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THE IMPLICATIONS OF RAISING AFRICA'S SHARE IN WORLD INDUSTRIAL
PRODUCTION TO 2 PER CENT BY THE YEAR 2000 ^{1/}

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for the
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We regret that some of the pages in the microfiche copy of this report may not be up to the proper legibility standards, even though the best possible copy was used for preparing the master fiche

I. INTRODUCTION

1. At its first meeting (Addis Ababa, September 1974) the Follow-up Committee on Industrialization in Africa stated that "The share of Africa in world industrial production stands at the infinitesimal figure of 0.5 per cent and has not changed during 15 years and more of African independence. A quantitative target should be set whereby this share could rise to, for example, over two per cent by the year 2000. ECA and UNIDO should amplify this target, spelling out its implications in a scheme for the industrial development of the African region during the next 25 years which should be submitted to the Nairobi Conference of African Ministers of Industry. In this scheme special attention should be paid to a more even distribution of industrial activity within Africa itself."^{1/} This study has been prepared as an initial response to the Committee's request.
2. In other regional meetings held in preparation for the Second General Conference of UNIDO, held in Lima, target shares of world industrial production for the year 2000 of ten per cent for Asia and 13.5 per cent for Latin America were established. This position was confirmed by the Lima Conference in the Lima Declaration and Plan of Action on Industrial Development and Co-operation, which called for the attainment of at least a 25 per cent share for the developing countries, and subsequently by the seventh special session of the General Assembly in its resolution on development and international co-operation (RES/3362 (S-VII)).^{2/}
3. In this paper we attempt to point out some of the implications of the two per cent target for developing Africa (i.e. excluding South Africa) within the framework of the overall target for the developing countries and to assess the feasibility of the African target. Related policy issues are discussed in a number of other papers submitted to the Nairobi Conference.^{3/}
4. The limitations of such a study are fairly obvious. Even with the most sophisticated forecasting models available, it is not possible to look ahead a quarter of a century with any assurance even with a good data base and a fairly limited economic problem. In this case, however, the whole of

^{1/} Recommendation C (iii), E/CN.14/INR/211.

^{2/} This percentage implicitly excludes "paper" changes in shares which might occur as any of the more advanced developing countries move into the developed category by the year 2000.

^{3/} In particular, see CMI.3/INR/TP/9 and CMI.3/INR/TP/4.

developing Africa is under scrutiny and much of the data required are unreliable or non-existent.^{4/} Moreover, it is statistically difficult to determine trends in African industry because of its present stage of infancy.

5. Under these circumstances it seems pointless to attempt to utilize complex methods. Instead, a simple approach is adopted here.

II. AFRICAN GROWTH REQUIREMENTS IN A WORLD-WIDE SETTING

6. We start with the set of alternative growth rates for industrial production in the developed countries, 1975-2000, postulated in UNIDO's paper "A preliminary note for the preparation of a plan of action on industrialization" (ID/B/C.3/27), written as part of the background work for the UNIDO Second General Conference. These (average annual) rates are:

Variant I - 6.7 per cent
Variant II - 6.0 per cent
Variant III - 5.0 per cent
Variant IV - 4.0 per cent

Variant I postulates a continuation of the rate of growth achieved in the 1960's, whereas Variants II-IV postulate a slowing down of industrial growth in the developed countries.

7. Current shares for 1975 and target shares for 2000 are also known. These are as follows (in per cent):

Shares of World Industrial Production

	<u>1975 (estimate)</u>	<u>2000 (target)</u>
Developing countries	7.0	25.5
- Africa	0.6	2.0
- Asia and Latin America	6.4	23.5
Developed countries	93.0	74.5
WORLD ^{5/}	100.0	100.0

^{4/} The data presented in CMI.3/INR/TP/1 were not available at the time the present paper was being prepared, thus other statistical sources were used.

^{5/} World totals given in this paper exclude, for lack of data, China, Democratic People's Republic of Korea, Mongolia and Democratic Republic of Viet-nam.

Thus the share of the developing countries in the year 2000 should increase to 3.64 times the 1975 level and that for Africa should increase to 3.33 times the 1975 level.

8. Given these data, it is a simple matter to calculate the corresponding growth rates for the world and the developing countries required to achieve the target shares for the year 2000. These are shown below in relation to the growth variants postulated for the developed countries (in per cent):

	V a r i a n t			
	I	II	III	IV
Developing countries	13.4	12.6	11.6	10.5
- Africa	13.0	12.2	11.2	10.1
- Asia and Latin America	13.4	12.7	11.6	10.5
WORLD	8.4	7.7	6.6	5.6

9. From this table it can be seen that world industry will grow at a rate of 5.6 to 8.4 per cent, depending on assumptions made regarding growth in the developed countries, and African industry will have to grow at a rate of 10.1 to 13.0 per cent, somewhat lower than that for the developing countries as a whole, to meet the two per cent target.

10. The implications of the targets and growth variants for developed countries are shown in terms of value added in the following table:

Value Added in Manufacturing (constant US\$ billions)

	1975 (estimate)	V a r i a n t			
		I	II	III	IV
Developing countries	93	2,148	1,837	1,440	1,224
- Africa	8	170	142	114	89
- Asia and Latin America	85	1,978	1,695	1,326	1,035
Developed countries	1,240	6,272	5,320	4,198	3,304
WORLD	1,333	8,420	7,157	5,638	4,528

Thus value added in African industry will increase by from 11.1 (Variant IV) to 21.2 (Variant I) times during the period 1975-2000, whereas industrial value added for the developing countries as a whole will increase by from 12.1 (Variant IV) to 23.2 (Variant I) times and that for the developed

countries will increase by from 2.7 (Variant IV) to 5.1 (Variant I) times during the period.

III. EXISTING SITUATION AND TRENDS

11. In this section the existing situation and trends regarding African industrialization are summarized within the broader context of regional economic development.^{6/} Population, income, consumption, savings and investment, trade and foreign investment and aid are considered prior to an analysis of African industrial structure. The tables referred to in this section are contained in the statistical appendix to the paper.

Population

12. In 1973, the total population of independent developing Africa was estimated to be about 330 million, a growth rate over the period 1960-1973 of about 2.6 per cent per annum; within this period, as shown in the appendix, Table 1, the estimated rate is reckoned to have increased somewhat from below 2.5 per cent per annum to about 2.8 per cent per annum.^{7/} Currently, population is growing fastest in the North African subregion estimated at 3.2 per cent per annum against 2.5 per cent to 2.7 per cent in other subregions.

Income

13. As Table 2 indicates, North Africa achieved the highest level of per capita GDP in the period 1971-1972 followed by West Africa, East Africa and Central Africa. Looking at Table 2 in conjunction with Table 1 showing population increases, it is clear that per capita GDP increases would have been much greater had there not been the indicated increases in population. It is also clear in the post-1972 period, although the data is fragmentary, that the relative position of the North African region has been reinforced because of the increase in the price of oil. Comparing the 1971-1972 changes with the changes of the previous decade, it can be seen that there has been a near renewal of the trends over the decade. Thus, whereas the Central African region registered the highest growth rate over the decade, i.e. 5.8 per cent per annum; in the most recent period, this region was behind all the others; conversely, the currently fastest growing North African region

^{6/} Also see CMI.3/INR/TP/1.

^{7/} p. 203, Survey of Economic Conditions in Africa, 1973, ECA/United Nations, New York, 1974.

did relatively badly in 1960-1970, growing at only 2.7 per cent per annum.

14. A number of countries registered negative per capita growth rates, and it is likely that these have further worsened under the impact of the Sahelian drought, the oil price rise and the world-wide inflation and depression following 1972. It is clear as well (without making allowances for the post-1972 oil price rises not recorded in the statistics) that the absolute level of GDP per capita remains low: as of 1972, in only two countries, the Libyan Arab Republic and Gabon, was the per capita income above US\$ 400 per annum.

Consumption

15. Private consumption absorbs a high proportion of the GDP in all the subregions of Africa. However, over the period 1960-1972 as shown in Table 3, in all regions the proportion of GDP going towards private consumption has tended to fall with the proportion going towards government consumption tending to increase. However, as shown in Table 4, while the proportion of GDP going to private consumption has fallen, private consumption has increased in absolute terms, since this falling share has been more than compensated for by increases in GDP. In fact, this trend reflects efforts to make more resources available for savings and capital formation.

Savings and investment

16. Table 5 shows that for independent developing Africa the share of savings increased from about 13 per cent of GDP in 1960 to about 20 per cent of GDP in 1972. However, while the region as a whole achieved the savings target of the Second Development Decade, the good performance was due primarily to earnings from oil and certain key mineral products by a relatively small number of developing African countries. Thus, domestic savings exceeded 20 per cent of GDP in Algeria, Libya, Tunisia, Ivory Coast, Liberia, Sierra Leone, the Congo, Gabon, Zaire, Botswana, Kenya, Swaziland and Zambia.

17. Table 5 also shows that there was an increase in the proportion of GDP going towards domestic capital formation from around 17.0 per cent in 1960 to about 19.5 per cent in 1972; however, while this proportion continued to grow, the rate of growth fell from 6.1 per cent per annum in the 1960-1970 period to 4.7 per cent per annum by 1972 with a number of countries registering a negative rate of growth in the latter year.

Trade

18. As shown in Table 6, the export of goods and services as a share of the regions, GDP increased from 24.7 per cent in 1960 to 25.4 per cent in 1972 (at constant 1970 market prices); however, in disaggregating these regional figures to a subregional level, it can be seen that this increase was typical for only North and West Africa with the other subregions suffering decreases.

19. Table 7 shows that in the 1970-1972 period there has been some increase in real terms of the rate of growth of exports of goods and services which rose from 5.6 per cent per annum in 1960-1970 to 7.6 per cent per annum in 1970-1972. At the same time, the growth rate of imports has remained relatively unchanged at about 3.5 per cent per annum in both 1960-1970 and 1970-1972. Thus the African region as a whole can be reckoned to have met two of the targets of the International Development Strategy that annual growth rates of less than 7 per cent per annum in imports and more than 7 per cent per annum in exports should be achieved during the 1970's.

20. Intra-African trade increased rapidly in 1971; after having levelled off in the second half of the 1960's, trade increased by over 18 per cent in 1971. However, compared to the internal trade of other developing regions, intra-African trade remains low and in 1971 accounted for only 6 per cent of the region's total exports; similarly intra-African imports amounted to only about 6 per cent of total imports into the region. Table 8 shows the breakdown of inter-African trade, and a comparison is shown with other developing regions.

Foreign investment and aid

21. The United States of America, France and the United Kingdom are the major donors of aid to African countries; in recent years, however, their aid provision has been below the level reached in the first half of the 1960's. In recent years, not only have a number of other OECD countries, in particular the Federal Republic of Germany, Sweden and Belgium, become increasingly important aid contributors, but also the socialist countries of Eastern Europe, in particular the Union of Soviet Socialist Republics. In addition, in recent years valuable aid contributions have been received in a few African countries from the People's Republic of China,^{3/} while from about

^{8/} See p. 190, Survey of Economic Conditions in Africa, ECA/United Nations, New York, 1974, op. cit.

1974 a new source of aid, the North African and Middle Eastern oil exporters, has begun to grow.

22. Table 9 shows the contribution of foreign finance to independent African countries in the period of 1962-1971. It can be seen that there is a considerable variation in both gross and per capita terms, as well as financial terms in the finance received by various countries. It is also interesting to note, as shown in Table 10, that a select number of African countries have been able to borrow directly on the international financial market.

23. Among the nine countries receiving the smallest amounts of finance per capita some seven of them were classified as being amongst the least developed countries of Africa; it seems that these countries have encountered difficulty in attracting foreign private finance because of their limited resource base.^{2/}

The manufacturing sector

24. The concentration of manufacturing output in the developed world, in market economies as well as centrally-planned economies, is paralleled by an equally intense concentration among developing regions and in Africa as well, as shown in Table 11, where it can be seen that North Africa with 25 per cent of the population produced almost one-half of the total value added in developing Africa. This is even further reinforced by the illustration, as shown in Table 12, that within North Africa, Egypt was the leading producer. Indeed, Table 12 shows that no more than 10 of the countries of developing Africa produced no less than 77 per cent of the total value added in manufacturing.

25. The structure of output of manufactures is illustrated in Table 13, which shows that in general, manufacturing is heavily concentrated in the area of light industry and especially in the food and beverage sub-sector which produced no less than about 42 per cent of gross output in 1971. While this sub-sector has nothing like this importance in industrialized countries, the figure does suggest that the effect of productivity improvements here can be of overall importance. Since the latter sub-sector can be considered to be almost the only manufacturing activity in certain countries, as shown in Table 14, the role the sub-sector can play in assisting

^{2/} p. 197, *ibid.*

in the development of manufacturing as a whole is likely to be crucial.

26. Table 14 shows that the food-processing sector together with textiles/clothing constitute more than 60 per cent of the output of African manufactures, and this underlines the dependence of Africa on light manufactures. Thus, not only is Africa's share of world manufactures negligible, but its share of heavy manufacturing output minuscule at just over 0.25 per cent; thus the total output of the chemical, petrochemical, non-metallic mineral, basic mineral and fabricated mineral product industries (ISIC groups 35, 36, 37 and 38) amounted to not more than \$2,200 million in 1973.^{10/}

27. Table 15 shows employment in African manufacturing industry. In 1971, total employment was just over 1.8 million with the largest sector being textiles/clothing at 596,000 closely followed by the food/beverages/tobacco sector with 456,000 workers; in this area of employment as well a few countries have a large part of the total employment, i.e. Algeria, Egypt, Morocco, Nigeria and Zaire.

IV. GENERAL IMPLICATIONS OF THE TARGET

28. The attainment of a rate of growth in manufacturing value added of 10 to 13 per cent, necessary for the achievement of the two per cent target (see para. 8), implies, inter alia, (a) an increase in the share of manufacturing in GDP and (b) an increase in the rate of growth of GDP.

29. It seems reasonable to assume that, for Africa, by the year 2000 the share of manufactures in GDP will be in the order of 20 to 30 per cent, that is, in the range now pertaining to most Latin American countries. Assuming a doubling of the manufacturing share from 12 per cent in 1975 to 24 per cent in 2000, GDP must grow at an average annual rate of 7 per cent given 4 per cent industrial growth in the developed countries (Variant IV, see para. 6), 8 per cent given 5 per cent industrial growth in the developed countries (Variant III), 9 per cent given 6 per cent industrial growth in the developed countries (Variant II) and 10 per cent given 6.7 per cent industrial growth in the developed countries (Variant I). The following table indicates the sensitivity for the four variants of the relationship between the rate of growth in GDP and the share of manufacturing in GDP:

^{10/} pp. 89, *ibid.*

Growth rate, GDP (per cent)	Share, manufacturing value added (per cent)
--------------------------------	--

Variant I (13.0 per cent growth rate, manufacturing value added)

5	80
6	60
7	48
8	36
9	30
10	24

Variant II (12.2 per cent growth rate, manufacturing value added)

5	65
6	50
7	40
8	30
9	25
10	20

Variant III (11.2 per cent growth rate, manufacturing value added)

5	54
6	40
7	32
8	24
9	20
10	16

Variant IV (10.1 per cent growth rate, manufacturing value added)

5	40
6	30
7	24
8	18
9	15
10	12

30. This table clearly shows that the achievement of the two per cent target is compatible only with an increase in the rate of growth of GDP in Africa to a minimum of around 7 per cent and may, depending on economic conditions in the rest of the world, be compatible only with a considerably higher rate of GDP growth. On the other hand, a rate of GDP growth of only, say, 5 per cent does not seem compatible with the two per cent target because the necessary share of manufacturing in GDP will be disproportionately high (40-80 per cent, depending on the variant). Thus, to attain the two per cent target, a major push in the economic development of Africa will be required over the next twenty-five years.

31. The population of developing Africa in 2000 will be about 655 million assuming an average annual growth rate of 2.5 per cent during the period 1975-2000. A 7 per cent GDP growth rate implies an increase in per capita annual income to \$540 in 2000, 8 per cent implies an increase to \$680, and 9 per cent implies an increase to \$850. Assuming that 20 per cent of income is saved, consumption per head will vary from \$430 to \$680.

32. The trend toward greater world economic interdependence seems likely to continue, with rates of growth of world exports of manufactures exceeding growth rates for output of manufactures. Assuming that Africa's share in world exports of manufactures (currently 0.9 per cent) increases in proportion to the increase in its share in output of manufactures, the African share of world export of manufactures would equal 3 per cent in the year 2000. The table below illustrates the sensitivity of the relationship between the world-wide growth of manufactured exports, the African share, the rate of growth in African manufactured exports and the proportion of African manufacturing output which is exported (with African manufacturing output assumed to grow at an annual rate of 10.1 per cent, as in Variant IV (low growth)):

World manufactured exports, growth rate (%) 1975-2000	Share, African manufactured exports in world total (%) 2000	African manufactured exports, growth rate (%) 1975-2000	Share, exports in African manufacturing output (%) 2000
6	2	9.4	37
	3	11.2	55
	4	12.5	73
8	2	11.5	59
	3	13.3	81
	4	14.6	100 +
10	2	13.6	94
	3	over 15.0	100 +
	4	over 15.0	100 +

33. The table shows that the low growth variant is not compatible with rates of growth of world manufactured exports in the order to 10 per cent, for this results in an increase in the proportion of African manufacturing output which is exported from about 40 per cent at present to near 100 per cent or even more than 100 per cent (non-feasible). With Variant IV it would seem more reasonable to assume that world manufactured exports grow at a rate of 6 per cent, so that with a 3 per cent African share a rate of growth of African manufactured exports of 11.2 is required. Similar calculations could be made for other variants.

34. Assuming a continuation of the past relationship between output and employment growth in the manufacturing sector, employment in that sector may be expected to grow at a rate of 5.0 to 6.5 per cent per annum (that is, half the rate of output growth). Total employment may then increase at a rate of 3 to 4 per cent per annum which would result in a gradual decrease in the pool of unemployed, although this rate may not be adequate to cause a decline in the absolute level of urban unemployment. The employment-output relationship is summarized in the following table:

Manufacturing output growth rate	Manufacturing employment growth rate	Total employment growth rate (rounded to nearest half per cent)
10.1	5.0	3.0
11.2	5.6	3.5
12.2	6.1	3.5
13.0	6.5	4.0

The rate of growth in manufacturing employment will, of course, be greater provided that the two per cent target can be achieved in conjunction with a shift towards more labour-intensive technologies in African industry.^{11/}

V. GROWTH PROSPECTS FOR KEY INDUSTRIES

35. In conjunction with the general analysis of the two per cent target presented in the previous section, a number of key industrial branches have been investigated in terms of projected structural change, 1975-2000, and a number of indicators, such as investment, production, value added, foreign exchange savings, employment, have been estimated and compared. These studies

^{11/} For a detailed discussion of the relation between employment and technology, see CMI.3/INR/TP/5.

are summarized below. The branches considered cannot possibly exhaust the total of industrial projects which might be valuable and be capable of effecting very considerable savings in the region. Some of the branches concern manufactures which can be set up on a national level; others are expected to be advantageous only as regional projects. It is well known that markets of large size are necessary for the efficient production of fertilizers, pulp and paper, capital goods and intermediate manufactures, such as chemicals, petrochemicals and steel products. Countries with small local markets are obviously not able to go into these lines of production unless they become part of a wider multinational market making it possible to profit from economies of scale.

36. Steel: Economies of scale are significant in steel making, but the individual markets of the countries of the region do not allow in general the installation of large-scale steel plants on a national basis. Further, steel plants are as a rule attractive because of high social profitability, savings in foreign exchange, employment generated and of the positive impact they have on upstream and downstream activities. It is, therefore, important that countries of the region co-operate in the development of this industry so that plants of an economic size supplying a multinational market and based on the best available raw materials could be established.

37. Africa has abundant reserves of high-grade iron ore and steel works established near these locations which would have an advantage as far as cost of production is concerned. However, unless cheap coking coal is provided, this advantage might be partly counterbalanced.

38. The current per capita consumption of iron and steel products in Africa is very low, amounting to less than 20 kgs. as compared with 400 to 600 kgs. in developed countries. Between 1950 and 1972 the annual growth rate of steel production and consumption was respectively 9.8 and 6.0 per cent, the lowest of all regions. It has been estimated that by year 2000 annual consumption of crude steel will be 130.0 million tons while production will reach 163.0 million tons.

39. Considering the existing capacities of production, the additional capacity to be installed is 162.0 million tons, corresponding to an investment of US \$129.6 billion. The above investment will generate a value of production equivalent to US \$45.5 billion approximately, with a corresponding value added of about US \$8.0 billion. The number of jobs created is estimated

to be 1,940,000. However, additional employment opportunities would emerge from the development of this sector. Annual savings of foreign exchange were found to be US \$28.0 billion, out of which US \$5.6 billion are due to exports.

40. Forest-based industries: The study deals with those industrial products for which wood is the chief raw material, i.e. sawn wood, wood panels, and pulp and paper. The African region is a major supplier of roundwood, with West and Central Africa representing 65.0 per cent of total African forest resources. Generally speaking, African forests contain a large part of the world's reserves of wood, including large-sized, broad-leaved woods and most of the quality broad-leaved species. However, the indiscriminate cutting down of national forests without a proper policy of reforestation leaves large areas deplete of natural resources. There is evidence that in some areas the resource is being depleted too far and too fast. Drastic action should be taken in the field of planning and forest plantation programmes to secure resources and to ensure their natural regeneration and replacement.

41. Provided the countries of the region take timely measure for building up the sources of raw materials, growth prospects of the sector are encouraging. Total raw wood requirements in Africa for year 2000 are estimated at 180.5 million cubic meters (r), distributed as follows: 6.0 million cubic meters (r) for logs, 81.0 million cubic meters (r) for sawn wood, 25.5 million cubic meters (r) for wood panels, 14.7 million cubic meters (r) for wood pulp and 53.3 million cubic meters (r) for paper. The above requirements were based on the estimated demands (including exports) of the region regarding these products, which will be of the order of 6.0 million cubic meters (r) of logs, 44.9 million cubic meters (s) of sawn wood, 12.8 million cubic meters (s) of wood panels, 4.2 million tons of pulp and 20.0 million tons of paper.

42. With a view to meeting this demand the capital requirements to be invested by year 2000 have been calculated at about US \$1.8 billion for sawn wood mills, US \$1.3 billion for wood panels production, US \$2.2 for production of pulp for export and US \$16.0 billion for integrated paper mills, the total being roughly US \$21.3 billion. Further, the necessary investment to support the establishment of these industries by establishing an afforestation programme has been estimated to be US \$3.3 billion. Rational forest

exploitation and industrialization of these resources will require close collaboration of different governments and continued collaboration at all levels.

43. The above aggregate investment programme is estimated to yield a value added of about US \$5.7 billion and a value of production of US \$17.5 billion. Estimated yearly earnings from exports have been calculated at US \$1.7 billion. Total generated employment has been estimated at 1.9 million persons approximately.

44. Engineering industries: This sector covers agricultural, industrial and electrical machinery and equipment, transport equipment, and fabricated metal products. The definition covers literally hundreds of thousands of different products.

45. The sector exerts a powerful influence on overall development in that it shapes the productive capacities essential for the growth of national output, and it contributes possibly more than any other sector to fostering labour, technical and management skills. A common characteristic of the engineering industries is that they are not natural-resource-based and a great number of them do not depend on economies of scale.

46. Statistical trends of consumption and production provide a rough guide to development in this sector. Thus, by year 2000 the African apparent consumption of engineering products per capita is estimated to be US \$85.0. This gives a total apparent consumption of US \$56.0 billion. It is assumed that by the same year the manufacturing value of engineering products of the region may be equivalent to US \$50.0 billion.

47. The above production will require an investment of about US \$33.6 billion generating a value added of approximately US \$18.7 billion per year. Total manpower requirements for the sector's development will be about 5.0 million persons.

48. Textiles: The study indicates that while demand of textiles in the African region was of the order of US \$1.7 billion in 1960, annual requirements are expected to reach US \$8.8 billion in 1975. During the same period production is estimated to increase from US \$1.0 billion to US \$2.0 billion. This implies that while demand increased by 11.4 per cent annually, production is increasing with a yearly growth of only 6.9 per cent. Demand for textiles was estimated at about US \$80.0 billion in year 2000. Regional

production for the same year will be US \$43.0 billion by considering that production increases by 13.0 per cent annually.

49. On the basis of the above, investment cost was estimated at US \$21.0 billion. The value added of this aggregate programme would be of about US \$10.5 billion and annual foreign exchange savings about US \$43.0 billion. A total of about 5.0 million jobs would be created by the suggested development programme of the sector.

50. Food processing: For the purpose of analysis, the study gave special attention to the following subsectors: grain milling, oils and fats, sugar, fruit and vegetable processing, milk and dairy products, meat, fish and beverages.

51. In 1970, the output of the food-processing sector amounted to about US \$5.5 billion and employed 500,000 workers. It is estimated that by year 2000 gross production could amount to about US \$43.0 billion. In order to achieve this production an investment of the order of US \$20.0 billion is required, with associated investment in storage and marketing facilities amounting to about US \$9.0 billion. Of even greater importance will be the sum which will have to be invested directly in agriculture for such operations as land clearing, plantation, irrigation and flood control, livestock inventory, etc., and which is estimated at about US \$33.0 billion. The latter sum does not include any provisions for another sector crucial for the development of food processing, namely investment in roads, transport and infrastructure facilities.

52. On the basis of the investment figures above, value added in food processing is estimated at US \$16.0 billion in 2000 while export earnings for the same year will be of the order of US \$23.0 billion. It is estimated that new employment created by 2000 regarding the processing industry itself will amount to about 2.0 million. A very considerable number of jobs will be expected in the upstream areas, most of all in a modernized agriculture where the new investments projected should lead to significant increases in income. The possibilities for the food-processing industries are very much tied to the transformation and development of a large part of African agriculture, as well as major improvements in roads, transport, marketing and storage. Problems associated with manufacturing, i.e. management, technology etc., are relatively minor in comparison with the above-mentioned problems which lie strictly outside of food processing itself.

53. Phosphate fertilizers: Within the African region phosphate deposits exist in the Maghreb, Senegal and Togo; Zaire and Zambia have sulphur, while potash is found in Ethiopia and the Congo. Between 1965 and 1972 consumption of phosphate and potash fertilizers in the region increased by 133.0 and 100.0 per cent.

54. The region's consumption in year 2000 is found to be 19.7 million tons of (NPK) which is equivalent to about 30 kgs. per capita. Out of this the total consumption in terms of plant nutrient P_2O_5 will be 6.6 million tons and that of K_2O , 2.6 million tons. However, taking into consideration the existing production capacities, the net deficit will be respectively 5.7 million tons and 2.2 million tons.

55. Estimated total investment for the above-mentioned phosphatic and potash fertilizer capacities is about US \$2.3 billion and US \$600.0 million respectively. These amounts may be easily doubled if one considers the indirect investment costs required for the setting up and the functioning of these plants. Developing countries should take advantage of the economics of large-scale production by co-operating among themselves, especially in Africa where raw material location is concentrated in certain areas. There are advantages in locating production facilities at the phosphate mine since high-analysis phosphate fertilizers weigh less than the rock from which they are made.

56. The aggregate investment of US \$2.9 billion is estimated to yield a value added of about US \$1.9 billion. It is to be noted that US \$1.5 billion and US \$400.0 million represent phosphate and potash fertilizers respectively. Foreign exchange savings at year 2000 have been calculated for the phosphatic fertilizers only. This was found to be about US \$4.0 billion. Because of the very uncertain price of potash no attempt was made to estimate the order of magnitude of its savings. The overall generated employment due to the development programme considered is estimated at 11,000 persons.

57. Nitrogenous fertilizers: Demand for nitrogenous fertilizers is estimated to reach 10.4 million tons in year 2000. Based on the present production capacities in the region, excess demand is expected to be 9.0 million tons in terms of N.

58. In order to meet this demand a capital investment of about US \$1.5 billion is required. The above figure may increase considerably if one

considers the areas in which additional investment funds are needed, such as transportation, storage, utilities and mixing plant facilities. Value added would average US \$600.0 million with a value of production of about US \$1.8 billion. It is estimated that some 13,000 persons will be employed.

59. The future development of the fertilizer industry in general depends on the growth of the agricultural sector and on the efficient use of modern agricultural techniques and inputs. Furthermore, much depends on the efficiency with which the industry will be able to combine capital goods, labour and raw material requirements to produce and market these goods, and on its ability to cope with the problems of transportation, storage and mixing plant facilities.

60. Petrochemicals and plastics: The main hydro-carbon raw materials for petrochemical industries are natural gas, crude oil and petroleum refinery streams converted by cracking into ethane, propane and naphtha used as feedstock for the production of ethylene and propylene. Ethylene contributes the main intermediate source for producing downstream products as polyethylene, vinyl chloride monomer and polystyrene.

61. Estimates of consumption in Africa of major thermoplastics give for the year 2000 the amount of 8.2 million tons. Very rough estimates can be made of the implications of this demand figure for production. It is assumed that by the same year domestic demand of final products will be covered by local production and that 6.0 million tons will be produced by fully integrated plants while 2.0 million tons will be based on imported intermediate products. It is to be noted, however, that African countries will not have a sufficiently large domestic market to justify integrated petrochemical plants for domestic production only. Only on a regional basis may development of this sector be contemplated.

62. Based on the above, the necessary investment by year 2000 is found to be US \$8.0 billion. This investment programme is expected to represent an annual value of production of about US \$2.7 billion and a value added of US \$900.0 million. Total employment is estimated at 50,000 persons.

63. Salt and its derivatives: Demands for salt and its derivatives, i.e. soda ash, caustic soda and chlorine, will be growing at a rapid pace which will partly depend on the establishment of such industries as petrochemicals, glass, textiles and pulp and paper. It is estimated that demand in the year 2000 will be about 13.8 million tons for salt, 1.5

million tons for soda ash, 895,000 tons for caustic soda and 785,000 tons for chlorine. On the basis of the production capacities already in existence and assuming that all excess capacity will be covered by local production, the additional production capacities to be established by year 2000 will be respectively 11.8 million tons, 1.5 million tons, 895,000 tons and 785,000 tons.

64. Economies of scale are significant especially in soda and caustic soda/chlorine production. It is assumed that five plants will be needed to cover this demand for salt and four for the production of soda ash; the number of plants for the manufacture of caustic soda/chlorine will depend on the number of pulp and paper mills and the vinyl chloride monomer production.

65. Based on the above demands, the investment is estimated at US \$477.0 million for salt, US \$210.0 million for soda ash and US \$256.0 million for caustic soda/chlorine. This will give by year 2000 an overall investment of US \$943.0 million. The aggregate investment programme is estimated to yield an annual gross production value of about US \$470.0 million out of which US \$204.5 million represent value added. The latter is distributed among salt production, US \$103.0 million; soda ash, US \$44.5 million; and caustic soda/chlorine, US \$57.0 million. Estimated foreign exchange savings amount to US \$283.0 million annually. The overall generated employment due to the development of the sector is estimated at 72,400 persons. Out of this total, salt production accounts for 63,000 persons, soda ash for 5,200 persons and caustic soda/chlorine for 4,200 persons.

66. The proposed production capacities for the year 2000 for the products of the industrial branches considered have been estimated on the basis of the expected demands of that same year. Whenever possible, allowance has been made for exports. However, in the majority of cases production was calculated to cover regional demand.

67. Table V(1) summarizes the estimates of the required investment, the value added in production, the generated employment and the order of magnitude of foreign exchange savings. The last is considered to be equal to the sum of the value of products manufactured for domestic use, which will have to be imported if not locally produced, and for export.

68. The investment during the period 1975-2000 required for the manufacturing programme proposed, US \$247.8 billion, is noteworthy. This amount,

which is in real terms (so that inflation is not considered), does not include investment funds for infrastructure and supporting activities necessary for the development of the branches. Although this means an average annual investment of almost US \$10.0 billion over the period, naturally investment during the early years will be much less than this average and investment in later years will be much more than the average.

69. Value added in production is estimated to be US \$62.5 billion in these industries by the year 2000. These industries are therefore expected to contribute significantly towards the attainment of the two per cent target, which requires total value added in manufacturing in the range of US \$89-US \$170 billion for the year 2000 (see para. 10). Three branches - engineering industries, food processing and textiles - generate US \$45.2 billion representing 72.0 per cent of the above total, i.e. half of the low estimate of total manufacturing value added required in the year 2000.

70. The total number of jobs created is 15.0 million. This figure does not include employment for construction of the plants and secondary employment effects originating from the setting-up of new industries. However, the figure does include jobs created for forest management operations. In comparison, only 1.8 million persons were employed in 1971 in all manufacturing activities (see para. 27).

71. Annual foreign exchange savings have been estimated at about US \$190.3 billion. This number includes exports of pulp, steel and food-processed products amounting to US \$1.7, US \$5.6 and US \$23.0 billion respectively.

VI. CONCLUDING REMARKS: SOME GENERAL POLICY CONSIDERATIONS

72. As previously noted, this paper is only a first attempt at assessing the implications of the two per cent industrial target for Africa. Nevertheless, it is shown that a major push towards the industrialization and economic development of Africa, with an increase in the rate of growth in manufacturing value added to the range of 10-13 per cent and in the rate of GDP growth to the range of 7-10 per cent, is required. The target is feasible but the attainment of it will not be easy and will depend on both internal and external factors. The following general policy recommendations are, of course, well-known; nevertheless, we feel that their inclusion in this study is useful as a reminder to African policy-makers of action to be taken over the next 25 years.

Table V(1). Estimates of total investment, 1975-2000, and regional benefits

	<u>Investment, 1975-2000 (US \$ billion)</u>	<u>Value added (2000) (US \$ billion)</u>	<u>Employment (2000) (000 persons)</u>	<u>Foreign exchange savings (2000)</u>	
				<u>Due to import substitution (US \$ billion)</u>	<u>Due to exports (US \$ billion)</u>
Steel	129.6	8.0	1,940	22.4	5.6
Forest industries	21.3	5.7	1,000	15.8	1.7
Engineering industries	33.6	18.7	5,000	50.0	
Textiles	21.0	10.5	5,000	43.0	
Food processing	29.0	16.0	2,000	20.0	23.0
Chemicals	13.3	3.6	150	8.8	
Total	247.8	62.5	15,090	160.0	30.3

73. The nations of Africa will need to commit a greater proportion of their income to savings. Financial institutions should be established and strengthened to mobilize savings and a larger share of savings should be transformed into industrial investment. Policies and plans should be formulated and implemented with the aim of improving the allocation of resources in the industrial sector. Factors such as product mix, technology, location and investment timing need to be systematically considered and producers efficient in terms of social costs and benefits should be encouraged. Every effort needs to be made to improve industrial infrastructure, not only in physical terms, such as transport and communications, but also in human terms, such as the provision through the educational system of better industrial managers and technicians. Clearly this can best be accomplished within a framework of African regional consultations and co-operation.

74. On the external side, it has been shown how the African share of industry in 2000 will be influenced by industrial growth in the rest of the world during the period 1975-2000. The achievement of the target will also depend on the extent to which the developed countries alter their policies regarding trade, investment, foreign assistance, technological transfer and technical assistance in favour of the African region. Finally, the attainment of the target will depend on the success or lack of it in implementing the New International Economic Order, and particularly on the scope and content of the system of international consultations proposed at the Lima Conference.

VII. STATISTICAL APPENDIX

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1. Size and growth of population in Africa, 1960 and 1970-1973
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Table 1. Size and growth of population in Africa, 1960 and 1970-1973

	<u>Population in thousands</u>				<u>Annual rate of growth (%)</u>	
	<u>1960</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1960-1970</u>	<u>1970-1973</u>
North Africa	64,586	85,477	88,275	91,074	2.9	3.2
West Africa	78,520	100,080	102,685	105,544	2.5	2.7
Central Africa	30,254	37,308	38,253	39,203	2.1	2.5
Eastern Africa	63,267	80,361	82,534	84,768	2.4	2.7
Total, independent developing Africa	236,627	303,551	311,747	320,589	2.5	2.8

Source: United Nations, World Population Prospects as Assessed in 1968, Population Studies No. 53, New York, 1973.

Table 2. Amount and rate of growth of per capita GDP in independent developing Africa at constant 1970 market prices, 1970-1972

	<u>Per capita GDP</u> ^{12/} (US \$)				<u>Rate of growth of per capita GDP</u> (%)		
	<u>1960</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1960-1970</u>	<u>1970-1971</u>	<u>1971-1972</u>
North Africa	199.4	259.1	253.7	261.9	2.7	- 2.1	3.2
West Africa	122.8	150.0	157.6	162.0	2.0	5.1	2.8
Central Africa	120.6	127.5	130.6	131.5	5.8	2.4	0.6
East Africa	84.9	120.0	119.5	120.9	3.5	- 0.4	1.2
Total, independent developing Africa	133.3	169.9	171.4	175.8	2.7	0.9	2.6

Source: ECA Secretariat

^{12/} Population figures are derived from the United Nations publication World Population Prospects as Assessed in 1968, New York, 1973.

Table 3. Percentage share of private and government consumption in GDP at constant 1970 market prices, 1960 and 1970-1972

	<u>Private consumption</u>		<u>Government consumption</u>			<u>Total consumption</u>						
	1960	1970	1971	1972	1960	1970	1971	1972				
North Africa	71.5	58.2	58.9	56.8	16.5	20.0	21.1	21.5	88.0	78.2	80.0	78.3
West Africa	80.5	73.0	72.6	70.0	8.8	10.5	10.9	11.0	89.3	83.5	83.5	81.0
Central Africa	68.5	58.4	59.9	59.7	15.4	20.0	20.3	19.5	83.9	78.4	80.2	79.2
East Africa	73.0	66.9	68.4	67.8	12.2	13.6	14.7	14.3	85.2	80.5	83.1	82.1
Total, independent developing Africa	74.1	64.1	64.9	63.1	13.3	16.0	16.8	16.9	87.4	80.1	81.6	79.9

Source: ECA Secretariat

Table 4. Rates of growth of expenditure of GDP at 1970 constant market prices, 1960-1970 and 1971-1972

<u>Subregion</u>	<u>Period</u>	<u>GDP</u>	<u>Private consumption</u>	<u>Government consumption</u>	<u>Gross domestic capital formation</u>	<u>Exports of goods and services</u>	<u>Imports of goods and services</u>
North Africa	1960-1970	5.6	3.4	7.6	5.2	7.9	3.6
	1971-1972	6.5	2.8	8.6	9.0	9.6	4.4
West Africa	1960-1970	4.5	3.5	6.3	5.8	5.4	3.6
	1971-1972	5.6	1.8	7.0	5.0	5.3	- 5.9
Central Africa	1960-1970	2.7	1.1	5.4	7.3	0.5	1.1
	1971-1972	3.1	2.8	- 0.9	14.8	0.8	6.7
East Africa	1960-1970	6.0	5.1	7.2	8.3	5.3	4.8
	1971-1972	3.9	3.0	1.4	- 9.6	10.4	- 3.7
Total, independent developing Africa	1960-1970	5.0	3.5	7.0	6.1	5.6	3.5
	1971-1972	5.4	2.5	6.3	4.7	7.6	0.1

Source: ECA Secretariat

Table 5. Gross domestic capital formation and savings as percentage of GDP at constant 1970 market prices, 1960, 1970 and 1972

	Gross domestic capital formation			Savings as a percentage of GDP		
	<u>1960</u>	<u>1970</u>	<u>1972</u>	<u>1960</u>	<u>1970</u>	<u>1972</u>
North Africa	20.7	20.1	19.5	12.0	21.8	21.7
West Africa	14.5	16.3	17.1	10.7	16.5	19.0
Central Africa	14.3	22.2	27.0	16.1	21.6	20.8
East Africa	15.1	18.7	19.5	14.8	19.5	27.9
Total, independent developing Africa	17.1	18.9	19.5	12.6	19.9	20.1

Source: Survey of Economic Conditions in Africa, 1973, ECA/United Nations, 1974, pp. 32-33.

Table 6. Exports of goods and services as a percentage of GDP at constant 1970 market prices, 1960-1972

	<u>1960</u>	<u>1972</u>
North Africa	21.6	25.7
West Africa	20.7	23.5
Central Africa	38.2	27.8
East Africa	30.0	25.3

Source: Survey of Economic Conditions in Africa, 1973, ECA/United Nations, 1974, Table 15, pp. 34-35.

Table 7. Average annual rate of growth of exports and imports of goods and services at current and constant 1970 market prices, 1960-1970, 1970-1971 and 1971-1972

	<u>At current market prices</u>				<u>At constant 1970 market prices</u>							
	<u>Exports</u>		<u>Imports</u>		<u>Exports</u>		<u>Imports</u>					
	1960-1970	1971-1972	1960-1970	1971-1972	1960-1970	1971-1972	1960-1970	1971-1972				
North Africa	9.8	4.6	15.1	5.8	3.7	12.7	7.9	-5.8	9.6	3.6	-2.8	4.4
West Africa	8.6	17.9	14.1	6.7	21.8	2.3	5.4	13.1	5.3	3.6	17.2	-5.9
Central Africa	3.6	-1.5	12.3	4.3	11.4	18.5	0.4	-2.5	0.8	1.2	10.4	6.7
East Africa	8.3	-4.9	16.1	7.5	19.9	1.2	5.3	-7.5	10.4	4.8	16.3	-3.7
Total, independent developing Africa	8.3	5.4	16.0	6.2	12.5	8.0	5.6	-1.0	7.6	3.5	7.6	0.1

Source: ECA Secretariat

Table 8. Intra-African exports in 1965 and 1969-1971

	<u>Value in million US \$</u>				<u>Annual growth rate</u>			<u>Percentage of total</u>			
	1965	1969	1970	1971	1965-1970	1969-1970	1970-1971	1965	1969	1970	1971
<u>Primary commodities</u>	380	367	422	500	2.1	15.0	18.5	63.3	65.3	64.9	64.9
Food and beverages	230	205	230	270	0.0	12.2	17.4	38.3	36.5	35.3	35.1
Raw materials excl. fuel	67	75	96	115	7.5	28.0	19.8	11.2	13.3	14.8	14.9
Fuels	83	87	96	115	3.0	10.3	19.8	13.8	15.5	14.8	14.9
<u>Manufactures</u>	220	195	228	270	0.7	16.9	18.4	36.7	34.7	35.1	35.1
Chemicals	39	32	30	35	-5.1	-6.2	16.7	6.5	5.7	4.6	4.6
Machinery	31	23	28	34	-2.1	21.7	21.4	5.2	4.1	4.3	4.6
Other manufactures	150	140	170	201	2.5	21.4	18.2	25.0	24.9	26.2	26.1
<u>Total intra-African exports</u>	600	562	650	770	1.6	15.7	18.5	100.0	100.0	100.0	100.0

	<u>Value in million US \$</u>			<u>Annual growth rate</u>			<u>Percentage of exports to all regions</u>			
	1965	1969	1971	1965-1970	1969-1970	1970-1971	1965	1969	1971	
<u>Within region exports</u>	600	562	770	1.6	15.7	18.5	7.7	5.1	5.3	6.0
Developing Africa	600	562	650	1.6	15.7	18.5	7.7	5.1	5.3	6.0
Latin America	1,080	1,180	1,290	3.6	9.3	9.3	9.8	10.3	10.1	11.2
Asia (developing)	3,460	4,110	3,905	2.4	-5.0	28.4	21.9	19.7	17.1	17.8

Source: United Nations Monthly Bulletin of Statistics, July 1973.

Table 9. Contribution of foreign finance to independent developing Africa
in million US \$, 1962-1971

	Cumulative grants received 1960-1971 (1)	Total reported debt outstanding (disbursed) end 1971 ^{13/} (2)	Of which: Export credits (3)	Estimated book values of private overseas direct investment (POM) end 1971 (4)	Total (1+2+4) (5)
North Africa	5,046	4,965	2,044	2,148	12,159
West Africa	3,056	4,265	2,487	3,362	10,683
Central Africa	2,560	786	420	1,305	4,651
East Africa	2,545	2,312	515	871	5,728
Total, independent developing Africa	13,207	12,328	5,466	7,686	33,221

Source: Organization for Economic Co-operation and Development, Development Co-operation, 1973 Review, Paris, 1973, Table iv-4, pp. 72-76.

^{13/} Or latest data available.

Table 10. Euro-currency loans to some African countries,
1971-1972

<u>Country</u>	<u>1971</u>	<u>1972</u>
	(million US \$)	
Algeria	120.0	275.0
Gabon	10.0	25.0
Guinea	-	40.0
Ivory Coast	22.0	-
Kenya	-	15.0
Mauritania	8.0	-
Swaziland	-	3.2
Zaire	55.0	90.0
Zambia	-	25.0

Sources: Organisation for Economic Co-operation and Development,
Development Co-operation, 1973 Review, Paris, 1973,
p. 53, Table II-11.

Table 11. Value added by manufacturing in independent developing Africa, 1972

<u>Subregion</u>	<u>Value added by manufacturing (million US \$)</u>	<u>Value added by manufacturing as per cent of total</u>	<u>Value added by manufacturing per capita (US \$)</u>	<u>Percentage of population of independent developing Africa</u>	<u>Percentage of GDP of independent developing Africa</u>
North Africa	2,563.1	45.6	28.1	28.4	41.9
West Africa	1,417.8	25.2	13.4	32.9	30.4
Central Africa	637.1	11.3	16.3	12.2	9.1
East Africa	1,003.7	17.9	11.8	26.5	18.6
Total, independent developing Africa	5,621.7	100.0	17.5	100.0	100.0

Source: Computed on the basis of data shown in previous tables.

Table 12. Relative importance of the ten leading manufacturing countries in independent developing Africa in 1960 and 1972

<u>Country</u>	<u>Share of leading countries in the region's total value added by manufacturing</u>		<u>Cumulative percentage</u>	
<u>North Africa</u>				
Egypt	35.9	27.4	35.9	27.4
Morocco	10.5	7.7	46.4	35.1
Tunisia	4.0	2.9	50.4	38.0
<u>West Africa</u>				
Nigeria	8.2	13.2	58.6	51.2
Ghana	2.7	4.8	61.3	56.0
Ivory Coast	1.7	3.2	63.0	59.2
<u>Central Africa</u>				
Zaire	9.6	7.5	72.6	66.7
<u>East Africa</u>				
Kenya	2.8	3.8	75.4	70.5
Ethiopia	3.0	3.6	78.4	74.1
Zambia	1.4	3.0	79.8	77.1
<hr/>				
Total (ten countries)	79.8	77.1	79.8	77.1
<hr/>				
Total, independent developing Africa	100.0	100.0	100.0	100.0
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Source: Compiled on the basis of Table 9.

Table 13. Value of gross output per person engaged by major groups of manufacturing industry at 1970 constant factor cost in independent developing Africa, 1971

<u>ISIC Group</u>	<u>Value of gross output (US \$ 000)</u>	<u>Per cent</u>	<u>Number of persons engaged in manufacturing</u>	<u>Per cent</u>	<u>Value of gross output per person engaged (US \$)</u>
Light industries (31, 32, 33, 34 and 39)	8,855,323	68.8	1,302,492	71.3	6,799
31 Food, beverage and tobacco	5,461,489	42.5	456,695	25.0	11,959
32 Textiles and clothing	2,445,295	19.0	596,306	32.7	4,101
33 Wood and furniture	468,106	3.6	129,503	7.1	3,615
34 Paper, printing and publishing	365,890	2.8	81,052	4.4	4,514
39 Other manufactures	114,543	0.9	38,936	2.1	2,942
Heavy industries (35, 36, 37 and 38)	4,011,297	31.2	521,372	28.7	7,694
35 Chemicals, petroleum and plastics	1,679,646	13.1	165,436	9.1	10,153
36 Non-metallic mineral products	519,830	4.0	97,645	5.4	5,324
37 Basic metal industries	308,947	2.4	36,170	2.0	8,541
38 Fabricated metal products, machinery and equipment	1,502,874	11.7	222,121	12.2	6,766
3 Total manufacturing	12,866,620	100.0	1,823,864	100.0	7,055

Source: ECA Secretariat computations.

**Table 14. Gross output of manufacturing industries at 1970 constant factor cost
in independent developing Africa, 1971**
(US \$ 000)

	<u>Food, beverages and tobacco</u>	<u>Textiles and clothing</u>	<u>Wood and furniture</u>	<u>Paper, printing and publishing</u>	<u>Chemicals, petroleum and plastics</u>	<u>Non-metallic mineral products</u>	<u>Basic metal industries</u>	<u>Fabricated metal products machinery and equipment</u>	<u>Other manufacturing</u>	<u>Total manufacturing</u>
North Africa	3,213,270	1,413,430	164,130	178,350	892,930	317,570	158,230	877,330	34,290	7,249,530
West Africa	900,382	490,925	113,599	79,782	380,126	77,569	28,278	250,960	41,286	2,362,907
Central Africa	314,320	126,880	109,560	19,180	130,940	27,410	69,570	104,010	12,370	914,240
East Africa	1,033,517	414,060	80,817	88,578	275,650	97,281	52,869	270,574	26,597	2,339,943
Total, independent developing Africa	5,461,489	2,445,295	468,106	365,890	1,679,646	519,830	308,947	1,502,874	114,343	12,866,620

Source: ECA Secretariat

Table 15. Number of persons engaged in manufacturing industries in independent developing Africa, 1971

	<u>Food, beverages and tobacco</u>	<u>Textiles and clothing</u>	<u>Wood and furniture</u>	<u>Paper, printing and publishing</u>	<u>Chemicals, petroleum and plastics</u>	<u>Non-metallic mineral products</u>	<u>Basic metal industries</u>	<u>Fabricated metal products machinery and equipment</u>	<u>Other manufacturing</u>	<u>Total manufacturing</u>
North Africa	223,220	371,255	21,114	47,848	105,674	64,855	30,521	124,552	10,450	999,489
West Africa	73,202	96,353	51,752	15,683	29,756	11,545	1,339	34,479	17,268	330,877
Central Africa	39,709	32,156	26,881	2,407	11,051	4,176	1,719	13,038	5,374	136,511
East Africa	120,564	96,542	29,756	15,114	18,955	17,569	2,591	50,052	5,844	356,987
Total, independent developing Africa	456,695	596,306	129,503	81,052	165,436	97,645	36,170	222,121	38,936	1,823,864

Source: ECA Secretariat

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