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THE DEVELOPMENT OF SMALL-SCALE INDUSTRY IN THE
WEST AFRICAN SUB-REGION

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CHAPTER I

THE NATURE AND SIGNIFICANCE OF SMALL SCALE INDUSTRY

1. Small Scale Industry may be defined from a statistical point of view as consisting of enterprises below a certain size, e.g. employing less than 100 persons. From an economic and practical point of view what is of importance is the nature of the productive processes which can be efficiently carried out on a small scale and the significance of small-scale enterprise in promoting industrial development. The processes which cannot be carried out on a small scale are those in which economies of scale are very great. They include the basic industries such as iron and steel, cement, oil refineries, heavy chemicals, etc. Such industries require large quantities of raw materials and make a substantially standard or uniform product. Large scale processes also include heavy engineering where the weight and complexity of individual pieces is such that elaborate handling and expensive processing equipment must be provided. In these processes the number of persons employed in a unit is usually large^{1/} and in any event the capital required per person employed is great.

Over the rest of industry which in fact is the great bulk of industry economies of scale are less important and are offset by other considerations such as transport charges, and small and large firms can both flourish according to circumstances. One part of this field, namely the service and craft industries and the traditional food, drink apparel and household goods industries is in fact almost entirely occupied by very small firms, usually employing less than 10 persons. Such services as repair work and blacksmithing meeting individual requirements may be established on a very small scale involving the use of hand tools only.

^{1/} There are of course exceptions; the output of some highly automatic machines is so great that even the largest market can be supplied by a small factory. e.g. for buttons and lamp bulbs.

The craft industries where the machine cannot replace the skill of the worker are also well established in such processes as wood, metal and textile working and finishing industries such as electro-plating. Such industries obviously do not require any special stimulus to get them started although assistance may be desirable in encouraging design and in promoting cooperatives for the buying of raw materials and the selling of the finished products.

2. The main potential for ~~small-scale~~ industry development, however, lies in that very large sector already referred to where both small and large concerns can flourish. The following groups of industry may be distinguished. First of all, those in which rapidly changing demand or the great variety of demand precludes mass production of the whole range of products required. Examples of this occur especially in the fashion trades, e.g. clothing, jewellery, etc. Secondly, there is a group of industries where economies of scale are offset by the transport charges which larger factories requiring a larger market or a more distant source of raw materials would attract. This is particularly the case in bulky products, or products for which the weight of raw material is great in relation to that of the finished product. Examples of the former are non-metallic mineral products - especially bricks and concrete blocks, pipes, etc.. Obviously, such factories are to be located near to the centres of consumption which are mainly urban centres. Sheet metal items and metal and wooden furniture as also truck body building are other examples. Soft drinks, difficult and expensive to be transported over long distances, are yet another. Examples of the latter are the dairy industry. Central dairy plants within a small radius of sufficient milk production are likely to be economical. In some of the West African countries, sugarcane grows in patches and small sugar manufacturing plants, crushing up to a maximum of 60 tons per day and involving a capital of \$ 70,000 are likely to succeed. Other examples are grain milling where the economies of scale which large plants have in regard to construction and operating costs may be offset by the limited supply of locally available raw material. There are yet other cases where the scale of

operation is determined by the need to avoid deterioration of the product and items produced in remote areas consequently require to be processed locally in small plants. For example the palm fruit of West Africa has to be sterilized within a few hours to keep its free fatty acid within tolerable limits. Produce in scattered remote holdings has, therefore, to be processed quickly. Small plants with a capacity of 100 tons per month and involving a capital expenditure of \$30,000 and a recovery of 85 per cent have, therefore, been set up in large numbers in Nigeria. Another example in this group is bread and pastry where because the end products cannot keep for a long time, the industries are best located near the source of consumption, irrespective of scale economies.

In a very large sector of industry there are virtually no economies of scale, the large factory differing from the small one only in having a larger number of the same machines, such as looms for weaving or presses for plastic or metal products e.g. plastic shoes, bakelite switches, nails, wire springs. In such cases it is perfectly practicable to begin operations on a small scale using only one or two machines, although it is likely that the more efficiently managed of these small factories will become larger since there are certain advantages in size, e.g. managerial ability and maintenance can be spread over a larger volume of output and work can be better organized.

A further large group of industries includes all those in which the final product is obtained by assembling a number of components which, in turn, can be manufactured on a small scale. It includes products of simple mixing such as paints, some pharmaceuticals, some of the food industries and the assembly of engineering products such as radios and sewing machines.

The best example of such separable operations is in the engineering industry in which the vast number of components required and the interchangeability of parts make small scale operations economic. In the concentrated markets of Europe and America the tendency in engineering is

towards small scale manufacture of components followed by assembly work. The reason is that the economies of scale for the manufacture of the various components is different and cannot, therefore, be integrated into a continuous line of production. Moreover, capital investment is saved and the advantages of specialization obtained by operating in this way. Though in African conditions, a major difficulty is that the market is usually so dispersed that the transport charges on assembling components might be unduly large, the assembly of such products as bicycles, sewing machines, pumps, could be developed on the basis of the manufacture of some components e.g. valves, chains, flat springs, on a small scale.

3. The significance of small-scale industry lies in the fact that the lower initial investment required on a small scale, the smaller risk involved and the comparative simplicity of the operations in many cases provides the best means of introducing the potential African entrepreneurs to industrial enterprise and of mobilizing local savings for this purpose. Such entrepreneurs are coming up, although in limited number, in most of the West African countries and have established successful modern small units in such industries as printing, concrete products, wire nails, electroplating, furniture and paints. The encouragement of small-scale industries furthermore results in encouraging the investment of altogether untapped resources of the community, such as small savings of the individual, his relatives and friends to form the nucleus of the capital of small enterprises in every country. Obviously, the greater the extent of development the larger will be the volume of utilization of such savings.

CHAPTER II

PRESENT INDUSTRIAL SITUATION IN WEST AFRICA - ROLE OF SMALL ENTERPRISES

4. There is as yet no comprehensive inventory of industrial establishments in West Africa. An attempt has, however, been made on the basis of such information as is available to prepare a statement showing the present importance of small enterprises. The definition of a small enterprise for this purpose is a unit employing more than ten but less than a hundred persons. The lower limit is taken partly because most countries do not collect statistics from concerns employing fewer than ten persons and partly because this excludes^{1/} the large number of service and, craft and the traditional food, apparel and household goods supplying enterprises already referred to in which there is relatively little scope of further development. The upper limit is largely arbitrary but certainly excludes all large establishments.

The results are given in Table I. It will be noticed that the total number of industrial units in West Africa in 1962-64 was 2485 employing 176912 workers with an average employment of 71 per unit. The number of small enterprises was 1983 or 79.8 per cent of the total with 52820 workers or 29.8 per cent of the total and with an average employment per unit of 27. This shows that although the upper limit for a small unit is taken as 100 the bulk of the small-scale enterprises employed less than 50 workers. The annual gross output of small enterprises amounted to \$211 million or 22 per cent of the total and contributed \$88 million or 22.6 per cent of value added. These proportions are much lower than those in other developing and developed countries, e.g. Japan (68 % of gross output and 45 % of value added). This suggests, therefore, that at present the small-scale industries sector is relatively undeveloped in West Africa.

As stated above, no figures are generally available of the numbers employed in enterprises with less than 10 workers referred to as the traditional sector but on the basis of the detailed information available in the case of Ghana it would appear that this sector at present accounts for about two thirds of employment in manufacturing industry and for

^{1/} In the case of Ghana the exclusion of traditional and service industries such as brewing of akpeteshie and pito, the weaving of kente & other fabrics on handlooms and the repair trades from the definition of small-scale industry excludes also a number of establishments employing more than 10 persons.

about 90 per cent in the food and apparel industries. It is therefore at present much more important than small-scale industry as now defined but its importance will steadily diminish as traditional methods and customs give way to modern methods and Western customs, and as the very small firms increase in size.

5. The current portion of small-scale industry in the organized non-traditional sector is as follows.

The furniture industry, with 27550 workers in the organized sector is the biggest employer of labour in the sub-region and 6330 or 23 per cent of workers are in factories employing from 10 to 99 persons. This proportion compares unfavourably with that in other underdeveloped countries, e.g. Philippines 83, Columbia 50, Chile 44, and also in developed countries e.g., Japan 65, West Germany 46, USA 37 and suggests there is considerable scope for the development of small-scale industries in this field.

The next most important industry in terms of employment in the sub-region is the food industry accounting for a total employment of 20114 workers. The share of small enterprises in employment is 42 per cent or 8438 workers and their contribution to value added 43 per cent or \$22.5 million. These proportions are approximately the same as those in other developing countries, e.g. Philippines 46 per cent, Columbia 48 per cent, Chile 52 per cent. Industries already established on a small scale include grain milling, abattoirs, canning of fish, drying and smoking of fish, tomato concentrates, bakeries, pine-apple juice, mango juice and fruit canning, reconstituted milk, ice cream and confectionery. Of these, small scale bakeries are the most numerous accounting for more than half the number of all small scale units.

The third most important industry in the sub-region is chemicals and chemical products accounting for a total employment of 17475 of which 4,830 or 27.6 per cent is in the small industries sector. Small enterprises are already established in the vegetable oil industries including palm oil, ground nut oil and to some extent palm kernel oil and coconut oil and in paints and in paints and varnishes, soap, perfumery, pharmaceuticals and cosmetics.

TABLE I
Current Industrial Situation in West Africa - 1962-64

The statistical data pertain to units employing 10 or more workers.

	N° of Units		Employment		Gross Output		Value Added		G.O./employee\$		V.A./employee	
	Total	SSI	Total	SSI	Total	SSI	Total	SSI	Total	SSI	Total	SSI
1. Dahomey	33	25	2,013	544	16.86	1.80	+6.74	0.72	*8,377	3,396	3,351	1,358
2. Gambia	6	3	+ 200	+60	+1.08	+0.25	+0.43	+0.10	+5,400	+4,200	+2,160	+1,680
3. Ghana ^{1/}	877	759	51,291	17,059	189.00	52.08	100.29	23.71	3,685	3,053	1,955	1,390
4. Guinea	19	5	3,614	257	+19.52	+1.08	+7.81	+0.43	+5,400	+4,200	+2,160	+1,680
5. Ivory Coast	267	150	14,618	+4,500	87.09	+18.90	40.72	+7.56	5,958	+4,200	2,786	+1,680
6. Liberia ^{2/}	302	292	5,225	3,499	12.79	7.00	+5.11	+2.80	2,448	2,014	+979	+806
7. Mali	11	N.A.	7,060	-	48.21	-	13.61	-	6,830	-	1,927	-
8. Mauritania	10	10	160	160	0.74	0.74	0.62	0.62	4,625	4,625	309	309
9. Niger	22	21	440	340	5.03	3.73	1.30	0.58	*11,447	*10,961	2,955	1,706
10. Nigeria ^{3/}	649	489	67,978	20,428	382.50	96.72	153.50	42.14	5,627	4,734	2,259	2,062
11. Senegal	182	138	17,964	2,168	170.19	13.15	48.84	4.06	*9,507	*9,507	2,719	2,719
12. Sierra Leone	48	38	3,909	2,028	13.77	6.90	5.38	3.04	3,523	3,402	1,376	1,499
13. Togo	18	15	1,890	1,377	9.41	7.60	3.47	1.77	4,978	5,525	1,836	1,285
14. Upper Volta	41	+38	550	+400	4.53	1.68	1.74	0.67	*8,236	+4,200	*3,164	1,680
Total	2,485	1,983	176,912	52,820	960.72	211.63	389.56	88.20	5,430	4,015	2,202	1,673
SSI/Total (%)	79.8		29.9		22.0		22.6		73.9		76.0	

+ = estimated

* = figures appear excessive

- 1/ Information about Ghana has been estimated from the figures published in Industrial Statistics 1962-64
- 2/ Information about Liberia has been collected from the document entitled "Progress Report on Industrial Development, Development Planning in Liberia January-August 1965
- 3/ Information about Nigeria has been obtained from the Industrial Survey Report of 1963.

The fabricated metal product industry employed 7640 workers of whom 36 per cent are in small enterprises. The main products made by them are metal doors and windows, aluminium and brassware, wire nails, etc.

The non-metallic minerals industry employs 5290 workers of whom 2540 or 48 per cent are in small enterprises. The main product are bricks, cement blocks and tiles and pipes.

CHAPTER III

GROWTH PROSPECTS FOR SMALL-SCALE INDUSTRIES

6. As far as growth possibilities are concerned, an estimate has been attempted of the expected increase in demand for each product group by 1980, and the extent to which it will be met by imports or by domestic production. Domestic production will come from new large-scale industry, new small-scale industry and also by expansion of the traditional sector. It is assumed, however, that the traditional sector will expand only slightly, increasing its output by perhaps not more than 10 per cent during the period under review, so that except in the food and apparel industries its contribution to the total supply will be negligible, and even in these two industries will not be greater than 5 per cent and so may be neglected. (Some of these enterprises will however increase in size and enter the small-scale sector). The allocation of the increased demand between large-scale and small-scale enterprises is done on the basis of a consideration of the present position, the suitability of the particular product group for small-scale enterprise and the proportion obtaining in other countries.

The size of enterprises given may be taken as representing the minimum scale on which economic production can be started. There is, of course, no objection to starting on a larger scale and in fact in nearly every case some advantage would be obtained from so doing.

ISIC 20 - Food Industry

7. The Food Industry is important everywhere, but more so in a predominantly agricultural region such as West Africa. From the macro-economic data for the sub-region for 1980, it is estimated that the consumption of processed food in the monetary sector by 1980 will be \$2,346 millions. This figure is exclusive of consumption of sugar which is very largely a large-scale industry and of vegetable oil and fats and beverages dealt with under other industries.

The demand for processed food can be met from three different sources, viz. large-scale industry production, small-scale industry production and imports. In an essential item of common consumption like food, it is necessary that bulk of the demand should be met by indigenous production and in the following table it has, therefore been assumed that imports will be negligible. The food industry offers excellent scope for development in the small-scale industry sector and based on the prevailing share of this sector in the total output of food products, and on the possibilities envisaged for its development in the different countries, an estimate has been made of its future contribution.

The table shows that the additional employment that may be offered by the food group in the small industry sector in 1980 may amount to 180,500 persons, and that the additional value added can be roughly estimated at \$280 million. Since the new small-scale enterprises proposed will have an average employment per unit of about 30 persons, it is clear that a very large number of enterprises can be established in this sector, even in the smallest country.

Grain milling especially of wheat and rice will obviously be the most ubiquitous industry in this group. This is an industry which can be established if necessary on a small scale and does not call for more than the average skill which is already available in every country of the sub-region and also meets a universal demand.

ISIC: 20

Food Industries

Additions in Small-scale Industries by 1980

Country	No. of units	Employ- ment	Gross Output '000\$	Value added '000\$	Investment '000\$
Dahomey	349	10,459	41,885	16,774	39,371
Gambia	49	1,475	5,900	2,400	5,546
Ghana	664	19,914	84,924	33,663	79,839
Guinea	460	13,800	55,200	22,100	51,888
Ivory Coast	261	7,825	31,300	12,500	29,422
Liberia	149	4,466	18,264	7,266	17,168
Mali	224	6,725	26,900	10,700	25,286
Mauritania	143	4,290	17,160	6,780	16,130
Niger	259	7,780	30,419	12,296	28,594
Nigeria	2,398	71,951	270,199	104,355	253,987
Senegal	422	12,669	49,575	20,526	46,601
Sierra Leone	239	7,160	27,500	10,730	25,850
Togo	180	5,398	19,750	9,000	18,565
Upper Volta	220	6,600	26,400	10,600	24,816
	6,017	180,512	705,376	279,690	663,063

There are however important economies of scale and in the case of flour production which in West Africa will be based on imported wheat large-scale enterprise will prevail. In the case of rice mills however based on locally grown rice of which the supply in any district will be limited small-scale enterprises will predominate.

At present, in spite of the rice mills that have been located in a number of countries, substantial hand pounding of rice goes on in the sub-region. It is possible that with the spread of urbanization and rising standards of living, there may be a switch over to more mill polished rice. Rice mills being of varying sizes, small units could be widely established. A typical small-scale unit with an output of 12 tons per shift or 3600 tons per annum on a single shift basis would employ about 40 workers and would require a fixed investment of about \$60,000 and working capital of about \$80,000. The annual gross output would be \$400,000 and the value added per worker \$2,300. The capital investment per worker would be reduced if three shifts could be worked but this depends on the availability of rice.

Baking is another major industry in this sector and a typical small scale bakery, employing 25 workers would have an output of 600,000 lbs. per annum valued at \$75,000. Fixed capital would be about \$50,000 and working capital \$15,000. Value added per person employed would be about \$1,000 which after allowing for capital charges would give an average annual wage of about \$870.

Development of the dairy industry not only for collection, pasteurization and bottling of milk but also for the supply of re-constituted milk is under active consideration in a number of countries in the sub-region. With the spread of urbanization, such units are likely to multiply.

The sugar confectionery industry has yet to make headway in the sub-region. The imports of confectionery in the various countries being already considerable and the industry permitting of considerable variations of scale, the possibility of small-scale confectionery units appears to be bright.

Although sugar is normally manufactured on a large scale, it is also possible to manufacture it on a decentralized small scale basis. Such units for the production of white sugar are working in India. A plant with a crushing capacity of 60 tons of cane a day is estimated to cost about \$70,000 and to yield 550 tons of sugar per year of the value of \$140,000. Such units are indicated where sugarcane grows in patchy areas of about 100 to 200 hectares.

Fruit and vegetable canning has developed in a small way in some of the countries of the sub-region. A typical small scale vegetable canning factory, employing 35 persons, would have an annual capacity of 400,000 lbs. valued at \$90,000. Fixed capital required would be about \$38,000 and working capital \$30,000. Value added per worker would be \$1,700. Cold storages to be used either by buyers or sellers are necessary to preserve fruit and vegetables in glut during the season. A typical plant will have a capacity of 10 tons and would employ 20 workers. Fixed capital required would be \$80,000.

ISIC 21 - Beverages

8. This group covers mainly beer, other alcoholic drinks and soft drinks. Economies of scale generally preclude the first two categories from the small industry sector, although some distilling on a small scale can be carried on. The main prospect, however, is in the manufacture of soft drinks. For this a projection of demand has been made in the paper on the Beverage Industry in the West African sub-region, submitted to the Conference and it is estimated that to meet it an additional 19 small and 10 big-sized units or alternatively 123 small-sized units will be required. Assuming that wherever the demand is large, 50 per cent thereof can be met by the small sector and where it is small, the entire production may be taken up by the small sector, the result is set out in the table below :

ISIC:21

Soft Drinks

Additions in Small-Scale Industries by 1980

Country	No. of units	Employ- ment	Gross Output '000\$	Value added '000\$	Investment '000\$
Dahomey	6	240	886	460	600
Gambia	-	-	-	-	-
Ghana	10	380	1,300	700	1,000
Guinea	-	-	-	-	-
Ivory Coast	19	760	2,700	1,400	1,900
Liberia	11	440	1,500	800	1,100
Mali	4	160	620	322	400
Mauritania	1	40	18	9	100
Niger	-	-	-	-	-
Nigeria	2	80	240	125	200
Senegal	12	480	1,600	850	1,200
Sierra Leone	1	40	20	10	100
Togo	2	80	344	179	200
Upper Volta	3	120	460	239	300
Total	71	2,820	9,688	5,094	7,100

In total 71 small new units are expected to be established by 1980, with an additional employment of 2,820 workers, a gross output of \$9.7 millions and a value added of 5.1 millions.

ISIC 23 - Textiles - Weaving

9. A separate paper on textiles submitted to the conference envisages an additional output of 14,900 tons (approx. 126 million square yards) in the decentralized weaving sector. While about half this output might come from mechanized looms in the cottage sector, the other half (viz: 63 million square yards) may come from small power loom factories. A typical unit may have 24 looms, employ about 17 persons, may have a gross output of \$50,000 and value added of \$12,000 and a fixed investment of about \$35,000.

On this basis a countrywise projection has been attempted in the following statement :

ISIC 23

Textiles - Weaving

Additions in small-scale industries by 1980

Country	No. of units	Employment	Gross output '000\$	Value added '000\$	Investment '000\$
Dahomey	6	102	300	72	210
Gambia	1	17	50	12	35
Ghana	21	357	1,050	252	735
Guinea	9	153	450	108	315
Ivory Coast	9	153	450	108	315
Liberia	2	34	100	24	70
Mali	11	187	550	132	385
Mauritania	2	34	100	24	70
Niger	8	136	400	96	280
Nigeria	158	2,686	7,900	1,896	5,530
Senegal	8	136	400	96	280
Sierra Leone	6	102	300	72	210
Togo	4	68	200	48	140
Upper Volta	11	187	550	132	385
Total	256	4,352	12,800	3,072	8,960

ISIC 24 - Footwear and Apparel

10. This group consists of two main sub-sectors, viz., footwear and apparel. The total additional demand for footwear has been arrived at by estimating a compound rate of growth of 6.5 per cent per year from 1965 to 1980 which after allowing for imports gives a total domestic requirement of \$47.49 millions. It has been divided into two categories, leather footwear and plastic and rubber footwear. The proportion of each varies in different countries depending upon levels of per capita income. More leather footwear usually is consumed in the comparatively affluent countries and plastic and rubber in the others. It has, therefore, been assumed that the additional demand for leather footwear will be about 30 per cent of the total in the case of Dahomey, Gambia, Guinea, Mali, Niger, Nigeria, Togo, Sierra Leone and Upper Volta while for Ghana, Ivory Coast, Liberia, Senegal and Mauritania, it will be 40 per cent.

The industry lends itself to production either on a small or large scale. There are advantages and disadvantages in both cases; large units make for standardized, comparatively lower priced products, while small units ensure considerable variety of design and quality. Assuming broadly that in the case of leather footwear 60 per cent of additional requirement might be produced in the medium and large sector and 40 per cent in the small and that in the case of plastics and rubber about 70 per cent might be produced by the small sector and the balance by others, the result is shown in the tables that follow.

The additional employment in small-scale industry in 1980 has been estimated on the basis of an annual output per worker of 1,200 pairs for leather shoes and for rubber and plastic 13,500 pairs while the value added per worker is estimated at 40 per cent of gross output in respect of leather and 25 per cent for others.

ISIC:24

Plastic Footwear

Additions in Small-Scale Industries By 1980

Country	No. of Employ-		Gross	Value	Investment
	units	ment	Output '000\$	Added '000\$	
Dahomey	1	9	162	40	45
Gambia	1	20	360	90	100
Ghana	5	102	1,836	459	510
Guinea	1	10	180	45	50
Ivory Coast	5	98	1,764	441	490
Liberia	2	34	612	153	170
Mali	2	32	576	144	160
Mauritania	-	-	-	-	-
Niger	1	22	396	99	110
Nigeria	19	384	6,912	1,728	1,920
Senegal	6	125	2,250	562	625
Sierra Leone	2	37	666	166	185
Togo	1	15	270	68	75
Upper Volta	2	43	774	194	215
Total	48	931	16,758	4,189	4,655

ISIC:24

Leather FootwearAdditions in Small-Scale Industries by 1980

Country	No. of units	Employ- ment	Gross Output '000\$	Value Added '000\$	Investment '000\$
Dahomey	1	36	43	17	18
Gambia	2	82	98	39	41
Ghana	15	608	730	292	304
Guinea	1	40	48	19	20
Ivory Coast	27	1,074	1,289	515	537
Liberia	7	264	317	127	132
Mali	5	190	228	91	95
Mauritania	1	14	17	7	7
Niger	6	232	278	111	116
Nigeria	56	2,232	2,678	1,071	1,116
Senegal	34	1,367	1,640	656	684
Sierra Leone	5	214	257	103	107
Togo	1	59	71	28	30
Upper Volta	4	178	214	86	89
Total	165	6,590	7,908	3,162	3,296

A typical small-scale factory making both leather and plastic shoes and employing 40 persons would require a fixed investment of about \$20,000 and working capital to about the same extent. The annual output would be 22,000 pairs, valued at about \$96,000 and the value added per person employed about \$800.

11. Separate papers are being submitted to the Conference projecting the demand for knitted goods, and apparel in 1980.

In the case of knitted goods, out of a total requirement of 13,500 tons it is anticipated that about 15 per cent or 2025 tons consisting of miscellaneous items of synthetic material will continue to be imported but that the balance estimated to consist of 1350 tons socks (mostly of stretch nylon) or 10,125 tons knitted outer and underwear can all be produced in the small-scale industry sector.

With regard to socks, assuming the weight of a dozen pairs = 1lb., the projected demand would work out to 1350×2240 lbs. or numbers = 3 million dozen pieces. This item is well suited for manufacture on a small scale basis. The Technical Aids Branch of the International Co-operative Ad. Washington has worked out a typical scheme.

Capacity - 34,000 dozen pairs per year	(in one shift)
Fixed capital including building	\$72,000
No. of workers	= 15

Adding 50 per cent to bring it to African standard the number of workers $15 + 8 = 23$

Value of gross output at \$2.5 per dozen pairs = \$85,000

Value added = 40% = \$34,000

On this basis the total number of units required would be 90 and the number of workers 2250. The total value of output would be \$7,650,000 and the total fixed investment \$6,500,000 million.

With regard to knitted garments including cotton undergarments, shirts and other outergarments the following represents a typical operation :

Capacity 25 dozen of fine quality of unbleached interlock cotton vests per day of one 8 hour shift (per year 7500 dozen of approximately 8.5 tons)	
Fixed capital including building	\$10,000
Number of workers	14
Gross output	\$45,000
Value added	40 per cent = <u>\$18,000</u>

On this basis the number of units required will be roughly 1190

The total number of workers 16,660

The value of gross output \$2,104 million

and the fixed investment about \$12 million

The countrywise position is given on page 21.

The total demand for garments by 1980 is likely to amount to the equivalent of about 375 million square yards of woven cloth of which the equivalent of about 75 million square yards may be imported. Of the balance of garments, representing about 300 million square yards 50 per cent or 150 million square yards may be the share of the small sector.

WEST AFRICA - SOCKS AND OTHER KNITTED GOODS

Country	Socks - Additions in SSI '000\$						Other Knitted Goods - Additions in SSI '000\$					
	Total output (Tons)	N° of units	Employ- ment	Gross output	Value added	Invest- ment	Total output (Tons)	N° of units	Employ- ment	Gross output	Value added	Invest- ment
Dahomey	31	2	52	176	70	149	229	26	377	1,212	485	269
Gambia	4	1	7	23	9	19	33	4	54	175	70	39
Ghana	111	7	185	629	252	533	831	98	1,369	4,399	1,760	977
Guinea	46	3	77	261	104	221	344	40	567	1,821	728	405
Ivory Coast	49	3	82	278	111	235	369	43	608	1,953	781	435
Liberia	11	1	18	62	25	53	85	10	140	450	180	100
Mali	59	4	99	334	134	283	444	52	731	2,351	940	522
Mauritania	8	1	13	45	18	38	61	7	100	323	129	72
Niger	43	3	72	244	98	206	320	37	527	1,694	678	376
Nigeria	832	55	1,387	4,715	1,886	3,994	6,240	734	10,277	33,035	13,214	7,338
Senegal	42	3	70	238	95	202	317	36	522	1,678	671	373
Sierra Leone	33	2	55	187	75	158	251	29	413	1,329	532	295
Togo	22	1	37	125	50	106	162	19	267	858	343	191
Upper Volta	59	4	98	334	134	283	439	52	723	2,324	930	516
Total	1,350	90	2,252	7,651	3,061	6,480	10,125	1,187	16,675	53,602	21,441	11,908

A typical small-scale factory in this industry making dresses and employing 30 persons would have an annual output of \$210,000 (28 dozen dresses per day on one shift) and require a fixed investment of \$18,000.

On this basis, it is estimated that the additional gross output of the small-scale industries sector by 1980 would be about \$105 million and the employment and value added of the order of 15,000 and \$42 million respectively. Total fixed investment would amount to \$9 million. The country distribution is as follows:

ISIC:24

GarmentsAdditions in Small-Scale Industries by 1980

Country	No. of units	Employ- ment	Gross Output '000\$	Value Added '000\$	Investment '000\$
Dahomey	11	339	2,373	949	203
Gambia	2	50	350	140	30
Ghana	41	1,232	8,624	3,450	739
Guinea	17	510	3,570	1,428	306
Ivory Coast	18	546	3,822	1,529	328
Liberia	4	126	882	353	76
Mali	22	658	4,606	1,842	395
Mauritania	3	90	630	252	54
Niger	16	474	3,318	1,327	284
Nigeria	308	9,242	64,694	25,877	5,545
Senegal	16	470	3,290	1,316	282
Sierra Leone	12	372	2,604	1,042	223
Togo	8	240	1,680	672	144
Upper Volta	22	651	4,557	1,823	391
Total	500	15,000	105,000	42,000	9,000

ISIC 25 - Wood and Cork Products except Furniture

12. The main items in this groups, viz., saw milling, may be left out of consideration as the industry is capital-intensive. There is, however, another sub-sector, viz., wood manufactures, in this group which has implications for the small scale sector. It embraces a multitude of products of varying importance, a list of which is given below :

Some Items of Wood Manufacturing

1. Mirror and picture frames
2. Finished mouldings for mirror and picture frames
3. Cork stoppers
4. Rattan and willow ware except furniture
5. Baskets
6. Lasts for boots and shoes of wood
7. Striking handtool handles
8. Lifting and pulling tool handles
9. Other handtool handles
10. Pencil slats
11. Tooth picks
12. Spools
13. Tanks and vats
14. Step ladders
15. Rung ladders
16. Other scaffolding equipment
17. Wooden reels for wire and cable
18. Toilet seats
19. Wood flour
20. Bobbins, shuttles, picking sticks
21. Miscellaneous wooden goods e.g. packing cases

A typical small-scale factory unit for production of packing cases may have a fixed capital of \$20,000 and employ 40 workers. Its gross output may be \$64,000 and value added \$25,600.

Macro-economic projection for 1980 for the sub-region envisages an additional output of \$51.15 millions in this sub-group. Many of the items are presently being made and can be made in the small scale sector and it is expected that some share of the additional output in most countries will come from this sector resulting in an additional employment of 9,518 persons and value added of \$6.1 millions. The following table gives the country-wise analysis of possible development :

ISIC : 25

Wood manufacture

Additions in small-scale industries by 1980

Country	No. of units	Employ- ment	Gross output '000\$	Value added '000\$	Investment '000\$
Dahomey	6	240	384	153	120
Gambia	1	50	80	32	25
Ghana	38	1,500	2,400	960	750
Guinea	5	200	320	128	100
Ivory Coast	50	2,000	3,200	1,280	1,000
Liberia	8	318	509	204	159
Mali	1	40	64	25	20
Mauritania	3	100	160	64	50
Niger	14	540	864	346	270
Nigeria	61	2,450	3,920	1,568	1,225
Senegal	28	1,100	1,760	704	550
Sierra Leone	8	305	488	195	152
Togo	3	110	176	70	55
Upper Volta	14	565	904	362	282
Total	240	9,518	15,229	6,091	4,758

ISIC 26 - Furniture and Fixtures

13. A separate paper on Furniture in 1980 in West Africa has been submitted.

In dealing with the likely share of the small sector, two mutually contradictory factors in respect of this industry have to be taken into account. On the one hand, the high transportation costs and the diversified nature of the products will act in favour of the establishment of units in the small-scale industry sector in the sub-region, while on the other, the demand for cheap standardised furniture, both wooden and metal may call for the establishment of comparatively large establishments. At present, the proportion of output coming from the small-scale sector is only about 23 per cent, and is much less than that in other under-developed countries, where the proportion is usually higher than 50 per cent. Having regard to all these factors, it is considered that a share of 50 per cent of the increase output should be allocated to small-scale industries.

The total consumption of furniture in the sub-region is expected to increase from \$40 million in 1964 to \$110 million by 1980. The 1980 programme for this industry contemplates an export of \$15 million of furniture and \$5 million of imports. Local production is thus planned at \$120 million. It is not likely that the small sector will be able to cater for the export demand, and the remaining local production is divided **countrywise** at the rate of 50 per cent for small-scale and 50 per cent for large scale in the case of the larger countries, and 100 per cent to the small sector in regard to countries with low additional output.

ISIC : 26

Furniture industry

Additions in small-scale industries by 1980

Country	No. of units	Employ- ment	Gross output '000\$	Value added '000\$	Investment '000\$
Dahomey	15	294	1,352	541	441
Gambia	7	141	649	259	212
Ghana	104	2,080	9,568	3,827	3,120
Guinea	21	416	1,914	765	624
Ivory Coast	64	1,280	5,888	2,355	1,920
Liberia	24	480	2,208	883	720
Mali	9	176	810	324	264
Mauritania	8	160	736	294	240
Niger	14	288	1,325	530	432
Nigeria	224	4,480	20,608	8,243	6,720
Senegal	50	992	4,563	1,825	1,488
Sierra Leone	32	640	2,944	1,178	960
Togo	6	112	515	206	168
Upper Volta	9	176	810	324	264
Total	587	11,715	53,890	21,554	17,573

ISIC 27 - Paper and Paper Products

14. Paper is mainly produced in large scale industry but the item "paper products" in this Group offers considerable prospects for small-scale industry. The following items are included:

1. Toilet paper rolls
2. Towels - Industrial
Household
Wipers
Other sanitary and Health Products
3. Sanitary napkins
4. Business machine rolls
5. Folding paper board boxes
6. Corrugated shipping containers
7. Sanitary food containers
8. Milk and other beverage cartons
9. Cups - tight fit containers
10. Other sanitary food containers
11. Paper cones, reels, spools, bobbins and blocks
12. Single and double wall bags
13. Multi wall bags
14. Index cards
15. File folders
16. Stationery
17. Boxed stationery and portfolios
18. Package paper and envelopes
19. Pads and notebooks
20. Crepe paper
21. Crepe wadding for packing
22. Facial tissues and handkerchiefs
23. Laminated or coated wrappers
24. Paper - waterproof
25. Paper - laminated
26. Cassein and similarly coated paper
27. Envelopes
28. Bags, Grocers' shopping
29. Gummed tape
30. Book binding

A typical small-scale factory for making cardboard boxes with an annual output of 600,000 boxes (18" x 14" x 13" approximately) may involve a fixed capital of \$10,000; and 12 workers. The gross output may be about \$240,000 and value added about \$48,000.

In this case the difference in consumption between large and small countries is particularly great and it is estimated that while in the larger markets of Ghana, Ivory Coast and Nigeria, only 25 per cent of the additional output would be available to small-scale industry, in the smaller markets, production will be virtually entirely small-scale. Country estimates for 1980 are as follows :

ISIC 27

Paper Products

Additions in small-scale industries by 1980

Country	No. of units	Employ- ment	Gross output '000\$	Value added '000\$	Investment '000\$
Dahomey	5	80	889	355	270
Gambia	1	20	241	98	70
Ghana	12	180	2,050	820	620
Guinea	11	170	1,896	760	570
Ivory Coast	16	243	5,000	2,000	5,100
Liberia	4	60	672	270	200
Mali	11	160	1,815	730	550
Mauritania	1	20	234	90	70
Niger	7	110	1,273	510	380
Nigeria	47	700	8,000	3,200	2,500
Senegal	14	210	2,388	960	720
Sierra Leone	12	180	2,107	840	630
Togo	4	60	721	290	220
Upper Volta	11	170	1,911	760	570
TOTAL	156	2,363	29,197	11,683	12,470

ISIC 28 - Printing and Publishing

15. This is an industry as yet comparatively undeveloped except in the bigger countries. It is difficult to make a precise projection as to its probable rate of growth but it may be reasonable to consider that West Africa may develop to such an extent by 1980, that the industry will quadruple its output. In other countries, small-scale industry in this sector is important. In Japan, the small-scale sector accounts for 55 per cent of the employment, in West Germany 44 per cent, Australia 46 per cent and Sweden 50 per cent.

For West Africa, it is assumed that 50 per cent of the additional capacity will emanate from the small sector. This involves the additional employment of 7,051 workers and an additional output of \$18.6 millions and value added \$11.9 millions. The following table gives the countrywise projections :

ISIC 28 Printing and Publishing
Additions in small-scale industries by 1980

Country	No. of units	Employ- ment	Gross output '000\$	Value added '000\$	Investment '000\$
Dahomey	7	212	560	358	224
Gambia	1	30	80	51	32
Ghana	18	553	1,459	935	584
Guinea	11	318	840	537	336
Ivory Coast	11	341	900	576	360
Liberia	-	-	-	-	-
Mali	14	409	1,080	691	432
Mauritania	2	57	150	96	60
Niger	8	246	650	416	260
Nigeria	138	4,164	10,993	7,037	4,397
Senegal	2	52	136	88	54
Sierra Leone	8	227	598	384	240
Togo	1	44	115	74	46
Upper Volta	13	398	1,000	673	400
TOTAL	234	7,051	18,561	11,916	7,425

ISIC - 31 - Chemicals and Chemical Products

16. A separate paper on this group has been submitted to the conference, giving projections of total demand. The share of small-scale industry in the basic chemical industry will be insignificant, except in the case of pharmaceuticals, cosmetics, perfumery, and vegetable oils.

With the exception of Nigeria, where the manufacture of cosmetics on a small-scale is fairly extensive, and Ghana where simple medicinal preparations are also made on a small-scale, there has been so far little development in the cosmetic and pharmaceutical industry. The possibilities of manufacturing the simpler products and of bottling, tabletting, etc., on a small-scale appear, however, to be reasonably good in all the West African countries. The following tables show the projections in regard to these two industries :

In cosmetics and perfumery, it is estimated that the whole of the supply to the smaller countries can be met by small-scale industry, while in the large markets only about one quarter of the output required can be so allocated. The higher proportions for Nigeria and Senegal include the substantial small-scale industry already existing. In the case of pharmaceuticals only half of the required production has been allocated to small-scale industry in the smaller markets and in the larger markets, only about 10 per cent in addition to the existing plants. A typical small-scale plant in this industry employing 33 workers and engaged in tabletting (e.g. Aspirin tablets) would require a fixed investment of \$40,000 mainly in tabletting machine and would have a gross output of \$125,000.

ISIC: 31

Cosmetics and Perfumery

Additions in Small-Scale Industries by 1980

Country	No. of units	Employ- ment	Gross output '000\$	Value added '000\$	Investment '000\$
Dahomey	3	125	500	200	187
Gambia	1	35	100	40	52
Ghana	2	110	550	220	165
Guinea	3	125	500	200	187
Ivory Coast	2	110	550	220	165
Liberia	3	125	500	200	187
Mali	2	100	400	160	150
Mauritania	-	-	-	-	-
Niger	3	125	500	200	187
Nigeria	16	1,200	6,000	2,400	1,800
Senegal	3	170	850	340	255
Sierra Leone	3	175	700	280	262
Togo	3	125	500	200	187
Upper Volta	3	175	700	280	262
TOTAL	47	2,700	12,350	4,940	4,046

Pharmaceuticals
Additions in Small-Scale Industries by 1980

Country	No. of units	Employ- ment	Gross output '000\$	Value added '000\$	Investment '000\$
Dahomey	3	165	1,000	400	247
Gambia	-	-	-	-	-
Ghana	8	640	3,900	1,560	960
Guinea	12	585	3,500	1,400	877
Ivory Coast	5	240	1,500	600	360
Liberia	3	165	1,000	400	247
Mali	8	415	2,500	1,000	622
Mauritania	-	-	-	-	-
Niger	3	165	1,000	400	247
Nigeria	20	1,545	9,300	3,720	2,317
Senegal	4	300	1,800	720	450
Sierra Leone	8	415	2,500	1,000	622
Togo	3	165	1,000	400	247
Upper Volta	3	165	1,000	400	247
TOTAL	80	4,965	30,000	12,000	7,443

In regard to vegetable oils, although large oil mills have come into existence for processing oil seeds, a substantial share will continue to be processed on a small-scale where local supplies are limited. The following table gives a projection in this regard.

ISIC: 31 Vegetable Oils
Additions in Small-Scale Industries by 1980

Country	No. of units	Employ- ment	Gross output '000\$	Value added '000\$	Investment '000\$
Dahomey	7	280	1,400	560	560
Gambia	1	40	200	80	80
Ghana	10	400	2,000	800	800
Guinea	10	400	2,000	800	800
Ivory Coast	4	170	850	340	340
Liberia	3	120	600	240	240
Mali	8	320	1,600	640	640
Mauritania	2	80	400	160	160
Niger	10	390	1,950	780	780
Nigeria	71	2,840	14,200	5,680	5,680
Senegal	3	120	600	240	240
Sierra Leone	7	280	1,400	560	560
Togo	5	200	1,000	400	400
Upper Volta	14	560	2,800	1,120	1,120
TOTAL	155	6,200	31,000	12,400	12,400

A number of other chemical products which can be manufactured on a small-scale are listed below:

Chemical Products

1. Insecticides
2. Dentifrices
3. Dyes (some types)
4. Fertiliser mixing
5. Agricultural pesticides
6. Glue
7. Printing ink
8. Essential oils
9. Salt refining
10. Fluid ink
11. Adhesive tapes
12. Paper gum tape
13. Sodium Silicate
14. Anodised aluminium

As an example a small-scale factory engaged in mixing insecticides and employing 18 workers would require a fixed investment of \$10,500, mainly in mixing machines and glass lined storage tanks. Annual gross output would be about \$260,000 and value added \$128,000.

ISIC 33 - Non-metallic mineral products

17. This consists of five main categories. They are:

1. Structural clay products
2. Glass and glass products
3. Ceramics
4. Cement
5. Others, including manufacture of concrete, gypsum, plaster products, mineral wool, etc.

In regard to structural clay products a separate paper on bricks has been submitted to the Conference. The proposals made therein for brick manufacture involve comparatively large units. At the same time the demand for bricks likely to be produced on the artisan scale is estimated at 1,670,000 tons by 1980.

The quality of bricks made at the artisan level is poor. It is possible to improve their quality with the help of minimum equipment and by putting up small standard type of kilns using fuelwood, cocconut husk or groundnut shell as fuel. Such units would then form part of the small-scale industry sector.

Introduction of such improved brick making would obviously be slow. It may not be unreasonable to estimate an output of about 35 per cent of the demand (or say 560,000 tons) in the artisanal sector to come out of such improved manufacturing units.

If the capacity of a brickyard is assumed as 4,000 tons, there will be 140 to 150 brick yards by 1980.

The following are the broad details of an individual brickyard :-

Capacity	4000 tons per annum or 1.6 million pieces
No. of workers	20
Fixed capital	\$16,000
Value of gross output @ \$22 per ton	\$88,000
Value added	60 per cent

The above projection has been divided countrywise in the statement attached:-

B r i c k s
Additions in Small-Scale Industries by 1980

Country	No. of units	Employ- ment	Gross output '000\$	Value added '000\$	Investment '000\$
Dahomey	3	63	278	167	50
Gambia	1	9	41	25	7
Ghana	11	230	1,011	607	184
Guinea	5	95	419	251	76
Ivory Coast	5	102	448	269	81
Liberia	1	23	103	62	19
Mali	6	123	541	325	98
Mauritania	1	17	74	44	13
Niger	4	88	389	233	71
Nigeria	86	1,725	7,592	4,555	1,380
Senegal	4	88	386	232	70
Sierra Leone	3	70	306	184	56
Togo	2	45	197	118	36
Upper Volta	6	122	535	321	97
TOTAL	138	2,800	12,320	7,393	2,238

For cement products a projection has been made of total demand and of the share to be provided by small-scale industry. In general because of unit weight considerations the industry is market orientated and the number and size of units is largely determined by the number and size of the urban centres in each country. In total the share of small-scale industry in the production of concrete blocks is about one quarter, for cement and concrete tiles about one half - although roofing tiles are almost entirely small-scale - and for concrete pipes about a fifth. Details of the factories proposed are as follows:

Concrete Blocks and Fills
Additions in Small-Scale Industries by 1980

Country	No. of units	Employ- ment	Gross output '000\$	Value added '000\$	Investment '000\$
Dahomey	4	132	600	360	200
Gambia	1	100	450	270	150
Ghana	-	-	-	-	-
Guinea	8	264	1,200	720	400
Ivory Coast	12	396	1,800	1,080	600
Liberia	8	264	1,200	720	400
Mali	5	165	750	450	500
Mauritania	6	198	900	540	300
Niger	15	495	2,250	1,350	1,500
Nigeria	170	7,310	33,000	19,800	11,000
Senegal	10	670	3,000	1,800	1,000
Sierra Leone	14	462	2,100	1,260	700
Togo	5	165	750	450	250
Upper Volta	14	462	2,100	1,260	1,400
TOTAL	272	10,983	50,100	30,060	18,400

Concrete Roofing Tiles
Additions in Small-Scale Industries by 1980

Country	No. of units	Employ- ment	Gross output '000\$	Value added '000\$	Investment '000\$
Dahomey	-	-	-	-	-
Gambia	-	-	-	-	-
Ghana	2	66	400	240	400
Guinea	-	-	-	-	-
Ivory Coast	1	33	200	120	200
Liberia	-	-	-	-	-
Mali	-	-	-	-	-
Mauritania	-	-	-	-	-
Niger	-	-	-	-	-
Nigeria	2	66	400	240	400
Senegal	1	33	200	120	200
Sierra Leone	-	-	-	-	-
Togo	-	-	-	-	-
Upper Volta	-	-	-	-	-
TOTAL	6	198	1,200	720	1,200

Cement and Concrete Tiles
Additions in Small-Scale Industries by 1980

Country	No. of units	Employ- ment	Gross output '000\$	Value added '000\$	Investment '000\$
Dahomey	3	51	300	180	300
Gambia	1	17	100	60	100
Ghana	10	170	1,000	600	1,000
Guinea	4	102	600	360	600
Ivory Coast	10	170	1,000	600	1,000
Liberia	4	68	400	240	400
Mali	2	34	200	120	300
Mauritania	2	68	400	240	400
Niger	3	51	300	180	450
Nigeria	30	680	4,000	2,400	4,000
Senegal	6	102	600	360	600
Sierra Leone	3	51	300	180	300
Togo	3	51	300	180	300
Upper Volta	3	51	300	180	450
TOTAL	84	1,666	9,800	5,880	10,200

Concrete Pipes
Additions in Small-scale Industries by 1980

Country	No. of units	Employ- ment	Gross output '000\$	Value added '000\$	Investment '000\$
Dahomey	2	66	400	240	300
Gambia	1	16	100	60	75
Ghana	10	330	2,000	1,200	1,500
Guinea	2	66	400	240	300
Ivory Coast	10	330	2,000	1,200	1,500
Liberia	2	66	400	240	300
Mali	3	99	600	360	600
Mauritania	3	99	600	360	450
Niger	2	66	400	240	400
Nigeria	30	990	6,000	3,600	4,500
Senegal	6	198	1,200	720	900
Sierra Leone	2	66	400	240	300
Togo	2	66	400	240	300
Upper Volta	2	66	400	240	400
TOTAL	77	2,524	15,300	9,180	11,825

The remaining items of the non-metallic mineral product group are considered to be suitable only for large-scale enterprise.

ISIC 35 - Fabricated Metal Products

ISIC 36 - Machinery except Electrical

ISIC 37 - Electrical Machinery, apparatus and supplies

18. A separate Paper is being submitted to the Conference on the above three groups. Most of the projections covered by this paper fall outside the category of small-scale enterprise, but the following units employing less than a 100 persons, have been projected:

S p r i n g s

Additions in Small-scale Industries by 1980

Country	No. of units	Employ- ment	Gross output '000\$	Value added '000\$	Investment '000\$
Ghana	1	30	600	300	240
Guinea	1	15	300	150	120
Ivory Coast	1	15	300	150	120
Nigeria	1	30	600	300	240
Togo	1	15	300	150	120
Upper Volta	1	15	300	150	120
TOTAL	6	120	2,400	1,200	960

Pins, Wire Products, Needles, Safety Pins
Gem Clips, Etc.

Country	No. of units	Employ- ment	Gross output '000\$	Value added '000\$	Investment '000\$
Mali	1	65	850	550	380
Niger	1	65	850	550	380
Upper Volta	1	65	850	550	380
TOTAL	3	195	2,550	1,650	1,140

Grinding Machines, Motorised and Otherwise

Country	No. of units	Employ- ment	Gross output '000\$	Value added '000\$	Investment '000\$
Dahomey	1	40	300	150	90
Gambia	1	40	300	150	90
Guinea	1	40	300	150	90
Mali	1	40	300	150	90
Togo	1	40	300	150	90
TOTAL	5	200	1,500	750	450

Switches and Other Electrical Accessories

Country	No. of units	Employ- ment	Gross output '000\$	Value added '000\$	Investment '000\$
Ghana	1	22	60	48	60
Ivory Coast	1	22	60	48	60
Nigeria	1	22	60	48	60
Senegal	1	22	60	48	60
Sierra Leone	1	22	60	48	60
TOTAL	5	110	300	240	300

Electric Fans

Country	No. of units	Employ- ment	Gross output '000\$	Value added '000\$	Investment '000\$
Dahomey	1	35	280	126	30
Ghana	1	35	280	126	30
Guinea	1	35	280	126	30
Ivory Coast	1	35	280	126	30
Liberia	1	35	280	126	30
Mali	1	35	280	126	30
Niger	1	35	280	126	30
Senegal	1	35	280	126	30
Togo	1	35	280	126	30
Upper Volta	1	35	280	126	30
TOTAL	10	350	2,800	1,260	300

In addition there are several light engineering products for which no projection has been made in the Paper on Engineering, but which can be established in West Africa predominantly in the small industries sphere. These are listed below:-

1. Bicycle parts, spokes, chains, handle bars, forks, freewheels, brakes, hubs, mud guards, carriers, stands, bells.
2. Brass lampholders
3. Grey iron foundries - castings
4. Barbed wire
5. Sheet metal units
6. Irons, non-electric
7. Miniature lamps
8. Bifurcated rivets
9. Clocks and timepieces, to begin with on assembly basis - later some parts to be manufactured
10. Collapsible tubes
11. Conduit pipes
12. Hurricane lanterns
13. Perforation of sheets
14. Umbrella ribs
15. Type foundry
16. Shoe eyelets
17. Steel wool
18. Vacuum metallising
19. Zip fasteners
20. Cartridge shells
21. Pliers, spanners and other small forgings
22. Staples
23. Electric bells and buzzers
24. Soldering iron
25. Tin containers
26. Household utensils
27. Rolling shutters
28. Snap fasteners

29. Wheel barrows

30. Spring washers

A typical factory employing 33 persons would produce 600 bicycle chains per day valued at \$85,000 per annum and would require a capital investment of \$166,000.

Small Industries Service Institute 39 - Plastics

19. The demand for plastic raw materials has been projected for 1980 in the paper on Chemicals and is estimated at 246,000 tons. Deducting from this the consumption of plastic materials estimated at 13,745 tonnes in 1964, the additional demand would be 232,255 tons.

Manufactures of plastics cover a large field. Detailed analysis of the requirement in terms of the final product is difficult and statistical information is lacking. However, based on the pattern of production in the U.S.A., the following estimates have been made for production in the small sector by 1980.

Plastic pipes	5 per cent of total
Polyethylene films	3 " " " "
Moulded articles	40 " " " "

In countries where the anticipated demand is large, it is estimated that only ten per cent of this demand would be supplied by the small sector in each of these categories.

Typical unit sizes in each of these groups have been worked out and are as follows:-

1. Plastic pipes

Capacity average 30 lbs. per hour of pipes upto 2½" dia.

or 32 tons per year

Fixed capital (with building) \$ 17,000

Number of workers 12

Value of gross output @ \$840 per ton = \$ 26,880 or

say \$ 27,000

Value added 40%

II. Plastic moulding

Average capacity of machine	5 oz. per article - 50 tons per annum single shift
Fixed capital	\$40,000
Number of workers	12
Value of Gross output	\$88,000
Value added	\$22,000 - 25 per cent

III. Polyethylene packing material

Capacity	160 lbs. per day per shift or 25 tons per annum
Fixed capital	\$11,287
Number of workers	14
Value of gross output	\$50,000
Value added	25 per cent

The following tables give projections by countries:-

Plastic Pipes

Additions in Small-Scale Industries by 1980

Country	No. of units	Employ- ment	Gross output '000\$	Value added '000\$	Investment '000\$
Dahomey	6	72	162	65	102
Gambia	1	10	22	9	14
Ghana	6	77	173	69	109
Guinea	2	26	59	24	37
Ivory Coast	4	53	119	48	75
Liberia	3	34	76	30	48
Mali	1	14	31	12	19
Mauritania	1	16	36	14	23
Niger	2	21	47	19	29
Nigeria	17	203	460	184	290
Senegal	2	29	65	26	41
Sierra Leone	4	48	108	43	68
Togo	5	58	130	52	82
Upper Volta	12	138	310	124	196
TOTAL	66	800	1,798	719	1,133

Plastic FilmsAdditions in Small-Scale Industries by 1980

Country	No. of units	Employ- ment	Gross output '000\$	Value added '000\$	Investment '000\$
Dahomey	4	62	220	55	48
Gambia	1	8	30	8	7
Ghana	5	64	228	57	50
Guinea	2	22	80	20	18
Ivory Coast	3	44	158	40	35
Liberia	2	28	100	25	22
Mali	1	11	40	10	9
Mauritania	1	14	50	12	11
Niger	1	17	62	15	14
Nigeria	12	171	612	153	135
Senegal	2	24	86	22	19
Sierra Leone	5	67	240	60	53
Togo	4	50	180	45	40
Upper Volta	9	118	420	105	92
TOTAL	52	700	2,506	627	553

Moulded Articles
Additions in Small-Scale Industries by 1980

Country	No. of units	Employ- ment	Gross output '000\$	Value added '000\$	Investment '000\$
Dahomey	3	35	253	63	115
Gambia	4	48	352	88	160
Ghana	32	384	2,816	704	1,280
Guinea	11	127	933	233	424
Ivory Coast	21	253	1,857	464	844
Liberia	1	16	120	30	54
Mali	5	65	473	118	215
Mauritania	6	77	563	141	256
Niger	8	101	739	185	336
Nigeria	82	982	7,198	1,800	3,272
Senegal	11	137	1,007	252	458
Sierra Leone	3	38	282	70	128
Togo	2	28	204	51	93
Upper Volta	6	66	486	122	221
TOTAL	195	2,357	17,283	4,321	7,856

A summary of the above projections is given in the following table:-

Additions in Small-Scale Industries by 1980

Country	No. of units	Employ- ment	Gross output '000\$	Value added '000\$	Investment '000\$
Dahomey	475	13,566	55,915	22,840	44,149
Gambia	83	2,269	9,701	3,990	6,884
Ghana	1,132	31,018	133,987	53,901	96,489
Guinea	641	18,163	77,071	31,396	58,794
Ivory Coast	606	16,983	69,666	28,901	47,452
Liberia	253	7,324	30,355	12,598	21,895
Mali	403	11,053	48,499	20,096	32,445
Mauritania	194	5,487	22,596	9,274	18,504
Niger	426	12,046	49,628	20,785	35,732
Nigeria	4,738	127,798	523,316	215,080	329,546
Senegal	685	20,121	79,652	33,355	57,382
Sierra Leone	409	11,439	47,396	19,252	32,219
Togo	267	7,533	30,366	13,590	22,115
Upper Volta	440	11,947	50,719	21,235	33,526
TOTAL	10,752	296,747	1,228,867	506,293	837,132

CHAPTER IV

Policy Implications and Recommendations

20. The 1980 projections outlined in the preceding Chapter involve a steep rise in employment, gross output and value added in the small scale industry sector. The following table brings out the position:

	Actual 1962-1964	Additions by 1980
Employment	53,000	297,000
Gross output	\$ 211 million	\$1,229 million
Value Added	\$ 88 "	\$ 506 million
Investment		\$ 837 million

In 1980, it is expected that modern small industries will contribute about 25 per cent of the value added and about 33 per cent of total employment in manufacturing industries.

This is an impressive contribution to industrial development. Moreover, its importance lies in the fact that the development can be achieved by African entrepreneurs financed by domestic savings. It must, however, be realised that incentives must be provided to encourage these entrepreneurs to come forward in sufficient number.

It is important that the Governments concerned examine and clarify their attitude towards modern small industries. This is necessary because no clear policies have been enunciated so far; furthermore existing legislation appears to ignore small industries and in some countries even shut them out from their benefits.^{1/}

^{1/} Mauritania prescribes a minimum limit in respect of fixed capital of \$300,000 for a concern to get the benefit of the Code. In Guinea the limit is \$600,000. Senegal has recently modified its Code reducing its minimum limit to \$160,000 and/or creating 40 new permanent jobs for Senegalese if the unit is in Capvert, and half these limits if they are outside Capvert. But these reduced limits are still high.

A precise statement of policy would be a strong foundation on which to build the necessary superstructure of organisations involving considerable expenditure and would give a focus to the common effort. In particular, except in those countries where private ownership of productive property is not allowed, Governments might declare their objective to be the development of the local entrepreneur and their intention of giving them all-out assistance.

21. Turning now to a consideration of the difficulties which face potential entrepreneurs, they are first of all, those of lack of information as to the kind of enterprise which can be profitably undertaken, the technical processes involved, capital requirements, etc., such as is provided by a feasibility study. Secondly, they relate to finance and in particular, long-term finance.

Technical Advisory Services:

Dealing first with information and technical assistance, small enterprises cannot afford to employ the expensive specialists in different fields such as technical, managerial and financial, which are employed by large industries, but their need is real and assistance for such services essential to success.

A need for feasibility studies has been underlined by many West African countries as being of considerable importance and urgency. While there are in some countries agencies engaged in such studies, they mostly pertain to medium or large industries, preferably those involving foreign capital and know-how. Organisations studying the prospects for small industries are almost non-existent.

The circulation of booklets on small scale industry giving brief description of processes, cost of building and machinery, number of workers, estimated gross output and profit under West African conditions, would be of considerable utility. They would stimulate interest in potential entrepreneurs, give them a general idea of the magnitude and complexity of the industry and also enable them to select the most profitable industry for a given capital.

Another type of handicap usually experienced in West Africa is in the matter of book-keeping. Small undertakings are not able to maintain proper records with the result that financing institutions are reluctant to extend to them help. The need to provide facilities for training small entrepreneurs in commercial book-keeping is over-riding in some West African countries.

Information is also required on sources of machinery suitable for small scale industry and of recent developments in this regard. Low prices machines and equipment suited for small industries have been evolved in a number of industries. An example of this is the new hydraulic press for palm oil evolved by the West Africa Oil Palm Research Centre. Singer products of New York are reported to have produced a small package plant for manufacture of storage batteries with a capacity of 50 batteries a day, costing only £ 4,860 F.A.S. New York. The USAID is distributing in Sierra Leone small cement brick making plants called CINVARAM. Simple equipment to enhance productivity in the footwear industry has been produced in West Germany. Japan is reported to have produced small plants for coir fibre extraction. It is essential that these and other machines are popularised so that the African entrepreneur has an opportunity of seeing them working and of utilising them.

These services may be provided by specialised agencies such as Industrial Development Centres, Small Industry Service Institutes, etc.

22. In the West African sub-region provision for technical advisory services to small scale industry exists in only a few countries.

In Owerri, in Eastern Nigeria, with the help of USAID, ILO, Ford Foundation, the Netherlands Government and the Eastern Nigerian Government, an Industrial Development Centre has been established recently. The objective is to "provide on a sustained basis, comprehensive practical assistance and encouragement to Nigerian private entrepreneurs in small and medium scale industries". Enterprising entrepreneurs are selected and given concrete expert advice on technical, financial and management

aspects either for the expansion of existing plants or creation of new facilities. Such assisted industrial enterprises then become models for other entrepreneurs interested in improving their products, increasing productivity or starting new operations. The principal method of action is to hold seminars so that the minimum necessary knowhow for operating small enterprises can be given to a fairly large number of entrepreneurs. Those who show promise, are selected for further training, and given the fullest possible range of technical and management assistance. IDC technicians constantly visit entrepreneurs in their workshops to observe and evaluate their operations. Selected entrepreneurs who, because of their aggressive attitude and their technical ability, appear to have the potential to expand and develop their operations are invited to the IDC for further instruction. Simple production demonstrations are given, lecture and practice in simple book-keeping provided and marketing and procurement problems discussed. Particular attention is given to entrepreneurs who can supply parts for other producers or engage in assembly operations.

In other countries advisory services are provided by Small Industry Service Institutes.

India has 16 such Institutes, five branch Institutes, and 65 Extension Centres.

Small Industry Service Institutes have been set up with the help of the U.N. Special Fund in Ceylon, U.A.R., Morocco and Singapore.

23. Ideally it would be desirable to provide a Small Industries Service Institute in every country in West Africa; perhaps more than one in the bigger countries. Considerations of finance, however, rule out such a possibility. The organization of an Institute is expensive, e.g., in India a large Small Industries Service Institute costs as much as \$200,000 - \$300,000 per year in the bigger industrial areas and \$100,000 - \$150,000 for one of medium size.

In view of the heavy recurring financial outlay involved, and also the difficulty of finding qualified personnel in adequate numbers, one Small Industries Advisory Centre staffed adequately and with competent and experienced personnel should be set up, to begin with for the whole sub-region. Such an organization would also be able to deploy technical personnel among the different West African countries in accordance with their gradually evolving needs. For instance, Upper Volta might not immediately require expert assistance in setting up bicycle part factories, but Nigeria might and the same expert who assists Nigeria today would be available for assisting Upper Volta a few years later.

There may be another advantage, namely that the Institute could co-ordinate the work in the various West African countries so that industrial production is diversified and too many units are not established in the same industry.

A proposal to establish such a Small Industries Advisory Centre and the functions thereof are given in a separate document.

24. Turning now to the provision of finance, the sub-region is reasonably well placed in regard to institutions for this purpose. Barring Gambia, Sierra Leone, Mali and Togo, every country in West Africa has an industrial bank or a development corporation. Nigeria has a multiplicity of such organizations.

These Banks or Corporations have usually comprehensive permissive functions. They include loans and equity participation. In regard to availability of funds again most of them are more or less favourably placed. In the case of a few development banks as in Niger and Ivory Coast, USAID has placed substantial funds at their disposal for assistance to the private sector. West German funds have also been made available to Niger Bank.

In spite of this, the actual volume of lending to small industry is inconsiderable. The reason adduced is lack of applications and entrepreneurs. To overcome this difficulty most Corporations and Banks have resorted to the easier expedient of starting industries themselves

with foreign collaboration and know-how on the basis "mixed companies". Most of these enterprises are medium or large.

The present position is ample testimony to the fact that provision of financial resources, although important, does not by itself lead to the establishment of small industries. It needs to be associated with the provision of other services as proposed above, and with the locating of entrepreneurs. The Institutions described below largely meet this condition.

Industrial Estates

25. The Industrial Estate, consisting of not only developed land with power and water supply, but also of constructed standard factory buildings, has been recognized as an important tool for promoting industrialization. The estate eliminates for the entrepreneur the need to find finance for construction of the building and also relieves him of the time-consuming tasks of getting title of land and having buildings designed and constructed.

It is usual to associate various services in the estate such as the industrial advisory services, common facility workshops, providing facilities which an individual unit cannot afford, and training. If the estates are located in an area already earmarked for development of large industries, the units in the estate develop ancillary relationship with the large units, thereby leading to considerable mutual assistance.

On account of these decided benefits, vigorous promotional effort is being made in the direction of establishment of such estates in many countries. In India, as many as 120 estates were functioning on 31 March 1964 employing 29,449 persons. The gross output from 1,451 out of the 2,112 units working was estimated at \$18 millions. In Pakistan, the industrial estates in Gujranwala and Sialkot not only provide constructed building, but also technical services to the individual firms from a well-known German firm of consulting engineers. In Puerto Rico the industrial estate among others has been used in what is called "operation boots trap" to attract industries. By the middle of 1958 more than 500 firms had been

induced to settle in Puerto Rico, most of them being light manufacturing activities.

In West Africa, however, the industrial estate in this context is practically undeveloped. Yaba (in Lagos) is about the only estate (completed in 1958) as a pilot estate, conforming to this definition. Situated in an area of $2\frac{3}{4}$ acres, it provides 40 factory sheds, presently occupied by 28 units. All the sheds are occupied by small industries; there is pressing demand for more space.^{1/}

Enugu is reported as having another industrial estate ready but not occupied. The Development Plan of East Nigeria provides for construction of a number of similar estates.

^{1/} With 42 standard factory units (40 feet x 30 feet) situated in 7 blocks, 28 small industrial units are located in the estate. 5 of these are printing presses, 4 garment manufactures, 3 furniture factories, 1 makes scientific equipment, 1 is a cosmetic unit, 1 is a unit spray painting of cars, 2 deal in repairs of electrical appliances, 1 produces drugs, 1 is a singlet manufacturing unit, and the others are miscellaneous industries. The cost of construction of the estate is reported to be about £85,000 or \$238,000. Rent is on a subsidized basis for the first five years. Presently, it works out to £18 (\$50.4) per month for a standard factory of 40 feet x 30 feet or 1200 sq.ft., or \$0.04 per sq.ft. The maintenance costs are borne by Government. The permanent estate staff consists of one Senior Industrial Officer, 1 Accountant, 4 Clerks and 2 Storekeepers. The general services provided on the Yaba estate include power, water, watch and ward, medical care, fire protection and canteen. A fairly well equipped maintenance and repair shop is provided. The total number of persons employed in the units is estimated at 400. Demand for factory space outruns available accommodation. Twelve persons were reported to be on the waiting list for more than six months.

Most countries in West Africa have developed extensive industrial areas in one or more centres^{1/} They provide developed land, power and water supply, but not buildings. If the targets for 1980 are to be achieved an expansion of the industrial Estate System in the Countries of West Africa is essential.

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- 1/ Nigeria - Kaduna, Kano, Zaria, Jos, Emene near Enugu, Onitshe, Ikeja, Mushin, Ajeromi, Ibadan, Abeakuta, Oshogbe and Akure.
Gambia - Bathurst
Ghana - Tema
Guinea - Conakry
Sierra Leone - Willington Industrial Estate, Freetown
Dahomey - Cotonou
Liberia - Monrovia
Niger - Niamey

The number of sheds, their sizes and the facilities to be provided are matters which require detailed examination.

It is desirable to fix the rents of factories in the estate quite low. In the initial stages of a new industry, an element of subsidy in rentals may be justified. This principle has been accepted in the industrial estates in India and subsidized rentals on a tapering basis for the first five years are charged. In Puerto Rico, the rentals are fixed at tapering rates. Beginning with San Juan where they are highest they get reduced as the distance of the Municipality gets longer. As an inducement for establishment of industries in remote areas, PRIDCO is reported to be offering rent free buildings for the first $1\frac{1}{2}$ years.

It is desirable to provide for purchase of factory space on a hire purchase basis as an alternative to rental. The land will, however, continue to be on lease.

It is obviously not possible to estimate the investment required for the programme of industrial estates. If by 1980, ten estates are to be set up with 100 factory sheds in the four countries of Nigeria, Ghana, Ivory Coast and Senegal and 50 in each of the other countries, or a total 700 sheds, the constructed space may roughly be about 100,000 square metres. The cost of construction of the estate, the workshops, administrative blocks, etc., will depend upon the costs of local building materials, labour and supervisory personnel. In addition provision must be made for administrative personnel to manage the estates.

In most countries, the expert technical staff will be expected to advise and develop not only units in the estate but over the whole country.

The UN Special Fund has agreed in certain countries, e.g., Uganda to meet a part of the expenditure involved. The cost of the foreign experts, the expenditure on fellowships for training local counterpart staff and others and also on the capital cost of equipment for setting up common facility shops have been accepted for a subsidy from the UN Special Fund. The Government concerned is expected to meet the cost of

construction of building of the Estate and on the local staff. Except in the case of the four industrially advanced countries, viz., Nigeria, Ghana, Senegal and Ivory Coast, it may be necessary to secure additional assistance from bilateral or other sources to start industrial estates in the smaller countries of the West African region.

Hire Purchase Facilities

26. Supply of machines on hire purchase basis to small enterprises has been found in practice to be a useful instrument for attracting entrepreneurs. Under this scheme the entrepreneur furnishes only 20 per cent of the cost of the machines; the balance is furnished by a Corporation which procures and supplies the machines to the client without taking any guarantee. The machine remains the property of the corporation, until outright purchase on an instalment basis is made.

Such a scheme is understood to be working in Burma and Indonesia. The Banco Cafetero finances equipment imports in Colombia. The biggest experiment, however, which has succeeded is in India where the wholly Government owned National Small Industries Corporation has been operating the scheme for well over 10 years. Established in 1955, this Corporation has supplied 14,326 machines to 4,775 units of a value of \$43 million: for the period ending on 31.3.1965. The coverage by the Corporation is country-wide, and over a vast diversity of industries. The supply extends from an ordinary band saw, power hammer and welding set or a lathe to complete plants for a variety of industries such as paper, collapsible tubes, tin making, manufacture of fluorescent tubes, water meters, plastic moulding machines, galvanized pipe manufacture and the like. Unlike the supply of hire purchase machines by machine dealers, the Corporation's main objective is service. By bulking demands for similar machines and calling for global tenders, the Corporation is in a position to secure prices which probably an individual small undertaking may not be able to secure. The Corporation's finances are obtained from the Government of India, but this is comparatively inconsiderable; in the main it obtains lines of credit from international sources.

The Corporation charges on outstandings from clients interest at 6 per cent and a service charge of 6 per cent. Its working is entirely commercial in character.

In West Africa, supply of machines on a hire purchase basis is not altogether new. The Credit du Togo has been operating such a scheme but at the level of artisans who have been supplied tools on this basis. In Northern Nigeria, it is understood that on the recommendation of a team of experts from the Ford Foundation such a system is being started.

As regards the best form of organization to supply machines on a hire-purchase basis and undertake construction of Industrial Estates, this function can perhaps be taken up by the Development Banks or Corporations especially in the smaller countries where the volume of activity is not likely to be very heavy.

In the larger countries, such as Nigeria, Ghana, Senegal and Ivory Coast, it may be desirable to organize a separate Small Industry Corporations, which would construct the industrial estates, arrange supply of machinery, and assist in marketing.

The African Development Bank could with advantage back the activities of these Industrial Development Banks or Corporations and guarantee their financing of the operation.

27. Further assistance in marketing is essential if small industries are to be successful. In certain countries selective government purchasing and quality marking have been adopted to benefit small-scale industries.

Governments usually are the most important purchasers in every country. Government purchase policy has been used as an instrument to stimulate small industries notably in USA and also India. In the latter,

about 70 articles are reserved for exclusive purchase from the small industries sector^{1/}

1/ Brass padlocks	Woolen hosiery	Umbrellas
G.I. padlocks	Keys wooden	Animal driven vehicles
Brass dampers	Stone curvy and stone roller	Skin sheep - all types
Boxes made of metal	Caps cotton	Hand drawn carts of all types
Sign Board painted	Curtain mosquito	Sole leather
Buttons metal	Tape cotton	Leather harness
Postal weighing scales	Bandage cloth	Ghamellas
All badges, cloth embroidered and metals	Garments	Dust bins
Belt leather (apparel)	Wicks cotton	Ustensils cooking (except stainless steel utensils and vessel pressure cookers)
Cash bags	Stockinette	Bags ice head
Dust shield leather	Rags cotton	Wooden packing cases of all sizes
Chappals and Sandals	Blacksmith hearth	Lamps signal
Leather Boxes (not army type)	Kodali	Gauge surgical all types
Laces leather	Basket cane	Patient coat and py-jamas
Leather bags	Lathies	Dusters cotton all types (except the items reqd. in Khadi)
Boots and shoes of types reqd. for civil indentors	Caps woolen	Hair pasham wool
Glass ampoules	Belts leather and strips	Nail tip heel
Handles wooden & bamboo	Wheel barrows	Cumblies
Soap washing or laundry soap	Tarpaulin	Leather washers
Metal polish	Brushes	Metric weights
Scissors cutting (ord. scissors)	Brooms	Tin trays
Coir fibre and Coir yarn	Steel trunks	Teak fabricated round block
Postal lead seals	Hides and country leather of all types	
Cotton hosiery	Railway platform drinking water trolleys	

A liaison officer of the Small Industries Corporation works with the Government Purchasing department at the time tenders are considered and attempts to secure for small-scale industries as much share of Government contracts as possible. In West Africa, Nigeria has adopted a policy of giving preference to local industries (not necessarily small) in the matter of Government purchases. It will be desirable for other Governments to devise a policy in favour of small-scale industries as part of their policy for promoting industrial development.

The chief obstacle that products from newly developing small units will face will be the prejudice on the part of the consumer in favour of well known foreign brands. To counter this tendency, a measure of considerable utility is the initiation of a system of quality marking. (See the separate paper on Standardization). The quality marking scheme adopts such standards in respect of specified articles, assists manufacturers in conforming to these standards, and arranges inspections on a scientific basis. Goods coming up to standards are stamped with a quality mark. The mark is popularized by means of advertisement in the press and radio and posters so that the consumer gets the confidence that quality marked goods are worthy of purchase.

28. The Industrial Institute, Industrial Estate and the Hire-Purchase system offer effective instruments for drawing out the entrepreneur in West Africa and in channellizing initiative into useful spheres. They have to be utilized simultaneously.

What is required is not merely the provision of the three services mentioned above, but to initiate a dynamic programme utilizing these

three instruments to draw out entrepreneurs^{1/}. This is done in India by what are called intensive campaigns with which leaders of public opinion are associated. Meetings are convened in local areas, model schemes are distributed, outlines of industrial possibilities explained and discussions are held. Films of possible small industries are shown. Exhibitions are arranged of end-products which could be manufactured. Such campaigns have been held in the industrially least promising areas in India with excellent response.

1/ The position in respect of availability of entrepreneurs is not as bad as is sometimes made out. A careful examination shows that they exist in almost every West African country; only their number is small and within this small limit, the number varies from country to country. There are examples of West African entrepreneurs who have successfully taken up the traditional lines of furniture (wood and metal), footwear, soft drinks and of others who have struck new paths and developed modern small industries in electro-plating, sports goods, ready made garments, printing, paints, industrial gases, etc. Similar units are under construction for matches. Potential entrepreneurs exist among successful merchants, artisans and craftsmen who could be induced to take up other projects. The Chambre Syndicale du Patronat Sénégalais, an all-African Chamber of Commerce, with about 100 members, orally expressed the view that quite a number of entrepreneurs are interested in starting small industries. The successful Liberian rubber planters are stated as possible small industry entrepreneurs. In Dahomey it is understood that a number of displaced technicians formerly working in other West African countries can set up small units.

Summary of Projections for 1980 - Dahomey

		Additions in SSI by 1980				
		('000 \$)				
		Units	Employment	Gross Output	Value Added	Investment
ISIC						
20	Food industries ^{a/}	349	10,459	41,885	16,774	39,371
21	Beverages - Soft drinks	6	240	886	460	600
23	Textiles - weaving	6	102	300	72	210
24	<u>Footwear, other wearing apparel and made up textile goods</u>					
	Footwear -Plastic	1	9	162	40	45
	-Leather	1	36	43	17	18
	Knitted goods	28	429	1,388	555	418
	Garments	11	339	2,373	949	203
25	Woodwork	6	240	384	153	120
26	Furniture	15	294	1,352	541	441
27	Paper and Paper Products	5	80	889	355	270
28	Printing and Publishing	7	212	560	358	224
31	<u>Chemicals and Chemical Products</u>					
	Cosmetics & perfumery	3	125	500	200	187
	Pharmaceuticals	3	165	1,000	400	247
	Vegetable oils	7	280	1,400	560	560
33	<u>Non-metallic mineral products</u>					
	Bricks	3	63	278	167	50
	Concrete Blocks & Fills	4	132	600	360	200
	Concrete Hoofing Tiles	-	-	-	-	-
	Cement & Concrete Tiles	3	51	300	180	300
	Concrete Pipes	2	66	400	240	300
35-37	<u>Engineering Products</u> ^{b/}					
	Springs	-	-	-	-	-
	Pins & other wire products	-	-	-	-	-
	Grinding machines (motorised & otherwise)	1	40	300	150	90
	Switches and other electrical accessories	-	-	-	-	-
	Electric fans	1	35	280	126	30
39	<u>Plastic Products</u>					
	Pipes	6	72	162	65	102
	Plastic films and bags	4	62	220	55	48
	Plastic moulded articles	3	35	253	63	115
	Grand Total	475	13,566	55,915	22,840	44,149

^{a/} Includes bakeries, probably accounting for over half the output & employment. Other important items are grain mill products, fruit & vegetable canning, dairy products and sugar confectionery.

^{b/} A number of other engineering products for which no projection is available can be made on a small scale. (para 18)

Summary of Projections for 1980 - Gambia

Additions in SSI by 1980					
('000 \$)					
ISIC	Units	Employment	Gross Output	Value Added	Investment
20 Food industries ^{a/}	49	1,475	5,900	2,400	5,546
21 Beverages - Soft drinks	-	-	-	-	-
23 Textiles - weaving	1	17	50	12	35
24 <u>Footwear, other wearing apparel and made up textile goods</u>					
Footwear - Plastic	1	20	360	90	100
- Leather	2	82	98	39	41
Knitted goods	5	61	198	79	58
Garments	2	50	350	140	30
25 Woodwork	1	50	80	32	25
26 Furniture	7	141	649	259	212
27 Paper and Paper Products	1	20	241	98	70
28 Printing and Publishing	1	30	80	51	32
31 <u>Chemicals and Chemical Products</u>					
Cosmetics & perfumery	1	35	100	40	52
Pharmaceuticals	-	-	-	-	-
Vegetable oils	1	40	200	80	80
33 <u>Non-metallic mineral products</u>					
Bricks	1	9	41	25	7
Concrete Blocks & Fills	1	100	450	270	150
Concrete Roofing Tiles	-	-	-	-	-
Cement & Concrete Tiles	1	17	100	60	100
Concrete Pipes	1	16	100	60	75
35-37 <u>Engineering Products</u> ^{b/}					
Springs	-	-	-	-	-
Pins & other wire products	-	-	-	-	-
Grinding machines (motorised & otherwise)	1	40	300	150	90
Switches and other electrical accessories	-	-	-	-	-
Electric fans	-	-	-	-	-
39 <u>Plastic Products</u>					
Pipes	1	10	22	9	14
Plastic films and bags	1	8	30	8	7
Plastic moulded articles	4	48	352	88	160
Grand Total	83	2,269	9,701	3,990	6,884

a/ Includes bakeries, probably accounting for over half the output & employment. Other important items are grain mill products, fruit, vegetable canning, dairy products and sugar confectionery.

b/ A number of other engineering products for which no projection is available can be made on a small scale. (para .18)

Summary of Projections for 1980 - Ghana

		Additions in SSI by 1980				
		('000 \$)				
		Units	Employment	Gross Output	Value Added	Investment
* ISIC						
20	Food industries ^{a/}	664	19,914	84,924	33,663	79,839
21	Beverage -- Soft drinks	10	380	1,300	700	1,000
23	Textiles -- weaving	21	357	1,050	252	735
24	<u>Footwear, other wearing apparel and made up textile goods</u>					
	Footwear -- Plastic	5	102	1,836	459	510
	-- Leather	15	608	730	292	304
	Knitted goods	105	1,554	5,028	2,012	1,510
	Garments	41	1,232	8,624	3,450	739
25	Woodwork	38	1,500	2,400	960	750
26	Furniture	104	2,080	9,568	3,827	3,120
27	Paper and Paper Products	12	180	2,050	820	620
28	Printing and Publishing	18	553	1,459	935	584
31	<u>Chemicals and Chemical Products</u>					
	Cosmetics & perfumery	2	110	550	220	165
	Pharmaceuticals	8	640	3,900	1,560	960
	Vegetable oils	10	400	2,000	800	800
33	<u>Non-metallic mineral products</u>					
	Bricks	11	230	1,011	607	184
	Concrete Blocks and Fills	-	-	-	-	-
	Concrete Roofing Tiles	2	66	400	240	400
	Cement & Concrete Tiles	10	170	1,000	600	1,000
	Concrete Pipes	10	330	2,000	1,200	1,500
35-37	<u>Engineering Products^{b/}</u>					
	Springs	1	30	600	300	240
	Pins & other wire products	-	-	-	-	-
	Grinding machines (motorised & otherwise)	-	-	-	-	-
	Switches and other electrical accessories	1	22	60	48	60
	Electric fans	1	35	280	126	30
39	<u>Plastic Products</u>					
	Pipes	6	77	173	69	109
	Plastic films and bags	5	64	228	57	50
	Plastic moulded articles	32	384	2,816	704	1,280
	Grand Total	1,132	31,018	133,987	53,901	96,489

^{a/} Includes bakeries, probably accounting for over half the output & employment. Other important items are grain mill products, fruit & vegetable canning, dairy products and sugar confectionery.

^{b/} A number of other engineering products for which no projection is available can be made on a small scale. (para 18).

Summary of Projections for 1980 - Guinea

Additions in SSI by 1980					
('000 \$)					
ISIC	Units	Employment	Gross Output	Value Added	Investment
20 Food industries ^{a/}	460	13,800	55,200	22,100	51,888
21 Beverages - Soft drinks	-	-	-	-	-
23 Textiles - weaving	2	153	450	108	315
24 Footwear, other wearing apparel and made up textile goods					
Footwear - Plastic	1	10	180	45	50
" Leather	1	40	48	19	20
Knitted goods	43	644	2,082	832	626
Garments	17	510	3,570	1,428	306
25 Woodwork	5	200	320	128	100
26 Furniture	21	416	1,914	765	624
27 Paper and Paper Products	11	170	1,896	760	570
28 Printing and Publishing	11	318	840	537	336
31 Chemicals and Chemical Products					
Cosmetics & perfumery	3	125	500	200	187
Pharmaceuticals	12	585	3,500	1,400	877
Vegetable oils	10	400	2,000	800	800
33. Non-metallic mineral products					
Bricks	5	95	419	251	76
Concrete blocks & Fills	8	264	1,200	720	400
Concrete Roofing Tiles	-	-	-	-	-
Cement & Concrete Tiles	4	102	600	360	600
Concrete Pipes	2	66	400	240	300
35-37 Engineering Products ^{b/}					
Springs	1	15	300	150	120
Pins & other wire products	-	-	-	-	-
Grinding machines (motorised & otherwise)	1	40	300	150	90
Switches and other electrical accessories	-	-	-	-	-
Electric fans	1	35	280	126	30
39. Plastic Products					
Pipes	2	26	59	24	37
Plastic films and bags	2	22	80	20	18
Plastic moulded articles	11	127	933	233	424
	641	18,163	77,071	31,396	58,794

^{a/} Includes bakeries, probably accounting for over half the output & employment. Other important items are grain mill products, fruit & vegetable canning, dairy products and sugar confectionery.

^{b/} A number of other engineering products for which no projection is available can be made on a small scale. (para 18).

Summary of Projections for 1980 - Ivory Coast Annex
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		Additions in SSI by 1980 ('000 \$)				
ISIC		Units	Employment	Gross Output	Value Added	Investment
20	Food industries ^{a/}	261	7,825	31,300	12,500	29,422
21	Beverages - Soft drinks	19	760	2,700	1,400	1,900
23	Textiles - weaving	9	153	450	108	315
24	<u>Footwear, other wearing apparel and made up textile goods</u>					
	Footwear - Plastic	5	98	1,764	441	490
	- Leather	27	1,074	1,289	515	537
	Knitted goods	46	690	2,231	892	670
	Garments	18	546	3,822	1,529	328
25	Woodwork	50	2,000	3,200	1,280	1,000
26	Furniture	64	1,280	5,888	2,355	1,920
27	Paper and Paper Products	16	243	5,000	2,000	5,100
28	Printing and Publishing	11	341	900	576	360
31	<u>Chemicals and Chemical Products</u>					
	Cosmetics & perfumery	2	110	550	220	165
	Pharmaceuticals	5	240	1,500	600	360
	Vegetable oils	4	170	850	340	340
33	<u>Non-metallic mineral products</u>					
	Bricks	5	102	448	269	81
	Concrete Blocks & Fills	12	396	1,800	1,080	600
	Concrete Roofing Tiles	1	33	200	120	200
	Cement & Concrete Tiles	10	170	1,000	600	1,000
	Concrete Pipes	10	330	2,000	1,200	1,500
35-37	<u>Engineering Products</u> ^{b/}					
	Springs	1	15	300	150	120
	Pins & other wire products	-	-	-	-	-
	Grinding machines (motorised & otherwise)	-	-	-	-	-
	Switches and other electrical accessories	1	22	60	48	60
	Electric fans	1	35	280	126	30
39	<u>Plastic Products</u>					
	Pipes	4	53	119	48	75
	Plastic films and bags	3	44	158	40	35
	Plastic moulded articles	21	253	1,857	464	844
Grand Total		606	16,983	69,666	28,901	47,452

^{a/} Includes bakeries, probably accounting for over half the output & employment. Other important items are grain mill products, fruit & vegetable canning, dairy products and sugar confectionery.

^{b/} A number of other engineering products for which no projection is available can be made on a small scale. (Para 18).

		Additions in SSI by 1980				
		('000 \$)				
		Units	Employment	Gross Output	Value Added	Investment
ISIC						
20	Food industries ^{a/}	149	4,466	18,264	7,266	17,168
21	Beverages -- Soft drinks	11	440	1,500	800	1,100
23	Textiles -- weaving	2	34	100	24	70
24	<u>Footwear, other wearing apparel and made up textile goods</u>					
	Footwear -- Plastic	2	34	612	153	170
	-- Leather	7	264	317	127	132
	Knitted goods	11	158	512	205	153
	Garments	4	126	882	353	76
25	Woodwork	8	318	509	204	159
26	Furniture	24	480	2,208	883	720
27	Paper and Paper Products	4	60	672	270	200
28	Printing and Publishing	-	-	-	-	-
31	<u>Chemicals and Chemical Products</u>					
	Cosmetics & perfumery	3	125	500	200	187
	Pharmaceuticals	3	165	1,000	400	247
	Vegetable oils	3	120	600	240	240
33	<u>Non-metallic mineral products</u>					
	Bricks	1	23	103	62	19
	Concrete Blocks & Fills	8	264	1,200	720	400
	Concrete Roofing Tiles	-	-	-	-	-
	Cement & Concrete Tiles	4	68	400	240	400
	Concrete Pipes	2	66	400	240	300
35-37	<u>Engineering Products</u> ^{b/}					
	Springs	-	-	-	-	-
	Pins & other wire products	-	-	-	-	-
	Grinding machines	-	-	-	-	-
	(motorised & otherwise)	-	-	-	-	-
	Switches and other electrical accessories	-	-	-	-	-
	Electric fans	1	35	280	126	30
39	<u>Plastic Products</u>					
	Pipes	3	34	76	30	48
	Plastic films and bags	2	28	100	25	22
	Plastic moulded articles	1	16	120	30	54
Grand Total		253	7,324	30,355	12,598	21,895

^{a/} Includes bakeries, probably accounting for over half the output & employment. Other important items are grain mill products, fruit & vegetable canning, dairy products and sugar confectionery.

^{b/} A number of other engineering products for which no projection is available can be made on a small scale. (para 18).

Summary of Projections for 1980 - Mali

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Additions in SSI by 1980

('000 \$)

		Units	Employ- ment	Gross Output	Value Added	Investment
ISIC						
20	Food industries ^{a/}	224	6,725	26,900	10,700	25,286
21	Beverages - Soft drinks	4	160	620	322	400
23	Textiles - weaving	11	187	550	132	385
24	<u>Footwear, other wearing apparel and made up textile goods</u>					
	Footwear - Plastic	2	32	576	144	160
	- Leather	5	190	228	91	95
	Knitted goods	56	830	2,685	1,074	805
	Garments	22	658	4,606	1,842	395
25	Woodwork	1	40	64	25	20
26	Furniture	9	176	810	324	264
27	Paper and Paper Products	11	160	1,815	730	550
28	Printing and Publishing	14	409	1,080	691	432
31	<u>Chemicals and Chemical Products</u>					
	Cosmetics & perfumery	2	100	400	160	150
	Pharmaceuticals	8	415	2,500	1,000	622
	Vegetable oils	8	320	1,600	640	640
33	<u>Non-metallic mineral products</u>					
	Bricks	6	123	541	325	98
	Concrete Blocks & Fills	5	165	750	450	500
	Concrete Roofing Tiles	-	-	-	-	-
	Cement & Concrete Tiles	2	34	200	120	300
	Concrete Pipes	3	99	600	360	600
35-37	<u>Engineering Products ^{b/}</u>					
	Springs	-	-	-	-	-
	Pins and other wire products	1	65	850	550	380
	Grinding machines (motorised & otherwise)	1	40	300	150	90
	Switches and other electrical accessories	-	-	-	-	-
	Electric fans	1	35	280	126	30
39	<u>Plastic Products</u>					
	Pipes	1	14	31	12	19
	Plastic films and bags	1	11	40	10	9
	Plastic moulded articles	5	65	473	118	215
Grand Total		403	11,053	48,499	20,096	32,445

^{a/} Includes bakeries, probably accounting for over half the output & employment. Other important items are grain mill products, fruit & vegetable canning, dairy products and sugar confectionery.

^{b/} A number of other engineering products for which no projection is available can be made on a small scale. (para 18).

Summary of Projections for 1980 - Mauritania

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		Additions in SSI by 1980				
		('000 \$)				
		Units	Employ- ment	Gross Output	Value Added	Investment
ISIC						
20	Food industries ^{a/}	143	4,290	17,160	6,780	16,130
21	Beverages - Soft drinks	1	40	18	9	100
23	Textiles - weaving	2	34	100	24	70
24	<u>Footwear, other wearing apparel and made up textiles goods</u>					
	Footwear -- Plastic	-	-	-	-	-
	-- Leather	1	14	17	7	7
	Knitted goods	8	113	368	147	110
	Garments	3	90	630	252	54
25	Woodwork	3	100	160	64	50
26	Furniture	8	160	736	294	240
27	Paper and Paper Products	1	20	234	90	70
28	Printing and Publishing	2	57	150	96	60
31	<u>Chemicals and Chemical Products</u>					
	Cosmetics & perfumery	-	-	-	-	-
	Pharmaceuticals	-	-	-	-	-
	Vegetable oils	2	80	400	160	160
33	<u>Non-metallic mineral products</u>					
	Bricks	1	17	74	44	13
	Concrete Blocks & Fills	6	198	900	540	300
	Concrete Roofing Tiles	-	-	-	-	-
	Cement and Concrete Tiles	2	68	400	240	400
	Concrete Pipes	3	99	600	360	450
35-37	<u>Engineering Products</u> ^{b/}					
	Springs	-	-	-	-	-
	Pins & other wire products	-	-	-	-	-
	Grinding machines (motorised & otherwise)	-	-	-	-	-
	Switches and other electrical accessories	-	-	-	-	-
	Electric fans	-	-	-	-	-
39	<u>Plastic Products</u>					
	Pipes	1	16	36	14	23
	Plastic films and bags	1	14	50	12	11
	Plastic moulded articles	6	77	563	141	256
Grand Total		194	5,487	22,596	9,274	18,504

^{a/} Includes bakeries, probably accounting for over half the output & employment. Other important items are grain mill products, fruit & vegetable canning, dairy products and sugar confectionery.

^{b/} A number of other engineering products for which no projection is available can be made on a small scale. (para 18).

Summary of Projections for 1980 - Niger

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		Additions in SSI by 1980				
		('000 \$)				
		Units	Employ-	Gross	Value	Investment
			ment	Output	Added	
ISIC						
20	Food industries ^{a/}	259	7,780	30,419	12,296	28,594
21	Beverages - Soft drinks	-	-	-	-	-
23	Textiles - weaving	8	136	400	96	280
24	<u>Footwear, other wearing apparel and made up textile goods</u>					
	Footwear - Plastic	1	22	396	99	110
	- Leather	6	232	278	111	116
	Knitted goods	40	599	1,938	776	582
	Garments	16	474	3,318	1,327	284
25	Woodwork	14	540	864	346	270
26	Furniture	14	288	1,325	530	432
27	Paper and Paper Products	7	110	1,273	510	380
28	Printing and Publishing	8	246	650	416	260
31	<u>Chemicals and Chemical Products</u>					
	Cosmetics & perfumery	3	125	500	200	187
	Pharmaceuticals	3	165	1,000	400	247
	Vegetable oils	10	390	1,950	780	780
33	<u>Non-metallic mineral products</u>					
	Bricks	4	88	389	233	71
	Concrete Blocks & Fills	15	495	2,250	1,350	1,500
	Concrete Roofing Tiles	-	-	-	-	-
	Cement & Concrete Tiles	3	51	300	180	450
	Concrete Pipes	2	66	400	240	400
35-37	<u>Engineering Products</u> ^{b/}					
	Springs	-	-	-	-	-
	Pins & other wire products	1	65	850	550	380
	Grinding machines (motorised & otherwise)	-	-	-	-	-
	Switches and other electrical accessories	-	-	-	-	-
	Electric fans	1	35	280	126	30
39	<u>Plastic Products</u>					
	Pipes	2	21	47	19	29
	Plastic films and bags	1	17	62	15	14
	Plastic moulded articles	8	101	739	185	336
Grand Total		426	12,046	49,628	20,785	35,732

^{a/} Includes bakeries, probably accounting for over half the output & employment. Other important items are grain mill products, fruit & vegetable canning, dairy products and sugar confectionery.

^{b/} A number of other engineering products for which no projection is available can be made on a small scale. (para 18).

Summary of Projections for 1980 - Nigeria

		Additions in SSI by 1980				
		('000 \$)				
ISIC		Units	Employment	Gross Output	Value Added	Investment
20	Food industries ^{a/}	2,398	71,951	270,199	104,355	253,987
21	Beverages - Soft drinks	2	80	240	125	200
23	Textiles - weaving	158	2,686	7,900	1,896	5,530
24	<u>Footwear, other wearing apparel and made up textile goods</u>					
	Footwear - Plastic	19	384	6,912	1,728	1,920
	- Leather	56	2,232	2,678	1,071	1,116
	Knitted goods	789	11,664	37,750	15,100	11,332
	Garments	308	9,242	64,694	25,877	5,545
25	Woodwork	61	2,450	3,920	1,568	1,225
26	Furniture	224	4,480	20,608	8,243	6,720
27	Paper and Paper Products	47	700	8,000	3,200	2,500
28	Printing and Publishing	138	4,164	10,993	7,037	4,397
31	<u>Chemicals and Chemical Products</u>					
	Cosmetics & perfumery	16	1,200	6,000	2,400	1,800
	Pharmaceuticals	20	1,545	9,300	3,720	2,317
	Vegetable oils	71	2,840	14,200	5,680	5,680
33	<u>Non-metallic mineral products</u>					
	Bricks	86	1,725	7,592	4,555	1,380
	Concrete Blocks & Fills	170	7,310	33,000	19,800	11,000
	Concrete Roofing Tiles	2	66	400	240	400
	Cement & Concrete Tiles	30	680	4,000	2,400	4,000
	Concrete Pipes	30	990	6,000	3,600	4,600
35-37	<u>Engineering Products^{b/}</u>					
	Springs	1	30	600	300	240
	Pins & other wire products	-	-	-	-	-
	Grinding machines (motorized & otherwise)	-	-	-	-	-
	Switches and other electrical accessories	1	22	60	48	60
	Electric fans	-	-	-	-	-
39	<u>Plastic Products</u>					
	Pipes	17	204	460	184	290
	Plastic films and bags	12	171	612	153	135
	Plastic moulded articles	82	982	7,198	1,800	3,272
Grand Total		4,738	127,798	523,316	215,080	329,546

a/ Includes bakeries, probably accounting for over half the output & employment. Other important items are grain mill products, fruit & vegetable canning, dairy products and sugar confectionery.

b/ A number of other engineering products for which no projection is available can be made on a small scale. (para 18).

Summary of Projections for 1980 - Senegal

		Additions in SSI by 1980			
		('000 \$)			
		Units	Employment	Gross Output	Value Added Investment
ISIC					
20	Food industries ^{a/}	422	12,669	49,575	20,526 46,601
21	Beverages - Soft drinks	12	480	1,600	850 1,200
23	Textiles - weaving	8	136	400	96 280
24	Footwear, other wearing apparel and made up textile goods				
	Footwear - Plastic	6	125	2,250	562 625
	Footwear - Leather	34	1,367	1,640	656 684
	Knitted goods	39	592	1,916	766 575
	Garments	16	470	3,290	1,316 282
25	Woodwork	28	1,100	1,760	704 550
26	Furniture	50	992	4,563	1,825 1,488
27	Paper and Paper Products	14	210	2,388	960 720
28	Printing and Publishing	2	52	136	88 54
31	Chemicals and Chemical Products				
	Cosmetics & perfumery	3	170	850	340 255
	Pharmaceuticals	4	300	1,800	720 450
	Vegetable oils	3	120	600	240 240
33	Non-metallic mineral products				
	Bricks	4	88	386	232 70
	Concrete Blocks & Fills	10	670	3,000	1,800 1,000
	Concrete Roofing Tiles	1	33	200	120 200
	Cement & Concrete Tiles	6	102	600	360 600
	Concrete Pipes	6	198	1,200	720 900
35-37	Engineering Products ^{b/}				
	Springs	-	-	-	- -
	Pins & other wire products	-	-	-	- -
	Grinding machines (motorized & otherwise)	-	-	-	- -
	Switches and other electrical accessories	1	22	60	48 60
	Electric fans	1	35	280	126 30
39	Plastic Products				
	Pipes	2	29	65	26 41
	Plastic films and bags	2	24	86	22 19
	Plastic moulded articles	11	137	1,007	252 458
	Grand Total	685	20,121	79,652	33,355 57,382

a/ Includes bakeries, probably accounting for over half the output & employment. Other important items are grain mill products, fruit & vegetable canning, dairy products and sugar confectionery.

b/ A number of other engineering products for which no projection is available can be made on a small scale. (para 18).

Summary of Projections for 1980 - Sierra Leone

		Additions in SSI by 1980				
		('000 \$)				
ISIC		Units	Employment	Gross Output	Value Added	Investment
20	Food industries ^{a/}	239	7,160	27,500	10,730	25,850
21	Beverages - Soft drinks	1	40	20	10	100
23	Textiles - weaving	6	102	300	72	210
24	Footwear, other wearing apparel and made up textile goods					
	Footwear - Plastic	2	37	666	166	185
	- Leather	5	214	257	103	107
	Knitted goods	31	468	1,516	607	453
	Garments	12	372	2,604	1,042	223
25	Woodwork	8	305	488	195	152
26	Furniture	32	640	2,944	1,178	960
27	Paper and Paper Products	12	180	2,107	840	630
28	Printing and Publishing	8	227	598	384	240
31	Chemicals and Chemical Products					
	Cosmetics & perfumery	3	175	700	280	262
	Pharmaceuticals	8	415	2,500	1,000	622
	Vegetable oils	7	280	1,400	560	560
33	Non-metallic mineral products					
	Bricks	3	70	306	184	56
	Concrete Blocks & Fills	14	462	2,100	1,260	700
	Concrete Roofing Tiles	-	-	-	-	-
	Cement & Concrete Tiles	3	51	300	180	300
	Concrete Pipes	2	66	400	240	300
35-37	Engineering Products ^{b/}					
	Springs	-	-	-	-	-
	Pins & other wire products	-	-	-	-	-
	Grinding machines (motorized & otherwise)	-	-	-	-	-
	Switches and other electrical accessories	1	22	60	48	60
	Electric fans	-	-	-	-	-
39	Plastic Products					
	Pipes	4	48	108	43	68
	Plastic films and bags	5	67	240	60	53
	Plastic moulded articles	3	38	282	70	128
Grand Total		409	11,439	47,396	19,252	32,219

a/ Includes bakeries, probably accounting for over half the output & employment. Other important items are grain mill products, fruit & vegetable canning, dairy products and sugar confectionery.

b/ A number of other engineering products for which no projection is available can be made on a small scale, (para 18).

Summary of Projections for 1980 - Togo

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		Additions in SSI by 1980				
		('000 \$)				
ISIC		Units	Employ- ment	Gross output	Value added	Investment
20	Food industries ^{a/}	180	5,398	19,750	9,000	18,565
21	Beverages - Soft drinks	2	80	344	179	200
23	Textiles - weaving	4	68	200	48	140
24	<u>Footwear, other wearing apparel and made up textile goods</u>					
	Footwear - Plastic	1	15	270	68	75
	- Leather	1	59	71	28	30
	Knitted goods	20	304	983	393	297
	Garments	8	240	1,680	672	144
25	Woodwork	3	110	176	70	55
26	Furniture	6	112	515	206	168
27	Paper and Paper Products	4	60	721	290	220
28	Printing and Publishing	1	44	115	74	46
31	<u>Chemicals and Chemical Products</u>					
	Cosmetics & perfumery	3	125	500	200	187
	Pharmaceuticals	3	165	1,000	400	247
	Vegetable oils	5	200	1,000	400	400
33	<u>Non-metallic mineral products</u>					
	Bricks	2	45	197	118	36
	Concrete Blocks & Fills	5	165	750	450	250
	Concrete Roofing Tiles	-	-	-	-	-
	Cement & Concrete Tiles	3	51	300	180	300
	Concrete Pipes	2	66	400	240	300
35-37	<u>Engineering Products</u> ^{b/}					
	Springs	1	15	300	150	120
	Pins & other wire products	-	-	-	-	-
	Grinding machines (motorised & otherwise)	1	40	300	150	90
	Switches and other electrical accessories	-	-	-	-	-
	Electric fans	1	35	280	126	30
39	<u>Plastic Products</u>					
	Pipes	5	58	130	52	82
	Plastic films and bags	4	50	180	45	40
	Plastic moulded articles	2	28	204	51	93
	Grand Total	267	7,533	30,366	13,590	22,115

^{a/} Includes bakeries, probably accounting for over half the output & employment. Other important items are grain mill products, fruit & vegetable canning, dairy products and sugar confectionery.

^{b/} A number of other engineering products for which no projection is available can be made on a small scale. (para 18).

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		Additions in SSI by 1980				
		('000 \$)				
	ISIC	Units	Employ- ment	Gross Output	Value Added	Investment
20	Food industries ^{a/}	220	6,600	26,400	10,600	24,816
21	Beverages - Soft drinks	3	120	460	239	300
23	Textiles - weaving	11	187	550	132	385
24	<u>Footwear, other wearing apparel and made up textile goods</u>					
	Footwear -- Plastic	2	43	774	194	215
	-- Leather	4	178	214	86	89
	Knitted goods	56	821	2,658	1,064	799
	Garments	22	651	4,557	1,823	391
25	Woodwork	14	565	904	362	282
26	Furniture	9	176	810	324	264
27	Paper and Paper Products	11	170	1,911	760	570
28	Printing and Publishing	13	398	1,000	673	400
31	<u>Chemicals and Chemical Products</u>					
	Cosmetics & perfumery	3	175	700	280	262
	Pharmaceuticals	3	165	1,000	400	247
	Vegetable oils	14	560	2,800	1,120	1,120
33	<u>Non-metallic mineral products</u>					
	Bricks	6	122	535	321	97
	Concrete Blocks & Fills	14	462	2,100	1,260	1,400
	Concrete Roofing Tiles	-	-	-	-	-
	Cement & Concrete Tiles	3	51	300	180	450
	Concrete Pipes	2	66	400	240	400
35-37	<u>Engineering Products</u> ^{b/}					
	Springs	1	15	300	150	120
	Pins & other wire products	1	65	850	550	380
	Grinding machines (motorised & otherwise)	-	-	-	-	-
	Switches and other electrical accessories	-	-	-	-	-
	Electric fans	1	35	280	126	30
39	<u>Plastic Products</u>					
	Pipes	12	138	310	124	196
	Plastic films and bags	9	118	420	105	92
	Plastic moulded articles	6	66	486	122	221
	Grand Total	440	11,947	50,719	21,235	33,526

^{a/} Includes bakeries, probably accounting for over half the output & employment. Other important items are grain mill products, fruit & vegetable canning, dairy products and sugar confectionery.

^{b/} A number of other engineering products for which no projection is available can be made on a small scale. (para 18).

Summary of Projections for 1980 - Group Totals

		<u>Additions in SSI by 1980</u>			
		<u>('000 \$)</u>			
		<u>Units</u>	<u>Employment</u>	<u>Gross Output</u>	<u>Value Added</u>
					<u>Investment</u>
ISIC					
20	Food industries	6,017	180,512	705,376	279,690 663,063
21	Beverages - Soft drinks	71	2,820	9,688	5,094 7,100
23	Textiles - weaving	256	4,352	12,800	3,072 8,960
24	<u>Footwear, other wearing apparel</u> <u>and made up textile goods</u>				
	Footwear - Plastic	48	931	16,758	4,189 4,655
	- Leather	165	6,590	7,908	3,162 3,296
	Knitted goods	1,277	18,927	61,253	24,502 18,388
	Garments	500	15,000	105,000	42,000 9,000
25	Woodwork	240	9,518	15,229	6,091 4,758
26	Furniture	587	11,715	53,890	21,554 17,573
27	Paper and Paper Products	156	2,363	29,197	11,683 12,470
28	Printing and Publishing	234	7,051	18,561	11,916 7,425
31	<u>Chemicals and Chemical Products</u>				
	Cosmetics & perfumery	47	2,700	12,350	4,940 4,046
	Pharmaceuticals	80	4,965	30,000	12,000 7,443
	Vegetable oils	155	6,200	31,000	12,400 12,400
33	<u>Non-metallic mineral products</u>				
	Bricks	138	2,800	12,320	7,393 2,238
	Concrete Blocks & Fills	272	10,983	50,100	30,060 18,400
	Concrete Roofing Tiles	6	198	1,200	720 1,200
	Cement & Concrete Tiles	84	1,666	9,800	5,880 10,200
	Concrete Pipes	77	2,524	15,300	9,180 11,825
35-37	<u>Engineering Products</u>				
	Springs	6	120	2,400	1,200 960
	Pins & other wire products	3	195	2,550	1,650 1,140
	Grinding machines (motorised & otherwise)	5	200	1,500	750 450
	Switches and other electrical accessories	5	110	300	240 300
	Electric fans	10	350	2,800	1,260 300
39	<u>Plastic Products</u>				
	Pipes	66	800	1,798	719 1,133
	Plastic films and bags	52	700	2,506	627 553
	Plastic moulded articles	195	2,357	17,283	4,321 7,856
	Grand Total	10,752	296,747	1,228,867	506,293 837,132