Overview of Ethiopian Manufacturing Industries

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Abstract
The industrial sector in Ethiopia is only 11.1% which is much less than the world average (26.29%) and the sub-Saharan average (30.34%). The manufacturing sector contributes only 3.7% of output to GDP which is declined from its 6.4% proportion of the 2003/04. (WDI, 2013). Considering the average of three years value before and after GTP at constant factor price, the manufacturing value added has been 8.9 billion birr and 13.12 billion birr. Besides, the lead of the manufacturing sector has been taken by the group of light industries such as food, beverage, leather and textile. Hence, those whose multiplier effect would be more are less in their physical commencement. This would be seen as the other line disparity in industrial development. The import intensity and export value are different in each sub-sector. Heavy industries such as chemicals and basic iron and steel are found to be import intensive while the light categories such as food and beverage, textile and others are domestic resource intensive ones. Of course, the import intensive groups have shown reduction in their import intensity in the post GTP period. For example, in case of iron and steel it has been 0.93 and 0.91 in the pre-post GTP respectively. Export value in real terms has shown small increment in the post GTP period than in its pre counterpart. Food and beverage industries followed by leather have been the better performers in the export sector. Textile wakens up in the post GTP season to strengthen its export. This entails us that the transformation plan has opened new opportunities to the manufacturing firms to create and enhance their capability to export. The export duty elimination, the industrial finance priority, new export destinations as additional demand and others have made the export sector waken up. Regional disparity in the distribution of manufacturing firms especially in those important heavy manufacturing industries serious prejudice has been made against Amhara region. Basic iron and steel, fabricated metals and chemical manufacturing firms are dismally few or none at all relative to other regions which are economically influential. Thus, it would be shrewdness to objectively distribute the manufacturing sectors among the regions so that the balanced regional development would commonly be enjoyed. Otherwise, the intentionally crafted inequity problem would bear social turmoil and instability for all. The physical resource endowment, human resource accumulation, population size a base for effective demand and the infrastructure set ups have to be the objective criteria in determining the location decision of the manufacturing firms. Turning to the phase of the heavy industry fabrication for they have wider multiplier effects (backward and forward linkages) of the economy is the other core element the researcher desires to recommend. This would of course, be scrutinized in a way that the labour intensive categories would be selected thereby to augment their employment impact.
Keywords: Ethiopia, Employment, Manufacturing, Regional Disparity

1. Introduction
The chapter is confined to the summarization of the Ethiopian manufacturing sector background. The contribution of manufacturing industry to the bank of GDP is still at its unsatisfactory level in various measures. The production and productivity performance of the manufacturing sectors particularly medium and large scale manufacturing sector's output, employment, and intensities of factors of production utilization over the period of 2006-2012 would be literally discussed. Although the study is confined to the four manufacturing sectors and the firms within them, in some cases of the overview the whole industry groups would be considered. The four industrial sectors are textile including apparel, leather, food processing including beverages and Chemical industries which are actually given due attention in the Growth and Development Plan of the government though they are existed since before. Such manufacturing industries are anticipated, at least in the eyes of the government, to use labour intensive techniques of production, to have strong linkages with the rest of the economy both of forward and backward, to use agricultural outputs as inputs of their production, to be export oriented and import substituting, to contribute to rapid technological transfer. (EEA, 2013).

2. Production performance of industrial sector in terms of GDP share
In our country context, the share of Industrial sector in general and the manufacturing sector in particular is not only unsatisfactory but also declining. In 2011/12 the share of industry, composed of MLSMI, SCI, construction, mining and quarrying, electricity and water is only about 11.1% of the GDP and that of manufacturing sector is only about 3.7% of the GDP. For comparison, the industrial sector had an average contribution of about 30.34%

and 26.29%[1] to GDP of all income levels of Sub Saharan African countries and the world in the same period, respectively. (WDI, 2013). No question, the above figure entails us that Ethiopia is one of the least industrialized countries in Sub-Saharan Africa group and the world at large even at the second half of the first GTP implementation period where the primary and tertiary sectors still held a dominant share (EEA, 2013). The share of the manufacturing sector industries in GDP has further shrunk as evidenced from the declined figure of 6.4% in 2003/04 to 3.7% 2011/12.(Daneal 2007) , (EEA,2013), (Gebreeyesus,2009).

Improvement albeit the observable achievement of the growth rate of the sector in recent years (nearly 10% average growth rate registered in between 2008-2013. The government has taken initiative in 2010 to commence the GTP/ Growth and Transformation Plan where greater emphasis has been given to manufacturing sectors which are labour intensive ,have linkages to the rest of the economy, use agricultural output as inputs , export oriented and substitute import and contribute to rapid technology transfer. (EEA, 2013). Although the plan envisaged a faster and sustained development of the manufacturing sector, the score left behind.

Table 1: Value Added levels and growth rates of manufacturing sector 2000-2013 at constant base price of 2003/2010 in'000birr

	1993/2000	1999/2007	2000/2008	2001/2009	2002/2010	2003/2011	2004/2012	2005[2]/2013
Manufacturing MLS	8,146,628	11,979,803	13,215,282	14,414,606	16,086,186	18,037,324	20,503,794	23,490,030
Manufacturing	5,032,146	7,655,202	8,617,869	9,504,445	10,797,131	12,323,846	14,612,411	16,357,626
S SC Industries	3,227,216	4,436,475	4,684,261	4,982,831	5,329,932	5,713,478	5,891,382	7,132,404
GVA @ basic Prices	198,320,850	309,686,774	344,331,932	378,907,384	18,946,953	466,648,135	506,533,267	55,6462,520
GDP @ Market Prices	215,332,635	335,519,015	371,716,667	404,436,976	455,196,015	506,079,135	548,921,587	606,733,602
Growth Rate								
Industry	5.1	**9.5**	**10.1**	9.7	**10.8**	**15.0**	**13.6**	**18.5**
Manufacturing	3.6	8.3	10.3	9.1	11.6	12.1	13.7	10.8
MLS Manufacturing	2.1	9.5	12.6	10.3	13.6	14.1	18.6	14.5
S SC Industries	6.5	6.0	5.6	6.4	7.0	7.2	3.1	3.0
GVA @ basic Prices	**7.4**	**11.8**	**11.2**	**10.0**	**10.6**	**11.4**	**8.5**	**9.7**
GDP @ Market Prices	**8.3**	**11.5**	**10.8**	**8.8**	**12.6**	**11.2**	**8.5**	**10.4**
RGRGDP[3]		11.8	11.2	10.0	8.0	7.5	7.0	6.5

Source: MoFED, National Account Database

The growth of the industry sector over the past decade and half showed that the trend of growth in the sector is changing at an attractive rate. Since 2000 until 2012/13 the sector is growing at an average growth rate of 10.6% annually and a less than the industry average growth rate is recorded in the manufacturing sector, whereby it grows at an average rate of 8.6% within the specified period. Medium and large scale manufacturing industries have registered a figure between the above two where its average annual growth rate has been 9.9% over the same ranges of years. Despite this moderate level of average growth rate for a decade and half, the manufacturing sector and the MLSM is still dwarf in their capacity of generating value added and creating employment for it generates only a value added (at constant factor price of 2010/2003) worth less than 718million USD[4] as an average output value for the immediate three years before GTP(2007-2009) while 1.05billion US dollars in first three GTP period (2010)-2012/13 the maximum recorded annually being 1.16[5] billion in 2012/13. Of these an average value of 475 and 706.1million USD accounts to MLSM as before and after GTP periods of average three years where its min-max achievements are pertaining to the years 2007 and 2012/13 at 424.9 and 806.5million USD. This resulted in a per capita production of eleven dollars per annum. Growth rate (%) of GDP in manufacturing sub sectors at the base year price of 2003 /2010 year which has shown only a double increase as compared to the level before a decade of less than five USDs. (Gebrehiwot 2007).

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[1] 2010/11

[2] In the year arrangement, the first refers to Gregorian Calendar (G.C) while the second to Ethiopian Calendar (E.C).See for example, 2013/2005.

[3] IMF, African Department database, September 19, 2012; and IMF, World Economic Outlook (WEO) database, September 19, 2012

[4] It's intentionally restated in USD for comparison unlike the previous value description in terms of birr-local currency.

[5] The exchange rate between dollar and birr as of the 05/02/2015 is 20.28birr for 1USD but taken at constant official exchange rate of 2010 12.5. Hence; the value of output in birr has been changed to USD.

3. Import Intensity and Export Value

Import substitution strategy must well be backed up by the promotion of industries which largely depend on locally available resources for their raw materials due to the fact that such industries have greater competitiveness over those which are import intensive. Import intensity is measured as the ratio of costs of imported raw materials to total raw material costs. Keeping other things unaltered, declining import intensity may imply increasing consumption of local raw materials for production. Albeit this is the preferred option, import intensity could rise due to the increase in world price and series devaluation of local currency where the sum of these two alterations resulted in increased value of import in terms of local currency.

A static outlook of the intensity of imported intermediate inputs disclose that firms under heavy industries such as Chemical and Basic Iron and Steel have greater dependence on external economies for more than 80% of their raw materials are imported. Of course, a variation of import intensity observed in before and after GTP[1] period. For instance, basic iron and steel firm had used to import 93% of its input requirement before GTP as the average of the last three years closest to GTP entailed us while it has shown a reduction in its imported resource proportion over the first three GTP implementation periods as depicted by the average level of 91% import proportions. The overall average import intensity in the period of GTP accounts 45.6% indicating a sort of improvement from 53.2% average intensity of GTP preceding periods. Firms like wine manufacturers are continued to use increasing amounts of imported ingredients in their production process.

Table 2: Import Intensity

INDUSTRIAL GROUP	2007	2008	2009	Avg of last3	Direction of change	Avg of First 3	2010	2011	2012
FOOD PRODUCTS AND BEVERAGES	0.238	0.279	0.311	0.276	↑	0.289	0.248	0.181	0.206
Production, processing and preserving of meat, fruit & veg	0.472	0.46	0.427	0.453	↓	0.447	0.186	0.032	0.021
Vegetable and animal oils and fats	0.007	0.067	0.047	0.040	↑	0.051	0.012	0.001	0.049
Dairy products	0.134	0.116	0.087	0.112	↓	0.105	0.105	0.008	0.101
Grain mill products	0.034	0.051	0.162	0.082	↓	0.098	0.053	0.027	0.21
Prepared animal feeds	-	-	-		↑	0.071	0.062	0.067	0.083
Bakery products	0.051	0.152	0.082	0.095	↑	0.110	0.256	0.229	0.196
Sugar and sugar confectionery	0.193	0.066	0.331	0.197	—	0.197	0.341	0.538	0.143
Macaroni and spaghetti	0.231	0.237	0.274	0.247	↑	0.253	0.197	0.183	0.225
Food products n.e.c.	0.005	0.025	0.053	0.028	↑	0.035	0.006	0.035	0.407
Distilling, rectifying and blending of spirits	0.288	0.208	0.239	0.245	↓	0.231	0.368	0.204	0.027
Wines	0.198	0.662	0.747	0.536	↑	0.648	0.504	0.869	0.705
Malt liquors and malt	0.488	0.603	0.59	0.560	↑	0.584	0.478	0.335	0.49
Soft drinks & production of mineral waters	0.583	0.659	0.572	0.605	↑	0.612	0.501	0.415	0.237
TEXTILES	0.415	0.296	0.467	0.393	↓	0.385	0.37	0.388	0.244
Spinning, weaving and finishing of textiles	0.385	0.295	0.421	0.367	↓	0.361	0.337	0.334	0.247
Cordage, rope, twine and netting	0.826	0.710	0.877	0.591	↓	0.513	0.901	0.792	0.724
Knitting mills	0.712	0.93	0.831	0.824	↑	0.862	0.818	-	0.08
Wearing apparel, except fur apparel	0.527	0.373	0.349	0.416	↓	0.379	0.503	0.092	0.166
LEATHER AND LEATHER PRODUCTS	0.216	0.236	0.261	0.238	↑	0.245	0.344	0.206	0.186
Leather, luggage and handbags	0.123	0.17	0.153	0.149	↑	0.157	0.275	0.108	0.132
Footwear	0.531	0.454	0.541	0.509	↓	0.501	0.503	0.442	0.312
CHEMICALS AND CHEMICAL PRODUCTS	0.785	0.871	0.799	0.818	↑	0.829	0.705	0.749	0.823
Basic chemicals, except fertilizers and nitrogen compounds	0.244	0.42	0.632	0.432	↑	0.495	0.82	0.562	0.655
Paints, varnishes and mastics	0.811	0.881	0.8	0.831	↑	0.837	0.716	0.452	0.821
Pharmaceuticals, medicinal chemicals and botanical products	0.98	0.964	0.697	0.880	↓	0.847	0.719	0.885	0.862
Soap and detergents ,perfumes and toilet preparations	0.712	0.851	0.847	0.803	↑	0.834	0.65	0.822	0.832
Chemical products n.e.c	0.898	0.797	0.859	0.851	↓	0.836	0.905	0.442	0.774
BASIC IRON AND STEEL	0.989	0.998	0.804	0.930	↓	0.911	0.791	0.786	0.778
Basic iron and steel	0.989	0.998	0.804	0.930	↓	0.911	0.791	0.786	0.778

The share of imported inputs in such firms has increased on average from 54% before GTP to more than 70% after GTP and hence the inevitable dependence on imports for even basic manufactured goods. This has indeed adverse implications on its production performance, being dependent on agriculture –the highly traditional and unstable sector, and imports for its inputs, growth over the years has been marked by a cycle of

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[1] 'After GTP period' refers to the implementation period of the Growth and Transformation Plan which is quite different from After GTPI-Growth Transformation Plan Implementation.

fluctuations. The government has intentionally devalued the local currencies from 10.96birr/USD in 2009/10 base year to 17.34birr/USD in 2012 and further to 20.28birr in 2015 as a discouraging tool to import.

3.   Export Values of manufacturing sectors

Outward oriented manufacturing industries are getting at least table value incentives unlike their counter parts of inward oriented manufacturing industries. However, either due to insufficiency or unrealization of the incentive schemes given to export sub sectors, shortage of raw materials at optimal prices and or high cost of production, one could not observe a marked difference between the export oriented and import substituting industries. It would be precise if the separate examination of the industrial group is made.

3.1 Food and Beverage

Export earnings in this sub sector fluctuate. Prior to the GTP period, the receipts steadily declined from 11.93million birr in 2007 to 3.02million birr in 2009 proceeded by steadily increasing in GTP implementation seasons. The money value of export rose from 2.77million birr to 12.52million birr in2010 and 2012 respectively. In food and beverage industry, the major export items are production, processing, and preserving of meat, fruits and vegetables, dairy products , malt liquors and malt and soft drinks and production of mineral water accounting for 35.1, 7.04 ,5.5 , and 4.5 percent respectively as an average of the first three GTP periods. Some of the firms such as soft drinks and production of mineral water and production, processing, and Preserving of meat, fruits and vegetables have joined the export sector after the GTP probably encouraged the incentives provided for the sector.

3.2 Textile

Textile industry is one of the early commenced industries in the country but waken up to register better export return only in the GTP period. The average receipt from the sub sector has been 0.86 million birr and 2.58million birr before GTP and after or in GTP. This might be an indication for partial effectiveness of the support schemes of the government provided for incumbent and new firms investing in export sector. The radical devaluation measures of the local currency, access to credit, duty draw back schemes, duty free privilege and other fiscal incentives. Of course, biased provisions of any of these incentives are common where party based business firms of the same category are the major beneficiaries.

3.3 Leather and Leather Products

The wider margin of export earning in manufacturing sector is generated from Leather and leather products next to food and beverage. The sub sector not only spawn relatively immense amount of money via offering for sale at international market but also prompted its export oriented performance continually specially since the formulation of the GTP in the country, it recorded an export value of 4.97million, 12million and 17million birr for the first consecutive years of GTP.

Table 3: Export Receipts of Firms [1] in million Birr

Industrial Group	2007	2008	2009	average	change	average	2010	2011	2012
FOOD PRODUCTS AND BEVERAGES	11.93	3.07	3.02	3.04	↑	8.66	2.77	9.15	12.295
PPP of meat, fruit and veg					↑	3.14	0.55	3.54	9.46
Vegetable and animal oils and fats		0.025		0.014	↓	0.007	0.029	0.006	
Dairy products					↑	0.63	1.22	2.16	0.01
Grain mill products	0.004	0.075	0.002	0.018	↑	0.16	0.56		0.028
Bakery products			0.023	0.028	↑	0.15	0.004	0.146	0.47
Sugar and sugar confectionery		2.27	2.29	1.64	↓	0.06	0.16		
Macaroni and spaghetti	0.004	0.005	0.03	0.009	↑	0.012	0.036	0.015	0.013
Food products n.e.c	7.65	0.25	0.23	1.15	↓	0.47	0.12	0.90	1.11
Distilling and blending of spirits					↑	0.036	0.038	0.058	0.075
wines	0.007	0.15	0.002	0.035	↓	0.004	0.008	0.007	0.005
malt liquors and malt		0.30	0.44	0.18	↑	0.50	0.035	2.30	0.13
soft drinks & mineral waters	0.002	0.002	0.002	0.001	↑	0.40		0.005	0.98
TEXTILES	1.88	1.098	1.47	0.86	↑	2.58	1.87	1.42	8.14
Spinning, weaving and finishing of textiles	1.88	1.098	1.47	0.86	↑	2.58	1.87	1.42	8.14
Cordage, rope, twine and netting					↑	0.009			0.007
Wearing apparel except fur apparel	0.015	1.089	0.339	0.33	↑	0.49	0.88	0.098	1.40
LEATHER AND LEATHER PRODUCTS	11.40	9.70	6.72	5.38	↑	7.42	4.97	12.02	17.07
Tanning and dressing of leather	11.17	8.62	5.86	4.89	↑	6.35	4.14	11.01	14.09
Footwear	0.23	1.08	0.86	0.48	↑	1.07	0.83	1.02	2.98
CHEMICALS AND CHEMICAL PRODUCTS		0.30	0.20	0.19	↑	0.45	0.36	0.96	0.79
Basic chemicals, except fertilizers and nitrogen co					↑	0.006	0.013		0.008
Paints, varnishes and mastics					↑	0.06		0.12	
Pharmaceuticals, medicinal and botanical products			0.026	0.032	↑	0.083	0.09	0.19	0.12
Soap and detergents , cleaning and polishing		0.30	0.17	0.186	↓	0.33	0.26	0.64	0.67
Chemical products n.e.c		0.0001	0.0001	0.0001	↑	0.001	0.0001	0.003	
Average				0.857	↑	0.938			

Source: CSA, Report on Large and Medium Scale Manufacturing and Electricity Industries survey, (Various Issues)

3.4 Chemical and Chemical Products

Of chemical exports, the major ones are soap and detergents, cleaning and polishing, perfumes and toilet preparations generating about two thirds (73.3%) of the sub-sector's receipts. The industry has improved its export performance over the periods scoring a larger amount of earnings in the GTP season. 0.20million birr earning in 2009 has quadrupled to 0.96million birr by 2011. In general, the export earnings from the manufacturing sector have been increasing over the last periods of nearly a decade thought not equalized with the import value of the same period. Still a discrepancy between the two has not narrowed to the level of zero or around. This is an indication of the relatively weak performance of the export sector of the manufacturing industries.

4. Employment

Well matured and efficient manufacturing sector raises national incomes and creates demand for the traditional sector products and provides growing employment opportunities. It is also at the heart of modernization of the economy. Despite this, being at its immature level in Ethiopia, total employment in major manufacturing industries grew still in thousands out of ninety million Ethiopians from 93,500 workers in 2000 to 132,172 in 2008 and 200,014 in 2012(Table 2.5). This resulted in an annual average employment growth rate of 11.48% during 2008-2012 compared to 14.15% of output growth. This comparison clearly, in addition to the input intensity analysis in chapter five, suggests that Ethiopian MLS manufacturing sector operates in capital-intensive sectors despite privatization intensification and pro-labour declaration of GTP. The employment share of each sub-sector persistently from held at top by food and beverage, textile and apparel, non-metallic minerals and leather respectively during the study period. The employment varies among the activity groups among each other and a long time. The employment share of food and beverage declined from 30.3 percent in 2009 to 27.4 percent in 2012. Non metallic mineral have also shown a reduction from 14.0 percent to 12.5 percent in the same time period. Among the top employing sub-sectors textile and apparel has increased its employment share from 16.2 percent to 22.1 percent. Leather and chemical sub-sectors are from absorbers group they have swallowed 7.5 and 5.8 percent of the labour force in 2012 than their 5.8 and 5.3 percent shares in 2009. The second column under each period refers to the employment growth rates of each sub-sector. Serious fluctuation has been commonly observed in sectoral employment growth rate. Machinery and equipment, the one with highest growth rate in 2009 at 411percent became the least in 2011 with -92 percent growth rates. Textile and apparel, one the most

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[1] The nominal export receipts of each year have been deflated by the CPI of respective years so as to arrive at the real values of the same variable. The CPI estimated by World Bank considering 2010 price as base. These are 59.0, 85.3, 92.5, 100, 133.2 and 163.6 for the years 2007 to 2012 respectively.

labour intensive sub-sector has registered increasing growth rate of 143 percent in 2012 as compared to 30 percent in 2009. Hence, this implied that while light industries intensified their labour inputs, heavier industries reduce it, perhaps due to shifting to capital intensification. Identification of the labour intensive types of heavier manufacturing industries would have to be the duty of the government so that the issue of employment would be solved in parallel to the development and expansion of such industries.

Table 4: Employment levels and Growth rates of Major Industrial sectors 2008-2012

Industrial group	2008		2009		2010		2011		2012
Food products and beverages	41681	0.09	45371	0.33	60409	0.12	67471	-0.19	54849
Tobacco products	1254	-0.11	1122	-0.12	986	0.36	1342	0.00	1342
Textiles	10614	0.55	16494	0.30	21389	-0.37	13436	1.43	32624
Wearing apparel, except fur apparel	7635	0.02	7822	0.20	9365	-0.38	5820	1.01	11679
Tanning and dressing of leather	8650	0.02	8807	0.22	10759	0.31	14136	0.07	15173
Wood and of products of wood and cork	3231	-0.34	2144	0.54	3298	0.23	4044	0.01	4091
Paper, paper products and printing	8941	-0.01	8835	0.13	10004	0.01	10096	-0.10	9054
Chemicals and chemical products	7778	0.03	8048	0.39	11199	-0.13	9756	0.21	11774
Rubber and plastic products	8751	0.37	12007	0.16	13885	-0.21	11019	0.16	12762
Other non-metallic mineral products	17687	0.19	21084	-0.04	20230	-0.10	18115	0.38	25042
Basic iron and steel	1329	0.29	1712	1.36	4039	0.23	4963	-0.32	3351
Fabricated metal products	5237	0.15	6045	0.67	10115	-0.38	6266	0.37	8591
Machinery and equipment n.e.c.	186	-0.08	171	4.11	873	-0.25	653	-0.92	49
Motor vehicles ,trailers & semi-traile	1727	-0.02	1688	-0.01	1679	-0.03	1626	-0.02	1586
Furniture; manufacturing n.e.c.	7471	0.11	8322	0.03	8569	-0.20	6898	0.17	8047
Total	132 172	13.24	149 672	24.8	186 799	-5.97	175 641	13.87	200 014

Source: own computation

5.   Regional Disparity of MLSM Industries

Balancing regional distribution of manufacturing sectors is of having paramount relevance not only in ensuring balanced development of the country but also in realizing social and political stability of the country. For this reason, objective criteria are to be set in passing a location decision of industries across regions. A study by Porter et al (2001) on five different regions in USA, found that regions differ deeply in terms of economic performance of output, and successful regions are those that are able to create specialized local economies to offer comparative advantages to local companies and that differ from other regions. In the theory of regional economic resilience (Hill et al., 2008 and Pendall et al.), regions have asymmetric abilities to reach an efficient growth path and to recover successfully from shocks when they are thrown off from their growth paths. This uneven regional capability of resilience is partly explainable in regional disparities. Regions would compete for their comparative advantage in attracting potential investors provided that they have autonomous power of self administration. However, in Ethiopia, the regional power is in the hands of the federal government and thus, they couldn't determine their regional economic cases autonomously even partly. Of course, solely handling the power of industrial location determination by the federal government may not be awful by itself if rational and objective unbiased criteria are the guideline. But this is not the case in Ethiopia. For example, regions in the north (Amhara and Tigray) have similar geographical and topographic features including resource bases and also the southern ones with each other. Their population proportion is Oromia 30million, Amhara 25million SNNP 19 million, Tigray, Somalia and Addis Ababa 5million each and the others constitute the remaining.

On account of this let's examine the regional distribution of industries. The heavy industries such as chemicals, fabricated metals and basic iron and steel are among the highly biased industries in their regional distribution. The number of chemical manufacturing firms in Oromia (40) has been twenty times that of Amhara's(2) while the same firms in Tigray (6) has been three times greater than Amhara's and SNNP has much lesser. In case of fabricated metals, Amhara region, the victim and the second top populous, has the 14 firms while Tigray, Oromia and SNNP each has 20, 80 and 19 respectively. So, it is not demand, resource base, and infrastructure or agglomeration economies which have been the base for the location decision of these industries.

One of the most powerful ideas in all of economics is the notion of comparative advantage. Ever since David Ricardo, it has been well known that country can increase its national income (and welfare) by moving resources into sectors or regions in which its opportunity cost of production is lower than its other counterparts. Of course, arguments against are raised as allocating resources according to comparative advantages of regions or countries can only ensure static efficiency and in no way guarantees dynamic efficiency. Succar (1987) argues "...the comparative advantage theory is a static construct that ignores forward linkages exist between present choices and future production possibilities. Therefore, it cannot guide the pattern of international specialization when there are asymmetric learning opportunities associated with the production of different goods and/or use of certain techniques. Promotion of industries which generate substantial learning by doing economies should be an integral part of a strategy of human capital formation in LDCs." In other words, Succar argues for some sort of industrial targeting although her model does not explicitly deal with this issue. Even if one accepts the premise that certain industries are more likely to generate spillovers (based on knowledge diffusion or other factors), can

policy be designed to encourage the 'right' industries? The ideal but rarely attained goal of industrial policy is the development of a general-purpose technology. However, the argument of Succar may not be so powerful for different regions of a nation.

5.1. Reasons for Regional Disparity
5.1.1 Demand as Base
Regions in the same country vary in the size, growth and the nature of demand. Inter-regional differences in these demand related aspect wouldn't be worse. Of course, the new economic geography theories predict manufacturing firms to locate in regions with larger demand because firms are motivated to minimize transportation costs and also realize scale economies (Krugman, 1991). The environment for interactive learning and innovation would be higher for a firm if it is situated in a region with larger demand, attracting a greater number of firms.

Therefore, regions with larger demand offer a wide range of formal and informal inter-firm interactions and dynamics of competition, synergies and complementarities. Based on these theoretical underpinnings, Oromia, Amhara and SNNP regions are the top populous in the country followed by Somalia and Tigray Regions at one fifth of population of Oromia region each. But the manufacturing sector distribution is not in accordance of these population sizes.

5.1.2 Resources as Base
Regional divergences in the availability of productive resources are a crucial factor for the distribution of economic activities over different localities in a nation. The physical and human resources are the main reasons for industrial location.

For instance, larger firms need to undertake R&D, as it is human capital intensive activity (Zeng, 1997), firms determine their location of regions with greater availability of skilled and experienced workers than those poor in endowment of skilled manpower.

Following the endogenous growth model of Redding (1996), one may presume that firms' profit seeking R&D is closely related to their host region's base in education and training. Regions with deficiencies in education and training are also those that offer little incentive to local firms to undertake R&D. The quick evolution of indigenous strength in the Indian software industry is closely linked to the rise of Bangalore – a city with higher human capital that alone accounts for nearly 15 percent of India's higher education enrolments (Joseph, 2009). But in Ethiopia, even the large firms are not accustomed to R and D to determine their location and expansion decision; rather the obligatory direction or the biased direction of the federal government has been the reason for them. Thus, neither the human capital nor the physical resource potential has been the base for their location decision.

5.1.3 Infrastructure as reason
Studies have confirmed the critical role of infrastructure (telecommunication, transport, and energy) in regional disparities to attract manufacturing firms. (De and Ghosh, 2005 and Del Bo et al., 2010). Regions suffering from the inadequate supply of overhead capitals with general purpose, for instance power shortage, costly transport, busy signals of communication are likely to have strong diamond disadvantage in Porter's terminology (Porter, 2000). Smith (1997) argued that the provision of infrastructure has a direct impact on economic performance and technological choice. Transport and telecommunication infrastructures that respectively affect transport costs and provide significant network externalities play a critical role in innovation systems.

Despite the scientific principles for the determination of the location of the firms in a country, developing countries including Ethiopia faultily decide on the bases of political reasons, if not ethnic preferences at worst. The regional allocations of the manufacturing firms are examined by taking the data of last one year before GTP and the third year of GTP. On the population size and labour force criterion, regions- Oromiya , Amhara , S.N.N.P, Somaliya, Tigray, Addis Ababa would be the order of priority. The impartial spacial distribution of manufacturing firms put Addis Ababa (40.26%),Oromiya (16.52%),S.N.N.P(14.03%), Amhara(12.3%) and Tigray (11.21%) at the eve of GTP period(2009). In the second half of the GTP period (2012) proportional commencement of firms among regions altered than before where the share of Oromiya rose to 26.1% at the cost of Addis Ababa (36.58%) and S.N.N.P (11.7%). In Amhara neither entry not exit took place leaving the ratio unchanged.

Table 5: Regional Distribution of the manufacturing sectors

INDUSTRIAL GROUP	Tigray	Afar	Amhara	Oromiya	Somalie	Benshan.	S.N.N.P	Gambella	Harari	Addis Ababa	Diredawa	Total	Percentage	
Food products and beverages	44	-	59	170	13	-	67	1	5	252	29	640	65.37	26.10
Tobacco										1		1		0.04
Textiles	4	2	6	19	-	-	2	-	-	31	1	65	6.6	2.65
Wearing apparel	1		1	5			3			29		39		1.59
Wearing apparel, except fur apparel..	1	-	1	5	-	-	3	-	-	29	-	39	3.9	1.59
Leather; footwear, luggage and handbags	8	-	8	42			1	-	1	71	-	131	13.3	5.34
Wood and products of wood	4		5	24			15			22		70		2.85
Paper and printing	4		2	15		1	3		2	91	4	122		4.98
Chemicals and chemical products	6	-	2	40	-		1		1	54	1	104	10.6	4.24
Rubber and plastic products	3		1	55	1					73	2	135		5.51
Other Non-metallic minerals	67	11	132	117	3		67		9	113	12	531		21.66
Basic iron and steel	5	-	-	9	-		-	-	-	12	1	27	2.7	1.10
Fabricated Metal products except M & E	20		14	80	1		19		1	66	7	208		8.48
Machinery and Equipment; manufac N.E.C.				1						1		2		0.08
Motor Vehicles and Trailers	2		4	1						1		8		0.33
Furniture and manufacturing N.E.C.[1]	23		77	62	5	4	109	1	5	80	3	369		15.05
Regional TOTAL of the six	68	2	76	276	13		74	1	6	431	32	979	100	41
Regional Percentage of the six	6.9%	0.2%	7.7%	28.2%	1.3%		7.5%	0.1%	0.6%	44.0%	3.2%	100.0%		
MLSM total	191	13	311	640	23	5	287	2	23	897	60	2,452		
MLSM %	7.79	0.53	12.68	26.1	0.94	0.2	11.7	0.08	0.94	36.58	2.45	100		

Serious skewed distribution is obviously observed in the case of heavy manufacturing firms viz-a-viz basic steel and Iron and Chemical sub sectors. Addis Ababa (68)[2] still become the lion host for such industries proceeded by Oromiya(26), Tigray(6) and S.N.N.P(1). The second populated region-Amhara has none of the two indispensible manufacturing sub sectors. After four years of fiscal calendar, Addis owned (66), Oromiya(49), Tigray(11), S.N.N.P and Diredawa (1)each and Amhara (2). Oromiya is a resource rich and nearby region to the capital deserving big host. However, the northern hemisphere constituting Amhara and Tigray regions where the later is much more poorly endowed with resources coupled with very few population size –the proxy for effective demand and labour force. The number of population of Amhara region is four time larger than Tigray. Moreover, Tigray is the furthest in terms of distance from the capital. In spite of this fact, the number of high tech firms is more than five times in Tigray than in Amhara.

5.1.4 Agglomeration and linkages

For sharing indivisible goods and facilities, for augmenting learning mechanisms and for gains of individual specialization, firms decide their location to be around the colony of incumbent industrial sites. (Gilles Duraton and Diego Puga, 2003). So, regardless of the regions' resources resource endowments, infrastructure assets and actual or potential demand, the location of an industry may be determined based on the agglomeration reason. Addis Ababa has been chosen as the main house of industrial localization for the agglomeration reason besides its proxy for the external economy.

Regarding the structural linkages of manufacturing with the rest of the domestic economy, internally loose as well as lopsided forward & backward linkages between economic sectors characterizes it. In terms of raw material inputs, manufacturing is more strongly linked to the external economy rather than to its own and the rest of the domestic economy. According to EEA (2013) the degree to which manufacturing satisfies its raw material demand from internal sources is not so more than 50 percent, depending on the external sector for nearly the remaining half. The problem is more serious when we consider the linkage with agriculture in which domestic manufacturing supplies only 1.3% of the manufactured goods demand in the agricultural sector.

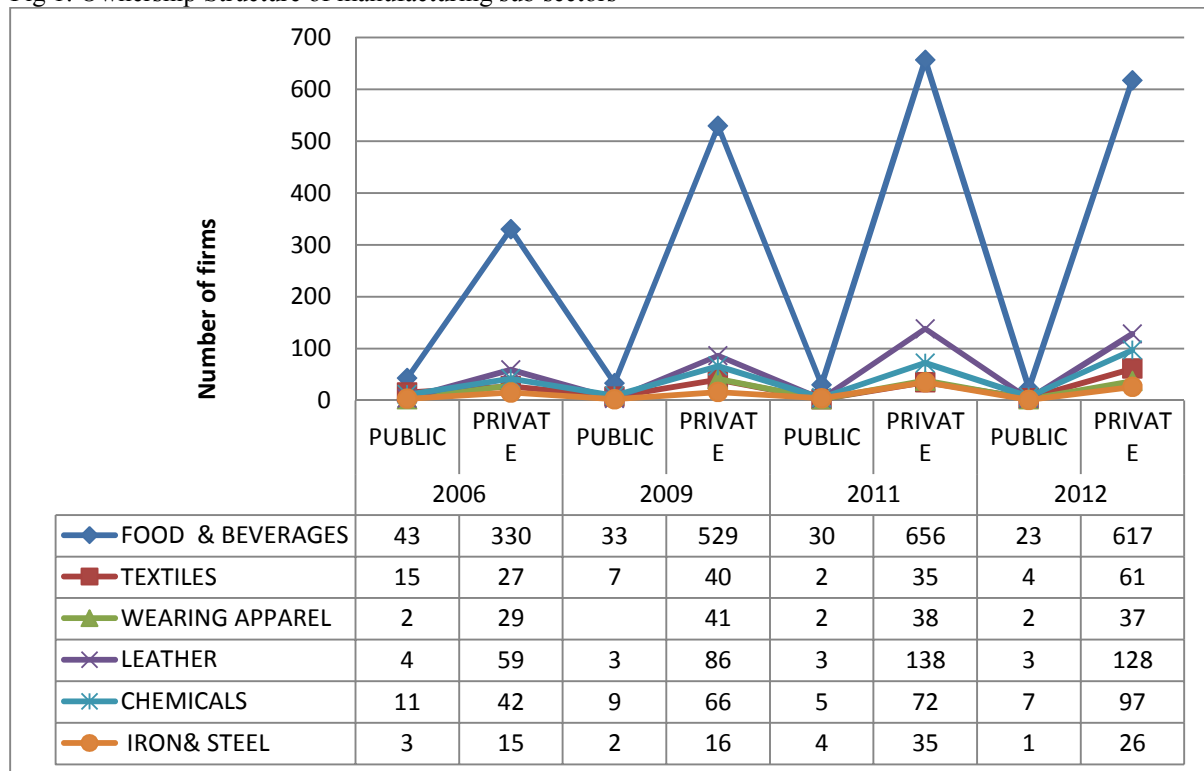### 6. Ownership Structure of Manufacturing Firms

Manufacturing industries are under the man ship of either the government or distinct forms of private actors (individuals, groups and institutions). Bansal (2005), indicated that the community of investors is generally made up of individuals, groups and institutions whose interests, goals, investment horizons and capabilities may vary considerably. As general shareholders, they have the right and capacity to influence company's fundamental issues including election of directors, amendments in company's organic documents, approval of extraordinary transactions, modifications in company's internal status and appointment of auditors. Indeed, Meckling (1976) classify ownership structure in terms of capital contributions, comprising inside investors (managers), and outside investors (debt holder and equity holder). Abel and Okafor (2010) defines ownership structure as the percentage of share held by managers (managerial ownership), institutions (institutional ownership), government (state ownership), foreign investors (foreign ownership), family (family ownership) and etc. Jensen (1986 cited in Said, 2013) points to the preference of managers to increase firm size through excessive investment for private benefit. Over the time, the extent of privatization gets strength at the expense of the public enterprises in all industrial groups considered in the study. The proportion of public sector has seriously shrunk leaving the position for the private counterpart. In all the industrial groups, private sector has dominated the economic activation.

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[1] At the eve of GTP(2009), the percentage distribution of MLSMI across regions are 11.21 Tigray, 0.54 Afar,12.3 Amhara,16.52 Oromia,0.54 Somalia, 0.32 Benshangul, 14.05 S.N.N.P,0.36 Gambella, 1.95 Harari, 40.36 Addis Abeba,1.95 Dire Dawa and the industrial share is (67.55,25.51) food and beverage, (5.65,2.13) Textile, (4.93,1.86) Apparel, (10.70,4.04) Leather, (9.01,3.04) Chemical, (2.16,0.82) Basic Iron and steel where the first coordinated number refers to the percentage share from the six while the second is from the total MLSM.

[2] The number in parenthesis refers to the number of firms of both categories.

Fig 1: Ownership Structure of manufacturing sub sectors

	PUBLIC	PRIVATE	PUBLIC	PRIVATE	PUBLIC	PRIVATE	PUBLIC	PRIVATE
	2006		2009		2011		2012	
FOOD & BEVERAGES	43	330	33	529	30	656	23	617
TEXTILES	15	27	7	40	2	35	4	61
WEARING APPAREL	2	29		41	2	38	2	37
LEATHER	4	59	3	86	3	138	3	128
CHEMICALS	11	42	9	66	5	72	7	97
IRON& STEEL	3	15	2	16	4	35	1	26

Source: Own Computation

The nature of the manufacturing industries could also be traced from the above figure. In all the study periods, food and beverage takes the lead followed by leather and textile inclusive of apparel. So, it is possible to conclude that the share of heavy manufacturing sectors is far more less than the light counterparts. Basic iron and steel and chemicals are to be mentioned as part of the heavy industry.

7. Conclusion

In this paper the overview of the Ethiopian industrial sector in general and medium and large scale manufacturing in particular has been literally described. The production performance of the industrial sector and manufacturing sector in comparison to the sub-Sahara Africa average , the import receipt and export values , employment, ownership and regional disparity of the commencement of manufacturing industries have been discussed.

Accordingly, in 2011/12, the GDP share of the industrial sector is only 11.1% which is much less than the world average (26.29%) and the sub-Saharan average (30.34%). The manufacturing sector contributes only 3.7% of output to GDP which is declined from its 6.4% proportion of the 2003/04. (WDI,2013). Of course, the value of manufacturing output rose from 8.14billion birr in 2000 to 14.41 billion birr in 2009 and then to 23.49 billion birr in 2013. The corresponding value of MLSM has been 5.03bb, 9.50bb and 16.53bb. The growth rate of the industry, manufacturing and MLSM respectively are, 5.1, 3.6 and 2.1 in 2000; 9.7, 9.1 and10.3 in 2009; 18.5, 10.8 and 14.5 percents in 2013. Considering the average of three years value before and after GTP at constant factor price, the manufacturing value added has been 8.9 billion birr and 13.12 billion birr. The import intensity and export value are different in each sub-sector. Heavy industries such as chemicals and basic iron and steel are found to be import intensive while the light categories such as food and beverage, textile and others are domestic resource intensive ones. Of course, the import intensive groups have shown reduction in their import intensity in the post GTP period. For example, in case of iron and steel it has been 0.93 and 0.91 in the pre-post GTP respectively. Export value in real terms has shown small increment in the post GTP period than in its pre counterpart. Food and beverage industries followed by leather have been the better performers in the export sector. Textile wakens up in the post GTP season to strengthen its export. This entails us that the transformation plan has opened new opportunities to the manufacturing firms to create and enhance their capability to export. The export duty elimination, the industrial finance priority, new export destinations as additional demand and others have made the export sector waken up.

Regional disparity in the distribution of manufacturing firms especially in those important heavy manufacturing industries serious prejudice has been made against Amhara region. Basic iron and steel,

fabricated metals and chemical manufacturing firms are dismally few or none at all relative to other regions which are economically influential. The manufacturing sector has been highly privatized in the last decade. The lead of the manufacturing sector has been taken by the group of light industries such as food, beverage, leather and textile. Hence, those whose multiplier effect would be more are less in their physical commencement. This would be seen as the other line disparity in industrial development.

Thus, it would be shrewdness to objectively distribute the manufacturing sectors among the regions so that the balanced regional development would commonly be enjoyed. Otherwise, the intentionally crafted inequity problem would bear social turmoil and instability for all. The physical resource endowment, human resource accumulation, population size a base for effective demand and the infrastructure set ups have to be the objective criteria in determining the location decision of the manufacturing firms. Turning to the phase of the heavy industry fabrication for they have wider multiplier effects (backward and forward linkages) of the economy is the other core element the researcher desires to recommend. This would of course, be scrutinized in a way that the labour intensive categories would be selected thereby to augment their employment impact.

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