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The Ethiopian Manufacturing Sector: Competitiveness and the Way Ahead*¹

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Abstract

Considering the structure of Ethiopian economy and the level of poverty, it would be interesting to examine to what extent Ethiopia's industrialisation effort has succeeded or failed in establishing internal and external competitiveness. Competitiveness is the way to face the challenges and to grasp the opportunities provided by globalisation. Thus, the need is not simply manufacturing expansion, but also to identify firms in which there is competitive advantage for selective intervention. Based on the analytical framework outlined in section 2 and considering the local context, this paper estimated domestic and international competitiveness of the Ethiopian manufacturing industry. We further developed a composite index criteria taking into account contribution to the economy, factor and raw material base, resource use efficiency, and competitive advantage in order to inform manufacturing policy for selective priority interventions.

It was found that Ethiopian experience in industrialisation and competitiveness is poor. In fact the existing competitiveness capacity of the sector is not good. What is most surprising is that the findings do not fully support what the government propagates with regard to manufacturing sector where the focus is based on resource-based theory. All the four-digit manufacturing activities in the textiles and leather sub-sectors prove to be uncompetitive even in the domestic market. The lesson drawn from this paper is that non-resource based firms can also be competitive through improved productivity and high learning rate.

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1. Introduction

The history of Ethiopian manufacturing industry is more or less related to the post Ethiopia-Italy war.⁴ In the second half of 1940s, there was very few manufacturing industry, which accounted for only 1% of the national income. Industrialisation really begun in the 1950s and was consolidated in the following three successive five-year developments plans.

With regard to the policy environment, following the Mutual Aid Agreement of 9 August 1943 with the United States of America (USA), the Ethiopian Government requested for a USA technical mission to be sent to Ethiopia to investigate the country's resources and its economic problems and to draw up an aid package for its development. The mission arrived in May 1944 and with their help, the Ethiopian Government initiated a ten-year programme of industrial development (1945-55). This was followed by the three successive Five-Year Development Plans (1958-1962, 1963-67 and 1969-74). Import substitution was recommended as the industrial strategy.

The Government placed much hope on the contribution of foreign capital. This was evident from its first measures in the area of economic policy, which gave emphasis to foreign direct investment. The issuance of 'Notice for the Encouragements of Foreign Capital Investment', in 1950, revealed little concern for indigenous investment. This policy gave a lot of incentives for foreign investors, which were not extended to existing or potential local investors until the issuance of the Investment Decree of 1963 and the 1966 Investment Proclamation. Despite the first five-year plan and the investment proclamation emphasis on the role of local investors, the 1966 Investment Proclamation provided a lot of incentives for those investments not less than \$200,000, which was beyond the reach of most local investors. As a result of this, most manufacturing firms were owned and operated by foreigners.⁵

After the collapse of the Imperial regime, the Derg nationalised enterprises involved in major economic activities and the private sector was allowed only to participate in small-scale industries and handicraft activities.⁶ With regard to industrialisation, there were not any economic plans for the first four years (1975-1978), with all sectors of the economy becoming run down as the period was characterised by intense political confrontation, fierce power struggles within the *Derg* itself and the Ethio-Somali war.

⁴ It should be noted, however, that during the Italian occupation/aggression, there were small-scale manufacturing producing consumer goods such as soap and textiles (Eshetu, 1995:194-195 and 201).

⁵ About 67 percent of the establishments were fully and partially owned by foreigners (See Getnet 2003).

⁶ Government ownership in the manufacturing sector was more than 90 percent.

At the end of 1978, the Central Planning Supreme Council was set up as an instrument to control and allocate resources. Following its establishment, Six Annual Development Campaign Plans were successively launched, between 1979 and 1984 with the aim of rehabilitating the war-ravaged economy of the country. It should be noted, however, that these were annual programmes, short-term in nature, intended to meet the immediate challenges of food shortages, low capacity utilisation in industry and the like, and could by no means be construed as comprehensive development plans.

In September 1984, the regime issued a comprehensive and long-term development plan, which came to be known as the Ten-Year Perspective Plan, covering the period from 1985 to 1994. The development strategy was the same, import substitution industrialisation. The major difference was that during the socialist regime, the strategy was state-led.

The current Government is pursuing an agricultural development led industrialisation as opposed to the previous regimes. It is believed that priority to agriculture in the short and medium term will create a big domestic market for industry and supply food and raw material to industry and this is anticipated to strengthen the inter-sectoral linkages between agriculture and industry and will lead the economy to the development of industry. The problem, however, is that the urban sector of the economy is somehow ignored and the focus on agriculture has not even emancipated peasants from the havoc of periodic famine.

There have been long years of adverse policies and economic management in which the private sector remained inactive and where the state sector lacked the dynamism required to foster industrial growth. It would therefore be interesting, as an objective of this paper, to establish whether the resource use and learning of the Ethiopian manufacturing industry has made any headway and establish to what extent Ethiopia's industrialisation effort has succeeded or failed in establishing internal and external competitiveness.

The rest of the paper is outlined as follows. The next section deals with conceptualisation of competitiveness. Section 3 discusses the estimation of competitiveness while section 4 attempts to pinpoint what sorts of manufacturing activities Ethiopia should promote, at what pace and what measures to consider. Finally, concluding remarks are set out in section 5.

2. Conceptualising competitiveness: concepts and method of measurement

2.1. Conceptual framework

There is little consensus about the precise meaning of competitiveness, though economists, politicians, and business leaders frequently use it. There is even less consensus about the method of measuring competitiveness. Some authors use the term to describe resource use by different entities such as the firm, industry, state or country. Sustained international competitiveness requires a productivity level and rates of growth equal to or exceeding those of competing countries. Levels and rates of growth of productivity are of paramount importance for an assessment of the manufacturing sector's current and potential competitiveness. Comparison of average productivity levels of different firms within an industry and similar industries in different countries provides relative efficiency levels and, at the end, relative competitiveness. Inefficient firms can hardly compete in international markets even if they have enabling external environment. Hence, productivity measures are the direct venue for measuring competitiveness. However, such an approach cannot reveal information on the cost of productivity improvement. Productivity can be improved through costly incentive measures that could offset the gain obtained through the latter, which could leave unit cost and competitiveness unchanged. Combining production inputs efficiently in the production process is not synonymous to selling products efficiently and increasing market shares (see Salinger, 2001 and Cockburn et al., 1998).

Other authors define competitiveness as a nation's ability to produce and market a product in international trade while earning a level of return to the resources used in production. This level of return to resources is comparable to what these resources could earn in alternative activities (i.e., opportunity cost). This is similar to the domestic resource cost (DRC) concept. The DRC is estimated as the ratio of the economic value of domestic resources (i.e., factors of production) used in production relative to the economic value-added (economic value of outputs minus the economic value of tradable inputs) generated by the production process. The DRC, thus, represents the value of domestic resources spent in order to gain or save a unit of foreign exchange. But as Salinger (2001:10) points out, such a calculation is based on outdated notions: that there are no economies of scale, that technologies everywhere are identical, that products are undifferentiated, that the pool of national factor is fixed, and that skilled or high quality factors are not tradable.

Most authors use the term competitiveness to refer to an advantage of firms or industries vis-à-vis their competitors in the domestic or international markets. For such authors, competitiveness is simply the capacity to sell one's product profitably. To be competitive, a firm must be able to undercut the prices or offer products of better quality than its competitors. At the enterprise or industry level, producers are deemed to be competitive if their unit cost of production is inferior or equal to those of their competitors both in the domestic as well as in the international markets. This is the firm or industry level (microeconomic) use of the term. In this case, the indicator of competitiveness used is the unit cost ratio, defined as total cost divided by the value of output, which in turn equals to output quantity times the ex-factory price. For domestic sales, the ex-factory price is the domestic market price, which is typically higher than the international price of a similar imported product by a margin equal to the nominal rate of protection. For export sales, the ex-factory price is equal to the international price. However, competitiveness estimations at a minimum must be careful to compare comparable goods, as manufacturing diversifies into increasingly differentiated products, which are sold to end consumers via sophisticated marketing campaigns. As well, it requires care to include overhead expenditures (research and development, travel, advertising, customer relations, professional association networking). The shortcoming of such an approach is that it does not take into consideration the selling capability of a firm. A firm may be cost competitive while it does not have the necessary know-how to successfully market and deliver its product. Non-cost determinants of competitiveness are excluded (see Siggel, Ikara, and Nganda, 2000).

Some researchers have extended the meaning of competitiveness to the entire economies. The economy wide competitiveness is measured by the exchange rate, which some call it a dangerous obsession. In aggregate, a country cannot be competitive in all activities as this would lead to currency appreciation until some activities become internationally non-competitive. Exchange rate over-valuation or under-valuation can temporarily affect the competitiveness of all activities, but it will tend to correct itself automatically through a balance of payments mechanism.

Researchers such as Balassa measure competitiveness through outcomes. The outcome of competitiveness is profitable trade. Profitable trade leads to maintaining an increasing market share. Market share is used as a measure of competitiveness. These measures are ex-post measures based on past performance. The best-known market share indicator of competitiveness is the 'revealed comparative advantage' developed by Balassa, which can be put as follows:

$$RCA = \frac{X_k^A / X_k^w}{X_T^A / X_T^w} \quad (1)$$

where RCA = revealed comparative advantage and where A stands for a particular country, k for exported product, T represents total export, w represents world export and X represents the magnitude of export by country A and the world for product k and all goods. RCA greater than one implies a comparative advantage or specialisation of trade in that commodity by that country. By allowing intra-industry trade through the inclusion of imports, the above expression can be transformed to:

$$RC = RCA - \frac{M_k^A / M_k^w}{M_T^A / M_T^w} \quad (2)$$

where RC = revealed competitive advantage and M represents imports from country A or the world of commodity k or all commodities. The revealed competitiveness advantage index as a measure of competitiveness shows how well a country's particular economic sector or industry competes abroad and at home. A positive RC measure demonstrates that country A has a competitive edge in producing and trading commodity k. However, the market share is the result, not the cause of competitiveness. Such an approach leads to no specific policy implication since it does not deal with causes (see Salinger, 2001)

The World Economic Forum (2000) approached competitiveness, through its World Competitiveness Report and African Competitiveness Report, in terms of economy wide business environment. Here, competitiveness is measured through a weighted index that includes different items, namely political and economic stability, openness to trade and investment, legal and institutional enabling environment, financial infrastructure and institutions, human resource development and technology, and economic and social infrastructure. Such a measure, however, does not allow for evaluating single industry or firm since it does not capture industry or firm specific capability differences and since it heavily depends upon subjective judgements.

2.2. Methods of measurement

Though diverse are the measures of competitiveness, unit cost indicator is employed in this paper to determine the competitiveness of the Ethiopian manufacturing

industries. The main reason being, as described above, the theoretical soundness that unit cost is decisive to competitiveness.

Productivity and competitiveness are linked to realising many of the management concepts that affect the human capital necessary for improving productivity. To the extent that one firm manages its materials inventory and flow-through, the organisation of its labour force, technology acquisition, and the supply chain to final consumers more efficiently than another, it will be able to increase its sales per unit factor input compared to other firms. This is increased total factor productivity. If a firm does not make a productive use of its factors and other inputs, it is unlikely that it will reduce costs or generate value-added to such an extent that it will have competitive advantage in production. Though productivity improvement could be the necessary condition to be cost competitive, factor costs and the knowledge to master costs are the relevant elements. Hence, analysing unit cost indicators, the main focus of this section, is of paramount importance in formulating an industrial policy that builds up internationally competitive manufacturing industries.

The unit cost indicator used in this section follows that of Cockburn et-al (1998), Siggel and Ssemogerere (1999) and Siggel, Ikara, and Nganda (2000). Their approach rests upon comparing the cost structure of local firms with those of their competitors to determine their competitiveness. This is in line with the neo-classical firm theory. Firms always drive to maximise profits subject to technological and resource constraints. As long as profitable opportunities exist, firms will increase their production and sales. Making profits and expanding sales require firms to bring the unit cost below market prices (or marginal cost below marginal revenue). Costs are, thus, the fundamental determinants of competitiveness. Competitiveness of local firms is, therefore, defined by a cost advantage over foreign competitors, namely unit cost of local firms should at least be equal to that of their foreign competitors. Symbolically, this can be put as:

$$UC \leq UC_F \quad (3)$$

where F represents the foreign competitor and UC = unit cost, which is total production cost (TC) per physical unit of production. This leads us to:

$$UC = \frac{TC}{Q} \quad (4)$$

where Q = quantity produced. Since firms produce products of different quality, such physical unit comparisons among firms might be unreasonable. As long as consumers value quality through price, equation (2.4) can be transformed into:

$$UC = \frac{TC}{pQ} \quad (5)$$

where p represents market price. Now, unit cost takes a monetary form that allows comparison across firms. Hence, the indicator of competitiveness – the unit cost ratio – is defined as total cost divided by the value of output.

Such a comparison will require information on the cost structure and output of both local firms and their international competitors, which is highly data demanding. One way out from such a difficulty would be to impose the assumption of long-run behaviour of firms. Firm's theory asserts that in the long run, through free entry and exit of firms and the free interplay of market forces, firms are supposed to operate at or near zero profit in order to survive. Employing the same principle, a typical international best practice competitor is assumed to sell at cost, implying that $TC = pQ$. Therefore,

$$UC_F = \frac{TC}{pQ} = 1 \quad (6)$$

Thus, the unit cost of this typical best practice international producer corresponds to the international price. As a result, the indicator of competitiveness will reduce to:

$$UC \leq 1 \quad (7)$$

Such a formulation of the competitiveness indicator will have two advantages. First, the usual difficulty of making inter-firm comparison due to product mix and quality differences will be eliminated. Second, such an indicator will become free of actual comparison with foreign firms, which otherwise would require looking for data on an international competitor.

If $UC < 1$, the firm in question produces at a lower cost than its competitors and is thus more competitive. A unit cost inferior to one indicates that the firm is making profit. Since total cost includes the opportunity cost of capital, a firm may earn a

positive rate of return and still show up as uncompetitive if its rate of return is lower than the lending rate. Competitiveness in this sense, therefore, means that the price covers all costs including the full opportunity cost of capital, and is a long-run analysis.

There are different types of indicators to measure competitiveness. These are indicator of domestic competitiveness, indicator of international competitiveness, and indicator of comparative advantage. Their basic difference mainly rests upon the valuation. While domestic competitiveness denotes the situation of cost advantage under protection, international competitiveness reflects the situation at free trade prices while that of comparative advantage relates to shadow price conditions (competitiveness measured in the absence of price distortions). Competitiveness, domestic and international, is measured in terms of market prices while comparative advantage is measured in terms of shadow prices (economic opportunity costs) net of all price distortions. Domestic competitiveness reflects financial profitability at domestic, protected, distorted prices. International competitiveness is the financial profitability at international output prices. Comparative advantage is economic profitability at shadow prices. In order to measure comparative advantage, one has to replace all prices, output as well as all inputs, by shadow prices.

Symbolically, hence, an indicator of domestic competitiveness can be expressed as:

$$UC_D = \frac{TC}{p_D Q} \leq 1 \quad (8)$$

where D represents domestic competitiveness and p_D represents domestic (protected) prices, which usually refers to ex-factory prices for domestic sales and border prices for exports. The domestic price of output is assumed to depend on border prices of equivalent imports, implicit nominal rate of protection, and monopoly power. In the absence of quantitative restrictions and monopoly power, the domestic output price is affected only by the nominal rate of protection. And, in the absence of the above, nominal rate of protection is normally equal to the tariff levied. When contraband, under-invoicing, and dumping are significant, however, this setting will be jeopardised. In this setting, domestic prices could be less than border prices, local industries no more enjoying the tariff protection.

In the same way, indicator of international competitiveness (or indicator of export advantage) will be:

$$UC_X = \frac{TC}{p_W Q} \leq 1 \quad (9)$$

where X represents indicator of export advantage and p_W is the international price. The comparative advantage criterion is similar:

$$UC_S = \frac{TC_S}{p_S Q} \leq 1 \quad (10)$$

where TC_S is total cost in shadow prices and p_S is the shadow price of output, which is usually equal to the international price adjusted for any distortions in the exchange rate. Total cost at shadow prices is the sum of all cost components adjusted for all price distortions and subsidies. Since competitiveness of firms is determined by its cost at market price, as these are prices that consumers and producers face, rather than shadow prices, and since the estimation of shadow prices is quite a cumbersome exercise, only domestic and international competitiveness indicators are used for our purposes.

We estimate using a four-digit International Standard Industrial Classification (ISIC) manufacturing using Central Statistical Authority (CSA) data. We assume the following for this particular analysis:

- a) Total cost is the difference between gross value of production (GVP) and operating surplus (P), as defined by CSA. Symbolically: $TC = GVP - P$.
- b) In the short-run, fixed costs are assumed to be sunk costs; what matter in the decision making process would be variable costs. It is difficult in the short-run to dispose or expand fixed assets. This assumption implies that the opportunity cost of capital (fixed assets) will be zero, and the cost of capital will only be the sum of the accounting depreciation, rental expenses and interest paid (for working capital or otherwise). This will leave total cost as that of above: $TC = GVP - P$.
- c) In the long run, fixed costs are not sunk costs. Fixed assets are variable. They can be disposed off or can be put in another field of operation in which they can generate better profit. They can be expanded to reach a level that maximises

economies of scale. Hence, fixed assets have an opportunity cost and this cost has to be included in the total cost.

- d) Among the different alternatives of estimating the opportunity cost of capital (rate of return forgone, the current lending rate, the current saving rate, the official discount rate), the official discount rate (r) currently in force, which is 10 percent, will be used.
- e) The fixed assets of a firm or an industry are measured by their net fixed asset value (K), as defined by CSA. This makes the total cost differ from the above by the amount of the opportunity cost of capital or fixed assets. Symbolically, $TC = GVP - P + rK$.

Using these basic assumptions, the indicator of domestic competitiveness for the two scenarios will be the following: -

- a) Short-run Scenario:

$$UC_D = \frac{TC}{p_D Q} = 1 - \frac{P}{GVP} \leq 1 \quad (11)$$

- b) Long-run Scenario:

$$UC_D = \frac{TC}{p_D Q} = 1 + \frac{rK}{GVP} - \frac{P}{GVP} \leq 1 \quad (12)$$

In order to compute international competitiveness, we impose the following additional assumption in addition to the above: -

The cause for the difference between domestic prices and border prices (international prices) is the customs tariff imposed. Hence, the subtraction of the customs tariff (t) in GVP at domestic prices (GVP_d) will give GVP at border prices (GVP_b). Symbolically: $GVP_b = (1-t) GVP_d$.

With this additional assumption, the indicator of international competitiveness for the two scenarios will take the following form:

- a) Short-run Scenario:

$$UC_X = \frac{TC}{p_S Q} = \frac{GVP}{GVP(1-t)} - \frac{P}{GVP} \leq 1 \quad (13)$$

b) Long-run Scenario:

$$UC_x = \frac{TC}{p_s Q} = \frac{GVP - P + rK}{GVP(1-t)} \leq 1 \quad (14)$$

3. Estimating the competitiveness of Ethiopian manufacturing

Indicators of the competitiveness of the Ethiopian manufacturing industry have been computed using the above formulation. The recent three years (1998/99, 1999/00 and 2000/01) survey from CSA have been considered for the estimation. Based on a four-digit ISIC grouping, about 45 manufacturing activities have been identified for the analysis. For each of the manufacturing activities identified, an indicator of domestic competitiveness has been computed using three cases: without the cost of capital, (namely depreciation and the opportunity cost); without the opportunity cost of capital; and with all costs of capital. The first two cases are short-run scenarios in which fixed assets could possibly be considered as sunk costs. In the short-run, it could be managerially admissible to allow production to continue, even if all the costs of capital are not recovered. The third case is the long-run scenario in which it is not advisable to continue production, if all costs are not to be recovered. In this case, shifting to other activities could be considered. The result is summarised in Table 3.1.

Table 3.1: Indicators of domestic competitiveness

INDUSTRIAL GROUP	1998/99			1999/00			2000/01		
	Wocc	Woocc	Wac	Wocc	Woocc	Wac	Wocc	Woocc	Wac
1 Processing and preserving of meat, fruits and vegetables	0.726	0.782	0.839	0.725	0.780	0.834	0.764	0.838	0.917
2 Manufacture of vegetables & animal oils & fats	0.953	1.050	1.182	0.954	1.086	1.293	0.913	1.096	1.313
3 Manufacture of dairy products	0.800	0.969	1.257	0.720	0.856	1.206	0.732	0.821	0.944
4 Manufacture of grain mill products	0.950	0.977	1.014	0.926	0.958	1.005	0.961	1.002	1.057
5 Manufacture of prepared animal feeds	0.877	0.896	0.921	0.919	0.931	0.947	0.916	0.929	0.944
6 Manufacture of bakery products	0.824	0.856	0.891	0.832	0.869	0.919	0.837	0.888	0.946
7 Manufacture of sugar & sugar confectionery	0.479	0.521	0.564	0.545	0.599	0.668	0.450	0.510	0.587
8 Manufacture of macaroni & spaghetti	0.824	0.845	0.869	0.778	0.802	0.832	0.836	0.857	0.882
9 Manufacture of food products n.e.c	0.753	0.817	0.904	0.764	0.812	0.900	0.669	0.835	1.030
10 Distilling, rectifying & blending of spirits	0.699	0.717	0.736	0.813	0.829	0.847	0.784	0.806	0.823
11 Manufacture of wines	0.859	0.871	0.878	0.880	0.974	1.099	0.887	0.952	1.028
12 Manufacture of malt liquors & malt	0.914	0.952	0.997	0.755	0.812	0.886	0.691	0.772	0.864
13 Soft drinks & production of mineral waters	0.886	0.942	0.993	0.922	0.995	1.069	0.918	0.972	1.025
14 Manufacture of tobacco products	0.504	0.516	0.527	0.636	0.646	0.655	0.785	0.804	0.831
15 Spinning, weaving & finishing of textiles	0.984	1.103	1.245	0.977	1.111	1.292	0.960	1.067	1.197
16 Manufacture of cordage, rope, twine & netting	0.829	0.867	0.919	0.846	0.879	0.938	0.981	1.024	1.077
17 Knitting mills	0.814	0.915	1.041	0.846	1.121	1.490	0.992	1.155	1.361
18 Manufacture of wearing apparel except fur apparel	1.040	1.116	1.221	1.005	1.079	1.204	1.051	1.116	1.208
19 Tanning & dressing of leather, luggage & handbags	0.833	0.868	0.909	0.927	0.988	1.075	0.954	0.992	1.039
20 Manufacture of footwear	0.865	0.922	0.986	0.891	0.964	1.055	0.890	1.010	1.138
21 Wood and cork, except furniture	0.822	0.838	0.855	0.832	0.851	0.864	0.757	0.769	0.780
22 Manufacture of paper & paper products	0.876	0.921	0.975	0.815	0.847	0.896	0.832	0.865	0.903
23 Publishing and printing services	0.717	0.756	0.797	0.700	0.737	0.777	0.716	0.750	0.789
24 Basic chemicals	1.112	1.489	1.951	0.796	1.216	1.865	0.773	0.955	1.182
25 Manufacture of paints, varnishes and mastics	0.793	0.825	0.861	0.800	0.824	0.868	0.814	0.834	0.857
26 Pharmaceuticals	0.861	1.001	1.160	0.739	0.892	1.085	0.880	1.021	1.181
27 Soap, detergents, perfumes and toilet preparations	0.913	0.951	1.004	0.855	0.879	0.922	0.854	0.881	0.912
28 Manufacture of chemical products n.e.c.	0.794	0.837	0.891	0.809	0.884	0.995	0.921	0.967	1.026
29 Manufacture of rubber products	0.770	0.855	0.953	0.754	0.819	0.911	0.714	0.774	0.845
30 Manufacture of plastic products	0.793	0.853	0.924	0.835	0.900	0.992	0.797	0.856	0.925
31 Manufacture of glass and glass products	0.624	0.691	0.765	0.754	0.931	1.048	0.686	0.770	0.865
32 Manufacture of cement, lime and plaster	0.749	0.789	0.832	0.701	0.730	0.796	0.721	0.748	0.783
33 Manufacture of articles of concrete, cement & plaster	0.799	0.882	0.932	0.809	0.860	0.910	0.848	0.881	0.914
34 Manufacture of non-metallic mineral products n.e.c.	0.879	1.120	1.391	0.856	1.070	1.342	0.936	1.172	1.437
35 Manufacture of basic iron and steel	0.885	0.903	0.922	0.844	0.867	0.894	0.916	0.941	0.973
36 Structural metal products, tanks and containers	0.907	1.014	1.139	0.890	0.983	1.114	0.887	0.951	1.037
37 Manufacture of cutlery, hand tools and hardware	0.920	0.966	1.022	0.962	1.009	1.075	0.922	0.968	1.028
38 Manufacture of other fabricated metal products	-	-	-	0.817	0.983	1.217	0.864	0.990	1.147
39 Manufacture of ovens, furnaces and furnace burners	0.887	0.910	0.934	0.831	0.861	0.879	0.900	0.904	0.909
40 Manufacture of other general purpose machinery	0.918	-	-	0.839	0.0	0.851	-	-	-
41 Machinery for food & beverage processing	0.844	0.928	1.036	0.851	1.063	1.395	0.741	0.846	0.982
42 Accumulators, primary cells & batteries	1.513	1.544	1.594	0.914	0.0	0.974	0.914	0.940	0.967
43 Manufacture of bodies for motor vehicles	0.903	0.911	0.920	0.806	0.816	0.828	0.848	0.863	0.881
44 Parts and accessories for motor vehicles	0.262	0.396	0.519	0.341	0.478	0.601	0.757	0.918	1.077
45 Manufacture of furniture; manufacturing n.e.c	0.859	0.925	1.008	0.854	0.909	0.997	0.866	0.929	1.013

Source: own computation from CSA survey

Note: Wocc: competitiveness without considering all costs of capital.

Woocc: competitiveness without taking into consideration the opportunity cost of capital.

Wac: competitiveness considering all costs of capital, i.e. depreciation and opportunity cost of capital, about ten percent of the net fixed asset.

In the analysis, a value greater than one indicates that these particular sectors are financially unprofitable, implying that they sell their products below their unit costs of production. As shown in Table 3.1, there are sectors, which are not financially profitable even with the current tariff barriers Ethiopia imposes on imported products. As per the computations made, about half of the four-digit manufacturing activities were unable to cover all costs of production in 2000/01, including the cost of capital. This implies that about half of the Ethiopian manufacturing sector is not competitive even in the current protected and distorted domestic market. Surprisingly, the majority of these belong to sub-sectors in which one would expect Ethiopia to have a clear competitive advantage in the global market, namely food, beverages, textiles and leather sub-sectors. Interestingly, all the four-digit manufacturing activities under the textiles and leather sub-sectors prove to be uncompetitive in the domestic market. All except the manufacture of wearing apparels become domestically competitive if we ignore the cost of capital. The manufacture of wearing apparels is not competitive even excluding the cost of capital for the whole period under investigation. It is interesting to note, here, that the number of four-digit manufacturing activities that are domestically uncompetitive even without considering the cost of capital has dropped from three in 1998/99 to only one in 2000/01. The significance of contraband, dumping, and under-invoicing could be the reason behind such a situation, for this would nullify any advantage the protection of these sub-sectors would otherwise provide.

Indicators of international competitiveness have been also computed using the above three cases. The result is summarised in Table 3.2. Here, too, a figure below one indicates that the particular sector in question will have a cost advantage under free trade prices, making it competitive in the international market. Based on calculations made, sub-sectors with such a cost advantage at free trade prices were only four in 2000/01, namely the manufactures of sugar, wood and cork, publishing and printing services, and plastics. In 1999/00, the number of manufacturing activities with cost advantage at border prices were eight, double that of 2000/01. These manufacturing activities, as shown in Table 3.2, were sugar, tobacco products, publishing and printing services, other chemical products, plastic, glass, basic iron and steel and parts, and accessories of motor vehicles.

Three clear facts stand out from Table 3.2. First, local-resource-based manufacturing activities did not reveal any tendency of being internationally competitive, with the exception of the manufacture of sugar. Interestingly, import-based manufacturing activities like the manufacture of plastics revealed consistent cost advantage at border prices. Second, the number of the four-digit manufacturing activities that had demonstrated a sign of being internationally competitive were dwindling since 1998/99 – from eight in 1998/99 to five in 1999/00 and four in 2000/01. Third, the likelihood that Ethiopian manufactured products would be internationally competitive, even considering the cost of capital as sunk, is limited. The cost of capital did not significantly influence the competitiveness of manufacturing activities, though it is an important factor in the production process.

Table 3.2: Indicators of international competitiveness

INDUSTRIAL GROUP	1998/99			1999/00			2000/01		
	wocc	woocc	Wac	wocc	woocc	wac	Wocc	woocc	Wac
1 Processing and preserving of meat, fruits and vegetables	0.976	1.032	1.049	0.975	1.030	1.043	1.014	1.088	1.146
2 Manufacture of vegetables & animal oils & fats	1.620	1.716	1.971	1.620	1.753	2.155	1.580	1.763	2.188
3 Manufacture of dairy products	1.050	1.219	1.571	0.970	1.106	1.508	0.982	1.071	1.180
4 Manufacture of grain mill products	1.061	1.089	1.127	1.037	1.069	1.116	1.072	1.113	1.174
5 Manufacture of prepared animal feeds	1.127	1.146	1.151	1.169	1.181	1.184	1.166	1.179	1.180
6 Manufacture of bakery products	1.491	1.522	1.486	1.499	1.536	1.531	1.504	1.554	1.577
7 Manufacture of sugar & sugar confectionery	0.531	0.574	0.593	0.597	0.652	0.703	0.502	0.562	0.618
8 Manufacture of macaroni & spaghetti	1.491	1.511	1.449	1.445	1.468	1.386	1.502	1.524	1.469
9 Manufacture of food products n.e.c	1.420	1.484	1.506	1.431	1.479	1.500	1.335	1.502	1.716
10 Distilling, rectifying & blending of spirits	1.366	1.384	1.227	1.480	1.496	1.412	1.451	1.473	1.372
11 Manufacture of wines	1.526	1.537	1.464	1.547	1.641	1.831	1.554	1.618	1.713
12 Manufacture of malt liquors & malt	1.580	1.619	1.662	1.422	1.479	1.477	1.358	1.438	1.440
13 Soft drinks & production of mineral waters	1.552	1.608	1.655	1.589	1.662	1.781	1.585	1.639	1.708
14 Manufacture of tobacco products	0.933	0.945	0.753	1.065	1.075	0.936	1.213	1.232	1.187
15 Spinning, weaving & finishing of textiles	1.095	1.214	1.383	1.088	1.222	1.436	1.071	1.179	1.330
16 Manufacture of cordage, rope, twine & netting	1.079	1.117	1.149	1.096	1.129	1.172	1.231	1.274	1.346
17 Knitting mills	1.480	1.582	1.735	1.513	1.787	2.483	1.659	1.821	2.268
18 Manufacture of wearing apparel except fur apparel	1.707	1.783	2.036	1.671	1.746	2.006	1.718	1.783	2.013
19 Tanning & dressing of leather, luggage & handbags	1.261	1.297	1.298	1.356	1.416	1.536	1.382	1.420	1.485
20 Manufacture of footwear	1.531	1.589	1.643	1.557	1.630	1.759	1.557	1.677	1.896
21 Wood and cork, except furniture	0.998	1.015	1.005	1.008	1.027	1.017	0.934	0.946	0.918
22 Manufacture of paper & paper products	1.052	1.098	1.148	0.991	1.023	1.054	1.008	1.042	1.062
23 Publishing and printing services	0.770	0.809	0.839	0.753	0.790	0.818	0.769	0.803	0.830
24 Basic chemicals	1.223	1.600	2.168	0.907	1.327	2.072	0.885	1.066	1.313
25 Manufacture of paints, varnishes and mastics	1.222	1.253	1.230	1.229	1.252	1.240	1.243	1.262	1.225
26 Pharmaceuticals	0.913	1.054	1.221	0.792	0.944	1.142	0.933	1.073	1.243
27 Soap, detergents, perfumes and toilet preparations	1.341	1.380	1.435	1.283	1.308	1.317	1.283	1.309	1.303
28 Manufacture of chemical products n.e.c.	0.905	0.948	0.990	0.920	0.995	1.105	1.032	1.078	1.141
29 Manufacture of rubber products	1.199	1.283	1.361	1.183	1.248	1.301	1.143	1.203	1.207
30 Manufacture of plastic products	0.846	0.906	0.972	0.888	0.953	1.045	0.850	0.909	0.974
31 Manufacture of glass and glass products	0.874	0.941	0.957	1.004	1.181	1.311	0.936	1.020	1.081
32 Manufacture of cement, lime and plaster	1.416	1.456	1.386	1.368	1.397	1.326	1.387	1.414	1.304
33 Manufacture of articles of concrete, cement & plaster	1.466	1.549	1.553	1.476	1.526	1.516	1.514	1.548	1.523
34 Manufacture of non-metallic mineral products n.e.c.	1.545	1.786	2.319	1.523	1.737	2.237	1.602	1.839	2.394
35 Manufacture of basic iron and steel	0.938	0.956	0.971	0.897	0.919	0.941	0.968	0.994	1.024
36 Structural metal products, tanks and containers	1.019	1.125	1.265	1.001	1.095	1.238	0.998	1.062	1.153
37 Manufacture of cutlery, hand tools and hardware	1.348	1.395	1.460	1.390	1.438	1.535	1.350	1.397	1.469
38 Manufacture of other fabricated metal products	-	-	-	1.067	1.233	1.521	1.114	1.240	1.434
39 Manufacture of ovens, furnaces and burners	1.137	1.160	1.167	1.081	1.111	1.099	1.150	1.154	1.136
40 Manufacture of other general purpose machinery	0.971	-	-	0.892	-	0.896	-	-	-
41 Machinery for food & beverage processing	0.897	0.981	1.090	0.903	1.116	1.468	0.794	0.899	1.034
42 Accumulators, primary cells & batteries	1.763	1.794	1.992	1.164	-	1.218	1.164	1.190	1.209
43 Manufacture of bodies for motor vehicles	1.332	1.339	1.314	1.235	1.245	1.183	1.277	1.292	1.258
44 Parts and accessories for motor vehicles	0.512	0.646	0.648	0.591	0.728	0.751	1.007	1.168	1.346
45 Manufacture of furniture; manufacturing n.e.c	1.288	1.353	1.440	1.283	1.337	1.424	1.294	1.358	1.447

Source: own computation from CSA survey

4. The way ahead for competitive industrialisation

Industrialisation is imperative given the fluctuating and persistently deteriorating prices of primary products vis-à-vis industrial products on world markets and the fixed nature of land and its low productivity with population pressure. In nearly all economies, the manufacturing industry has been the critical agent of the structural transformation that marks the transition from a primitive low productivity, low-income state to one that is dynamic, sustained, and diversified. The history and experience of developed countries and some emerging economies in Asia show clearly that the process of change from a low income, low-productivity economy based on traditional agriculture to one utilizing highly productive modern technologies nearly always requires a sustained period of manufacturing industrial expansion.

Competitiveness is the way to face the challenges and to grasp the opportunities provided by globalisation. Given the Ethiopian and the current globalisation context, the need is not simply for manufacturing industrial expansion but also the creation of an enabling environment where the sector can move by its own dynamics in the long run and an immediate intervention by the government to promote competitive enterprises in the short run. Identifying firms which have competitive advantage is, therefore, crucial for manufacturing policy, which facilitates selective intervention along with setting up the basic enabling environment. Thus, we envisaged two ways of Government intervention: selective (immediate) and neutral (long term).

4.1. Selective (immediate) intervention

In the context of resource limitation and other constraints where the Government cannot intervene in all manufacturing activities, there is a need for selective intervention in order to bring about significant change in the structure of the industrial sector and increase its role in the economy. This does not mean direct intervention in terms of public investment in the manufacturing activities. It rather means adopting a preferential policy that supports manufacturing activities that have high level competitiveness capacity.

In order to be selective, it is prudent to seriously consider such factors as contribution to the economy, factor and raw material base, resource use efficiency, and competitive

advantage. In this study an attempt is made to develop composite index criteria for selecting such industrial activities for Ethiopia as a priority to commit its limited resources and effort. The index considers the following important elements for the selection:

i. Contribution to GDP, employment and exports: The Government's effort in bringing about industrialisation is believed to ultimately boost the contribution of the sector for the gross domestic product, employment, and exports of the country. And, in essence, economic integration should benefit the manufacturing sector by helping promote its performance. Therefore, when selecting manufacturing activities for strong intervention, contribution of the particular activity for industrial GDP, employment creation, and exports has to be seriously considered. If the contribution of a particular manufacturing activity is insignificant, the growth of this particular manufacturing activity does not influence the performance of the sector as a whole. Support to such activities or sub-sectors thus will lead the economy nowhere.

ii. Factor intensity (resource base intensity): The relative abundance of factor resources is quite a relevant guide for selection. Competitiveness is an issue of cost advantage and the latter highly depends on factor prices. Price is a reflection of scarcity and abundance. Capital is costly since it is a scarce factor of production and labour is cheap, being an abundant factor of production in countries like Ethiopia. Factor intensity, measured by capital-labour ratio, will, hence, be a relevant guide for selection. If a particular manufacturing activity happens to be more capital intensive, it is away from the resource base of the country and its chance of enjoying cost advantage will be low. The implication is that the chance of such a manufacturing activity to be internationally competitive will be minimal. Hence, Government efforts and resources should not be directed to such manufacturing activities at least in the short run.

iii. Import-intensity: The source of raw material, whether it is locally based or imported, influences the cost of raw material, which in turn determines the price of the product. If the raw material of a particular manufacturing activity is locally based, transport and handling costs will be lower than otherwise, the cost of stock management will be less, supply will not be constrained by the availability of foreign exchange and ex-ante inspection will be possible. All these could reduce the cost of raw material of a particular industry, while further reducing the price of the new product, leading to cost advantage or increase in profit. The contrary will hold true if raw material is imported. Hence, the extent of import intensity, defined by the ratio of imported raw material to the total raw material consumed, could influence the

competitiveness of enterprises and, as such, becomes a relevant guiding principle for selecting manufacturing activities in which Government should intervene.

iv. Productivity: As already stated, factor intensity and import intensity in relation to resource base would affect the success of a particular manufacturing activity only in as long as productivity gains could not compensate the loss this could entail. Hence, the extent of productivity gains could count more to competitiveness than factor or import intensities. Inefficient firms can hardly compete in international markets even if they have an enabling external environment. Productivity, measured by total factor productivity has, thus, to be considered as one of the basic guiding principles in selecting sectors in which Government has to commit its effort and resources to bring rapid changes in the performance of the manufacturing sector.

v. Domestic competitiveness: Productivity can be improved through costly incentive measures that could offset the gains obtained through the latter, leaving unit cost and competitiveness unchanged. Combining production inputs efficiently in the production process is not synonymous to selling products efficiently and increasing market share. To be competitive, a firm must be able to undercut the prices or offer products of better quality than its competitors. The extent of domestic competitiveness could be and might serve as a sign of good performance of a particular manufacturing activity, at least at the protected and distorted domestic market. This could indicate that, with some experience and learning by doing, the chance for that particular manufacturing activity to be internationally competitive is not far away. Hence, domestic competitiveness could be one of the yardsticks for selecting manufacturing activities for strong intervention by the Government.

vi. International competitiveness: More important for the Government to select sectors or sub-sectors for intervention would be cost advantage at border prices. A manufacturing activity that reveals cost advantage at border prices is, at the same time, capable of penetrating international markets with a minimum extra effort. Such a manufacturing activity has the basic ingredient to be competitive in the international market. Cost advantage, hence, international competitiveness, as defined above, is considered as a good yardstick for the Government to select manufacturing activities

in which it will devote much of its effort and resources. These six factors and two others have been used as the basis for the score.⁷

Each factor is assumed to have equal weight. The score is based on the number of the four-digit manufacturing activities treated in this section. About 43 four-digit manufacturing activities, for which information is available consistently for all factors, have been considered for selection of intervention. A particular manufacturing activity that ranks first for a particular factor will score 43 for the same and the one that ranks last will score one. The sum of these scores (and the average score) is the decision point for the selection of intervention.

Information for these factors are collected is for (1998/99, 1999/00 and 2000/01) for which we found recent data). The average result of these three years is used for comparison among the four-digit manufacturing activities, not to be unnecessarily influenced by outliers (mild or extreme) of a particular year for reasons, which could be irregular. The data source is the "Report on Large and Medium Scale Manufacturing and Electricity Industries Survey" of CSA.

Based on available resources to provide special extension services to the manufacturing sector, Government may choose the manufacturing activities with the highest average scores for intervention. The manufacturing activities with the highest average scores, by implication, are relatively more resource based, efficient in resource use, and more competitive than others. The score for each factor and the average score for the 43 four-digit manufacturing activities are reported in Table 4.1.

⁷ Namely: (i) Contribution to industrial GDP, measured by the share of the value of the particular manufacturing activity in total industrial GDP; (ii) Contribution to employment, measured by the share of the particular manufacturing activity in total industrial employment; (iii) Contribution to export, measured by the share of the particular manufacturing activity in total industrial exports; (iv) Factor intensity, measured by the ratio of net fixed assets to wages and salaries of the particular manufacturing activity; (v) Import intensity, measured by the ratio of imported raw materials consumed in the total raw materials consumed by a particular manufacturing activity; (vi) Total factor productivity, measured by the ratio of value-added at factor cost at the national accounts concept to the combined factor inputs, each weighted by their respective income share in the particular manufacturing activity; (vii) indicator of domestic competitiveness (IDC), measured by the ratio of total costs of the particular manufacturing activity to gross value of production of the same at domestic prices; and (viii) international competitiveness indicator (ICI), measured by the ratio of total costs of the particular manufacturing activity to gross value of production of the same at border prices.

Table 4.1: Factor scores and average scores for four-digit manufacturing activities

Manufacturing Activity	Contr. GDP	Contr. employ.	Contr. export	Factor Intensity	Import intensity	TFP	IDC	ICI	Average Score
Production and preserving of meat, fruits and vegetables	35	33	36	20	36	24	34	35	32
Manufacture of vegetables & animal oils & fats	15	26	33	2	43	2	4	3	16
Manufacture of dairy products	10	8	25	1	38	4	10	18	14
Manufacture of grain mill products	29	34	28	14	32	8	15	31	24
Manufacture of prepared animal feeds	4	6	25	41	40	38	24	30	26
Manufacture of bakery products	32	36	25	24	27	23	27	10	26
Manufacture of sugar & sugar confectionery	43	42	42	12	34	35	43	43	37
Manufacture of macaroni & spaghetti	21	9	25	22	42	32	36	17	26
Manufacture of food products n.e.c	19	16	40	6	39	9	23	9	20
Distilling, rectifying & blending of spirits	20	15	25	39	30	41	39	22	29
Manufacture of wines	11	13	32	34	29	36	18	8	23
Manufacture of malt liquors & malt	42	32	35	10	19	13	29	12	24
Soft drinks & production of mineral waters	34	39	37	26	22	17	14	7	25
Manufacture of tobacco products	37	17	25	33	10	43	42	40	31
Spinning, weaving & finishing of textiles	39	43	41	18	28	18	5	19	26
Manufacture of cordage, rope, twine & netting	17	31	25	38	13	34	19	26	25
Knitting mills	2	4	25	7	12	7	3	2	8
Manufacture of wearing apparel except fur apparel	14	38	38	32	35	1	6	4	21
Tanning & dressing of leather, luggage & handbags	36	37	43	27	33	19	16	15	28
Manufacture of footwear	30	35	34	16	23	10	12	6	21
Wood and cork, except furniture	16	21	25	43	17	42	37	38	30
Manufacture of paper & paper products	25	25	25	30	9	26	26	34	25
Publishing and printing services	38	41	27	37	20	37	40	42	35
Basic chemicals	12	20	25	4	24	6	1	5	12
Manufacture of paints, varnishes and mastics	23	12	25	15	15	28	35	25	22
Pharmaceuticals, medicinal & botanical products	24	19	26	3	8	5	8	28	15
Soap, detergents, perfumes and toilet preparations	26	24	25	17	11	20	22	20	21
Manufacture of chemical product n.e.c.	7	5	25	13	6	13	20	36	16
Manufacture of rubber products	33	18	25	9	2	15	31	23	20
Manufacture of plastic products	31	29	25	11	4	11	21	37	21
Manufacture of glass and glass products	13	11	25	23	31	22	32	33	24
Manufacture of cement, lime and plaster	41	28	25	21	26	31	38	21	29
Manufacture of articles of concrete, cement & plaster	22	30	30	36	41	33	28	11	29
Manufacture of non-metallic mineral product n.e.c.	18	27	29	5	37	3	2	1	15
Manufacture of basic iron and steel	28	22	25	29	3	29	25	39	25
Structural metal products, tanks, and containers	9	14	25	25	16	16	11	27	18
Manufacture of cutlery, hand tools and hardware	8	10	25	35	7	27	13	13	17
Manufacture of ovens, furnaces and furnace burners	2	3	25	42	14	40	30	32	24
Machinery for food & beverage processing	5	7	31	19	21	12	9	29	17
Accumulators, primary cells & batteries	1	1	25	40	1	30	7	14	15
Manufacture of bodies for motor vehicles	40	23	39	28	5	39	33	24	29
Parts and accessories for motor vehicles and their engines	6	2	25	8	18	21	41	41	20
Manufacture of furniture; manufacturing n.e.c	27	40	25	31	25	25	17	16	26

Source: own computation from CSA survey

As clearly exhibited in the table, a little more than half (25 four digit ISIC manufacturing activities) scored more than the average. The highest scoring manufacturing activities, however, are very few. This shows that the existing actual competitiveness capacity of the sector is not that much dependable. If we take firms whose score are greater or equal to 30, we have only five manufacturing activities, namely: production, processing, and preserving of meat, fruits and vegetables; manufacture of sugar and sugar confectionery; manufacture of tobacco products; manufacture of wood and products of wood, except furniture; and publishing and printing services. This implies that these sectors are relatively more significant contributors to the Ethiopian manufacturing sector given the existing situation.

This is not, of course, in line with what the Government propagates with regard to manufacturing sector where the focus is mainly on resource-based theory. Although our result does not refute the focus on resource based manufacturing activities, it suggests that all resource based activities may not necessarily be competitive. Non-resource based firms can also be competitive through improved productivity and high learning rate. Thus, the Government has to consider this composite index for its immediate intervention in the sector.

It should be noted, however, that this does not mean Government shall neglect other sectors whose actual competitiveness capacity is limited. If the Government provides all the necessary supports and engages the private sector in real partnership, the ground will be levelled for different manufacturing activities to be mushrooming. The Government should, therefore, remove the constraints that the manufacturing sector faces in order to create the enabling environment, which could bring sustained and competitive manufacturing sector, a point to which we shall turn now.

4.2. Neutral (long term) intervention

As we have seen in the preceding sections, the capacity of the manufacturing industry to be competitive at the global market is very limited. The few industries with this capacity are not even those one would expect Ethiopia have a clear competitive advantage (resource base). Most activities, which are labour intensive and resource based, are found to be not competitive. This may not be surprising given the Ethiopian context. As mentioned in the introductory note, about 67 percent of the establishments were fully and partially owned by foreigners and there was not much engagement by local people in the manufacturing industry. Local investors were largely involved in trade and housing. This was further worsened by the military regime where

private investment was simply crowded out by policy prescription. As a result, the Ethiopian manufacturing industries do not have much local investor who had accumulated experiences in many aspects. The ground is not still levelled for local investors in the manufacturing sector to be up to the expectation. We have still a large private sector participated in trade and distributive sector.

As noted earlier, in nearly all economies, the manufacturing industry has been the critical agent of structural transformation that marks the transition from a primitive low productivity, low-income state to one that is dynamic, sustained, and diversified. This sector has been, however, engulfed in diverse and immense constraints for extended periods. Constraints affecting the manufacturing sector may be broadly grouped into infrastructure, technology, finance, Government policy, inefficient bureaucracy and poor private-public dialogue.

Thus, the Government has to do a lot in terms of creating an enabling environment in order to promote investment in manufacturing and to strengthen the competitiveness capacity of the sector. If we consider the criteria used by the International Institute for Management Development (IMD) in its World Competitiveness Yearbook 2003 to select the competitive economy in the world, the central focus was the Government. The four criteria that are used in 2003 were measures of economic performance, Government efficiency, business efficiency and infrastructure. Among the four, two (Government efficiency and infrastructure) are directly related with the Government and the other two are not also independent of the Government. The Government has, therefore, a central role in making the manufacturing sector competitive and has to involve itself in alleviating and removing all the constraints and engage itself with structured dialogue with private sector to promote investment.

4.2.1. The role of the government

The main focus with regard to the role of the Government in enhancing competitive manufacturing sector lies on providing the legislative framework, efficient infrastructure, skilled manpower, and stable environment for business.

Providing legislative framework

The Government should provide a clear and predictable legal framework for businesses. Regulations should be administered in an open and transparent system, and applied fairly to all parties. The Government has to make it clear to businesses

that it deals with them solely on the merits of their case. There is no favoured treatment for private companies or for Government/political party-linked companies for that matter. Policies should be guided by the principle that it should support the private sector as the engine of growth and ensures that the macro-environment is stable. A lot remains to be done to provide a legislative framework like this one.

Investing in infrastructure and manpower

The Government has to invest in infrastructure and manpower, aware of the fact that these are the areas in which the private sector is likely to under-invest. Public investment in hard and soft infrastructure facilitates the private sector to come in. It has a strong crowding in effect.

As it has been evidenced by the East Asian economies, the role of Government investment in human capital is the kernel of competitiveness. In order to build a successful competitive economy, there is a need to develop a workforce with capabilities in business, technology, innovation, production and services, and international market development. The Government has to ensure that the education and training system is geared towards the needs of the economy, tailored to what is required, with a strong emphasis on providing technical and professional manpower. The Government has also commit itself in establishing perhaps sector-specific training institute to provide tailored training for competitive manufacturing activities and establish a development centre that provides entrepreneurship and business management skill at federal and regional level. These human resource strategies call for a special policy for manpower development and perhaps a special agency to accomplish.

Similarly, an efficient infrastructure lowers business costs and makes it attractive for investors. Efficient infrastructure significantly lowers the transaction cost and improves the competitiveness of the manufacturing sector. Despite the Government efforts to improve the country's road network, Ethiopia's road transport infrastructure is still weak. The percentage of paved roads for the year 1996 is only 15 percent and it is by far below from other African countries. The normalised road index for the same year was 55, which is considerably far away from the average.²⁸

²⁸ The normalised road index is the total length of roads in a country compared with the expected length of roads, where the expectation is conditioned on population, population density, per capita income, etc. A value of 100 is normal; less is below average. This is based on the World Bank, World Development Indicators, 1998, table 5.9.

Telecommunication services, the other major infrastructure, is wholly operated and owned by the Government. This might be one of the reasons that makes the country one of the lowest telephone densities in the world. Telephone mainlines per 1000 people is only 3.²⁹

Facilitating business

Government is always expected to play through providing a pro-business environment for the private sector. This includes having sound macro-economic policies, good soft and hard infrastructure, and a developmental mindset. The Government has to exercise also greater flexibility in the administration of rules and regulations. It should facilitate conditions to do businesses, including foreign investors wishing to come to Ethiopia, through various promotional agencies. We need to have agencies entrusted with this responsibility in each important and strategic sector. One of the secrets of the success of the East Asian countries is the role of the Government through promotional agencies.

Further more, the Government has to develop a specific export/manufacturing zone with special package of fiscal incentives, technology and other like preferential rating on public utility services, particularly electricity and direct provision, such as land, buildings, and finance.

4.2.2. Addressing market difficulties

As the 1995/96 CSA survey on manufacturing industries underlines, absence of market is the most serious problem facing manufacturing industries, both small scale and large and medium industries, to operate at full capacity. Out of 2731 small-scale industries surveyed, 1471 (54 percent) identified absence of market as the major constraint for not being operational at full capacity. Out of 630 large and medium industries surveyed, 269 (43 percent) identified absence of market as the major constraint for not being operational at full capacity. The average capacity utilisation for manufacturing industries was only 49 percent in 2000/01.³⁰ The main reason for market difficulties could be, among others, lack of effective domestic demand and dumping.

²⁹ This is 48 for Botswana, 50 for Egypt, 45 for Morocco, 15 for Zimbabwe and 162 for Mauritius (See World Bank, World Development Indicators 1998, table 5.10).

³⁰ See BACTECT, 2003:100

Creating effective domestic demand

Effective domestic demand is a crucial element in boosting competitiveness. Specifically, the nature and quality of demand is much more important than the size. Particular quality demands for manufacturing output are believed to pressurise producers to give more attention to the quality of the product and after sales services. In this process, manufacturing industries will be challenged to be innovative, improve their productivity and increase their learning rate and hence gain competitive advantage. For this, we need effective local markets, which are strong enough to put pressure on producers to innovate, improve production, to invest more, and to be more efficient.

The main issue here is how we are going to build this kind of local market in our economy. The population of Ethiopia is approximately 70 million, growing at a rate of 2.7% per annum (1961-2003), and real gross domestic product at factor cost grew at 2.6% per annum for the same period, which led to a negative per capita income growth (-0.1%).³¹ About 85 percent of the population lives in rural areas and are employed in agriculture, of which nearly half produce below subsistence level of output.³² This shows a very limited actual market which has very limited role in supporting the competitiveness of the manufacturing sector. The question is how to create an effective domestic demand/market.

From the preceding paragraph, we can observe that the potential market is in the rural area. Given the context in the preceding paragraph and high level of poverty in the rural area, the success of building effective local demand critically depends on the treatment of agriculture and the rural sector. In fact, development processes, hence building an effective local market, may be characterised by trying to reduce relative importance of rural and agricultural sector in GDP and employment, and moving workers and families into non-agricultural (industrial) sectors and urban areas. Development, both from theoretical and empirical evidence, is conceived as a social transformation (from rural to urban) and economic transformation (from agriculture to non-agriculture, i.e., manufacturing and then service). The transformation inherent in the development process is agricultural transformation, which, in turn, implies a decline in its share in total output and employment with a simultaneous rise in the share of non-agricultural sector. Focusing/investing in agriculture must, therefore, be

³¹ Annual growth rates were estimated by regressing the natural logarithmic values of the variable against time. Source for the data: EEA/EEPRI Statistical Data Base, 2003.

³² MoFED, 2002.

in the context of reducing its significance in the economy and simultaneous rise in the importance of non-agriculture. Building the local market involves improving and diversifying the livelihoods of the rural population in the context of transforming the sector. In light of this, the current overall development strategy and agricultural policy need to be revisited.³³

Preventing dumping

Most imported items originate, nowadays, from those countries that undertake extensive export promotion measures, namely Asian countries (such as China, Korea, Singapore, Indonesia, and Taiwan) and the Middle East. In these countries, many exported items, mainly finished products, are produced in export processing and/or industrial zones where most of the infrastructure, utilities, and work premises are covered or provided by the Government at concessionary prices; bureaucratic hassle and transaction costs are minimal; the financial environment is friendly; there is extensive technical support in terms of technology selection and dissemination, quality standards, skill upgrading, and market information; duties and taxes are either minimal or absent altogether; and many leverages are given to those firms aiming at the export market. There is also cost subsidy to promote export. It is not surprising, therefore, if, with all these concessions and privileges, an imported item is cheaper in Addis Ababa. To look at how cheap and excessively abundant food items such as tea, edible oil, wearing apparels, footwear, and electronics are in the streets of Addis Ababa requires little effort. Domestic industries producing these and other similar items including food products (tea, edible oil), detergents, and wheat flour are operating below capacity. The scale of dumping seems to be increasing making the condition worse for domestic manufacturers at the same pace. The situation does not seem to have captured the attention of the Federal Government as well as the City Governments in that the level of response to take remedial measures to mitigate the scale of dumping is yet to match the gravity of the problem.

4.2.3. Public-private partnership

Government may lack proper understanding, technical know-how and management capability to deeply know the problems of manufacturing industries at sectoral and sub sectors level. Thus, it always has difficulty in addressing factors that drive the competitiveness of manufacturing. The recognition of the private sector as a key actor

³³ For detail discussion see Getnet 2005a and 2005b.

in the country's economic development and hence, institutionalise the participation of the private sector in the policy formulation process at different levels and collaboration in different investment venture, allows the country to join the two key actors together to have consensus on policy issues, shared vision and pool resources.

The importance of instituting public-private partnership in which the private sector can present its concerns, views, and problems to public authorities is well recognized. Ensuring that the views of the private sector are, always and as a rule, heard at every stage of policy formulation and implementation on a regularly basis is considered vital in realizing growth objectives. This is so because consultative mechanisms, among other things, help:

- a) Enhance the flow of information amongst Government, business, and civil society.
- b) Engender a sense of common ownership over reform strategies among stakeholders.
- c) Conserve resources through pooling technical expertise and the sharing of costs.
- d) Generate trust and social capital, which in turn lower the transaction costs of doing business and economic governance.
- e) Facilitate the ease of the free movement of labour and capital between and among regions.

Although there is a good signal of Government's intention to engage with the private sector in the spirit of real partnership, a formal private-public dialogue mechanism of the nature outlined above is absent in Ethiopia. The usual experience is that when there is a conference organised by the private sector, the participation of Government representatives is on invitation. By the same token, when the Government organised conferences the participation of private sector is on invitation. This kind of process may lead the Government to perceive conferences organised by the private sector as a private-sector affairs and private sector may also think conferences organised by the Government as a political affairs. The tone of both kinds of conferences, as observed in the past few years, is not one of partnership. In fact, there was a tendency for the private sector to present lists of complaints to the Government, and for Government, in response, to defend its positions.

A hard fact, which both actors have to accept, is the manufacturing sector of Ethiopia is not in a position to afford an adversarial relationship between the Government and private sector. Experiences of newly industrialised countries and some successful

countries in Africa explicitly showed that public-private partnership is the most important factor to boost the development of the economy.

5. Conclusion

As observed above, the Ethiopian manufacturing sector is not performing well in all aspect of its operations. Its contributions to GDP, exports, employment, growth in output have been very limited. Domestic and international competitiveness and import intensity of the sector are also quite disappointing and deteriorating.

The Ethiopian experience shows no encouraging signs in industrialization and competitiveness despite a relative early entry as compared to other African countries. Changing the disappointing state of the Ethiopian manufacturing industry requires profound measures that would improve conditions for growth and expansion. These include, *inter alia*, sound public policies and support services capable of attracting both domestic and foreign investment to enhance the development and optimum use of available natural and human resources.

To avoid a widening gap and marginalisation from the rest of the world, the industrial sector must be competitive and responsive to the requirements of the global interaction. This would require, in addition to technical know-how and market intelligence, the creation of an enabling environment for private entrepreneurs with minimal control through regulation and investment in complementary services essential to boost a competitive and innovative response to opportunities. An efficient and well-adapted industrial structure for competitiveness will further require the building of entrepreneurial, managerial, and technical capabilities through education, research, training on-the-job, and experience.

Thus, there is a need for a competitive industrial policy, which includes the provision of a package of market information, assistance in the acquisition of technology, subsidised credit, tax holidays, and incentives to new investments. Supporting services and institutions are also required to enhance the competitiveness of the sector.

The competitiveness and efficiency of enterprises often depends on the availability of infrastructure and clusters of mutually supporting services and institutions of the markets in which they operate. These include, among other things, institutions for

industrial standards, testing and quality assurance, design, training, technology acquisition, dissemination and adoption, information, research and extension services.

With regard to market difficulties, one of the main obstacles are the absence of effective local demand that can boost the competitiveness of manufacturing industries. Among the main reasons for local market difficulties is, of course, high level of poverty in the country and its subsequent on the purchasing power of the people. This boils down to the failure of the development strategy we have been pursuing so far. All the development strategies to date have failed to produce a wealthy and market oriented peasantry and wealthy urban population. We need to transform the economy and create an effective demand. We have to transform agriculture from livelihood engagement to commercial engagement and increase land-labour ratio by transforming agricultural employment into non-agricultural employment. For this to come, non-agricultural sectors particularly manufacturing has to grow supported by a multifaceted macro and sectoral policies. The current development strategy, ADLI, badly needs some thought in line with this. The success of ADLI should be measured not in terms smallholder agricultural output growth but in terms of reducing labour-cultivated land ratio, increasing volume of marketed surplus and mobility of agricultural labour force towards other sectors of the economy where there is more productive engagement.

Government partnership with the private sector should not be considered as an optional affair. The motto of the Government should be: recognise opportunities, utilise synergies, and work together. As it stands now, private sector involvement in policy-making is minimal. Institutionalised processes of public-private dialogue are virtually absent. Thus, the Government has to enact legislation that facilitate instituting public-private partnership which allow structural dialogue at different levels with clear mandate and constituency.

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