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## Industrialisation of a developing country

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interest, political incentives, and politically usable extra time. Their ceaseless struggle for survival just does not permit this. Even little facilities such as those necessary for informing people, and informing them in time, of politically significant meetings and schedules are lacking; no phones, no money for postal stamps, no typewriters let alone typists, no letter paper even, ad infinitum! And even if you did succeed in informing people about the meetings, where would you meet!

The question that is generally asked when this kind of reasoning is presented is what kind of culture did initially bring forth these material facilities, helpful to "healthy" political processes, out of a given environment? The answer is, in short, both: a given set of attitudes values and beliefs, plus geo-economic advantages or facilities. How else would you explain the fact that two at least relatively different ways of life, with differently operative political cultures, have

sprung up in the two continents of Australia and the United States, though it was about the same time and about the same kind of people (with similar traditions) that started life in these two areas?

It must be stressed strongly that it is not suggested here that economic well being ipso facto means "healthy" political processes and "healthy" social development in general. It is a whole syndrome of political, economic, socio-psychological and cultural forces and conditions that interact with each other constantly and in a multi-variate system (Lipset) that give us one or the other type of political legitimacy and social system. The economic factor is but one of these; this is recognised. But, among the poorer polities, especially, this one variable looms very long indeed. Recognition of this fact fully leads one to different research approaches, different findings and different developmental plans. This, luckily, is already happening.

## ETHIOPIA

# Industrialisation of a Developing Country

by Detlev Karsten, Addis Ababa

**M**uch emphasis is laid on industrialisation as the solution to the problems of the developing countries. But very often the difficulties of this policy are not seen by economists and politicians advocating a faster pace of industrialisation in particular by encouraging foreign private investment. This report is meant to elucidate some of the general difficulties by looking at the situation in Ethiopia. The whole analysis is unaffected by the question of the prevailing economic system since the investment criteria of the private entrepreneur and of a central planning agency in the field of manufacturing industry do not differ so widely.

### **The Importance of Manufacturing Industry**

Figures in this report are basically taken from a survey of manufacturing industry, carried out in 1966 by the Ministry of Commerce and Industry and are supplemented by data published by the Central Statistical Office. Although much could be said about problems of definition and the reliability of the data, the picture of the situation as reflected in the figures, appears to be fairly accurate.

The contribution of manufacturing industry to the Gross Domestic Product is well below 3 per cent. The share of manufactured products in exports is very small. In spite of a very broad definition of manufactured products, their share in total exports in 1962 was only 4.1 per cent, in 1963 only 5.9 per cent and in 1964 6.4 per cent, the major items being meat, oil

seed cakes, sugar and salt. The imports into Ethiopia are almost exclusively manufactured products.

In 1965 the total employment in manufacturing industry is given as 43,583 permanent employees plus 2,269 seasonal workers. Reckoning with a population of 22.6 million, and assuming that 5 people depend on each worker in manufacturing industry, about 1 per cent of the population derive their livelihood from manufacturing industry. Manufacturing industry is concentrated in three small areas: the Addis Ababa/Nazareth area, Asmara, and the Dire Dawa/Harrar area. The reasons for this are the vicinity of the market, the availability of workers and the existence of infrastructure facilities.

By all indicators, manufacturing industry has at present very small importance in the Ethiopian economy.

### **Most Important Branches**

Table I gives the number of establishments, gross value of production, fixed capital assets and employment by branches. One has to keep in mind, however, that the branches with a great number of small establishments are less completely covered by the statistical data than others; this distorts the picture insofar as the importance of the following industries is underestimated for the reasons given:

**The food industry:**

As a result of the widely scattered small flour mills and oil-crushing stations.

### The wood industry:

Not even all the larger saw-mills are covered by the survey on account of their inaccessibility.

### The building industry:

There is a large number of small firms dealing in the steel, metal and electro industries, and also a large number of small metal workshops.

The most important single branch is the food industry which has a share of 32.7 per cent in gross value of production, 39.9 per cent in fixed capital assets, and 37.2 per cent in employment. This, however, is due to the fact that the largest industrial establishment in Ethiopia, the HVA-Ethiopia sugar producing firm about 100 km south of Addis Ababa, falls into this group. HVA alone employs about 11,000 people, which is about 70 per cent of the employment of the whole branch.

Second in importance is the textile industry which has a share of 28.7 per cent in gross value of production, 26.2 per cent in fixed capital assets, and 34.0 per cent in employment. The structure of this branch is different from that of the food industry; the size distribution of firms is more equal. The largest firms in this branch are: Indo-Ethiopian Textiles, Akaki, with roughly 4,000 employees; Cotton Company of Ethiopia, Dire Dawa, with about 3,000 employees; and Cottonificio Baratolo, Asmara, with about 2,000 employees.

Third in importance is the beverage industry with a share of 16.3 per cent in gross value of production, 7.4 per cent in fixed capital assets, and 5.1 per cent in employment. Unfortunately the gross value of production of this branch is inflated by indirect taxes which are higher for alcoholic beverages than for other industrial products. Important firms are the two breweries (Addis Ababa and Asmara), the soft drink and mineral water bottling plants and the numerous wine and liquor factories.

Only figures for the gross value of production are provided by the statistics. Consequently the figures

in Table II would have been more revealing had they been those for the net value of production.

The gross value of production per employee is between Eth. \$ 3,500 (wood industry) and Eth. \$ 6,700 (steel, metal & electro), the average being in the region of Eth. \$ 4,500—5,000 per employee (in each case omitting beverages and tobacco).

**Table II**  
**Gross Value of Production per Employee and Fixed Capital per Unit of Gross Value of Production by Branches**

Branch	Gross Value of Prod. per Employee in Eth. \$	Fixed Capital Assets per Unit of Gross Value of Prod. in Eth. \$
Food Industry	4,600	1.33
Beverages *	(16,700)	(0.49)
Tobacco Manufacturing *	(12,000)	(0.55)
Textile Industry	4,400	0.88
Leather & Shoe Industry	5,840	0.99
Wood Industry	3,500	0.59
Building & Non Metal Ind.	3,740	1.83
Printing and Publishing	4,850	2.08
Chemical Industry	4,800	1.66
Steel, Metal & Electro Ind.	6,700	1.27
Others	4,850	1.39

\* The figures for Beverage and Tobacco Industry are heavily distorted due to the high tax element in the gross value of production and are therefore not comparable with the figures for the other industries.

The low figure for the wood industry is mainly due to the very low degree of mechanisation as reflected in the figure for fixed capital assets per unit of gross value of production. For the other industries the figure for the fixed capital assets per unit of gross value of production is surprisingly high, and that may hint at underutilisation of capacity, which is supported by the personal knowledge of industrial firms.

The whole picture of manufacturing industry as shown in Table II is one of a productivity well below the productivity of manufacturing industry in industrial-

**Table I**

**Number of Establishment, Gross Value of Production, Fixed Capital Assets and Employment by Branches (1965)**

Branch	Establishments		Gross Value of Production		Fixed Capital Assets		Total Employment		Foreigners	
	Number	%	1000 Eth. \$	%	1000 Eth. \$	%	Number	%	Number	%
Food industry	67	27.0	74,500	32.7	97,485	39.9	16,189	37.2	331	33.7
Beverages	37	14.9	37,230	16.3	18,186	7.4	2,235	5.1	114	11.6
Tobacco Manufacturing	2	0.8	5,355	2.7	2,924	1.2	445	1.0	11	1.1
Textile Industry	22	8.9	65,413	28.7	64,066	26.2	14,854	34.0	189	19.2
Leather & Shoe Ind.	20	8.1	10,818	4.7	10,070	4.1	1,859	4.3	71	7.2
Wood Industry	24	9.7	6,555	2.4	3,885	1.6	1,877	4.3	40	4.0
Building & Non Metal	18	7.2	10,309	4.5	18,930	7.7	2,770	6.4	60	6.1
Printing & Publishing	20	8.1	4,978	2.2	10,336	4.2	1,024	2.4	43	4.4
Chemical Industry	24	9.7	6,782	3.0	11,213	4.6	1,414	3.2	84	8.6
Steel, Metal, Electro	11	4.4	5,200	2.3	6,620	2.7	778	1.8	35	3.5
Others	3	1.2	668	0.3	931	0.4	138	0.3	6	0.6
<b>Total</b>	<b>248</b>	<b>100.0</b>	<b>227,817</b>	<b>100.0</b>	<b>244,643</b>	<b>100.0</b>	<b>43,583</b>	<b>100.0</b>	<b>984</b>	<b>100.0</b>

ised countries: As a rough figure in such countries one reckons on a capital/output ratio for industry of below 1.

As regards the growth of the different branches of manufacturing industry the investment activity in 1965, as shown in Table III, is revealing.

**Table III**  
**Investment in Manufacturing Industry in 1965**

Branch	Total Investment 1965		Total Investment as planned in the 2nd Five Year Plan 1963—1967 1000 Eth. \$
	1000 Eth. \$	%	
Food	12,764	18.9	73,660
Beverages	5,511	8.2	1,440
Tobacco Manufacturing	403	0.7	1,000
Textile Industry	19,507	28.9	32,625
Leather & Shoe Industry	1,177	1.7	11,100
Wood Industry	1,447	2.1	2,350
Building & Non Metal Ind.	7,986	11.8	35,390
Printing & Publishing	4,361	6.5	800
Chemical Industry	12,545	18.5	96,550
Steel, Metal & Electro Ind.	11,882	2.7	51,050
Others	222	—	12,500
Total	67,605	100.0	318,465

Table III shows that the highest investment is in the textile, food and chemical industries—the latter being mainly due to the construction of the Assab Oil Refinery—and building and non metal industries. If we assume an equal distribution of investment over time, each year about 20 per cent of the total sum of investment envisaged in the Second Five Year Plan should be effected. The overall performance is not unsatisfactory; in 1965 21 per cent of the total planned investment for the period of the Second Five Year Plan was made. But it is most interesting to observe that the actual development obviously follows a line quite different from the Plan; this is particularly conspicuous in beverage industry and printing and publishing, where, in 1965, more was invested than was planned for the whole period 1963—1967, whereas in steel, metal and electro industry, in chemical industry, and in leather and shoe industry, the Plan-figures are obviously much too ambitious.

This trend reflects the neglect of the market aspect which characterises the Second Five Year Plan.

#### The Problems of Manufacturing Industry

As was shown before, the role of manufacturing industry is very insignificant. The main problem is apparently the very limited market for manufactured products; this applies both to the export and the domestic market, and for both markets the question of prices is relevant. Compared to other countries and to the world market, products manufactured in Ethiopia command relatively high prices. This is witnessed in many cases where, in spite of import duties and high cost of transport, imports can compete in price with locally produced commodities, e.g. in textiles, canned vegetables and so on.

In the author's opinion, the main causes of the high prices are:

the high prices of raw materials and other inputs resulting from: high costs of domestic input materials due to low productivity of agriculture and to indirect taxes.

They are also an outcome of the high cost of imported input materials due to import duties, indirect taxes, time-consuming sea transport with a tying up of capital, other natural difficulties (e.g. expensive transport), and administrative problems (e.g. long clearance times and the interest cost for the commodities whilst in the bonded warehouse). The high cost of imported inputs has a particularly strong impact on the early stages of the development of manufacturing industry, because the fraction of imported goods in total inputs is very high; no industry can do without inputs of imported raw materials.

The high indirect taxes on the finished product,  
 the high cost of capital,

the high cost of skilled labour. Presumably the high cost of skilled labour—especially of foreigners, but also of skilled Ethiopians—is not balanced by the relatively cheap unskilled labour. Even unskilled labour is not cheap when its wage is compared to the wages in some Asian countries.

The small scale of production which foregoes economies of scale, and low degree of capacity utilisation.

The difficulties with the public administration: bureaucracy, e.g. to get import licences, foreign exchange, to pass the customs clearance formalities, a host of clearance—and contact agents is employed.

High Profits. The manufacturing sector is owned and managed to a considerable extent by foreign firms. These firms calculate on the basis of a presumably rather high risk and consequently expect very high profits (and effect them by using very short periods of depreciation). This is certainly true for new investors, and established firms may be able to reap high profits resulting from lack of competition.

Inefficiency due to lack of competition. As in many branches there are only a few firms (or even only one firm), there is almost no competition. The difficulties of transport strengthen the monopolistic position of single producers. The protective tariffs impede foreign competitors. Consequently the firms are not cost-conscious; there is for example under-utilisation of labour in many firms.

Low price elasticity of demand. Even if in certain branches the cost-level would allow price reductions, the producers are not interested in lower prices because they assume a low price-elasticity of demand. This assumption may be justified in view of the social structure (e.g. even considerable reductions in price for leather shoes would not induce farmers to wear them).

Both the quality and the price of Ethiopian manufactured products are major obstacles to selling in the world market. The poor quality is often due to poor raw material (e.g. in the case of meat factories) but to a certain extent also the result of poor workmanship due to lack of experience and missing skills, unfashionable designs, etc.

The quality problem could be overcome—at least in certain markets—by offering lower prices. This is difficult because of high costs.

The problem of the domestic market for manufactured products is essentially one of the developments of the other sectors of the economy, in particular of agriculture, where a transformation of the subsistence economy into a cash economy could open an immense market for manufactured goods.

For the time being the bulk of the manufactured products is consumed by the urban population, the rural population being mainly engaged in subsistence farming without many regular cash purchases.

The most successful branches of industry are those which managed to interest the rural population in their products; this is notably true for the textile industry, and to a lesser degree for the food industry (in particular sugar) and the beverage industry.

#### Appraisal

The first and obvious opportunity for industrialisation of a country is the establishment of import-substituting industries, and the industries existing in Ethiopia are predominantly of this type. But if a small country develops along these lines, a point is reached where this process, together with the resulting secondary effects, is slowing down because the original "stock" of obvious projects stemming from the "pre-industrialisation period" is exhausted. Import-substitution of course will go on, but it will follow the general gradual expansion of the domestic market. This is a situation in which the list of imports is long and very diversified—no single item in the list of imports justifies the setting up of a minimum size plant, or the lack of raw materials or of essential skills renders

domestic production impossible. It is in this situation that countries try to encourage further industrialisation by ever-increasing protection. There may be marginal projects, and in fact every year some projects pass the domestic production threshold either because the market has expanded, or because—on account of technical innovation—the smallest unit of economical production has become smaller, or because the protection has been increased. In many countries this process of establishing import-substituting industries went hand in hand with the setting up of export industries in the field where the country concerned had a comparative advantage. This has not happened in Ethiopia; the only industry, based on local raw material, which tried to go into exports was the meat industry. But the meat industry faces—in addition to the problems dealt with in the paragraph on high prices—particular problems of the quality of the cattle, and of shortage of supplies. Difficulties in securing the necessary supply of cattle stem from the fact that no region within a reasonable distance from the ports has a concentrated continuous surplus to supply 300—400 head of cattle per day, the normal capacity for a meat factory. This, of course, is the consequence of the traditional pattern of agriculture and is also partly a transport problem. It is the experts' opinion that the meat industry can only flourish on the basis of a link-up with large ranches.

There is, for the time being, no field of manufacturing industry in which Ethiopia enjoys a comparative advantage, and which could include an export industry. It is doubtful whether any Ethiopian industry—with the possible exception of the meat industry—could survive without protection. That is to say, that industrialisation follows the development of the domestic market, which in turn depends on the general development of the country, and the main pace-setter is agriculture. Further investigations pending, there are at present no possibilities for a spectacular break through in industry: there are no profitable projects, and consequently no private investor—who bases his considerations exclusively on profitability calculations without any governmental support—will invest in Ethiopia.

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