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SMALL INDUSTRY IN EAST AFRICA

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ANNEX 1

CHAPTER I

THE ROLE OF SMALL INDUSTRY

1. The role of small industry - tentatively defined as manufacturing units employing up to 100 workers - is considerable in most countries, irrespective of their state of development. The universal emergence of such a role is explained in terms of a whole complex of factors in the subsequent section, but it would be useful to begin with a statement of major characteristics of small industry, taken on the whole, in different economies.

2. In the first place, establishments in the small industry group comprise the overwhelming majority of all manufacturing establishments. Thus, in the United States[1] only 26,500 establishments out of a total of nearly 300,000 employ more than 99 employees. The near-universality of this level of incidence of small units can be seen from the fact that the proportion is 89 per cent in West Germany, 91 per cent in Puerto Rico, 95 per cent in the United Kingdom, 97 per cent in Australia and 99 per cent in Japan[2]. One direct consequence of the scale of presence of small units is to make the average factory in most countries of the world (other than centrally planned economies) a small employer in absolute terms. Thus, in Canada and in the US, the average number of employees per establishment is around 60, and in Australia, it is around 35. In Germany, where the statistics cover only establishments with over

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1/ US Department of Commerce, United States Census of Manufactures, 1958, Bureau of the Census, 1961, Table 3, page 2-3, Volume 1, Summary Tables.

2/ Figures are taken from an article: Development of Small Industry Programmes, by Eugene Staley, in Methods of Industrial Development (edited by Albert Winsemius and John A. Pincus), O.E.C.D., 1962, page 205.

10 employees, the average is around 115; and in the UK where statistics immediately available related to establishments with a minimum of 11 employees, the average employment is around 140[1]. Another characteristic of small industry on the whole is more variable from one country to another (in one part, this variation is derived from differences in definition and coverage). The average employment per unit in small industry is only a fraction of the average for all industry. To argue again with the help of an illustration, in the US, small units employ on an average less than 15 employees compared to an all-industry average which is four times as large.

3. To put it somewhat differently, small industry is not usually the larger sector of manufacturing industry in terms of employment. In Japanese industry[2], small units employ 34 per cent of the total work force, and in countries like the US[3] and West Germany[4], the proportion is around 27 per cent.

4. The smallness of contribution to employment by small industry gets reflected in its share of gross output in an even more marked fashion, and this is brought out below clearly with the help of data from the 1958 Census of Manufactures of Japanese Industry.

5. In interpreting the greater productivity of labour in large industries as compared to units in small industry, a certain element of caution needs to be entered. As will be seen later, the proportionate significance of small and large sectors of industry varies largely from one product group to another, and to the extent that occurs, the Table below is less than an accurate reflection of strictly comparable items.

1/ Based on Statistical Appendix to an article by John Jewkes: Are the Economies of Scale Unlimited?, in Economic Consequences of the Size of Nations (edited by E.A.G. Robinson), MacMillan, 1960, pages 114-116.

2/ See Statistical Year Book, 1961, issued by the Bureau of Statistics of the Office of the Prime Minister, page 150 et seq.

3/ Op. Cit., Table 3, pages 2-3.

4/ Staley's article quoted in an earlier foot-note.

TABLE 1

Indices of Shipments and Employment for Japanese Industry - 1958

	Establishments with Employees from:				
	4-49	50-99	100-299	300-999	1,000 and over
A. Volume of Employment (Employment in the 4-49 employees group = 100	100	28	35	33	38
B. Value of Shipments (Shipments by the 4-49 employees group = 100	100	40	70	86	112
C. Ratio of B : A	100	143	200	261	295

Source: Based on Statistical Year Book, 1961, issued by the Bureau of Statistics of the Office of the Prime Minister.

6. Nonetheless, it is fair to sum up that small industry is concerned, very broadly speaking, with about one-third of employment and around 25 to 30 per cent of gross output, notwithstanding the fact that it comprises nine out of ten industrial establishments. It might also be added that usually the proportional share of small industry in gross output will be somewhat larger than its proportionate share in net output. While the precise proportions will vary from one country to another, from one industrial structure to another, and in time, small industry is thus a large and essential part of most industrial structures seen as evolved national entities. The next section is directed to an analysis of the complex of factors - economic, technological and social - which creates, maintains and nurtures small industry in an industrial world characterized by largeness in the typical methods of deriving the greater part of its manufacturing output.

CHAPTER II

ROLE OF SMALL INDUSTRY - AN INDICATIVE STATEMENT OF CAUSES

7. The analysis, provided below, of the factors which enable, facilitate, maintain and nurture small enterprise, is primarily made in qualitative terms, and the order in which factors are stated is a matter of logic and convenience rather than of precedence.

8. The nature of demand for the products of industry is often a factor conducive to or permissive of smallness. Thus, total demand for a particular product might be quite small in a particular country, and the smallness of total demand, ipso facto, must be met by smallness of capacity for its production. On the other hand, smallness of demand might arise from the primary fact that demand is local rather than spread over a larger territorial area, and therefore favours smaller units. Thus, fresh bread is more likely to be produced by small bakeries in smaller towns, whereas in the cities of New York or London or Delhi the vastness of the local market is permissive of huge factories. A variation on the theme of smallness of the market arises in cases where demand is local (for example, in the case of a job-order carpentry shop catering to a single factory assembling radios) and the supply has to be found, as it were, locally. Industries involving a large element of provision of services or repair facilities thus tend to be small, just as industries involving large amounts of work to order (such as job-work printing presses) also tend to be small.

9. Smallness of scale arises under several kinds of demand conditions other than those arising out of limitations of geography just indicated. Some of the most significant of these are considered here. In the first place, some industries must cater to an immense scale of heterogeniety in their end-products. Producers of clothing, for example, must cater to a final demand pattern which is the sum total of several sources of variation[1/] - fabric variation, variations arising from the geometry of the male and female forms, variations caused by fashions, age, products

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1/ See Document E/CN.14/INR/95: Clothing Industries in the East African Sub-region, paragraphs 9 and 10.

and price levels - and which raises the number of separate products into many thousands. In industries which are not a vast honeycomb of heterogeniety in end-products, such as clothing industries are, there are at least some sectors which are characterized by heterogeniety. Thus, ancestral European tastes linger in the palates of some third or fourth generation Americans, making it possible to produce a number of speciality food preparations. In the industrial sector at large, there is very often a "miscellaneous" sector in demand where the production runs are too small for large-scale factory operation. A similar situation appears in another large field, namely, the provision of "maintenance" supplies. In one sense, this occurs in the case of many sectors of the economy (including households) where assets older in age are in productive use but cannot be any longer serviced in terms of spare parts by current output from large factories. In another and larger sense, this occurs in relation to the maintenance of existing plant and machinery either through "captive" owned engineering workshops or/and through outside workshops performing the same role.

10. In the case of the books and periodicals industry, one comes across a large number of products, sharply differentiated from one another, with a limited amount of substitutability, and often comparatively small markets. Many kinds of surgical instruments and appliances, as well as a large number of measuring instruments fall in this category of sharply differentiated products whose individual runs (in terms of production) are generally adequate in relation to smaller scales of operation.

11. Rapidly changing fashions, due whether to the vagaries of milady's moods or merely as cases of joint supply (for example, the suppliers of speciality buttons to the clothing industries), often imply small runs subject to rapid change, and the large factory might in such cases amount to being an agglomeration of several small factories under one roof rather than become a single operation benefiting from largeness of scale. Conditions of this type will tend to favour small units. A special case of this type which, however, may not be subject to rapidly changing fashions, is comprised in the production of high value luxury items. Thus, the production of cigars as well as silverware is likely to be modally carried out in small units.

12. Several other factors favouring smallness, in a large or small measure, arise in connexion with the nature of the raw material. Thus, where raw material is liable to deteriorate with transport or/and storage, and its production is geographically well-spread (as in the case of milk and its products) industrial units (such as pasteurization and bottling plants) are more likely to be small. In still other cases, such as logging camps, the transportation of raw material is ruled out by practical considerations of weight and cost in relation to the final product. In still another group of industries, of which tomato canning is a good example, the needs of capacity at peak levels are so large (and variable from year to year) in relation to the capacity normally utilized, that large factories often find it more economic to leave room for small plants.

13. The third group of enabling factors to be considered relates to technological considerations. In several industrial processes, there are no major indivisibilities involved, or these are not very significant in terms of investment and cost. In other words, in these kinds of processes, production is secured by adding the outputs of lots of similar machines (e.g., sewing machines in the clothing industries, spinning frames and looms in the textile industries and lots of leather shoe-making machinery) rather than by the kinds of economies involved in larger cement plants or blast furnaces. Economies of scale are realized at a very early stage in these groups of industries and purely in terms of cost of production small units may not be at a disadvantage at all. In still other industries, either of the artistic kind or, more important, involving kinds of precision which are attained by the truly gifted (e.g., lens grinding, manufacture of crystalware, manufacture of many kinds of precision instruments) the scale of production tends to be small because it is limited by the skill of one or a few persons. In many cases, modern industrial products (cars, trucks, television receivers and aeroplanes, for example) are themselves agglomerations made out of hundreds and occasionally thousands of parts, many of which are necessarily made on a small scale. Thus, at least some 10 per cent of the value added in the "Motor Vehicles and Equipment" industry in the US originates in firms employing fewer than 99 persons. Conversely, the Indian Tariff

Commission cites the absence of small producers of this type as one of the factors in the high cost of automotive vehicles made in India. Smaller scale becomes relevant in other kinds of assembly work at quite the opposite end as well. Thus, in the less brand-conscious, price-sensitive parts of the market for bicycles, radios and sewing machines, small firms have made considerable headway in countries like India, Japan and the US (to quote three examples only) on the basis of what is essentially assembly operations based on purchased parts.

14. One other group of facilitative factors can be distinguished in some detail. In the first place, government policies might be directly protective (for example, reservation of certain spheres of production in favour of small industry) or directly discriminatory (for example, the purchase of police or military uniforms only from the smaller factories). On the other hand, the kind of over-all import restrictions such as had to be imposed by the Government of India to meet their foreign exchange problems have had the effect of casting a vast protective net over all indigenous enterprise, small and large. In the second place, in many countries - including India, Japan and Pakistan - great wage gaps exist between areas, on the one hand, and as between large industry and small industry, on the other hand. These disparities in wage levels offer substantial advantage in costs to small enterprise against large enterprise. Another kind of cost advantage, which is sometimes achieved, is in economies of overhead costs which are usually significantly lower for small industry.

15. None of the factors mentioned in the preceding paragraphs is decisive in itself. In fact, industrial conditions are a conglomeration of elements and a very large number of industries have a whole spectrum of sizes at work therein. What is clear, nonetheless, is that there are sufficient elements in the industrial structure - on the sides of demand, technological aspects, raw material considerations and environmental factors - to permit a sizable, vigorous, widespread and essential small industry sector. The argument could perhaps be taken a step further, and at least under conditions of a mixed economy, the small industry

sector might be regarded as vital to efficiency. It should perhaps be underlined that the case for small industry exists not as a matter of special pleading, but as a vital, complex response to the sizable demands of a modern industrial structure, and its relationship to the larger economic arena.

CHAPTER III

INDUSTRY GROUPS WITH MAXIMUM INCIDENCE OF SMALL UNITS

16. As was seen earlier, smallness of scale is an industrial response to a whole complex of factors and, as viewed in terms of numbers of establishments, it is a response not wholly absent from any major industrial group or sub-group. (In a strictly nominal sense, it makes its appearance even in the "Tanks and Tank Components" industry in the US). Nonetheless, it is clear, from empiric analysis, that the convergence of factors produces widely varying ratios of the incidence of small units in different industrial groups.

17. The following statement sets out, on the basis of a composite reading of data about the industrial structures of Japan and the United States, the three major divisions in which the incidence of small units in the major industrial groups might be divided. The groups are arranged in a rough order, but it would be idle to attribute any systematic quantification to the pattern of ordering.

Statement I

Major Industrial Groups and Levels of Incidence of Small Units

A. Major Industrial Groups: Maximum Incidence of Small Units
(In an approximate, declining order)

1. Furniture and fixtures
2. Apparel and other finished products
3. Leather and leather products
4. Lumber and wood products
5. Other industries (including ordnance)
6. Fabricated metal products
7. Food and kindred products.

B. Major Industrial Groups: Medium Incidence of Small Units
(in an approximate, declining order)

8. Textile mill products
9. Publishing, printing and allied industries
10. Machinery

11. Precision instruments
12. Ceramic, stone and clay products
13. Pulp, paper and paper-board products.

C. Major Industrial Groups: Low Incidence of Small Units
(In an approximate, declining order)

14. Non-ferrous metals and products
15. Chemicals and allied products
16. Rubber products
17. Primary metal industries
18. Electrical machinery, equipment and supplies
19. Petroleum and coal products
20. Transportation equipment.

18. With all the disadvantages of agglomeration, Division A groups might be regarded as positively oriented to small units; Division B groups might be, very broadly, regarded as permissive of both small and large units; and Division C groups can be considered as favouring the largest scales of unit operation. However necessary as a form of introductory shorthand, it is clear that a more detailed breakdown of each group is essential if the incidence of smallness is to be stated in more meaningful terms, that is, terms which are closer to product-groups. It is also necessary to view them along a scale which does not talk in the model-like terms of just three Divisions. With these two objectives in view, the next statement has been worked out on a scale divided into thirteen slots and the industry sub-groups are expanded to 141. As the scale shifts from A to M, the incidence of smallness declines.

Statement II

141 Product-groups Arranged on a Declining Scale of Incidence of Small Units

Group A

Logging camps and contractors
Cigars
Miscellaneous leather goods
Screens, shades and blinds

Group B

Lumber and basic products
Commercial printing
Printing trade services
Concrete and plaster products
Furniture and fixtures, n.e.s.
Miscellaneous publishing
Transportation equipment, n.e.s.
Fabricated textiles, n.e.s.
Miscellaneous wood products
Partitions and fixtures

Group C

Cut stone and stone products
Millinery
Jewellery and silverware
Miscellaneous food preparations
Dairy products

Group D

Bookbinding and related industries
Chemical products, n.e.s.
Products of purchased glass
Lithographing
Miscellaneous machinery parts
Costume jewellery and notions
Leather gloves
Periodicals
Soap and related products
Petroleum and coal products, n.e.s.
Millwork and related products
Purses and small leather goods
Luggage

Grain mill products
Newspapers
Metal stamping and coating
Bakery products
Wooden containers

Office supplies
Women's and misses' outerwear
Miscellaneous apparel
Footwear cut stock
Medical instruments and supplies

Toys and sporting goods
Industrial leather belting
Lighting fixtures
Beverages
Household furniture

Fertilizers
Paving and roofing materials
Non-ferrous foundries
Structural metal products
Plastic products, n.e.s.

Children's outerwear
Metal products, n.e.s.
Books
Vegetable and animal oils
Metal-working machinery

Group E

Paints and allied products
Secondary non-ferrous metals
Fabricated wire products
Narrow fabric mills
Fur goods

Public and professional furniture

Group F

Candy and related products
Heating and plumbing equipment
Miscellaneous manufactures
Non-metallic mineral products
Grand and frozen foods

Special-industry machinery, n.e.s.
Electrical products, n.e.s.
Pottery and related products
Miscellaneous textile goods
Gum and wood chemicals

Women's and children's under-garments
Meat products
Musical instruments and parts
Optical instruments and lenses
Hats (except cloth and millinery)

Drugs and medicines
Pulp, paper and board products, n.e.s.
Structural clay products
Greeting cards
Knitting mills

Men's and boys' furnishings
Leather tanning and finishing
Cutlery, hand tools and hardware
Opthalmic goods
Carpets and rugs

Paper-board containers

Group G

Envelopes
Ships and boats
Men's and boys' suits and coats
General industrial machinery
Paper bags

Office furniture

Group H

Paper coating and glazing
Rubber industries, n.e.s.
Tractors and farm machinery
Insulated wire and cable
Finishing textile (other than wool)
Construction and mining machinery
Mechanical measuring instruments

Group I

Iron and steel foundries
Scientific instruments
Chewing and smoking tobacco

Group J

Primary metal industries, n.e.s.
Photographic equipment
Electrical appliances
Tobacco stemming and re-drying
Woollen and worsted manufactures
Watches and clocks
Reclaimed rubber
Motorcycles and tricycles
Footwear (except rubber)
Electrical industrial apparatus
Service and household machines
Yarn and thread mills
Communication equipment
Sugar

Group K

Pulp, paper and board
Inorganic chemicals
Tin cans and other tinware
Pressed and blown glassware
Office and store machines

Cement, hydraulic
Engine electrical equipment

Group L

Motor vehicles and equipment
Organic chemicals
Non-ferrous rolling and drawing
Electrical lamps (bulbs)
Broad-woven fabrics

Petroleum refining

Group M

Primary non-ferrous metals
Engines and turbines
Aircraft and parts
Railroad equipment
Flat glass

Rubber footwear
Blast furnaces and steel mills
Cigarettes
Tires and inner tubes.

19. In assessing the results of Statement II, some things should be borne in mind. The Divisions A to M follow one another, but do not do so in any measured equality. At Division G, a sort of dividing line is arrived at, and from Division H onwards we begin a rapid movement away from small units, until in Divisions L and M, small units perform only the marginal roles of suppliers of small, odd components or of filling in the "miscellaneous" sector of demand. Secondly, while there is some notion of declining order within the Divisions, this is not of the same validity as the order of the Divisions themselves. Thirdly, some surprising entries might be explained as the result of considering a product-group as a whole with major internal statistical biases one way or another. Thus, fertilizers are classified with Division D in terms of incidence of smallness because of the inclusion of mixing of fertilizers. Fourthly, it is possible

that some re-ordering could be done by changing the basis, but in general the results jibe in both commonsense and general industrial practice in the developed countries. Fifthly, it should be made clear that this analysis is not based on minimum technical scale, but on incidence (i.e., how often do the lower scales get adopted in the absence of special favouring conditions?) of smallness. The preceeding analysis also does not seek to answer the question in terms of the relative role in a particular economy of the various sub-groups or groups.

20. In more positive terms, Statement II provides a list of 95 product-groups (Divisions A to G) in which small industry can be expected to play a significant role, on the basis of empiric evidence. The transformation of mere product-groups into product categories of a kind needed for detailed macro-economic planning is attempted later in the course of evolving projections for 1975-80, and is obviously a more complex job. In another sense, small industry is seen to cover all sectors, and incapable of being confined to the traditional version of "light" industry. Further, it is seen that while a large part of small industry is necessarily in the mainstream of current, tested technology and traditional materials like wood, leather, food and other agricultural products, considerable portions of it are in the outlying areas of technology (in the field of instrumentation, in the contribution of components to the most complex products of modern technology and in the utilization of the whole range of modern syntehtic materials).

CHAPTER IV

SMALL INDUSTRY IN THE EAST AFRICAN SUB-REGION: PRESENT POSITION

21. Any statement of the over-all magnitudes involved in measuring the role of industry in the East African sub-region is blurred by deficiencies in statistics, differences in coverage, non-reportage, and so on. Thus, some of the countries include, for understandable reasons, the whole of their employment in products like sugar, which are produced from the plantation stages up to the final product by a single company in one integrated operation, under the heading of manufacturing. In other cases, there is a tendency to regard purely agricultural processing (such as the separation of sisal fibre from the leaf) establishments as manufacturing because factory units are employed. The coverage of repair plants, such as automotive repair shops, varies most unevenly and in any case, the basis of allocating the sector between manufacturing and services is often, on the face of it, arbitrary.

22. The estimation of dimensions of small industry must cope with those general problems and contend with several others more limited in their operation. In at least one country, Ethiopia, the exclusion of custom milling (which can be supported on definitional grounds) has the effect of diluting the role of "grain mill products" and of creating a lop-sided impression of the relative absence of small industry, which in substance, is invalid. In many countries, available statistics are not capable of being broken up into employment categories at all [for example, the Census of Industrial Production in Tanganyika, 1961, states: "No information was collected on numbers employed". (page 20)]. In other cases, the break-up stops consideration of sizes according to employment categories at 49 persons and lumps the rest of the units in one omnibus category (for example, the Kenya Census of Manufacturing, 1961; see Appendix Table 11).

23. There are considerable difficulties in sorting out the boundary lines in all countries as to where handicrafts, artisan trades and purely service industries end and where manufacturing proper begins. Thus, in the case of Tanganyika (and it should be made clear that the problem is

not peculiar to Tanganyika) the Census seems to quote with approval a figure of 17,000[1] as numbers employed and the number of units in manufacturing is placed at 706[2]. On the other hand, the statistics of "Number of Factories Registered as at 31 December, 1961, by Industry and Number Employed"[3] can be reworked to yield more than twice as many workers as indicated in the Census and up to 2,000 units in the manufacturing sector as defined in the Census. The fundamental point here is not the detailed consideration of the statistical problems in any single country, but the larger one: that the total manufacturing sector seems to be understated, in varying degrees in the available statistics, and this has the particular effect of understating the role of small industry in the countries of the sub-region. This variation between reported employment in the manufacturing sector (and in the number of establishments, gross output, etc.) and the larger actuals is probably the least in the case of Mauritius, Rhodesia, Malawi and Zambia. Some of the highest cases - such as Tanganyika and Ethiopia - are brought down to a more manageable degree in the Table following, but it should, nevertheless, be clear that the estimates presented have only a degree of plausibility which prohibits any over-precise use of them.

24. Given all the deficiencies in data, it is nonetheless clear that small industry accounts for 104,000 employees (and possibly up to 115,000 employees) out of aggregative employment in manufacturing of the order of 324,000 (and possibly up to 350,000). In other words, something like one-third of the total employment in manufacturing is presently offered by small industry.

25. The typical small industrial unit employs an average 25 employees in the countries of the sub-region, and the over-all pattern in the

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1/ Op. cit., page 16.

2/ Ibid., page 20.

3/ Statistical Abstract, 1962, Tanganyika, pages 84-86.

TABLE 2

Total Employment in Manufacturing and in the Small Industry Sector

Country (A)	Current Total Employment in All Manufacturing (1961 or 1962) (B)	Estimated Employment in Small Industry (i.e., Units Employing up to 100 workers) (C)	Employment in Small Industry as % of Total Employment (C as % of B) (D)
Ethiopia[a]	40,000	13,000	32 %
Rhodesia[b]	83,000	22,000	20 %
Kenya[c]	50,000	19,000	38 %
Tanganyika[d]	28,000	14,000	50 %
Burundi and Rwanda[e]	9,000	4,000	44 %
Malawi[f]	14,000	2,000	15 %
Zambia[g]	19,000	6,000	30 %
Madagascar[h]	11,000	3,000	27 %
Mauritius[i]	27,000	9,000	33 %
Uganda[j]	28,000	8,000	30 %
Somalia, Reunion[k]	15,000	5,000	33 %
Tentative Total	324,000	104,000	32 %

Sources: Based on official statistics and estimates based on fragmentary data.

a/ The figure of total employment has been adjusted upwards to take into account more than 10,000 persons employed in small flour mills, and printing presses, etc., and railway workshops, and has been adjusted downwards to remove the effect of employment in the agricultural side of the sugar industry. The final figures are in the nature of first approximations only.

b/ The Census figure of employment has been taken, but it appears that comparisons with other countries should allow for a downward bias (on account of stricter definitions) of about 10 per cent in the presented data.

c/ Small industry employment data covered only establishments with up to 50 workers, and the balance has been estimated.

d/ See preceeding discussion in the text. Small industry employment estimates are based on some fragmentary data and low average employment.

e/ f/, g/, h/, i/ j/, and k/ Small industry employment data are estimated on varying bases.

countries of the sub-region of the distribution of establishment according to sizes might be visualized, in terms of broad orders of magnitude, as follows:

A. Approximate Number of Units in Small Industry in the Countries of the Sub-region --- 4,200 to 5,000

B. Of which,	No. of Units	Employment
(i) Units employing up to 10 persons	1,800-2,200	10,000-11,000
(ii) Units employing 11-20 persons	1,000-1,200	14,000-18,000
(iii) Units employing 21-50 persons	1,000-1,100	35,000-40,000
(iv) Units employing 51-100 persons	500-600	40,000-42,000

26. The range of products manufactured in the small industry sector fall within the following groups, in that very approximate order:

1. Food and kindred products
2. Wood and wood products
3. Furniture and fixtures
4. Fabricated metal products
5. Apparel and related products
6. Leather and leather products
7. Textile mill products
8. Miscellaneous products
9. Printing and publishing
10. Stone, glass and clay products
11. Printing and publishing.

27. Small amounts of output, accounting for possibly 1,000 persons each in employment, are recorded against the following sectors:

12. Pulp, paper and paper-board products
13. Primary metal industries
14. Machinery, other than electrical
15. Electrical machinery

28. Some production, accounting for less than 500 persons in employment, exists in the case of the following:

16. Tobacco and tobacco products
17. Rubber products.

29. No small industry production is known to exist in the field of petroleum and coal products, although it is recognized that it is impossible with the help of available data to always trace every single item of output.

30. It is difficult to make any quantified statements about the rate of growth of small industry, although there is no reason to believe that small industry has failed to share in the general pace of industrial expansion which has been characteristic of individual national economies - a 15 per cent annual increase (uncompounded) in Ethiopia over 1955 to 1963; an 8 per cent (uncompounded), approximately, in Kenya over 1957 to 1961; an 11 to 12 per cent increase (uncompounded) in the three countries of Rhodesia, Malawi and Zambia over 1955 to 1962; a 4 per cent increase (uncompounded) in Mauritius, and so on. Alternatively, the economies of the sub-region seem to have a demonstrated capacity over the ten years since 1955 of adding around 10 per cent (uncompounded) in annual output in manufacturing industry and a broadly similar statement appears to be valid in the case of small industry. In the main, say to the extent of 80 per cent, the small industry structure of 1963 can be said to have been built over the preceding fifteen years, and nearly one-half may be regarded as having been set up since 1958 or so.

31. In summing up the present position of small industry, one fact of today's ownership and management of small industry (as of all manufacturing industry) should be noted. The business classes in general, and the industrial classes of entrepreneurs in particular, are drawn from the ranks of expatriates, whether residents or nationals. The successful African entrepreneur is conspicuous only in his absence, and his emergence is in most countries additionally handicapped by the discriminatory, colonial structures which have denied him a fair chance to accumulate the varying stocks of risk capital needed as equity. (In some parts of the sub-region, such as Ethiopia, Somalia, Mauritius and, to a lesser extent,

Uganda, there is no absolute shortage of wealth-holders who could supply equity; but, until recently, the traditional values of the Ethiopian society did not rate trading and manufacturing as activities worthy of the well-to-do). In any case, and this often applies with almost equal force to many expatriate trading groups, understanding of the requirements of industrial entrepreneurship is generally scarce among the resident populations at large at the present stage. Any development programme for small industry which does not aim at creating this entrepreneur class will be drawn up on shaky grounds, more so since political considerations are neither likely to permit of the addition of large numbers of small expatriate entrepreneurs nor are they likely to allow the present absence of the African from entrepreneurial ranks to continue.

CHAPTER V

SMALL INDUSTRY DEVELOPMENT PERSPECTIVES FOR 1975/80

32. The present study offers a first statement, which is necessarily more indicative in some respects than in others, of the perspectives for small industry development in the countries of the sub-region. The presentation is hinged to a range in time - 1975 to 1980 - rather than a single year and is based among other things on four basic propositions.

33. In the first place, it is believed that the GDP projections on which all Lusaka studies are based implies an over-all growth per year of 12 to 15 per cent (uncompounded) over 1962 in total manufacturing output. It is further believed that this growth of output will imply - as it has already done - a sizable role for small industry, notwithstanding the current shortage of small industrial entrepreneurs in the countries of the sub-region. The latter is seen only as a difficult problem, not as an insoluble one.

34. Secondly, the analysis in the present study takes it as its base that small industry has a significant, natural viable place in a modern industrial structure which calls for help in several directions but which needs no permanent crutches and special, continuing discrimination in its favour. In other words, the analysis prognosticates on the basis of economic strength and incidence inherent in small industry and not on the basis of a policy framework which sets up artificial protective barriers.

35. Thirdly, the growth of output in the small industry sector is more specifically seen as derived from a whole group of inter-related processes. The growth of demand for products of industry is known to be a secular trend within the economies of the sub-region, quite apart from the high income-elasticities attaching to individual products. In so far as import substitution proceeds to translate the demand for industrial products - both existing demand, as well as the one permitted by future growth - into output within the economies of the sub-region, small industry (as all industry) must benefit. The prospects of exploiting an export market, other than the market within the sub-region, are regarded in the present time context

as limited, not because any universal unviability is anticipated but because all early growth is likely to be focussed on things nearer.

36. Finally, most small industry development in the present time context is likely to be derived from the existing pool of industrial techniques and products and the role of new products, inventions and new technologies is likely to be extremely limited.

CHAPTER VI

MAJOR INDUSTRY GROUPS IN THE PERSPECTIVES FOR 1975/80

37. The table following attempts a first approximation of the over-all industrial structure of the sub-region in terms of net output in 1975 according to major categories of industry. In the next step, it sets out the approximate share of small industry in each category, partly on the basis of characteristic incidence of small industry as derived from a composite judgement based on data from the US, Japan and several other countries (other than centrally planned economies) and this result is tempered upward or downward for the purposes of the present study by considerations of the likely detailed composition of each category, and by broad judgements about the lesser availability of the highest kinds of individual industrial skills which the countries of the sub-region will probably be contending with in 1975/80. It might be underlined that the small industry picture is presented as a range in time, 1975/80, whereas the over-all industrial picture is presented as at a mere limited span in time, namely, 1975. In the third step, the net output to be derived from small industry in each major product group is correlated to the likely employment required per each million US dollars of net output. The latter figure assumes a considerable advance in labour productivity (of the general order of 40 to 50 per cent) over current levels.

38. The net effect is seen as follows: Small industry in 1975/80 will be called upon to produce 300-325 million dollars of net output, the corresponding gross output being valued at 700-750 million US dollars. The total employment is seen to be in the neighbourhood of 270,000 to 300,000, i.e., additional employment to the tune of 170,000 to 200,000 by 1975/80. The share of small industry in total net output in manufacturing is seen to vary between 28 to 23 per cent approximately depending upon whether the small industry projections are realized nearer 1975 or 1980.

TABLE 3

Major Industry groups in the small Industry Perspectives for 1975/80

No.	Industry Group	Anticipated share in the structure of net output from manufacturing in 1975 Amount (m.U.S. dollars)	%	Anticipated % of small industry in each major category in 1975/80	Approximate Net output in Small Industry in 1975/80 in Million U.S. dollars	Estimated total of Employees in Small Industry in 1975/80	Approximate current employment in small Industry	Additional Employment in each category by 1975/80
1	Food and kindred products	193	17.50	35%	68	58,000	30,000	28,000
2	Tobacco and tobacco products	28	2.50	10%	3	2,700	500	2,000
3	Textile mill products	220	20.00	20%	44	37,400	5,000	32,000
4	Apparel & related products	72	6.50	70%	50	50,000	9,000	41,000
5	Lumber and wood products	22	2.00	70%	15	22,500	16,000	7,000
6	Furniture and fixtures	33	3.00	45%	15	18,000	10,000	8,000
7	Pulp, paper and paper products	28	2.50	30%	8	4,800	1,000	4,000
8	Printing & publishing	44	4.00	40%	18	9,450	3,000	6,000
9	Chemicals & allied products	77	7.00	10%	8	2,600	1,000	2,000
10	Petroleum & coal products	11	1.00	5%	0.5	300	nil	1,000
11	Rubber products	17	1.50	30%	5	1,800	500	1,600
12	Leather & Leather products	22	2.00	35%	8	14,400	7,600	7,000
13	Stone, clay & glass products	33	3.00	30%	6	7,000	1,000	6,000
14	Primary metal industries	57	5.50	20%	10	8,700	1,000	2,000
15	Fabricated metal products	66	6.00	40%	26	18,200	9,000	9,000
16	Machinery except eelectrical	28	2.50	10%	3	2,300	1,000	1,000
17	Electrical machinery	44	4.50	10%	4	2,900	1,000	2,000
18	Transportation equipment	66	6.00	10%	7	7,000	3,000	4,000
19	Instruments & related products	39	3.50	30%	13	10,000	5,000	5,000
20	Miscellaneous manufactures							
	All product groups	1,100	100.00		311	272,000	104,000	168,000

Note: All estimates involve a considerable amount of estimation, and derivation from fragmentary data. As such, these should be read with a margin of error of the order of ± 25%.

39. The preceding table might also be seen in the context of the major product-groups which will call for the maximum thrust in the area of small industry development.

40. Three major groups - apparel and related products, textile mill products and food and kindred products - are together seen to account for nearly 60 per cent of the potential additional employment in small industry. Six other groups - lumber and wood products, furniture and fixtures, printing and publishing, leather and leather products, stone, clay and glass products and fabricated metal products - are expected to provide an additional 25 per cent of the potential employment. Between them, these two categories of groups are thus seen as productive of six out of seven workplaces to be created in small industry, leaving the remaining one workplace as the share of the eleven other major product groups.

41. Viewed in another context, small industry is seen as the major partner in only two product groups - apparel and related products, and lumber and wood products - accounting for 70 per cent of the net output of all units in the respective product group. It will also be seen that the areas in which the largest absolute additional contribution is expected to arise do not necessarily coincide with the relative significance of small industry in each major product group. On the other hand, it needs to be underlined that small industry will have some contribution, varyingly significant in the aggregate and in absolute terms, to make in each major product category.

42. The fixed investment costs of the small industry development investment outlined might be estimated, purely as a dimension in macro-economic planning, at 150-175 million US dollars. Net working capital requirements will raise the total investment to a range of 250-275 million US dollars. The ratio of initial fixed capital investment to total annual output is visualized, in similar macro-economic terms, at around 1:2.5. The annual foreign exchange savings, assuming a fairly large amount of imported material inputs and expatriate technical skills, etc., might be calculated on the entire output at somewhere between 250-350 million US dollars.

CHAPTER VII.

OVER-ALL COUNTRY IMPLICATIONS OF THE 1975/80 PERSPECTIVES

43. The first approximations for the sub-region might be placed in an approximate country perspective. This is done in the next table, and the results presented are guided by four elements. In the first place, the over-all growth in the sub-regional perspectives has been taken into account. In the second place, the figures for countries like Rhodesia and Kenya are somewhat toned down to take account of the fact that their future growth will have to necessarily rely somewhat less on totally free access to their respective common markets. Thirdly, the sheer scope for expansion by import substitution is relatively smaller in these countries than is true of other countries of the sub-region. Thus, the approximate ratio of the gross value of all manufacturing production to the c.i.f. value of imports of manufactured goods is in the neighbourhood of 1:1 in the case of Kenya and 1:0.5 in the case of Rhodesia as compared to 1:14 in the case of Somalia and 1:2 in the case of Ethiopia. Finally, as industrialization takes conscious strides forward, it is believed that countries like Ethiopia, Mauritius, Somalia (and to a lesser extent, Uganda) which have a significantly larger distribution of stocks of personal equity capital among the indigenous peoples than is true of other countries will have a distinct advantage in short-run development of small industry.

44. The next table also seeks to provide a measure of the additional units (and therefore, entrepreneurs) which will be needed by 1975/80, the over-all estimate for the sub-region being in the neighbourhood of 7,000 units (and entrepreneurs) the maximum requirement in no single country exceeding 1,300 units (and entrepreneurs).

TABLE 4

Country-wise Implications, Stated as Employment, of 1975/80 small industry perspectives

Country (A)	Estimated current Employment in Small Industry (B)	Anticipated Employment in 1975/80 (C)	Increase by 1975/80 over current levels (D)	Approximate No. of new units (Entrepreneurs) required (E)
Ethiopia	13,000	35,000-45,000	22,000-32,000	880-1,280
Rhodesia	22,000	39,000-50,000	17,000-28,000	680-1,120
Kenya	19,000	40,000-50,000	21,000-31,000	840-1,240
Tanganyika	14,000	32,000-35,000	18,000-21,000	720-840
Burundi Rwanda	4,000	10,000-12,000	6,000-8,000	240-320
Malawi	2,000	8,000-9,000	6,000-7,000	240-280
Zambia	6,000	20,000-25,000	14,000-19,000	560-760
Madagascar	3,000	10,000-12,000	7,000-9,000	280-360
Mauritius	9,000	23,000-26,000	14,000-17,000	560-680
Uganda	8,000	26,000-35,000	18,000-27,000	720-1,080
Somalia Reunion	5,000	12,000-15,000	7,000-10,000	280-400
All countries	104,000	272,000	170,000	7,000

See notes to Table 3.

CHAPTER VIII

PRODUCT IMPLICATIONS OF THE 1975/80 PERSPECTIVES

45. It was indicated earlier in a larger context that generalizations in the matter of industrial recommendations have only a role as first approximations. Factories, after all, do not produce anything as vague as "Textile Mill Products", but they do produce narrow fabrics or hose or tulle or braid or embroidery or lace. The present chapter seeks to underline that individual industries defined strictly to mean a factory or a group of factories producing a specific product or line of related products, number several thousands, and meaningful programming in the small industry field in particular must eventually set itself to the tasks of detailed specifying.

46. The present chapter attempts such a task, in spite of severe limitations in available information, and the results presented, although they run into more than 300 entries, are considerably short of what should have been done in the matter of specifying individual products or/and product lines.

47. However, before proceeding to this task of specifying, two larger propositions ought to be made. In the first place, it is believed that the total complex of small industry in existence by 1975/80 (around 11,000 units) will probably produce not less than 2,500 to 3,000 individual products or/and lines of related products. Secondly, out of this total number, only about 700 to 1,000 will be lines more or less produced in each country, the larger countries in general being capable of producing more lines than the smaller countries. Other lines, perhaps 1,500 to 2,200 in numbers, will have to be produced on the basis of sub-regional marketing, whether in an abridged or extended sense of the term. The first might be made illustratively. The production of pipe cleaners, for example, currently implies an annual turnover of less than $25,000 in all countries of the sub-region, and could just support a single plant in the entire sub-region. Examples of this sort, in different degrees of market size needed, can be multiplied by the thousand, for the sub-region presently, as will be clear on reading the list of feasible products and lines of products. This study

does not present even a preliminary analysis of small industry distribution according to products and by countries. But it should be emphasized that the need for sub-regional markets is often paramount in the case of small industries. Or, to put it alternatively, while a major part of small industrialization (in terms of output) functions at a country level, a substantial part (in terms of numbers of products or product lines) needs must function on the basis of a sub-regional market. In the absence of the latter, the economies of the sub-region will have to forego that substantive part of the possibilities in their industrialization.

48. The availability of data being limited, the next statement is sometimes limited to broad descriptions of product-lines and sometimes can extend to products. It should further be read in conjunction with the analysis presented earlier about the relative roles of various major product groups. It should also be emphasized that the inclusion of an item here indicates a definite judgement about some positive small industry possibilities but none about the relative role of small industry against each item. In any case, the statement does convey the wide spectrum that small industry will need to cover in the 1975/80, although it is obvious that there might be reservations about individual entries.

Statement III: A Compilation of Possible Lines of Manufacturing on a Small Industry Scale in the East African Sub-region by 1975/80

A. Food and Kindred Products

1. Meat packing
2. Sausages
3. Casing for sausages
4. Canned meat
5. Meat extracts
6. Milk, pasteurization and bottling
7. Condensed milk
8. Dried milk powder
9. Creamery butter
10. Natural cheese

11. Dairy products, n.e.c. (ice-creams, ice-cream powders, malted milk compounds and mixtures)
12. Preparations of fish, including canned fish
13. Wheat milling
14. Cereal preparations (flaked, pearled or prepared otherwise)
15. Bread
16. Biscuits
17. Cakes
18. Macaroni, spaghetti, noodles, vermicelli, etc.
19. Other preparations of flour
20. Preparation of dried fruits and nuts
21. Cashewnut processing
22. Jams, Marmalades, Jellies, pulp and paste
23. Infant food
24. Fruit juices
25. Canned soups, vegetables and vegetable juices
26. Dehydrated soups
27. Special sugars
28. Syrups
29. Confectionery
30. Chocolates and chocolate preparations
31. Spice grinding
32. Meat meal
33. Fish meal
34. Margarine
35. Shortenings
36. Vegetable oils
37. Animal oils
38. Yeast
39. Mineral water
40. Lemonades and squashes
41. Wine
42. Vermouth and other aromatic wines
43. Cider and fermented fruit juices

44. Other alcoholic beverages
45. Oils from fish and marine animals
46. Lard
47. Other animal oils, fats and greases
48. Linseed oil
49. Castor oil
50. Acetic acid (vinegar)

B. Tobacco and Tobacco Products

51. Cigars

C. Textile Mill Products

52. Broad-woven fabrics
53. Screen printing of textiles
54. Hats
55. Carpets and rugs
56. Knitting mills
57. Doubling plants
58. Mosquito netting
59. Ribbons
60. Tulle
61. Lace
62. Embroidery
63. Elastic fabrics
64. Tent-making
65. Making of other canvas goods
66. Absorbent cotton
67. Wadding
68. Blankets
69. Shoe laces
70. Tapes, braids, bindings
71. Terry towelling
72. Felt goods
73. Paddings and upholstery filling
74. Artificial leather
75. Other coated and impregnated fabrics
76. Twine making

D. Apparel and related products (Also see E/CN.14/INR/95)

77. Suits
78. Jackets
79. Trousers
80. Shorts
81. Shirts
82. Bush-shirts
83. Overcoats
84. Rainwear
85. T-Shirts
86. Woven underwear
87. Dresses
88. Blouses
89. Skirts
90. Coats
91. Undergarments and lingerie
92. Corsets
93. Brassieres
94. Infants' wear
95. Work clothing
96. School uniforms
97. Uniforms for the police, armed forces, etc.
98. Nightwear for men
99. Nightwear for women
100. Nightwear for children
101. Fabric work gloves
102. Dressing gowns
103. Leather clothing

E. Lumber and wood products

104. Logging camps and contractors
105. Saw milling and related products
106. Containers (boxes, crates and cases)
107. Partitions and fixtures
108. Screens, shades, blinds, etc.

109. Hardwood dimension stocks
110. Hardwood flooring
111. Window units
112. Door units
113. Cabinet work
114. Cooperage products
115. Wood preservation
116. Other wood products, n.e.s.
117. Cork products - plugs, floats, sleeves, etc., gaskets.

F. Furniture and fixtures

118. Wood household furniture
119. Metal household furniture
120. Mattresses and bed springs
121. Radio, phonograph, etc. cabinets
122. Wood office furniture
123. Metal office furniture
124. Public and professional furniture
125. Venetian blinds and shades
126. Restaurant furniture
127. Hospital beds, etc.

G. Paper and Board Products

128. Paper bags
129. Cardboard boxes
130. Other containers (shipping containers, etc.)
131. Envelopes
132. Letter pads
133. Exercise books
134. Registers, diaries, memorandum books, etc.
135. Sanitary food containers
136. Fibre cans, tubes, drums, etc.
137. Labels and wrappers
138. Toilet paper rolls
139. Paper napkins
140. Sanitary tissue health products

H. Printing and publishing

141. Newspapers
142. Books
143. Periodicals
144. Lithography
145. Bookbinding
146. Commercial Printing
147. Engraving and etching of plates
148. Greeting cards
149. Files and looseleaf binders
150. Printing trade services, n.e.s.

I. Chemicals and allied products

151. Some inorganic chemicals
152. Drugs and medicines - biological products
153. -------"------ - medicinals and botanicals
154. -------"------ - pharmaceutical preparations
155. Soap (toilet)
156. Soap (washing)
157. Shaving cream
158. Liquid soap
159. Soap powder
160. Toothpastes and tooth powders
161. Boot polish
162. Other kinds of polish
163. Starch
164. Glue and gelatine
165. Hair preparations
166. Face cream, powder, etc.
167. Mixing of fertilizers
168. Insecticides, fungicides, disinfectants, etc.
169. Paints, varnishes, lacquers and enamels
170. Putty and caulking compounds
171. Some gum and wood chemicals
172. Printing-ink
173. Miscellaneous chemical preparations

J. Petroleum and coal products

174. Paving mixtures and blocks
175. Asphalt felts and coatings
176. Lubricating oils and greases

K. Rubber products

177. Tyres for children's bicycles
178. Rubber slippers
179. Rubber hose and tubing
180. Fabricated rubber products, n.e.s.
181. Fabricated plastic products, n.e.s.
182. Hygienic, medical and surgical articles

L. Leather and leather products

183. Leather tanning and finishing
184. Industrial leather belting
185. Footwear cut stock
186. Leather footwear
187. Leather work gloves
188. Luggage
189. Handbags and purses
190. Other leather goods

M. Stone, clay and glass products

191. Kitchen and tableware
192. Mirrors
193. Other products of purchased glass
194. Bricks
195. Floor and wall tiles
196. Clay refractories
197. Other clay products, n.e.c.
198. Decorative and novelty potteryware
199. Stoneware table and kitchenware
200. Chemical, technical and industrial potteryware
201. Some other pottery products
202. Concrete blocks and bricks

203. Other concrete products
204. Manufacture of quicklime, hydrated lime, etc.
205. Cut stone and stone products
206. Gaskets and insulations
207. Grinding and treating of minerals
208. Mineral wool

N. Primary metal industries

209. Steel wire drawing
210. Cold finishing of steel shapes
211. Gray iron foundries
212. Steel foundries
213. Secondary smelting, refining and alloying of non-ferrous metals and alloys
214. Non-ferrous wire drawing
215. Aluminium castings
216. Brass, Bronze and copper castings
217. Iron and steel forgings
218. Primary metal industries, n.e.s.

O. Fabricated metal products

219. Metal cans
220. Trunks
221. Mechanics' hand service tools
222. Edge tools
223. Motor vehicle hardware
224. Railway hardware
225. Furniture hardware
226. Vacuum bottles and jugs
227. Padlocks
228. Hinges
229. Door closures and butts
230. Builder's hardware, n.e.s.
231. Trunk and luggage hardware
232. Refrigerator and stove hardware
233. Other hardware, n.e.s.

234. Non-electric heating equipment
235. Fabricated structural steel products
236. Metal doors, sash and trim
237. Sheet metal work
238. Miscellaneous metal work
239. Screw machine products
240. Bolts
241. Nuts
242. Washers
243. Rivets
244. Vitreous-enamelled products
245. Other metal stampings
246. Stamped and spun utensils
247. Metal closures
248. Electroplating
249. Plating and polishing
250. Wire netting
251. Barbed wire
252. Other wire products, n.e.s.
253. Buckets, drums and pails
254. Valves and pipe fittings
255. Fabricated pipe fittings
256. Nails, tacks, etc.
257. Hurricane lanterns
258. Cases for electric torches

P. Machinery (other than electrical)

259. Farm machinery and equipment
260. Construction machinery
261. Special dyes and tools
262. Machine tool accessories
263. Food products machinery
264. Textile machinery
265. Woodworking machinery
266. Printing trades machinery

267. Industrial patterns
268. Industrial furnaces and ovens
269. General industrial machinery, n.e.s.
270. Scales and balances
271. Machine shops

Q. Electrical Machinery (Also see E/CN.14/INR/89)

272. Electric measuring instruments
273. Other electric machinery, n.e.s.
274. Household appliances
275. Lighting fixtures
276. Phonograph records
277. Storage batteries
278. Miscellaneous electrical products, n.e.s.

R. Transportation equipment

279. Truck and bus bodies
280. Truck trailers
281. Miscellaneous motor vehicle parts
282. Boat building and repairing
283. Miscellaneous transportation equipment, n.e.s.

S. Instruments and related products

284. Engineering, laboratory and scientific instruments
285. Mechanical measuring devices
286. Optical instruments and lenses
287. Surgical and medical instruments
288. Surgical appliances
289. Personal industrial safety devices
290. Dental equipment and supplies
291. Opthalmic goods
292. Watches
293. Clocks
294. Watchcases

Miscellaneous manufactures

295. Precious metal jewellery
296. Jewellers' findings and materials
297. Lapidary work
298. Silverware
299. Plated ware
300. Games
301. Toys
302. Children's vehicles
303. Other sporting and athletic goods
304. Pens
305. Mechanical pencils
306. Marking devices
307. Costume jewellery
308. Buttons
309. Needles and pins
310. Zip fasteners
311. Other fasteners
312. Brooms
313. Brushes
314. Candles
315. Lamp shades
316. Morticians' goods
317. Signs and advertising displays
318. Umbrellas
319. Canes
320. Pipe cleaners
321. Other miscellaneous products, n.e.s.

CHAPTER IX

POLICY IMPLICATIONS OF THE 1975/80 PERSPECTIVES

49. Major aspects of a policy framework needed for the scale and content of anticipated small industry development need to be explicitly stated.

50. In a very basic sense, small industry development is seen in the earlier chapters as a function of and a derivative from the much larger scale of the total industrial effort envisaged in the documents of the Lusaka meeting. It is seen to be a large part in terms of output and employment; a necessary role in the complex of industrial needs; and a viable part in terms of the terms on which it seeks to come into existence and continue.

51. In the second sense, its pattern of internal emphasis is seen to be substaintially different from that of the total industrial structure. Its main thrust, as measured by additional employment potential, will be in that order, in the following major product groups; apparel and related products, textile mill products, food and kindred products, followed by lumber and wood products, furniture and fixtures, printing and publishing, leather and leather products, stone, clay and glass products and fabricated metal products. A smaller contribution, significant in itself, will span the rest of the industrial spectrum.

52. Thirdly, the spectrum itself is seen as composed of upt 3,000 individual products and product-lines, only about a third of which could do without sub-regional marketing facilities. In fact, the latter are seen not merely as an enabling circumstance but as a necessary condition in a wider sense as well. The sub-regional approach is seen as a more competitive one, capable of meeting the heterogeneity in the case of some of the end-products, and as supporting of a much larger scale of total industrialization (and its range of activities) than would be the case in its absence. In another sense, a sub-regional market will enable larger runs in production and greater specialization with consequential beneficial effects on both man and machine productivity. Finally, by providing a large number of industries which are essentially foot-loose (the argument cannot be extended too arbitrarily though) the small sector provides a great

balancing element in the evolution of a total scheme of industrial development for the sub-region as a whole.

53. Fourthly, the complexity of problems set up by the largeness of the spectrum reinforces the structural problems which are the stock-in-trade of most books on industry. In the most significant part those create the need for a suitable financial approach to the problems of finding the initial capital and to the great need for training facilities, for workers and others. Most of these problems need to be studied in detail at the country level, and no pat, uniform solutions might be prescribed. Nonetheless, it is necessary to keep in mind that the broad evolutionary processes which filled these needs in the building up of the existing small industry structure are prima facie inadequate. In some cases, these will call for new financing institutions; in others, these still call for a strengthening of existing facilities. But in all cases, the new needs will call for a kind of boldness in approach, and a willingness to take risks beyond the best that existing institutions have shown. (Existing facilities are reviewed in Annex A).

54. Fifthly, there are two aspects which will call for an overhaul of approaches. On the one hand, time is of the essence in as much as the projected development is nearly twice as large as the existing structure, and will have to be brought into existence in just over half the time. In other words, in a purely time sense, the State has a decisive role in the forthcoming expansion of industry such as it has never had in past growth. On the other hand, there is the difficult problem of inducting large numbers of African entrepreneurs so as to effect, at the least, a very sizable dilution of the current expatriate domination. In absolute terms, the problem narrows down to finding 7,000 entrepreneurs (which is the total number of projected new units) for all countries of the sub-region, but its practical solution will again call for a willingness to risk a higher rate of failures (the saving in expatriate remittances alone might well make this worthwhile for the economy at large) and an intelligent tapping of the several sources of potential entrepreneurs; the small quasi-industry type of operation today (for example, the men who run 3,300 small flour mills in Ethiopia today or

the men who run the small carpentry shops presently; traders where they exist; possibilities of a co-operative movement type, (of which, the developments in Tanzania are a good example); partnerships with local or non-local expatriates in conjunction with any of the preceding groups; and the limited extent to which formal training and education can make entrepreneurs. In any case, with the spread of education and a larger share in all types of economic opportunity, the over-all pool of business talent should become progressively enlarged. Whatever the method used, it is clear that the scale of expansion sought in the small industry sector must rely increasingly on the obvious largest source, namely the people of the country concerned, and the whole issue need to be faced upto squarely as well as with urgent speed.

55. Finally, the State has a battery of instruments to play on - various kinds of promotional institutes, financial institutes and facilities, provision of industrial estates, preferential treatment in the matter of orders from government departments, help in training and other aspects, fiscal policies directed to the attainment of specific objectives and so on. The use of these instruments will vary, and in fact, few dogmatic assertions can be made, which would be valid for conditions in each of the several countries of the sub-region. The only recommendation that can be made, at the present state, is that each country should feel called upon to quantify its small industry goals and to concretize these and then to launch the studies to give it the required small industry policy.

56. One sup-regional recommendation, however, appears essential. An institute for small industry development needs to be set up on a sub-regional basis, charged with the task of preparing detailed feasibility schemes in the 3,000 individual product lines and products referred to earlier. If this work is left to institutions at the country level, serious duplication will result in some countries and in some other countries, choices will be made without the benefit of the detailed knowledge of whole spectrum. Moreover, the sub-regional aspects of small industry development are crucial to its over-all scale and the richness of its content, as has been seen. These aspects reinforce the

need for a sub-regional approach. The sub-regional institute should, inter alia, be charged with aiding governments in the sub-region in the task of formulating small industry programmes as well as the dissemination of detailed studies and specific information.

ANNEX

Some Notes on Existing Institutional Arrangements in the field of Small Industry

Industrial Development Corporation of Kenya - I.D.C.

The I.D.C. is a wholly owned national corporation formed for the promotion, financing and implementation of industrial projects principally in the indigenous private sector. Conscious of the need to develop local entrepreneurship - it has a technical branch to assist local industrialists in establishing and operating small and medium scale industries.

The technical division has sections on

(a) project evaluation, feasibility studies and programming,
(b) industrial estates,
(c) implementation and engineering.

The staff in these sections has been obtained under bilateral aid from the governments of France, Western Germany and the United Kingdom. Of the seven engineers in this division two are engaged in the establishment of industrial estates and in later servicing, three in project evaluation, technical assistance and programming and the rest in implementation and engineering.

The Corporation hopes to assist local entrepreneurs in their technical problems besides providing finance, and management.

Uganda Development Corporation - Laboratories and Development Division

The Development Division of the Uganda Development Corporation consists of 8 professionals in three sections:

(a) project evaluation,
(b) market research, and
(c) small industries.

Two additional experts have been requested for the small industries section. This division undertakes feasibility studies, project evaluation and direct consultancy services for clients of UDC. Present services to non-clients is limited but is expected to improve with the arrival of the UN experts for small industry development.

MADAGASCAR

Bureau du Développement Industriel

The industrial development bureau is a body separate from the Directorate of Industry, and is charged with providing assistance to local industrialists by feasibility studies, project evaluation and direct technical assistance. It uses outside consultants in France to prepare project studies where the specialization required is not found within the organization's expert staff. A large technical team provided under bilateral aid by the Government of France is available and availability of technical personnel is not the principal problem.

Scientific research

The following institutes and laboratories are listed.

IMRA - Institut de Malagache des Recherche Applique's

CTFT - Centre Technique Forestier Tropical

AMEI - Laboratoire d'Analyse Minérale et d'Essals Industriels.

RHODESIA

Industrial Development Division - Ministry of Industries, Slaisbury

In Salisbury, the Federal Ministry of Industries established an Industrial Development Division several years ago to serve Rhodesia, Zambia and Malawi. It has a professional staff of 5. It prepares project reports on industries which have potential markets and brings these to the attention of entrepreneurs and industrialists. It undertakes feasibility studies, project evaluation and loan surveys for the development banks, corporation, and the private sector of industry. It functions as an industrial promotion and advisory services centre for industry and has established liaison with the University, the standards association, and the Governments laboratories for testing.

ZAMBIA

Industrial Development Corporation, Lusaka (INDECO)

This Corporation was established in 1960 as a fully owned government body to finance, promote, and implement industry development. Private share capital was later admitted principally from the Anglo American Corporation Group, British South Africa Company, Commonwealth Development Corporation, Roan Select Trust Group and the composition of the Board amended to give representation to these investors. In August 1964, however, the Government decided to regain full ownership and control of the Corporation and acquired all non-government shares in the Corporation.

It is now once again a fully owned government body and its board is appointed by the Minister of Industries. It has a chairman and full time managing director. The three main objectives of the Corporation are:-

I. The financing and management of State owned and controlled industries

II. The promotion of Zambian entrepreneurship in respect of both commerce and industry and with emphasis towards the rural areas

III. The provision of financial and technical assistance to private enterprise projects

It has currently on its staff an Industry Adviser and a small project evaluation and implementation group, and this staff is to be substantially increased. The permanent staff planned and in existence are economists and industrial engineers with broad background of industrial experience or general practitioners. The specialist expertize required from time to time is provided by consultants and short term specialists engaged on specific projects by the Corporation. The Corporation needs to expand the permanent staff of technical personnel and it is suggested that assistance be sought from UN agencies and friendly governments.

It has not been possible to review here the African business promotion and development schemes prevalent in Kenya, Uganda, etc.

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