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Industrial Growth in Ethiopia–A Review

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Abstract:- Ethiopia is one of the land-locked countries in Africa. By African standards, Ethiopia is a potentially wealthy country, with fertile soil and good rainfall over large regions. Ethiopia possesses several valuable minerals, including gold and platinum. Unlike most sub-Saharan African countries, Ethiopia's resources have enabled the country to maintain contacts with the outside world for centuries. Since Ethiopia doesn't manufacture automotive, construction machineries, machine tools and agricultural equipment's locally at present, it imports those from various countries of the world. Ethiopia claims that there are lots of resources available in the country. It is true the country has treasure of resources which are not being fully utilized or explored. There is a need of industrial growth in the country. This paper is in relation to develop industries in the country by developing industrial zones, estates, techno craft guilds and enhancing private management capacity. In the present situation industries such as manufacturing of machineries and equipments, automobiles spare parts treated as non-resources based industries and the Govt. pays little attention for these industries. But now Ethiopian Govt. with Industrial Master Plans (IMP) lay the foundation for the development of the manufacture sector, which quickly became the leading growth sector of the economy. These depend the development of the manufacturing sector which led to increased value-added activities, enhanced productivity, greater industry linkages as well as growth of manufacturing related services. Utilizing the resources and the techniques available, it is possible to produce the various engineering products of the daily needs. In developed countries in the mass manufacturing industry; they are using latest equipment and improved methods in process to produce the quality goods. Similarly it is possible to produce the same items maintaining the same quality here by using the proper tooling with the equipment available. As it is in the country all the necessary goods are imported from the other countries spending lot money and time. The country is depending on the other source. The country is still under developed it is true, but how long it will continue this stage, here all the required resources are available and skilled labour, so only will power is lacking. Today the world is advancing, and emerging into new heights of growth. Growth is required for everyone hence it is the time to utilize the resources available start producing the products to meet the demand of the domestic market and later international market. The countries industrial and commerce bureau has to look at the newly industrialized countries performance and how they are progressing day by day, adapt similar industrial policies of them and implement the policies in a phased manner. If look at the present condition of industry and current situation of the industries in Ethiopia, it is a long way to go and takes more time, but right decision at right time will help in progressing.

Key words:- Machine building, Agro industries, Electrical, Electronic and Automobile Industries.

I. INTRODUCTION

Ethiopia, with an area of 1.1 million square kilometres (444,000 square miles), is the ninth largest country in Africa. This is slightly less than twice the size of Texas. In July 2000, the population was estimated at 60 million with a growth rate of 2.9 percent. The rural to urban population ratio is 4:1. The Ethiopian economy is largely based; agriculture on average accounts for about 40 percent of GDP, 85 percent of exports, and 85 percent of total employment. Ethiopia's main imports include petroleum products, civil aircraft, vehicles, spare parts, construction equipment, medical and pharmaceutical products, industrial equipment and machinery, both agricultural and industrial chemicals, agricultural machinery, hybrid seed, fertilizers, irrigation equipment, and durable and non-durable consumer goods. [1]

Ethiopia's main exports are coffee, chat, leather and leather products, pulses, gold, live animals and processed meat, oilseed cake, and fruits and vegetables. Among these products, coffee is by far the most important, constituting an average of 55 percent of total exports by value during the last twenty three years and reaching as high as 60 percent in 1999/2000. [2]

1.1. IMPORT AND EXPORT IN ETHIOPIA[8]

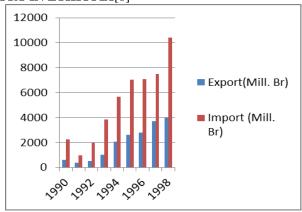


Fig.1. Import and export in Ethiopia

The major manufacturing sub-sectors in Ethiopia are food, beverages, textiles, clothing, and leather, all of which are also related to the agricultural sector. Ethiopia's Growth and Transformation Plan (GTP), for the Five-year period(2010-2015). As the GTP is in the preparation process, it has been passing through an extensive process of consultation with citizens, the private sector and civil society including women and youth organizations, religious institutions, the academia including professional associations both at regional and federal levels.

The industrial growth will have immense contribution to the Growth of the country, supported with attractive incentives. The major areas the contribution can be felt easily along:

- Job creation
- Saving foreign currency
- Efficient commodity distribution and improving intercity commodity transaction
- · Market access
- Decreasing accident level there by reducing the loss of human lives and resources

II. ETHIOPIAN INDUSTRIAL POLICY

Currently Industrial Development Strategy is primarily focus on the promotion of agricultural and industrialization, export based industries and expansion of labour intensive industries. Hence in this strategy, growth in agricultural productivity enable to have high demand for manufacturing goods and motivates expansion in production capacity utilization and investment in manufacturing. Industrial Development Strategy which was approved including establishment of new (or strengthening of existing), specialized technology institutes for sub-sectors (leather and leather products, textile and sugar industry, metal, dairy and meat, horticulture).[3]

2.1. MANUFACTURING INDUSTRIES IN ETHIOPIA

Modern manufacturing industrial sector in Ethiopia was established at the end of 19thcentury total of 25 factories were established mostly by foreigners. Currently the Ethiopian manufacturing industry has increased to 2172[8].

The following export-oriented industries can continue to be supported in the next five years:

- Leather and leather products
- Agro-processing
- Textile and garment
- Floriculture

The development policies and strategies pursued during Sustainable Development and Poverty Reduction Program (SDPRP), the country's vision and achievements registered under SDPRP were the basis for the PASDEP. The Plan for Accelerated and Sustained Development to End Poverty (PASDEP) is the First Five Year Phase to attain the goals and targets set in the MDGs at a minimum. The main objective of the PASDEP is to lay out the directions for accelerated, sustained, and people-cantered economic development as well as to pave the groundwork for the attainment of the MDGs by 2015. Eight Pillar Strategies were developed under PASDEP which have been carrying forward important strategic directions.[4] These pillar strategies were:

- Building all-inclusive implementation capacity;
- A massive push to accelerate growth;

- Creating the balance between economic development and population growth;
- Unleashing the potentials of Ethiopia's women;
- Strengthening the infrastructure backbone of the country;
- Strengthening human resource development;
- Managing risk and volatility; and,
- Creating employment opportunities

In the current PASDEP, most of the targets in the trade and industry sector are expressed in growth rates, shares of GDP, or export earnings in USD. Some of them count numbers of policy actions taken or firms supported. Tables 1 and 2 show respectively the numerical targets and major achievements by 2007/08 in the trade and industry sector as reported in the PASDEP Annual Progress Report 2007/08:[4],[5]

	Baseline (end	Target (2009/10)
	2004/05)	
Growth rate of industry value added (%)	8.1	11.5 (average)
Share of industry in GDP (%)	13.6	16.5
Revenue generated from industrial	63.73	500
export (leather and leather products)		
(USD million)		

Table 1. Current PASDEP: Numerical Targets Related to Industry

1	Textile and garment	Encouraging steps have been observed; 71 projects were at	
		different stages of operation. Export earnings recorded USD	
		14.5 million (15.1% higher than)	
2	Tanning industry	Support has been provided in manpower, machinery, market	
		access and other areas. 5 of 16 tanneries supported	
		registered better performance	
3	Leather export	The tanning industry generated revenue of USD 101	
		million, 13% higher than previous year but lower than target	
		(USD 153.4 million).	
4	Sugar	Production was 296,009 tons (3 sugar factories), slightly	
		above	
5	Ceme	Mugher produced 737,043 tons (against the target of	
	nt	871,000 tons); Messebo produced 950,000 tons (18% higher	
		than the previous year); five new plants	
6	Floricult	Flower farms reached 922 ha (43% increase over previous	
	ure	year); flower	
7	Privatizat	15 public enterprises (PEs) given decision to privatize; 3	
	ion	PEs for re-tender; 31 PEs carried out business evaluation; 10	
		PEs completed	
8	Export	Export in 2007/08 was USD 1,481.4 million (25% higher	
	earning	than previous year), with coffee earning 35.5% of total.	
		Target for 2007/08 was USD	
9	WTO accession	Process has continued	

Table 2. Current PASDEP: Major Achievements in Trade and Industry by 2007/08

Purely quantitative targets expressed in per cent or USD million, without examining the quality of such achievement, are still useful because they can visualize the progress of industrialization in concrete and comparable numbers—just as the final scores of a football game. Developing countries often use these targets in their industrial policy formulation. However, mindless obsession with such numbers also carries risks. Ethiopia should broaden the scope of industrial targets by introducing more indicators for skills, technology and other internal capability in addition to the traditional "macro" targets.[2]

2.2. GROWTH% OF MANUFACTURING INDUSTRY REGION WISE[8]

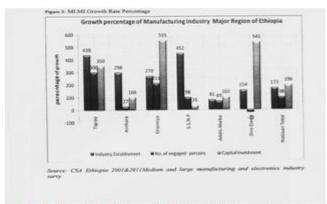


Fig.2. Growth% of manufacturing industry region wise

To realize the objective of PASDEP by employing the above pillar strategies, the Government had established two alternative growth scenarios under PASDEP. The first scenario was established in line with the requirements of MDGs, while the second scenario which is equivalent to the 'MDGs Plus' scenario was based on the requirements of the country's vision. In the base case scenario, 7 % annual average real GDP growth was targeted while the target in the higher case scenario was set at an average real GDP growth of 10 %. In both scenarios the performance achieved in the past five years of PASDEP implementation was remarkable (Table 3).

	Average Growth			
Sector	Sector Base case scenario	High case scenario Average Growth Achieved(2005/06- 2009/10)	Achieved (2005/06- 2009/10)	
Real GDP (%)	7.0	10.0	11.0	
Agriculture and allied activities	6.0	6.4	8.0	
Industry	11.0	18.0	10.0	
Services	7.0	10.3	14.6	

 Table 3. Growth Targets and Performance under PASDEP

As shown in Table 3 above, the growth performance as measured by real GDP growth has exceeded the growth targets set under both scenarios of PASDEP. The registered GDP growth rate, in comparison with an average population growth rate of 2.6%, implies that the average annual per capita income growth rate was 8.4 %

Factors Affecting Industrial Growth [9]

- Prevailing political and economic environment
- House hold income (purchasing power)
- Economic development (GDP)
- Price and running costs
- Quality of after sales support (parts & workshop)
- Promotion and advertisement
- Ease of maintenance and cost of maintenance
- Reliability of the product
- Government policy
- Customs and Excise duty
- Population and demography
- · Technology
- · A closed financial sector
- Lack of capable financers

III. ETHIOPIA'S ECONOMY

Ethiopia is an extremely poor and overwhelmingly agricultural country, with agriculture employing 80% of the people and farm products accounting for almost half of the country's GDP and 60% of its exports (mainly coffee). The great majority of the population is engaged in subsistence farming. [6]The chief farm products are cereals, pulses, coffee, oilseed, cotton, sugarcane, potatoes, khat, and cut flowers. Large numbers of cattle, sheep, and goats are raised, and there is a fishing industry. Because of its degraded lands, poor cultivation practices, and frequent periods of drought, Ethiopia has to rely on extensive food imports.

Industry, which is largely state-run, is mostly restricted to agricultural processing and the manufacture of consumer goods. The main industrial centers are Addis Ababa, <u>Dire Dawa</u>, and Nazret. The leading manufactures include processed food, beverages, textiles, leather, chemicals, and metal products. No large-scale mineral deposits have been found in Ethiopia; gold, platinum, copper, potash, and natural gas are extracted in small quantities. The country is developing its hydroelectric capacity, which is significant; the electricity being produced is for both domestic use and export.

Ethiopia has a poor transportation network, with few year-round roads. The country's one rail line links Addis Ababa and Djibouti; plans for its revitalization were announced in 1998. The chief ports serving Ethiopia, which became landlocked with Eritrean independence, are in other countries: <u>Djibouti</u>, in the country of Djibouti, and <u>Aseb</u> and <u>Massawa</u>, in Eritrea. The border war that began in 1998 ended Ethiopian use of Eritrea's ports.

The annual value of imports into Ethiopia is usually considerably higher than the value of its exports. The principal imports are food and live animals, petroleum and petroleum products, chemicals, machinery, motor vehicles, cereals, and textiles. The main exports are coffee, khat, gold, leather products, live animals, and oilseeds. The leading trade partners are China, Saudi Arabia, the United States, and Italy.

3.1. EUROPEAN UNION TO SUPPORT INDUSTRIAL GROWTH AND ECONOMIC DEVELOPMENT IN ETHIOPIA

The European Commission will give new support to Ethiopia to modernise and expand the industrial sector. The assistance is meant to help create an enabling environment for Ethiopia to tap its potential for industrial growth and make the country's economic development, which is currently based on agriculture and (to a lesser extent) services, more diversified.

The Transformation Triggering Facility (TTF), funded with \in 35 million will support Ethiopia's plans to accelerate industrialisation and private investments[7]. Four main priority sectors with good development potential in Ethiopia will be supported: leather and leather products; textiles and clothing; agri-processing; and pharmaceuticals.

The development cooperation programme with Ethiopia is one of the largest the EU runs in the world. Disbursements in the past years amounted to an average of about €200 million per annum. The cooperation programme centres around three focal sectors, (i) rural development and food security; (ii) transport and regional integration; and (iii) macro-economics and governance.

The Ethiopian Government has set an ambitious target for the country of reaching middle income status by 2025. This requires sustaining the average growth rate of about 11% of the past 7 years for at least another decade.

IV. AN OVERVIEW OF NEWLY INDUSTRIALIZED COUNTRIES

The industrial development policy of Singapore, China, India, Korea, Taiwan and Malaysia was closely similar. Initially they use focused import substituting policy and work with for two or more decades. Of course it has brought a remarkable development but no up to their expectation. To achieve their expectation they change their policy to export led industries. During this time a lot of challenge was faced due to lack of raw materials, lack of technologies, lack of technical skills and knowledge[10]. For this reason initially their product was unable to compete in international market. To tackle these problems the government of each nation plays a significant role by establishing research canters, collaboration with developed countries, and providing funds for R&D, supporting and subsidizing technology transfer and commercialization activities, investing in human development through internal and external source of training and facilitating specialization. All this makes these fast developing countries grow fastly and become competent in international market with short period of time.

China's 2010 industrial output growth rate is estimated to reach 15 per cent. The main targets for Chinese industry next year will be restructuring, energy efficiency and technological innovation, according to Mr. Li. He said that the nation's industrial investment is expected to grow 19 per cent next year[11]. The government will advocate high-quality and value-added imports and control strictly highly-energy intensive and highly polluting exports. Qualified companies will be encouraged to develop abroad for acquisition and manufacture, said Li. Miao Wei assumed the position of minister of industry and information technology on Dec 26.

4.1. THE MOMENTUM OF GROWTH

The last thirty years' experience suggests that very few developing countries have sustained decent per capita growth for two decades or more. Specifically, out of 117 developing countries with population over half a million, only 12 countries achieved per capita growth of more than 3 per cent per year in 1980-2002, with at least 2 per cent growth in each decade of the eighties and nineties. These twelve countries were: China, Vietnam, South Korea, Chile, Mauritius, Malaysia, India, Thailand, Bhutan, Sri Lanka, Botswana and Indonesia. The number falls to 9 if we specify a minimum population of 3 million. Nine of these 12 countries are in Asia and, fortunately, they include the three most populous: China, India and Indonesia. (See Table 4). If we take the full 25 years (1981-2006), India's per capita growth has averaged 3.8 per cent or almost 4 per cent per year.

	Country	1980-2002	1990s	1980s	Population in 2000 (Millions)
1.	China	8.2	8.6	7.7	1262
2.	Vietnam	4.6	5.7	1.9	78
3.	South Korea	6.1	5.0	7.4	47
4.	Chile	3.3	4.3	2.1	15
5.	Mauritius	4.4	4.1	4.9	1
6.	Malaysia	3.4	3.7	3.1	23
7.	India	3.6	3.6	3.6	1016
8.	Thailand	4.6	3.4	6.0	61
9.	Bhutan	4.3	3.4	5.4	1
10.	Sri Lanka	3.1	3.1	3.1	18
11.	Botswana	4.7	2.7	7.2	2
12.	Indonesia	3.5	2.6	4.4	206

Table 4: Good Growth Performers of Recent Decades [12] Average Annual Per Capita Growth (%)

4.2. INDIA'S GDP GROWTH IN % [13]

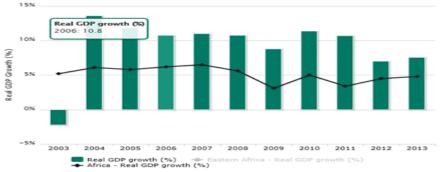


Fig. 3.India's GDP growth in %

	1992/3 –	2002/3 -	2007/8 - 2011 /12			
	2005/6	2006/7	1992/3 –2005/62002/3 - 2006/7"Optimist"	"Pessimist"		
GDP %	6.4	1.2	8 – 10	6.5 - 7.0		
GDP per capita (%)	4.4	5.5	6.5 - 8.5	5 – 5.5		

Table 5: Medium Term Growth Expectations

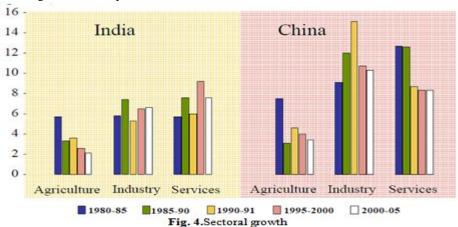
	China		India	India		Increment (2000- 05)	
	2000 (1)	2005 (2)	2000 (3)	2005 (4)	China (5)	India (6)	
Merchandise Exports(\$ Billion)	249.1	762.4	45.5	104.7	513.3	59.2	
Share of world export (%)Share	3.9	7.3	0.7	0.9	3.4	0.2	
Service export (\$ Billion)	30.4	74.4	16.2	60.6	44	44.4	

Current Account Balance\$ Billion)	20.5	160.8	-2.7	-10.6	140.3	-7.6
Foreign Exchange Reserve\$ Billion)	165.6	818.9	37.2	131.0	653.3	93.8
FDI inflow (\$ Billion)	30.1	72.4	1.7	6.6	42.3	4.9
FDI stock (Inward, \$ billion)	193.3	317.9	17.5	45.3	124.6	27.8
Oil Consumption (million of tonns)	223.6	327.3	106.1	115.7	103.7	9.6
Primary Energy Consumption (million of tonnes oil equivalent)	966.7	1554.0	320.4	387.3	587.3	66.9

Table 6: China and India: Global Impact

4.3. SECTORAL GROWTH[14]

Average annual growth rate in percent



In the current PASDEP, most of the targets in the trade and industry sector are expressed in growth rates, shares of GDP, or export earnings in USD. Some of them count numbers of policy actions taken or firms supported[15]. Tables 7 show respectively the numerical targets and major achievements by 2007/08 in the trade and industry sector as reported in the PASDEP Annual Progress Report 2007/08:

	Baseline (end 2004/05)	Target (2009/10)
Growth rate of industry value added (%)	8.1	11.5 (average)
Share of industry in GDP (%)	13.6	16.5
Revenue generated from industrial export (leatherand leather products) (USD million)	63.73	500

Table 7. Current PASDEP: Numerical Targets Related to Industry

V. CONCLUSION

Drawing lessons from Eastern Europe and Asia, the project aims to be comprehensive by supporting economic transformation not only through policy fine tuning and capacity building of key institutions, but also by supporting intermediary organisations as well as providing direct support to small and medium sized enterprises in order to increase their competitiveness. Country has to establishing research canters, collaboration with developed countries, and providing funds for R&D, supporting and subsidizing technology transfer and commercialization activities, investing in human development through internal and external source of training and facilitating specialization. All this makes these fast developing countries grow fastly and become competent in international market with short period of time. Once the country grows industrially and economically, sure one day it will be recognised as one of the developed country globally

Moreover Countries experiences have shown that successful industrialization necessitates the conscious and active role of the state to counter balance the impact of market failure and to guide, coordinate and support industrial investment and entrepreneurial activities. Industrialized countries deliberately concentrated import –substituting efforts very early on light and relatively labour intensive industries, which did

not involve significant economies of scale and could therefore be run reasonably efficiently at the low output volumes demanded by the domestic market, protecting local producers against import competition include introducing import licensing on manufactured goods.

Ethiopia's vision in the economic sector is

"To build an economy this has a modern and productive agricultural sector with enhanced technology and an industrial sector that plays a leading role in the economy; to sustain economic development and secure social justice; and, increase per capita income of citizens so that it reaches at the level of those in middle-income countries."

It is suggested to follow the policies of the developed countries mentioned, who are doing better and select their policies. Implement the policies in industrial growth plan and start producing the goods. Once the products produced are accepted in the international market like other countries, which are in the same field, really the country will gain good reputation and feel proud saying that **MADE IN ETHIOPIA**.

REFERENCES

- [1]. CIA (Central Intelligence Agency), the World Factbook, Ethiopia, https://www.cia.gov/library/publications/the-world-factbook/geos/et.html
- [2]. Government of Ethiopia, Ministry of Trade and Industry, Micro and Small Enterprises Development Strategy, 1997, Addis Ababa
- [3]. Government of Ethiopia, Industrial Development Strategy,
- [4]. PASDEP Annual Progress
- [5]. Extracted from PASDEP Annual Progress Report 2007/08 (MOFED draft, p.16). This is a summary of more detailed discussion of achievements and challenges in the main text of the Report (pp.83-88).
- [6]. The Heritage Foundation, Index of Economic Freedom http://www.heritage.org/index/country.cfm?id=EthiopiaHolland Horti News Mach 2007
- [7]. European Commission -Press Release
- [8]. Central statistical agency, Report on Large and medium scale manufacturing and Electricity Industries Survey
- [9]. Federal Customs Authority. (2006). ASEKUDA's import statistics data
- [10]. PawełBożyk (2006). "Newly Industrialized Countries". *Globalization and the Transformation of Foreign Economic* Policy. Ashgate Publishing, Ltd. p. 164.ISBN 0-7546-4638-6.
- [11]. Industrial output growth to slow in 2011 China Daily
- [12]. The Federal Democratic Republic of Ethiopia, Ministry of Agriculture and Rural Development, 2010. Ethiopian Strategic Investment for Sustainable Development.
- [13]. IMF World Economic Outlook Database
- [14]. http://econ.worldbank.org/dansingwithgaints.
- [15]. PASDEP Annual Progress Report 2007/08 (MOFED draft, p.121)

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