> classification of the Manufacturing Sector into 3 groups of Consumers goods, Intermediate goods, and Capital goods.

Table III shows the number of employees in the four groups into which the branches of manufacturing and repairs have been grouped in Nairobi, in 1971.

**TABLE III**  
Number of Employees in the Major Groups of Manufacturing & Repairs in Nairobi, 1971.

Major Group	No. Employees	% to total NRB	% NRB to KEN
1. Consumers Goods	15,421	44.7	34.4
2. Service	12,314	35.7	48.7
3. Capital Goods	4,028	11.7	47.4
4. Intermediate Goods	2,709	7.9	22.2
Total <sup>(1)</sup>	34,472	100.0	37.9

**Source :** Table based on figures of Census of Employment and Earnings in the Modern Sector in 1971.

(1) The total excludes Miscellaneous Industries.

(2) Please refer to Table I of the index for the branches of the Service Industries.

It is clear from Table III that the group of Consumers Goods Industries accounts for nearly half (44.7%) of all Manufacturing and Repairs in Nairobi; it is followed by the group of Service Industries (35.7), i.e. the two

(1) The figures for employment in the branches of industry were not available for Nairobi in this census.

(2) Details of the grouping of the branches in the four classifications is shown in Table I of the Index.

(3) F.R. FAHMY, Growth Pattern of Manufacturing Sector in Egypt (1950-1970), Institute of National Planning, Memo, No. 386, 1964, pp. 1-2.

groups together account for 80.4% of all employment in Manufacturing and Repairs in NRB.

As the group of Intermediate goods has the least contribution to employment, with only 8%, and as it is noticed that most of the products of this branch are actually used by the Consumers goods Industries; 3/4 of those employed in the Intermediate group were added to those employed in the Consumers Goods, and 1/4 were added to those employed in the Capital Goods Industries.<sup>(1)</sup>

Therefore, according to the 3 group classification, Consumers Goods would account for 50.6% of employment in Manufacturing and Repairs; Service would account for 35.7%, and Capital for 13.7%. This would mean that the two groups of Consumers Goods and Service would together account for 86.4% of all employment in Manufacturing and Repairs; which is a very high percentage. It will be evident why these two groups account for this very high percentage of employment when the major factors affecting industrial location in Nairobi are analysed.

As for Nairobi's share of employment in Manufacturing and Repairs in all Kenya, it is found that 49% of all those employed in the Service Group of Industry, 47% of those employed in the Capital Goods group, 34% of employment in the Consumers Goods Group, and 22% of employment in the Intermediate Group, are in Nairobi.

Presently, the reason for naming one of the major groups as «The Service Group of Industry», will be explained briefly<sup>(2)</sup>.

The Service Group as can be seen from Table I in the index includes five<sup>(3)</sup> of the six branches of «Transport Equipment», thus excluding only the branch of Motor Body Building. These five branched together employed 7696 employees or 63% of all employment in the Service group in Nairobi. It is interesting to note that three of the five branches are stated in the Kenyan Censuses as branches for repairing only<sup>(4)</sup>. Table IX); while the fourth branch, that of Railway Equipment is known to include mainly workshops

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(1) This grouping with these percentages was adopted by Fahmy, Op. Cit., p. 2.

(2) I have introduced the term «Service group of Industry in my Ph.D. Thesis; Aida Reshara, *The Geographical Background to the Distribution and Character of Manufacturing Industry in Egypt*, unpublished Thesis, presented to the Univ. of Durham, U.K., 1956.

(3) The five branches are 1) Aircraft Repairs 2) Repair of Road Vehicles 3) Railway Equipment 4) Bicycle Repairs 5) Shipping and Repairing.

(4) These are the branches of 1) Aircraft Repairs 2) Repair of Road Vehicles 3) Bicycle Repairs.

for maintenance and repair of railway locomotives and wagons and rail<sup>(1)</sup> Kenya does not produce any rails or locomotives or wagons. Therefore it can be safely said that the four branches of Transport represented in Nairobi and comprising 63% of all employment in the Service group of Industry are essentially engaged in maintenance and repairwork, with perhaps the manufacture of a few spare parts.

The Service group includes besides the five branches of Transport, half those employed in the branch of Machinery non-Electrical and half those employed in the branch of Metal Products.

It is presumed that a large proportion of those working in these two branches is actually engaged in repair work. This assumption is based on the following :

1) The average number of employees per establishment in Kenya<sup>(2)</sup> for the branch of Machinery non-Electrical is low (13 employees per est., Table I of the index), if compared to 27 employees per est., for all Manufacturing and Repairs. This average becomes evident as a very low one, if compared to the average for some branches which are only engaged in manufacturing — no repair work — though the type of manufacturing could be simple processing such as the branch of Spirits, Beer and Tobacco, with an average of 109 employees per establishment; and the branch of Spinning, Weaving, and Finishing Textiles, with an average of 192 employees per establishment. The average number of employees per establishment for the Metal Products branch of industry is not low (32), if compared to the average for all Manufacturing and Repairs (27), but it is very low if compared to the average for the two branches of Spirits. Beer and Tobacco (109); and Spinning, Weaving and Finishing Textiles (192), was there not a sizeable percentage of establishments in the two branches of Machinery non-Electrical and Metal Products engaged mainly in repair work, the average number of employees per establishment for these two branches could not be comparatively so low.

2) The predominance of repair and maintenance in some branches of Manufacturing is one of the characteristics of the structure of Manu-

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(1) The fifth branch is that of Shipping and Repairing. Though this branch is not represented in Nairobi, it can be assumed that a substantial % of its employees is also engaged in repair work.

(2) The average no. of employees per est. could not be obtained for branches of industry in Nairobi, for this reason I had to use the average for all Kenya as an indication.



facturing Industry in most developing countries. This is evident in the case of Egypt where the 1937 Industrial and Commercial Census produced a table classifying Manufacturing Industry by Group of Industry into three categories of 1) Making 2) Making and Repairing and 3) Repairing. In 1937 some major groups of industry in Egypt had more than 50% of their employees in establishments belonging to the categories of Repairing, and Making and Repairing. Amongst these groups could be mentioned Machine & Machine Tools group (90.4%), Transport Equipment (85.7%), Metals and Metal Articles (79.4%), and Rubber (82.7%)<sup>(1)</sup>.

Unfortunately none of the Censuses dealing with Manufacturing Industry in Kenya break down the data into Manufacturing as one category and Repairing as another<sup>(2)</sup>, but repairing appears in the headings of five branches, four of them in the major group of Transport Equipment,<sup>(3)</sup> and the fifth is the branch of Footwear Manufacture and Repair (Table I of index). But it can be safely assumed that besides the Transport group of industry, establishments for maintenance and repair, and perhaps the manufacture of a few spare parts, represent a sizeable percentage in some branches of industry in Kenya, such as the two branches of Machinery non-Electrical and Metal Products. Another fact which supports the above mentioned assumption is the fact that the term **Manufacturing and Repairs** has been actually used up to 1972 <sup>(4)</sup> by the two major Censuses dealing with data of the manufacturing Sector to refer to the Manufacturing Sector as a whole in Kenya.

Thus these branches of industry in which a sizeable percentage of establishments is engaged in maintenance and repair actually belong to the **Service group of Industry**, which could be termed as a Population-oriented Industry.

The last branch of industry included in the Service group is that of Printing, Publishing and Allied Industries. This branch essentially serves the literate and education of the population.

Before reviewing the major factors affecting the location of Manufacturing and Repairs in Nairobi, the following fact should be cleared.

Out of the 49 branches of Manufacturing and Repairs, five branches

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(1) Op. Cit., Beshara, unpublished Ph. D. Thesis, p. 222.

(2) As was done in the Industrial Census of Egypt in 1937.

(3) These branches have been cited on p. 7 of this paper.

(4) 1972 is the last Census Year used in this paper.

are not represented at all in Nairobi, and seven branches have less than 10% of their employees in Nairobi (Table IV)<sup>(1)</sup>.

TABLE IV  
Employment in Branches of Industry for which NRB  
has representation of less than 10%

Branch of Industry	No. employed KEN	No. employed NRB	NRB to KEN
<b>I Branches of the Consumers goods</b>			
1. Sugar factories and refineries	3,978	—	0.0
2. Canning & preservation of fish	50	—	0.0
3. Other handicrafts	21	—	0.0
4. Cotton ginning	358	3	0.8
5. Cordage, rope and finishing text.	2,490	116	4.7
6. Footwear manufacture & repair	1,619	82	5.1
7. Canning and preservation of fruits & vegetables.	2,106	128	6.1
8. Slaughtering, reparation & pres. of meat	2,088	202	9.7
<i>Total 8 branches of Consumers goods</i>	<b>12,710</b>	<b>531</b>	<b>4.2</b>
<b>II Branches of Intermediate goods</b>			
1. Wattel bark extract & manufacture	499	—	0.0
2. Cement & Clay products	1,192	28	2.4
3. Sawmills	5,688	224	3.9
<i>Total 3 branches of Intermediate goods</i>	<b>7,379</b>	<b>252</b>	<b>3.4</b>
<b>III Branches of Service Group</b>			
1. Shipping and repairing	849	—	0.0
<i>Total branches of 3 groups I, II, III</i>	<b>20,938</b>	<b>783</b>	<b>3.7</b>

The reasons for no representation or comparatively low representation (below 10%) of these branches of industry in Nairobi are obvious, as will be shown in the coming paragraphs.

The five branches which have no representation in Nairobi are the following :

(1) The number of employees in all Manufacturing and Repairs in Nairobi is 37.9% of all Kenya.

- a) Three branches of the Consumers goods Industries, namely the Sugar Factories and Refineries, Canning and Perservation of Fish, and Other Handicrafts.<sup>(1)</sup>

As for the **Sugar Factories and Refineries**, it is a known fact that sugar cane, which is the raw material for the sugar crushing industry in Kenya, should not be transported a long distance from the fields to the factories, as the quality of the cane deteriorates quickly.<sup>(2)</sup> Besides, the refined sugar is about 10 times lighter than the cane from which it is extracted.<sup>(3)</sup> It is for these two reasons that the sugar cane crushing industry is a strictly raw-material-oriented one<sup>(4)</sup>.

In 1964, 88.6% of the operatives in the sugar cane processing industry in Kenya were in Nyanza and Coast Provinces,<sup>(5)</sup> as most sugar cane is cultivated in these two provinces.

As for **Canning and Preservation of Fish**, it is also strictly tied to its raw material, i.e., the availability of fish from the sea, a lake, or a large river, on a large scale; which is not the case in Nairobi.

- b) The only branch of the Service group which is not represented in Nairobi is that of **Shipping and Repairing**, which is also tied to the existence of a sea, a lake or a navigable waterway; again not the case of Nairobi (Fig. 1).
- c) **Wattle Bark Extract and Manufacture** which is the only branch of the Intermediate group not represented in Nairobi, is also strictly raw-material-oriented. There are no wattle tree plantations in the Nairobi region.

The following remarks will be made concerning these branches of

industry which have less than 10% of their employees in Nairobi.

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(1) This is very insignificant branch with only 21 employees in all Kenya.

(2) A. Beshara, the Location of Industry in Egypt, Nahda Arabia, Cairo, 1962, P. 100, (Arabic).

(3) Op. Cit., Ogendo, p. 28.

(4) The same is true of the location of sugar cane crushing factories in Egypt, which are concentrated in Upper Egypt, where the bulk of the sugar cane is cultivated. (Refer to *Op. Cit., Beshara, Location of Industry in Egypt*, pp. 79-105).

i) Op. Cit., Ogendo, P. 28.

NAIROBI'S POSITION AND SURROUNDING SETTLEMENTS, IN KENYA AND EAST AFRICA

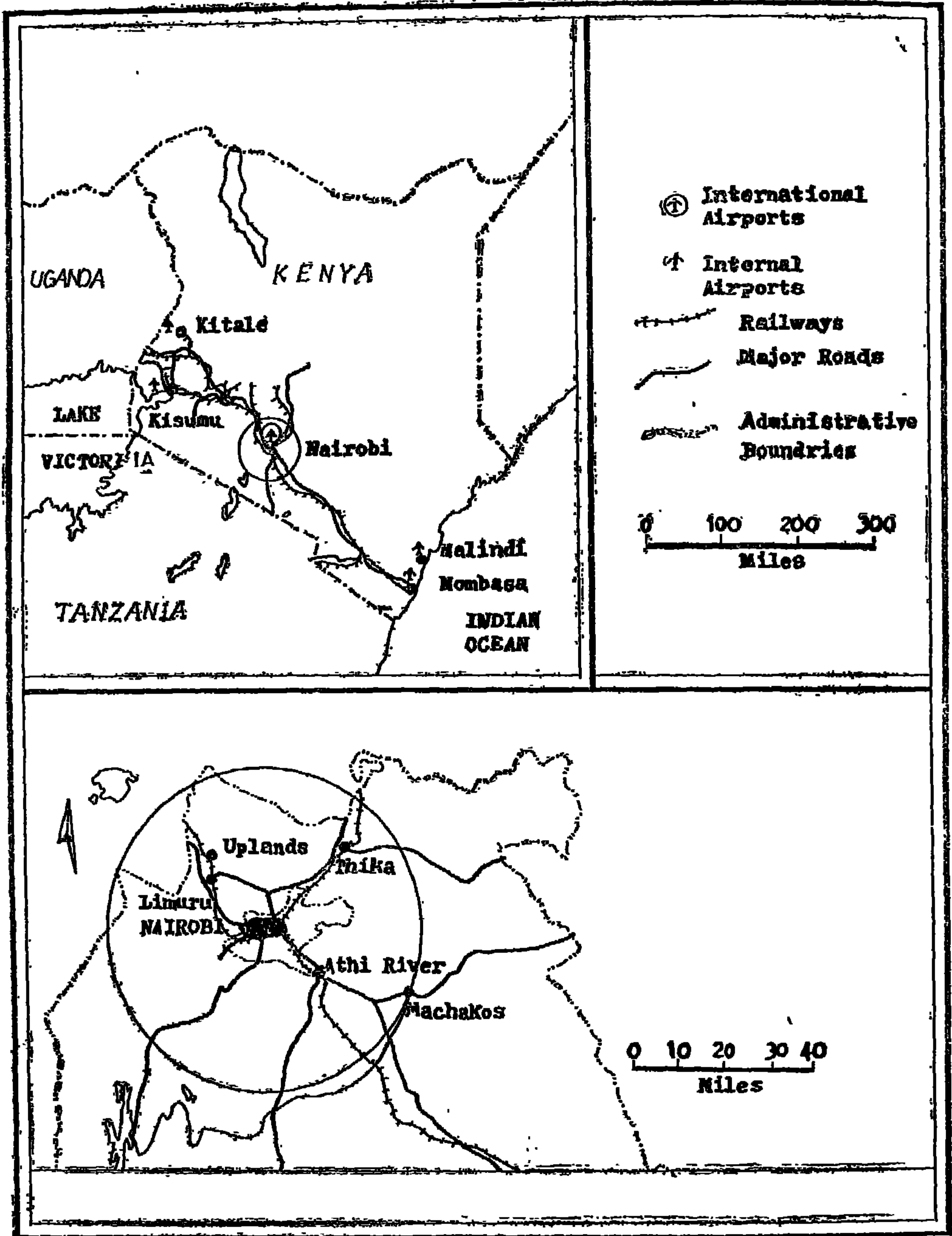


FIGURE 1

Concerning the **Cement** industry, it is mainly a raw-material-oriented industry. In Kenya, the two largest establishments are the Bamburi Cement Factory near Mombasa<sup>(1)</sup> on the coast, and the Athi River Cement Factory, near Nairobi. Though, it was mentioned that cement is mainly a raw-material-oriented industry, it also prefers to be as near to its market as possible, as it is a bulky and cheap product. It is therefore that the Athi River Cement Factory is only 27 km. from Nairobi, which is its major market (Figure 1).

The **Sawmilling** industry is also a material -oriented industry, with only 3.9% of its employment in Nairobi, so is the **Cotton ginning** industry with only 0.8% of its employment in Nairobi.

The **Footwear Manufacture and Repair** branch of industry has 5.1% of its employees in Nairobi. It is one of the industries in Kenya with a very low average number of employees (7) per establishment (Table I of the index). This industry is one of the few agricultural processing and fabricating industries with a considerable repair service.<sup>(2)</sup> In terms of establishments, 91.4% of a total of 233 establishments employed less than 5 employees, and only two establishments employed 50 or more employees in 1971. The most important of the two largest factories in this industry, the huge Bata Shoes Factory of Limuru, employed 68.2% of a total of 1,612 operatives in this industry in 1964,<sup>(3)</sup> Limuru is very near Nairobi, situated 31km. to its North-west, and linked to it by good tarmac roads. It also lies on the railway line joining Nairobi with Kisumu on lake Victoria (Fig.1).

In the **Slaughtering, Preparation and Preservation of Meat** industry, the three major meat processing and preserving factories in Kenya are the Athi River Kenya Meat Commission Factory, the Mombasa Kenya Meat Commission Factory and the Uplands Bacon Factory. Both the Athi River K.M.C. factory and the Uplands bacon factory are located on the railway line. These factories are both near Nairobi; Athi River factory is only 27 km. from Nairobi, and the Uplands factory is about 41 km. to the North-west of Nairobi (Fig. 1). Therefore these two factories could be considered to be oriented towards the Nairobi market, but it would have been wrong to locate any of them inside or very near Nairobi for more than one reason :

- 1) The nasty smell and harmful refuse of this type of factory affect the settlements near them.
- 2) Abattoires need large quantities of water at hand, this is not available in Nairobi.

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(1) Mombasa is the chief port of Kenya, and the second largest city.

(2) Op. Cit., Ogendera, p. 32.

(3) Ibid., P. 32.



The **Canning and Preservation of Fruits and Vegetables** branch of industry is mainly a material-oriented industry. One of the most important fruits which is canned and exported in Kenya is pineapples. Pineapples are a cash crop of local importance which are in Thika and Machakos.<sup>(1)</sup> Both Thika and Machakos are not far from Nairobi, and both are well linked by good roads to Nairobi. Thika is about 42 km. to the North-east of Nairobi (Figure 1). These two factories serve the Nairobi Market.

It could thus be concluded that of the twelve branches of industry which have no, or a low representation in Nairobi<sup>(2)</sup> (Table IV), in comparison with the other 37 branches of Manufacturing and Repairs (Table I of the index), six are strictly material-oriented, as has been viewed in the previous paragraphs. The other six branches, though partly material-oriented, are also partly market-oriented, and especially to the Nairobi market. It is therefore that four of these branches <sup>(3)</sup> as viewed in the previous paragraphs have a sizeable proportion of their employees near Nairobi, at a distance ranging from 27 km. in the case of Athi River to 65 km. in the case of Machakos, i.e., within a circle of radius 65 km. around Nairobi (Fig.1). This fact underlines the importance of the Nairobi market in attracting industry near it, so that if Nairobi is considered together with the urban settlements lying around it (within a radius of 65 km), their contribution together to total employment in the consumers goods group would rise to at least 54% (Nairobi alone 47%), and to at least 27% in the Intermediate group (Nairobi alone 22%), and to at least 42% in all Manufacturing and Repairs (Nairobi alone 40%).

After reviewing the main reasons for no or low representation for 12 of the 49 branches of industry in Nairobi (Table IV), it can be concluded that these twelve branches are either strictly material-oriented or partly so. Nairobi's share of industrial employment, within these limitations, i.e. if the 12 branches are excluded, would thus rise from 37.9% to 48.2% of the total employment in Manufacturing and Repairs in Kenya. Similarly, its share of employment in the Consumers Goods group would rise from 34.4%

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(1) Op. Cit., Morgan, p. 85.

(2) It will be noticed that 6 of these 12 branches have % of employment in Nairobi more, equal to, or a little less than the % of Nairobi's population to all Kenya's, which is 4.7%

(3) These 4 branches are (1) Footwear manufacture and repair; 2) Canning and preservation of fruits and vegetables; 3) Slaughtering, preparation and preservation of meat; from the consumers goods group; and 4) Cement and clay products, from the Intermediate group.

to 46.2%, its share in the Service group would rise from 48.7% to 50.4%, and its share in the Intermediate group would rise considerably from 22.2% to 51.0%, thus bringing its share in this group to be comparable to its share in the other three groups and in all Manufacturing and Repairs (TableV).

TABLE V

Group of Industry	Total employment KEN	Total employment NRB	% NRB to KEN	% to total 4 groups in NRB
I Total Service Industries	25,284	12,314	48.7	35.7
Total Service — A <sup>1)</sup>	24,435	12,314	50.4	
II Total Capital goods Industries <sup>2)</sup>	8,495	4,028	47.4	11.7
III Total Consumers goods Inds.	44,919	15,421	34.4	44.7
Total Consumers — A <sup>1)</sup>	32,230	14,890	46.2	
IV Total Intermediate goods	12,193	2,709	22.2	7.9
Total Intermediate — A <sup>1)</sup>	4,814	2,457	51.0	
Total Manufacturing & Repairs <sup>3)</sup>	90,891	34,472	37.9	100.0
Total Man. & Rep. — A <sup>1)</sup>	69,935	33,689	48.2	

(1) A = all branches of the group which have less than 10% of their employees in Nairobi.

(2) Capital goods group of Industry has no branch with less than 10% employment in Nairobi. (Please refer to table I of the index).

(3) Total 4 groups.

## **Major Factors Affecting the Location of Manufacturing Industry in Nairobi**

It is generally recognized that there are factors common to all Metropolitan cities, which are attractive to Manufacturing Industries. Amongst these factors are the importance of the Metropolitan city as an administrative centre; its relative importance as a population centre; <sup>(1)</sup> the availability in such a city of skilled labour; relatively good infrastructure facilities; external economies; a relatively advanced capital-market; good educational, cultural and social facilities; and the attraction of living in a big city.

These common factors will not be dealt with, as they are common to all Metropolitan cities. What could be noted is that usually there is a gap between the Metropolitan city and other urban settlements as regards the extent of the existence and the advantages of these common factors; this gap is undoubtedly greater in developing than in industrialized countries.

Moreover, these advantages and facilities are of greater significance in newly established Metropolitan cities. Nairobi therefore has been more attractive to industries than a very much older Metropolitan city in a developing country, such as Cairo in Egypt.

Of greater weight still in attracting Manufacturing Industries in the case of Nairobi are some special factors, which are less common to all Metropolitan cities. These special factors as will be seen from the following analysis, attract many branches of the Consumers group and the Service group of Industries, especially those branches that are linked to the high and middle income sections of the population. Some of these branches are also linked to that section of the population leading a modern style of life.

Most important among these factors are, the high percentage of non-Africans in Nairobi; the special importance of Nairobi as a tourist centre; the relatively higher standard of living of the population of Nairobi as compared to other cities in Kenya; and the great importance of Nairobi as a transport centre, especially for railway transport.

It has been noted before that the attraction of the city of Nairobi to Manufacturing and Repairs is very great, and especially for the groups of Service Industries (48.7% of employment in all Kenya), Capital Goods Industries (47.4%), and Consumers Goods Industries (34.4%). It has also been noted that

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(1) The Metropolitan city is usually the most populated urban centre in the country.

if Nairobi city is considered together with some of its surrounding urban settlements, their share of total employment in Kenya would be much higher, rising their share of total employment in Kenya would be much higher, rising to at least 54% in the Consumers Group <sup>(1)</sup> and to at least 42% in all Manufacturing and Repairs.<sup>(2)</sup>

It is thus clear that the predominant industries in Nairobi and its surroundings are these which are market-oriented, as in the case of all branches of the Consumers Goods Group, and some branches of the Capital Goods Group and the intermediate Goods Group; or population-oriented, as in the case of the Service Group. For this reason it will be found that the major factors affecting industrial location which will be analysed, will mainly give reasons for the location of branches of the Consumers Goods Group or Service Group of industries.

It is interesting to note here that though usually the size of the market or the amount of the services needed could be correlated to the number of the population, in Nairobi there is a striking feature. This striking feature is that Nairobi's share of employment in market-oriented and population-oriented industries (34.4% and 48.7% respectively), is much higher than its share in the population (4.7%).

Presently the special factors affecting the location of Manufacturing and Repairs will be discussed :

### **I — The High Percentage of Non-Africans as a Factor Affecting Industrial Location :**

In 1969 there was a total of 209,503 non-Africans in Kenya or 1.9% of the total population (10,942,705, Table VI); of these, 88,207 were in Nairobi, making up 17.3% of Nairobi's population, which is a much higher percentage compared to that of Kenya's (1.9%) (Figure 2). In another way, in 1969, 42% of all non-Africans in Kenya were in Nairobi, which is a very high percentage.

This relatively high percentage of non-Africans in Nairobi as compared to all Kenya, and consequently the relatively very high percentage of non-Africans in all Kenya who live in Nairobi, has been a remarkable feature in the composition of Nairobi's population since its establishment<sup>(3)</sup>. In 1962 there

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(1) Page 14 of this paper.

(2) Nairobi's share alone is 37.9% of employment in Manufacturing and Repairs in all Kenya.

(3) No data concerning the number of non-Africans in Nairobi before 1962 were available to the author, but it is to be remembered that it was the British colonialists who established it at the end of the 19th century.

was a total of 270,321 non Africans in Kenya, of whom 111,407 were in Nairobi, thus constituting the relatively very high percentage of 41% of the total non-Africans in Kenya<sup>(1)</sup>. They also constituted the relatively very high percentage of 42%<sup>(2)</sup> of the total population of Nairobi (Table VI).

It is interesting to note in this connection that the average annual rate of decrease of non-Africans in all Kenya reached the high rate of 3.7% between 1962-1969, and their average annual rate of decrease in Nairobi was also high (3.3%), but slightly lower than that of all Kenya (Table VI, & Figure 2).

In the case of the European population, there was a total of 55,759 in all Kenya in 1962. Their number decreased to 40,593 in 1969. In 1962, there were 21,476 Europeans in Nairobi forming 8% of Nairobi's population (Table VI) and 38.5% of all Europeans in Kenya. In 1969, the number of Europeans in Nairobi decreased to 19,185, to form only 3.8% of its population, but still forming a very high percentage of all Europeans in Kenya (47.3%), even higher than the percentage of Nairobi's Europeans to Kenya in 1962 (38.5%). In another way the average annual rate of decrease of Europeans in all Kenya reached the high figure of 4.6% between 1962-1969, while it was much lower for Nairobi (1.6% Table VI) during the same period (Figure 2).

This fact clearly shows that though a number big of Europeans left Kenya, of those who remained, still a greater percentage (47%) were living in Nairobi in 1969 as compared to 39% in 1962.

It is also interesting to note the very big attraction of Nairobi to Europeans if compared to the attraction of the other urban settlements<sup>(3)</sup> in Kenya. In 1969 of the remaining 53% of Europeans living outside Nairobi, 32% lived in rural areas, leaving only 21% in the other 21 urban settlements<sup>(4)</sup>. While of the total non-Africans, 17% lived in Nairobi, 15% in rural areas and the remaining high percentage of 68% lived in the other 21 urban settlements (Figure 2).

It could thus be stated that a high percentage (17%) of all non-Africans live in Nairobi, but still a much higher percentage (47%) of Europeans in all Kenya live there.

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(1) This percentage is comparable with that of 1969.

(2) This percentage decreased to 17% in 1969 as has been mentioned before.

(3) Urban settlements are those with more than 5000 inhabitants.

(4) There are 22 urban settlements in Kenya.



TABLE VI  
Population by Race in Kenya and Nairobi 1962 & 1969

Year	Total Pop.		non-African		European		av. an (1)		av. an (2)		av. an. (2)	
	No.	% NRB to KEN	No. to all NRB Pop. to KEN	% to all NRB	% to all NRB	% to KEN	r. ic. %	Total pop.	r. dec. %	Non-Afri-can	r. dec. %	European
Kenya 1962	8,636,253	3.1	270,321	3.1	55,759	0.7						
Nairobi 1962	266,975	3.1	111,407	41.8	21,476	8.1	38.5					
Nenya 1969	10,942,705	4.7	209,503	1.9	40,593	0.4		+ 3.4	- 3.7	- 4.6		
Nairobi 1969	509,268	4.7	88,207	17.3	19,185	3.8	47.3	+ 9.7	- 3.3	- 1.6		

1. Average annual rate of increase per cent.

2. Average annual rate of decrease per cent.

Figures for 1962 are after op. cit., Morgan, p. 107 (1962 Census).

POPULATION BY RACE  
IN KENYA AND MAIN CITIES

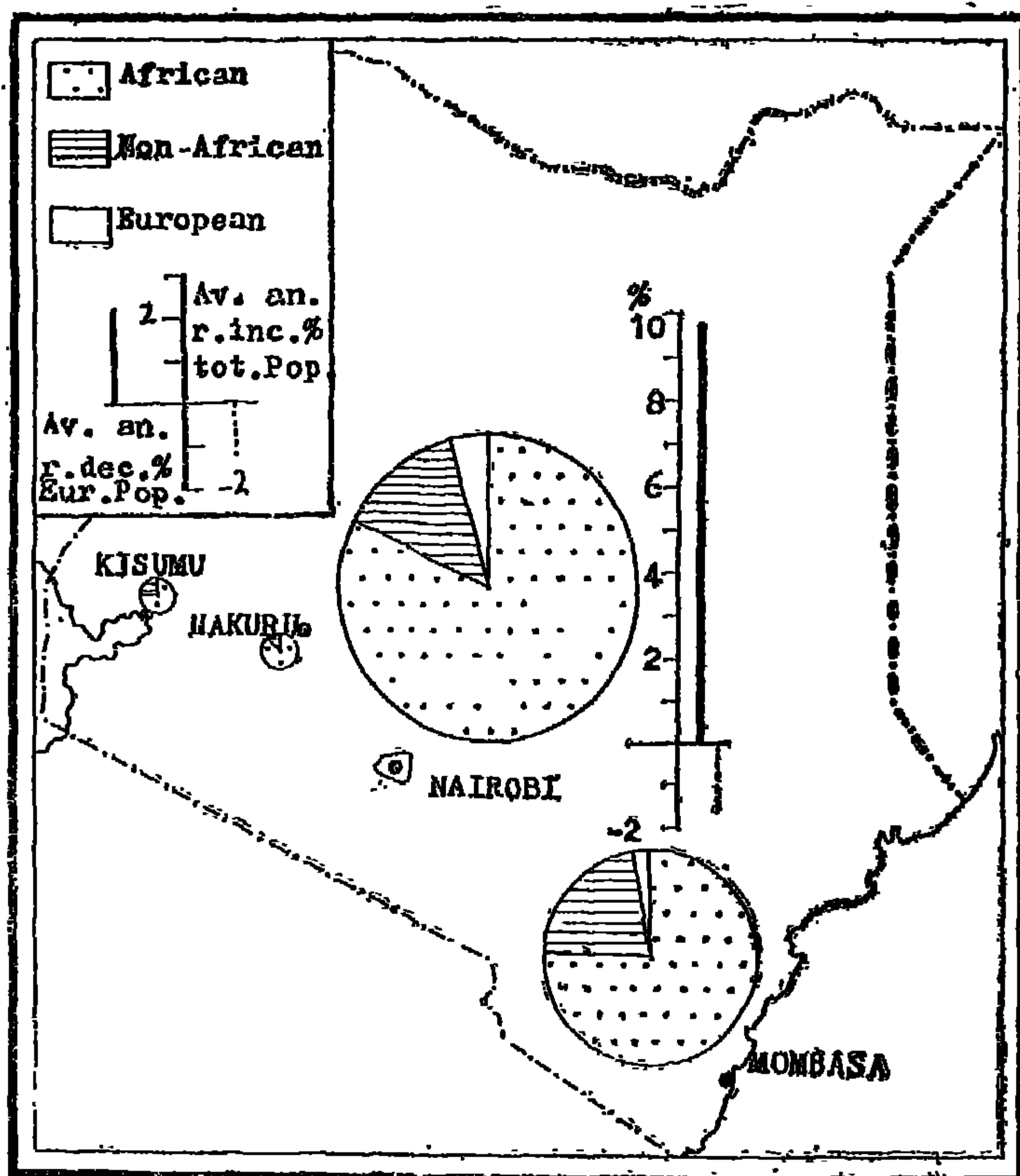
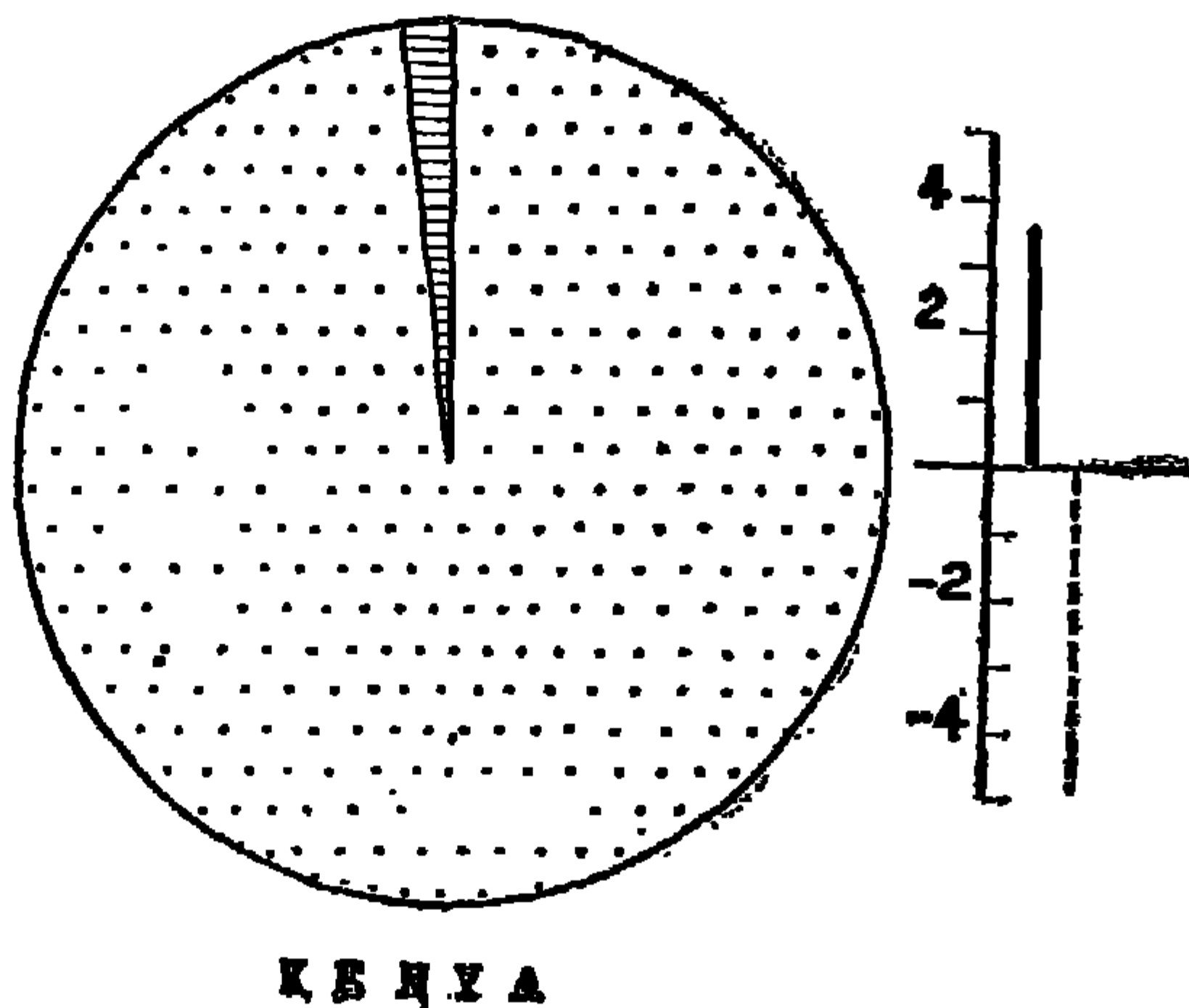


FIGURE 2

The comparatively high percentage of non-Africans and especially Europeans in Nairobi can attract industrial location in the city for more than one reason, most important among these are :

- 1) The different life style of non-Africans, and especially Europeans, to the life style of Africans, makes them have consumers preferences for certain consumers goods, and demand certain services.
- 2) The relatively higher standard of living of non-Africans and especially Europeans if compared to the lower income classes of Africans. <sup>(1)</sup>

Presently will be viewed some branches of industries which are largely attracted to Nairobi because of the existence of non-Africans, and especially Europeans in that city. It will be seen that these industries will be mostly those branches of the Consumers Goods and Service groups of industry with a very high representation in Nairobi.

First will be discussed some branches of the Consumers Goods group of Industry.

Table VII and Fig. 3 show the thirteen branches of the Consumers Goods group of industry which have a percentage representation in Nairobi, as compared to all Kenya, more than the percentage representation for all Manufacturing and Repairs.

It is worthwhile to note that employment in the thirteen branches <sup>(2)</sup> together is very big, as it accounts for 85.2% of employment in the Consumers Goods group in Nairobi and 54.3% of the same group in Kenya.

About 73% of employment in the Spirits, Beer and Tobacco branch of industry is in Nairobi. If this branch is broken down into its sub-branches, it is found that out of a total of 2367 employed in this branch in 1971 (Table VII), 1960 or 71.4% were engaged in the sub-branch of Breweries and Manufacture of Malt, 640 or 27.0% in the sub-branch of Tobacco Manufactures, and the remaining 1.6% in the sub-branch of Distilling, Rectifying, and Blending of Spirits. Thus the manufacture of Beer is by far the most important sub-branch of this main branch. It is a known fact that Europeans like to drink beer. Here one can mention that besides the attraction of the European residents of Nairobi for the beer market, there is also the attraction of the high percentage of tourists who visit Nairobi<sup>(3)</sup>, Africans in Nairobi with a high

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(1) This point will be discussed as a separate factor later in this paper.

(2) There are 26 branches of the Consumers Goods group represented in Nairobi of a total of 29 branches represented in all Kenya (Table I of Index).

(3) The high % of tourists in Nairobi will be discussed as a separate factor later in this paper.

standard of living would also consume beer, but low-income groups of Africans usually drink local changa and «bouza» both of which are locally manufactured, even as cottage industries, and drunk by low-income Africans, in urban as well as rural areas.

TABLE VII  
Empolyment in the most Important Branches<sup>(1)</sup> of the Consumers Goods Group of Industry in Nairobi, 1971.

Branch of Industry	No. Emp- loyed	% toall. Ind. in NRB	% to cons. in NRB	% to same branch KEN
1. Spirits, beer & tobacco	2,367	6.9	15.3	72.7
2. Clothing except footwear	1,969	5.7	12.8	50.6
3. Coffee roasting & grain mill prod.	1,516	4.4	9.8	51.0
4. Furniture and Fistures	1,484	4.3	9.6	56.2
5 1/2 Electrical machinery & appliances	1,362	4.0	8.8	42.3
6. Bakery products	816	2.4	5.3	48.5
7. Paper and paper products	743	2.2	4.8	42.9
8. Dairy products	694	2.0	4.5	40.4
9. Rubber Manufactures	658	1.9	4.3	81.4
10. Soap	577	1.7	3.7	67.1
11. Soft drinks	564	1.6	3.7	65.7
12. Fur & Leather products	254	0.7	1.6	86.1
13. Cocoa, chocolate & sugar confect.	130	0.4	0.8	54.6
Total Consumers goods Ind.	15,421	44.7	100.0	34.3
All Manufacturing & repairs	34,472	100.0		37.9
All 13 branches	13,134	38.1	85.2	54.3

(1) All branches of the consumers goods group of industry which have percentage employment to all Kenya more than the general for all Manufacturing & Repairs (37.9).

The Soft Drinks industry is the first manufacturing industry to be established in Nairobi<sup>(1)</sup>. It has never been an important industry in Nairobi. In 1961, there were 555 persons employed in this branch in Nairobi<sup>(2)</sup> (Table VIII), forming 65% of total employment in this branch in Kenya. It is interesting to note here that employment in this branch in both Kenya and Nairobi has increased very slightly from 1961-71. The figure of employment for Kenya was 854 in 1961 and 868 in 1971, increasing only by 0.5% in 10 years.

(1) P. 2 of this paper.

(2) Op. Cit., Morgan, Table 27 p. 115.

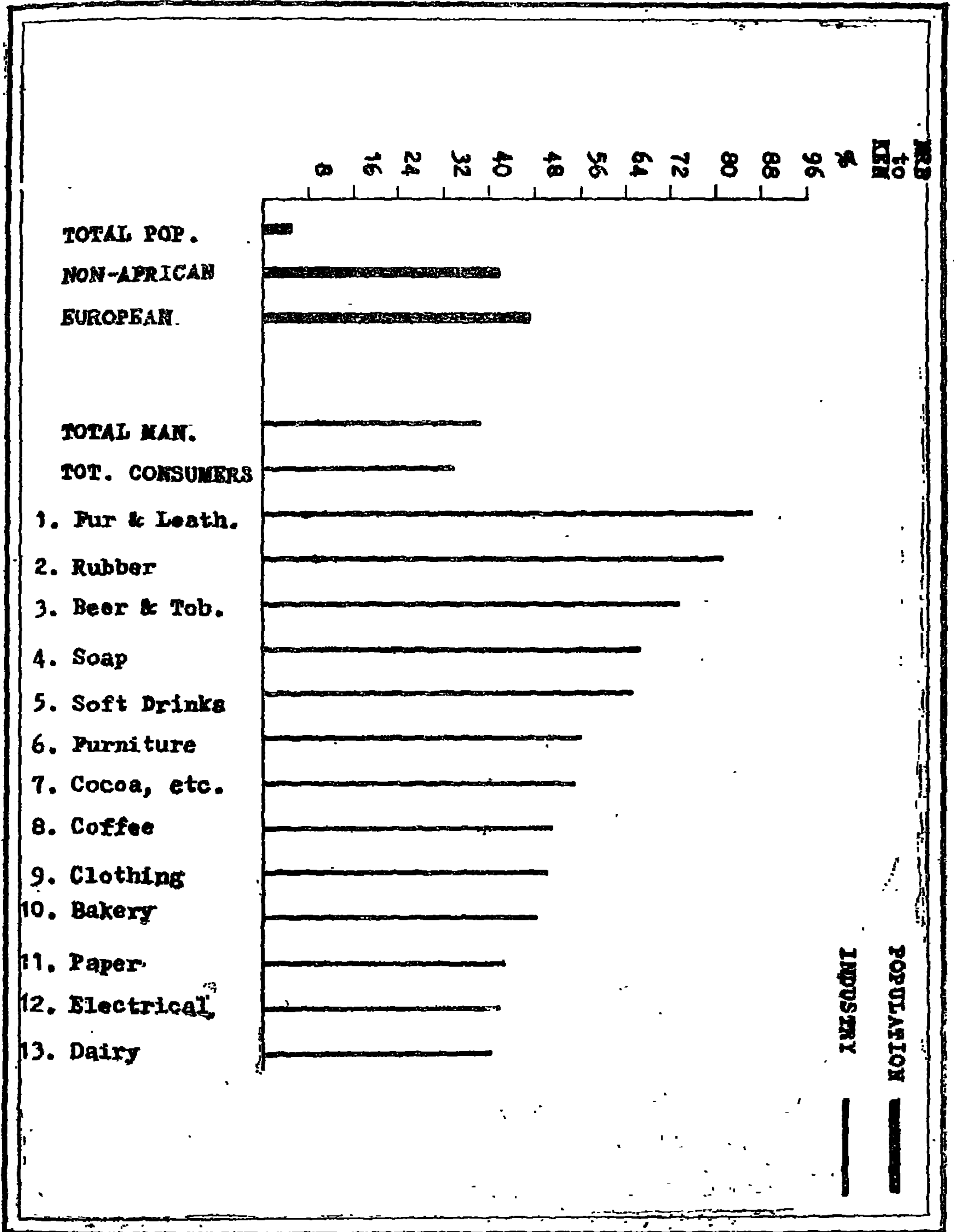


Fig. 3



Employment in this branch in Nairobi also increased by only 1.6% from 1961-71, in another way it had an average annual rate of increase of only 0.2%, a rate not at all comparable with the very high average annual rate of increase of the population of Nairobi of 9.7% for the period 1962-1969 (Table VI). The average annual rate of increase for all Kenya of less than 0.1% was also extremely low, especially if compared to the average annual rate of increase of the population of 3.4%. This very low increase in employment in this industry in all Kenya as well as in Nairobi could be at least partly attributed to the decrease of non-Africans — including Europeans — in both Kenya and Nairobi<sup>(1)</sup>. Therefore it can be concluded that the comparatively high percentage of non-Africans — especially Europeans — in Nairobi, and the high percentage of tourists visitings Nairobi, could be considered the major reasons for the high concentration of this branch of industry in Nairobi.

**Bakery Products** is another branch of industry related to the life style of non-Africans, and especially Europeans. Low-income Africans in Nairobi and all Kenya depend for their main diet on house prepared maize meal. It is therefore that bakery products would be consumed mainly by non-Africans, and perhaps to some extent by high-income Africans, who have started to acquire the food preferences of non-Africans. Bakery Products is another branch of industry which has not experienced an increase in employment at all comparable with the increase in Nairobi's population. The average annual rate of increase in employment in this branch from 1961-1971 was 2.4% for Nairobi (Table VIII), while the average annual rate of increase of the population (1962-69) was 9.7%. Thus this comparatively low average rate of increase in employment in the Bakery Products industry could be related to the decrease in employment in the Bakery products industry could be related to the decrease<sup>(2)</sup> in the number of non-Africans in Nairobi as in the case of the Soft Drinks industry. The relationship between this industry and the non-African population in Nairobi is evident after the evicus analysis.

The **Cocoa, Chocolate and Sugar Confectionery** branch of industry is also are of the indsutries in Kenya attracted to the non-African consumers. Though this industry is of little importance in terms of numbers employed, yet it appears as a seperate branch of industry. Its concentration in Nairobi is also a great proof of the attraction of the non-African population to it. This statement can be explained by the fact hat though one of the major raw materials — refined sugar — on which it depends, is not manufactured at all

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(1) Refer to PP. 18-19 of this paper.

(2) Table (VI), P. 19 of this paper.

in Nairobi, or anywhere near it,<sup>(1)</sup> it had 55% of its employment in Nairobi in 1971 and 47% in 1961 (Table VIII). The average annual rate of increase of workers in this industry in Nairobi (9.4%, Table VIII), is comparable to the average annual rate of increase of Nairobi's population (9.7).

TABLE VIII  
Development of Employment in Nairobi in a few Important  
Branches of Industry 1961-1971, and dev. of Population  
1962-1969

Branch of Industry <sup>(2)</sup>	1961 <sup>(1)</sup>		1971		av. an. rate of inc %
	No. employees	% NRB to KEN	No. emp.	% NRB to KEN	
<i>Consumers Goods Industries</i>					
1. Rubber Products	226	91.9	658	81.4	11.3
2. Mineral Water & Squashes	555	65.0	564	65.7	0.2
3. Furniture & fixtures	786	64.5	1,484	56.2	6.6
4. Cocoa, chocolate & sugar conf.	53	46.9	130	54.6	9.4
5. Bakery Products	642	52.9	816	48.5	2.4
<i>Service Industries</i>					
1. Printing and Publishing	1,806	70.0	3,175	72.3	5.8
2. 1/2 Non-electrical machinery	253	58.6	472	60.5	6.4
3. Motor repairs	446	28.8	2,126	46.5	16.9
4. 1/2 Metal Products	438	35.7	970	32.9	8.3
Population of Nairobi	266,795 <sup>(4)</sup>	3.1	509,286 <sup>(5)</sup>	4.7	9.

- 1) After Op. Cit., Morgan, Table 27 p. 115 (Kenya, Census of Manufacturing, 1961).
- 2) Names of branches are written as they are in Morgan's table.
- 3) Average annual rate of increase.
- 4) According to the 1962 Census.
- 5) According to the 1969 Census.

Perhaps affecting the location of this industry in Nairobi to the same extent as the high percentage of non-Africans in Nairobi, is the relatively higher standard of living of the resident population of Nairobi, as well as the high percentage of tourists visiting Nairobi.

(1) Refer to PP. 10-11 of this paper.

**The Fur and Leather Products** branch of industry which is very highly concentrated in Nairobi by having 86% of its employment in this city (Fig. 3) could be considered to be attracted by the same three factors attracting the Cocoa, Chocolate and Sugar Confectionery of Nairobi, namely, (1) the high percentage of non-Africans in Nairobi, (2) the comparatively high standard of living of Nairobi's population, and (3) the high percentage of tourists who visit Nairobi. The great linkage of this industry to its market can be underlined if we know that the preparation of one of its major raw materials — tanned leather — has a comparatively low representation in Nairobi.<sup>(1)</sup>

It is interesting to note concerning this branch of industry that fur and leather preparation in a primitive manner, and the manufacture of some primitive fur and leather products is widely practised in Kenya as a cottage and perhaps a tribal industry, as different kinds of fur and leather products are widely used by many tribes in Kenya; yet no data is available concerning this handicraft.

**The Clothing except Footwear** branch of industry has 51% of its employment in Nairobi<sup>(2)</sup>. It is a type of industry tied to an urban population, a modern style of living, and a high standard of living, all three features found in Nairobi; but perhaps more associated with the non-African population than with the African. The Clothing industry was even more concentrated in Nairobi in 1961 when 75% of total employment in it was in that city (Table VIII), though Nairobi's population was then only 3.1% of all Kenya's (4.7% of Kenya's in 1969). It is to be remembered that the non-African population formed 42% of Nairobi's population in 1962, and that in that year 41% of all non-Africans in Kenya were in Nairobi.

**The Furniture and Fixtures** branch of industry had 56% of its employment in Nairobi in 1971. This industry is also related to a modern style of life and a high standard of living, both features associated with the non-African population in Nairobi. Its great orientation towards the Nairobi market can be underlined by the fact that though the Sawmill industry which provides it with its major raw material has only 4% of its employment in Nairobi, still the Furniture and Fixtures branch has the high percentage of 56% of its employees in Nairobi. This industry was even more concentrated in Nairobi in 1961 (Table VIII), when 65% of its employees were in that city. It is a very fast growing industry in Kenya and in Nairobi. In 10 years

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(1) Only 14.7% of employment in the Tanneries and Leather Finishing Plants branch of industry was in Nairobi (Table I of Index).

(2) It is interesting to note that the population of Nairobi represented 51% of the total urban population in Kenya in 1969.

(1961-1971) employment in this industry in Nairobi has increased by 88.8%, giving an average annual rate of increase of 6.6%; though a very high rate, still lower than the average annual rate of increase of Nairobi's population (9.7%). This fact perhaps proves more the relationship between this industry and a high standard of living.

The **Rubbre Manufactures** branch of industry is a very highly concentrated industry in Nairobi, having 81% of its employment in that city in 1971 (Table VII and Fig. 3). The only factory for the manufacture of motor car tyres in Kenya is the Firestone factory of Nairobi. This factory started operation in 1971. Even before the establishment of the Firestone factory, this industry was highly concentrated in Nairobi, where 92% of employment in this branch was found in 1961 (Table VIII). This could perhaps be explained by the fact that, apart from the percentage of employees in this industry working in the Firestone factory at present, a sizeable portion is working, and must have been since the establishment of this industry, in tyre retreating workshops, and workshops for the repair of all types of tyres. The existence of a comparatively big number of private cars in Nairobi, a fact which requires the service of tyre repair, is related to a modern style of life, and a high standard of living, both features associated to some extent with the non-African population in Nairobi. As for the existence of a comparatively big number of buses and trucks, which need tyre repairing, it is a feature associated with the relatively good economic development of Nairobi, again a development which the non-African population helped in achieving.

The **Paper and Paper Products** branch of industry had 43% of its employment in Nairobi in 1971. This industry is clearly market-oriented. Part of the production — writing paper — would be used for making copy books used in schools, or would be used in offices, public and private; part of the production — wrapping paper — would be used by industrial and commercial establishments; and a part — printing paper — would be used by the Printing and Publishing branch of industry. This last branch is highly concentrated in Nairobi, having 72.3% of its employment in that city (Table IX). Therefore the Paper and Paper Products industry is found to be associated with different usages, all of which are associated with literacy, a high cultural standard, and a high standard of living, all features found in Nairobi, and especially associated with the high income section of the population, which section is formed partly by the non-African population.

Some branches of the Service group of industry (Table IX) would be also affected by the presence of a high percentage of non-Africans in their



orientation towards Nairobi. This attraction would be on the one hand due to the modern and different style of life of the non-Africans, and on the other hand because of their relatively high income, especially in the case of the European population. Most important among these branches are the Printing, Publishing and Allied Industries; the Repair of Road Vehicles; Metal Products; and Machinery non-Electrical (Table IX & Fig. 4).

TABLE IX  
Employment in the Different Branches of the Service  
Group of Industry in Nairobi, 1971

Branch of Industry	No. Emp.	% top II Ind. in NRB	% to service Ind. NRB	% to same branch KEN
1. Railway equipment	4,458	12.9	36.2	43.0
2. Printing, Publishing & Allied Industries.	3,175	9.2	25.8	72.3
3. Repair of road vehicles	2,126	6.2	17.3	46.5
4. Aircraft repairs	1,095	3.2	8.9	86.2
5. <sup>1</sup> / <sub>2</sub> Metal Products	790	2.8	7.9	32.9
6. <sup>1</sup> / <sub>2</sub> Machinery non-elctrical	472	1.4	3.8	60.5
7. Bicycle repairs	17	0.0	0.1	17.7
Total Transport maintenance & repair <sup>(1)</sup>	7,696	22.3	62.5	46.0
Total Service Industries	12,314	35.7	100.0	48.7
All Manufacturing & repairs <sup>(2)</sup>	34,472	100.0		37.9

1) Includes branches of Railway equipment, Repair of road vehicles, Aircraft repairs, and Bicycle repairs.

2) Total four major groups of 1) Service 2) Capital goods 3) Consumers goods and 4) Intermethodic goods, i.e., excludes from general total of Manufacturing and repairs branch of Miscellaneous Manufactures.

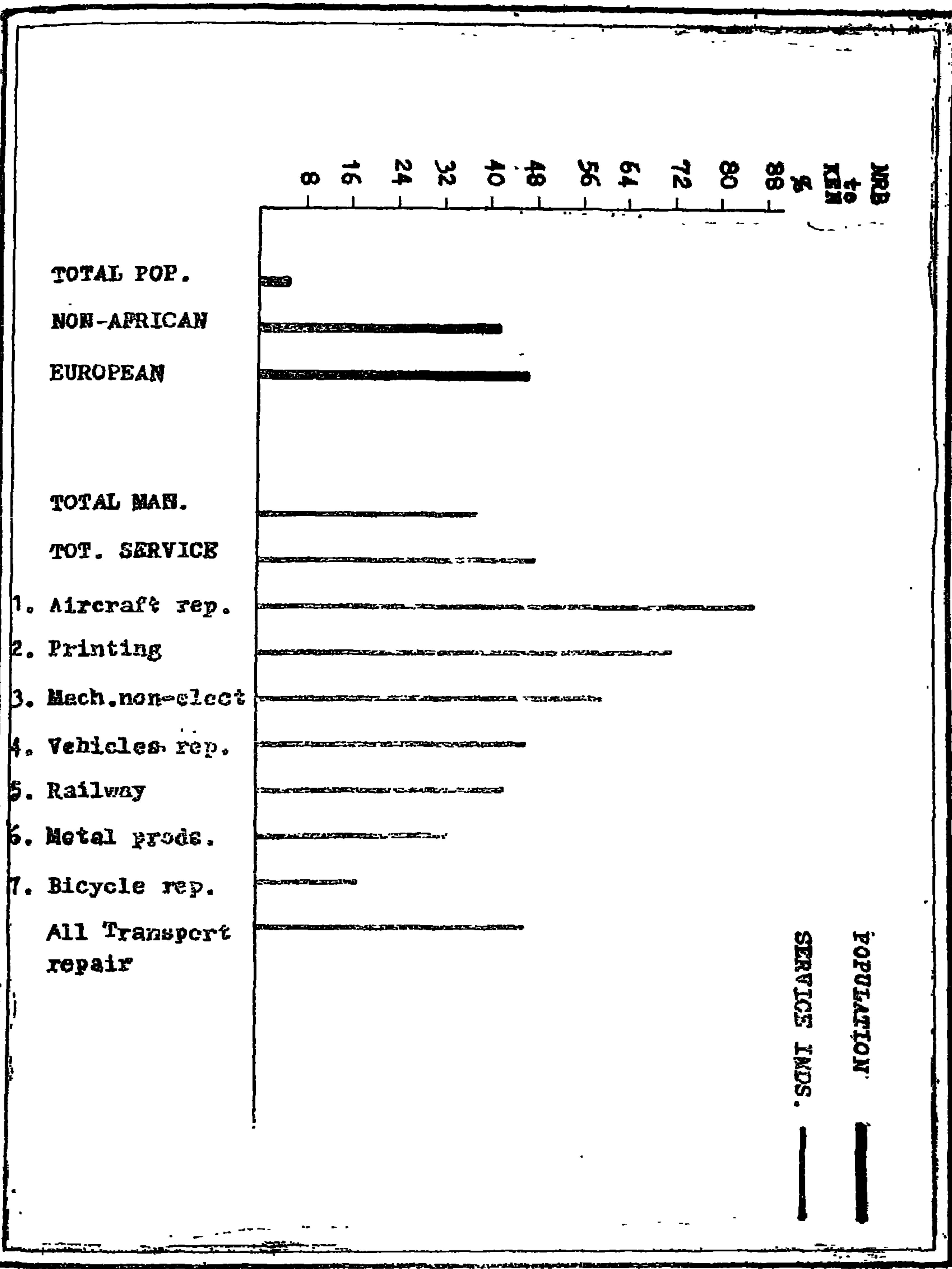
In the case of Printing, Publishing and Allied Industries, the non-Africans of Nairobi, and especially Europeans are mostly well educated, and have a relatively high standard of living, thus they would be good customers for all printed matter, e.g., books, magazines, newspapers, etc. Besides, many of the foreign schools in Kenya are located in Nairobi.

The other three branches of the Service group of Industries have been described before in this paper<sup>(1)</sup> to be mainly or partly engaged in repair-work and maintenance. The modern life style of most non-Africans, and

(1) PP. 8-9 of this paper.



Fig. 4



especially Europeans in Nairobi, besides their relative high income, allow them to own cars and use many electrical machines and appliances, such as refrigerators, washing machines, cookers, irons, toasters, electric cleaning appliances, etc. All these machines and appliances, electrical or non-electrical, need maintenance and repair.

Perhaps the factor of the relatively higher income of a section of the population of Nairobi, both Africans and non-Africans, has a higher weight in attracting these branches of the Service group of Industry, than the factor of the high percentage of non-Africans in Nairobi. For this reason, these three branches will be discussed later under the factor of the relatively higher standard of living of the population of Nairobi.

The high percentage of non-Africans in Nairobi is also of importance in the factor of capital availability<sup>(1)</sup>, as many establishments commercial or industrial, are owned by non-Africans, especially Asians and Europeans. Besides, many banks, companies, and firms have a number of non-Africans on their managerial staff. This means that the existence of non-Africans, especially of the higher income group, helps in providing entrepreneurship and capital in Nairobi.

## **II The Relatively Higher Standard of living of the Population of Nairobi as a Factor Attraction Industrial Location :**

Though there are no statistics showing the average per capita income in the different regions and urban centres in Kenya, it is quite evident that there is great disparity between the average per capita income, and consequently the standard of living, in rural as compared to urban areas; and even between one urban centres and the other. Nairobi has by far the highest average per capita income in Kenya. Probably this disparity in per capita income is more pronounced in the case of Nairobi as compared to other urban centres in Kenya, and more so as compared to rural areas. This is partly because of the high percentage of non-Africans, and especially Europeans, living in Nairobi,<sup>(2)</sup> most of whom have a comparatively high per capita income<sup>(3)</sup>; and partly because a big section of all the high income group of the population in Kenya live in Nairobi. Part of this high income section of the population living in Nairobi would be working with the following organizations.

- a) As Nairobi is the capital of Kenya, it located the major administrative centres of Kenya, e.g. all Ministries, Police Headquarters, etc. This means that a big percentage of the highest paid government officers in Kenya lives in Nairobi.

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(1) This is one of the common factors mentioned before on P. 16.

(2) This feature has been dealt with in detail on PP. 17-30 of this paper.

(3) This feature affecting the per capita income of the population is found only in a few cities in developing countries.

- b) Nairobi is the center of some East African Organizations, amongst which are the East African Post and Telecommunications — Electrical Branch; the East African Railways Corporation — Maintenance and Repairs; and the East African Airways Aircraft Repairs.
- c) Being the capital of Kenya all embassies and most consulates in Kenya are placed in Nairobi. Some of these embassies cover all countries in East Africa.
- d) The headquarters of the United Nations Environmental Programme — UNEP — were established in Nairobi in 1973. Besides, there are a number of other United Nations missions working either for Kenya, or for all East Africa, which are stationed in Nairobi.
- e) The only University in Kenya is in Nairobi. The University staff in any country are usually among the highest paid professionals.
- f) Located in Nairobi are many head offices and some branch offices of many of the most important industrial and commercial establishments, which are functioning in Nairobi, and in other parts of Kenya.

Besides the aforementioned organizations which employ well paid officials, there is a number of private income persons, Africans and non-Africans, practising different jobs, who is working and living in Nairobi.

Among the Consumers Goods group of Industry, those branches greatly oriented towards high-income consumers or customers are the following; Fur and Leather Products; Furniture and Fixtures; Clothing except Footwear; and Rubber Manufactures. The branches which are oriented towards middle income consumers besides high income consumers are the Spirits, Beer and Tobacco; and the Cocoa, Chocolate and Sugar Confectionery branches of industry. All of these six branches have over 40% of their employees in Nairobi (Table VII and Fig. 3.), and all of them have been discussed in detail when analysing the factor of the high percentage of non-Africans in Nairobi.<sup>(1)</sup>

Of the Service group of Industries (Table IX and Fig. 4), four of the seven branches have been noted before to be branches serving mainly the high income group of the population.<sup>(2)</sup>

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(1) PP. 17-30 of this papre.

(2) PP. 28-30 of this paper.

The branches of **Repair of Road Vehicles** (47% of employees in Nairobi) has been discussed before,<sup>(1)</sup> and was shown to be associated with a high standard of living on the one hand, and relatively good economic development on the other. It is also associated with Nairobi's importance as a transport centre, a factor which will be discussed later on in this paper.

Concerning the two branches of **Metal Products** and **Machinery non-Electrical**, it has been concluded before, that both are mainly or partly maintenance and repair work.<sup>(2)</sup> This maintenance and repair service is also associated with a high standard of living.

As for **Printing, Publishing and Allied Industries**, it was also mentioned before that this industry is highly concentrated in Nairobi (72.3% of its employees was in Nairobi). Total employment in this branch in Nairobi is 3,176 or nearly 9% of all employment in Manufacturing and Repairs, and 25.8% of employment in the Service group of Industry (Table IX and Fig. 4). This high concentration of this industry in Nairobi is because Nairobi is by far the most important educational and cultural center in all Kenya, perhaps in all East Africa. Nairobi acquired this education and cultural importance, because of the relatively high percentage of literacy of its population, and their relatively higher standard of living.

The only University in Kenya is in Nairobi, besides, Nairobi locates a big number of all high schools in Kenya, African and non-African. Again people belonging to the literate and high income section of the population are good buyers of books, magazines and news papers. The two main English newspapers in Kenya are issued in Nairobi, so is at least one newspaper in Swahili and one in an Indian Language.

### **III Nairobi's Importance as a Tourist Centre, As a Factor Affecting Industrial Location :**

The major attractions of Nairobi as a tourist centre are the following :

- 1) The existence of one of the best National Parks of Kenya, and one of the best of East Africa<sup>(3)</sup> in Nairobi. National Parks are areas reserved as parks in the form of the natural environment, e.g., while preserving all the natural flora and fauna, they are at the same time well looked after. The most important wild animals found in Nairobi National Park are the following. Lions, cheetahs, hyenas, jackals, rhinoceroses, wild buffaloes, zebras, gazelles, wild hogs, giraffes, monkeys, ostriches, wild beasts, etc.

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(1) P. 28 of this paper.

(2) PP. 8-9 of this paper.

(3) East Africa locates some of the best National Parks of the World.

This feature forms one of the most important attractions of Nairobi to European and American tourists. The importance of Nairobi's National Park for tourism can be indicated by the fact that in 1971 out of a total of 170,007 adult non-residents of Kenya who visited National Parks, 58,814 or 34.6% visited the Nairobi National Park<sup>(1)</sup>.

- 2) Nairobi's good weather throughout the year is another tourist attraction. This advantage of Nairobi attracts both Western as well as African tourists, especially those living in hot countries such as Sudan or Somalia.
- 3) Nairobi's attraction for tourism as a modern city, having all the amenities of that type of city; such as good hotels; restaurants; cinemas; sports clubs, having good sports facilities such as tennis, swimming, golf, horse riding, horse racing, etc; modern shopping centres with big supermarkets which exhibit all types of merchandise and products, both local and imported all merchandise is exposed in very attractive way, Comparable with the way it is exposed in modern countries. Nairobi has also its charm as an African city. The suburbs and surroundings of Nairobi are both beautiful and clean. This feature of Nairobi as a modern city would have its attraction mainly for African tourists. Many tourists from neighbouring African countries such as Tanzania, Ethiopia, Sudan, Zaire and Somalia go to Nairobi for holiday, and for doing some shopping.

It is interesting to note in this connection that the United Nations has chosen Nairobi as the holiday resort centre of its permanent and non permanent staff working in the following countries; Botswana, Burundi, Central African Republic, Chad, Lesotho, Rwanda, Somalia, Sudan, Swaziland, Zaire, all of which are African Countries, and Yemen People's Democratic Republic of (Aden), in Asia.

Nairobi's importance as a tourist centre can be also indicated by its share of the total number of beds in hotels (International and Other), occupied by foreign residents in Kenya. Of the total 1432 beds, Nairobi's share was 651 beds or 45.4% of all Kenya.

Nairobi's importance as a tourist centre would have some attraction to the following industries. The industries will be written according to the percentage employment of each branch in Nairobi to Kenya's total employment

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(1) Op. Cit., Statistical Abstract, 1972, p. 34.



in the same branch : Fur and Leather Products (86.1%); Spirits, Beer and Tobacco (72.7%); Soft Drinks (65.7%); Cocoa, Chocolate and Sugar Confectionery (54.6%); Clothing except foot wear (50.6%); Bakery Products (48.5%); Table VII); and Wood Carving (29.0%, Table I of index). All these branches except Wood Carving have been analysed in previous parts of this paper.<sup>(1)</sup> Wood carving is very insignificant in terms of employment with only 31 workers in all Kenya and 9 in Nairobi

#### **IV Nairobi's Importance as a Transport Centre — Especially for Railway Transport — as a Factor Affecting Industrial Location :**

It was mentioned before that Nairobi was first established as a Railway Centre.<sup>(2)</sup> As a consequence, most maintenance and repairwork for railway equipment was carried out in Nairobi. Though Nairobi quickly gained importance in many other aspects, e.g., administrative, commercial and later on industrial, it continued to be the major centre for railway equipment repair and maintenance in all Kenya, probably in all East Africa. In 1971, 43% of all employment in the branch of **Railway Equipment** was in Nairobi. Employment in Railway Equipment in Nairobi was also very important in comparison with employment in other branches. In 1971 there were 4, 458 persons employed in this branch, which was the biggest number employed in any branch, and this number formed 13% of all employment in **Manufacturing and Repairs** in Nairobi. It is thus evident that Nairobi continues to be the most important centre in Kenya, probably in all East Africa, for repair and maintenance of railway equipment.

The **Aircraft Repairs** branch of industry is very highly concentrated in Nairobi having 86% of all its employees in that city (Table IX and Fig. 4). This high concentration is due to the fact that the only International Airport in Kenya is located in Nairobi. (Fig. 1). The Nairobi International Airport is in fact the most important international airport in all East Africa. Besides, in this airport are repaired not only planes belonging to East African airways, but also planes belonging to some other airway companies which stop in Nairobi. The comparatively big number of tourists and businessmen who visit Nairobi increase its importance as an international centre for air transport.

Besides being a centre for international air travel, Nairobi is also a centre for internal air travel in Kenya, and especially to the coast (Fig. 1).<sup>(3)</sup>

It is worthwhile to mention that the two branches of **Railway Equipment** and **Aircraft Repairs** together account for 19% of all employment in **Manufacturing and Repairs**, and 72% of employment in all branches of transport maintenance and repair in Nairobi. Nairobi's share in both branches compared to Kenya is 48% (Table IX).

(1) PP. 21-26 of this paper.

(2) PP. 1-2 of this paper.

(3) The four internal airports of significance in Kenya are located on the coast at Mombasa and Malindi, and in the Western part of the country at Kisumu and Kitale.

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TABLE I

No. employed in each branch of Manufacturing and Repairs in Kenya and Nairobi, 1971,  
and grouped into the 4 Major Groups of Manufacturing and Repairs.

Serial No.	Branch of Industry	N. Emp.	N. Emp. Nairobi	% NRB to KEN	No. (6) est. KEN	Av. no. employees per est. KEN	(6) est. emp 50&over KEN
<b>I Service Industries</b>							
1.	Aircraft repairs	1,270	1,095	86.2	5	245	2
2.	Printing, Publishing & allied ind.	4,392	3,175	72.3	132	33	15
3.	1/2 Machinery non-electrical (1)	781	472	60.5	58	13	5
4.	Repair of road vehicles	4,569	2,126	46.5	331	14	20
5.	Railway equipment	10,377	4,458	43.0	42	42	19
6.	1/2 Metal Products (exc. machinery) (2)	2,951	970	32.9	94	32	13
7.	Bicycle repairs	96	17	17.7	102	1	—
8.	Shipping and repairing	849	—	0.0	14	61	5
	Total repair of all kinds of transport (3)	16,736(3)	7,696(4)	46.0	494	34	46
	Total Service ind.	25,285	12,314	48.7	778	33	79
<b>II Capital Goods Industries</b>							
9.	Motor body building	1,537	1,224	79.6	30	51	10
	1/2 Machinery non-electrical	780	472	60.5	58	13	4
10.	1/2 Electrical machineir & oppliances(5)	3,224	1,362	42.3	73	44	10
	1/2 Metal Products	2,950	970	32.9	93	32	13
	Total Capital Goods Ind.	8,491	4,028	47.4	254	38	37

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Table I (continued)

Serial No.	Branch of Industry	No. Emp. Kenya	No. Emp. Nairobi	% NRB To KEN	Total est. KEN	Av. no employees per. est. KEN	est. 50 & over KEN
III	Consumers Goods Industries :						
11.	Fur and Leather Products	295	254	86.1	11	27	2
12.	Rubber Manufactures	808	658	81.4	17	48	5
13.	Spirits, beer and tobacco	3,258	2,367	72.7	30	109	8
14.	Soap	860	577	67.1	18	48	5
15.	Soft drinks	858	564	65.7	10	86	3
16.	Furniture & Fixtures	2,643	1,484	56.2	353	7	11
17.	Cocoa, chocolate and Sugar confectionery	238	130	54.6	11	22	2
18.	Coffee roasting & grain mill Products	2,972	1,516	51.0	154	19	8
19.	Clothing except footwear	3,894	1,969	50.6	739	5	23
20.	Bakery Products	1,682	816	48.5	64	26	6
21.	Paper & Paper products	1,731	743	42.9	32	54	11
	‡ Electrical Machinery & Applicances	3,224	1,362	42.3	74	44	11
22.	Dairy Products	1,717	694	40.4	24	72	11
23.	Miscellaneous food preparations	1,400	741	33.6	39	36	6
24.	Wood Carving	31	9	29.0	16	2	—
25.	Spinning, weaving & Finishing textiles	3,257	739	22.7	17	192	8

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Table I (Continued)

Serial No.	Branch of Industry	No.		No. Emp. Nairobi	% NRB to KEN	Total est. KEN	Av. no employees & over per. est. KEN	est. 50 employees & over KEN
		Emq. Kenya	Emp.					
26.	Made up textiles except clothing	1,029	184	17.9	20	51	4	
27.	Tanneries and leather finishing plants	632	93	14.7	12	53	4	
28.	Knitting mills	1,680	210	12.5	18	93	6	
29.	Slaughtering, preparation & pres. of meat	2,088	202	9.7	10	209	5	
30.	Canning and Preservation of Fruits & Veg.	2,106	128	6.1	8	263	5	
31.	Footwear manufacture and repair	1,619	82	5.1	233	7	2	
32.	Cordage, rope and finishing tex	2,490	166	4.7	7	356	3	
33.	Cotton Ginning	358	3	0.8	14	26	1	
34.	Vegetable & animal Oils	*	50	—	—	—	—	
35.	Pottery, China & earthenware	*	2	—	—	—	—	

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Table I (Cont.)

Serial No.	Branch of Industry	No. Emp. Kenya	No. Emp. Nairobi	% NRB to KEN	No. est. KEN	av. no. employees per est. KEN	Est. with 50 and over KEN
				KEN	KEN	KEN	KEN
36.	Sugar factories and refineries	3,978	—	—	10	398	5
37.	Canning and preservation of fish	50	—	—	3	17	—
38.	Other handicrafts	21	—	—	5	4	—
	Total Consumers Goods not represented	4,049	—	—	18	—	5
	Total Consumers Goods Ind. in Nairobi	44,919	15,421	34.4	1949	23	155
<b>IV Intermediate Industries</b>							
39.	Paints, varnishes and lacquers	322	278	86.3	6	53	3
40.	Miscellaneous chemical industries	1,530	1,151	75.2	44	35	9
41.	Non-metallic mineral products n.e.	854	471	55.2	26	33	5
42.	Glass and Glass Products	555	248	44.7	2	278	2
43.	Structural Clay products	367	100	27.6	7	52	4
44.	Basic industrial chemicals and petroleum	818	151	18.5	21	39	6
45.	Wood and cork products	372	58	15.6	15	25	1
46.	Sawmills	5,688	224	3.9	112	51	36
47.	Cement and Clay products.	1,192	28	2.4	7	170	2
48.	Wattle bark extract manufacture	499	—	—	5	100	3
	Total Intermediate Goods Ind.	12,193	2,709	22.2	245	50	71



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Table I (Cont.)

Serial No.	Branch of Industry	No. Emp. Kenya	No. Emp. Nairobi	% NRB to KEN	No. est. KEN	Av. no employees per est. KEN	Est. with 50 & over KEN
	Total four Major Groups	90,888	34,472	37.9	3226	29	342
49.	Miscellaneous industries	1,915	1,091	57.0	248	8	10
	General Total	92,803	35,563	38.4	3474	27	352

Source : Census of Employment and Earnings, 1971.

\* Branches not given for all Kenya.

1. Half those employed in Machinery non - electrical are included with Service ind. as this half is presumed to be engaged in repair work the other half is included with Capital Goods Industries.
2. Half those employed in Metal products are included with Service Ind. as this half is presumed to be engaged in repair work, the other half is included with Capital Goods Industries .
3. Includes industries serial no. 1 + 4 + 5 + 7 + 1/2 8.
4. Includes ind. no. 1 + 4 + 5 + 7.
5. Half those employed in Electrical machinery are included with Capital Goods ind., and the other half with Consumers Goods Industries
6. Statistical Abstract, 1972, p. 84.