REPORT ON THE ETHIOPIAN ECONOMY

2013

Private Sector Development in Ethiopia with Particular Emphasis to the Manufacturing Sector

Ethiopian Economics Association
(EEA)

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The analysis and policy recommendations of this Report do not necessarily reflect the views of the Ethiopian Economics Association, its Executive Committee or its members. The Report is the product of the team of experts in the Ethiopian Economic Policy Research Institute and external consultants and advisors.

Inquiries should be addressed to:

Ethiopian Economics Association/Ethiopian Economic Policy Research Institute
P. O. Box 34282
Tel: 011 645 32 00
Fax: 011 645 30 20
e-mail: eea@ethionet.et
Website: www.eeaecon.org

Foreword

Assisting the economic policy formulation and implementation capabilities of Ethiopia through rigorous economic research is one of the core objectives of the Ethiopian Economics Association. In its effort to realize this objective, the Association has been publishing an independent Report on the Ethiopian economy every year since 2000. The Association is happy to issue the tenth edition of this Report, which, as before, attempts to evaluate the yearly performance of the Ethiopian economy both on aggregate and its sectoral components. It is intended to inform and stimulate dialogue on topical economic issues - an important contribution towards releasing Ethiopia's growth potential.

Following the formats of the previous years' reports the current report has also got two parts. Part one focuses on a broader review of the macroeconomic situation and the performance of the economy at the sectoral levels. This part of the report provides an update of recent economic trends and covers the macroeconomic performance as well as selected sector performance and policy issues. The report concludes by appreciating the recent encouraging growth trends, but also cautions against complacency. The special topic of this year's report is *Private Sector Development* in Ethiopia, a sector with significant contribution to national development. The publication comes at a timely moment and provides a valuable contribution to the understanding of the performance of the private sector, the economic concerns and the challenges it is facing as well as the policy implications.

The focus on private sector development is necessitated by several factors. The private sector development is widely recognized as an engine of sustainable and inclusive economic growth. The private sector is not only a major contributor to economic growth and employment creation; it also has a central place in efforts to reduce poverty. The Ethiopian government consequently has a strong interest

in fostering a policy and institutional environment that enables the private sector to flourish and act as an effective driver of pro-poor growth. In view of these considerations, the Association has identified the private sector development as one of its fundamental areas of focus to reduce poverty and support sustainable growth in Ethiopia.

Nevertheless, the private sector is confronted with serious challenges. Capacity limitations, finance, poor infrastructure and institutional constraints are common hindering the development of the private sector in Ethiopia. To develop the private sector, efforts should focus on which policies could provide incentives that shape private sector activity that brings about pro-poor market outcomes such as more and better jobs, higher incomes, better returns on goods sold and greater affordability of essential goods and services.

It is important to recognize that the private sector consists of more than formal businesses. Individuals and households, from rich to poor, also operate as private economic actors when they consume goods and services, sell their labour, farm or produce goods and services. This requires addressing the needs and recognizing and maximizing the contribution of the many informal enterprises, family-run farms and self-employed people, as well as those of formal and large businesses. So, reducing poverty requires greater efforts to address the needs and augment the contribution of the many informal enterprises, family-run farms and self-employed men and women that conduct business.

I believe that the report will be useful to policymakers, legislators and other stakeholders as they work to create an enabling environment to realize the national development goals. I hope that subsequent annual reports will become valuable contributions to the understanding of the many economic development challenges that face the nation

Finally, I would like to express my appreciation to all those people whose contribution has made this Report possible.

Alemayehu Seyoum Taffesse (DPhil)

President
Ethiopian Economics Association

Acknowledgement

The preparation of this report owes much to the hard work, dedication, advice, contributions and support of many people and organizations. The Ethiopian Economic Association (EEA) would like to extend its appreciation to all of them. The overall work has been led by Dr. Assefa Admassie, who is the Principal Research Fellow at the Ethiopian Economic Policy Research Institute and a team of researchers led by Dr. Seid Nuru. The team members who have contributed to this report include, Kassahun Abera, Getachew Ahmed, Solomon Mossisa, Helen Berga and Worku Gebeyehu. They wrote the chapter on the Macroeconomic Developments and the chapters on the thematic issue "*Private Sector Development in Ethiopia with Particular Emphasis to the Manufacturing Sector*". They deserve great appreciation and special recognition for their immense intellectual contribution and hard work.

The chapters on the Performance of the Agricultural Sector and Agricultural Export – Analysis of Trend and Performance have been written by Drs. Bekele Hundie and Samuel Gebre-Selassie. Amin Abdella and Bethelehem Berhane wrote the chapter on Manufacturing Industries Sector: Review of the First GTP Implementation Year as well as the chapter on Ethiopia's State of Integration in COMESA. Finally the Chapter on the Performance of the Social Sector is written by Dr. Degnet Abebaw, Fitsum Zewdu and Israel Fekade. Their contribution is also highly appreciated and recognized.

In the planning phase of this report, various professionals drawn from government offices, NGOs, academia and the private sector have participated in the workshop that was organized to generate and discuss ideas on the thematic issue. Their suggestions were very helpful and instrumental for this report. EEA would like to thank all of them for their constructive inputs.

The report also benefited from many useful comments and suggestions received from the members of the EEA Executive Committee. We would like to acknowledge the contributions of Dr. Alemayehu Seyoum Taffesse, Dr. Gezahegne Ayele, Dr. Tadele Ferede, Dr. Fantu Guta, Dr. Amdissa Teshome, W/O Etalem Engeda, W/O Sindu Abebe, and Ato Demerew Getachew. The commitment and support as well as the encouragements of all the members of the Ethiopian Economics Association have always inspired those of us working for the Association to keep the momentum in spite of several challenges. We are all proud of them.

Many other people have also made very valuable contributions to this report, and we are grateful to them. A special thank goes to Ato Daniel Desta who served as the language editor. W/O Rahel Yilma also deserves special thanks for preparing and formatting the manuscript before it is sent to the publisher. The staffs of the Finance and the Administration Divisions as well as the documentation centre provided valuable administrative and logistic support during the preparation of the report. Other EEA staffs have also contributed to the successful completion of this project. Their contribution is also highly appreciated.

This report would have not been produced without the generous financial support of EEA's development partners. In this regard, the financial and technical support of the African Capacity Building Foundation (ACBF), the Think Tank Initiative (TTI) of the International Development Research Centre (IDRC), the Civil Society Support Program (CSSP), and the Friedrich Ebert Stiftung (FES) is deeply appreciated. They deserve special acknowledgment for their trust and confidence on the Ethiopian Economics Association for their continued collaboration.

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Part I

Review of Economic Performance

The fiscal year 2011/12 marks the second year of the implementation of the growth and transformation plan (GTP) of Ethiopia which was launched in 2010/11. The first part of the report reviews major macroeconomic and sectoral performance of the Ethiopian economy mainly in the fiscal year 2011/12. Comparisons with past performances of the Ethiopian economy are also made.

The first chapter of the report discusses major macroeconomic developments in the fiscal year 2011/12 in comparison to past performances. It should be noted that owing to the changes in the base years and methodology of estimation of the national income accounts by the Ministry of Finance and Economic Development (MoFED), some figures and analyses made thereof are not necessarily consistent with past reports issued by the Ethiopian Economics Association. Inconsistencies are particularly observed in the structure of the economy, gross fixed investment, and savings.

Chapter two reviews the performances of the agriculture sector for the period 2011/12. Chapter three makes analysis of performance and trend of agricultural exports. Chapter four reviews the performance of the manufacturing industry. Chapter five discusses Ethiopia's state of integration in COMESA. The performance of the social sector is reviewed under Chapter six.

Chapter One

Macroeconomic Performance

1.1 Growth

The revised version of the national income accounts of Ethiopia estimated by the Ministry of Finance and Economic Development (MoFED) reveals that real GDP grew by 8.6 percent in the fiscal year 2011/12. Though this rate is lower than the 11.3 percent envisaged by the Growth and Transformation Plan (GTP), it is still robust. The deceleration in the value-added in the agricultural sector and the less than targeted growth rate of the industrial sector on the one hand, and the dominance of the service sector in the overall growth on the other seem to testify against the tenets of the GTP. The service sector spearheaded by the wholesale and retail trade subsector accounted for 45.3 percent of GDP and 58.5 percent of the growth in GDP in 2011/12. Crop production from the agricultural sector and wholesale and retail trade from the service sectors are the most dominant subsectors accounting jointly for 46 percent of GDP and 41 percent of growth in GDP in 2011/12.

According to the new GDP series[1], the Ethiopian economy measured by real GDP grew by 8.6 percent in the fiscal year 2011/12. Though this shows a deceleration in the economy compared to the 11 percent average growth for the

[1] The Ministry of Finance and Economic Development (MOFED) has changed the base year for the estimation of GDP to the year 2010/11 (2003 EFY). According to MOFED, a more recent base year is considered with a view to incorporate structural changes in the economy. In the estimation of various macroeconomic aggregates, improvements in data sources, methodological changes and updating of classification were done.

last eight years, it is still a significant performance. The decline in the rate of growth is primarily due to a relatively slower performance of the agricultural sector. Value-added in the sector decelerated from its average rate of growth of 8.4 percent during 1005/06-2009/10 to a rate of 4.9 percent in 2011/12. This reduced the contribution of the agricultural sector to growth from 37 percent during 2005/06-2009/10 to 24.4 percent in 2011/12.

Table 1.1: Growth Rates

Period	Agriculture	Industry	Services	Total GDP	Per capita GDP
1991/92-1999/00	1.78	6.37	7.63	4.12	1.2
2000/01-2004/05	5.6	8.2	6.7	6.22	6
2005/06-2010/11	8.5	10.9	14.1	11.2	18.2
2009/10	7.6	10.8	13.2	10.5	-10.1
2010/11	9.0	15.0	12.5	11.4	4.0
2011/12	4.9	13.6	11.1	8.6	32.4

Source: Ministry of Finance and Economic Development

Value added in the industry and service sectors grew at a rate of 13.6 percent and 11.1 percent, respectively, in the year under review (2011/12). About 5.2 percentage points of the 8.5 percent growth rate of GDP in the fiscal year was contributed by the service sector. That means, nearly 59 percent of the growth during the period was attributed to the growth in the service sector.

The fiscal year 2011/12 also witnessed a situation where growth performances deviated from the base case scenario targets envisaged by the Growth and Transformation Plan (GTP). Value-added in the agricultural and industrial sectors was planned to grow at a rate of 8.6 and 21.4 percent, respectively. However, the 4.9 percent growth performance in the agricultural sector and the 13.6

percent growth rate in the industrial sector in the fiscal year sharply contrasted with the targeted levels. In this regard, the service sector performed at a rate of a little higher than the target. The various sectors and the GDP need to grow at more than the respective target rates in the remaining three years to achieve the targeted base case scenario average growth rates over the GTP period.

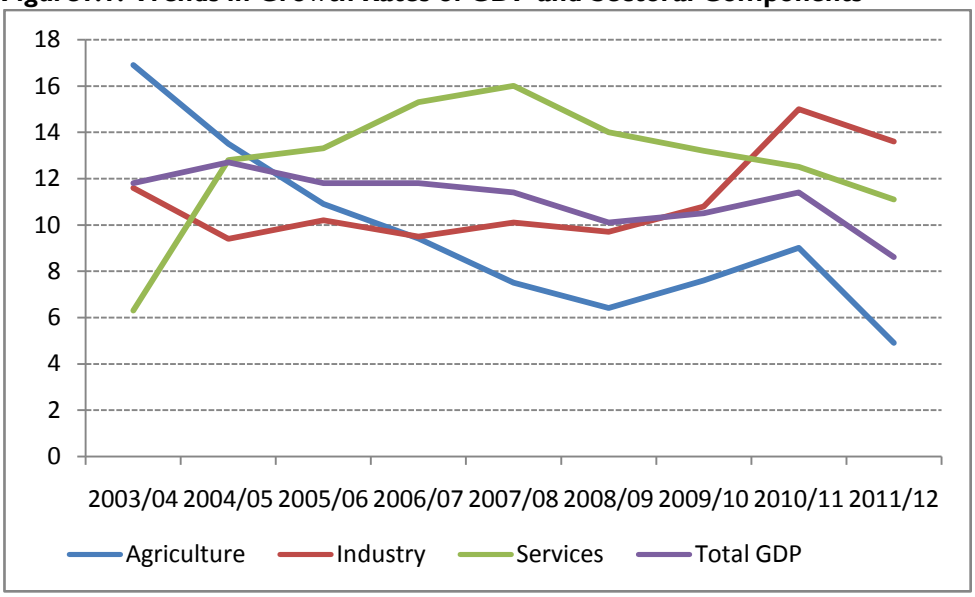
Table 1.2: GTP targeted growth by sector and 2011/12 Actual

Sector	GTP Target (Base case scenario)			Actual	
	Average:2010/11-2014/15	2010/11	2011/12	2010/11	2011/12
Agriculture and Allied Activities	8.1	8.5	8.6	9.0	4.9
Industry	20.0	17.9	21.4	17.9	13.6
Service	11.0	11.5	10.5	11.9	11.1
Real GDP	11.2	11.1	11.3	11.1	8.6

Source: Ministry of Finance and Economic Development

The new data series showed a significant change in the structure of the economy. Previous versions of the national income accounts of Ethiopia that was prepared by MoFED showed that agricultural, industrial, and service sectors had shares of 41.5, 12.9, 45.6 percent, respectively, in the GDP in 2010/11. According to the revised series, the share of agriculture was reported to be 45.2 percent in 2010/11. The share of the industrial sector in the GDP was revised to 10.5 percent in the same year. The service sector was also revised downwards with a share of 44.2 percent in the GDP in 2010/11. This measure reversed the earlier reading of the data that the service sector overtook the lead in the economy from the agriculture sector in 2008/09.

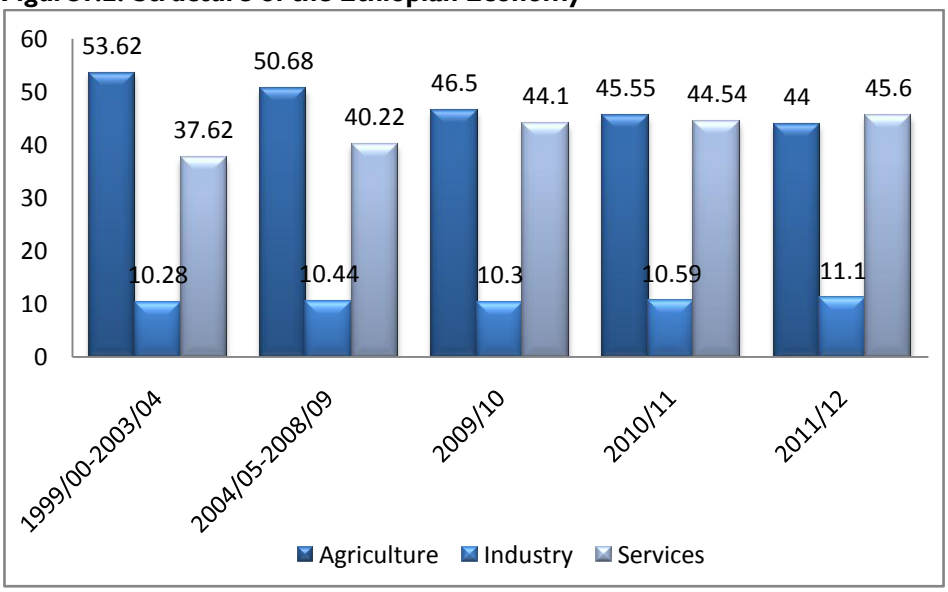
Figure1.1: Trends in Growth Rates of GDP and Sectoral Components



Source: Ministry of Finance and Economic Development

The new series indicate that the service sector overtook the lead in the economy only in 2011/12 with a share of 45.3 percent in the GDP while agriculture followed with a share of 43.7 percent. The share of the industrial sector in the economy was still limited to 11 percent of GDP in 2011/12. The growth rates in the value-added of the industrial sector that have been recorded so far do not seem to be consistent with the aim of GTP to gear the economy towards the industrial sector. Given the fact that the GTP period is left with only two years to be over, it is hoped that new investments in the manufacturing sector with strong public support will commence production soon to compensate for the below target performances observed so far.

Figure1.2: Structure of the Ethiopian Economy



Source: Ministry of Finance and Economic Development

In general, the service sector has still dominated economic growth in Ethiopian half way into the implementation period of GTP. It appears that the momentum in the economy is spearheaded by aggressive public expenditure on infrastructure development. The increase in agricultural production itself can be attributed significantly to the increase in demand in urban centers which in turn is a result of public expenditure fostering youth employment. While such outcomes are quite positive, an eventual slowdown in public expenditure may lead to slow growth in the economy and youth unemployment. This requires gearing the momentum towards more productive sectors such as agriculture and the manufacturing industry. This is in fact the central objective of GTP, and the challenge ahead is how to make GTP successful.

Table 1.3: Growth Decomposition by Sector

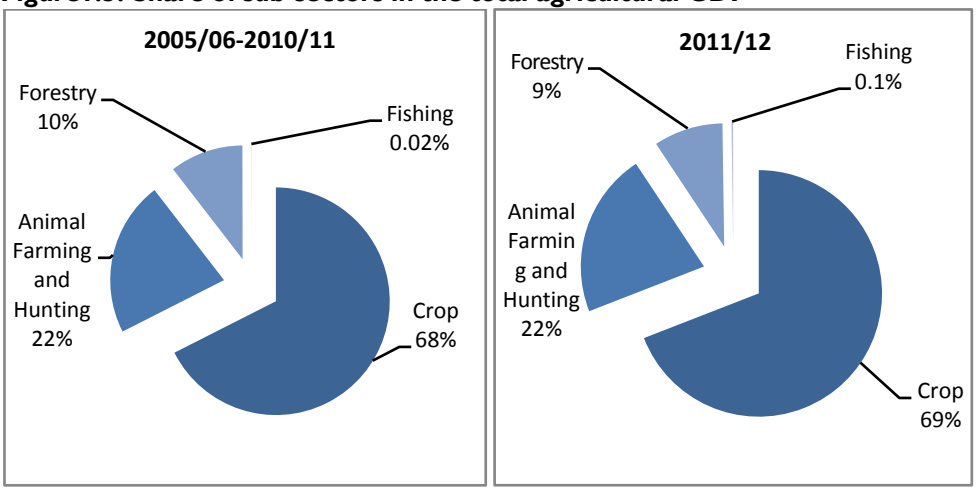
	2000/01-2004/05		2005/06-2009/10		2010/11		2011/12	
	Weighted Growth	Share in Growth	Weighted Growth	Share in Growth	Weighted Growth	Share in Growth	Weighted Growth	Share in Growth
Agriculture	**3.06**	**47.76**	**4.13**	**37.13**	**4.08**	**35.16**	**2.16**	**24.41**
Crop	2.52	39.37	3.23	29.09	3.22	27.77	1.51	17.04
Animal Farming and Hunting	0.35	5.43	0.72	6.47	0.73	6.28	0.51	5.80
Forestry	0.20	3.05	0.17	1.52	0.13	1.09	0.13	1.45
Fishing	-0.01	-0.09	0.01	0.05	0.00	0.02	0.01	0.12
Industry	**0.80**	**12.4**	**1.02**	**9.17**	**2.05**	**17.62**	**1.49**	**16.91**
Mining and Quarrying	0.05	0.83	0.12	1.05	0.84	7.21	0.19	2.16
Manufacturing	0.20	3.15	0.38	3.43	0.47	4.01	0.55	6.21
Large and Medium Scale Manufacturing	0.12	1.80	0.30	2.67	0.37	3.20	0.53	6.01
Small Scale and Cottage Industries	0.09	1.44	0.08	0.73	0.09	0.75	0.04	0.41
Electricity and Water	0.09	1.33	0.08	0.76	0.22	1.92	0.23	2.61
Construction	0.46	7.14	0.44	3.93	0.52	4.48	0.52	5.93
Service	**2.55**	**39.71**	**5.96**	**53.73**	**5.48**	**47.28**	**5.18**	**58.47**
Whole Sale and Retail Trade	0.82	12.77	2.19	19.75	0.89	7.64	2.13	24.09
Hotels and Restaurants	0.14	2.14	0.61	5.52	0.89	7.69	0.39	4.35
Transport and Communications	0.47	7.28	0.42	3.77	0.41	3.54	0.53	5.97
Financial Intermediation	0.13	2.04	0.40	3.57	0.60	5.18	0.86	9.72
Real Estate, Renting and Business Activities	0.69	10.79	1.25	11.25	2.07	17.84	0.34	3.88
Public Administration and Defense	-0.10	-1.59	0.42	3.78	0.35	3.02	0.56	6.29
Education	0.19	2.98	0.31	2.79	0.09	0.81	0.10	1.10
Health and Social Work	0.05	0.79	0.11	1.02	0.05	0.42	0.10	1.14
Other Community , Social & Personal Services	0.14	2.23	0.24	2.16	0.12	1.04	0.13	1.47
Private Households with Employed Persons	0.02	0.28	0.01	0.12	0.01	0.10	0.04	0.46
GDP	**6.41**	**100**	**11.11**	**100**	**11.61**	**100**	**8.83**	**100**

Source: EEA computations based on data from MoFED

1.1.1 Agriculture

Though the service sector has overtaken the lead in the economy by slightly surpassing the share of agricultural sector in the GDP, agriculture is still a major source of employment, income and livelihood for most of the society. The capability of the country to address poverty, food insecurity and various socio-economic problems is highly dependent on the performance of the sector. Growth in the value-added of the sector is recorded to be 4.9 percent for the fiscal year 2011/12.

Figure1.3: Share of sub-sectors in the total agricultural GDP



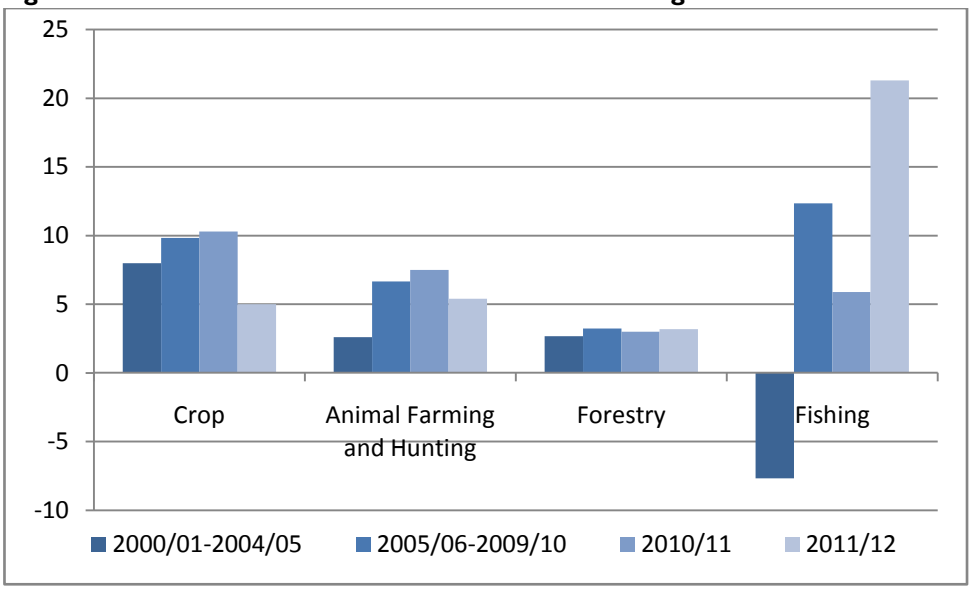
Source: Ministry of Finance and Economic Development

The 4.9 percent growth in the value-added in the agricultural sector is not consistent with the 8.6 percent target of GTP. Crop production which accounts for 69 percent of the total value-added in the sector and 30 percent of GDP grew at 5 percent in 2011/12-a deceleration from the 10.3 percent in 2010/11. Value-added in animal farming and hunting grew by 5.4 percent and by 3.2

percent contributing 23.7 and 5.9 percent of the growth in the agriculture, and GDP, respectively.

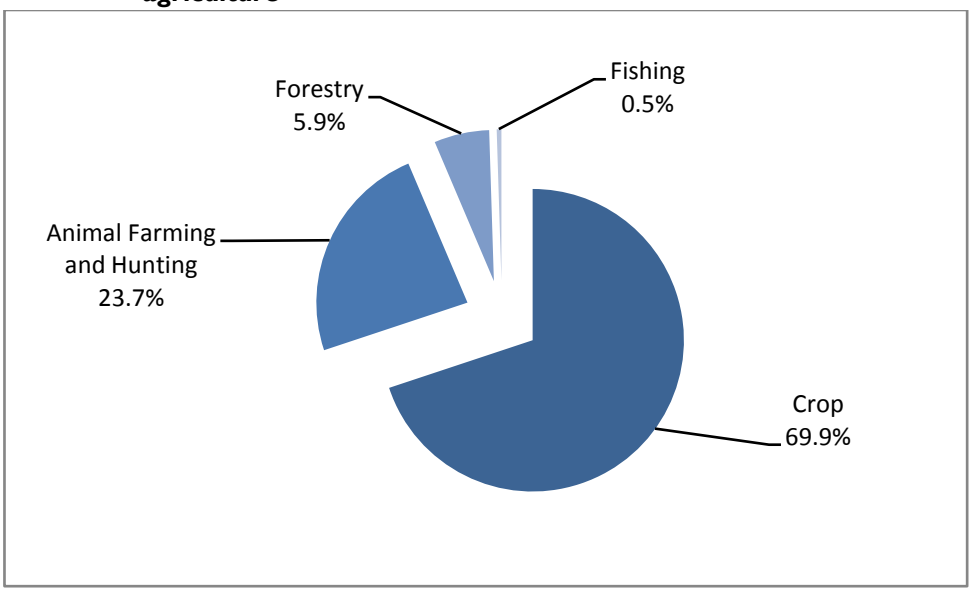
The relative slowdown in the growth rate of the value-added in the agricultural sector may be due to a number of factors such as erratic weather if not drought, increase in input price, change in farming practices and amounts of fertilizer used. If we consider the size of land used to cultivate grain crop, it grew by 2.2 percent in 2011/12 which is slightly lower than the average growth rate of 3.1 percent in the previous five years. However, yield (production per hectare of land) of grain crop was 18.1 percent in the review period which is somewhat higher than the average of 15.3 percent in the previous five years.

Figure1.4: Value-added Growth of sub-sectors in the agricultural sector



Source: Ministry of Finance and Economic Development

Figure1.5: The contribution of sub-sectors to the growth of value-added in agriculture



Source: Ministry of Finance and Economic Development

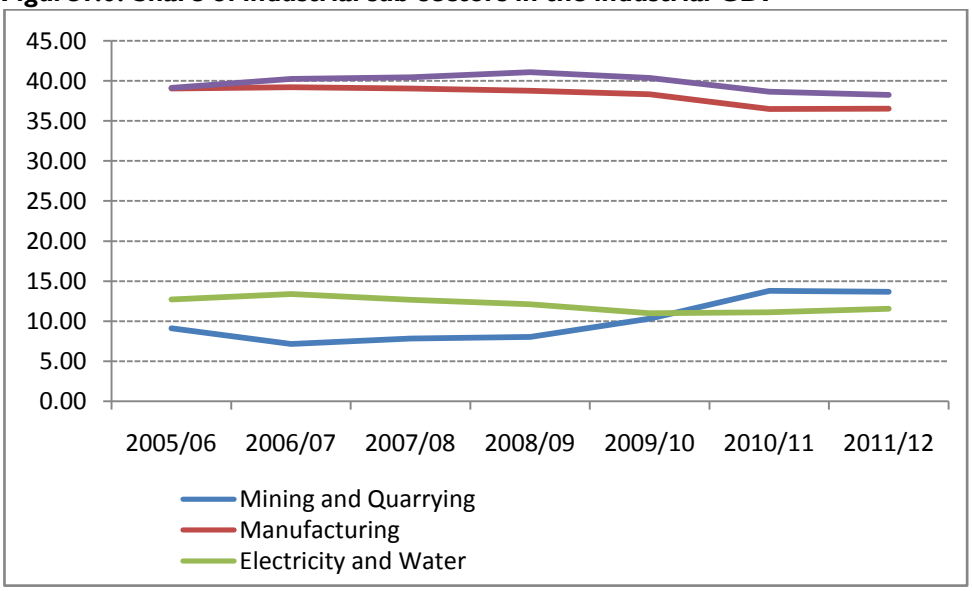
1.1.2 Industry

Value-added in the industrial sector grew by 13.6 percent in 2011/12. This rate is slightly lower than last year's 15 percent. The sector accounted for 17 percent of the growth in GDP. The construction sector which accounted for 38.3 percent of the value-added in the industrial sector contributed to around 35 percent of this growth. This sub-sector also achieved 12.5 percent growth in the year under review.

The manufacturing sector which is the second major contributor to the industrial sector has a share of 36.5 percent in the total value-addition of the sector in 2011/12. In the year under review, the sub-sector grew by 13.7 percent contributing 36.7 percent of the growth in the industrial sector.

Looking at the pattern of the relative performance of the manufacturing and construction subsectors, it is apparent that there has been hardly any change in their respective share in the industrial sector. This may not be consistent with the objective of GTP of making the industrial sector lead the economy. The GTP envisages the manufacturing sector to play a dominant role in enabling the overall industrial sector to lead the Ethiopian economy. Successful implementation of the GTP requires that the value-added in the manufacturing sector grow at a rather faster rate than what has been achieved in the last three years of the GTP period.

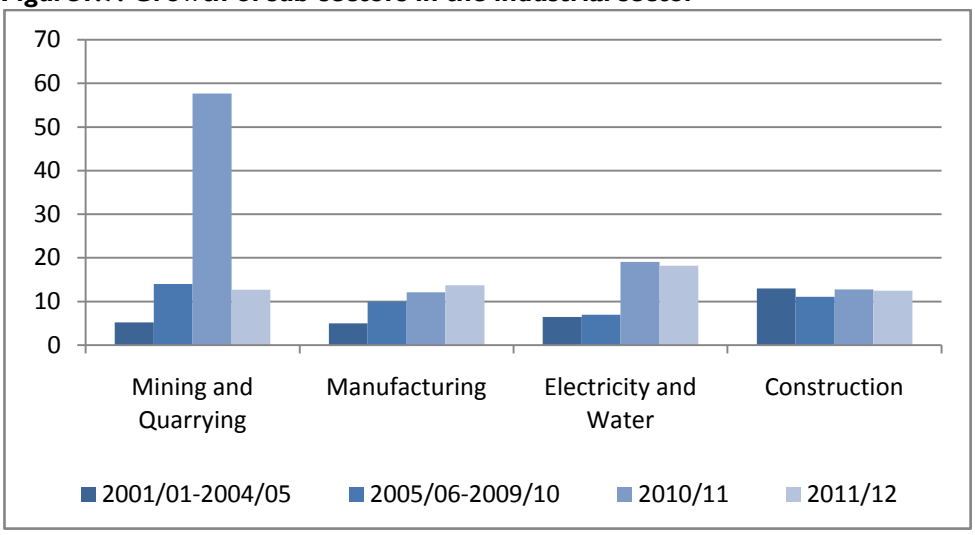
Figure1.6: Share of industrial sub-sectors in the industrial GDP



Source: Ministry of Finance and Economic Development

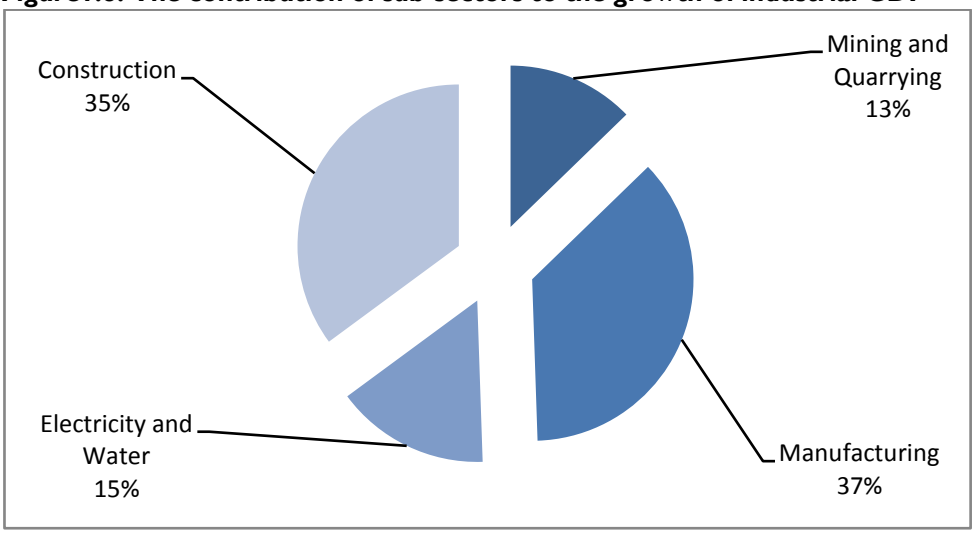
Regarding the other sub-sectors in the industrial sector, mining and quarrying grew by 12.7 percent. Value-added in the electricity and water sub-sectors grew by 18.2 percent in 2011/12. The two sub-sectors have small shares in the GDP.

Figure1.7: Growth of sub-sectors in the industrial sector



Source: Ministry of Finance and Economic Development

Figure1.8: The contribution of sub-sectors to the growth of industrial GDP



Source: Ministry of Finance and Economic Development

1.1.3 Services

According to the new series of the national income accounts of Ethiopia, the service sector accounted for 45.3 percent[2] of GDP in 2011/12. One of the basic justifications for the need to launch GTP was that the service sector had dominated the spur in the economy during the period of PASDEP (2005/06-2009/10) as it accounted for 6 percentage points of the 11 percent growth in GDP. It was planned in the GTP that productive sectors, most importantly industry and agriculture, would take the lead in the economy. The rate of growth of the value-added in the service sector was planned to slowdown. Nevertheless, the sector still dominated the economy in the year under review as it contributed 58.5 percent of the growth in GDP, which means that 5.2 percentage points of the 8.9 percent growth in GDP was the share of the service sector.

In the year under review, value-added in the sector grew by 11.1 percent which is low compared to its average growth rate of 14.2 percent in the previous five years. Despite its relative low growth, it contributed 58.5 percent of the GDP growth in the fiscal year due to its larger share in the GDP and the deceleration of the value-added in the other two major sectors.

Wholesale and retail trade accounted for the biggest share of 34.9 percent of the value-added in the service sector in 2011/12 unlike in the preceding fiscal year in which real estate and renting business activities dominated. In fact, this subsector is the second largest with a share of 15.8 percent in the GDP after crop production which has a share of 30.2 percent. Particularly in 2011/12, wholesale and retail trade became the leading sub-sector by contributing 24.1 percent to GDP growth. Crop production had a share of 17 percent in the overall growth of GDP in the fiscal year under review.

[2] Earlier versions of the national income accounts of Ethiopia showed that the service sector had been growing so fast that it had overtaken the lead in the economy since 2008/09.

Real estate, renting and business activities stood at second place in terms of their contribution to the value-added in the sector. There appears to be a slowdown in the sector as it grew by 3.8 percent in 2011/12 in contrast to 22.1 percent in the preceding fiscal year.

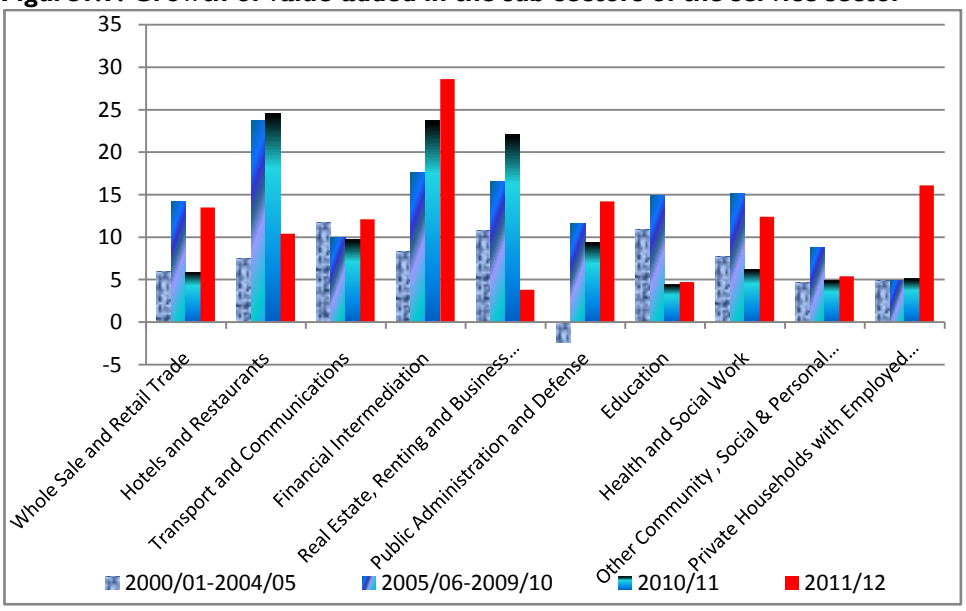
Table 1.4: The share of sub-sectors and their contribution to the growth of the service sector

Sub-sector	Share in the		Contribution to the growth of value added in the service sector
	GDP	Value added in the service sector	
Whole Sale and Retail Trade	15.9	34.9	41.2
Hotels and Restaurants	3.7	8.1	7.4
Transport and Communications	4.4	9.7	10.2
Financial Intermediation	3	6.6	16.6
Real Estate, Renting and Business Activities	9	19.8	6.6
Public Administration and Defense	3.9	8.6	10.7
Education	2.1	4.6	1.9
Health and Social Work	0.8	1.8	2.0
Other Community , Social & Personal Services	2.4	5.3	2.5
Private Households with Employed Persons	0.3	0.6	0.8

Source: Ministry of Finance and Economic Development

Value-added in the financial intermediation subsector accelerated from a rate of growth of 23.7 percent in 2010/11 to 28.6 percent in 2011/12. This is by far the highest growth rate registered amongst subsectors in the fiscal year. Transport and communications, and public administration grew by 10.4, 12.1 and 14.2 percent, respectively.

Figure1.9: Growth of value-added in the sub-sectors of the service sector



Source: Ministry of Finance and Economic Development

1.2 Saving and Investment

A noticeable achievement in the fiscal year 2011/12 is the relatively high rate of gross domestic saving that was recorded. Gross domestic saving stood at 16.5 percent of GDP in the fiscal year. Revisions were also made on the saving rate for the year 2010/11 from 7 percent of GDP in the old series of the national income accounts to 12.8 percent in the revised series. Comparison of this rate with past performances such as during the Imperial regime requires a systematic revision of the data under the new methodology which covers only recent years. The rate of gross fixed investment as a percentage of GDP was 34.6 percent in 2011/12. This rate is higher

than the rate recorded in the previous year by 6.7 percentage points. As a result, the resource gap as a percentage of GDP widened from15.1 in 2010/11 to 18.1in 2011/12. National saving accounted for 28 percent of the GDP where 11.5 percentage points is the share of net current transfer.

Saving and the resulting capital accumulation have always been seen as major determinants of economic growth. However, domestic saving rate in Ethiopia had been low to maintain vigorous capital accumulation and economic growth in the country. The saving rate has also been showing a stagnant trend which has critical implications on the growth and development goal of the nation. Gross domestic saving as a percentage of GDP for the year under review is estimated at 16.5 percent showing a 3.7 percentage point increment over the preceding year.

The five year plan (GTP) has targeted gross domestic saving to reach 15 to 17 percent of GDP by the end of the plan period. To that end, the 16.5 percent saving rate registered in the fiscal year under review seems to assure that the target is achievable. On the other hand, gross national saving as a percentage of GDP was 28 percent which is above the gross domestic saving by 11.5 percentage points. Much of the national saving which is greater than the domestic saving is contributed by net current transfer from the rest of the world

Government consumption expenditure accounted for about 7 percent of the GDP and it grew by 18.7 percent in year 2011/12. Meanwhile, private consumption expenditure which obviously accounted for the largest share of the GDP grew by 41.8 percent.

The rate of fixed capital formation reached 34.6 percent of GDP in the year under review. Despite the improvement observed in gross domestic saving, the high rate of capital formation led to a widening resource gap of 18.1 percent of

GDP. Compared to the previous year, the resource gap was 3 percentage points wider.

Table 1.5: Expenditure on GDP (as a percentage of GDP)

Period	Absorption				Current Account Balance			
	Total	Private Consumption	Government Consumption	Gross fixed investment	Gross Domestic Saving	Exports	Imports	Resource Gap
2000/01-2004/05	114.9	74.47	14.61	25.86	10.92	13.72	29.24	-15.53
2005/06-2009/10	115.9	79.53	10.69	25.64	9.78	12.54	32.54	-20.00
2010/11	115.1	78.56	8.62	27.9	12.81	16.98	32.11	-15.12
2011/12	118.1	76.51	7.03	34.6	16.45	13.97	32.09	-18.12

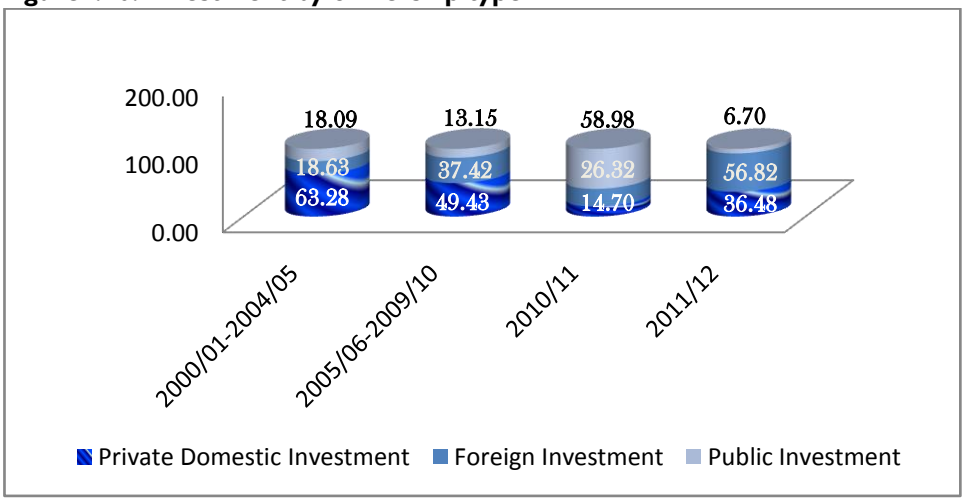
Source: Ministry of Finance and Economic Development

On the current account side, import expenditure as a percentage of GDP was about 32.1 percent which is by far greater than value of exports which was 14 percent of GDP. It is apparent to see that the current account deficit stood at 18.1 percent of GDP in the fiscal year under consideration.

Regarding the trends and patterns of investment in Ethiopia, data from Ethiopian Investment Agency shows that private domestic investment exceeds both public and foreign investment in the last twelve years. During the period of PASDEP, investment by the domestic private sector had the largest share even if the share of foreign investment significantly increased from 18.6 to 37.4. In 2011/12 foreign investment took the leading place by accounting for 56.8 percent of the total capital investment made within the year. Foreign investment is followed by domestic private investment which accounted for 36.5 percent of the total investment. In contrast to the previous year in which public investment takes the

largest share, the share of investment made by the government for the review period is found to be only 6.7 percent.

Figure1.10: Investment by ownership type



Source: Ethiopian Investment Agency

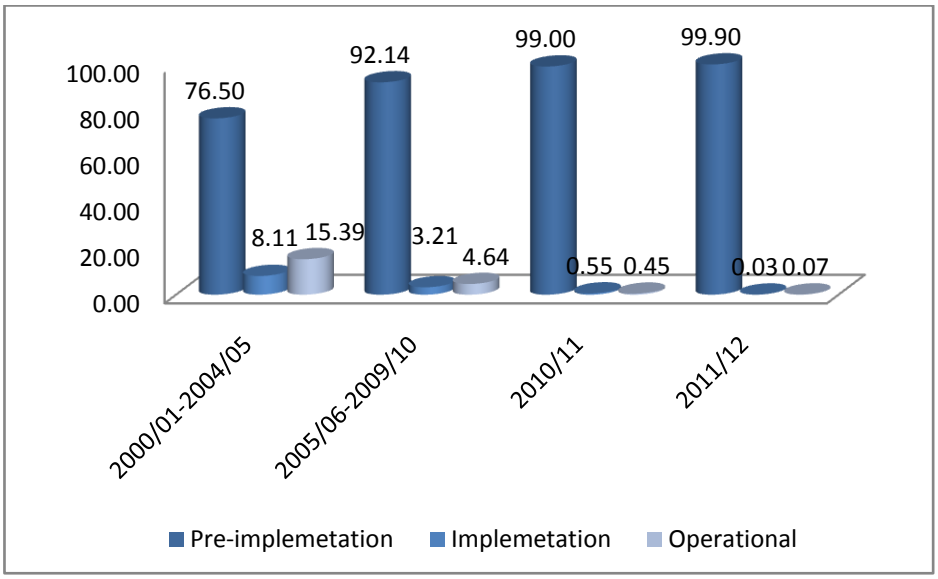
Figure 1.11 shows the implementation status of projects by ownership type. It appears that there is a serious difficulty in bringing proposed investment projects to operational stage which is virtually common for all ownership types. However, the problem seems more serious in the case of private domestic investment relative to foreign or public investments. Among total investment projects proposed in 2011/12, about 6.7 and 25[3] percent of foreign and public investments, respectively, are in operational stage whereas almost all private domestic investments are in pre-implementation stage. This may indicate the existence of long time gaps between the proposal of investment projects and their being operational. It may also

[3] Note that there were only 4 proposed public investments in the review period and one of them was in the operational stage. However when we see the amount of capital on this operational project, it accounts only for 0.3 percent of the total public capital investment proposed within the year.

indicate that many investment proposals may not be operational at all. Given the two decade long experience of investment trends in the country, proposed number and capital of investment projects need to be considered with caution. A more reliable indicator of investment performance in the country in this case is size and number of projects that went operational.

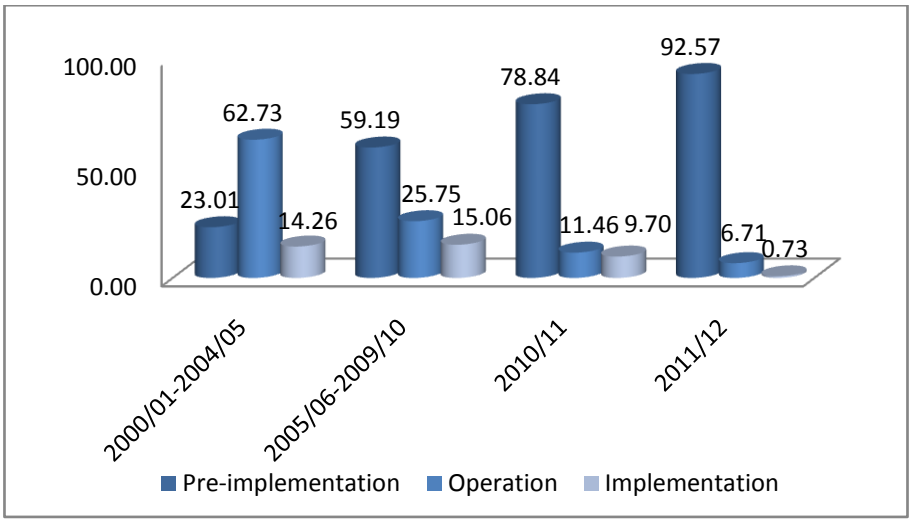
Figure1.11: Investment by Implementation status

(a) Status of domestic private investments



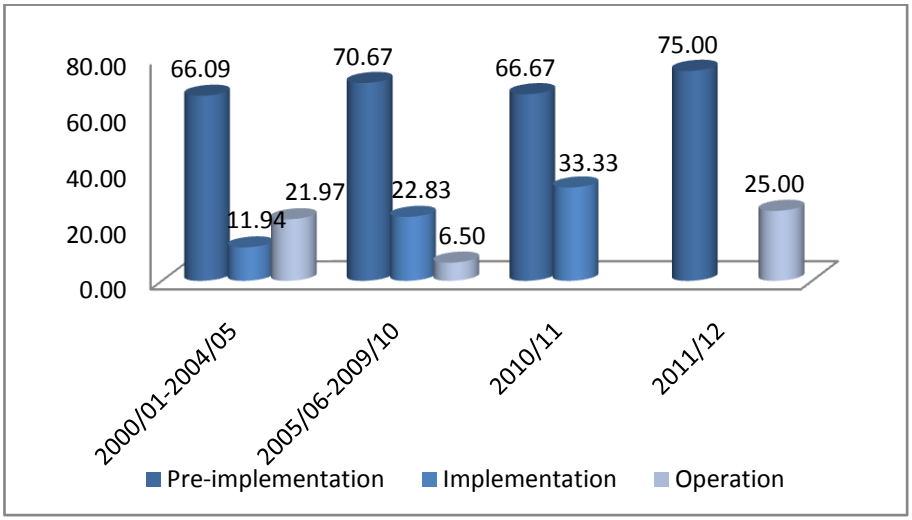
Source: Ethiopian Investment Agency

(b) Status of domestic foreign investments



Source: Ethiopian Investment Agency

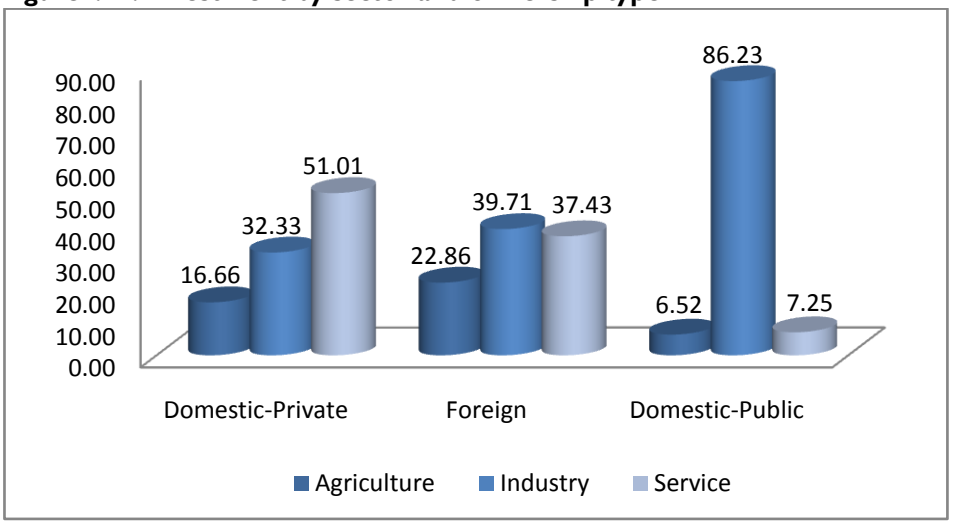
(c) Status of domestic public investments



Source: Ethiopian Investment Agency

With respect to sectoral distribution of investment projects, domestic private investors seem to be more interested in investing in the service sector whereas much of public investment is in industry which is mainly on construction and electricity. About 51 percent of domestic private capital investment made is in the service sector followed by the industrial sector. Public capital investment has been quite low both in agricultural and service sectors. Foreign investments seem to have fair sectoral distribution in which investment in the industrial sector takes the largest share of 39.7 percent. Agriculture appears to be the least favored sector by domestic investors while foreign investors put considerable amounts of resources both in the agricultural and service sectors. Given the GTP's objective of making the industrial sector lead the economy by the end of the 2014/15, much effort should be made to encourage both domestic and foreign investors to spend more in the industrial sector, especially in manufacturing.

Figure1.12: Investment by sector and ownership type[4]



Source: Ethiopian Investment Agency

[4] The illustrations given in figure 1.12, table 1.6 and table 1.7 are based on summary data of licensed investment projects since January 01, 1992 - February 11, 2013

In terms of the size of investment measured by capital per number of projects, domestic private investors seem to engage in small scale investments compared to foreign investors. For instance the average capital of investment projects in the operational status in the agriculture sector owned by foreign investors is seven times larger than what is invested by domestic-private investors. The fact that domestic investors focus on small scale projects compared to foreign investors is also manifested by employment per number of project. In this case as well, the average number of employment opportunities per project created by foreign investors is by far greater than that of domestic investors in all implementation status of projects.

Table 1.6: Size of investment (capital per number of projects)

	Sector	Agriculture	Industry	Service
Domestic-private	Pre-implemented	9532.03	63442.0	53284.2
	Implemented	12,788	46958.2	55666.3
	Operational	6,087	37193.5	51597.3
Foreign	Pre-implemented	70869.39	331077.7	171079.5
	Implemented	148,792	317037.3	140910.5
	Operational	44504.36	105000.0	57567.7
Domestic-public	Pre-implemented	15846	3890567.5	38610.2
	Implemented	18,694,991	19962324.9	0.0
	Operational	8643.69	367054.6	2225580.9

Source: Ethiopian Investment Agency

As one would expect, the size of public investment measured both in terms of capital and employment per number of projects is relatively large compared to both private domestic and foreign investments. For instance, if we look at the average employment (per project), government financed projects seem to provide higher employment opportunities relative to both foreign and domestic private investment in all sectors.

Table 1.7: Size of investment (employment per number of projects)

	Sector	Agriculture	Industry	Service
	Pre-implemented	315.80	302.88	437.62
Domestic-private	Implemented	434.93	270.32	395.33
	Operational	587.89	304.16	299.34
	Pre-implemented	770.25	605.45	411.51
Foreign	Implemented	1005.59	713.79	528.45
	Operational	923.93	596.22	393.54
	Pre-implemented	583.33	105849.39	265.83
Domestic-public	Implemented	49750.00	16460.78	0.00
	Operational	991.50	582.72	2417.00

Source: Ethiopian Investment Agency

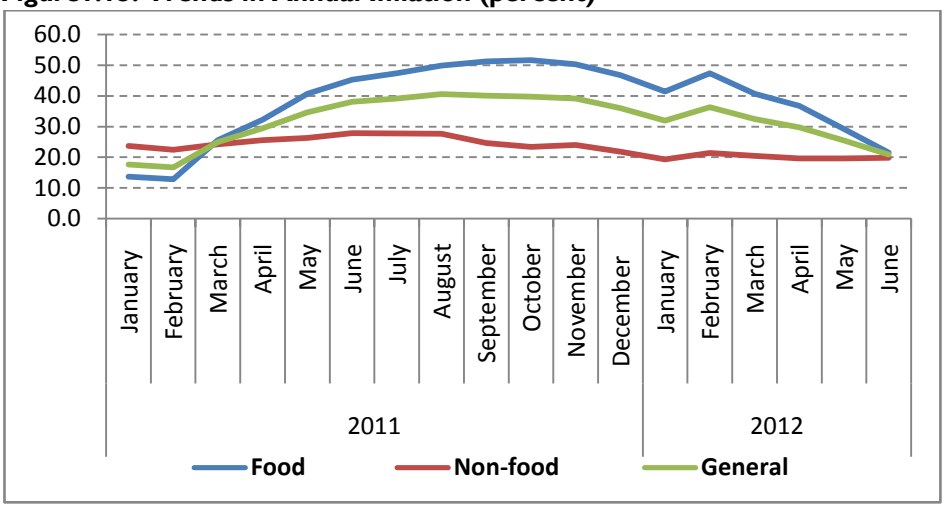
1.3 Price Development

The fiscal year 2011/12 witnessed another round of high price inflation. A month-to-month annualized general inflation stood at 34.3 percent largely dominated by the upsurge in the food price levels which grew by about 43 percent. Non-food inflation rate averaged 22 percent during the period. Expansion of monetary aggregates, in particular domestic credit, in the face of a relatively slower growth of the agricultural output is believed to be the cause of the high inflation rate.

The high inflationary pressures which tested the economy for the last seven years seemed to decelerate in 2011/12 where the general level of inflation registered in June 2012 was 20.9 percent. Similarly the levels of food and non-food price inflation stood at 21.5 and 19.8 percent respectively during the same period. Even if rates of inflation for price levels showed a declining trend starting from February 2011/12, it is still high on annual basis. The annualized inflation for the

year under review was registered to be 34.3, 43 and 22 percent for general, food and non-food prices, respectively. Even in the Meher harvest season, the average rate of general and food inflation remained high where it was recorded to be 37.2 and 48.1 percent, respectively.

Figure1.13: Trends in Annual Inflation (percent)



Source: Central Statistics Agency

One important factor that might result in the high inflationary pressure observed in the review period is the deceleration of the agricultural sector. In addition, the substantial increase in money supply could have resulted in the high rate of inflation in the fiscal year 2011/12. For instance, if we look at the trend of the money supply in the respective year (see section 1.4), the volume of broad money rose from 145 to 189 billion birr registering 30.3 percent growth. The significant growth in domestic credit and government expenditure recorded in the year could have also contributed for this high rate of inflation. Other demand and supply side changes could have also led to the high inflation in the review period.

1.4 Monetary Developments and Policy

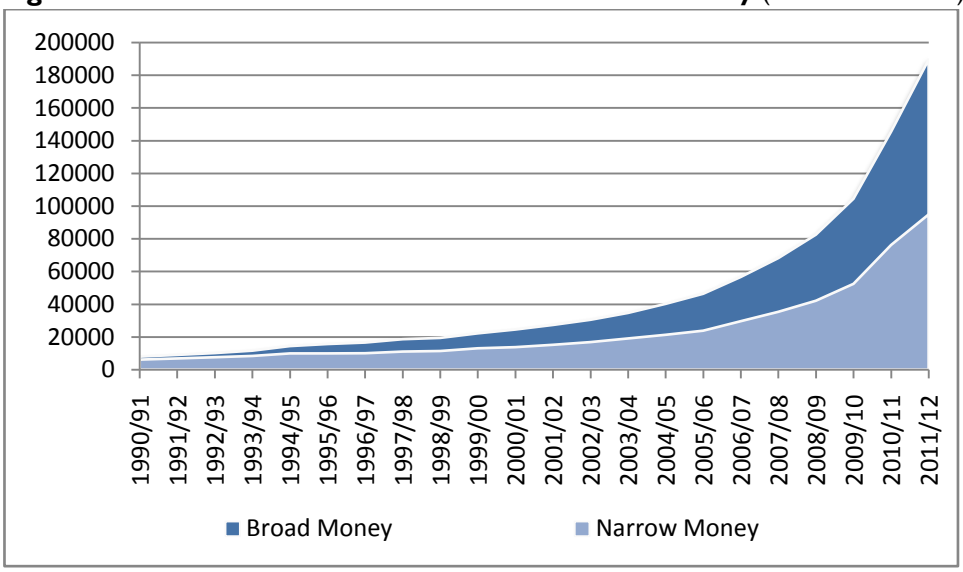
The fiscal year 2011/12 witnessed a significant upsurge in broad money and its components from even a higher base in the preceding year. Narrow money (demand deposits and currency outside banks) increased by 24.5 percent, which is the second highest in the last decade after the rate of expansion observed in the preceding year. On the asset side, domestic credit expanded at a significant rate of 39.5 percent, which is the highest rate of expansion in the last decade. Such an expansion in monetary aggregates in the face of decelerating agricultural production is believed to have made a significant contribution to the high rate of inflation observed during the period. The expansion of quasi money at a high rate of 36.6 percent (which is the highest in the past decade) seemed to be consistent with the nation's efforts to mobilize domestic resources.

In developing countries like Ethiopia, the objective of monetary policy is mainly related to money and credit control, price stabilization, and economic growth. Monetary development is often explained by development in monetary aggregates, domestic credit and financial sector development which in turn is explained by resource mobilization of banks. Figure 1.14 shows the trend of narrow and broad money starting from 1990/91 up to 2011/12. In 2011/12, narrow money registered a growth rate of 24.5 percent while broad money grew by 30.3 percent. Both monetary aggregates grew at a lower rate compared to the rates registered in the preceding year. In 2010/11, narrow money and broad money grew at rates of 45.3 and 39.2 percent, respectively. However, these rates are by far greater than the average rate of expansion of the respective monetary aggregates during PASDEP. In fact, the rates are even higher than what was recorded during the 2008/09 period which was known to have triggered the record high inflation. What makes the rate of expansion of narrow and broad

money in 2011/12 is not only because they are the second highest at least in the recent past but also because the aggregates had a very high base in the preceding year.

Currency outside the bank and demand deposit accounted for 40.6 and 59.4 percent, respectively, of the narrow money supply contributing 30 and 70 percent of the growth in respective aggregates. Narrow money in turn accounted for 50.1 percent of broad money. The remaining 49.9 percent of broad money supply is accounted for by quasi-money which comprises of saving and time deposits. Narrow and quasi-money contributed 40.2 and 59.8 percent of the growth in broad money supply, respectively.

Figure1.14: Trends in the value of narrow and broad money (in millions of Birr)



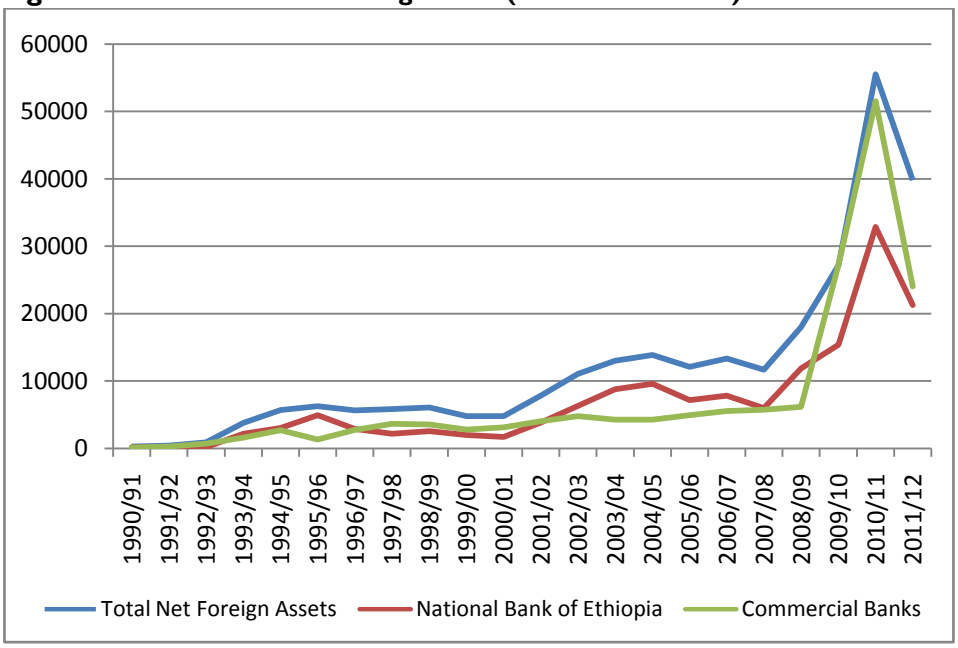
Source: National Bank of Ethiopia

Domestic credit reached 189 billion Birr in 2011/12 and grew at a rate of 39.5 percent which is the highest within ten years. It is therefore apparent that the

upsurge in domestic credit in particular and the money supply in general had the leverage to pull inflation up.

On the other hand, net foreign assets show a reduction compared to the previous year, registering a negative growth rate of 28.4 percent for the year under review. This reduction is not necessarily large because there was a more than 100 percent rate of accumulation of foreign reserve in the preceding year. In fact one of the factors that were believed to have pushed inflation in 2010/11 was the high accumulation of foreign assets and the apparent preference of the National Bank of Ethiopia not to sterilize it.

Figure1.15: Trends in Net foreign asset (in millions of Birr)



Source: National Bank of Ethiopia

Table 1.8: Growth rates of monetary aggregates

Year	2000/01-2004/05	2005/06-2009/10	2010/11	2011/12
Net Foreign Assets	25.83	18.05	104.25	-28.36
National Bank of Ethiopia	44.93	17.79	113.58	-35.31
Commercial Banks	9.72	76.49	88.91	-18.27
Domestic Credit	9.39	21.13	29.82	39.49
Claims on Government	8.03	9.09	-13.21	-24.76
National Bank of Ethiopia	15.89	16.23	15.21	0.04
Commercial Bank of Ethiopia	36.51	35.47	163.49	42.67
Claims on other Sectors	12.09	31.15	49.72	56.71
Broad Money	12.66	21.08	39.21	30.28
Narrow Money	10.32	19.84	45.27	24.52
Currency outside banks	11.32	19.44	34.57	18.30
Demand Deposits	9.58	20.44	54.44	29.17
Quasi-Money	15.75	22.45	33.09	36.62

Source: National Bank of Ethiopia

1.5 External Sector

The significant build up in foreign reserve observed in 2010/11 which is manifested by the positive overall balance of payment, was reversed by the 9 billion USD deficit registered in 2011/12. This balance of payment deficit is mainly attributed to substantial increment in trade deficit, decrease in net service receipts, fall in long term capital and foreign direct investment. The export sector performed less compared to the previous year recording a growth rate of 14.8 percent. On the other hand, import expenditure showed a significant increment. Imports of consumer and semi-finished goods have increased significantly whereas capital goods and fuel import showed a slight reduction.

1.5.1 Balance of Payments

In contrast to 2010/11, the year 2011/12 showed a significant reduction in foreign reserve. The period recorded a deficit of 9 billion USD in overall balance of payment showing a large reduction (-170.3 percent) compared to the enormous positive growth rate registered in the previous year. The trade balance deficit also widened from 5.5 billion USD in 2010/11 to 7.9 billion USD in 2011/12. This could be partly attributed to the increment in the value of import by 34 percent while export value grew only by 14.8 percent which is lower relative to what was recorded in 2010/11.

The review period also witnessed a large reduction in the value of net service receipts which reached a value of 74 million USD registering a negative growth rate of 89.1 percent. This negative growth rate is due to reduction in the value of net non-factor service which decreased from 7 billion in 2010/11 to 1 billion USD in 2011/12. Meanwhile, private transfer during the period under review grew by 18.2 percent which is high compared to the 1.4 percent rate recorded in the preceding year.

In contrast to the improvement observed in the previous year, current account deficit (excluding official transfer) widened in the review period, reaching the value of 4.5 billion USD. Similarly capital account showed a reduction by 16.4 percent. This negative growth rate is due to the decrease both in net long-term capital and foreign direct investment which declined by 8 and 13.7 percent, respectively. In general, the deterioration in foreign reserve witnessed in the review period was due to substantial increment in trade deficit, decrease in net service receipts, fall in long term capital and foreign direct investment.

Table 1.9: Balance of Payment (Millions of USD)

Particulars	2009/10	2010/11	2011/12	Growth	
	A	B	C	B/A	C/B
Trade Balance	-6265.7	-5506.3	-7,908.50	-12.12	43.63
Exports	2003.1	2747.1	3,152.70	37.14	14.76
Imports	8,268.90	8253.4	11,061.20	-0.19	34.02
Net Services	457.6	688.1	74.9	50.37	-89.11
Non-factor services, net	513	757.6	171.1	47.68	-77.42
Exports of non-factor services	2044	2,585.50	2,810.50	26.49	8.70
Imports of non-factor services	1531	1,827.90	2,639.40	19.39	44.40
Income, net	-55.3	-69.5	-96.2	25.68	38.42
Interest	31.9	51.9	89.1	62.70	71.68
Dividend	-26.6	-28.1	-15.5	5.64	-44.84
Private transfers	2709.7	2746.7	3,245.80	1.37	18.2
Current Account Balance (excl. off. transfers)	-3098.5	-1886.3	-4,587.80	-39.12	121.5
Official Transfers	1905.6	1860.7	1,787.90	-2.36	-3.9
Current Account Balance (incl. Official transfers)	-1193	-210.4	-2,799.80	-82.36	1230.6
Capital Account	2000	2535.5	2,119.80	26.78	-16.4
Long-term capital (net)	1043.6	1019.3	937.8	-2.33	-8.0
Disbursements	1118.1	1054.5	1,007.00	-5.69	-4.5
Repayments	74.5	35.2	69.2	-52.75	96.7
Foreign Direct Investment (net)	960.2	1242.5	1,072.10	29.40	-13.7
Short-term (net)	-3.8	-156.5	-120.9	4018.42	-22.8
Net Errors & Omissions	-490.9	-940.9	-292.7	91.67	-68.9
Overall Balance	179.5	1384.2	-972.8	671.14	-170.3
Financing	-179.5	-1384.2	-972.8		
Reserves (increase)	-177.3	-1375.8	980.8		
NBE net foreign asset	40.8	-932.2	846.5		
CBs net foreign asset	-218.1	-443.6	134.3		
Debt Relief	-2.2	-8.4	-8		

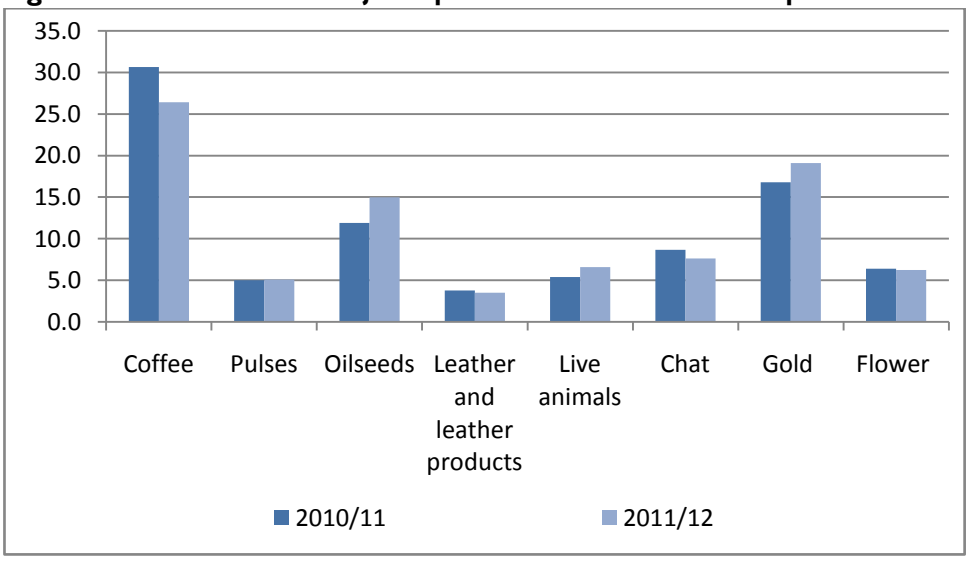
Source: National Bank of Ethiopia

1.5.2 Exports

Ethiopia's export sector continued with its undiversified nature concentrating on few primary commodities. In 2011/12 the value of export reached 3.1 billion USD registering a growth rate of 14.8 percent compared to the previous year. As usual, coffee accounted for the largest share in the total export standing at 26.4 percent. An export item that showed a significant performance in a relatively shorter period is the cut flowers.

Concerning its destination, Germany maintained its leading place by taking the largest share of 28.7 percent of the coffee export which was virtually similar with the previous year. Saudi Arabia took 17 percent of the coffee export which made it the second largest importer of Ethiopian coffee in 2011/12. The United States and Belgium also imported 7.7 and 6.2 percent of the total coffee export of the country, respectively, in the year under review.

Figure1.16: The share of major export items from the total export



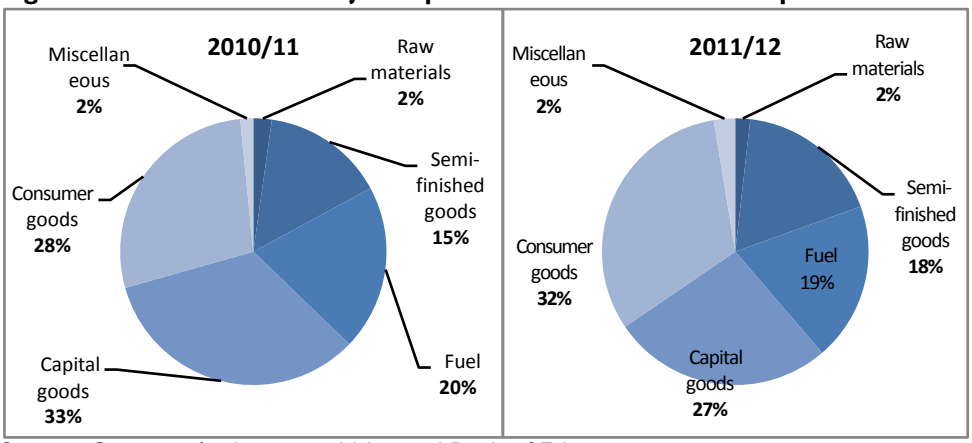
Source: Customs Authority and National Bank of Ethiopia

Gold export was the second largest in the Ethiopian export accounting for 19.1 percent of the total export. Switzerland continued to be the sole importer of Ethiopia's gold export. Gold was followed by oilseeds which accounted for 14.9 percent of total export in 2011/12. China imported the biggest share of 59.9 percent from the total oilseed export of Ethiopia in the review period. Israel held the second place by taking a significant share of 10.5 percent from the total oilseed export in the year.

1.5.3 Import

The value of import showed a substantial increment reaching 11.06 billion USD in 2011/12. Compared to the year 2010/11, import value recorded a growth rate of 34.02 percent. As it can be seen from Figure 1.17, the majority of Ethiopia's imports in 2011/12 were consumer goods followed by capital goods. This is rather a new phenomenon because capital goods had in the past held the leading place in major import items for a long period of time. The share of capital goods showed a significant reduction of 6 percent relative to 2010/11.

Figure1.17: The share of major import items from the total import



Source: Customs Authority and National Bank of Ethiopia

Compared to the previous year the value of imported consumer goods grew by 53.9 percent while that of capital goods recorded a growth rate of 7.4 percent. Semi-finished goods accounted for 18 percent of the country's total import in 2011/12, showing a slight increment of 3 percentage points compared to the year 2010/11. The remaining components of the total import maintained almost similar shares relative to the previous year. The value of imported semi-finished goods grew by 59.4 while the value of fuel and raw materials grew by 28.1 and 8.1 percent, respectively. As the GTP envisages industrialization, increased rate of capital imports is rather expected.

Table 1.10: Value of Imports by End Use (Millions of USD)

Categories	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	Growth (2011/12)
	1998	1999	2000	2001	2002	2003	2004	2004
Raw Materials	77.2	148.6	257.8	354.2	212.4	183.7	**199.7**	8.7
Semi-finished Goods	821.6	800.3	1,259.70	1,140.10	1,226.50	1,228.00	**1957.2**	59.4
Chemicals	115	98.9	114.7	117.7	114.8	130.1	**154.6**	18.9
Fertilizers	135.9	140	302.1	270.7	249.4	342.4	**604.6**	76.6
Textile Materials	38.3	13.2	27.3	19.3	23.5	29.2	**41**	40.4
Others	532.4	548.1	815.6	732.4	838.7	726.3	**1157**	59.3
Fuel	860.4	875.1	1,621.40	1,256.60	1,310.70	1,659.30	**2124.8**	28.1
crude petroleum	0	0	0	0	0	0	**0.01**	-34.1
Petroleum Products*	856.5	872.3	1,614.40	1,246.90	1,303.00	1,648.80	**2078.3**	26.1
Others	4	2.7	7	9.7	7.7	10.5	**46.4**	340.5
Capital Goods	1,453.10	1,868.50	1,907.70	2,474.40	2,886.30	2,757.00	**2961.7**	7.40
Transport	429.9	633.8	380.9	384.2	509.8	688.1	**809.7**	17.7
Tyres for Heavy Vehicles	48.9	54.5	62	81.1	102	85.6	**106.8**	24.7
Heavy Road Motor Vehicles	312.3	488.1	297.2	289.6	403.6	575.1	**652.5**	13.5

Aircraft	67.5	37.7	12.3	3.3	0.8	24.7	**42.1**	70.4
Others	1.2	53.6	9.5	10.3	3.4	2.6	**8.3**	222.4
Agricultural	38.7	33	40.9	31.3	59.8	63.6	**119.5**	87.9
Industrial	984.4	1,201.70	1,485.80	2,058.90	2,316.70	2,005.40	**2032.5**	1.4
Consumer Goods	1,281.90	1,317.00	1,532.30	2,383.50	2,515.70	2,294.80	**3531.7**	53.90
Durables	415.7	520.7	476	674.8	865	868.5	**1105.3**	27.3
Radio & T.V.	56.6	56.2	35.3	12.8	12.5	16.9	**15.4**	-8.9
Tyres for cars & Other Vehicles	15.1	19.2	22.6	27.3	40.4	35	**45.4**	29.5
Cars & Other Vehicles	141.9	174.3	138.7	158.3	215.8	218.2	**269.8**	23.7
Others	202.1	270.9	279.5	476.5	596.4	598.5	**774.7**	29.4
Non-durables	866.2	796.3	1,056.30	1,708.70	1,650.70	1,426.30	**2426.4**	70.1
Cereals	195.1	160.5	207.7	635.1	513.1	196	**652.5**	232.9
Other Food	137.6	97.9	154.4	194.8	211.3	249.5	**382.7**	53.4
Medical & Pharmaceuticals	148.1	171.3	211.8	279.4	321.8	331.6	**389.5**	17.5
Textile Fabrics	204.6	191.1	208.2	193.1	230.2	237.1	**347.3**	46.5
Others	180.8	175.5	274.1	406.3	374.3	412.1	**654.4**	58.8
Miscellaneous	98.5	116.6	231.8	117.7	117.3	130.5	**286.3**	119.3
Total Imports	4,592.80	5,126.20	6,810.70	7,726.60	8,268.90	8,253.30	**11061.2**	34.00

Source: National Bank of Ethiopia

1.6 Fiscal Developments

Despite the increment in current and capital expenditure, budget deficit as percentage of GDP stood at 1.7 percent in 2011/12 showing an encouraging reduction compared to the preceding year. Foreign borrowing remained the main source of financing budget deficit. Tax revenue also showed an increment accounting for the largest share of total revenue mobilized within the year. Current expenditure grew by 26.9 percent in which close to half of it were channeled to poverty targeted activities. Education took the largest share in the poverty targeted budget followed by health. Similarly much of the capital expenditure was allotted to poverty targeted activities.

The total government expenditure during 2011/12 was Birr 124.4 billion. Out of this, 41.3 percent was the share of recurrent expenditure while the balance (58.7 percent) was allocated for capital expenditure. The total government expenditure rose by 32.6 percent over the preceding years. This contrasts with the 34.3 percent of rate of inflation observed during the period indicating a slight decline in real total expenditure over the preceding year.

During the review period, fiscal deficit (including grants) showed expansion from Birr 8.2 billion in 2010/11 to Birr 8.7 billion in 2011/12 registering a growth rate of 6.5 percent. The ratio of total deficit to GDP which was recorded to be 5 percent in 2010/11 showed a reduction in the review period reaching 1.7 percent. About 74.6 percent of the total fiscal deficit was financed from foreign sources which were mainly borrowing.

Total revenue (excluding grant) grew by 48.8 percent while total expenditure grew by 32.6 percent in 2011/12. Of the total revenue collected in the review

period, 83.3 percent of it was obtained through tax and the remaining 16.7 percent from non-tax sources. The value of total grant obtained in the year showed reduction compared to the previous year registering a negative growth of 22.4 percent.

Current expenditure grew by 26.9 percent. From the total current expenditure, 48.6 percent of it went to poverty targeted activities. Of these, education took the largest share of 31.5 percent followed by health which accounted for 7.5 percent of the poverty targeted expenditure. The remaining 6.6, 2.1 and 0.7 percent of poverty targeted expenditure was invested in agriculture, natural resources and roads, respectively. Expenditure on defense accounted for 12 percent of current expenditure during the period.

Capital expenditure grew by 36.9 percent where the major share of 85.8 percent was poverty targeted.

Table 1.11: Summary of Government Finance (in millions of birr)

	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Total Revenue and Grants	29380.77	39704.8758	54637.29	66240.1516	85611.22	115659
Revenue	21797.37	29794	40183.59	53864.05	69119.87	102864
Tax revenue (inc measures)	17353.61	23800.68	29007.47	43318.07	58980.78	85740
Direct taxes	5167.91	7015.29	9868.301	14905.84	19549.7	28858
Indirect taxes	12185.7	16785.39	19139.17	28412.23	39431.08	56882
Domestic indirect taxes	3997.038	5092.32	7325.09	10727.34	15705.31	23326
Import duties & taxes	8188.66	11693.07	11814.08	17684.89	23725.77	33556
Export taxes	0	0	0	0	0	0
Non-tax revenue	4443.76	5993.32	11176.12	10545.98	10139.08	17124
Grants	7583.405	9910.8758	14453.7	12376.1016	16491.35	12795
Grants in kind/earmarked	3492.105	4434.1758	4858.396	5560.60163	6858.603	8089
CPF/ DBS grant	4091.3	5476.7	9595.3	6815.5	9632.749	4706
Expenditure	35607.34	46914.9658	57774.27	72597.9341	93831.41	124417
Current expenditure	17165.07	22794.01	27175.6	32537.1866	40534.71	51445

Defense	3004.92	3452.67	4000	4000	4749.997	6486
Poverty-targeted expenditure	7795.17	10626.57	12628.5	14995.6762	18995.33	24994
Interest payments	1206.59	1133.13	1286.1	1587.4	1912.67	2230
Capital expenditure	18397.97	24120.9558	30598.67	40060.7475	53296.7	72971
Central Treasury	13832.43	18276.88	22712.57	30685.0259	38340.09	57439
External assistance *	3081.384	4033.6758	4518.396	4929.62163	6521.103	8089
External loans	1484.15	1810.4	3367.7	4446.1	8435.5	7443
Poverty targeted expenditure	14564.72	19423.9712	23583.46	32794.3057	43383.44	62574
Overall balance including grants	-6182.26	-7210.09	-3136.979	-6357.7825	-8220.193	-8758
Overall balance excluding grants	-13765.7	-17120.9658	-17590.68	-18733.884	-24711.54	-21553
Financing	6226.564	7210.09	3136.979	6357.7825	8220.193	8758
External (net)	1912.75	2396.2	3176.4	4131.3	7797.63	6530
Domestic(net)	6246.2	6580.4	-416.9	1757.7	111.2165	3793
Privatization	0	1008.13	472.12	697.27	1457.61	2763.9
Other and residual	-1932.39	-2774.64	-94.64084	-228.4875	-1146.264	-4328

Source: Ministry of Finance and Economic Development

Chapter Two

The Performance of the Agricultural Sector

2.1 Background

The performance of the agricultural the sector in Ethiopia is highly dependent on the timely onset, duration, amount and distribution of rainfall which makes it highly vulnerable to drought and other natural calamities. On the other hand, the sector is highly significant in contributing to national employment, food security and generating badly needed hard currency. This justifies assessing regularly the performance of the sector which is one of the key areas for the Annual Report of the Ethiopian Economics Association on the Ethiopian Economy.

Following the practice of the previous years, this year's report provides an update on the performance of the agricultural sector putting great emphasis on the production of food crops by small farmers. Unlike reports of the previous years, this report, however, has two parts. A brief report that updates the performance of the agricultural sector under the reporting period constitutes the first section. The second section provides an in-depth analysis on a topic or sub-sector selected for its importance. In addition to its rigorous nature, the analysis in this section uses time-series data that provides an opportunity to look at developments and challenges (of the sub-sector) based on long-term performance of the sector.

The report indicates that 2011/12 and 2012/13 were good years in signifying improvements in the production and acquisition of food crops. In relative terms, the performance of the sector is, however, declining which signals the need for greater attention from policy makers. The growth rate in 2012/13, for instance,

was not only much lower than the preceding year (2011/12) but also significantly lower than the long-term trend. For the first time over a decade, production grew only by 4.6% which is almost three times lower than the growth rate registered in 2010/11 or two times less than the average grain growth for the period between 2005/6 and 2011/12. The decline in the growth rate (in production) is associated with a 39% and 47% decrease in growth rates in yield and cultivated land, respectively.

The cause of this declining trend needs a thorough investigation. Considering the existing gap in national food security[5] as well as the high population growth and rapid urbanization, this trend should be reversed. Otherwise, it would be difficult to allow the economy to grow sustainably and avoid macro-economic instability, which are key policy objectives for the government.

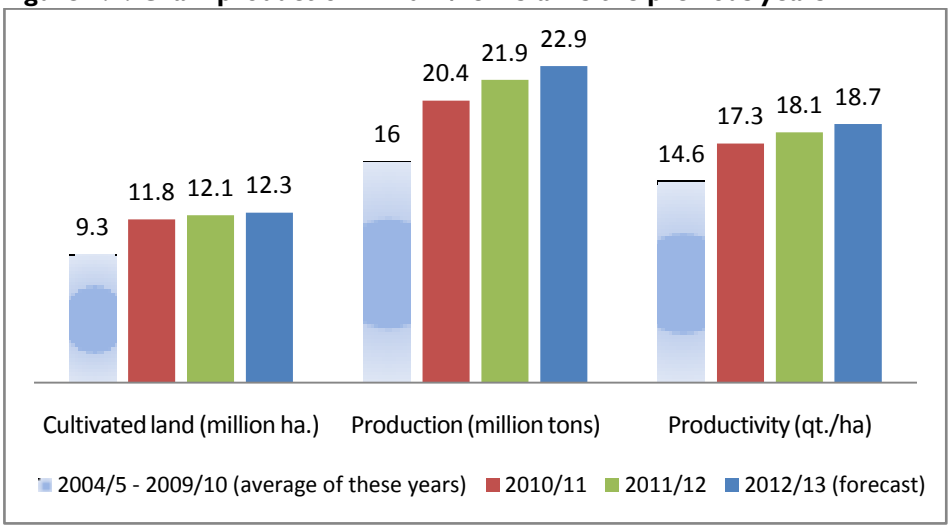
2.2 The Performance of the Agricultural Sector over the Past Year

The sound performance of agriculture is essential to make food crops available. Beyond its role in improving access to food crops that help attain food security, a good performance of the sector has a wide multiplier effect on the whole economy. Official reports on food grain production indicate that 2011/12 and 2012/13[6] were good years in signifying improvements in production and acquisition of food crops. Compared to the previous year, the growth rate over the past two years, however, is declining (Figure 2.2).

[5] Considering all food assistance programmes, Ethiopia requires 928 000 tonnes of cereals to meet the need of about 13 million beneficiaries. Out of this, 327 000 tonnes will be required for relief assistance, 416 000 tonnes for the Productive Social Safety Net programme, 92 000 for refugee operations and the remaining 94 000 tonnes for nutrition, HIV/AIDS, school feeding and natural resource management programmes (FAO/WFP, 2012).
[6] Data on 2012/13 is based on CSA forecast (see CSA, 2012b).

In 2011/12, the country managed to harvest about 21.9 million metric tons of grains (cereals, pulses and oil crops) from 12.1 million hectares of farmland, which implies a productivity of 18.1 quintals per hectare of cultivated land. Compared to the previous year (2010/11), the performance in 2011/12 registered a 7.4%, 2.5% and 4.6% growth in production, farmland and productivity, respectively (see Figure 2.1). As a CSA (Central Statistical Authority) forecast for 2012/13 indicates, grain production, productivity and cultivated land grew only by 4.6%, 3.3% and 1.7%, respectively; the growth rate in the following year (2012/13) is much lower than the preceding year (2011/12).

Figure 2.1: Grain production in 2012/13 vis-à-vis the previous years

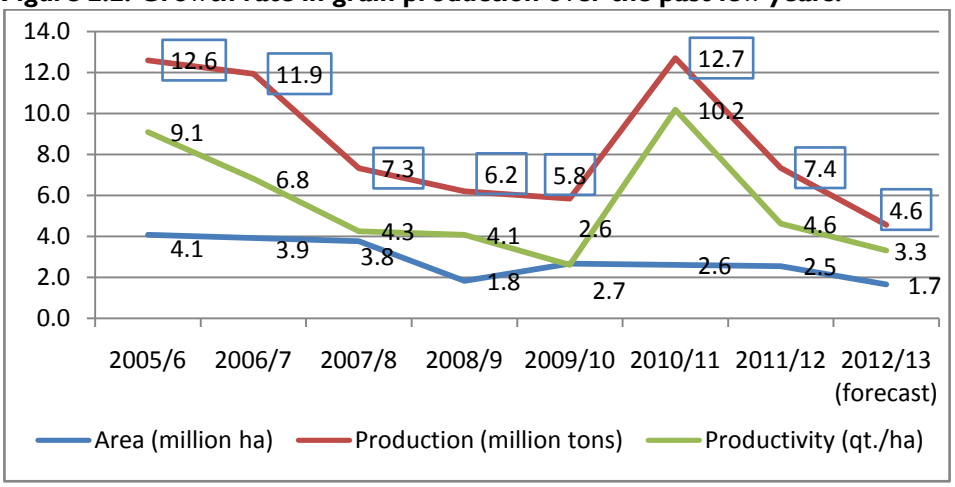


Source: Computed from CSA annual agricultural sample surveys

In other words, production in 2011/12 and 2012/13 exceeds the average production achieved over the past seven years (between 2004/5 – 2010/11) by over 37% and 43%, respectively, which is high enough to improve per capita production. If one assumes that the Ethiopian population grew annually by 3% during the same period, the data indicates a 19% growth in per capita grain

production between 2004/5 and 2012/13. In other words, per capita grain production grew by 2.4% over the past eight years.

Figure 2.2: Growth rate in grain production over the past few years.



Source: Computed from CSA annual agricultural sample surveys

The declining trend in the growth rate over the past two years and especially in 2012/13 deserve the attention of policy makers. . For the first time over a decade, production grew slightly by 4.6% which is almost three times lower than the growth rate registered in 2010/11 or two times less than the average grain growth for the period between 2005/6 and 2011/12 (see Figure 2.2).

The decline in the growth rate of grain is associated with a corresponding decline in yield (productivity) and cultivated land. Compared to 2011/12 crop year, growth rates in yield and cultivated land, for instance, declined by 39% and 47%, respectively, in 2012/13. When compared to the average growth rate for the period between 2005/6 and 2011/12, the decline in the growth rate in land productivity (yield) and cultivated land becomes even larger as both declined by 80% in 2012/13.

The cause of this declining trend needs a thorough investigation. Considering the existing gap in national food security as well as the high population growth and rapid urbanization, this trend should be reversed. Otherwise, it would be difficult to allow the economy to grow sustainably and avoid macro instability.

2.2.1 Production of Cereals, Pulses and Oil Crops

2.2.1.1 Total Production

Of the total grain crop area, about 79% and 80% (9.6 and 9.8 million hectares) were covered by cereals in 2011/12 and 2012/13, respectively. When compared to the 2010/11 cultivated land, the data implies that the area covered by cereals declined by about 1.1% in 2011/12 but increased by 2.2% in the subsequent year. The five major crops account for three fourths of the total cultivated land: Teff (22.6%), maize (17%), sorghum (15.92%) and wheat (11.89%) and barely (7.84%).

Despite a decline by about 1% in cultivated area, cereal production in 2011/12 was increased by about 5.9% from 177.6 million quintals (in 2010/11) to 188.1 million quintals in 2011/12 (CSA, 2012) and then to 198.9 million in 2012/13. The five major crops accounted for 82.4% of total production; the breakdown being:

- Maize 27.8 % (or 60 million qt.)
- Teff 16% (or 35 million qt.)
- Wheat 13.3 % (or 29.2 million qt.)
- Sorghum 18.1 % or 39.5 million qt.)
- Barely 7.3 % (or 15.9 million qt,)

In terms of yield (land productivity), a remarkable growth was achieved especially for maize and wheat. By harvesting 29.5 and 20.3 quintals per hectare of cultivated land, land productivity in maize and wheat production increased (in 2011/12) by 16.3% and 10% respectively (CSA, 2012). Compared to these crops, changes in yield of other crops was small. Yields in Teff and barely, for instance,

increased only by 1.5% and 2.7%, respectively; while yield in sorghum declined by 1.6% to 20.5 quintals per hectare.

As indicated in CSA pre-harvest forecast data, there are significant changes in the subsequent year. In 2012/13, Teff and sorghum yields increased by 5.8% and 4.0%, respectively, which is relatively better compared to their performance in the preceding year (CSA, 2012b). Yield of barely, wheat and maize, however, increased marginally by 2.0%, 2.3% and 0.7%, in that order. Despite this opposite trend in yield of five major food crops, the change in yield of maize and wheat is special as the changes is both high and swift. In 2011/12, yield of maize, for instance, grew by 16.3% which is very high compared to the 0.7% growth registered in the 2012/13 crop year.

Pulses accounted for 13.4% (1.6 million hectares) and 10.6% (23.2 million quintals) of the grain area and production, respectively. Compared to 2010/11, production and cultivated land in 2011/12 exceeds by 18.6% and 19.1%, respectively. In the subsequent year (2012/13), however, production declined by 1.8% while cultivated land contracted by 0.5%, faba beans, haricot beans, chick-peas and field peas are the major pulse crops with percentage shares of 3.8%, 2.7%, 1.8% and 1.7%, respectively, in total grain crop area.

Progress in terms of yield is mixed. While yields of Fenugreek and Haricot beans increased by 34% and 23% to 12.2 qt./ha and 14.3 qt./ha, respectively, yields of chick-peas and lentils declined by 11% each to 15.5 qt./ha and 10.5 qt./ha, in that order.

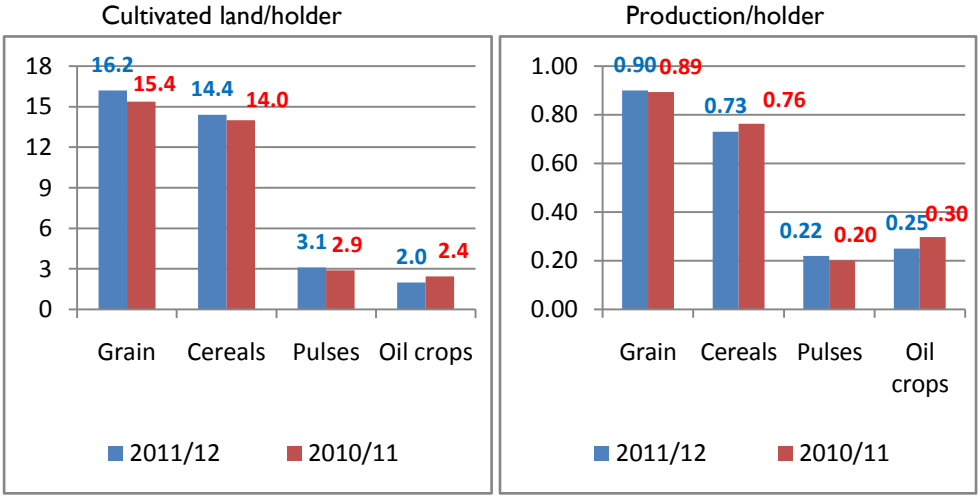
The other major crop categorized as grain is oil crops which consists of crops like nuge, sesame and linseed which are produced largely as cash crops. CSA (2012) indicates that oil crops accounted for 7.3% (about 880,871 ha) and 3.3% (about 7,308,800 qts.) of grain crop area and production, respectively. Compared to 2010/11 performance, both cultivated land and production of oil crops increased by 14% and 15%, respectively, in 2011/12. The trend in 2012/13 is,

however, mixed as production increased by 0.8% despite a 3.2% decline in cultivated land.

2.2.1.2 Production per Farm Household

CSA data indicates that there were 13,228,086 farmers engaged in the production of grains in the 2010/11 crop year. This number grew by 1.9% to 13,476,888 in 2011/12 crop year. The size of farm each of these producers cultivated increased marginally by 1.2% from 0.89 ha in 2011/12 to 0.90 ha in 2010/11. In terms of production, the increase is slightly bigger. About 15.4 quintals of different grains were produced by every farmer in 2011/12. As shown in Figure 2.3, this rose to16.2 quintals increasing by 5.2 %. Higher improvement in yield is attributed to wide differences in grain area and production. As mentioned earlier, average grain yield was increased by about 5% (to 18.1 qt./ha) in 2011/12 crop year.

Figure 2.3: Cultivated land and production per farm household (holder) (ha.)



Source: Computed from CSA annual agricultural sample surveys

2.2.2 Vegetables and Fruits Production

Vegetables and fruits are not major crops for Ethiopian small farmers. Vegetables, for instance, took up only about 1.2% of the area under all crops. Similarly, fruits accounted only for 0.51% of national agricultural land. Out of the total 160,050 ha of vegetable land, 88% is accounted for by red pepper (68%) and Ethiopian cabbage (20%).

In terms of production, vegetables accounted for 2.8% of the national agricultural crop production. In specific crops, again red pepper and Ethiopian cabbage accounted for33% and 43% respectively, of the total vegetable production in 2011/12 crop year.

On the other hand, fruits are even less common among small farmers. CSA (2012) indicates that about 61,473 hectares of land was under fruit crops in 2011/12. Bananas contributed about 58.4% of the fruit crop area followed by mangoes which took up 13.1%

2.2.3 Factors Affecting Yield

2.2.3.1 Seeds

The total annual seed requirement of the agricultural sector in Ethiopia is estimated at about 700 000 tonnes. During 2011, about 15 percent of this was met by the formal sector, distributing over 105 000 tonnes of improved seeds (see Table 2.1). The formal seed sector comprises of the Ethiopian Seed Enterprise (ESE), multinational seed companies, regional seed enterprises, cooperatives, unions and approximately 35 private producers (FAO/WFP, 2012).

Despite a relatively large amount of seed supply, the actual amount used by small farmers seems very small. CSA report shows that only 483 thousand quintals of improved seeds was used in 2011/12 crop year. The crop area it was applied to

was estimated to be around 861 thousand hectares which implies an application rate of 51 Kg./ha (CSA, 2012).

The FAO/WFP report indicates that during the 2011 Meher season most farmers had access to some seed at the appropriate time. Specific unmet demand was reported for pulse seeds, improved rust tolerant wheat seed varieties and short season hybrid maize. A stock of over a thousand tonnes of a long season maize variety remained unsold.

Although production of improved seed has increased significantly over recent years to meet increasing demand, a gap between production and specific farmer requirements (i.e. rust tolerant wheat varieties) remains. It is clear from discussions and observations in the field that the MoA (Ministry of Agriculture) and Regional BoA's (Bureau of Agriculture), EIAR, (Ethiopian Institute of Agricultural Research), ARARI (Amhara Regional Research Institute), regional seed enterprises in collaboration with ICARDA (International Centre for Agricultural Research in the Dry land Areas), CIMMYT (International Maize and Wheat Improvement Center) and others collaborate to improve farmer access to improved seed.

Table 2.1: Improved seed distributed during last five years (tonnes)

Crop	2007/8	2008/9	2009/10	2010/11	2011/12
Wheat	7560	12175	12322	20926	56357
Teff	582	654	787	1955	4351
Maize	5475	4193	3819	28101	37563
Barely	636	646	905	1638	3705
Sorghum	28	79	150	349	182
Rice	-	-	-	-	616
Millet	-	-	-	-	81
Pulses	1006	1081	1061	1113	2941
Total	15287	18828	19044	54082	105796

Source: Ethiopian Seed Enterprise (ESE) (quoted by FAO/WFP, 2012).

2.2.3.2 Fertilizer Use

Ethiopia totally depends on imports to meet its annual fertilizer demand. The parastatal Agricultural Input Supply Enterprise (AISE) plays the role of procuring entity, while cooperatives and unions are responsible for domestic distribution.

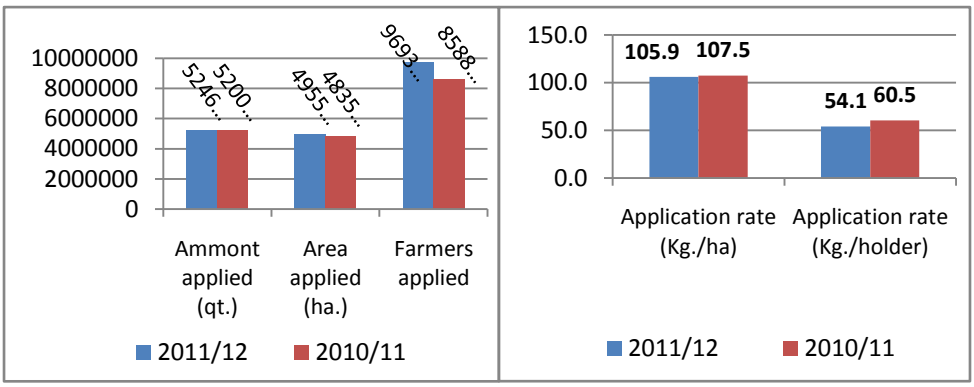
Sales of fertilizers for 2011 were delayed for 600 000 tonnes, which was less than the expected demand, because Meher rains were late in many areas and farmers usually prefer to purchase their basal fertilizer only when rains commence and land preparation starts. Use of fertilizer during the 2011 extremely poor Belg crop was also much reduced. Price increases were an issue in some areas, which was said to have reduced sales (FAO/WFP, 2012).

According to CSA, about 5.2 million quintals of fertilizers (both natural and inorganic) were applied to an estimated 6.8 million hectares of cultivated land. Excluding natural (compost) fertilizers, farmers applied about 5.25 million quintals of DAP and Urea on 4.96 million hectares of farm land. This implies an application rate of 105.9 kilogram per hectare and 54.1 kilogram per holder (farmer).

Most of the fertilizers were applied to Teff, maize and wheat crops. A CSA report indicates that nearly 1.5 million quintals of fertilizer was applied to 1.9 million hectares of Teff farm land (about 79 kg./ha). Similarly, nearly 1.4 and 1.1 million hectares of maize and wheat lands, respectively, were planted using fertilizer.

Compared to the 2010/11 production year, the number of farmers who applied fertilizer and the area which received fertilizer increased by about 13% and 2.5%, in that order, in 2011/12. The quantity of fertilizer applied, however, increased only marginally by 0.9%. Consequently, the intensity of fertilizer use measured as kilogram per hectare and per holder declined by 1.5% and 10.6%, respectively (see Figure 2.4).

Figure 2.4: Inorganic fertilizers (DAP and Urea) application in 2011/12 and 2010/11 crop years



Source: Computed from CSA annual agricultural sample surveys

The trend in fertilizer use is expected to vary among farmers in different parts of the country. Agro-ecological factors, affordability as well as access to credit are expected to play significant roles in affecting the use of fertilizer. Other factors influencing fertilizer usage are availability of product, extension advice and economic benefits. These factors need also be analyzed in depth to increase usage and hence crop production. Observations in the field (by FAO/WFP, 2012 crop assessment team), however, indicate that the use of fertilizer increased in some cases with those farmers in high potential production areas, who had access to cash or credit, and whose yields were traditionally higher. Such farmers were applying high rates of fertilizer (8 - 14 quintals) of fertilizer per hectare on wheat, where a yield of 50 to 60 quintals was expected. Normal fertilizer application recommendation by extension workers to farmers range from 2 to 4 quintals per hectare (FAO/WFP, 2012).

Fertilizers are available to farmers through cooperatives and unions which in most cases require full cash payment for fertilizer. Credit facilities are now rarely provided due to frequent payment defaults in the past. However, in Southern

Nations and Nationalities Peoples Region (SNNPR), where the highest percentage of sales is recorded, it was observed that credit was available to farmers, with down-payments ranging from 25 – 50 percent of the purchase price. This increasing price of fertilizers coupled with minimal credit facilities may deter some resource poor farmers, who find it particularly and increasingly difficult to finance seasonal crop production inputs, from utilizing higher levels of fertilizer, or any amount, on crops, thus achieving higher production levels (FAO/WFP, 2012).

2.2.3.3 Irrigation

Irrigation is important in improving productivity of farmers as it enables them to increase the frequency of crop production and alleviates water shortage caused by poor rains /dry seasons.

CSA data shows that the practice of irrigation in the country has a long way to go to bring about the desired change. The total irrigated crop area in the country within the private peasant holdings was estimated to be more than 165 thousand and 182 thousand hectares in 2011/12 and 2010/11 crop years, in that order, (CSA, 2012 and 2011).

According to CSA (2012) the farmers who practice irrigation are estimated to number more than one million (or about 7.4% of the estimated 13.5 number of holders). In terms of the share of irrigated area, the data indicates that about 1.4% of total cultivated farm land was irrigated in 2011/12.

Most of the area irrigated was under sorghum, maize and Teff estimated to be more than 30 thousand for sorghum, 24 thousand for maize and 10 thousand hectares for Teff (CSA, 2012). The balance (about 101 thousand hectares) might be the share of high value crops like vegetables and fruits.

The overall performance of the crop production was good. Improvements in the agricultural sector, however, need to be accelerated to fulfill the objective of sustained growth and food security. As stated in the Growth and Transformation Plan (GTP), more should be done to intensify effectiveness of smallholders and scale up best practices to bring average farmers' productivity closer to those of best farmers, expand irrigation coverage and shift to production of high value crops to improve income of farmers.

The promotion of exports also needs better and increased support to small farmers who contribute very much to the country's foreign exchange earnings. Ethiopian export is still dominated by a few raw or semi-processed agricultural products. Due to the overall underdevelopment of the country's economy, this feature is expected to continue without significant changes in the near future. The next section which provides an in-depth assessment of the performance of the agricultural export sector over the past decade also signify this fact and the need for comprehensive, well coordinated and sustained support.

Chapter Three

Agricultural Export – Analysis of Trend and Performance

3.1 Trends in Export of Agricultural Commodities

3.1.1 Trends in the Export of Major Agricultural Crops/Commodities

The commodity structure of the Ethiopian export sub-sector reflects the country's overall economic structure at large. The nation's output and exports are highly concentrated in agricultural commodities. The study broadly classifies these agricultural commodities into two groups: traditional export commodities and non- traditional export commodities. The first group consists of coffee, oil seeds and pulses which generates the bulk of export proceeds both historically as well as in recent years[7]. In the second section main trends and developments in export of crops such as fruits and vegetables, meat and meat products, flowers, live animals and Chat are discussed.

The performance of Ethiopia's agricultural as well as total export is closely associated with the performance of the three traditional export commodities in general and coffee in particular. From 1970/71- 2000/01 coffee alone accounted for 54.4 percent of the total export proceeds. Following coffee, oilseeds and pulses together rank second in their share of the total export earnings during the period 1970/71-2000/01.During this period, their share in the total export proceeds was about 13.1percent. Though their share was the highest during the pre-revolution period[8] (which was about 25.4 percent), it declined significantly to

[7] Hides and skins were also major traditional agricultural export commodities, but their export was prohibited in recent years to encourage export of semi-processed and finished products of leathers.
[8] This refers to the imperial period (or prior to the 1974 Ethiopian revolution).

6.6 percent in subsequent years. Although affected by declining world market prices, export of oilseeds and pulses surged in recent years (Debel, 2002, SECO, 2011).

Table 3.1: Trends in export of traditional primary agricultural commodities

Year	Foreign currency earned (million USD)			Volume of commodities exported (million Kg.)		
	Coffee	Oil seeds	Pulses	Coffee	Oil seeds	Pulses
2002/03	165.3	46.1	20.0	126.1	82.8	66.2
2003/04	223.5	82.7	22.6	156.4	105.9	73.3
2004/05	335.4	125.0	35.5	161.1	170.8	121.7
2005/06	354.3	211.4	37.0	147.7	265.7	110.4
2006/07	424.2	187.4	70.3	176.4	235.0	158.8
2007/08	524.5	218.8	143.6	170.7	152.1	233.0
2008/09	375.9	356.1	90.7	134.0	287.0	138.0
2009/10	528.3	358.5	130.1	172.2	299.0	225.7
2010/11	841.8	326.6	137.9	191.1	254.2	224.5
Average	419.2	212.5	76.4	159.5	205.8	150.2

Source: NBE Annual Reports

In parallel, there has been a gradual decline in the share of coffee in total agricultural export. This, however, is very small to have any impact in changing the composition of agricultural export. Attempts to change the rigidity in the structure of agricultural export and the dominance of a few primary commodities show the challenge the country faced in following global trends where export of high value agricultural commodities like horticultural crops and dairy products increasingly displace export of traditional agricultural commodities.

Coffee, oilseeds and pulses, in that order, have contributed on average about 44.8, 21.1 and 7.2 percent of the total agricultural export earnings over the past

decade. In other words, these three crops alone accounted for about 73% of proceeds generated from export of agricultural commodities over the past decade. In terms of growth rate, export of coffee, oil seeds and pulses grew on average by about 6.6%, 22% and 23%, respectively, over the past decade. This is a remarkable growth especially for oil seeds and pulses. The increase in export of oil seeds is associated with sesame seeds which grew significantly over the past two decades, from practically zero during the early 1990s.

Table 3.2: Trends in export of traditional primary agricultural commodities

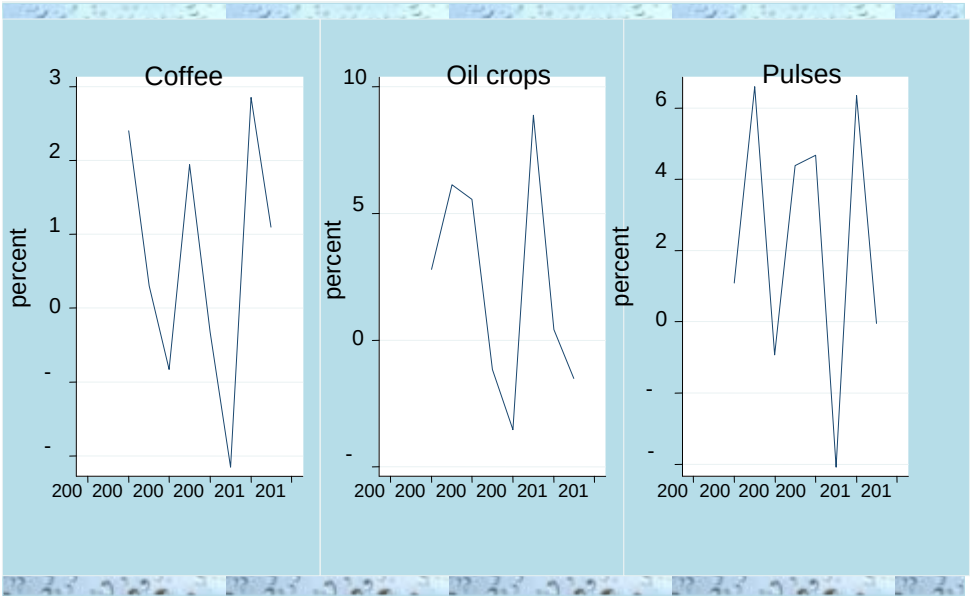
Year	Growth rate in export volume (% over the preceding year)			Percentage share in total proceeds from agricultural exports		
	Coffee	Oil seeds	Pulses	Coffee	Oil seeds	Pulses
2002/03				54.8	15.3	6.6
2003/04	24.0	27.9	10.8	50.6	18.4	5.2
2004/05	3.0	61.3	66.0	51.8	19.3	5.5
2005/06	-8.3	55.6	-9.3	45.8	27.4	4.8
2006/07	19.4	-11.6	43.8	46.8	20.7	7.8
2007/08	-3.2	-35.3	46.7	44.4	18.5	12.2
2008/09	-22.0	88.7	-40.8	31.7	30.1	7.7
2009/10	28.5	4.2	63.6	34.2	23.1	8.4
2010/11	11.0	-15.0	-0.5	42.9	16.6	7.0
Average	6.61	22.0	22.5	44.8	21.1	7.2

Source: NBE Annual Reports

Rapid increase in the international trade of high-value commodities has resulted in significant agricultural growth in many countries. Trade in high-value products, such as fruits and vegetables, dairy products, poultry, and fish, are increasingly displacing exports of traditional commodities, such as cereals, sugar, coffee, tea, and tobacco (Watts and Goodman, 1997, cited by The World Bank, 2004). In general, the continued dominance of these few largely unprocessed export commodities, which are highly subjected to price fluctuations, is one reason for the poor performance of the export sector.

In addition to the fluctuation in the international prices of these major export commodities, which acts as a demand side constraint, the high degree of fluctuation in export volume of these crops indicate the problem the sector faced from supply side factors[9]. The range of fluctuation in the supply of these commodities was high. Export of coffee, for instance, declined by about 22% in 2008/9 only to grow by as much as 29% in the following year (2009/10). Similarly, export of oilseeds and pulses declined by 35% (in 2007/8) and 41% (in 2008/9) but grew by over 88% (in 2008/9) and 64% (in 2009/10), in that order, (see Figure 3.1).

Figure 3.1: Growth rate in export volume of coffee, oil crops and pulses over the past decade



Source: NBE, Annual Reports

[9]This issue will be discussed in the next section.

Coupled with problems associated with the demand side (like instability of world prices), and sluggish progress to diversify exports by using high-value crops or low capacity to process and add value before exporting, these traditional export commodities greatly reduced the competitiveness and performance of the export sector.

3.1.2 Trends in Export of other Agricultural Export Commodities

Conditions in Ethiopia make it possible to cultivate virtually all tropical, sub-tropical and temperate horticultural crops. For large scale growers there are opportunities to cultivate and export fresh produce to the Middle East and the EU-markets. For small scale growers there is a good potential to increase the exports of fresh fruits and vegetables to the neighboring countries such as Djibouti, Sudan and Somalia. In these countries there is a sustained demand for products such as chilies, onions, cabbages, bananas, mangoes, etc. So far little of this potential has been realized, but the Ethiopian authorities and a growing number of private investors are showing interest to develop the fruits and vegetables export sector (Joosten F. et al, 2011).

According to government statistics, Ethiopia exported on average 23, 17 and 85 million kilograms of meat and meat products, fruits and vegetables, and flowers, respectively, over the past decade generating on average close to 8, 46 and 25 million USD, in that order during the same period. Similarly, export of live animals and Chat generated on average about 43 and 24 million USD, respectively.

Trade in non-traditional commodities or high-value products such as fruits and vegetables, meat and meat products and flowers contributed 2.04%, 1.97% and 6.5%, respectively, to the total value of agricultural export earnings (Table 3.3). Similarly, export of Chat and fruits contributed on average about 13.7% and 3.5%, in that order, to total proceeds from agricultural export. Overall, their

contribution to total revenue from export of agricultural commodities, however, is minuscule role.

Table 3.3: Trends in export of non-traditional primary agricultural commodities

Year	Foreign currency earned (million USD)					Volume of commodities exported (million Kg.)				
	Meat and meat products	Fruits and Vegetables	live animals	Chat	Flower	Meat and meat products	Fruits and vegetables	Live animals	Chat	Flower
2002/03	1.7	25.3	0.6	6.1	.	2.4	9.6	0.5	58.0	.
2003/04	4.0	36.8	3.1	18.5	.	7.7	12.7	1.9	88.0	2.3
2004/05	7.27	37.9	21.2	19.4	.	14.6	16.1	12.8	100.2	7.8
2005/06	8.0	34.8	33.3	22.3	6.3	18.5	13.2	27.6	89.1	21.8
2006/07	5.8	40.9	43.7	22.7	14.4	15.5	16.2	36.8	92.8	63.6
2007/08	6.5	39.9	40.7	22.4	22.4	20.9	12.8	40.9	108.3	111.8
2008/09	7.5	38.5	36.7	25.4	29.2	26.6	12.1	52.7	138.7	130.7
2009/10	10.2	66.3	90.7	36.1	36.0	34.0	31.5	90.7	209.5	170.2
2010/11	16.9	91.6	112.8	41.0	41.6	63.3	31.5	147.9	238.3	175.3
Average	7.5	45.8	42.5	23.7	24.9	22.6	17.3	45.8	124.8	85.4

The export commodity whose share increased significantly during the last four decades is Chat. Its share in the total export earning was 0.8 and 2.2 during the Imperial and Derge periods, respectively (Debel, 2002). Its share significantly increased in 1990s following the liberalization of export to Somalia. As shown earlier, by having close to 14% share in total proceeds, export of Chat is only third following coffee and oil seeds. Its share will be even much greater if substantial unrecorded illegal Chat trade passes through the formal trade channel. Chat exports are expected to grow even without government intervention because of strong demand in neighboring countries.

Table 3.4: Trends in export of non-traditional primary agricultural commodities

Year	Growth rate in export volume of non (% over the preceding year)					Percentage share in total proceeds from agricultural export				
	Meat and meat products	Fruits and Vegetables	live animals	Chat	Flower	Meat and meat products	Fruits and vegetables	Live animals	Chat	Flower
2002/03						0.8	3.2	0.2	19.2	.
2003/04	132.6	45.5	408.2	203.1	.	1.7	2.9	0.4	19.9	0.5
2004/05	81.8	3.0	583.8	4.9	.	2.3	2.5	2.0	15.5	1.2
2005/06	10.0	-8.2	57.1	14.8	.	2.4	1.7	3.6	11.5	2.8
2006/07	-27.5	17.5	31.2	1.8	128.6	1.7	1.8	4.1	10.2	7.0
2007/08	12.1	-2.4	-8.5	-1.3	55.6	1.8	1.1	3.5	9.2	9.5
2008/09	15.4	-3.5	-8.3	13.4	30.4	2.3	1.0	4.5	11.7	11.0
2009/10	36.0	72.2	147.1	42.1	23.3	2.2	2.0	5.8	13.5	10.9
2010/11	65.7	38.2	24.4	13.6	15.6	3.2	1.6	7.5	12.1	8.9
Average	40.7	20.3	154.4	36.5	50.7	2.0	2.0	3.5	13.7	6.5

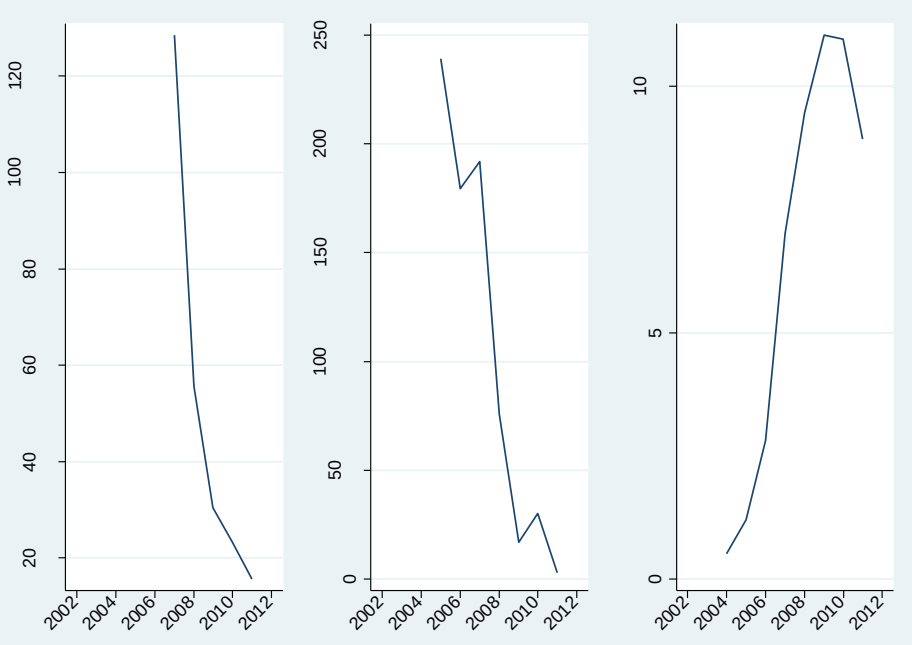
Source: NBE, Annual Reports

Export of non-traditional agricultural commodities grew faster than the three traditional export commodities (coffee, oil seeds and pulses). Export of meat and meat products, fruits and vegetables, and flowers grew annually on average by about 41%, 20% and 51%, respectively. This is far higher than the 7% and 22% growth rates registered in the three traditional export commodities (coffee, pulses and oil seeds) during the same period. Despite this relatively increased growth in the export of these high value agricultural commodities, the progress made over the past few years is very low especially in view of Ethiopia's wide and great potential to grow and export these crops. Irrigation which is essential for modern export oriented horticultural production remains largely untapped. Joosten F. et al, (2011) for instance, indicates that the country has an estimated 4.2 million potentially irrigable areas in its four major regions which is highly

incomparable to the 247,470 hectares developed currently both by small and modern medium and large producers (Joosten F. et al, 2011).

Given the diverse range of altitudes in combination with irrigation potentials in different parts of the country, it is possible to produce virtually all tropical, sub-tropical and temperate horticultural crops (Joosten F. et al, 2011). The growing world demand for these high-value commodities whose value relatively remain stable (when compared to traditional agricultural commodities) as well as the high level of export achieved by neighboring countries like Kenya should encourage policy makers to take further action.

Figure 3.2: Trends in Export of Flower over the Past decade

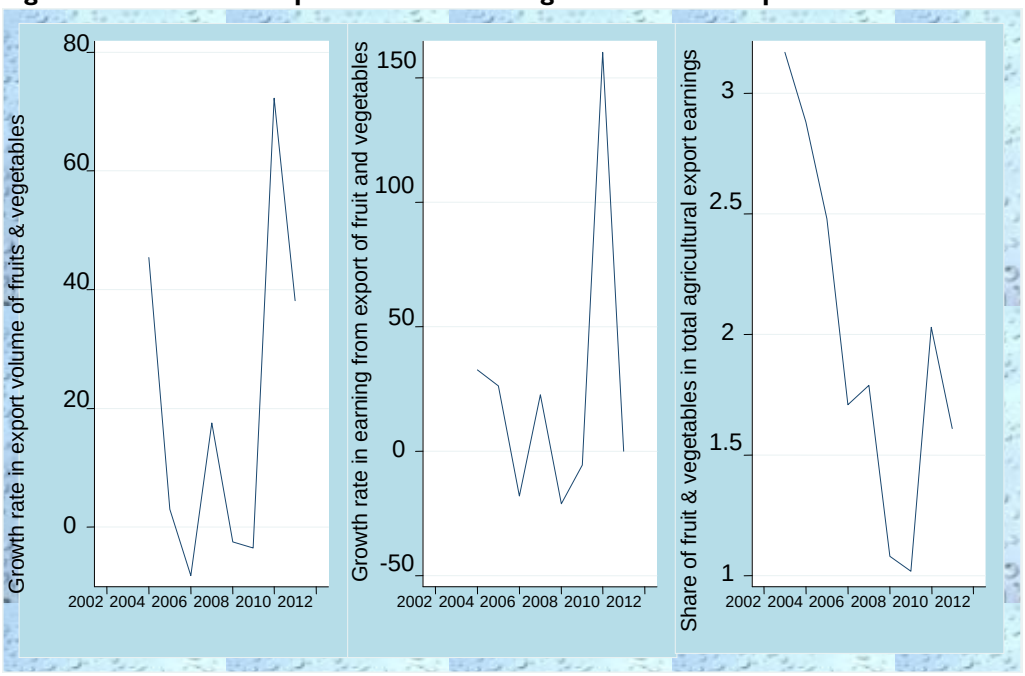


Source: NBE, Annual Reports

In general, Ethiopia needs to change its heavy reliance on a few commodities like coffee, oil seeds, pulses and Chat which, for instance, contributed for over 82% of proceeds generated over the past decade from agricultural export. Reliance on these few primary agricultural products pose a high degree of risks and uncertainties for the country.

The overall deficit on Ethiopia's trade balance which has also widened rapidly over the past years should urge policy makers to look in detail at constraints and problems hindering the pace of growth of the sector.

Figure 3.3: Trends in export of fruits and vegetables over the past decade



Source: NBE, Annual Reports

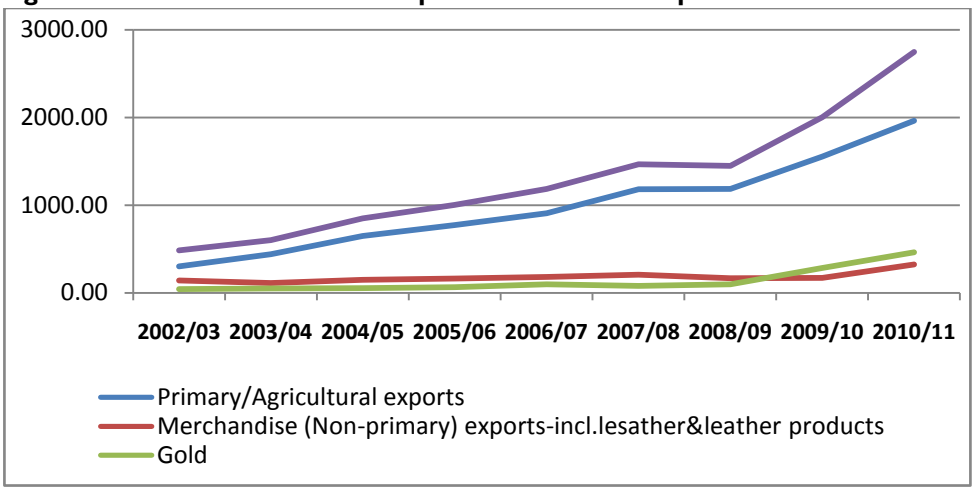
The next section tries to review policies the government provides to promote the sector as well as constraints and problems that holdback the growth of the

agricultural export sector in general and the export oriented horticultural and high-value commodities in particular.

3.2 Export of Agricultural versus Non-agricultural Commodities

The export sector can play a crucial role in the growth performance of the country as can be evident from its contribution to the different sectors of the economy. During the past four decades, for instance, export has contributed on average for about 11.3 percent to GDP. In addition, it generates the much needed foreign exchange earnings that is used to finance the imports of the country. Together with foreign aid and grants, the country uses the foreign exchange generated from the export of primary agricultural products to import almost all of its intermediate inputs, fuel and capital goods, which are believed to be essential for the economic growth of the country (Debel, 2002, Berhanu, 2003).

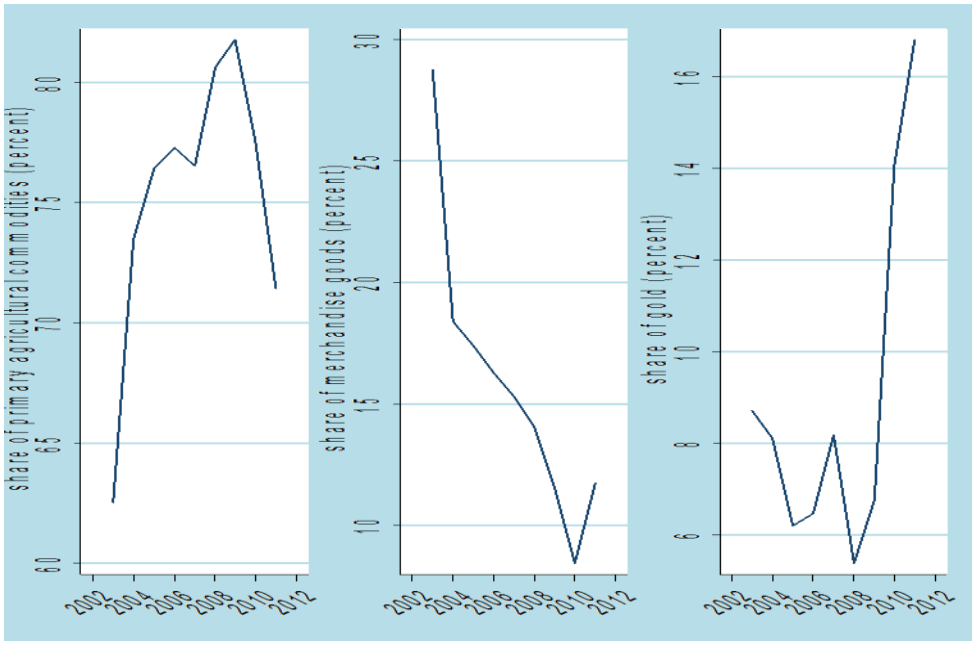
Figure 3.4: Performance of the export sector over the past decade



Source: NBE, Annual Reports

Over the past decade, Ethiopia's export sector multiplied five times. As shown in Figure 3.5 the country exported commodities and merchandise worth 483 million USD in 2002/3, which grew to 2.7 billion by 2010/11. This relatively high increase in export resulted from rising agricultural/primary exports since they grew faster than total export (Figure 3.5). Proceeds from export of primary agricultural commodities was little more than 300 million USD in 2002/03. This, however, rapidly and consistently grew over the past decade and reached close to 2 billion USD in 2010/11. In fact, growth of Ethiopia's export is mainly linked to a few agricultural commodities such as coffee, oil seeds, pulses, Chat, and live animals and flowers.

Figure 3.5: Percentage share of agriculture versus non-agriculture (merchandise and gold) in total value of exports



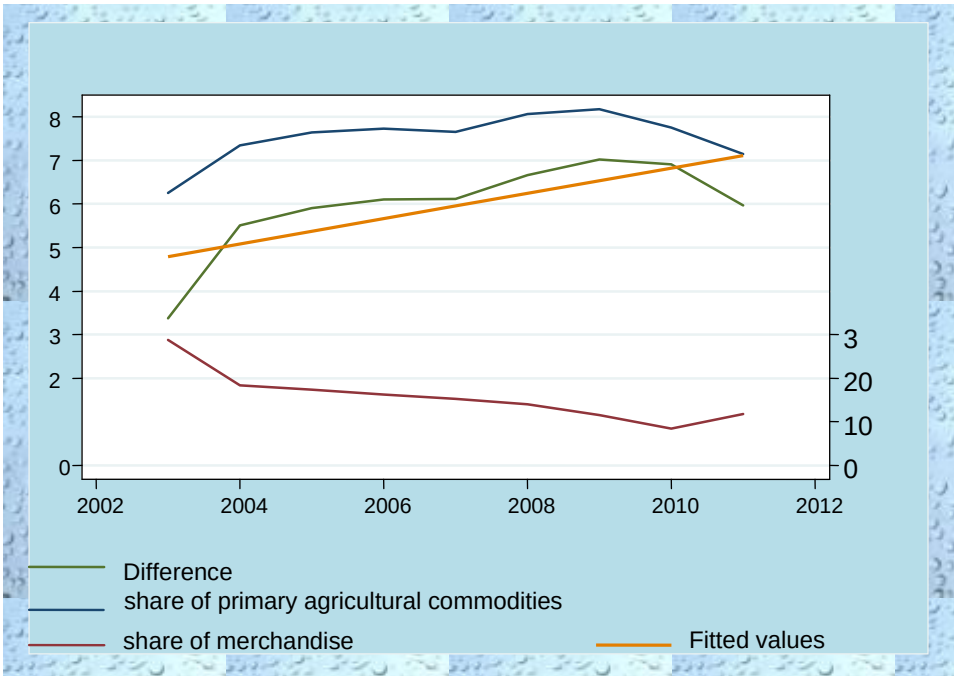
Source: NBE, Annual Reports

As shown in Figure 3.6, over the past decade the share of agricultural commodities in total export varied between 63% and 82%. Its contribution to total export proceeds increased consistently from around 63% in 2002/3 to 82% in 2008/9. Thereafter it declined slightly and reached 71% in 2010/11 which is still very high. During the same period, the contribution of merchandise goods in earnings from total export declined consistently from around 28% in 2002/3 and 18% in 2003/4 to its lowest level (8.4%) in 2009/10. It however, slightly recovered in 2010/11 to reach around 12%.

Despite the relatively high growth in export proceeds over the past decade, the performance of the export sector has been less satisfactory both in terms of its capacity to pay for the growing import bill or change the structure of export. The country's exports are highly concentrated in agricultural commodities, while the share of non-agricultural products in total exports is low and little changed over the past decades although the government and international development partners like USA and EU introduced numerous policy and institutional measures to diversify and promote exports of least developed countries like Ethiopia.

Among these export specific incentive schemes from global development partners such as the US's the African Growth and Opportunity Act (AGOA) and the EU's Everything but Arms (EBA) provide the most liberal access to the U.S. and EU markets for exporters from countries like Ethiopia. In addition to their role in promoting trade and investment ties between these developed economies and beneficiary developing countries like Ethiopia, these export incentives were assumed to create promising opportunities for export diversification as well as increasing export earnings. Data on export earnings and commodity structure of Ethiopia's export which is discussed in the next section, however, indicates that the country is not yet in a position to make any substantial gains from such conducive policies.

Figure 3.6: Trend in percentage share of primary agricultural commodities versus merchandise goods in overall export earnings and difference (gaps) over the past decade



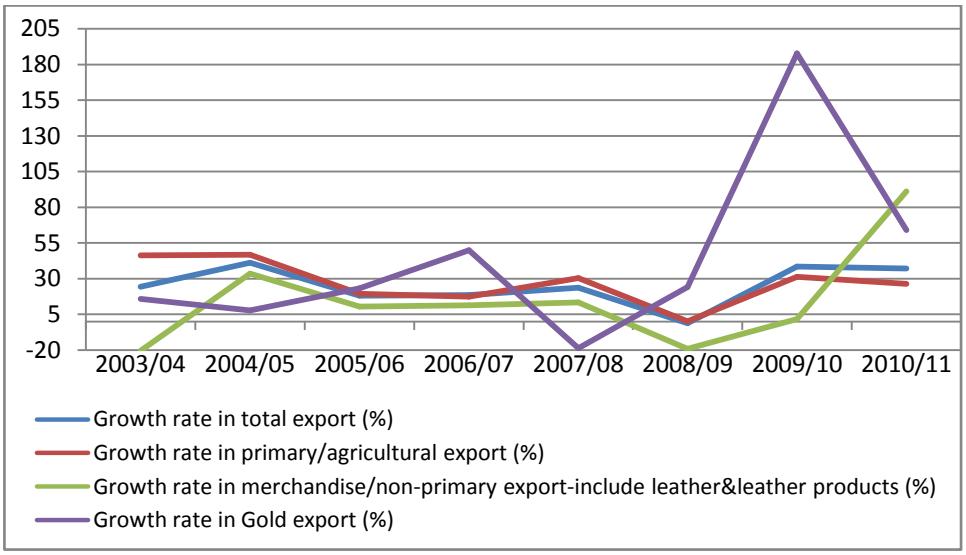
Source: Computed based on NBE reports

As shown in Figure 3.7, the gap in the revenue from export of primary agricultural commodities and merchandise goods had been growing over the past decade. The fitted value indicates a continued growing gap which in turn implies lack of change in the structure of the export sector. In general, agriculture which generates the bulk of the foreign currency that is essential for the development of the economy still dominates the export sector. The implication is that the instability of international prices and declining terms of trade associated with export of primary commodities will continue to threaten the sustainable growth

of the economy as the volatility in the export sector easily spills over to the overall economy.

In terms of growth rate, the value of goods and services exported has been increasing at an average annual rate of 25% percent over the past decade. This is remarkable growth when compared to the annual rate of 10.2 for 1960/61-2000/01(Debel, 2002). During the period under consideration, the revenue from exports of primary agricultural commodities, merchandise goods and gold has been growing at average annual rate of 27.2%, 15.2% and 44.2%, respectively. Despite this relatively high growth rate, there was also relatively high fluctuation especially in the proceeds generated from export of primary agricultural commodities which brought some instability in the overall earnings from the export sector.

Figure 3.7: Growth rate in export earnings from agricultural, merchandise and gold as well as all export goods

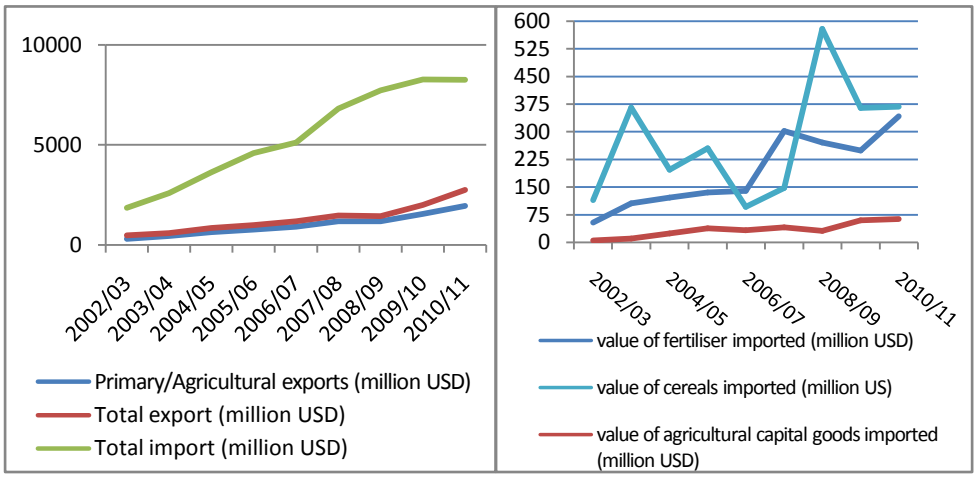


Source: NBE, Annual Reports

3.3 Agricultural Export versus Agricultural Import: Capacity of Agricultural Export to pay for Agricultural Import

The analysis made earlier shows the dynamics in the structure and composition of the export sector vis-à-vis the relative contribution and role of the agricultural sector. The performance of the agricultural export sector could also be measured in terms of the trend in its capacity to pay for imports of agricultural goods and inputs.

Figure 3.8: Trends in agricultural export and import over the past decade



Source: Computed based on reports from the National Bank of Ethiopia (NBE) (for the first chart) and Custom Authority (for other three charts)

The revenue from exports made the import of inputs possible that are crucial for development thus playing the role of engine of growth to other sectors. Proceeds from agricultural export has also increasingly been spent to pay for imports of agricultural raw materials (like cereals, cotton etc) and processed goods like coffee and sugar. Though proceeds from export of agricultural

commodities grew at a higher rate, the bill for imports of agricultural and non-agricultural goods also increased over the past decade.

Figure 3.9 shows the trend in value of agricultural export and agricultural import (both measured in USD). Over a decade, proceeds from agricultural export grew from less than 500 million USD in 2002/03 to close 2 billion USD in 2010/11. During the same period, expense for agricultural imports (import of agricultural goods and fertilizers) also increased from a little less than 200 million USD to a little over 1 billion USD. Increase in expenditure for import of cereals was the major contributor for the relatively rapid increase in the bill for agricultural import. As Figure 3,9 also shows expenditure for import of cereals increased from a little over 100 million USD in 2002/3 to a little less than 600 million USD in 2008, though it has declined moderately since then.

Figure 3.9: Trends in the capacity of agricultural export to pay for agricultural import.

Source: Computed based on NBE reports and data obtained from Custom Authority

The positive but similar growing trend in both agricultural export and agricultural import has reduced the net effect of expanding exports that are expected to play a major role in reducing the foreign exchange constraint which acts as a bottleneck for the growth of the overall economy.

Though the capacity of the sector to pay for its import could be affected by different factors, a positive and increasing trend in the ratio of agricultural export versus import implies a good performance for the agricultural sector. The trend in this ratio, however, is not consistent and encouraging especially since 2007/8 when the upward trend observed for the preceding four years (2004/5 – 2007/8) was halted. Though a modest recovery is observed since 2007/8, more should be done to check the sector from eating up the growing share of foreign currency generated from its export.

To get more insight into the performance of the agricultural export vis-à-vis import of key agricultural inputs (fertilizers and agricultural capital goods), an index that shows how the revenue from export of agricultural commodities grow over time in view of costs the country spent for import of these inputs was computed. As shown in Figure 3.10, the capacity of agricultural export to pay for import of fertilizer fluctuates widely and lacks any steady trend which implies a relatively stable capacity of agricultural export to pay for import of fertilizer[10].

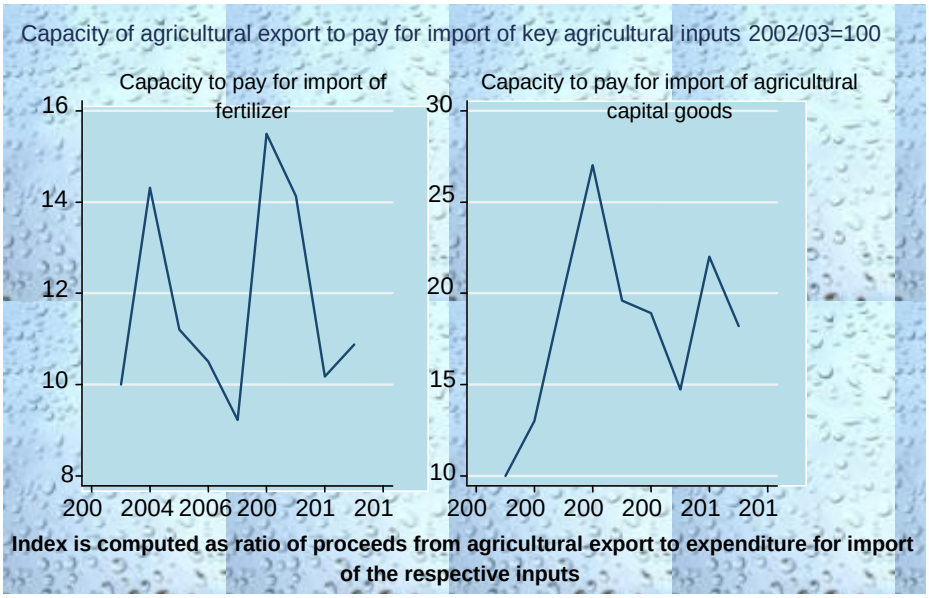
The performance of the agricultural export sector could also be measured in terms of its capacity to pay for agricultural capital goods the country has imported over time. Over the past decade the capacity of agricultural export to pay for import of agricultural capital goods has improved. On average, the ratio of proceeds from

[10] Any direct interpretation of the trend in this ratio is not warranted. First, the use of fertilizer in Ethiopia is still much less than the level recommended by experts. Second, fertilizer is mainly used as key input for largely non-exported food crops. This makes any straightforward interpretation of an increasing or decreasing trend in this ratio difficult and complex.

export of agricultural commodities to expenditure the country incurred for import of agricultural capital goods has doubled over the past decade.

Though this indicates better performance for the agricultural export sector, any interpretation of the trend in this ratio, however, needs more caution. At the current stage of Ethiopia's agriculture where the ratio of capital to labor inputs is very low in smallholder sector, an increasing ratio that implies a growing capacity of agricultural export sector to finance import of agricultural capital goods is not necessarily a good indicator for the overall economy[11].

Figure 3.10: Capacity of earning from agricultural export to pay for agricultural import (2002/03=100)



Source: computed based on data obtained from the NBE and Custom Authority

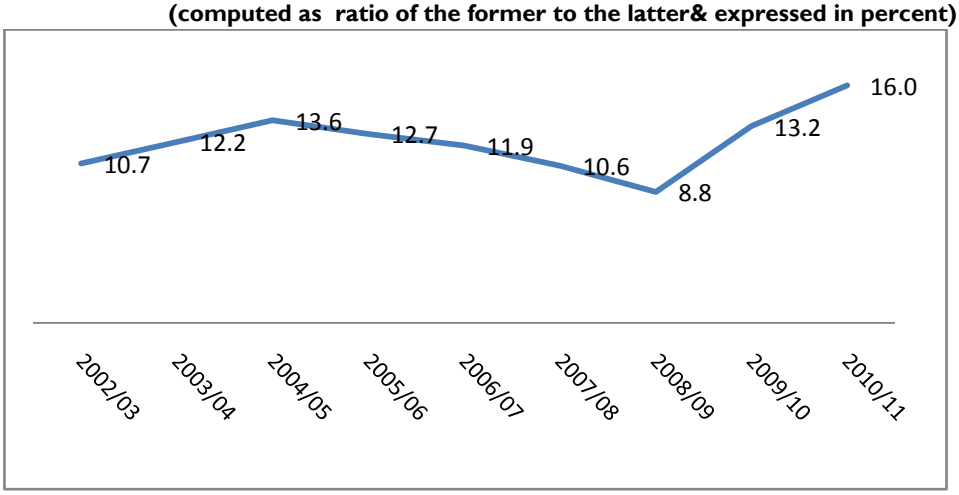
[11] Increased use of agricultural capital goods that has been observed over the past few years might also be associated more with export-oriented large farms that have been expanding over the past decade especially in the floriculture sector and transnational agricultural companies that have invested in major food crops like wheat and rice.

3.4 Trends Agricultural Export vis-à-vis Agricultural Growth (Orientation of Agricultural Growth in Ethiopia)

The issue of accelerated economic growth has been the main agenda in the economic policy formulation of Ethiopia. Together with foreign aid and grants, the country uses the foreign exchange generated from the export of primary agricultural products to import almost all of its intermediate inputs, fuel and capital goods, which are believed to be essential for the economic growth of the country (Debel Gemechu, 2002, Berhanu, 2009).

As the country is not self-sufficient in generating the saving that is essential to realize a sustainable economic growth, the external sector will continue its crucial role of fuelling or retarding the growth performance of the economy. If the country follows an export-oriented agricultural growth strategy, the growth in agricultural export should exceed the growth rate in the overall agricultural sector (i.e. agricultural GDP).

Figure 3.11: Trend in the ratio of agricultural export as agricultural GDP (computed as ratio of the former to the latter& expressed in percent)

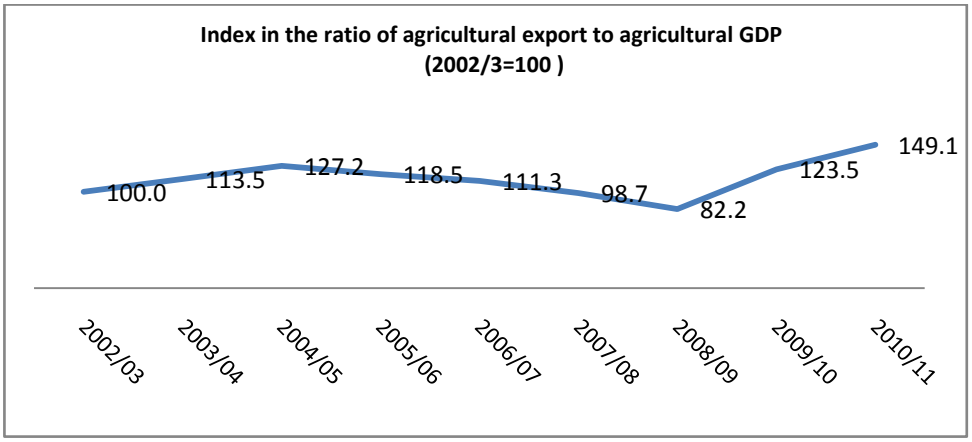


Note: Both the value of agricultural export as well as agricultural GDP were measured in USD.
Source: NBE, Annual Reports

This relative growth in the agricultural export sector (vis-à-vis the growth in the overall agricultural sector) is, therefore, considered as another important long-term indicator in any assessment of the performance of Ethiopia's agricultural export sector. Any significant divergence in the trend in the ratio of agricultural export to agricultural GDP (both of which are measured in terms of USD) could also indicate the trend in the orientation of Ethiopia's agriculture (export-oriented versus domestic/food self-sufficiency focused).

As shown in Figure 3.11, the growth rate in agricultura export has been slightly ahead compared to the overall growth of the agricultural sector. The trend, howerver, is not consistent over time. The share of agricultural export in total agricultural GDP, for instance, increased from 10.7% to 13.6% between 2002/3 and 2004/5. The ratio, however, declined since then and reached only 8.8% in 2008/9; and then increased significantly in the following years. Despite some inconsistency, the growth in agricultural export exceeds the growth rate of the overall agricultural sector (i.e. agricultural GDP), which shows that the country follows an export-oriented agricultural growth strategy.

Figure 3.12: Growth in the ratio of value of agricultural export to value agricultural production (agricultural GDP) (2002/3=100)



Source: NBE, Annual Reports

3.5 Export Promotion Efforts in Ethiopia and problems and constraints

3.5.1 Export Promotion Policy Reforms

Policies and strategies to promote the export sector dates back to the early 1990 when the previous socialist government was replaced by the current EPRDF-led government. Prior to that, Ethiopia commonly pursued an import substitution strategy and the export sector was secondary in economic development plans. This, however, does not mean that there was no effort to promote and diversify the country's exports. Although export promotion incentives like export subsidy and others were provided, they neither resulted in export diversification nor expansion of the existing export volume (Debel, 2002).

Pursuant to the new economic policy and the associated structural adjustment program, the new government provided policy measures aimed at stimulating export growth and diversification. Among the measures undertaken the following were the most significant.

a) Devaluation of the Ethiopian currency by more than 140 percent in terms of the US dollar to make exports competitive and promote export trade. In addition a weekly auction of foreign exchange was introduced, and to guarantee that the incentive passed to the peasants, the government set a floor price for coffee, haricot beans and sesame seeds.

b) The tariff regime was continuously revised and was reduced in stages from a maximum of 230 percent to50 percent. Similarly, to nullify the anti-export bias, the state lifted a two percent transaction tax on non-coffee exports and abandoned the direct financial subsidy on export.

c) The import and export licensing systems were simplified and become more transparent so as to encourage new entrants to the export market. The range of goods and services covered by the auction has been progressively extended and finally fully liberalized.

d) A duty drawback scheme was introduced whereby exporters are refunded the tax and duty they paid on the inputs and raw materials used in export production. This is to provide exporters a free trade status on their import of intermediate inputs and encourage non-traditional export products, especially that of manufactured goods. But the effectiveness of the scheme on export is constrained by lengthy administrative requirements to get refunded.

e) A foreign exchange retention scheme has been introduced which entitles exporters to retain 10 percent of their earnings to hold in their account and to sell the 40 percent at a competitive rate, while submitting the remaining 50 percent directly to the National Bank. But the scheme may not be beneficial in view of the usual control over the use of the retained 10 percent and because of the fact that it ties up the working capital.

f) A preferential interest rate scheme is also introduced for exporters, which is lower than the interest rate paid on non-export activity loans. Such low preferential interest rate scheme is provided for exporters because it is believed that it strengthens the country's export diversification efforts.

g) State exporting enterprises were provided with a managerial autonomy but were deprived of a monopoly power. This creates a conducive environment for private exporters and puts them at equal footing with public enterprises.

As a result of these trade policy reforms a remarkable decrease in the anti-export-bias incentive structure and an increase in export volume and earnings

were realized. Since then the government has taken other measures to fully exploit the benefits and potential of the sector and promote economic growth. The following section discusses the export development strategy enacted since these initial export promotion policy reforms were taken.

3.5.2 The Export Development Strategy

Motivated by the desire to spread risks, raising capacity utilization and increasing total export proceeds, export diversification has been the concern of most developing countries including Ethiopia. The Export Development Strategy highlights the importance of providing all rounded support services and incentives to exporters including market information provision, credit priority, priority in the provision of working premises, warehouses, etc. and calls for coordination of the export promotion effort and proper utilization of existing capacity in the most efficient way. To this effect, the Ethiopian Export Promotion Agency is established as an autonomous body by proclamation No.132/1998. The main objective of the agency is to promote the country's exports by designing and coordinating of the overall export promotion tasks (Berhanu, 2003, Debel, 2003). The agency established a unit that serves as a source of trade related information on business and market opportunities, potential clients and suppliers, trade regulations and requirements, etc.

The other significant step in export support is the establishment of the Animal Products Marketing Agency as well as the Leather and Leather Products Technology Institute, the former concerned with the development of the livestock sector in general and the latter aimed at promoting the production and export of leather products (Berhanu, 2003). In order to streamline the government's support to the high value export of horticultural products- flowers, fruits and vegetables – the Ethiopian Horticultural Development Agency (EHDA) was established in June 2008.

Along with these changes in policy focus from comprehensive intervention at sector level to tailor-made commodity-level interventions, the government undertook various export incentive schemes[12].

Coupled with a high global demand for most of the exported commodities, these policy measures contributed for recent improvement in export proceeds witnessed over the past few years. Rapid growth in the floriculture sector and export of meat and meat products over the past decade, for instance, could be attributed to this recent change in policy focus from comprehensive intervention at sector level to tailor-made commodity-level intervention (see Box 3.1, for example, on export promotion of the government at a commodity level).

Despite some progress in export diversification and increase in proceeds from export, the country could have earned better income from export through value-adding/processing and more diversification. The next section looks into constraints on successful export diversification as well as factors that could hinder acquiring the benefits expected from recent policy measures as well as increased participation of the private sector.

[12] Among others the following four export incentive schemes could be mentioned: (i) the Export Trade Duty Incentive Scheme which incorporates three types of incentive schemes: Duty Draw-Back Scheme, Voucher Scheme and Bonded Manufacturing Warehouse Scheme; (2) An Export Credit Guarantee Scheme which is a form of insurance cover for political and commercial risk thus enabling exporters borrow corresponding amount of money from banks; (3) Another export sector related incentive scheme is the foreign exchange retention facility. According to the "Retention and Utilization of Export Earnings and Inward Remittances Directive Number FX/11/1998" of the NBE, eligible exporters of goods and services and recipients of inward remittances are allowed to benefit from the retention scheme, and (4) External Loan and Suppliers' or Foreign Partners' Credit. Considering that the investment proclamation has enabled domestic investors in Ethiopia to acquire external loans and with the view of encouraging export production, the NBE has promulgated a Directive for the Registration of External Loan and Suppliers' or Foreign Partners' Credit. According to the revised directive (No.REL/005/2002), recipients of external loans and suppliers' or foreign partners' credit should be registered by the NBE (Berhanu, 2003).

Box 3.1: Government plan for export horticultural crops

As mentioned earlier the Ethiopian Horticultural Development Agency (EHDA) was established in June 2008 in order to streamline the Government's support to the high value export of horticultural products – flowers, fruits and vegetables. The objectives of this Agency are:

- Ensure the accelerated and sustainable growth of horticulture production and productivity
- Facilitate the export of diversified horticultural products which meet international standards
- Coordinate the development of supporting services. Under its growth and transformation plan (GTP) the government aims to increase the land under horticultural production from 2500 ha in 2010 to 33,000 ha by the end of the GTP-period. This should lead to a production increase from the current 58,400 tons to nearly a million tons in 2015.

The scaling up of successful production and marketing strategies to potential production regions and the creation of a conducive market environment is part of the GTP strategy for the horticultural sector. Services and industries that support the development of the horticultural industry will be expanded. Ethiopia wishes to become less dependent on imported inputs and equipment necessary for high-productivity horticulture. Both in the supply of services and in the production of high quality export products the number of domestic producers will have to increase.

Domestic and foreign investments are provided with several incentives to establish an export oriented horticultural company. Incentives include amongst others duty free importation of production equipment and an income tax holiday. Access to land is facilitated through EHDA and the regional authorities. Land cannot be bought, but in rural areas a lease of 20 or 25 up to 50 years is granted. Acquisition of land can be organised through the regional authorities, but also with the support of EHDA.

At Federal level the Government policies and plans include additional strategies for the more efficient use of irrigation facilities and the development of new irrigation schemes. Furthermore infrastructure development and logistical services through the State-owned Ethiopian Airlines and Ethiopian Shipping Lines are supposed to facilitate the growth in horticultural exports.

Regional development plans as well as additional details on the Federal policies and plans are described in Supplement 2.

The National Bank of Ethiopia (NBE) overseas the commercial banks in the country and has a regulatory and monitoring function where it concerns the availability of foreign exchange and the repatriation of foreign earnings. Since 2008 the NBE Directives regulating the repatriation of foreign exchange earnings from the export horticulture industry have become more stringent and tighter controls and monitoring mechanisms have been put in place through the commercial banks, customs and exporting companies. Under the current regulatory system the monthly export permits are withdrawn from companies with (perceived) unsettled repatriation commitments.

Loans for capital investments and operational expense are available from both the commercial banks and the Development Bank of Ethiopia (DBE) viii. The DBE loans have favourable conditions, including (grace periods for loan repayments, relatively low interest rates, debt: equity ratio of up to 70:30).

The recent focus of Development Bank of Ethiopia is to provide medium and long term loans for investment projects, which are engaged in agriculture, agro-processing and manufacturing with an export focus. In line with the Growth and Transformation Plan the fruits and vegetables exports are identified as one of the DBE priority sub-sectors.

Joosten F. et al, (2011)

Despite these measures which brought some modest progress, rapid growth witnessed in the floriculture sector could not be duplicated in the high value fruits and vegetables sector[13].

[13] Though exports of vegetable products from Ethiopia have increased from 25,300 tons in 2002/03 to 63,140 tons in 2009/10 which increased the value of fruits and vegetables exports from less than USD 10 to 30 million during the same period, rapid growth witnessed in the floriculture sector could not be duplicated in the high value fruits and vegetables sector. More critical for gaining sustained market access and improve proceeds from the sector are two-fold: (i) high costs of transport (air freight) which is the single largest cost factor for exporters to Asia, Africa and South America. The first priority is to improve the export transport and logistics. Currently the exports of high value fruits and vegetables to the Middle East and the EU markets are too reliant on air freight. The competitiveness of the export sector will be limited if sea freighting will not become a feasible option from an operational and economic point of view. (ii)The second challenge to realize the high export growth potential of the sub-sector is building potential for reliable supplies in terms of timeliness, volumes and quality standards.

3.6 Challenges and Opportunities in Ethiopia's Export Diversification Endeavor

One area that has been given much attention in order to promote the economic performance of the country is external trade. Diversification of export and increasing foreign exchange earnings capacity of traditional agricultural export commodities both through increasing volume, quality as well as adding-value through processing has been in the development plans for over two decades. The promulgated export development strategy, export support institutions, commodity specific incentives undertaken over the past few years as well as free market access possibilities under AGOA could demonstrate policy priority to the sector.

Agro-ecological factors as well as other agricultural resources with potential irrigable land of about 3.5 million hectares also indicate the promising opportunities for export diversification in the country. So far little of this potential has been realized. The country could have earned better income from export through value-adding/processing and diversification. Even for the traditional commodities like coffee, the largest share is exported as a primary good. What is lacking and hindering better performance? How would the private sector engage to improve the sub-sectors for higher benefits? In general, what are the constraints to enhance Ethiopia's export diversification endeavors and the performance of the agricultural export in particular? These are not simple issues to be addressed in such a report, but based on some reviews this study hopes to provoke some thoughts for future in-depth studies.

Constraints for successful export diversification, however, are not only internal. Sanitary and Phytosanitary (SPS) measures by the developed countries, for instance, could affect the ability of developing countries to exploit export opportunities for agricultural and food products in developed country markets (Henson et.al (2001, p.89), cited by Berhanu, 2003). However most of the factors that contribute for the continued export concentration on a few primary agricultural commodities and sluggish progress in export growth and

diversification in Ethiopia are considered to be internal - low capacity in terms of competitiveness, productivity, quality and supply response.

Producers and firms engage in export of agricultural commodities should work to increase their productivity and innovation. Their capacity to achieve this, however, could be constrained because of various factors including poor infrastructure, low technical know-how, poor access to vital information and finance, and other policy variables that affect the incentive and security of long-term investments. In addition to its direct and full responsibility to tackle some of these constraints, the government's role is to act as a "catalyst and challenger". It must encourage and even push producers to raise their aspirations for higher competitive performance.

As discussed earlier the Ethiopian government has put greater focus on high value crops and support for commercial farming in general and fruits and vegetables in particular. There is good reason for this as the country has suitable agro-ecological conditions and irrigation potential to cultivate virtually all tropical, sub-tropical and temperate horticultural crops. For commercial export growers there are opportunities to cultivate and export fresh produce to the Middle East and the EU-markets. Domestic and foreign investments are also provided with several incentives to establish an export oriented horticultural company[14] (Joosten et al, 2011). There is also a good market opportunity for these crops both in the EU and especially in the Middle East countries where price and income elasticity for these crops is relatively high.

Despite these conducive conditions, rapid growth in the floriculture sector could however not be duplicated in the high value fruit and vegetable export sector.

[14] Incentives include amongst others duty free importation of production equipment and an income tax holiday. Access to land is facilitated through EHDA and the regional authorities. Land cannot be bought, but in rural areas a lease of 20 or 25 up to 50 years is granted. Acquisition of land can be organized through the regional authorities, but also with the support of the Ethiopian Horticultural Development Agency (EHDA).

This implies the existence of some issues that still need to be addressed by the country. Policy makers should extend their focus on the rules, regulations and formalities that facilitate commercial producers' access to finance and land as well as export markets. Based on reviews of other successful African countries, Joosten et al, (2002), for instance, identifies some peculiar characteristics that are unique to the Ethiopian horticultural sector (see Box 3.2).

While some of these challenges could be addressed by policy makers alone, some others need an effective partnership between public and private partners. One of the most striking features of the Ethiopian agricultural sector today is the need to strengthen all actors along the entire agricultural value chain, from input research, supply, and distribution, through aggregation of smallholder production and trading, to downstream processing and export. Actors cover public and private institutions (such as local private companies, state owned enterprises, or public institutions), including seed enterprises, farmer cooperatives and unions, agricultural processors, traders, aggregators, and rural credit providers, among others, who require resources, technical skills, and a favorable enabling environment to operate effectively. These actors are needed to realize the full potential of Ethiopia's natural endowments and to bring efficiency and quality to the value chain (the Bill & Melinda Gates Foundation, 2010).

Policy makers should also revisit their approach to smallholder sector in general and small farmers engagement in production of high value crops in particular. Excluding domestic or foreign private commercial farmers, the broader agricultural policy of the country overlooked this emerging group of small-investor farmers. Most government policy and strategy documents consider silently the rest of small farmers as homogeneous or near-homogenous group[15].

[15] Apart from acknowledging for their very high levels of productivity and production and its intension to scale-up the 'best-practices' of these model farmers to the rest of other small farmers, even the Growth and Transformation Plan (GTP) that considered as blueprint for the country's 2010/11–2014/15 development plan, the GTP doesn't a dedicated strategy or support specifically aimed at these 'group of farmers' (see MoFED, 2011).

Critics, however, recommend to the government to rethink otherwise. The IMF, for instance, in its evaluation of the government five-year (2010/11-2014/15) development plan commonly known as the GTP, advise the government the importance of private investments for smallholder agriculture and broaden its narrowly defined private sector agriculture to include both commercial large investors as well as emerging small farmers (IMF, 2011)[16].

A small but growing number of farmers engaged in production of high value export commodities need to invest and increase their economies of scale in innovation and technology adoption processes. They need all rounded support in terms of access to information and knowledge, improved organization of production and marketing, such as those related to logistics, marketing and storage as well as better access to long-term finance[17] and insurance for potential risks.

[16] The role of the private sector in agriculture is central. The GTP emphasizes private sector involvement in (primary) agriculture, in particular through attracting commercial (larger) investors. The strategy should be broadened in two directions: (i) private investments are also very important for smallholder agriculture and need to be promoted through an enabling environment including transparent input and output markets, land tenure security and effective land transactions, and also access to financial services, possibly strengthened through the ability to collateralize land use rights; and (ii) the focus on private sector involvement in primary agriculture should be matched with the same focus for the sectors supporting the inputs to and outputs from agriculture, including suppliers and traders of seeds, fertilizer and other inputs; extension and information services; and marketing, processing and trade, and agricultural produce. The strengthening of agribusiness linkages needs to focus on agricultural commodity value chains (IMF, 2011).

[17] Even ppublic financial institutions like the Ethiopian Development Bank which has been created a century ago for the purpose of increasing agricultural investment focused only large-sized private or public farms. Most policy makers recognize such policy that getting smallholders out of screen (in terms of access to long-term finance) but they fails to underestimate the importance as well as the potential of such long-term credit as they think that credit from microfinance style organizations or informal credit sources (from relatives or friends) that are small and seasonal in their nature could meet the demand for these farmers. These sources, however, have increasingly become not an option for some farmers who are largely outward oriented and aspire to run modern large farm enterprises. If policy makers fail to address this problem, they might also kill the growing entrepreneurship spirit among these farmers and the potential role of smallholder sector in export of high value crops and commodities.

Box 3.2: Development approaches in other horticultural exporting countries

Some of the leading exporting countries in Sub-Saharan Africa are South Africa, Kenya and Côte d'Ivoire. There are significant differences between these exporting countries in terms of export products, climatic conditions, seasonality, farm-size structure, distance to main consumer markets, etc. Kenyan exports mainly comprise semi-processed fresh vegetables produced by both smallholder producers and commercial growers. South Africa largely relies on commercial export growers who produce a broad range of (off season) fruits, including (sub-) tropical and temperate varieties. Côte d'Ivoire's export includes mainly pineapples and bananas, which are sea freighted to Europe. Kenya largely relies on air freight and the South Africa exporters use both forms of transport.

Despite the many differences between these countries, there are also a few similarities that can form a reference for Ethiopia. Some of the main lessons are summarized below:

a) Direct government participation in the trade or handling of the export produce was minimal. Where it did occur (e.g. in the case of the Kenya Horticultural Crop Development Authority and the public-private partnerships investing in pineapple processing plants in Côte d'Ivoire), the government interventions were not successful.
b) Attracting foreign investors is important for the development of a sector. In addition to the inflow of investment funds, the investors also provide know how, essential services, critical mass, market access, etc. Companies such as Del Monte, Dole, Chiquita and Compagnie Fruitière played a pivotal role in the development of the fruit exporting sectors in Kenya, respectively Côte d'Ivoire. A positive investment climate is therefore important; this includes the absence of unnecessary bureaucracy, macro-economic and political stability.
c) Particularly with perishable products such as fruits and vegetables, delays in export paperwork and procedures can lead to considerable losses for the exporting companies. For horticultural exports to be profitable, the rules, regulations and formalities associated with the exports need to be transparent, streamlined and consistently applied.
d) The costs of transport and logistics and the time to market are critical for the success of the export horticulture. South Africa and Kenya serve as regional hubs for air traffic and have frequent and competitive air transport markets. In Côte d'Ivoire the investments and efficient management of the port in Abidjan has been of critical importance for the development of the export sector
e) International commercial links and vertical coordination in the supply chain facilitates market access and sector growth. In the case of South Africa this is arranged by having agents and sales offices in the European end markets. In Côte d'Ivoire the multinational companies Chiquita and Compagnie Fruitière provided the coordinating services.

Chapter Four

Manufacturing Industries Sector: Review of the First GTP Implementation Year

4.1 Introduction

This report reviews the performance of the Large and Medium Scale Manufacturing Industries (LMSMI)[18] during the first Growth and Transformation Plan (GTP) implementation year. Owing to long term negligence of the sector, it has registered stagnated performance in terms of its share in GDP, employment and export earnings. Cognizant of the importance of the sector, the government has given due focus for industrial development in the GTP, which started being implemented in 2010/11.

The development objectives of the industrial sector, according to GTP, are to:

- bring about broad-based, competitive domestic industrial and private sector development, create employment opportunities and reduce poverty,
- support sustainable development of agriculture,
- increase industrial production and productivity by fully utilizing the existing capacity of industries,
- promote industries which largely use domestic raw materials and labor, and
- create a strong foundation for the sector to start playing a leading role in the national economy, employment creation foreign exchange earnings and savings, and strengthen its capacity to produce equipment, machinery and spare parts.

[18] According to CSA Large and medium scale manufacturing industries are those establishments which engage ten persons and more, and use power-driven machinery in their production process.

Within the manufacturing sector, the plan focuses on industries that are labor intensive, have linkages with the rest of the economy, use agricultural output as inputs, are export oriented and substitute import, and contribute to rapid technological transfer.

This year, the country is in the third GTP implementation year. However, owing to data lag on LMSMI, the coverage of this report is limited to reviewing the performance of the first GTP implementation year (2010/11) against the base year, PASDEP period average and SDPRP end year.

4.2 Industrial Sector Performance

GTP has set targets for the industrial and some manufacturing sectors that should be achieved during the plan implementation period. It has set targets in two scenarios, base case and high case. According to the base case, the industrial sector is expected to grow, on average, by 20 percent over the GTP implementation period thereby raising the share of the sector in GDP to reach 18.8 percent at the end of the plan period (2014/15). According to the high case, the industrial sector is expected to grow, on average, by 21.3 percent over the period thereby raising the share of the sector in GDP to reach 16.9 percent at the end of the plan period.

The first GTP implementation year (2010/11) registered planned growth rate for both scenarios but failed to achieve the planned share in GDP in both scenarios. The second GTP implementation year (2011/12) failed to hit the planned target for both growth and share in GDP. Increased share of industry in GDP can be considered as an indicator of structural transformation of the economy. This, however, was not the case during the first two GTP implementation years, partly due to lack of finance and trained manpower, and in general the challenging nature of industrial transformation (Table 4.1).

Table 4.1: Plan and Performance of Industrial Sector GDP growth & Share

Year	Plan: Base case		Plan: High case		Performance	
	Real growth (in %)	share in GDP	Real growth (in %)	share in GDP	Real growth (in %)	share in GDP
2009/10 (base year)	10.6	12.9	10.6	12.9	10.6	12.9
2010/11	14.0	13.2	14.8	13.1	15.0	10.6
2011/12	17.9	14.0	19.4	13.7	13.6	11.1
2012/13	21.4	15.3	20.8	14.3		
2013/14	23.0	16.9	23.7	15.4		
2014/15	23.7	18.8	27.9	16.9		
(2010/11-2014/15) period average	20.0	15.6	21.3	14.8		

Source: MOFED, GTP document and National Accounts data

4.3 Manufacturing Industries' Performance

4.3.1 Manufacturing Sector GDP

According to the System of National Accounts (SNA), the industrial sector comprises large and medium scale manufacturing industries, small and cottage industries, mining and quarrying, electricity, water and construction sub-sectors. The manufacturing sector accounts for about 36.5 percent of the industrial sector GDP in 2011/12, of which about 71.3 percent was accounted for by the large and medium scale manufacturing industries while the balance was due to small scale and cottage industries.

Similar to the decline in the share of the industrial sector in GDP, the share of manufacturing industries in GDP has slightly declined to respective shares of 3.6 percent and 3.7 percent in 2010/11 and 2011/12, from the 4 percent during the base year. In a nutshell, the performance during the first two GTP

implementation years was lower than the target set due to a variety of reasons, the major one being the deteriorating business environment distancing investors from joining the sector, and financing constraints (Table 4.2).

Table 4.2: Manufacturing Sector GDP, share in %

	2009/10	2010/11	2011/12
Share in Industry GDP, in %			
Manufacturing	38.2	36.5	36.5
Large and Medium Scale	27.1		
Small Scale and Cottage	11		
Share in GDP, in %			
Manufacturing	4	3.6	3.7
Large and Medium Scale	2.8	2.4	2.7
Small Scale and Cottage	1.1	1.1	1.1

Source: MOFED

4.3.2 Investment and Capital Intensity

4.3.2.1 Investment

The low productivity and hence the competitiveness of the manufacturing industry has been largely attributed to a variety of reasons, the major ones being the sector's use of obsolete machinery, lack of skilled manpower and application of backward production technology. In order to enhance its productivity, the sector has to address its critical obstacles. This, however, requires huge investment.

Investment flowing into the sector has increased from Birr 895 million in 2004/05 to Birr 3657.7 million in 2010/11 depicting, an average annual growth of 51.4 percent over the period. The investment, however, is distributed unevenly across the different sub-sectors. Of the total investment, the share of the food and beverage sub-sector during the SDPRP end year was 42.1 percent which is slightly higher than the PASDEP period average of 41.8 percent. But it is slightly lower than the first GTP implementation year of 43.9 percent. This shows that

the food and beverage group, consumer goods producing sub-sector, took more than two fifths of the total investment indicating that the balance is thinly scattering over 14 other sub-sectors.

Table 4.3: Investment in sub-sector, share in total investment (in %)

Sub-sectors	SDPRP end year, 2004/05	Base year, 2009/10	2005/06-2009/10 (PASDEP period Average)	GTP first Year, 2010/11
Food Products and Beverages	42.1	30.1	41.8	43.9
Tobacco Products	0.5	0.9	1.1	0.8
Textiles	10.0	25.3	7.2	3.0
Wearing Apparel, Except Fur Apparel	1.2	1.2	3.0	1.0
Tanning and Dressing of Leather; Footwear, Luggage and Handbags	9.7	6.3	6.7	7.1
Wood and of Products of Wood and Cork, except Furniture	0.13	2.34	0.67	0.36
Paper, Paper Products and Printing	6.3	3.5	4.0	4.4
Chemicals and Chemical Products	3.8	4.1	4.3	6.9
Rubber and Plastic Products	10.1	3.7	5.8	5.6
Other Non-Metallic Mineral Products	6.2	15.1	15.6	17.1
Basic Iron and Steel	3.2	1.9	2.0	3.9
Fabricated Metal Products Except Machinery and Equipment	2.1	4.2	3.2	3.7
Machinery and Equipment N.E.C.	0.1	0.7	0.3	0.3
Motor Vehicles	1.7	0.2	2.4	0.4
Furniture; N.E.C.	2.7	0.5	2.2	1.5

Source: CSA, Report on Large and Medium Scale Manufacturing and Electricity Industries Survey, (various issues) and author's computation

Within the food and beverage sub-sector, the lion's share went to mineral waters, sugar and sugar confectionery, malt liquors and malt and grain mill products altogether accounting for over three fourths of the total investment. These sub-sectors have, however, low linkages with the rest of the sub-sectors within the manufacturing sector and are less strategic in moving industrial development forward (see Annex 4.1).

4.3.2.2 Capital Intensity

Generally speaking, investment in machinery and technology increases capital intensity. Capital intensity is calculated by dividing total capital stock by number of workers. In the first GTP implementation year, capital intensity has slightly declined (i.e., labor intensity has increased) from the base year level showing the existence of less capital to work with.

The degree of capital intensity varies from one sub- sector to the other. Table 4.4 shows that wearing apparel is the least capital intensive sub-sector followed by textile. While iron and steel is the most capital intensive followed by fabricated metal sub-sector. This is in line with the thesis that capital goods producing firms tend to be more capital intensive than those producing consumer goods.

Table 4.4: Capital Intensity, in 000 Birr

Sub-sectors	2004/05	2009/10	2005/06-2009/10, PASDEP period Average	2010/11 (GTP 1st Year)
Food Products & Beverages	75.9	77.3	79.5	67.4
Tobacco Products	381.1	142.8	191.9	57.5
Textiles	32.2	82.4	42.3	45.6
Wearing Apparel, Except Fur Apparel	14.6	58.0	44.4	27.7
Leather and leather products	63.4	77.8	71.0	77.0
Wood	5.1	115.1	42.8	94.4
Paper, Paper Products & Printing	32.6	77.9	43.4	87.3
Chemicals & Chemical Products	64.4	72.3	67.1	103.1
Rubber & Plastic Products	77.8	81.4	74.5	82.2
Other Non-Metalic Mineral Products	106.8	119.7	89.7	141.3
Basic Iron & Steel	199.0	142.3	146.5	157.5
Fabricated metals, EXCEPT Machinery & Equipment	59.7	114.8	73.7	152.4
Machinery & Equipment	21.2	123.7	54.4	130.8
Motor Vehicles	83.0	68.9	74.3	74.9
Furniture	19.2	28.7	28.0	44.3
Total	60.6	83.9	67.8	82.1

Source: CSA, Report on Large and Medium Scale Manufacturing and Electricity Industries Survey, (various issues)

4.3.3 Number and Scale of Enterprises

During the first GTP implementation year, the number of manufacturing industries has slightly been reduced to 2170 from the preceding year of 2172. This is because the number of new industries entering into the sector was lower

than those leaving the sector ending up with a net reduction in the total number of industries operating in the country.

Basically, a firm's size and competitiveness are related. Large firms can achieve economies of scale, better access to the various resources (e.g., raw materials) and hence can afford to fix lower unit price than small enterprises.

During the review year, of the total enterprises about 37.4, 34.4 and 78.2 percent were those which employ 10-19 persons, 50 persons and above and 20-49 persons, respectively.

The scale, however, varies from one sub-sector to the other. The food and beverage, textile, leather, chemicals and rubber, and plastic sub-sectors fall mainly under 50 persons and above employing category. The non-metallic and furniture sub-sectors fall mainly under 10-19 persons employing category. This shows that key manufacturing industries fall mainly under the large scale category. Of the total employees in the sector, about 84.2 percent operate in industries employing 50 and above persons (see Annex 3.1).

4.3.4 Employment and Wages

4.3.4.1 Employment

Employment generation is one of the major objectives of the industrial development strategy. Generally, employment expands with the expansion of business activities and shrinks with the slowing down of the activities.

According to the data, the number of employees during the first GTP implementation year was 173.4 thousand which is lower than the base year size of 185.1 thousand but is higher than the SDPRP end year of 109.2 thousand and PASDEP average of 143.2 thousand (Table 4.5).

Employment generation varies from one sub-sector to another depending on degree of labor or capital intensity. Except for the food and beverage, tobacco, leather and leather products, and basic iron and steel sub-sectors, others have either experienced significant reduction in employment or no change in 2010/11 compared with the preceding year. The increase in employment in food and beverage is mainly due to the surge in the sugar and sugar confectionery and soft drinks and mineral waters subsectors, which have created 6.3 thousand and 1.94 thousand more jobs, respectively, in 2010/11. On the other hand, textile and wearing apparel sub-sectors have lost about 11.5 thousand workers. The decline in the size of employment is the reflection of a sector's overall weak performance during the review year. Hence, the factors behind this dismal performance have to be identified and addressed (Table 4.5).

Table 4.5: The Number of Employees and Changes, by Number Over years

Sectors	Number of Employee in First GTP year, 2010/11	Changes in employment in First GTP year against		
		SDPRP end year	PASDEP average	Base year
Food & Beverages	67,072	35,379	21,458	6,962
Textiles	13,431	-7,270	-5,021	-7,951
Wearing Apparel, Except Fur Apparel	5,802	3,196	-1,488	-3,540
Leather and leather products	14,019	6,106	5,157	3,312
Tobacco	1,342	645	359	356
Wood and furniture	10,459	164	1,051	-1,053
Paper, Paper Products & Printing	10,076	2,569	1,285	78
Chemicals & Chemical Products	9,744	3,769	1,809	-1,441
Rubber & Plastic Products	10,984	5,311	1,172	-2,875
Other Non-Metalic Mineral Products	17,230	8,183	1,759	-2,252
Basic Iron & Steel	4,927	2,965	2,707	911
Fabricated metals, Machinery & Equipment	6,688	2,639	257	-4,148
Motor Vehicles	1,623	391	-310	-48
Total	173397	64,247	30,194	-11,689

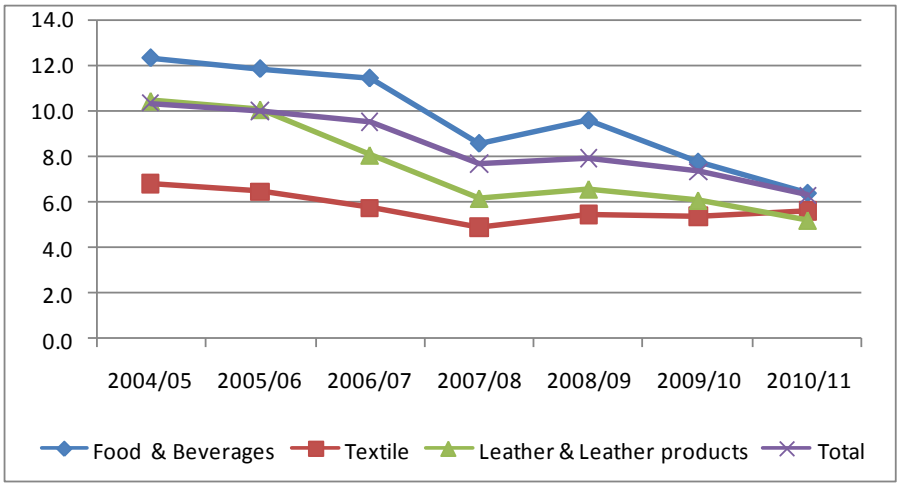
Source: CSA, Report on Large and Medium Scale Manufacturing and Electricity Industries Survey, (various issues)

In terms of structure, employment is highly concentrated in a few sub- sectors. During the first GTP implementation year, the food and beverage, non metallic minerals and leather and leather products were the major employers accounting for about 39.7, 9.9 and 7.8 percent, respectively, (see Annex 3.2).

4.3.4.2 Wages and Salaries

Owing to the mounting inflationary pressure, nominal wage based analysis tells little about the welfare of the workers. Hence, real wage is estimated by deflating the nominal wage by the Consumer Price Index (CPI). The data shows that there has been an overall decline in real wage over the period 2004/05–2010/11 mainly due to the mounting inflation. This, in turn, prove that wages and salaries are not indexed to CPI. As a result, workers are unable to consume the quantity of goods and services that they used to consume before some five years ago and hence tend to dampen the incentive to work and improve productivity (Figure 4.1).

Figure 4.1: Trends in Real Wage per person, by major sub-sectors



Source: CSA, Report on Large and Medium Scale Manufacturing and Electricity Industries Survey, (various issues)

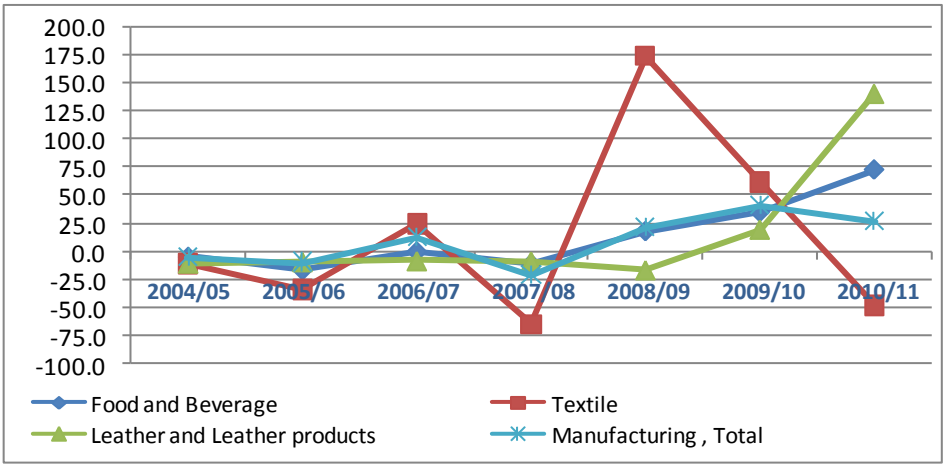
4.3.5 Production Performance

4.3.5.1 Value Added

Though slightly fluctuating from year to year, the real value added of the manufacturing sector has shown overall upward trends over the period 2004/05-2010/11. High fluctuation has been observed in the textile and leather and leather products. Leather and leather products have started picking up since the base year, while textile has started declining sharply since the same year (Figure 4.2).

The contribution of the different sub-sectors to the total value added is highly skewed. The food and beverage sector, for instance, accounted for about 55 percent of the value added of the large and medium scale manufacturing industries depicting the concentration of the value added on a single sub-sector during the review year.

Figure 4.2: Trends in real Value Added, growth in %



Source: CSA, Report on Large and Medium Scale Manufacturing and Electricity Industries Survey, (various issues)

On the other hand, the value added of textile, fabricated metals, furniture and other non-metals have declined significantly compared with the base year , the PASDEP average and the SDPRP end year (Table 4.6).

Table 4.6: Value Added by sub-sectors, share in %

Sub- sectors	SDPRP end year, 2004/05	Base year, 2009/10	PASDEP Average 2005/06-2009/10)	GTP first year, 2010/11
Food Products and Beverages	45.35	39.54	40.55	54.75
Tobacco Products	3.74	2.12	3.68	1.54
Textiles	5.43	5.24	4.06	1.73
Wearing Apparel, Except Fur Apparel	0.52	1.33	1.02	1.09
Tanning and Dressing of Leather; Footwear, Luggage and Handbags	4.24	2.33	3.36	6.14
Wood and of Products of Wood and Cork, Except Furniture	0.65	0.19	0.47	0.73
Paper, Paper Products and Printing	6.74	4.36	5.03	4.52
Chemicals and Chemical Products	5.14	7.47	6.12	7.87
Rubber and Plastic Products	4.65	7.02	6.06	4.92
Other Non-Metallic Mineral Products	9.16	15.60	16.32	12.32
Basic Iron and Steel	6.76	2.39	3.77	3.77
Fabricated Metal Products Except Machinery and Equipment	2.98	6.81	4.87	-2.54
Machinery and Equipment N.E.C.	0.09	0.49	0.17	0.42
Motor Vehicles	1.69	1.99	2.36	1.13
Furniture; N.E.C.	2.85	3.14	2.19	1.60

Source: CSA, Report on Large and Medium Scale Manufacturing and Electricity Industries Survey, (various issues)

4.3.5.2 Production of Major Articles

The manufacturing sector produces a variety of import competing goods. Despite this, similar goods have been imported into the country due to a number of factors the major ones being insufficiency of domestic production to satisfy the local demand, inferior quality of local outputs and cheaper imports.

According to the data, the productions of some industrial products have increased over the last five years. However, the growth in the quantity and quality of local output happened to be far lower than what is demanded in terms of both quantity and quality. Trends in the production volume of the major industrial products show lack of persistence in the year to year growth.

Despite the growing demand for industrial output due to the expanding economic activities and socio-economic infrastructure, the local industries have not been able to respond to this reality. For instance, the sector has not sufficiently responded in producing construction inputs, except cement, required for expanding construction activities. The country has not yet put in place industries which produce critical inputs for agriculture such as fertilizers (Annex 3.4).

4.3.5.3 Capacity Utilization[19]

The manufacturing industries have been suffering from idle capacity for a long time due to a variety of reasons. Cognizant of this problem, GTP targeted improving capacity utilization over the plan implementation period.

Contrary to the plan, the overall sector capacity utilization rate declined to 66.9 percent during the first GTP implementation year from 68.9 percent during the

[19] Capacity utilization is calculated by dividing the actual production to the value of production at full yearly capacity at market price.

base year. Nonetheless, it is higher than the SDPRP end year level of 60.68 percent and the PASDEP average of 60.12 percent. During the review year, the capacity utilization of some of the sub-sectors improved while others did not. For instance, the food and beverage, textile, wearing apparel and non-metallic industrial sub-sectors have experienced deteriorating capacity utilization compared to the base year (Table 4.7).

The loss in capacity utilization by the food and beverage sub-sector could probably be due to increased number of firms sharing the existing small market. This indicates the need to coordinate investment so as to improve the allocation of resources to the most efficient sectors instead of joining those which have been already suffering from idle capacity.

Like the other performance indicators, the capacity utilization of the textile sub-sector has drastically declined from 78.6 percent in the base year to 60.8 percent during the first GTP implementation year. Similarly, the capacity utilization of the wearing apparels subsector has sharply declined from 88.4 percent in the base year to 41.3 percent during the first GTP implementation year (Table 4.7).

Idle capacity entails the existence of a potential to increase output by about one third of the current production level if it is possible to bring the idle capacity in the industrial sector to nil. Thus, efforts should be made to achieve this.

Table 4.7: Capacity utilization, in %

Sectors	2004/05	2009/10	PASDEP period average	GTP fist year, 2010/11
Food Products and Beverages	64.68	76.58	69.95	69.62
Tobacco Products	84.37	100	99.71	100
Textiles	46.62	78.6	49.73	60.83
Wearing Apparel, Except Fur Apparel	57.12	88.36	57.17	41.27
Leather & Leather Products	68.19	52.66	62.91	69.03
Wood and of Products of Wood and	70.21	48.88	59.78	55.99
Paper, Paper Products And Printing	65.19	65.51	69.48	71.37
Chemicals and Chemical Products	55.81	56.21	56.02	70.12
Rubber and Plastic Products	57.92	57.06	59.25	66.9
Other Non-Metallic Mineral Products	78.61	78.98	79.96	69.62
Basic Iron and Steel	56.67	36.35	47.82	53.48
Fabricated Metal Products Except	45.04	66.43	68.00	59.93
Machinery and Equipment N.E.C.	44.87	74.8	59.72	53.9
Motor Vehicles, Trailers & Semi-Trailers	31.65	96.75	63.54	45.94
Furniture; Manufacturing N.E.C.	59.69	87.19	72.54	65.79
Total	60.68	68.85	60.12	66.9

Source: CSA, Report on Large and Medium Scale Manufacturing and Electricity Industries Survey, (various issues)

4.3.6 Cost of Production

In spite of the existence of high tariff protection for domestic industries, they have sadly failed to compete with imported goods in the domestic market. Keeping quality aside, the major factor contributing to the low competitiveness of the sector is the relatively high cost of production.

Thus, the crucial measure that should be taken to improve the price competitiveness of the manufacturing industries is reducing the cost of production. Of the different cost components, the most critical has to be identified and cost reducing ways should be suggested. In 2010/11, for instance, raw materials[20], non-industrial costs[21], energy, industrial service[22] and costs of transportation comprised about 71.2, 12.7, 6.7, 5.8 and 3.6 percent, respectively. The importance of the different types of costs differs from one sub-sector to the other. For instance, within the textile industries, the share of raw materials in the knitting sub sector is about 2.1 percent while that of industrial services is 94 percent (see Annex 3.3).

4.3.7 Energy Consumption

According to greener growth strategy, the energy source for the industrial sector to be renewable is mainly hydroelectric power. Customarily, manufacturing industries use different sources of energy including electricity, wood & charcoal, and other fuels. During the first GTP implementation year, the major source of energy in the manufacturing sector was dominated by other fuels which include gasoline, coal, etc.

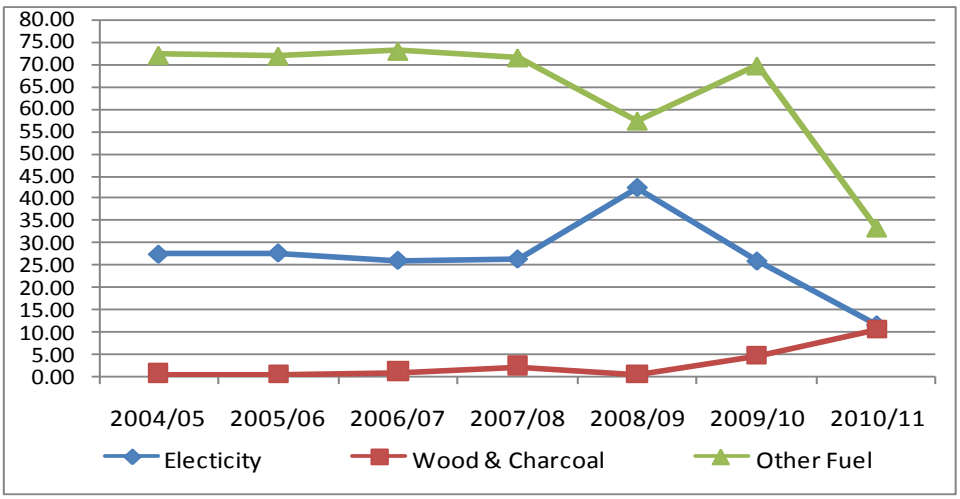
[20] Raw Materials: - include all raw and auxiliary materials, parts and containers which are consumed during the reference year. The value of local raw materials is the value of locally produced raw materials and is the cost at the factory which includes the purchase price, transport charges, taxes and other incidental costs. The value of imported raw materials is the value of raw materials produced in other countries and obtained directly or from local source and is the cost at the factory which includes the purchase price, transport charges, taxes and other incidental costs.

[21] Non-industrial Cost: - includes payments like professional fees, postage, telephone, insurance, advertising, hired transport, rental payments, etc. (interest, amortization and depreciation are excluded).

[22] Other Industrial Services Rendered by Others: - refers to contract, repair and maintenance work done by others in the reference year on materials controlled by the establishment. Included are also the cost of all goods purchased and resold without any transformation during the reference year and the cost of water consumed.

In 2010/11, for instance, 2032, 161 and 1533 manufacturing industries reported to have used electricity, wood & charcoal and other fuels as sources of energy, respectively. While some industries use only one form of energy, others use combinations of the different sources. The share of electricity in the total costs of energy consumed by manufacturing industries remained between 25-30 percent up until 2007/08. But it suddenly jumped to 43 percent in 2008/09. The share of other fuels, nonetheless, started to decline in 2009/10 leaving room for wood and charcoal instead of electricity (Figure 4.3).

Figure 4.3: Trends in the costs of energy consumed by sources, share in %



Source: CSA, Report on Large and Medium Scale Manufacturing and Electricity Industries Survey, (various issues)

4.3.8 Efficiency and Productivity

4.3.8.1 Efficiency

Attainment of efficiency is central to manufacturing industries operating in a competitive market environment. Here production efficiency is taken as a proxy for value added per Gross Value of Production. The overall efficiency of the

sector has slightly improved to 28.1 percent during the first GTP implementation year from 27.1, 26.2 and 25.3 percent during the base year, PASDEP period average and SDPRP end year, respectively. Some sub-sectors registered gain in efficiency while others registered loss in efficiency during the review year. For instance, the food and beverage, wearing apparel, leather, paper, chemical, basic iron and steel, machinery and equipment gained efficiency while textile, non-metallic minerals and fabricated metals lost efficiency during the review year compared to the base year (Table 4.8).

Table 4.8: Production efficiency

Sub-sectors	SDPRP end year, 2004/05	Base year, 2009/10	PASDEP Period average (2005/06-2009/10)	GTP First Year, 2010/11
Food Products & Beverages	0.297	0.245	0.245	0.347
Tobacco Products	0.273	-0.016	-0.016	0.232
Textile	0.196	0.320	0.320	0.156
Wearing Apparel, Except Fur Apparel	0.258	0.264	0.264	0.526
Leather and Leather Products	0.137	0.162	0.162	0.331
Wood & Products of Wood	0.445	0.042	0.042	0.292
Paper, Paper Products & Printing	0.308	0.320	0.320	0.320
Chemicals & Chemical Products	0.206	0.244	0.244	0.296
Rubber & Plastic Products	0.244	0.275	0.275	0.239
Other Non-Metalic Mineral Products	0.240	0.507	0.507	0.379
Basic Iron & Steel	0.220	0.102	0.102	0.204
Fabricated metals, Except Machinery & Equipment	0.216	0.232	0.232	-0.340
Machinery & Equipment	0.175	0.253	0.253	0.322
Motor Vehicles	0.063	0.331	0.331	0.202
Furniture, NEC	0.579	0.447	0.447	0.368
Total	0.253	0.271	0.271	0.281

Source: CSA, Report on Large and Medium Scale Manufacturing and Electricity Industries Survey, (various issues)

4.3.8.2 Labor Productivity

Productivity is a key factor underlying the competitiveness of an enterprise. Labor productivity is taken as a proxy for value added per person engaged in the sector. According to the estimate, labor productivity improved in nominal terms to Birr 83.7 thousand during the first GTP implementation year from Birr 60.5 thousand in the preceding year. This, however, would not have been the case had the productivity been measured in real terms.

Table 4.9: Value Added per worker, in million Birr

Industrial groups	SDPRP end year, 2004/05	Base year, 2009/10	PASDEP period average (2010/11-2014/15)	GTP First Year, 2010/11
Food & Beverage	97.33	62.08	65.04	72.21
Tobacco Products	365.40	202.92	263.40	101.81
Textiles	17.86	23.11	15.49	11.41
Wearing Apparel, Except Fur Apparel	13.64	13.42	9.64	16.67
Leather and leather products	36.43	20.57	25.80	38.72
Wood and wood products	28.24	5.52	13.85	16.28
Paper, Paper Products & Printing	61.06	41.14	39.22	39.67
Chemicals & Chemical Products	58.49	63.05	53.44	71.42
Rubber & Plastic Products	55.79	47.80	44.51	39.61
Other Non-Metalic Mineral Products	68.89	75.55	77.41	63.23
Basic Iron & Steel	260.85	56.05	104.95	67.67
Fabricated metals, Except Machinery & Equipment	52.97	64.39	59.51	-37.20
Machinery and Equipment, NEC	26.31	53.34	29.97	57.01
Motor Vehicles	93.56	112.25	82.03	61.73
Furniture, NEC	22.20	35.86	22.38	21.92
Total	**62.32**	**50.99**	**49.22**	**51.02**

Source: CSA, Report on Large and Medium Scale Manufacturing and Electricity Industries Survey, (various issues)

Productivity varies from one sub-sector to the other. Labor productivity is highest in the tobacco subsector (Birr 166.7 thousand per person per year) followed by the chemical and chemical products (with Birr 134 thousand). However, the least productivity was witnessed in fabricated metals and the textile sub-sectors having Birr 168.1 thousand and Birr 16.5 thousand in losses, respectively, during the review year.

4.3.9 Export Receipts and Import Intensity

4.3.9.1 Export Receipts

Despite the support for export oriented manufacturing industries, there was no marked difference between the performance of outward and inward oriented manufacturing industries. This is due to a variety of reasons, the major ones being insufficiency and low realization of the incentive scheme provided to investors in the export sector, high cost of production and supply side constraints.

Export earnings have been fluctuating over the period 2004/05- 2010/11. For some export items, the receipt in 2010/11 is lower than the amount registered some five years back. The total receipts from manufactured export in 2009/10, for instance, was less than the amount generated in 2004/05 verifying the ineffectiveness of the support package and level meant to boost earnings from such items for the last few years, including the fiscal incentive, duty free privilege, duty drawback schemes, access to credit , a series of devaluation measures, etc. This entails the need to examine, beyond market, structural issues to address the problems of manufactured exports.

Overall, the manufacturing sector generated about 222 million USD[23] in export receipt which is 141 percent higher than the base year, 88 percent higher than the PASDEP period average and 99.3 percent higher than the SDPRP end year achievements. Of the total receipts during the review year, the share of leather stood first accounting for about 44.75 percent followed by food and beverage with 34.1 percent altogether accounting for slightly over three fourths of the total receipts. The year registered significant export receipts from rubber and plastic products and chemical and chemical products depicting growing diversification of manufactured exports into other sub-sectors. On the other hand, export earnings from textile and wearing apparel were lower during the review year compared with the base year (Table 4.10).

In the food and beverage sub-sector, the major export items, were the production, processing and preserving of meat, fruits and vegetables; malt liquors and malt; and dairy products accounting for 38.7, 25.2 and 23.6 percent, respectively, during 2010/11. Of the chemical export the major ones were soap and detergents, cleaning and polishing, perfumes and toilet preparations generating about two thirds of the sub-sector's receipts. In 2010/11, contrary to the preceding years, the rubber and plastic sub-sector generated significant export receipts, entirely due to export of rubber products (CSA, 2012).

Although export earnings have been increasing over the last few years, it has not yet reached at the level of covering the bill of raw materials imported for manufacturing industries. During the review year, for instance, the sector's imported raw material was worth about US 708.8 million dollars which was three times greater than the value of export receipt- US 222.0 million dollars(CSA, 2012).

[23] The dollar value of manufactured export is obtained by dividing export revenue in Birr from large and medium scale manufacturing industries from CSA survey data by the average annual exchange rate obtained from NBE for the same year.

Table 4.10: Manufactured Exports Earnings, Growth in %

Sub-sectors	GTP 1st Year, 2010/11 (in 000 USD)	GTP 1st Year vis-a-vis, growth in %		
		SDPRP end year, 2004/05	Base year, 2009/10	2005/06-2009/10 (PASDEP period Average)
Food and Beverages	75,672	124.1	251.0	119.9
Tobacco	268		-20.0	109.7
Textiles	11,779	34.0	-19.1	-5.0
Wearing Apparel, Except Fur	809	3,788.7	-88.1	-83.7
leather and leather products	99,361	45.2	157.7	60.4
Wood and products of wood and Furniture	0			
Paper, Paper Products and Printing	0			
Chemicals and Chemical Products	7,926		183.5	324.8
Rubber and plastic Products	22,213	25,087.6	7,982.0	15,562.9
Non-metallic Mineral products	1,814	1,886.2	761.4	269.0
Basic Iron and steel	2,014		-31.8	223.9
Fabricated Metal, Machinery and equipment	184		-95.5	-77.5
Motor vehicles, trailers and semi trailers	0			
Total	**222,039**	**99.3**	**141.1**	**88.0**

Source: CSA, Report on Large and Medium Scale Manufacturing and Electricity Industries Survey, (various issues)

4.3.9.2 Import Intensity[24]

Countries promote industries which largely depend on locally available resources for their raw materials because such industries have greater competitiveness over

[24] Import intensity is measured as the ratio of imported to the total consumed raw material costs.

those which are import intensive. Other things being equal, declining import intensity may denote rising local content. However, this may not be the case since the intensity could increase by the increase in the world price and depreciation in local currency, all resulting in increased value of import in local currency.

The overall import intensity has declined to 44.1 percent in the first GTP implementation year from 51, 53 and 46 percent during the base year, PASDEP period and SDPRP end year, respectively. While import intensity increased in some sub-sectors, it declined in others. For instance, significant decline in import intensity is observed in food and beverage, fabricated metals and furniture sub-sectors while the opposite is witnessed in the woods and products of wood sub-sector.

The least import dependent sub-sectors of the whole sector are food and beverage (18.1 percent) and leather (20.6 percent), while the highest import dependent sub-sectors are rubber and plastic products (93 percent) and machinery and equipment (87 percent) (Table 4.11).

Table 4.11: Import intensity

Sub-sectors	SDPRP last year, 2004/05	2009/10	PASDEP period average
Food Products & Beverages	0.205	0.248	0.256
Tobacco Products	0.433	0.055	0.502
Textiles	0.396	0.370	0.391
Wearing Apparel, Except Fur Apparel	0.212	0.503	0.413
Leather and Leather products	0.162	0.344	0.253
Wood and products of wood	0.484	0.211	0.341
Paper, Paper Products & Printing	0.816	0.595	0.731
Chemicals & Chemical Products	0.857	0.705	0.798
Rubber & Plastic Products	0.977	0.923	0.903
Other Non-Metalic Mineral Products	0.054	0.581	0.250
Basic Iron & Steel	0.608	0.791	0.851
Fabricated Metals, except Machinery & Equipment	0.812	0.846	0.863
Machinery & Equipment	0.961	0.851	0.935
Motor Vehicles	0.986	0.985	0.938
Furniture NEC	0.421	0.501	0.518
Total	0.460	0.510	0.530

Source: CSA, Report on Large and Medium Scale Manufacturing and Electricity Industries Survey, (various issues)

4.4 Conclusions and Recommendations

4.4.1 Conclusions

Sizable investment has been flowing into the sector for the last five years. However, capital intensity has slightly declined (or labor intensity has increased) from the base year level showing the existence of less capital to work with.

Contrary to the expectation, the number of manufacturing industries was slightly reduced during the first GTP implementation year from the base year owing to a higher number of exiting entities compared to those joining the sector.

Better remuneration to workers plays a crucial role in attracting both skilled and unskilled labor into the sector away from other competing sectors, especially during a period of high inflation. However, there has been an overall decline in real wage and salary over the period 2004/05–2010/11 mainly due to the mounting inflation. As a result, experienced workers would leave the sector in search of better paying jobs.

The contribution of the different sub-sectors value added to the total manufacturing value added is highly skewed. The food and beverage sector, for instance, contributed over half of the value added of the large and medium scale manufacturing industries depicting the concentration of the Value Added on a single sub-sector.

Despite the growing demand for industrial output due to the expanding economic activities and socio-economic infrastructure, the local industries have not been able to respond to these realities by producing what is needed and what strengthens inter-sectoral linkages.

Contrary to the plan, capacity utilization has declined during the first GTP implementation year from the base year level indicating the existence of the potential to increase output by the amount of idle capacity without establishing new industries.

Among the industrial competitiveness affecting factors, high cost of production is the major one. Raw materials, non-industrial costs, energy, industrial service and costs of transportation are the major cost components in order of importance.

In terms of the sources of energy for the manufacturing sector, the share of other fuels, started to decline in 2009/10 leaving room for wood and charcoal instead of electricity.

Although improving efficiency is important, the food and beverage, wearing apparel, leather, paper, chemical, basic iron and steel, machinery and equipment gained efficiency while textile, non-metallic minerals and fabricated metals lost efficiency during the review year compared with the base year.

Although it falls short of hitting the planned target, significant improvement has been registered in terms of export receipts. Moreover, the foreign exchange generated is far from covering the cost of importing raw materials for the sector. Of the total receipts, leather and food and beverage sectors constitute slightly over three fourths of the total.

In a nutshell, the performance during the first two GTP implementation years are lower than the target set due to a variety of reasons, the major ones being the complexity of industrial development compared to other sectors.

4.4.2 Recommendations

In order to improve manufacturing industries performance the following recommendations are suggested:

- In order to avoid misallocation of the scarce resources and pick winning industries, promotion of industries should be preceded by an in-depth study. The priority of selecting industries for the sub-sector should be undertaken in light of the static and dynamic comparative advantage, available technology, linkages with the rest of the economy, global competitors, the global environment, etc.

- Of the critical problems of the domestic manufacturing sector, competitiveness vis-à-vis imported goods, the high costs of production, especially costs of raw materials, are vital. Thus, efforts should be made to reduce the costs of production by revisiting the cost components in all the sub-sectors along the whole value chain.
- Ethiopia is believed to have comparative advantage in some industries. However, upgrading of both skills and technology of enterprises is essential for translating comparative advantage into competitive advantage.
- Technological backwards and use of obsolete working facilities along with low skilled manpower are critical problems. Hence, special incentive scheme should be put in place to help industries upgrade their technological base, replace old machinery and upgrade their workers' skills.
- The sector has been suffering from persistence similar challenges year after year and decade after decade. Of these problems, selection and promotion of inappropriate industries could be the major one. Thus, in order to succeed in industrial development, the country has to revisit its priorities and industrial development strategies in the light of the five steps recommended by Loup Brefort[25] (2011):
    - Step 1: Find dynamic growing countries with a similar endowment structure and with about 100% higher per capita income. Identify tradable industries that have grown well in those countries for the last 20 years;
    - Step 2: See if some private domestic firms are already in those industries (of which may be existing or nascent).Identify constraints to quality upgrading or further firm entry. Take action to remove constraints;
    - Step 3: In industries where no domestic firms are currently present, seek FDI from countries examined in step1, or organize new firm incubation programs;

[25] , Loup Brefort[25] (2011), The role of the state in industrial policy, A Framework for Rethinking the Approach, Mokra Gora Forum Business Turnaround 2011. The World Bank

- Step 4: In addition to the industries identified in step1,the government should also pay attention to spontaneous self discovery by private enterprises and give support to scale up the successful private innovations in new industries,
- Step 5: In countries with poor infrastructure and business environment, special economic zones or industrial parks may be used to overcome these barriers to firm entry and FDI and encourage industrial clusters.

Chapter Five

Ethiopia's State of Integration in COMESA

5.1 Introduction

Regional Trade Agreements (RTA) are not a recent phenomenon, they have been there throughout the world as early as the 19th century. Currently, about 300 RTAs as both bilateral and multilateral agreements are known to exist and there is no country that is not part of at least one economic community if not more (Yang and Gupta, 2005).

In Africa, regional integration received considerable attention after the Lagos Plan of Action. The objectives of the plan were to create regional economic communities that serve as the building blocks for the creation of African Economic Community. As per the Lagos Plan of Action, the different regions initiated strategies to form sub-regional agreements. To this end, Preferential Trade Agreement (PTA) for Eastern and Southern Africa was signed in 1981. In 1994, PTA transformed into, what was envisioned from the onset, Common Market for Eastern and Southern Africa (COMESA).

Currently, COMESA has 19 members including Burundi, Comoros, D.R. Congo, Djibouti, Egypt, Eritrea, Ethiopia, Kenya, Libya, Madagascar, Malawi, Mauritius, Rwanda, Seychelles, Sudan, Swaziland, Uganda, Zambia, and Zimbabwe. The COMESA Free Trade Area (FTA) was launched on 31 October 2000 with nine member states including Djibouti, Kenya, Madagascar, Malawi, Mauritius, Sudan, Zambia and Zimbabwe. Currently, 16 COMESA member states are part of the FTA. Ethiopia, Eritrea and D.R. Congo are three countries which have not fully committed themselves to the FTA. Of these lagging three countries, Ethiopia has

the lowest commitment offering only 10% reduction in import tariffs for goods originating from member countries.

This report assesses the state of Ethiopia's integration in COMESA and put forward policy recommendations. To this end, it has collected secondary data from various sources including ERCA and COMESA database. Moreover, attempt is made to review literature on regional integration and studies conducted on the impacts of joining COMESA-FTA. The key findings are presented in the report.

5.2 Regional Integration: Concepts and Review of Studies

Economic integration is the process by which countries merge into larger entities removing any barrier to economic cooperation. There are different stages of integration ranging from Preferential Trade Area to Economic and Monetary Union.

The idea of economic integration emerged from the works of Jacob Viner. He argued that the effects of integration could split into static and dynamic. The static effect can be either trade creation or trade diversion or both while the dynamic effect results from trade creation, where increased production and income leads to economies of scale, new entries and tougher competition and larger market size in the long run.

Trade creation refers to increased level of trade as a result of the elimination of trade barriers within preferential or free trade agreement. Trade creation results when a country stops producing goods and services that it produces less efficiently and imports the same product from a partner country which produces it more efficiently. It improves regional and global welfare as a shift occurs from the consumption of higher-cost domestic products to cheaper imports from FTA member countries (UNECA, 2012).

Trade diversion occurs when the shift in consumption is more in favor of higher-cost goods and services from FTA members than lower cost products produced by countries outside the FTA. It is a tendency of importers to substitute goods from one source (non-member) to another (member) in response to a change in the import price from FTA member countries resulting in the displacement of more efficient non- partner import in favor of less efficient partner country sourced imports (Plummer et al., 2010). FTA leads to increased imports from members at the expenses of non-members.

During the Doha rounds, developed and developing nations could not reach consensus on their commitments regarding trade liberalization. The former failed to commit themselves to liberalize their agricultural sector and reduce the subsidy to the sector while the latter continued to be willingly trapped with its protectionist view regarding the manufacturing sector (Bouet and Laborde, 2008). Hence, eventhough regional agreements are the second best alternative to multilateral ones; countries have started to integrate regionally. Key members of the WTO who were once advocates and dependents on multilateral trade agreements are resorting to regional agreements.

Similarly in Africa, there was a push towards strengthening RTAs following the collapse of the Doha round negotiations. There is no country in Africa that is not a member of at least one RTA; most belong to more than one RTA. There are about 14 intraregional agreements in Africa, and out of the 53 African countries six belong to a single RTA, 26 to two, 20 to three while one belongs to four (EEA, 2008).

Regional trade agreements like free and preferential trade agreements are the second best choice for trade liberalization relative to multilateral agreements. This is due to the fact that RTAs are discriminatory in nature towards non-members and can have both trade creation and diversion effects, and if the

diversion effect outweighs, it will lead to welfare loss (Yang and Gupta, 2005). In addition, the major issue raised with RTA is the revenue loss due to integration into a free trade area.

Yang and Gupta (2005), argue that regional trade agreements in Africa has not been successful in meeting their ambitious goals. They blame, for one thing, the initial condition of smallness of intraregional trade for the failure of the successfully implemented regional agreements. The study further argues that lack of trade complementarity, poor infrastructure, high trading cost and low capacity have been the key reasons for African regions not to exploit the potential of economies of scale and competitive gains from RTA. The other reason for the failure is lack of broad-based trade liberalization scheme that opens up markets to the rest of the world since experience from other successful RTAs shows that nondiscriminatory liberalization promotes intra-regional trade.

In an attempt to see the impact of joining COMESA-FTA on the Ethiopian economy, few studies have been conducted. Alemayehu and Haile (2002), for instance, tried to review the problems and prospects of regional economic integrations in Africa taking COMESA as a case. They found out that building successful trade blocs is a difficult task due to problems of variation in the initial condition, compensation issues, real political commitment, overlapping membership, policy harmonization and poor private sector participation. They further proved that implementation of integration or the lack thereof is not only an economic issue but also political affairs. Alemayehu and Haile (2002) stated that the issue of revenue loss due to tariff reduction is a major concern for integrating parties and the loss for Ethiopia is estimated at only 1% of the total revenue.

Tadele et al. (2001), tried to analyze the impact of COMESA-FTA on the manufacturing sector. According to the study, FTA has different results on

different manufacturing sub-sectors. On commodities where COMESA members are efficient prior to the agreement, complete elimination of tariff would lead to a positive consumption effect resulting from reduced prices of imports. The commodities include rubber articles, textile articles, worn clothing, salt, sulfur, plastering, cosmetics, lime, cement, articles of iron and steel.

According to their study, the negative effects of COMSEA-FTA is observed in tariff revenue. The loss in government revenue amounted to 0.002% of GDP or 0.15% of total tax revenue. However, as the negative effect of reduction in tariff revenue is offset by welfare gains by consumers, the overall effect is welfare gains of about 0.002% of GDP. Regarding commodities where the rest of the world is the major supplier, COMESA-FTA would create market opportunities for members by diverting trade from the rest of the world to COMESA member countries. The commodities include man-made staple fabrics, chemicals, footwear, animal and vegetable oils and fats, clothing and articles.

Due to the increased import, consumption has also increased but this increment has been largely offset by the reduction in the government revenue implying an overall net welfare loss of about 0.13% of GDP. The other major effect is the trade creating effect of an FTA. Ethiopia's expansion of trade with COMESA is at the expense of local industries. Local industries like food, tobacco and textile displaced by imports from COMESA member countries results in a 0.50% GDP loss to producers. However, this loss in producer surplus plus the loss in tariff revenue is outweighed by consumers' surplus resulting in a net welfare gain of 0.07% of GDP.

By aggregating the welfare effect of the changes in consumption, trade creation and trade diversion, Tadele et al. (2001) found a 0.03% of GDP gains in consumer surplus but a 0.36% of GDP loss in tariff revenue thereby giving rise to a net welfare loss of 0.06% GDP.

Mussaye (2011), assessing the impacts of COMESA- FTA on Ethiopia using dynamic CGE model, found that the simultaneous opening-up of agricultural and non-agricultural sectors will result in increased output, consumption expenditure and GDP but decline in government revenue, and imports and exports prices. However, discriminatory reduction of import tariffs on the agricultural sector showed no significant change in the economy. He also found that there will be some trade creation in agriculture and industry, but not in the service sector. Moreover, no trade diversion occurred due to tariff reduction mainly due to lack of similarity between intra COMESA and extra COMESA exports.

5.3 COMESA Institutions

Since COMESA member states are the Least Developed Countries, (LDCs) they are constrained by their lower capacity to move towards FTA. Thus, establishing institutions which facilitate the move towards COMESA-FTA is found to be critical. To this end, member states have established six key institutions which support the integration process to COMESA. These include:

1. COMESA Clearing House: It assists members through the alleviation of problems related to inadequate foreign exchange in situations where there are strict exchange control and where national currencies are used in the transaction.
2. Federation of National Associations of Women in Business in the Common Market for Eastern and Southern Africa (FEMCOM): It was established in 1993 with the main objective of promoting programs that incorporate women into trade within COMESA.
3. PTA Bank: It was established in 1985 with a vision of providing development capital in the region and it is open to non-COMESA states and institutional shareholders.

4. COMESA Re-Insurance Company (ZEP-RE): It was created in 1990 as an institution that promotes trade, development and integration through trade of insurance and reinsurance.
5. COMESA Leather Institute: It was established in 1990 to promote sustainable development, productivity, competitiveness and integration of the COMESA leather sector. It operates as a technical institution focusing on the provision of services which include human resource development, investment and trade promotion, research and development, consultancy and extensions and information dissemination.
6. Regional Investment Agency: It is an institution that supports members in achieving a high level of regional investment, trade opportunities and sustainable economic growth and development through synergies, networks, alliances, and co-operation with other regional economic communities, co-operating partners and international institutions. It promotes COMESA-FTA, identifies investment opportunities, provides training and development support, and identifies and helps remove constraints to investment.

5.4 Ethiopia's Performance in COMESA

Despite being a founding member of COMESA, so far Ethiopia has offered only 10 percent tariff preference for imports originating from COMESA member countries. This preference rate is the least among COMESA member states. However, since recently its trade and infrastructure network with neighboring COMESA member states has started registering surplus trade balance.

5.4.1 Trade with COMESA Member States

5.4.1.1 Value of Exports

Like most sub-Saharan African Countries, Ethiopia's export is dominated by primary agricultural commodities. During the period (1997-2012), Ethiopia's

export to COMESA has been trending upwards except for the observed sharp decline in 2001. The value of export to COMESA which was Birr 476 million in 1997 has reached Birr 5000 million in 2012 indicating an annual average growth of 63.4 percent (Figure 5.1).

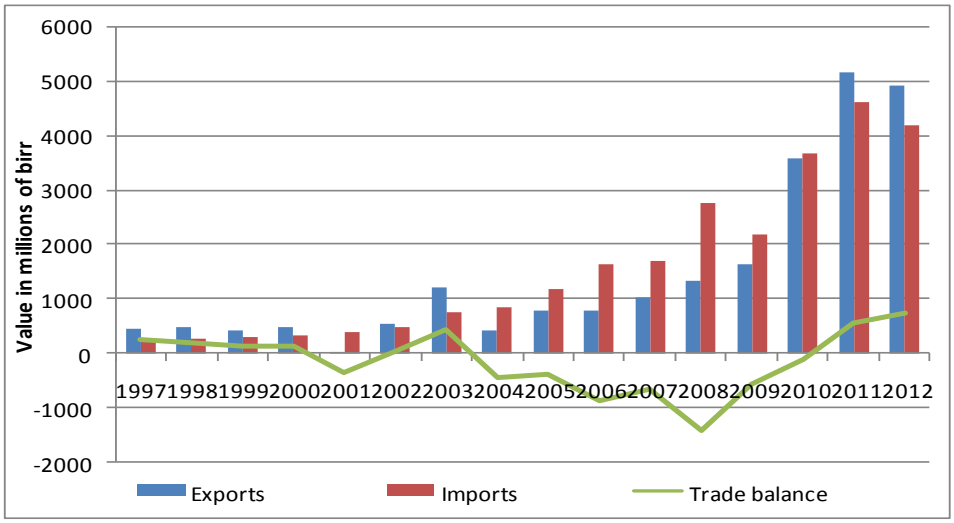
5.4.1.2 Value of Imports

Import from COMESA is fairly small compared to the overall imports of the country. Nonetheless, Ethiopia's import originating from COMESA member countries has started rising over the last 15 years. The value of imports from COMESA member countries which was Birr 218 millions in 1997 has reached Birr 4,206 million in 2012 depicting an annual average growth of 122 percent. The flow of imports has been increasing over time despite the low tariff preference given to goods originating from member countries (Figure 5.1).

5.4.1.3 Trade Balance

Trade balance is also a good to see which flow outweighs. According to the data, Ethiopia's trade balance with COMESA members' countries was favorable for the period 1997 to 2003 except for the year 2001 when there was almost no export receipt from COMESA members. The balance turned negative over the period 2004-2010. During the last couple of years, however, the trade balance between Ethiopia and COMESA members has shown surplus indicating that Ethiopia is benefitting from the intra-COMESA trade (Figure 5.1).

Figure 5.1: Ethiopia's Exports, Imports and Trade Balance with COMESA members



Source: Ethiopian Revenue and Customs Authority

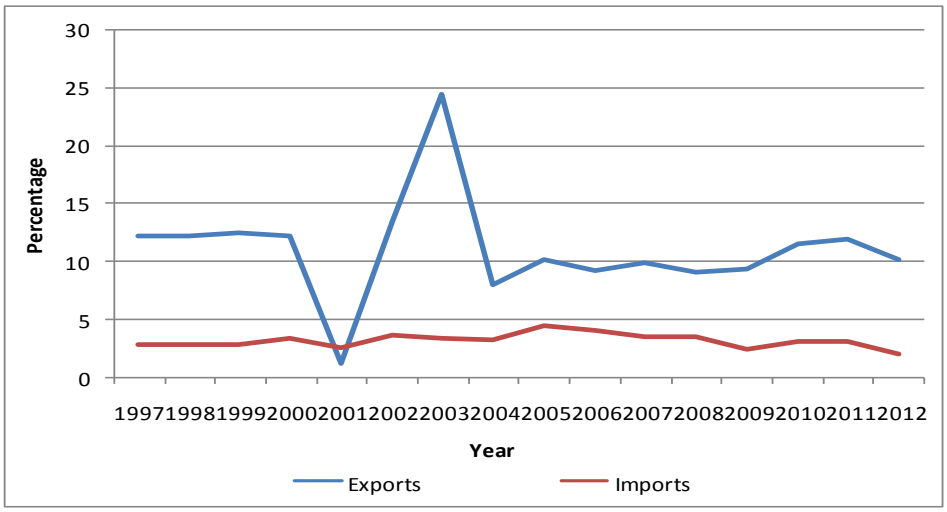
5.4.1.4 Market Share

The share of Ethiopia's exports to COMESA compared to its total exports has remained, on average, at about 11 percent over the last 15 years. The highest share was 24 percent recorded in 2003 while the lowest was 8 percent recorded in 2008. Compared with other COMESA member countries, the performance of Ethiopia is very low. For instance, the shares of Kenya's and Djibouti's exports to COMESA are about 31 percent and 68 percent, respectively, in 2011 (COMESA, 2012).

The share of Ethiopia's value of import originating from COMESA to its total import value is, on average, only 3.2 percent per annum in the period 1997-2012 confirming the fact that Ethiopia depends on non-COMESA countries for about 96.8% of its imports. The highest share was 4.5 percent recorded in 2005 while

the lowest was 2 percent in 2012. Both the share and value of imports from COMESA members have declined in 2012 compared to previous years (Figure 5.2).

Figure 5.2: Exports to and Imports from COMESA, share in total Exports and Imports



Source: Ethiopian Revenue and Customs Authority and own computations

5.4.1.4.1 Export Markets

The COMESA market for Ethiopia's export has shown no significant structural change over the last fifteen years. The market has been dominated by Djibouti, Sudan, Egypt and Kenya during the same period. Swaziland and Uganda are also frequent destinations of Ethiopia's exports. Recently, Sudan has become the major export destination replacing Djibouti from 2007 onwards by virtue of the Free Trade Agreement signed between Ethiopia and Sudan (Table 5.1).

Table 5.1: Ethiopia's Top Five COMESA Export Destination Countries (1997-2012)

No.	1997		1998		1999		2000	
1	Djibouti	63%	Djibouti	82%	Djibouti	78%	Djibouti	85%
2	Kenya	21%	Egypt	17%	Egypt	21%	Egypt	11%
3	Egypt	12%	Rwanda	1%	Kenya	1%	Kenya	3%
4	Uganda	2%	Sudan	0.20%	Sudan	0.20%	Sudan	1%
5	Mauritius	1%	Burundi	0.10%	Zimbabwe	0.04%	Uganda	0.04%
	2001		**2002**		**2003**		**2004**	
1	Egypt	50%	Djibouti	87%	Djibouti	91%	Djibouti	44%
2	Swaziland	31%	Egypt	7%	Sudan	5%	Sudan	33%
3	Kenya	12%	Sudan	4%	Egypt	2%	Swaziland	10%
4	Sudan	7%	Swaziland	2%	Swaziland	1%	Egypt	5%
5	Uganda	0.02%	Burundi	0.06%	Kenya	1%	Kenya	3%
	2005		**2006**		**2007**		**2008**	
1	Djibouti	63%	Djibouti	65%	Djibouti	48%	Djibouti	35%
2	Egypt	17%	Sudan	19%	Sudan	40%	Sudan	51%
3	Sudan	12%	Egypt	10%	Egypt	6%	Egypt	9%
4	Swaziland	4%	Kenya	3%	Kenya	4%	Kenya	3%
5	Kenya	3%	Swaziland	2%	Swaziland	1%	Swaziland	1%
	2009		**2010**		**2011**		**2012**	
1	Sudan	52%	Sudan	58%	Sudan	58%	Sudan	44%
2	Djibouti	34%	Djibouti	22%	Djibouti	23%	Djibouti	31%
3	Egypt	10%	Egypt	18%	Egypt	15%	Egypt	16%
4	Kenya	3%	Kenya	1%	Kenya	4%	Libya	4%
5	Swaziland	1%	Uganda	1%	Swaziland	1%	Kenya	4%

Source: Ethiopian Revenue and Customs Authority

5.4.1.4.2 Import Markets

Like its export markets, the major origins of Ethiopia's import in COMESA are Djibouti, Egypt, Kenya, Sudan, Swaziland, and Uganda. Djibouti, Egypt and Kenya were the top import trading partners in the period 1997-2012. Nevertheless after the FTA between Ethiopia and Sudan in 2008, Sudan has replaced Djibouti

as the major origins of import for Ethiopia within COMESA mainly due to large imports of fuel (Table 5.2).

Table 5.2: Ethiopia's top five COMESA Import Origin Countries (1997-2012)

No.	1997		1998		1999		2000	
1	Djibouti	18%	Djibouti	14%	Djibouti	11%	Djibouti	8%
2	Eritrea	4%	Egypt	26%	Egypt	41%	Egypt	38%
3	Kenya	67%	Eritrea	8%	Kenya	38%	Kenya	48%
4	Seychelles	5%	Kenya	43%	Swaziland	4%	Swaziland	4%
5	Swaziland	4%	Sudan	4.91%	Zimbabwe	2.87%	Zimbabwe	0.57%
	2001		**2002**		**2003**		**2004**	
1	Djibouti	23%	Djibouti	26%	Djibouti	29%	Djibouti	9%
2	Egypt	40%	Egypt	34%	Egypt	33%	Egypt	38%
3	Kenya	29%	Kenya	24%	Kenya	25%	Kenya	21%
4	Sudan	2%	Libya	9%	Sudan	7%	Sudan	17%
5	Swaziland	4%	Swaziland	4.06%	Swaziland	2.56%	Zimbabwe	6.00%
	2005		**2006**		**2007**		**2008**	
1	Kenya	18%	Kenya	22%	Sudan	14%	Mauritius	1%
2	Djibouti	3%	Burundi	3%	Egypt	60%	Egypt	33%
3	Egypt	39%	Egypt	36%	Kenya	18%	Kenya	10%
4	Sudan	33%	Sudan	34%	Swaziland	7%	Sudan	50%
5	Swaziland	4%	Swaziland	4%	Uganda	0.40%	Swaziland	4.76%
	2009		**2010**		**2011**		**2012**	
1	Sudan	38%	Sudan	42%	Sudan	53%	Sudan	29%
2	Egypt	38%	Egypt	39%	Egypt	31%	Egypt	45%
3	Kenya	17%	Kenya	12%	Kenya	13%	Kenya	17%
4	Swaziland	7%	Swaziland	6%	Swaziland	3%	Swaziland	8%
5	Uganda	0.30%	Uganda	0.40%	Uganda	0.10%	Zimbabwe	0.10%

Source: Ethiopian Revenue and Customs Authority and own computations

5.4.1.5 Major Exported and Imported Items

Like any other export destinations, the exports to COMESA were primary agricultural products. The major items exported from Ethiopia to COMESA market have been live animals (camels, ox, and sheep), coffee, broad and kidney beans, ginger, sesame seeds and chipped wood. Export items of live animals (camels and oxen) took the leading position in the past three years. In 2012, camels, oxen, and coffee constituted about 18.9, 15.8 and 9.8 percent, respectively (Table 5.3).

Table 5.3: Major Exported items, as percentage of the total COMESA Exports

Description	Share in total COMESA exports		
	2010	2011	2012
Camels	14.46	10.08	18.89
Dried broad beans and horse beans, shelled	12.74	8.28	8.37
Oxen	12.74	26.61	15.75
Coffee, not roasted, not decaffeinated	7.78	9.36	9.8
Ginger	5.35	5.92	4.33
Sesame seeds	2.14	3.87	2.27
Preparations for use on the hair	0.94	1.19	1.18
Other tropical wood sawn or chipped lengthwise of thickness>6mm	0.55	1.37	1.26
Dried kidney beans, incl. white pea beans, shelled	1.43	3.17	4.58
Live Sheep	0.34	0.88	2.65
Other Products	41.53	29.26	30.93
Total	100	100	100

Source: ERCA and own computations

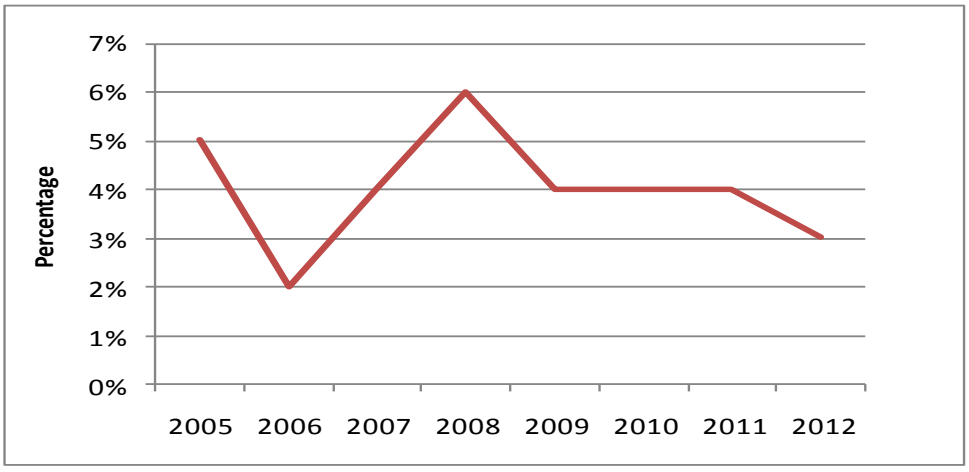
In terms of the structure of imports, like all other imported items from the rest of the world, almost all the top items imported from COMESA into Ethiopia are manufactured goods. Although the top items imported from COMESA vary from

year to year, the major items include; Food items, Tobacco, Fuels, Chemicals and Wires and Cables (see Annex 5.1).

5.4.2 Tariff Revenue on COMESA Imports

The loss of tariff revenue due to the elimination of tariffs on imports from FTA member countries is the major concern for countries like Ethiopia which receive much of their revenue from foreign trade taxes, mainly imports. Given the 10% preferential margin, the tariff revenue collected from imports originating from COMESA has never exceeded 6 percent during the period 2005-12. In 2012, where the highest COMESA imports were recorded, the share of tariff revenue collected from COMESA imports as a percentage of total customs revenue was only 3 percent. This shows that joining the COMESA FTA would mean losing a small percentage of the total customs revenue per year. This, however, is reinforced by welfare losses by domestic producers and others (Figure 5.3).

Figure 5.3: Tariff Revenue from COMESA Imports to total Customs Revenue, share in %



Source: EEA Database

5.4.3 Infrastructure Network

Of the factors hampering the boosting of regional integration in Africa, lack of or low interconnectedness among neighboring countries is the major one. This increases the transport and hence transaction costs. According to ADB (2010), transport cost in Africa is among the highest in the world due to inadequate and poor quality of roads, railways and numerous roadblocks and border restrictions. It is even higher in COMESA region since many of the countries in the region are landlocked.

This in turn has played a great role, besides other structural problems, in limiting the trading possibility among neighboring African countries. Ethiopia's trade with its neighbors is likely to expand in the near future since various infrastructure projects aimed at connecting Ethiopia with its neighbors are under implementation and will start operations in a few years.

In the next sections, attempts are made to present Ethiopia's infrastructure network with its neighboring countries, which are also members of COMESA.

5.4.3.1 Road

Road is a major critical infrastructure. Cognizant of its importance, efforts were made to connect all African regions, of which the Trans African Highway project is a case in point. The objective of the project was establishing a network of all weather roads of good quality, which would a) provide as direct routes as possible between the capitals of the continent, b) contribute to the political, economic and social integration and cohesion of Africa and c) ensure road transport facilities between important areas of production and consumption(ADB, 2003).

Ethiopia has a good road network with Djibouti, Eritrea, Sudan, and Kenya. New projects are also underway to link the country to the South Sudan and increase the link by constructing new roads and improve the quality of existing roads which link to all neighboring countries except Eritrea.

In addition to the existing road through Mile- Djibouti, the country is set to upgrade the current gravel road which runs from Dire Dawa to Dewale to concrete asphalt. There is also Assosa-Metema concrete asphalt road which connects another Sudanese border town, Gedarif. The Gambella-Etang -Gikawe road connects South Sudan to Ethiopia and is slated for completion in June 2013. The Jigjiga-Togochale road which connects Ethiopia with the self-declared Republic of Somaliland is critical in offering an opportunity to effectively use the port of Berbera.

Ethiopia is also constructing a series of roads which will connect it to Kenya, especially to its port city of Mombassa. A road project stretching from Hawassa, the capital of SNNPR to the Ethiopian border town of Moyale and Mega-Moyale asphalt road are underway. Moreover, Ethiopia, Kenya and South Sudan inaugurated a road project which connects the future port of Lamu in Kenya to both South Sudan and Ethiopia.

5.4.3.2 Railway

Railway plays a vital role in transporting goods, especially bulky goods, at cheaper prices over a long distance compared to road and air transport. Ethiopia used to have railway connection with Djibouti but ceased to operate since recently. Cognizant of the importance of rail transport for the development of the competitiveness of the economy, the GTP has designed to construct railway networks which connect Ethiopia with its neighboring countries, especially Djibouti, Sudan and Kenya. Part of the plan is to rebuild the non-functioning 656 km railway connecting Addis Ababa to the red sea port of Djibouti. The railway

connecting Ethiopia with Lamu, the new port of Kenya, and Juba, the capital of the Republic of South Sudan is also part of the plan. When completed, these railway networks are believed to significantly reduce the cost of transport between Ethiopia and its neighboring countries and by extension other COMESA member countries. Hence, trade will increase between Ethiopia and its COMESA member neighbors.

5.4.3.3 Airline

Currently, the Ethiopian Airlines provides services to 11 of the 19 COMESA member states including, Burundi, D.R. Congo, Djibouti, Egypt, Kenya, Malawi, Seychelles, Sudan, Zambia and Zimbabwe. However, it provides only cargo services to Burundi, D. R. Congo, Egypt, Sudan, Zambia and Zimbabwe.

5.4.3.4 Electricity

Ethiopia is endowed with abundant hydroeclectic power generation potential. Hence, by investing in the sector, it can export energy to neighboring countries. In this regard, the (GTP) has targeted to increase the power generation capacity from the present level of 2000 megawatts to 10,000 megawatts by 2014/15. The aim is to meet the growing local demand and generate foreign exchange by exporting energy to neighboring countries.

Trade in electricity service is considered as a stable source of foreign currency. Ethiopia has started supplying power to Djibouti and the Sudan, and with additional multi-million dollar agreements, it is intended to supply Kenya and South Sudan.

Ethiopia has started exporting 200 megawatts of hydroelectric power to Djibouti since 2011. The interconnection with Sudan has started exporting 200 megawatts in 2012. The construction of the Ethiopia-Kenya interconnector is underway to

export 200 megawatts by 2016. The Ethiopia-Sudan-Egypt interconnector, part of the Nile Basin Initiative and the East African Power Pool, is due to start operation by 2016 (Ministry of Water and Energy, 2012).

5.5 Advanced Countries in COMESA Bloc

Over the last decade and a half, Ethiopia has been shying away from joining COMESA-FTA, mainly on account of its low competitiveness compared with some advanced COMESA member countries. Comparisons based on the level of economic development, industrial development level, and competitiveness index, share of manufacturing sector in GDP and exports, and market share in COMESA show that Kenya and Egypt are relatively advanced countries in the bloc.

Of the total exports of Kenya, about 31 percent found their way into COMESA markets in 2011 thereby depicting how big the share of Kenya is in COMESA. Kenya exports both agricultural products and manufactured goods. It is one of the top exporters of tea, vegetables, fruits, tobacco and manufactured goods. It is also one of the leading exporters of Portland cement, petroleum oils, soaps and manufactured tobacco in the market (COMSTAT database).

Kenya's top three COMESA export destination countries are Uganda, Egypt and Sudan in order of importance. In 2011, for instance, the major exports of Kenya included tea, petroleum products, Portland cement, cigarettes and manufactured tobacco. Ethiopia stood 9th in the rank of export destination countries for Kenyan products, of which petroleum oils, ball point pens, rolled iron and steels, and cigarettes and tobacco were the major items.

Egypt exports both agricultural and manufactured products to COMESA and the rest of the world. The major export items include fuel and natural gas, copper, gold, textiles, live animals, sugar and sesame seeds. In 2011, it had the largest COMESA market share after Kenya and was the leading exporter of different

products such as fuel, gold, nickel, tobacco and fruits and vegetables. Egypt's top three export destinations within COMESA were Libya, Sudan and Kenya. Similarly its three top import origins were Zambia, Kenya and Libya.

Major imports of most COMESA members are manufactured goods, and exports are agricultural products. For instance, for Kenya in 2011 out of the top ten intra-COMESA imports seven of them were manufactured goods, and from that of extra-COMESA imports eight were manufactured goods. Egypt, Libya and Sudan are the only members whose major export is non-agricultural, as they are endowed with fuel and natural gas. This shows that the structure of imports and exports within COMESA are more or less the same except for Egypt, Libya and Sudan.

The threat to the Ethiopian economy emanates from the local consumers' choosing of cheaper and better quality items from COMESA member states, mostly Kenya and Egypt. The World Bank Competitiveness index shows that Kenya and Egypt have higher competitiveness compared to Ethiopia implying better comparative advantage in the production and export of the products that Ethiopian industries produce. Thus, if FTA prevails, those local producers which are clinging to survive under the current tariff protection regime will undoubtedly closedown leading to de-industrialization of the already meager industrial base.

5.6 Concerns of the Private Sector

Generally, the private sector of any country produces goods and services which are either exported or consumed domestically. The goods and services can be tradable and non-tradable. Private sectors can also be categorized as exporters, import competing producers of tradable goods and services and producers of non-tradables.

Owing to their specific interests, different groups react to liberalization differently. For instance, exporters tend to support for the FTA since the

removal of trade barriers (tariffs and non-tariff barriers alike) opens up new export markets or make their products cheaper on existing export markets in the region. Exporters, as well as others intending to export in the future, therefore have an interest in promoting FTA.

Conversely, the import competing sector will be affected negatively when tariffs or other means of protection are lowered and imports become relatively cheaper for domestic consumers. Import competing companies, therefore, have an interest to stand against trade liberalization. Finally, producers of non-tradable are not affected. In fact, it might well be that import competing producers which rely only on imported materials would gain in competitiveness if inputs get cheaper as a result of tariff liberalization. Generally, companies with a higher share of imported inputs for production tend to benefit from FTA.

The concern of the private sector regarding COMESA-FTA emanates from its weak position to compete with import and its lack of support to develop its capacity. Hence there is the danger of being driven out of the domestic market due to the possible surge of cheaper and better quality imports from FTA members, especially from the advanced ones. The trade creation effect of the FTA will come into play by shifting demands to less expensive and more efficient imports at the expense of local products. This, in turn, will drive out import substituting firms. These firms are dominated by largely labor intensive light manufacturing industries which produce basic consumer goods and cater for the domestic market. These firms are such to be failing to fully meet the domestic demand, let alone move to export markets.

In a recent unpublished study commissioned by MOFED, it is indicated that private sector, in particular the manufacturing sector is immature for the COMESA-FTA market for it is less competitive both at regional and international market places.

5.7 Concluding Remarks and Recommendations

5.7.1 Concluding Remarks

Ethiopia is the least integrated country among COMESA member states, offering a preference margin of only 10 percent for goods originating from COMESA member countries.

The share of tariff revenue on imports emanating from COMESA member countries are very small in terms of the shares of total customs revenue and GDP. Therefore, the revenue loss of joining COMESA-FTA would be small unless a significant volume of import starts to flow into Ethiopia due to FTA.

Despite the low tariff preference margin, the volume of trade has been growing remarkably over the last fifteen years. During the last couple of years, the trade balance between Ethiopia and COMESA member states turned in favor of Ethiopia indicating its good performance in the COMESA market.

Ethiopia has a good road network with its neighboring countries. Moreover, it is increasing the quantity and quality of roads linking it to its neighbors since recently. Besides its role in reducing transport costs and hence boosting the trade between Ethiopia and its neighboring countries, the network will give the landlocked country access to alternative ports.

Examination of items that Ethiopia imports from COMESA markets and produces locally shows great similarity. Thus, trade creation due to the FTA could adversely affect the already weak local manufacturing industries.

The challenges hindering Ethiopia from joining COMESA-FTA a decade and half ago have not ceased to be a challenge. Moreover, the sector that was considered vulnerable for FTA before fifteen years, the domestic manufacturing industries, is still considered to be vulnerable. This shows that a concerted effort has not been made so as to improve the competitiveness of the vulnerable sector.

There are both benefits and costs regarding COMESA-FTA. Of the adverse effects of the COMESA-FTA on Ethiopia, the major concern is the undesirable impacts on the domestic vulnerable sectors, particularly the manufacturing industries.

5.7.2 Recommendation

- The poor competitiveness of the industrial sector, which was the case fifteen years ago, is still there unaddressed. This should not continue. Thus, there should be a real commitment with sufficient budget to develop the competitiveness of the manufacturing sectors in which the country has a comparative advantage.
- Strengthen the competitiveness of the sectors with the potential to make it to the global market by providing the most attractive incentives which should be conditional on the registered performance of the receiving firms.
- Design and implement a manufacturing industries' competitiveness development program by undertaking an in-depth study on the manufacturing sector of the country. To this end, special sector-specific steering and technical committees should be established at various levels of government to monitor the implementation of the program.
- Since loss in tariff revenue due to COMESA-FTA is small, partly due to insignificant share of imports from COMESA member countries, it is recommended to join COMESA –FTA by eliminating tariff gradually.
- Given existing globalization, it is recommended to join COMESA-FTA for it will help the country to reallocate resources to areas in which it has comparative advantage and efficient industries, and serve it as a stepping stone towards the global FTA and competition.
- Most countries join FTAs with benefits and costs. Ethiopia is no exception. Thus, it is preferable to join COMESA FTA and work hard to realize the benefits and minimize the costs.

Chapter Six

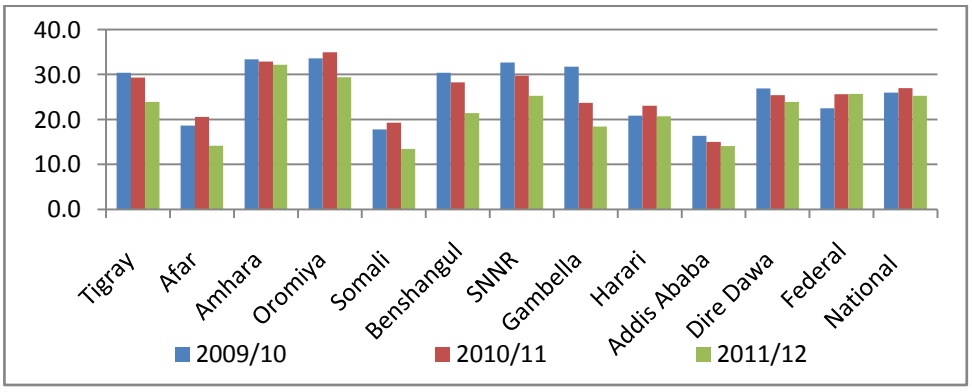
Performance of the Social Sector

6.1 Education

6.1.1 Development in Education Budget

Education is one of the priority sectors identified by the government; hence it has been allocated around 25 percent of the national budget. In addition to this relatively higher share of budget at national level, the sector has been given above 30 percent of the budgets of the regions of Amhara and Oromiya. Even though the sector received about 30 percent of the budgets of Tigray, Benishangul Gumuz and Gambella in the fiscal year 2009/10, these shares dropped in the subsequent years to below 25 percent for Tigray, above 20 percent for Benishangul Gumuz, and about 15 percent for Gambella in the year 2011/12. In the immediate past budget year, 2011/12, Afar, Somali and Addis Ababa seem to have allocated below 15 percent to the education sector, which is the lowest.

Figure 6.1: Share of Education in Budget Allocation of Regions and the Federal Government



Source: Several Issues of Education Statistics Annual Abstract

6.1.2 Pre-Primary Education

Pre-Primary Education consists of programs for children between the ages of four and six that prepare them for grade one. It is composed of three different parts, namely kindergarten, "0" class and child-to-child programs. Kindergarten is more formal having its own curriculum, trained teachers and administrative staff. Kindergarten is mostly offered by non-government organizations like the private sector, faith-based organizations and communities (for instance 94 percent of the enrollment in 2011/12 in kindergarten is in non-government providers) MoE (2012).

The second type of pre-primary education was the "0" class system for children of age 5-6 who do not have access to kindergarten. The system was introduced in the past few years along with the child-to-child program. In the "0" class program selected primary teachers coach children to make them ready for 1st grade. The third type, child-to-child program involves older brothers and sisters (young facilitators of 5th or 6th graders) to playfully teach their younger siblings and neighborhood children how to count, differentiate color and identify letters (MoE 2012).

The enrollment in kindergarten has increased by about eight percent on average in the last three academic years. Even though there is a slight increase in the kindergarten enrollment, the proportion of children who have access to it is very limited. As can be seen from the gross enrollment ratio (GER), the number of all children enrolled in kindergarten account for only less than 6 percent of the total population in the age group of 4-6 years. This shows that most Ethiopian children do not have access to kindergarten. Further disaggregation of the data by region shows that there is a significant discrepancy between them. More urbanized areas like Addis Ababa, Dire Dawa and Harari have higher GER than other areas. Especially Addis Ababa has a GER ranging between 85 and 88.5 percent over the

period 2009 to 2012. Dire Dawa follows Addis Ababa with a range of 23 - 29.7 percent while Harari follows Dire Dawa with a range of 15.3 – 18.5. This coupled with the fact that most of the kindergarten services are being provided by non-government providers, leads to speculation that kindergartens might be concentrated in urban areas. The Ministry of Education should take this into consideration while compiling its annual statistical abstracts and generate data disaggregated by rural-urban classifications to help researchers and policy makers to look deeply into the issue.

Table 6.1: Enrollment in Kindergarten

Academic Year	School Age Population (4-6)			Pupils (Enrollment)			Gross Enrollment ratio		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
2009/10	3,625,708	3,502,172	7,127,880	175,576	165,738	341,314	4.8	4.7	4.8
2010/11	3,719,863	3,593,199	7,313,061	197,671	185,070	382,741	5.3	5.2	5.2
2011/12	3,819,645	3,689,353	7,508,999	205,269	192,592	397,861	5.4	5.2	5.3

Source: Several Issues of Education Statistics Annual Abstract

Table 6.2 below presents the composition of teachers by gender and status of training. Overall, the number of female teachers seems to be greater than that of male in kindergartens. The national average for pupil-teacher ratio ranges between 35 and 27, which is not a bad number by itself. The proportion of trained teachers do not seem to have a clear trend in the past three years. It is high at 85.6 percent during 2009/10 but it dropped to 37.1 percent during 2010/11. This happened due to the increase in the number of untrained female teachers. In 2011/12 this number increased to 94.7 when the number of male untrained teachers dropped to nil.

Table 6.2: Kindergarten Teachers

Academic Year	Teachers						Percentage trained	Pupil Teacher Ratio	No. of Kindergarten
	Trained		Untrained		Total				
	Male	Female	Male	Female	Male	Female			
2009/10	547	7,770	1.363	32	1.910	7.802	85.64	35	*
2010/11	544	4.637	3.655	5.127	4.199	9.764	37.11	27	3.418
2011/12	704	11.115	-	661	704	11.776	94.70	32	3.580

Source: Several Issues of Education Statistics Annual Abstract

* Data not available for this year

The government devised the "0" class and child to child programs to improve access to pre-primary education (MoE 2012). Data for these programs is available only for the academic year 2011/12. In terms of GERs, "0" class performs well while the child to child program performs less as compared to kindergartens. Regional disaggregation of the data shows that SNNPR and Harari have the highest GER for "0" class standing at 26.5 and 26.4, respectively. Tigray follows these two with GER of 17.9. For the case of child to child program, Tigray tops the list with a GER of 24 followed by Harari with 14.9.

Table 6.3: Enrollment in Pre-Primary Programs in Academic Year 2011/12

Program	Enrolment			Gross Enrollment Rate		
	Male	Female	Both	Male	Female	Both
"0" Class	539,008	492,143	1,031,151	14.1	13.3	13.7
Child to Child	100,624	93,126	193,750	2.6	2.5	2.6
Kindergarten	205,269	192,592	397,861	5.4	5.2	5.3
Pre-Primary	844,901	777,861	1,622,762	22.1	21.1	21.6

Source: Several Issues of Education Statistics Annual Abstract

The pre-primary GER of 21.6 percent includes all pupils enrolled in all the three programs. The GER for the previous year, 2010/11, stood at 5.2 percent. The reason for this big jump within a year is caused by the inclusion of "0" class and child to child enrolments to this category. In other words, the report for 2010/11 considered kindergartens only while that of 2011/12 includes kindergarten, "0" class and child to child program (MoE 2012). The growth and transformation plan (GTP) of the Ethiopian government for the period of 2010/11 – 2014/15 aspires to increase the pre-primary GER to 20 from its baseline of 4.2 (MoFED 2010).

6.1.3 Primary Education (grades 1-8)

The primary education of Ethiopia is structured in two-four year cycles, the first covering grades 1-4 and the second the remaining grades 5-8. Universal access to primary education is one of the millennium development goals (MGDs) of the United Nations (UN). The Ethiopian government has been exerting efforts to meet this goal by or sooner than 2015.

Table 6.4: Enrollment of Students in Primary Schools (Grades 1-8)

Year	Total			
	Regular			
	Male	Female	Total	% Female
2009/10	7,677,844	6,950,245	14,628,089	47.51
2010/11	8,232,867	7,470,529	15,703,396	47.57
2011/12	8,372,407	7,708,768	16,081,175	47.94
	Evening			
2009/10	88,924	105,449	194,373	54.25
2010/11	93,180	111,341	204,521	54.44
2011/12	80,124	96,255	176,379	54.57

Source: Several Issues of Education Statistics Annual Abstract

Enrollment at primary level has shown an increasing trend in the past three years. Participation of girls at this stage is close to 50 percent for regular programs and even slightly higher than 50 percent for evening programs. But it should be noted that the evening programs enroll less than two percent of the number of students in regular programs.

Focusing only on the academic year 2011/12, the rural-urban distribution of enrollment at primary level seems to be closer to the population distribution between rural and urban areas. According to PCC (2008), 84 percent of the Ethiopian population lives in rural while the remaining 16 in urban areas. The enrollment at primary level is around 80 percent in rural and about 20 percent is urban areas. The distribution for boys and girls is also similar; 80.9 percent of the boys and 79.4 percent of the girls are enrolled in rural areas while 19.1 percent of the boys and 20.6 percent of the girls are enrolled in urban centres.

The Net Enrollment Ratio (NER) shows increment over the last three consecutive academic years. The NER for the first cycle of primary education (grades 1-4) particularly seems closer to what is set out to be achieved by 2015 by the Millennium Development Goals (MGDs). The second cycle, on the other hand, seems to lag far behind with less than 50 percent. The gender parity between boys and girls seems reasonably close for this level based on the NER.

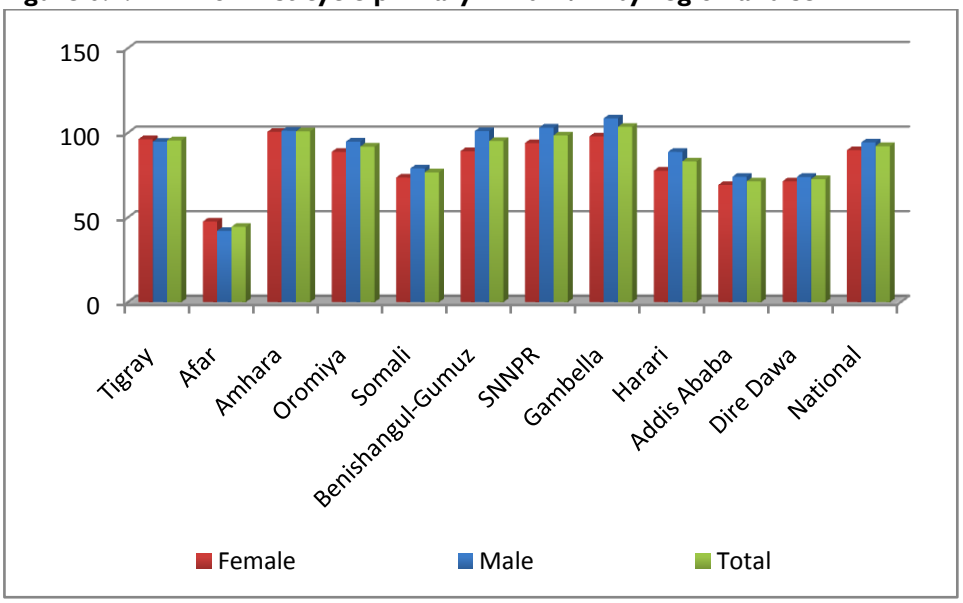
Table 6.5: Net Enrollment Ratio (NER) at Primary Schools

Academic Year	Grade 1-4			Grade 5-8		
	Male	Female	Total	Male	Female	Total
2009/10	88.2	84.9	86.6	46	46.9	46.4
2010/11	94	89.4	91.8	46.6	47.9	47.3
2011/12	94.4	89.8	92.2	47	49.2	48.1

Source: Several Issues of Education Statistics Annual Abstract

Figures 6.2 and 6.3 show the NER for first and second cycle primary education for the academic year 2011/12 by region. In the first cycle most regions have NER of above 80 percent with the exception of Afar, Somali, Addis Ababa and Dire Dawa. Afar performs exceptionally low with NER of about 50 percent for both boys and girls.

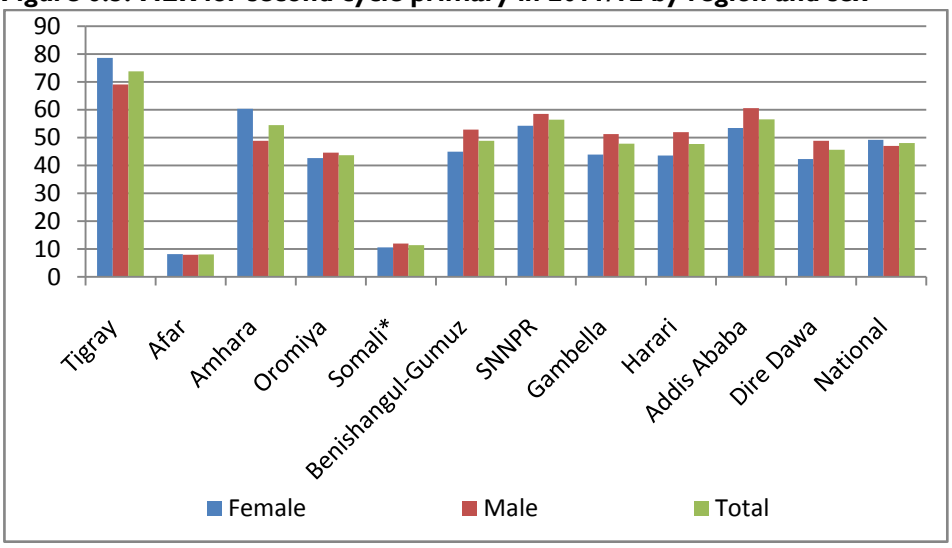
Figure 6.2: NER for first cycle primary in 2011/12 by region and sex



Source: MoE (2012) of Education Statistics Annual Abstract

In the second cycle on the other hand, most regions have NER of about or less than 50 percent. In this case, Tigray performs better than most regions with NER of above 70 percent. Afar and Somali, on the other hand, perform very low with NER of below 10 percent.

Figure 6.3: NER for second cycle primary in 2011/12 by region and sex



Source: MoE (2012) of Education Statistics Annual Abstract

6.1.4 Secondary Education (grades 9-12)

Like that of the primary education, secondary education is also divided into two cycles. The first two years, grades 9 and 10, are general secondary education while the remaining two, grades 11 and 12, are preparatory programs for those students who are expected to pursue higher education in colleges and universities.

The visible trend over the last three academic years in the enrollment of students in secondary education is the drop in the number of students enrolled at this level in private schools. The number of enrolled male students in the regular program fell by about half between the academic years 2009/10 and 2010/11 while that of female students fell by about one third in the private schools. For most of the remaining part of the Table 6.6, the figures are reasonably similar with a slight increase from one year to another.

Table 6.6: Enrollment in Secondary Education

Academic Year	Government			Private			Total		
	Male	Female	Both	Male	Female	Both	Male	Female	Both
Regular									
2009/10	868,575	636,125	1,504,700	84,459	66,706	151,165	953,034	702,831	1,655,865
2010/11	910,849	709,955	1,620,804	42,787	43,444	86,231	953,636	753,399	1,707,035
2011/12	894,634	741,039	1,635,673	46,346	46,739	93,085	940,980	787,778	1,728,758
Evening									
2009/10	17,082	14,679	31,761	3,758	3,329	7,087	20,840	18,008	38,848
2010/11	18,988	16,137	35,125	4,026	3,653	7,679	23,014	19,790	42,804
2011/12	16,239	14,848	31,087	3,097	2,986	6,083	19,336	17,834	37,170

Source: Several Issues of Education Statistics Annual Abstract

When we look at the contribution of the private sector in this program, it is noticeable that the sector is contributing only a little. In the regular program the private sector enrolled about 9.13 percent of the students in 2009/10. For the following two consecutive academic years this share has dropped to 5.05 percent in 2010/11 and 5.38 percent in 2011/12. This drop is in line with the observation above, the fact that private enrollment has dropped after 2009/10. Most importantly, the private sector has accounted for less than 10 percent of secondary enrollment in Ethiopia in the past three academic years.

The case is a little better for the evening programs. In the three year period under consideration the private sector enrolled 18.24 percent in 2009/10, 17.94 in 2010/11 and 16.37 in 20011/12. There is a decreasing trend here as well but it is not as dramatic as what has been noticed in the regular program.

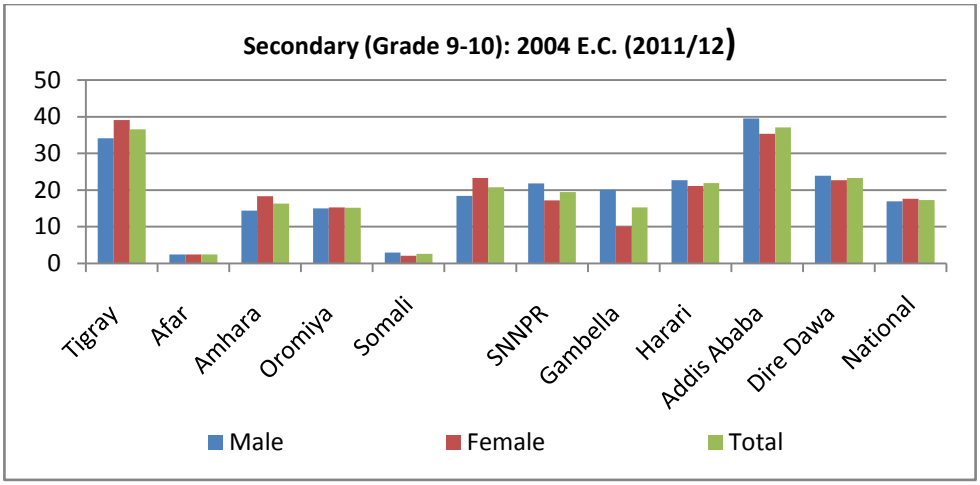
Despite achievements in the primary education, the Net Enrollment Ratio (NER) for secondary level education remains disturbingly low. The NER for the first cycle of the secondary education is between 16 and 17 percent. This means that only less than 17 percent of the population who are supposed to be in secondary school are actually attending at this level. The NER for the second cycle of high school, also known as the preparatory program, goes even below 5 percent. We can see that it has doubled from 2009/10 to 2011/12; but these numbers still remain low.

Table 6.7: Net Enrollment Ratio for Secondary Education

Academic Year	Secondary (Grade 9-10)			Secondary (Grade 11-12)		
	Male	Female	Total	Male	Female	Total
2009/10	16.8	16.1	16.4	2.7	2	2.4
2010/11	16.4	16.2	16.3	4.5	3.9	4.2
2011/12	16.9	17.6	17.3	5	4.6	4.8

Source: Several Issues of Education Statistics Annual Abstract

Figure 6.4: NER for first cycle secondary education in 2011/12 by region and sex

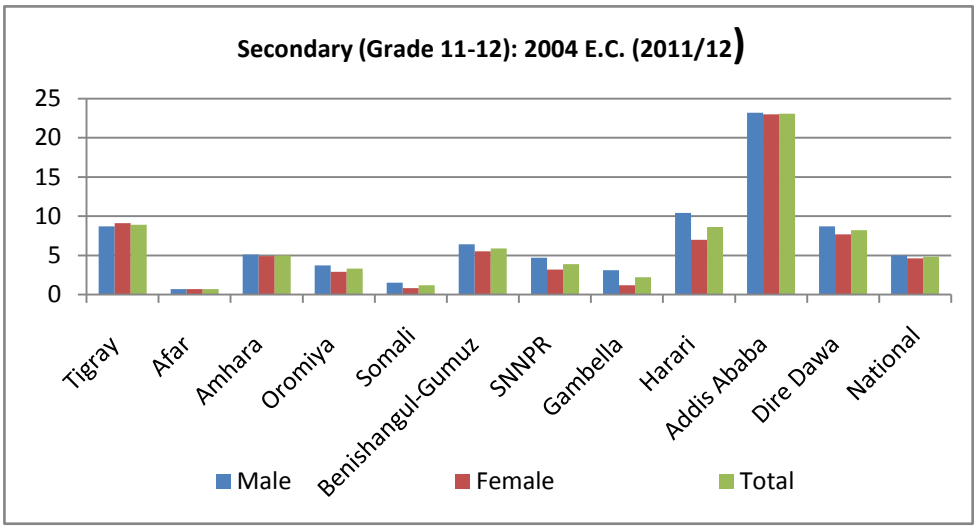


Source: MoE (2012) of Education Statistics Annual Abstract

Figure 6.5 below shows the regional and gender distribution of secondary NER for the two cycles. As can be seen from the graph, Tigray and Addis Ababa did relatively well with regard to their NER in the academic year of 2011/12. All the remaining regions remained below 25 percent. The NER for Afar and Somali are exceptionally low as compared to the other regions.

For the case of the preparatory enrollment (grades 11 and 12), Addis Ababa performed visibly well with NER of above 20 percent while all the remaining regions achieve NER of below 10 percent

Figure 6.5: NER for second cycle secondary education in 2011/12 by region and sex



Source: MoE (2012) of Education Statistics Annual Abstract

Unlike primary education, secondary enrollment is biased towards urban areas. As can be seen from Table 6.8 the enrollments in urban areas are much higher than that of rural. In terms of percentage, 87 to 89 percent of regular secondary enrollments took place in urban areas. There is though, a slight drop over the

past three academic years (89.77 percent in 2009/10 and 86.96 percent in 2011/12) in the urban regular secondary enrollment. Almost all of the evening programs are in urban areas. Urban evening secondary enrollment accounts for 97 percent of the total of such enrollments. On average, female students account for 44 percent of enrollment in the regular programs and about 47 percent in that of the evening.

Table 6.8: Secondary Enrollment by Region and Sex

Academic Year	Urban			Rural		
	Male	Female	Both	Male	Female	Both
			Regular			
2009/10	847,116	629,568	1,476,684	101,544	66,820	168,364
2010/11	826,739	657,874	1,484,613	101,544	66,820	168,364
2011/12	816,076	686,652	1,502,728	124,632	100,794	225,426
			Evening			
2009/10	19,955	17,567	37,522	628	208	836
2010/11	22,020	19,457	41,477	1,029	378	1,407
2011/12	18,632	17,574	36,206	710	264	974

Source: Several Issues of Education Statistics Annual Abstract

6.1.5 Technical and Vocational Education and Training (TVET)

The Technical and Vocational Education and Training (TVET) program targets tenth grade graduates, school leavers, people who are in employment, school dropouts and marginalized groups in the labor market. The program focuses on developing marketable and entrepreneurial skills for those who participate in the program. The main objective of the program is to train middle level professionals in order to facilitate technology transfer and improve the country's competitiveness by large (MoE, 2012).

The enrollment of students in TVET programs by government institutions increased in the immediate past three academic years. Even if there is no significant change in the number of students in absolute terms, the proportion of students in government institutions increased from 44.7 to 70.6 between 2009/10 and 2011/12. The fact that the proportion of government enrollment in TVET increased despite the fact that the number of enrolled students decreased suggests that the role of the private sector is diminishing rather than that of the government increasing. Participation of female students on the other hand is close to that of male at around 46 percent.

Table 6.9: Enrollment in TEVE Programs

Academic Year	Government			Government + Non Gov			% Government		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
2009/10	85,914	71,624	157,538	196,526	156,191	352,717	43.72	45.86	44.66
2010/11	119,048	96,511	215,559	199,799	171,548	371,347	59.58	56.26	58.05
2011/12	110,938	96,499	207,437	155,328	138,425	293,753	71.42	69.71	70.62

Source: Several Issues of Education Statistics Annual Abstract

6.1.6 Higher Education

Higher education covers all post secondary education that lead to either an undergraduate degree (be it a three, four or more years program) as well as post graduate degrees of Masters and PhD (MoE, 2012). According to the information on the website of the Ministry of Education of Ethiopia, currently there are 31 public universities that are administered by the ministry. There are additional four public institutes that are currently being administered by other government bodies (institutes like Civil Service University, Defence University College, Kotebe College of Teachers' Education and Telecommunication and IT college).

The ministry is making preparations to take over the administration of these institutions soon (MoE, 2012b).

In addition to the public institutions, there are some 59 non-government institutions of higher education in the country spread out over different regions. Most of the private institutions are in Addis (38 out of 59) while Mekelle has 5, Hawassa 4, Bahir Dar 3, Shashemene and Ambo have 2 each. Dire Dawa, Harar, Yirgalem, Wolayita Sodo and Debre Birhan have one each.

Table 6.10: Higher Education Enrollment by Sex

Academic Year	Male	Female	Total	% Female
Regular				
2009/10	149,308	57,871	207,179	27.93
2010/11	165,371	62,317	227,688	27.37
2011/12	194,028	75,834	269,862	28.10
Evening				
2009/10	43283	20786	64069	32.44
2010/11	42814	20911	63725	32.81
2011/12	47,308	26,370	73,678	35.79
Summer (Kiremt)				
2009/10	51,407	14,618	66,025	22.14
2010/11	57,787	17,649	75,436	23.40
2011/12	66,086	19,610	85,696	22.88
Distance				
2009/10	62,760	20,354	83,114	24.49
2010/11	60,797	20,047	80,844	24.80
2011/12	45,264	19,610	64,874	30.23
Regular, Evening, Summer and Distance -First Semester				
2009/10	306,758	113,629	420,387	27.03
2010/11	326,769	120,924	447,693	27.01
2011/12	355,006	139,104	494,110	28.15

Source: Several Issues of Education Statistics Annual Abstract

In response to the growing demand for teaching staff at higher education institutions, the postgraduate programs of several public universities, especially the older ones, have expanded recently. In the past three academic years alone, the enrollment at postgraduate studies has increased by about 80 percent. The participation of women in such programs has also almost doubled in terms of its proportion over the three academic year period. Even though this achievement is remarkable, there remains a lot to be done to improve the participation of women in postgraduate studies in particular and higher education in general.

Table 6.11: Enrollment in Post-Graduate Programs

Academic Year	Male	Female	Total	% Female
2009/10	12,569	1,703	14,272	11.93
2010/11	17,368	2,782	20,150	13.81
2011/12	20,478	5,182	5,660	20.19

Source: Several Issues of Education Statistics Annual Abstract

One of the inputs of higher education, or any level of education for that matter, is the teaching staff. In line with the increased number of public universities, the number of teaching academic staff has kept increasing in the academic years under review. Similar trends can also be seen in the private sector as well. Even though the number has slightly dropped in 2010/11, the number of overall teaching staff has increased between 2009/10 and 2011/12.

Female teaching staff at higher education are still few, around 9.8 percent in public and 12.5 percent in private institutions on average. The fourth wave of the Education Sector Development Plan (ESDP – IV) has set the target for the proportion of female teachers at higher education to reach 20 percent by 2014/15 (MoE, 2010b). The role of expatriate academic staff has also continued to drop. This shows that the country has minimized its dependency on foreign instructors and has built the capacity to base its higher education system mainly on its own citizens.

Table 6.12: Teaching Staff at Higher Education

Academic Year	ETHIOPIAN		EXPATRIATE		TOTAL		% Fem.	% Expatriate
	Total	F	Total	F	Total	F		
Government								
2009/10	13,176	1,465	950	126	14,126	1,591	11.3	6.7
2010/11	15,255	1,286	631	110	15,886	1,396	8.8	4.0
2011/12	17,990	1,631	721	121	18,711	1,752	9.4	3.9
Private								
2009/10	1,553	187	28	12	1,581	199	12.6	1.8
2010/11	1,493	195	23	13	1,516	208	13.7	1.5
2011/12	2,082	224	29	14	2,111	238	11.3	1.4

Source: Several Issues of Education Statistics Annual Abstract

A very rough indicator of quality is Pupil-Teacher Ratio (PTR). PTR is difficult to measure at higher education level since it involves a number of part-time teachers and students taking courses on part-time basis. The values hereunder have been calculated to give us some idea of the indicator by taking all undergraduate enrollments and total number of full time teachers. Accordingly, there are 23.7 undergraduate students per university teacher. For policy purposes this indicator should be computed for specific institutions and/or regions of the country since it is possible for deviations from this number are quite possible depending on the location, experience, prestige and other aspects of different institutions of higher learning.

Table 6.13: Pupil-Teacher Ratio

Academic Year	Undergraduate Enrollment	Full Time Teachers	PTR
2009/10	420,387	15,707	26.8
010/11	447,693	17,402	25.7
2011/12	494,110	20,822	23.7

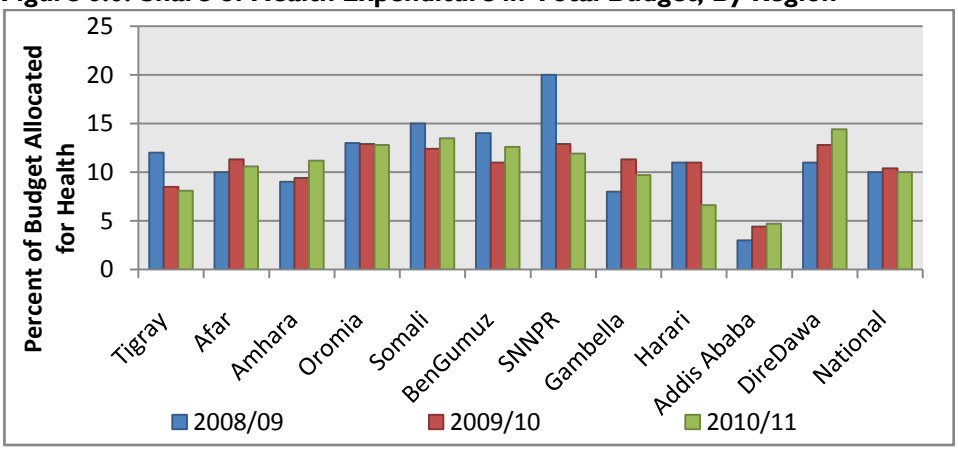
6.2 Health

6.2.1 Development in Health Sector Budgeting

The information used for the analysis of the performance of the health sector in Ethiopia is based on the annual statistical abstracts of the Ministry of Health. Since the latest available report is that of the year 2010/11, most of our analysis focuses on the three year period of 2008/09, 2009/10 and 2010/11. The health sector in Ethiopia gets some ten percent of the national budget. Looking at the different regions, Addis Ababa spends the least in terms of its share of health expenditure out of its total budget, which is below five percent. The share of expenditure on health for SNNPR had reached as high as 20 percent in 2008/09 but in the fiscal year 2010/11, it is Dire Dawa that has the highest expenditure share in the sector (close to 15 percent).

Per capita public expenditure on health is the average public expenditure on health per person per year. This expenditure includes all government expenditures on health, regardless of its source (revenue and direct budget support from donors). This indicator does not include out-of pocket spending of individuals. The federal government spent 30.7, 34.4 and 25.5 Birr per person in the years 2008/09, 2009/10 and 2010/11, respectively. The highest spending regions are Gambella, Harar and Dire Dawa. In line with the increasing trend of increased share of health spending as a proportion of its budget, Dire Dawa has increased its per capita health expenditure from 70.7 to 124.6 Birr during the three year period. On the other hand, expenditure of Harar has dropped from 132.2 to 79.3 Birr during the same period. For the remaining regions, the per capita spending ranges between 18.7 (Somali) and 60.1 (Addis Ababa) during the fiscal year 2010/11.

Figure 6.6: Share of Health Expenditure in Total Budget, By Region



Source: Own computation based on several issues of Health and Health Related Indicators of MoH

Table 6.14: Public Expenditure on Health Per Capita

Region	Health Expenditure per capita		
	2008/09	2009/10	2010/11
Tigray	40.4	41.9	32.8
Afar	47.7	32.2	36.5
Amhara	24.6	26.9	20.4
Oromiya	31.2	34.4	24.7
Somali	38.4	36.6	18.7
Benishangul Gumuz	53.9	70.8	56.8
SNNPR	4.9	29.4	20.2
Gambella	65.6	103.1	100.5
Harar	132.2	134.4	79.3
Addis Ababa	60.7	64.7	60.1
Dire Dawa	70.7	88.4	124.6
National	30.7	34.4	25.5

Source: Own computation based on several issues of Health and Health Related Indicators of MoH

6.2.2 Health Facilities

Health facilities play important roles in implementing the health policies of the government and improving the health status of the society. The number of publicly owned hospitals has slightly increased during the past three years. The noticeable change in this period is the fact that their numbers has almost doubled in Oromiya and Harar while for some reason it went down in the SNNPR.

Table 6.15: Number of Health Facilities by Region

Region	2008/09			2009/10			2010/11		
	Hospital	Health Center	Health Post	Hospital	Health Center	Health Post	Hospital	Health Center	Health Post
Tigray	13	70	538	14	170	552	14	183	552
Afar	3	23	238	4	28	251	4	50	272
Amhara	17	378	2,856	17	520	2,941	19	724	3,093
Oromiya	23	548	4,685	42	825	5,930	41	991	6,053
Somali	6	20	547	7	35	701	8	85	951
Benishangul Gumuz	2	24	235	2	29	291	2	30	339
SNNPR	22	248	3,238	16	463	3,340	20	513	3,603
Gambella	1	12	99	1	23	132	1	24	175
Harar	2	7	19	2	8	20	2	8	23
Addis Ababa	6	31	NA	10	26	NA	10	37	NA
Dire Dawa	1	14	33	1	15	34	1	15	34
National	104	1,375	12,488	116	2,142	14,192	122	2,660	15,095

Source: Own computation based on several issues of Health and Health Related Indicators of MoH

The number of health centers, at least doubled in Tigray, Afar, Amhara, Oromiya, Somali and SNNPR. This shows an increasing attention towards primary

healthcare. Given the demographics (more rural than urban) and the resource limitation this approach serves much of the society. At the lowest level of the system are the health posts that mainly focus on preventive care. The number of health posts has in all regions increased in the three years under review.

Table 6.16 presents the ratio of health facilities to population. Nationally speaking, a hospital served 669,031 people in the fiscal year 2010/11. The number dropped down to this from 1:748,195 in 2008/09. Some regions perform better than this number (for instance Tigray, Afar, Benishangul Gumuz and Dire Dawa have a ratio of 1 to less than 400 thousand while that of Addis Ababa and Harar are even below this). Others like Amhara, Oromiya and SNNPR have a much higher ratio indicating the shortage of hospitals in these regions.

Table 6.16: Hospital to population Ratio by Region

Region	Hospital		
	2008/09	2009/10	2010/11
Tigray	1:348683	1:331871	1:340168
Afar	1:491288	1:376572	1:384857
Amhara	1:1,047312	1:1082761	1:969200
Oromiya	1:1250283	1:704531	1:742648
Somali	1:778831	1:684926	1:614892
Benishangul Gumuz	1:355851	1:366526	1:377522
SNNPR	1:723984	1:1,024347	1:843242
Gambella	1:332599	1:346236	1:360431
Harar	1:96501	1:99010	1:101584
Addis Ababa	1:475744	1:291441	1:297561
Dire Dawa	1:360183	1:369187	1:378417
National	1:748195	1:688748	1:669031

Source: Own computation based on several issues of Health and Health Related Indicators of MoH

Health centers have relatively lower ratio of number of facilities to population. The national average is much lower than that of hospitals at 1:30,685 in 2010/11. Addis Ababa has the highest such ratio of one health center serving more than 80 thousand people. This could be due to the urban nature of the city and the higher concentration of other types of facilities like hospitals and private clinics. This number dropped almost by half from what it was in 2008/09. As indicated by their number, health posts have the lowest facility/ population ratio. On average one health post serves less than 5,500 people.

Table 6.17: Health Center and Health Post to population Ratio by Region

Region	Health Center			Health Post		
	2008/09	2009/10	2010/11	2008/09	2009/10	2010/11
Tigray	1:64755	1:27331	1:26024	1:8425	1:8,417	1:8627
Afar	1:64081	1:53796	1:30789	1:6193	1:6,001	1:5660
Amhara	1:47101	1:35398	1:25435	1:6234	1:6,259	1:5954
Oromiya	1:52475	1:35867	1:30725	1:6138	1:4,990	1:5030
Somali	1:233649	1:136985	1:57872	1:8543	1:6,839	1:5173
Benishangul Gumuz	1:29654	1:25278	1:25168	1:3029	1:2,519	1:2227
SNNPR	1:64224	1:35399	1:32875	1:4919	1:4,907	1:4681
Gambella	1:27717	1:15054	1:15018	1:3360	1:2,623	1:2060
Harar	1:27572	1:24752	1:25396	1:10158	1:9,901	1:10158
Addis Ababa	1:92079	1:112093	1:80422	NA	NA	NA
Dire Dawa	1:25727	1:24612	1:25228	1:10915	1:10,858	1:11130
National	1:56591	1:37299	1:30685	1:6231	1:5,630	1:5407

Source: Own computation based on several issues of Health and Health Related Indicators of MoH

6.2.3 Health Care Human Resources

6.2.3.1 Human Resource

The ratio of health professionals to population is very high in Ethiopia. If we consider all health professionals, including pharmacists and lab technicians, one professional serves about one to two thousand people. The shortage of medical doctors (general practitioners and specialists) is severe. In 2008/09 there was one general practitioner (GP) for more than 67 thousand people while there was one specialist for every 77 thousand people at national level. The number of such professionals has dropped and these ratios increased over the subsequent two years. The number of GPs was 816 in 2009/10 and 938 in 2010/11 decreasing from 1,151 in 2008/09. The number of specialists available in the country was 1,001 in 2008/09 and had dropped to 605 in 2009/10 and 606 in 2010/11.

Table 6.18: Distribution of Human Resource in the Health Sector*

Profession	2008/09		2009/10		2010/11	
	National	Ratio	National	Ratio	National	Ratio
General Practitioner	1,151	1:67,604	816	1:97,910	938	1:87,017
Specialist	1,001	1:77,735	605	1:132,058	606	1:134,689
Health Officer	1,606	1:48,451	3,096	1:25,806	3,702	1:22,048
All Nurses	20,109	1:3,870	26,423	1:3,024	29,550	1:2,762
Others	11,869	1:6,556	11,951	1:6,685	35,574	1:2,294
Total	35,736	1:2,177	42,891	1:1,863	70,370	1:1,160

Source: Own computation based on several issues of Health and Health Related Indicators of MoH

* The total does not include Health Extension Workers

In the case of nurses and health officers (HOs), the numbers have more or less increased during the three year period 2008/09 to 2010/11. Particularly, the

number of HOs has doubled during this period. The drop in the number of GPs and specialists accompanied by the rapid increase in the number of HOs indicate that there is a possibility of human capital flight in the former case and the government is exerting efforts to make up for it by rapidly training HOs to take over some of the jobs of medical doctors.

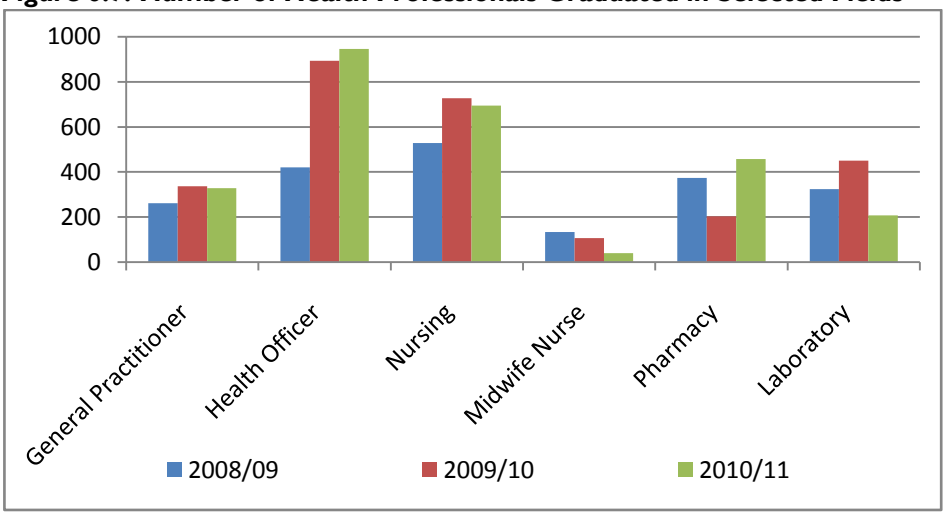
Health Extension Workers (HEWs) have increasingly become key players in the sector, particularly in the rural areas. The number of HEWs was less than three thousand in 2004/05 but this number has reached 30,578 in 2008/09; 30,995 in 2009/10 and 30,948 in 2010/11.

6.2.3.2 Output of Health Professionals Training Institutions

The county is trying to increase the number of trained professionals serving in the health sector by training a new work force to join the health service. The sector faces two challenges, very high health professional/population ratio and flight of the professionals away from the profession or even out of the country. The figure below shows the trend of graduates in some selected fields. The number of graduating doctors seems to be in an overall increasing trend. There is a big jump in the case of health officers (HOs), which seems in line with the hypothesis that the government is trying to quickly train HOs so that they can cover some of the tasks of doctors who are in very short supply.

The number of nurses graduating also shows an increasing trend. For the remaining three fields, midwifery, pharmacy and laboratory this increasing trend changes. In the case of midwifes, the trend seems to be on a decreasing trajectory while that of pharmacy and laboratory do not have a clear increasing or decreasing trend.

Figure 6.7: Number of Health Professionals Graduated in Selected Fields



Source: Own computation based on several issues of Health and Health Related Indicators of MoH

6.2.4 Indicators of Maternal and Child Health

Maternal and child health have been given due attention in a number of health policies and targets, including in the Millennium Development Goals (MGDs) have been set. Ethiopia has focused in improving the health of its population by focusing on preventive health care and child immunization is one aspect of this approach. The national coverage of full immunization of children under the age of one increased to 74.5 percent in 2010/11 from 65.5 percent in 2008/09.

In the fiscal year of 2008/09, Antenatal Care (ANC) coverage was 67.7 percent while the proportion of births attended by skilled professionals was only 18.4 percent. In the same year, there was a 34.3 percent coverage of postnatal care and 56.2 percent contraceptive acceptance rate (CAR) among non-pregnant women of reproductive age. Tigray and Addis Ababa had the highest ANC

coverage of about 100 percent. In the case of delivery with the attendance of skilled birth attendants, Addis Ababa has a 62.5 percent coverage followed by Harari with 46.9 percent. In the case of postnatal care, again Tigray and Addis Ababa perform better than the remaining regions, with 51.2 and 48.3 percent, respectively. Amhara closely follows them at 44.5 percent. CAR is higher in Dire Dawa and SNNP at 83.8 and 76 percent, respectively.

Similar figures for the year 2010/11 show that the national average for ANC coverage reached 82.2 percent with a coverage of 116.9 percent for Addis Ababa and 93 percent for Dire Dawa, of the expected pregnancies in that year. The proportion of births attended by skilled birth attendants fell to 16.6 percent in this year from 18.4 percent in 2008/09. Addis Ababa and Harari top this chart by reporting a coverage of 67.4 and 51.5 percent, respectively. The remaining regions trail from far behind. Postnatal care was reported to be 42.1 percent during 2010/11. In postnatal care, Dire Dawa has the highest coverage of 64.5 percent. Dire Dawa is followed by Tigray (47.2 percent), Amhara (45.9 percent), SNNPR (45.7 percent) and Oromiya (41.6 percent). Total contraceptive acceptance ratio (CAR) – both new and repeat- was reported to be 61.7 percent, with Amhara topping the list by 88.6 percent. SNNPR trailed with 70 percent which is closely followed by Tigray (66.7 percent) and Oromiya (61.7).

6.2.5 Trends in Disease Statistics

Single spontaneous delivery, pneumonia and malaria topped the chart of leading causes of hospital admission in the years 2008/09, 2009/10 and 2010/11, respectively. Single spontaneous delivery remained the main cause of admission for women in all the three years while pneumonia and non-bloody diarrhea alternating on the top of the reasons chart for why children under five got admitted to hospitals in these three fiscal years. The other important diseases for admission include malaria, trauma and pregnancy related abnormalities.

Table 6.19: Leading Causes of Admission

Year	Rank	Total	Female	Children under 5
2008/09	1	Single spontaneous delivery	Single spontaneous delivery	Pneumonia
	2	Trauma (injury, etc.)	Pneumonia	Diarrhea (non-bloody)
	3	Pneumonia	Other or unspecified obstetric conditions	Malaria (clinical without laboratory confirmation)
2009/10	1	Pneumonia	Single spontaneous delivery	Pneumonia
	2	Single spontaneous delivery	Pneumonia	Diarrhea (non-bloody)
	3	Malaria (Clinical without laboratory confirmation)	Other causes of abnormal pregnancy and childbirth	Malaria (Clinical without laboratory confirmation)
2010/11	1	Malaria (Clinical without laboratory confirmation)	Single spontaneous delivery	Pneumonia
	2	Single spontaneous delivery	Malaria (Clinical without laboratory confirmation)	Malaria (Clinical without laboratory confirmation)
	3	Pneumonia	Other delivery related	Diarrhea with dehydration

Source: Own computation based on several issues of Health and Health Related Indicators of MoH

Data on top causes of mortality is available only for the years 2009/10 and 2010/11 from the health and related indicators of the Ministry of Health. As they are among the main reasons of admission, pneumonia and malaria caused most reported deaths in these two years. In addition to pneumonia and malaria, tuberculosis and violence and other intentional injuries were among the

important causes of mortality among adults while prenatal diseases and low birth weight were important among children.

Table 6.20: Leading Causes of Mortality

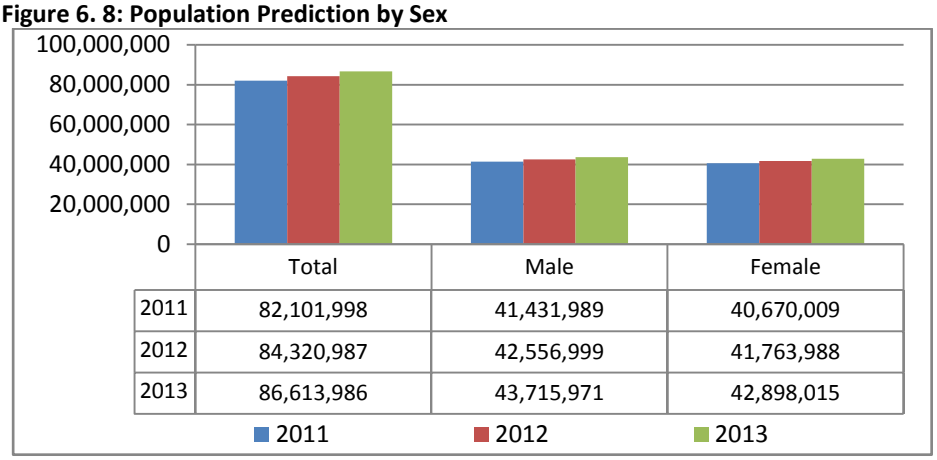
Year	Rank	Total	Females	Children Under 5 years
2009/10	1	Pneumonia	Pneumonia	Pneumonia
	2	Tuberculosis	Other or unspecified obstetric conditions	Other or unspecified prenatal diseases
	3	Violence and other intentional injury	Tuberculosis	Low birth weight of newborn
2010/11	1	Malaria (clinical without laboratory confirmation)	Malaria (clinical without laboratory confirmation)	Pneumonia
	2	Pneumonia	Pneumonia	Malaria (clinical without laboratory confirmation)
	3	Tuberculosis	Tuberculosis	Other or unspecified prenatal diseases

Source: Own computation based on several issues of Health and Health Related Indicators of MoH

6.3 Population

According to CSA, the Ethiopian population is predicted to reach 86.6 million by July 2013. This prediction is made based on the findings of the 2007 population and housing census. The graph and the associated table here show that the number of males is slightly higher, by about 700 thousand (CSA 2010; CSA 2011b and CSA 2012). According to this prediction, the population grows by about 2.7 percent annually.

Figure 6. 8: Population Prediction by Sex



	Total	Male	Female
2011	82,101,998	41,431,989	40,670,009
2012	84,320,987	42,556,999	41,763,988
2013	86,613,986	43,715,971	42,898,015

Source: Own computation based on several issues of Statistical Abstracts of CSA

According to the prediction, Oromiya is still the most populous region followed by Amhara and SNNP regions. Addis Ababa is the most densely populated place with more than 5,800 people per square kilometer.

Table 6.21: Population Size by Region, July 2013

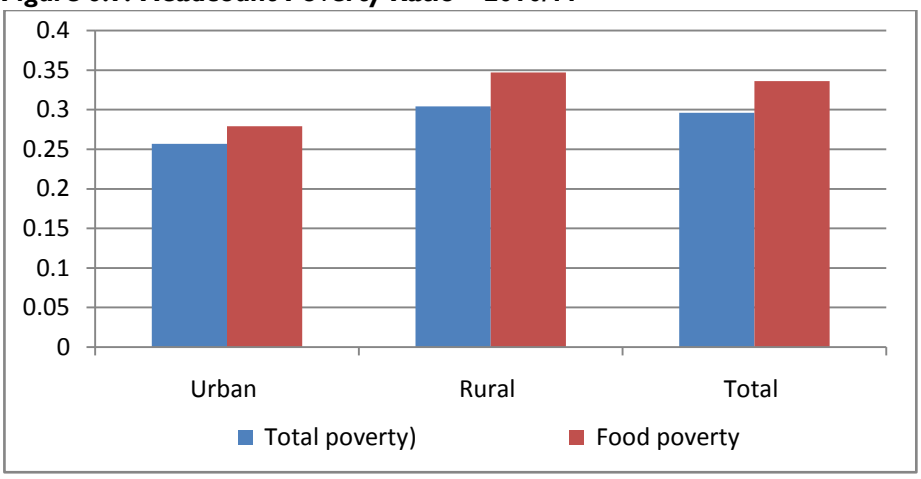
Region	Male	Female	Total	Density
Tigray	2,489,994	2,571,997	5,061,991	122.2
Affar	917,999	732,000	1,649,999	22.9
Amhara	9,633,991	9,578,003	19,211,994	124.2
Oromiya	16,227,993	15,992,008	32,220,001	113.2
Somali	2,957,999	2,360,001	5,318,000	-
Benishangul-Gumuz	522,997	504,997	1,027,994	20.3
SNNP	8,903,996	8,983,009	17,887,005	168.9
Gambella	212,003	194,001	406,004	13.6
Harari	108,000	107,000	215,000	643.8
Addis Ababa	1,479,000	1,624,999	3,103,999	5,890.10
Dire Dawa	198,000	197,000	395,000	253.4
Special En. Area	63,999	53,000	116,999	-
Country Total	**43,715,971**	**42,898,015**	**86,613,986**	**116.8**

Source: Own computation based on several issues of Statistical Abstracts of CSA

6.4 Poverty Dynamics

The government of Ethiopia devised a number of policy plans and strategies to reduce poverty and meet the Millennium Development Goals (MGDs) by 2015. Among these targets is reducing the proportion of people living below the poverty line to 0.222 for total poverty and 0.212 for the case of food poverty (MoFED 2010). An interim report on a poverty analysis study of the Ministry of Finance and Economic Development (MoFED) shows that total poverty has reached 0.296 following the 2010/11 Household Consumption and Expenditure survey. The rate is slightly higher in rural areas (0.304) as compared to urban (0.257). Looking at food poverty specifically, the total is 0.336 while that of the rural and urban is 0.347 and 0.279, respectively, (MoFED 2012).

Figure 6.9: Headcount Poverty Ratio – 2010/11

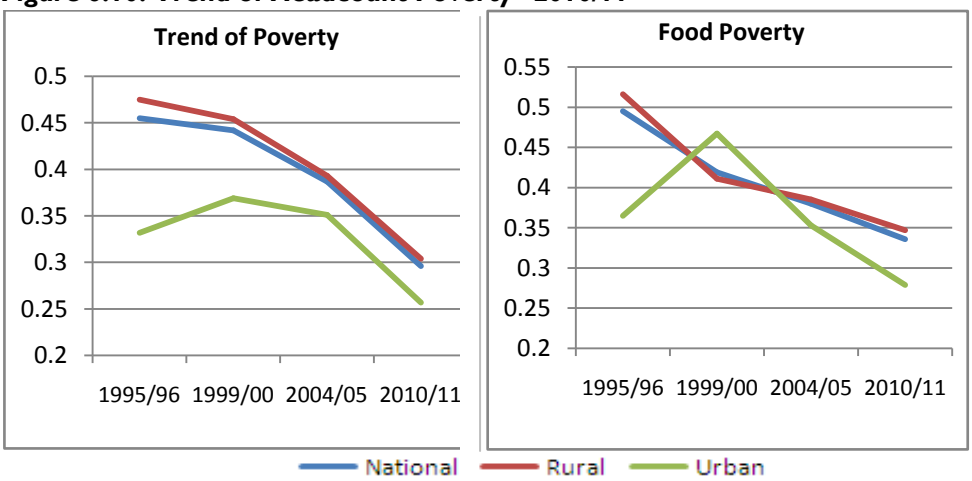


Source: Own computation based on MoFED 2012

Poverty over the period 1995 to 2011 shows a general trend of decline except for that of urban areas during 1995 to 2000, which was increasing in that period. Since 2000, both urban and rural areas seem to have similar trends of decline.

When we look at the trend of food poverty for the same period, the rural and national trends again look similar while that of the urban has increased very sharply first (1995-2000) and then started to drop rapidly (MoFED 2012). The trend of urban poverty and urban food poverty raises some interesting questions given the fact that the country has experienced episodes of high inflation since 2005 and the urban population depends on food purchases from the rural sector.

Figure 6.10: Trend of Headcount Poverty– 2010/11

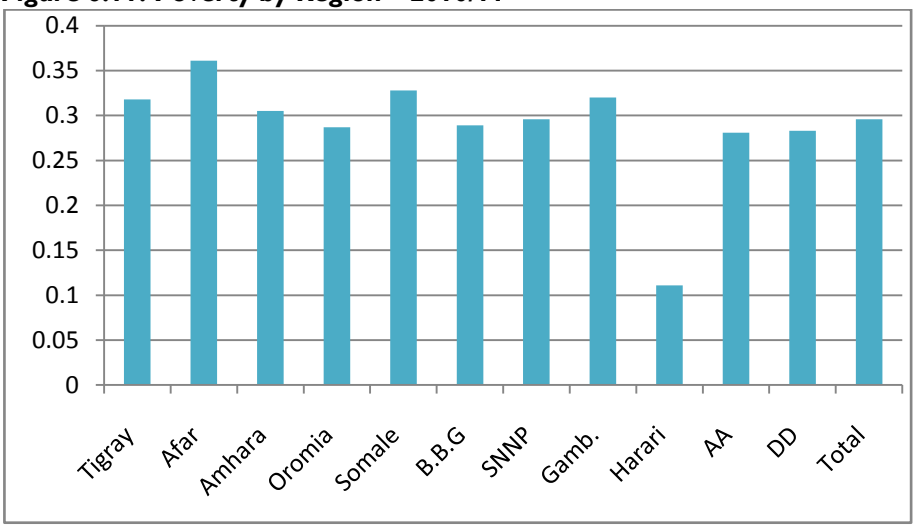


When we look at the trend of food poverty for the same period, the rural and national trends again look similar while that of the urban has increased very sharply first (1995-2000) and then started to drop rapidly (MoFED 2012). The trend of urban poverty and urban food poverty raises some interesting questions given the fact that the country has experienced episodes of high inflation since 2005 and the urban population depends on food purchases from the rural sector.

Looking at regional distribution of poverty, it is the lowest in Harari at about 0.111 and the highest in Afar at 0.361. There are differences among the remaining regions but it is not directly clear from the graph since the numbers are very small. Looking

at the trend, with the exception of Afar and Somali, all the other regions experienced a decrease in headcount poverty between the period 1995 to 2011.

Figure 6.11: Poverty by Region – 2010/11



Source: Own computation based on MoFED 2012

Child nutrition is an important and closely related issue to poverty. Poor households face challenges with regard to the knowhow and means to provide their children with nutrition that is necessary for their healthy growth. Malnutrition affects both the physical and cognitive development of children resulting in diminishing their chances of escaping from the poverty trap that their families are already in. The results of the 2011 Demographic and Health Survey of Ethiopia (DHS) show that forty-four percent of children under the age of five are stunted (have a low height for their age). Stunting shows the prevalence of long term malnutrition. Male children have a higher proportion of stunting than female children. Preceding birth intervals and stunting are also found to have inverse relations (CSA 2011).

When we look at stunting through different parameters, we can find that rural areas suffer more with stunting than urban centres (46 percent stunting in rural as compared to 32 percent in urban). Moreover, some regions have higher levels of stunting, higher than the national average of 44 percent, such as Amhara (52 percent), Tigray (51 percent), Affar (50 percent), and Benishangul-Gumuz (49 percent). On the other hand, Addis Ababa (22 percent) and the Gambella (27 percent) have the lowest proportion of stunted children of under five years of age (CSA 2011).

Another indicator of nutritional status is a measure of weight for height. Again according to the 2011 DHS, overall 10 percent of Ethiopian children are wasted (have a very low weight for their height), out of which 3 percent are severely wasted. Wasting is highest among children aged 9-11 months (19 percent) and lowest in children aged 36-47 months (6 percent). Again male children have slightly higher chances of being wasted (11 percent) than female children (8 percent). The spatial disparity shows that 10 percent of children in rural areas are wasted as compared to 6 percent in urban areas. On the other end of this indicator is put being overweight or obese. Apparently, obesity is not a serious problem among children in Ethiopia since only 2 percent of them are classified as overweight (CSA 2011).

The third and final indicator is a measure of being underweight for a specific age (weight for age). This indicator shows that 29 percent of children under the age of five are underweight and nine percent are severely underweight. The proportion of underweight children is highest in the age group of 24-35 months (34 percent) and lowest among those under six months (10 percent). Rural children are more likely to be underweight (30 percent) than urban children (16 percent). Addis Ababa has the lowest proportion of underweight children, at 6 percent, while Affar has the highest prevalence of underweight children, at 40 percent. The proportion of underweight children decreases as the wealth of the household increases (CSA 2011).

Ethiopia has conducted three DHSs so far (2000, 2005 and 2011) and the trend of malnutrition has changed between these periods. Accordingly the proportion of children stunted and underweight decreased over the three DHS survey periods. Stunting prevalence decreased by 12 percent (from 58 percent to 51 percent) between 2000 and 2005 and by an additional 14 percent to 44 percent between 2005 and 2011. The proportion of underweight children dropped by 20 percent from 2000 to 2005 and a further 12 percent from 2005 to 2011. Wasting on the other hand has remained fairly constant over the last 11 years (CSA 2011).

Breastfeeding plays an important role in child nutrition outcomes. The DHSs conducted in 2005 and 2011 show that breastfeeding is almost universal in Ethiopia. In 2005 ninety-six percent and in 2011 ninety-eight percent of the children were breastfed for some period of time. During the 2011 DHS it was found that 52 percent of infants started breastfeeding within one hour of birth, and 80 percent, within the first day. In 2005 on the other hand, these numbers were 69 percent for those who started breastfeeding within the hour and 86 percent within the first day of birth. This shows that immediate start of breastfeeding has decreased since 2005 and remained short of the target of 92 percent of children to be breastfed within one hour of birth, which is set by the fourth wave of the health sector development plan (CSA 2005; CSA 2011).

The 2005 DHS shows that rural children are more likely than urban children to start breastfeeding within one hour and within one day of birth. This trend seems to have shifted in the findings of DHS 2011; breastfeeding within one hour after birth was more common in urban areas (57 percent) than in rural areas (51 percent). In this survey it was also found that breastfeeding within one hour to be lowest in Amhara and Somali regions (38 percent and 40 percent, respectively), and highest in the SNNP and Dire Dawa regions (67 percent and 66 percent, respectively). The association of early initiation of breastfeeding with maternal education also seems to have shifted between the findings of the 2005 and 2011 DHSs. During 2005, it was the less educated women who seemed to start breast feeding early while it is the more educated in the case of 2011 (CSA 2005; CSA 2011). This calls for further investigation on the issue of consistency and some interesting causes of such a situation.

Part II
Private Sector Development in Ethiopia with Particular Emphasis to the Manufacturing Sector

Introduction to Part II

The tenet of a market economy is that basic objectives of societies namely efficiency and social justice can be best served by competitive market whereby agents are driven by self interest with virtue. By and large, human beings tend to respond to incentives. Those incentives are the source of innovations that lead to growth and prosperity of individuals and nations at large.

Within the framework of market economy, government has got a role because there are cases where market fails. Big governments in the form of stabilization policies are also common even in market economies. However, both theory and history showed at least so far that there are major economic decisions such as production, distribution, and consumption of most if not all goods and services which cannot be handled more efficiently than by the private sector. In that regard, the private sector plays an indispensible role in economic development.

The major question is what should be the role of government and a private sector of a nation which is characterized by a low level equilibrium in which the majority of the private operators are small holder farmers; and the few modern private operators have either limited role in leading the economy forward or are engaged in less sustainable economic activities? Available data shows Ethiopia falls in this type of economy. In the year 2011/12, traditional crop-based agriculture accounts for 44 percent of the GDP. The industrial sector has a share of 11 percent in the GDP. This contrasts to the 13 percent share of the industrial sector in the GDP at the end of the third five year development plan of the Imperial era (some 40 years ago). A major overtake is witnessed by the service sector which accounted for 45 percent of GDP.

Looking at the modern private sector in the manufacturing sector in particular, it has a dismal performance over the last half a century. The lack of the participation of the private sector during the socialist regime is clear. What requires an investigation is the apparent lack of appreciable participation of the private sector in the manufacturing sector for the last two decades. Some of the stylized facts listed below may help clarify the depth of the problem:

1. Private sector contribution to GDP through manufacturing value addition, employment opportunities and merchandize export through medium and large scale industries has still remained low.
2. Very low capacity utilization and lower productivity: For instance, in the year 2009/10, the rate of capacity utilization of the private sector was 64.3 percent, whereas public enterprises operated at 79.4 percent. A host of reasons have been given for low level of capacity utilization; raw materials shortage and the most dominant being power supply interruption and inadequacy (38.3 percent and 25.5 of the cases respectively of firms which reported causes of under-utilization in 2009/10). During the same period, gross value of production per person and per birr worth of fixed asset for the private sector was Birr 208, 272 and Birr 2.3 respectively. Productivities of labour and capital in the public sector during the same period were Birr 272, 980 and Birr 4.4 respectively [CSA, 2011].
3. Private sector operators are largely small in size: Small and micro enterprises are fully occupied by private operators. According to Central Statistical Agency classification, except state-owned enterprises, all other categories (endowment fund enterprises, foreign direct investments) are considered under the private sector. Inclusive of all different categories, the average size of private firms is by far lower than public ones. In 2009/10, about 41 percent and 29 percent of private enterprises employed only 10-19 and 20-49 persons per firm, respectively. During the same period, only 20 percent state-owned enterprises had fewer than 50 workers [CSA, 2011]. The

following table also shows how smaller the relative size of private firms is vis-à-vis public enterprises.

Table 0.1: Average Firm Level Output, labour and capital (values in '000)

Indicators	Public	Private
Gross Value of Production	94859	14217
Persons	347	68
Fixed assets	21462	6176

Source: Own calculation based on CSA (2010/11)

4. *Most private sector operators concentrate on very few local resource based or light manufacturing enterprises - very limited role for technology and innovation activities*: For instance, among about 48 ISIC two-digit industrial groups, as identified by Central Statistical Agency, more than 73 percent of private firms concentrated in only 9 industrial groups such as furniture, mills, bakery, articles of concrete, cement and plaster, footwear, plastics, and similar others.
5. *Despite provisions of special incentive schemes for export-promotion, most private sector operators are oriented towards substituting imports and also excessively depend on imports for their intermediate inputs use*: A sign of weak competitive status and weak intra and inter-sectoral linkages: For instance, about 51 and 50 percent of the total raw materials of private and public enterprises are acquired from foreign sources. It was only 4 and 1 percent of products of private and public firms were destined to the foreign market respectively [CSA, 2011].

With such a background, the Ethiopian government has launched a five-year development plan known as the Growth and Transformation Plan (GTP) in the

year 2010/11. The document reiterates the critical role that can be and should be played by the private sector. On the other hand, the plan has set a new role of government in the form of significant involvement in direct investments in the industrial sector. What should be the way forward?

A fair role of the private sector in leading the economy can be fostered through policies and private-public partnership that maximize opportunities and deal with constraints facing the private sector. To this end, this study under the thematic topic "**Private Sector Development in Ethiopia with Particular Emphasis to the Manufacturing Sector**" reviews the trends, structure and performance of the private sector; identifies opportunities available for a better performance of the sector and challenges facing the sector to strive. It has also attempts to document theoretical rationales and best performing experiences towards a vibrant private sector. While rigorous research is required to identify major deterrents of the private sector to invest in the manufacturing sector, this report lays the foundation for further in-depth investigation into the issue.

Chapter Seven

The Structure and Evolution of the Modern Private Sector in Ethiopia

7.1 Evolution[26]

In Ethiopia, the modern private sector began emerging following the establishment of a stable central government towards the beginning of the past century. The building of Ethio-Djibouti railway, the commencement of trade with the rest of the world, the increasing inflow of foreign citizens who brought entrepreneurial capacity to develop manufacturing industries and high transport costs for imported commodities, among others, were the driving factors for the birth of modern manufacturing industries in Ethiopia (Admit 2005; Solomon 1994).

Before the Ethio-Italian war, only 25 factories were operational in the country. In the five years of Italian occupation, eight additional manufacturing industries were established increasing the number of factories to 33 towards the end of the war. These factories were concentrated in Addis Ababa, Dire Dawa, Asmara and Massawa. Small scale industries such as wood and clay, tanneries, soap and edible oil, ammunition, brewery, tobacco, grain mill, salt, cement, mineral water and textiles were the major establishments during the time. In the second half of the

[26] Private sector comprises the private corporations, households and non-profit institutions serving households. This characterization clearly includes all economic activities undertaken in the economy except those in the public sector such as the general government, public financial corporations and public non-financial corporations. However, this definition is broad in the sense that it does not exclude the goods produced by households for their own consumption like subsistence production of agricultural and allied activities. In this study, therefore, by modern private sector we mean formal and incorporated sectors in all major industrial classifications.

1940s, manufacturing industries had accounted for less than one percent of the national income. It was after the post Ethio-Italian war (1941-1950) that the manufacturing industries began growing. The Good relationship of the imperial regime with the United States and the United Kingdom contributed for the development of the sector in the post war years (Bulti 1992; Solomon 1992).

A conscious effort towards industrial sector development, however, begun in the late 1950s. Following the formulation and implementation of the three successive development plans (1958-1962, 1963-67, and 1969-74), a good number of manufacturing enterprises were established. During these periods, the industrial policy was inward looking focusing on import substitution industries. Nevertheless, there was an apparent lack of participation by Ethiopian nationals in large and medium scale manufacturing industries and hence the dominance of foreign investments was the major concern. Towards the end of the imperial era, out of the total 273 establishments, over 65 percent of them were either fully or partially owned by foreigners. The role of the government was limited to play only a catalytic role (ibid).

The military government that took power in 1975 swiftly changed the structure, ownership and management of the manufacturing industries. Following the nationalization of the system of production, virtually all medium and large scale manufacturing industries came under government ownership. Consequently, the private sector was pushed into small and handicraft industries. The private sector was crowded-out by public manufacturing industries through capital ceilings, foreign exchange rationing and market access. Further, a discriminatory interest rate[27], stringent bureaucratic hurdles, excessive collateral requirement and exorbitant profit taxes pushed the private manufacturing sector further to the border (Eshetu et al, 1992, Admit 2005).

[27] During these years financial repression was common. For instance, the private investor had to pay an interest rate of 9 percent while public enterprises paid less than 8 percent

Consequently, what and how much to produce and to whom and how to sell were all decided by the central government. Despite all the preferential treatment and policy support, inefficiency and low capacity utilization compounded the public enterprises. As a result, output and profitability was dragged back below the breakeven level and the promises ended up with empty wishes. The complementarity between private and public participation that was emerging in the pre-1974 period was totally abolished (ibid).

Following the overthrown of the regime, the incoming government has liberalized the industrial sector as Derge part of its policy to pursue the market economic system. The main tenet of the reform was engaging the private sector in the manufacturing industries by privatizing those industries which were not profitable and strategic to the national security.

In light of this objective, market distortions were removed and incentive systems were put in place. However, the privatization process has been gradual and a number of public enterprises are still waiting in queue to be privatized. From the outset, there was intent by the current government to retain essential and profitable industries under the patronage of the government. For instance, large-scale engineering and pharmaceutical plants, large scale fertilizer manufacturing industries, and industries that supply strategic raw materials to major chemical industries have still been retained under public ownership (ibid).

Nonetheless, the role of the private sector in manufacturing industries is emerging gradually. For example, the number of large and medium scale manufacturing industries owned by private sector[28] tripled in the 15 year period from 607 in 1997 to 2,049 in 2011. Consequently, the average share of the private sector in all industrial groups grew grown from 80 percent 15 years ago to 94.4 percent in 2011. Though the private sector has thus grown significantly in

[28] Including the FDI companies

terms of number, it is still bounded by a multitude of challenges. While the participation of the private sector in manufacturing is commendable so far, there are still concerns for it to play a vital role in economic transformation and structural change. First, the overall share of the sector in the economy is small. Second, the manufacturing sector is dominated by foreign owned industries (MoFED 2013; EIA 2013).

Table 7.1: Average Share of Public and Private Manufacturing Sectors during 1996/97 and 2010/11

Industry group	1997/98		2010/11	
	Public	Private	Public	Private
Manufacture of food products and beverages	24.1	75.9	4.4	95.6
Manufacture of tobacco products	100.0	0.0	100.0	0.0
Manufacture of textiles	57.6	42.4	5.4	94.6
Manufacture of wearing apparel, except fur apparel	15.4	84.6	5.0	95.0
Tanning and dressing of leather manufactures	12.3	87.7	2.1	97.9
Manufacture of wood and products of wood	43.8	56.3	34.9	65.1
Manufacture of paper, paper products and printing	17.0	83.0	11.5	88.5
Manufacture of chemicals and chemical products	30.2	69.8	6.5	93.5
Manufacture of rubber and plastic products	11.5	88.5	4.7	95.3
Manufacture of other non-metallic mineral products	21.8	78.2	4.9	95.1
Manufacture of basic iron and steel	50.0	50.0	10.3	89.7
Manufacture of fabricated metal products except	7.9	92.1	0.7	99.3
Manufacture of machinery and equipment N.E.C.	5.0	95.0	0.0	100.0
Manufacture of motor vehicles	16.7	83.3	12.5	87.5
Manufacture of furniture; manufacturing N.E.C.	6.8	93.2	1.1	98.9
Total	20.3	79.7	5.6	94.4

Source: CSA's report on LMSME industries survey (various issues)

7.2 Industrialization and Economic Structure in Ethiopia

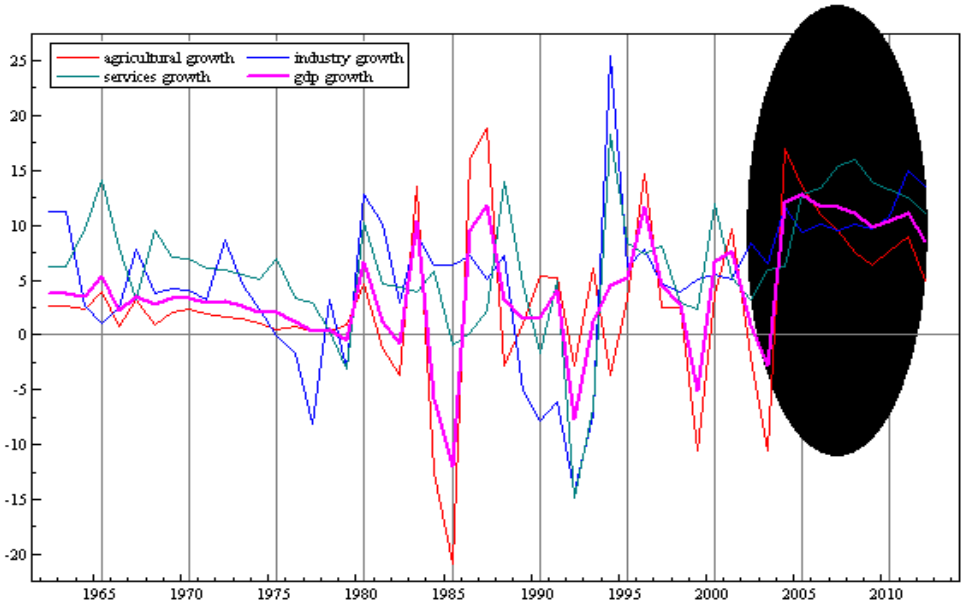
Drought and conflict (internal and external) had characterized the Ethiopian economy since the early 1960s. As a result, the economic growth was disrupted and volatile (see Figure 7.1). The recurrent droughts which occurred in 1963, 1973, 1984, 1999 and 2003 severely affected the agricultural growth which was the backbone of the national economy. Agriculture contributed an average of 71.4 and 60.5 percent of GDP during the imperial and the Derge regimes, respectively. Consequently, GDP growth had been swiftly following the growth rate of the agricultural sector which in turn was affected by rainfall variability and distributions.

The impact of drought on the overall economy has gradually decreased in recent years due to the slight shift on the production structure and lessening of the regularity of the natural anomalies, among others. In the past decade, the major drought that hit the economy in 2002/03 reduced the agricultural GDP by 10.5 percent and the overall GDP by 2.2 percent. After the economy recovered in 2004, it showed uninterrupted double digit growth for seven years in a row. For the first time in almost a decade, the overall GDP grew by a single digit (8.6 percent) in 2011/12 showing a slight deceleration due to the slow agricultural growth of 4.9 percent.

Despite the outstanding economic growth in the past two decades, the economy did not transform structurally in favor of the industrial sector. The average industrial sector value added to GDP ratio has remained at single digit for the past five decades. The service sector, on the other hand, has overtaken the agriculture sector in terms of source of growth. The service sector value added has gradually increased from a mere 16 percent of GDP in 1962 to over 45 percent of GDP in 2012. After more than 50 years history of industrialization, the share of the industry has still stagnated at 11 percent in 2012. Specifically, the

share of manufacturing value added has been about 4 percent of GDP in the first two years of the Growth and Transformation Plan. This is a regression towards its low share in the early stage of industrialization. The manufacturing sector squeezed back to its 1960s average should be an issue of concern for all stake holders (see Table 7.2).

Figure 7.1: Sectoral GDP Growth Rate in Ethiopia



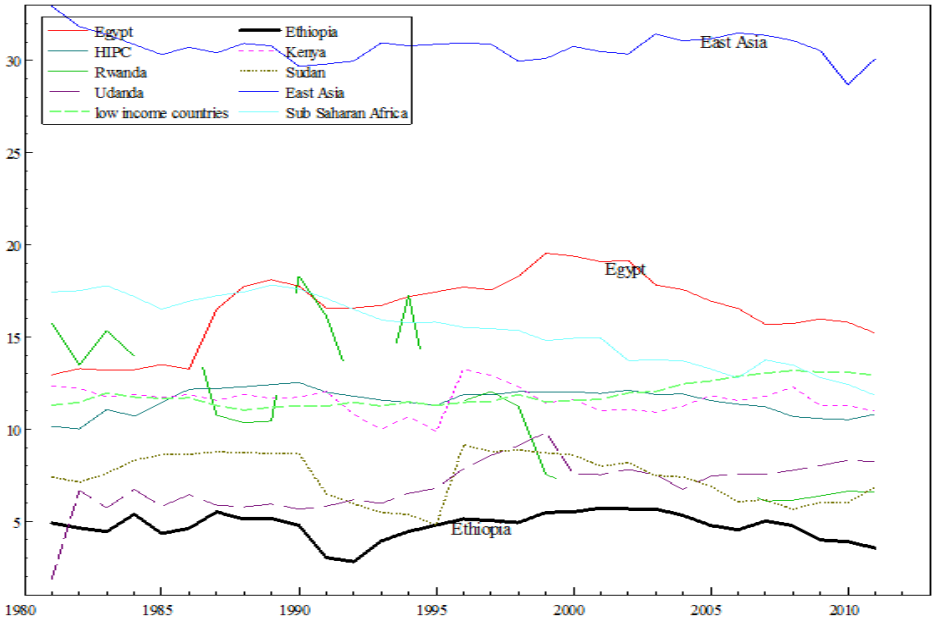
Source: EEA staff own calculation based National Accounts Statistics

As shown in Table 7.1, in Ethiopia, the manufacturing sector value added to GDP ratio is by far the lowest compared to that of the neighboring countries such as Kenya, Rwanda, Sudan, and Uganda. In 2011, the share of the manufacturing sector value-added was 3.6 percent of GDP in Ethiopia. This is about eight times lower than the average of the developing East Asia & Pacific countries and over

three times lower than the average of heavily indebted poor countries and Sub-Saharan Africa.

Deindustrialization has been a major challenge in virtually all developing countries except in East Asia & Pacific in 2010 and 2011. In this group of countries, the share of manufacturing value added to GDP ratio went down compared to the previous years. The Ethiopian case is not different either from this general trend. What makes the Ethiopian case rather unique is that the relative importance of the manufacturing sector is dwindling from the already low base compared with similar countries (World Bank WDI 2012).

Figure 7.2: Manufacturing Value Added (Percent of GDP) in Selected Countries



Source: WDI (2012) World Development Indicators Database

The number of manufacturing establishments owned by the private sector increased from 623 in 1996 to over 2,170 in 2011. However, the majority of these industries is still small in size and could not fetch the economies of scale and low unit cost advantage. The small scale private manufacturing industries marred with loose and unbalanced forward and backward linkage[29] among the rest of other factors is likely to slow the industrialization process in the years to come unless a significant participation in the large scale manufacturing industry is made possible.

Some people argue that the change in the production system from agriculture to the service sector is unhealthy and could be a challenge to sustainable growth. According to this line of thought, the lead of agricultural sector should have been overtaken by the manufacturing sector as it was the case in many countries that transformed their economies from agriculture-based to industry- based in their early stage of industrialization (see Figures 7.3 and 7.4). This structural leap in Ethiopia has created macroeconomic imbalance by increasing the demand side of the economy (service and construction) while the agriculture and manufacturing sectors were not growing enough relative to the demand side. This is believed to be the cause of high inflation that hit the country recently whose effect is yet unfolding.

[29] According to EEA 2004 Report, about 50% of the raw materials for manufacturing sector have come from the rest of the world. The agriculture sector fed only one-third of the raw materials. On the other hand, the percentage of raw materials that fed the manufacturing sector to its own was less than one-fifth showing the manufacturing sector is strongly linked to the external economy rather than to its own and to the agriculture. Similarly, there is weak backward linkage with the agricultural sector. Domestic manufacturing sector had supplied only 1.3 percent to the agricultural sector. In fact, agriculture depends more on the rest of the world for fertilizer, insecticides, pesticides, improved seeds etc.

Table 7.2: Period Average Growth Rates, Share and Growth Contribution of GDP Components (in percent)

Period	Agriculture[30]			Industry			Manufacturing			Services			GDP
	g	s	g*s/100	g	s	g*s/100	g	s	g*s/100	g	s	g*s/100	g
1962-1975	1.9	71.4	3.0	6.8	6.9	0.5	10.8	2.6	0.28	7.2	21.7	1.6	3.8
1976-1991	1.6	60.5	2.1	2.3	9.0	0.2	3.1	4.1	0.13	3.5	30.5	1.1	2.0
1992-2012	4.7	53.6	2.5	7.6	9.4	0.7	6.3	3.9	0.25	7.8	37.0	2.9	6.2
1962-2012	3.0	60.6	2.5	5.7	8.6	0.5	6.5	3.7	0.24	6.2	31.1	1.9	4.3
2011	9.0	45.2	4.1	15.0	10.5	1.9	12.1	3.8	0.46	11.9	44.2	5.2	11.4
2012	4.9	43.7	2.2	13.6	11.0	1.5	13.7	4.0	0.55	11.1	45.3	5.0	8.5

Source: EEA staff own calculation based National Accounts Statistics

[30] g=growth rate of sector i (i-agriculture, industry, manufacturing and services), s= share to GDP ratio of sector i and g*s/100= growth contribution of each sector.

Cognizant of this structural challenge, the current government has set the industry sector to play a key role in the five years of growth and transformation plan (GTP). Yet, the government contrives to play a pivotal role in transforming the economy. The mega infrastructure projects which are currently undergoing are owned by the government showing the government's intension to play a decisive role in the transformation. The private sector is earmarked for micro and small scale enterprises and commercial agriculture (MOFED, 2010). The industrialization process measured by the value added to GDP ratio has stagnated for almost half a century. During the imperial regime though the industry was at its infancy stage, it had grown by an average of 6.8 percent. This was better compared to the military regime's 2.3 average growth rate. In relative terms, the sectors performed well in the last two decades (1992-2012). The value added of the sector has grown by 7.6 percent per annum for two decades. However, since the other sectors also grew proportionally, the industrial sector value added swung between 5.4-11.5 percent to GDP ratio from 1962-2012.

The structural pitfall that stacked the industry sector awakened the government to give the attention it deserves in the Growth and Transformation Plan (GTP). From the Plan, one can see that the government wants to lessen the 'agriculture first' strategy that was pursued for two decades. Moreover, the importance of linkage between agriculture and manufacturing sectors has been given priority. As a result, commendable industrial sector growth was seen in the first two years of the Plan.

However, no matter how right the policy towards industrialization is, the rate of growth of the industry sector value added is still short of the required amount to free the economy from its dependence on agriculture. The highest growth rate achieved in the last two GTP years so far is 15 percent. This rate is below the 20 percent target envisaged in the GTP. This might be partly due to the fact that

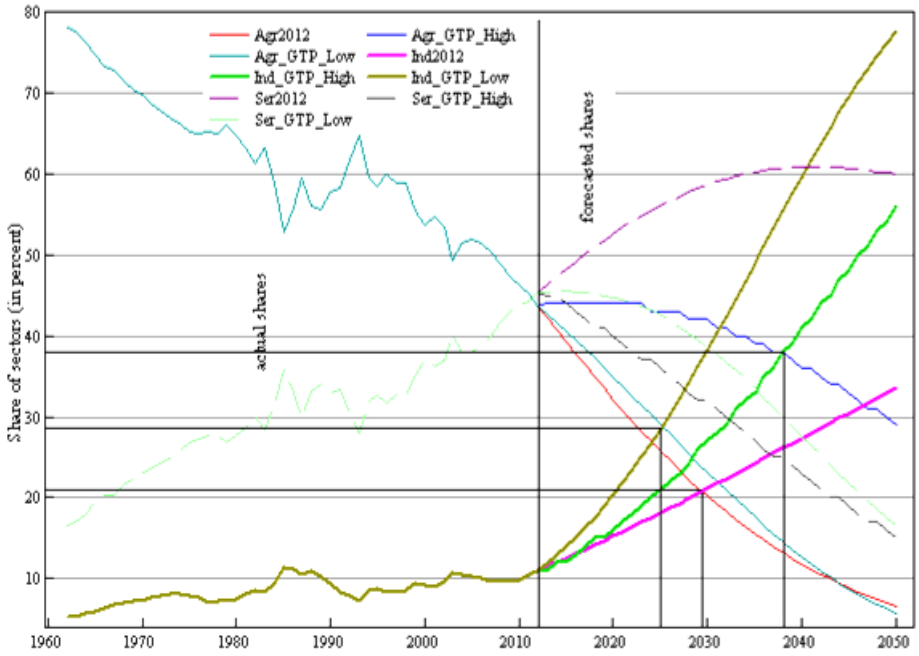
most manufacturing industries are under construction and may take some time before they commence production.

The experience of East Asian countries shows that they managed to reduce the dominance of the agriculture sector in just three to four decades. To see how long it will take Ethiopia to reach the industrialization level where they reached at, a simple simulation exercise is presented in three scenarios. In the first scenario, the assumption is that the sectors will continue growing by the rate they did grow in 2011/12[31]. In the second scenario, we assume that the major sectors will grow by the high case scenario of GTP[32]. Finally, in the third scenario, the assumption is that the GTP (base case scenario) will prevail[33] for the coming years. Based on these assumptions, the structure of the Ethiopian economy is forecasted to look like as follows:

Scenario 1: The industrial sector value added will capture the agricultural sector value added in 2030. But, the two sectors will have one-fifth of the GDP each. The remaining three fifths of the value added will be generated from the service sector. More interestingly, under this scenario, the agricultural sector value added will drop to 7 percent of GDP in 2050. At that time, the industrial sector share will be one- third of the total GDP. The service sector in turn will take the lion's share (three-fifths of the value added). Thus, if the sectors continue growing as assumed under case 1, then industrialization towards the industry sector will be very slow since the initial growth rate in 2001/12 which is assumed to prevail in the years to come is too small to lift the industrial sector from its low share observed for a long time.

[31] Agriculture by 4.9 percent, industry by 13.6 percent and service by 11.8 percent
[32] Agriculture by 14.9, industry by 21.4 and service by 12.8 percent
[33] Agriculture by 8.1, industry by 20 and service by 11.0 percent

Figure 7.3: Actual and Forecasted Structure of the Ethiopian Economy



Source: EEA staff own calculation based on National Accounts Statistics

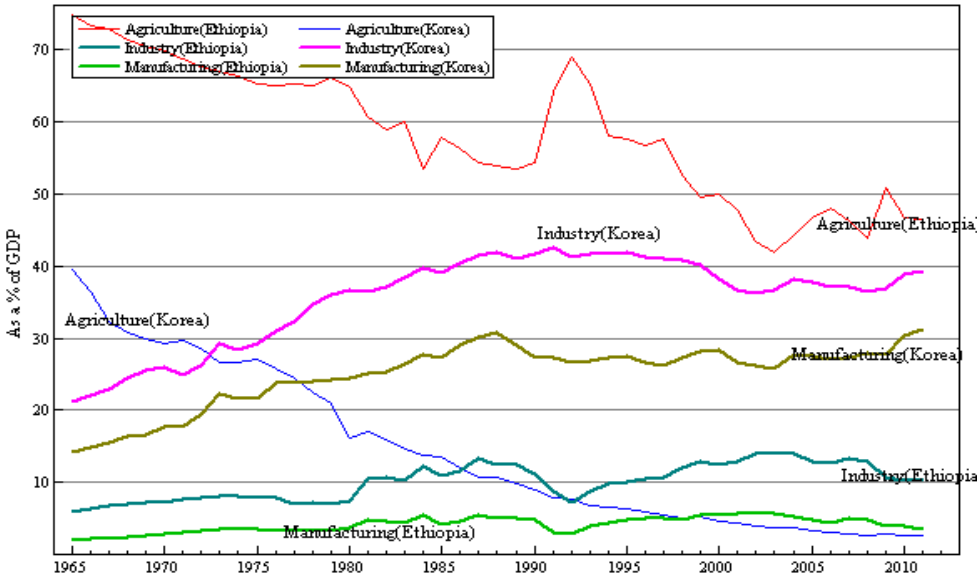
Scenario 2: The industrial sector value added will catch the agricultural sector in 2038. By that time the share of agriculture and industry will be equal and they will have 38 percent of the total value added each. This was not viable in the first case scenario for the service sector outnumbered the two sectors due to its initial high growth rate. Thus, if the sectors grow without interruption as envisaged in GTP (high case scenario) for the coming 26 years, the industrial and agricultural sectors will assume the upper hand from 2038 onward. Consequently, the service sector's share will drop to one-fourth of GDP in 2038. Further, the industrial sector will be the backbone of the Ethiopian economy contributing over 50 percent of GDP by the middle of this century (2050). In

2050, the agricultural sector will have one-fifth of the GDP and the service sector will take the balance.

Scenario 3: The movement towards industrialization will be achieved relatively sooner than assumed in the previous two cases. In 2026, the industrial sector value added will be equal to with the agricultural sector value added at lower level (each will have 28 percent of GDP). Unlike the previous scenarios, in 2050, the industrial sector value added will dominate the economy by far. The industrial sector value added will have 78 percent share. Agricultural sector value added will drop to less than 6 percent of GDP. Fifty years ago (in mid 1960s), the share of the agricultural sector was 78 percent of GDP and the share of industrial sector six percent of GDP. After 40 years (in 2050), the two sectors will exchange roles if the assumption holds true.

The industrialization experience of South Korea shows that it had adopted inward-looking development strategy since 1960s. Ethiopia had followed the same strategy at that time. Both countries had focused on promotion of import substitution industries. However, while Korea swiftly shifted towards export promotion, Ethiopia was stubborn on import substitution industrialization until the early 1990s. Korea's export-led industrialization has resulted in a dominant manufacturing sector in less than half a century. In 1965, Korea's agriculture value added to GDP ratio was half of Ethiopia. In 2011, Korea reduced the share of agriculture to less than three percent of GDP. Ethiopia in turn reduced the share from 75 percent to 45 percent of GDP. Agricultural sector dependence has substantially dropped in both countries. However, the structural shift in Korea was from the agricultural sector to the manufacturing sector. In Ethiopia the shift was from agricultural to the service sector. The manufacturing sector stagnated at less than six percent of GDP from 1960-2011. Korea, on the other hand, managed to increases the share of the manufacturing sector value added from 14 percent of GDP in 1965 to 31 percent of GDP in 2011.

Figure 7.4: Comparison of Ethiopian and Korean Economic Structure



Source: World Bank (2012) World Development Indicators Database

A number of factors might have caused the two economies to diverge in terms of structure in less than five decades. First, Korea has registered a sustainable economic growth since the 1960s. The only years that Korea was interrupted were in 1997 and 2009 due to the financial crises that prevailed at that time. Ethiopia, on the other hand, has been struggling with drought and conflict for almost three decades of the past 50 years. The only time that Ethiopia registered stable growth is from 2004-2012. Secondly, in their respective high growth periods, the share of private investment to GDP ratio was higher in Korea but lower in Ethiopia. Third, the average gross domestic saving to GDP ratio was 27.1 percent in Korea which is three times higher than that of Ethiopia. Fourth, the average real interest rate was positive in Korea throughout its high growth periods but was negative in Ethiopia. Finally, Korea's exchange rate depreciated while that of Ethiopia appreciated in their respective high economic growth

periods. This makes the Ethiopian growth periods differ from that of Korea (World Bank, 2012)

7.3 The Role of Private Sector in Domestic Economic Activities in Ethiopia

The private sector (including the informal sector) plays a significant role in the domestic economic activities in Ethiopia. According to the Chamber of Commerce and Sectoral Association, the private sector contributed over 80 percent of the overall gross domestic product. Specifically, agriculture has been the mainstay of the informal private sector. However, the objective of this study is to examine how the modern private sector has been playing on the domestic economic activities (GDP). Thus, the share of formal modern private sector falls in the range of 23-28 percent of real GDP. The share of unorganized/informal sector in GDP fell to 52.2 percent in 2008-09 from 57.4 percent in 2004/05. Increasing inflow of large scale foreign direct investment to the agricultural sector in recent years might have contributed to the formalization of private agriculture.

Table 7.3: Share of Private Sector to GDP

Institutions	2004/05	2005/06	2006/07	2007/08	2008/09	Average
General Government	10.0	9.7	9.9	10.3	11.3	10.2
Public Corporations	8.5	8.9	8.7	8.8	8.6	8.7
Private Corporations	23.4	23.5	25.3	27.9	27.3	25.5
NPISHs	0.6	0.6	0.5	0.6	0.6	0.6
Household/Unorganized/ Informal Sector	57.4	57.3	55.5	52.4	52.2	55.0
Public Sector	18.5	18.6	18.6	19.1	19.9	18.9
Private Sector	81.5	81.4	81.3	80.9	80.1	81.0

Source: Chamber of Commerce and Sectoral Associations (2010)

The share of the modern private sector increased to 27.3 percent of GDP in 2008/09 from 23.4 percent of GDP in 2004/05. On the other hand, the share of public corporations remained stagnant at around 8.7 percent of GDP. In addition, the growth rate of value added by the private corporations was higher than those belonging to the public sector. Recently, the growth of the public corporations has been larger than those in the private sector. This could be perhaps due to huge public sector spending in infrastructure and social sector developments.

Table 7.4: Share of private sector in GDP

Industry	2004/05	2005/06	2006/07	2007/08	2008/09	Average 2004/05-2008/09
Share of private sector in overall GDP at constant prices						
Agriculture	46.7	46.4	45.5	43.8	42.3	44.9
Industry	7.3	7.2	7.0	6.9	6.8	7.1
Services	27.4	27.8	28.8	30.3	31	29.1
Total GDP	81.5	81.4	81.3	80.9	80.1	81.0
GDP excl. Agriculture	34.8	35.0	35.8	37.2	37.8	36.1
Share of informal private sector in overall GDP at constant prices						
Agriculture	45.3	45.3	43.1	40.4	40.0	42.8
Industry	5.0	4.7	4.8	4.1	3.9	4.5
Services	7.8	7.9	8.1	8.5	8.9	8.3
Total GDP	58.1	57.9	56.0	53.0	52.8	55.6

Source: Addis Ababa Chamber of Commerce and Sectoral Associations

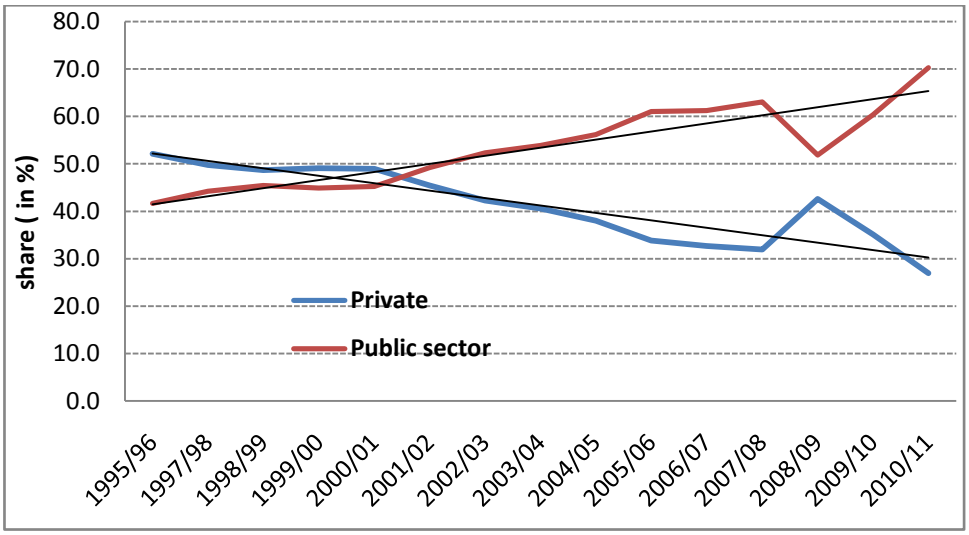
Informal private sector constituted the bulk of the Ethiopian agriculture contributing about 45 percent of GDP (Table 7.4). This shows that the formal accounted for only two percent of GDP. Informal industrial and service sectors, on the other hand, took 12.8 percent of GDP. Real estate, construction and manufacturing are amongst the non-agricultural informal private sectors. The share of the informal private agriculture went down from 45.3 percent of GDP in 2004/05 to 40 percent of GDP in 2008/09. Leasing out large amount of

agricultural land to foreign investors may have contributed for this slight shift of the agrarian system from small scale holders to a modern agricultural system.

7.4 The Private Sector in Gross Capital Formation

Capital formation (investment) is the basis of future economic growth for an economy. The capital and public divide in turn shows which sector is going to be the source of future economic growth in an economy. In Ethiopia, following the economic reform programs in the early 1990s, the private sector was given more attention and its share exceeded the public sector until 2001/02. From 2004/05 onwards, the government has changed the orientation of the economy by investing significant amount of resources on infrastructure projects including roads, housing (condominiums) and hydroelectric dams. Consequently, fixed capital formation has dramatically surged from less than 10 billion Birr in 1995/96 to over 50 billion Birr in 2010/11- in real terms.

Figure 7.5: Trends of Real Gross Capital Formation by Private Vs Public Investments



Source: MoFED, National Accounts Statistics, Various Editions

Except in 2008/09, private investment grew less than the public sector in the past two decades. As a result, the share of private and public sector investments have been widening. Specifically, the gap has widened since 2008/09. The credit and foreign exchange rationing that favor the public sector could be one factor. Since the government has a huge interest to invest in housing, roads, railways, dams and strategic industries in the GTP period, the gap could be diverging further in the years to come. In addition, concentration of the private sector in small scale and handicraft projects could also widen the gap.

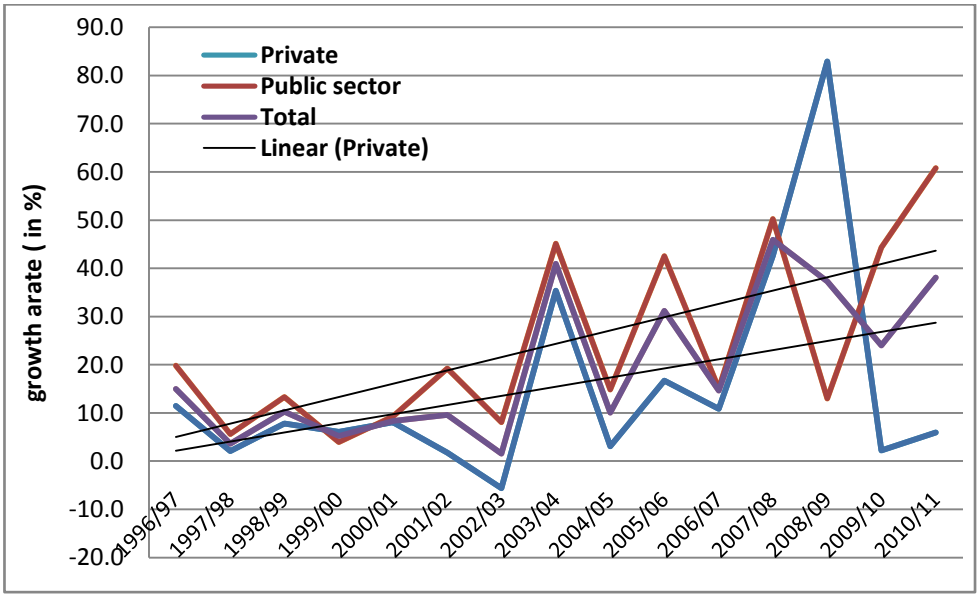
Table 7.5: Number and Capital of Private Investment Projects by Sector between 1992-2012

Item	Private		Public	Total/Average
	Domestic	Foreign		
No of projects	2,439	783	25	3,247
Capital in millions of birr	30,668	109,312	158,852	298,832
Permanent employment	108,678	105,654	39,344	253,676
Temporary employment	191,679	179,314	228,387	599,380
Total employment	300,357	284,968	267,731	853,056

Source: EEA staff own calculation based on Ethiopian Investment Agency (2013) Database

As we can see in the following section, the number of projects owned by private inventors has been increasing significantly. The private sector investment projects are however large in number and small in size and this led to lower capital to project ratio. Among other factors, lack of credit and markets and high collateral requirement by the banking industry might have pushed many domestic investors to finance their projects from own funds. Since cost of production is substantially influenced by economies of scale, the small size of the private sector projects could cause high cost of production and in turn reduce the competitiveness of the sector.

Figure 7.6: Trends of real gross capital formation by Private vs Public Investments



Source: MoFED, National Accounts Statistics, Various Editions

The macroeconomic imbalances that prevailed in the past few years causing foreign exchange and credit rationing arguably marginalize the private sector. These challenges along with the preferential treatment given to public sector projects by banks might have crowded-out the private sector further. This in turn could be one potential factor for the diminishing role of the private sector in capital formation after 2009/10. The experience of Asian tigers in this regard shows that in high growth episodes, the share of private investment to GDP ratio is higher than that of public sector. This is one issue that makes the Ethiopian growth experience somehow exceptional compared to the growth spurts of East Asian countries. Some people argue that with such minimal role of the private sector, the current growth may not be sustainable. The slight slowdown of the overall GDP growth in 2011/12 could be an issue of concern in this regard.

When one looks at the investment projects that have been operational between 1992 and 2012, one can see that the total number of investment projects that began production increased from 14 to 3,242. Of the total projects 99 percent of them were owned by the private sector including foreign direct investors (FDI). East Asian Countries which were FDI hosts over the past three decades are losing their competitive advantage to least developing countries like Ethiopia. In Ethiopia, relatively high economic growth, cheap and abundant labor and land and growing domestic and regional markets attract FDI companies in manufacturing and commercial agriculture.

In terms of number of projects, the domestic private sector accounts for over three-fourths of the projects. Yet, the share of the private sector in the invested capital is still low by any standard. From the total investment projects implemented since 1992, about 2,439 (75 percent) of them were owned by private sector. However, domestic private sector contributed only 10 percent of the total capital. On the other hand, 25 public projects (1 percent of the total projects) contributed about 53 percent of the total invested capital (see Table 7.5). Foreign direct investment projects which have been increasing recently especially in commercial agriculture have taken 24 and 37 percent of the total number and capital, in that order. Increasing inflow of foreign direct investment projects that has been reported recently has not been reflected so much on its share of contribution to capital.

The public sector is still the dominant investor in terms of capital due to the fact that its projects are big in size. The public sector projects have a significant impact in investment capital and employment as compared to the private sector.

Table 7.6: Number, Capital and Employment of Private, FDI and Public Investments

Item	Private		Public
	Domestic	Foreign	
No of projects (In percent)	75	24	1
Capital in millions of Birr(In percent)	10	37	53
Permanent employment (In percent)	43	42	16
Temporary employment (In percent)	32	30	38
Total employment (In percent)	35	33	31
Capital/project ratio	33	290	6,597
Capital/labor ratio	116,340	495,879	701,141
Labor/project ratio	181	980	14,228

Source: EEA staff own calculation based on Ethiopian Investment Agency (2013) Database

In the past two decades, a total of 1.4 million jobs were created. Two-thirds of these jobs were created by either foreign or public projects. The private sector which owned three-fourths of the projects (in number) created only one-third of the jobs.

The other peculiar feature of the private sector is the capital/project ratio, which measures the size of the project, is by far the lowest relative to foreign direct and public investment projects. Further, the domestic projects have invested small amount of capital for labor as evidenced by capital to labor ratio of Birr 116 million per labor in private projects as compared to Birr 701 million Birr per labor in the public projects (see Table 7.6).

By the same token, private sector projects have lower labor to project ratio relative to their public counterparts. For instance, in the past 20 years, private sector has employed 181 people per project per annum while public sector

projects employed 14,000 people per project per annum clearly showing the private sector has been contributing minimal role in employment creation. This is presumably due to the fact that the private sector engages in small scale projects that require less capital and create few jobs. In this regard, foreign investment projects have a high capital to project ratio, capital to labor ratio and labor to project ratio. Nevertheless, these figures are lower than that of the public sector projects (see Table 7.7).

Table 7.7: Share of Private Sector Projects: Number, Capital and Employment by Sector (Percent)

Sector	Domestic Private[34]			Foreign Investment			Total Private		
	No.	C	E	No.	C	E	No.	C	E
Agriculture	70	5	29	29	25	33	99	29	62
Construction Contracting Including Water Well Drilling	72	3	18	26	2	12	98	5	30
Education	84	67	84	16	28	16	100	95	100
Electricity (Generation, Transmission and Distribution)	13	0	1	0	0	0	13	0	1
Fishing	100	0	100	0	0	0	100	0	100
Health and social work	81	52	65	19	48	35	100	100	100
Hotels (Including Resort Hotels, Motels and Lodges) and Restaurants	85	71	80	15	26	20	100	97	100
Manufacturing	73	17	48	27	81	49	99	97	97
Mining and Quarrying	100	100	100	0	0	0	100	100	100

Source: EEA staff own calculation based on Ethiopian Investment Agency (2013) Database

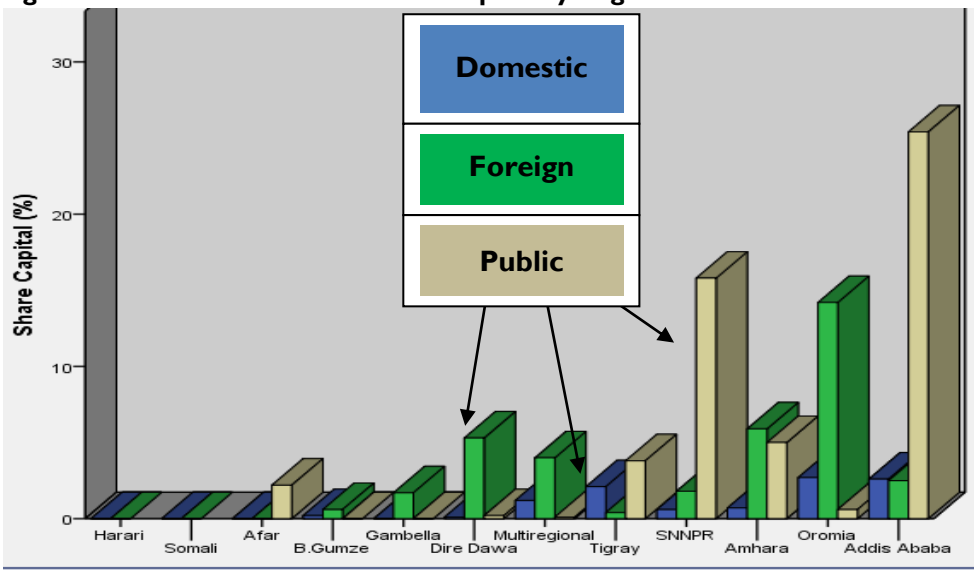
[34] No= number of projects , C=capital invested and E= Employment created

The private sector dominates service sectors such as education, health, social and personal services, tour operation, transport and communication, and whole sale and retail trade. On the other hand, construction and electricity generation and distribution are dominated by the public sector. The share of private capital invested in modern agriculture has not been significant compared to the foreign direct investment and the public sector. The domestic private sector has contributed only five percent of the total capital invested in the past two decades. The share of capital invested on the agricultural sector by foreign direct investors is five times higher than the domestic private sector's share. This may be due to both low capacity of the domestic private sector and high demand for foreign currency by the government leading it to prefer the former.

Similarly, foreign direct investments concentrate in manufacturing, real estate and health sectors. Here again, though there is an increasing claim that the Ethiopian government has leased out huge tracts of land to foreign investors in commercial agriculture, the share of FDI in this sector over the past twenty years did not exceed one-fourth of the total capital invested.

Further, the private sector owns three-fourths of the manufacturing projects that have been implemented in the past two decades. However, they contributes less than one-fifth of the capital. On the other hand, 27 percent of the manufacturing projects owned by FDI companies accounted for over four-fifths of the total capital invested. This shows that while the private sector engages in small scale and handicraft manufacturing projects, foreign investors dominate investments in medium and large scale manufacturing industries.

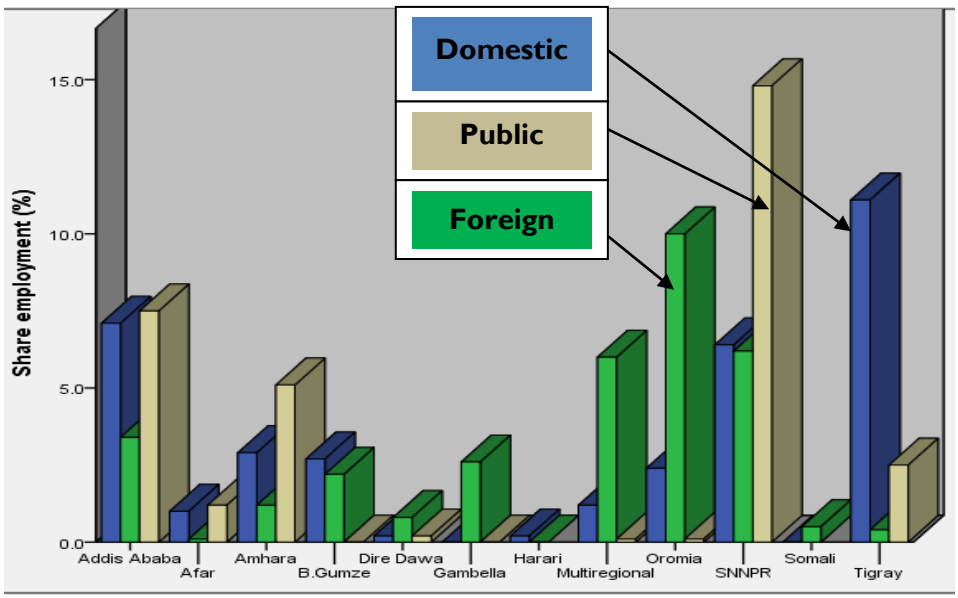
Figure 7.7: Distribution Investment Capital by Region 1992-2012



Source: EEA staff calculation based on Ethiopian Investment Agency (2013) Database

During the 1992-2012, three-fourths of the private investment capital was invested in three regions, namely Addis Ababa, Oromia and Tigray. Infrastructural development, proximity to international markets and resource endowment including agricultural land, among others, may contribute to the skewed allocation of private capital. Similarly, foreign investments were concentrated in Oromiya, Amhara and Dire Dawa. The share of Oromiya exceeded the share of the two regions combined. Recently, Gambella began attracting FDI due to a huge inflow of large scale agricultural investment in the region following the global food crises of the 2007/08. Out of the total FDI inflow to Ethiopia in the past two decades of Birr 109 billion, about Birr 43 billion (39 percent) was invested in Oromiya. On the other hand, Addis Ababa and SNNPR took the bigger share of the public capital (see Figure 7.8)

Figure 7.8: Regional Distribution of Employment Project 1992-2012



Source: EEA staff calculation based on Ethiopian Investment Agency (2013) Database

The main benefits of foreign direct investments are technology and skill transfer and creation of employment opportunities to citizens. In Ethiopia, private investments have different impacts among regions. Of those jobs created by domestic private sector over the past two decades, Tigray, Addis Ababa and SNNPR took the lion's share. Foreign direct investments have created a large number of employment opportunities in Oromiya and SNNPR (see Figure 7.8).

The domestic private sector employs relatively large number labor in Tigray region. One potential factor that created this imbalance could the presence of Endowment Fund under the Rehabilitation of Tigray (EFFORT) business group in the region. These party affiliated businesses are registered under "private limited company". Thus, distribution of the private sector's capital and employment seem

exaggerated in Tigray compared to other regions that are populous and endowed with abundant resources.

Currently, the following businesses are operational under EFFORT business group in Tigray: (i) Mesfin Industrial Engineering, (ii) Ezana Mining Development, (iii)Saba Dimensional Stones, (iv)SUR Construction,(v)Trans Ethiopia, (vi) Addis Pharmaceutical Factory, (vii) Guna Trading House, (viii) Hiwot Agricultural, (ix) Sheba Tannery (x) Almeda Textile Factory and (xi) Experience Ethiopia Travel. There are claims from the private sector that these businesses get preferential treatment from the government. If the claims are true it may create unfair competition in the private sector. This in turn might hinder the development of private sector development in Ethiopia.

Overall, private investment has been playing a significant role in capital and employment creation in the country. However, there is still room for improvement both from the private and the government sides. According to the World Bank's 2011 Ethiopian Enterprise Survey Report, access to finance is the biggest challenge of the private sector. Access to land and access to electricity are the two major obstacles for doing business in Ethiopia. The CSA's 2010/11 large and medium scale manufacturing survey also confirms the result. Consequently, the private sector relies heavily on internal financing for startup capital and expansion of its establishment. Of the total surveyed firms by the World Bank, 86.3 percent use internal finance for their investment which is higher than the Sub-Saharan average of 79.3 percent and the worldwide average of 68.6 percent.

Infrastructure challenges especially electricity outage and long waiting time to actually be connected to the desired service are the major obstacles to do business for the private sector (domestic as well as foreign). Firms in Ethiopia expect to wait for about 112 days to be connected to the electric network after

their submission of service application. This is nearly three times longer than the waiting time in sub-Saharan Africa (33 days) and the world average (34 days). Similarly longer delays in obtaining water connection and telephone connection are also significant challenges for doing business in Ethiopia. Power outage which has been improved in the past two years due to coming into operation of new hydropower projects has still been mentioned as a big obstacle for doing business in Ethiopia by the private sector.

Customs and trade regulations[35] are other challenges for private sector development in Ethiopia. According to the World Bank recent survey, the average time to clear export/import is 15/25 days which is almost twice as long as the customs clearance time of the sub-Saharan average of (8/14 days) and the worldwide average of (7/11 days) (World Bank, 2011)

High labor costs in countries like China and other East Asian countries bring in a competitive advantage to Ethiopia to attract private foreign investments due to political stability, cheap labor and land and attractive domestic and regional markets. However, there are still challenges that hinder the development of a big private sector such as problems of accessing finance, land, electricity outages and long waiting time, tax administration and high tax rates.

7.5 The Role of the Private Sector in Large and Medium Scale Manufacturing Industries

In the preceding sections, we have reviewed how the private sector evolved in the past five decades; the role it plays in domestic economic activities, and its size, in terms of capital and employment generating capacity. This section

[35] The customs authority often does not accept the documented value from importers. Instead, they usually use an international 'standard' price for the imported goods to compute import tariffs accordingly. Similarly, unpredictable and long delays of customs clearances reported by private sector importers (The World Bank, Ethiopia Enterprise Survey (2012).

examines the role of the modern private sector in the industrialization process using the CSA's large and medium scale manufacturing industries survey for selected years.

Private sector engagement in large scale manufacturing industries has become significant over time increasing their share in number of establishments to 94 percent in 2011 from 80 percent 14 years ago. However, there is still a huge opportunity for improvement because the share of the private sector in employment, production and investment is still low. Thus, although investments by the private sector are increasing in number, size of firms is still small compared to its public counterpart. Lack of access to finance might have created the current shape and structure of the private sector. Apart from this, the private sector's role in large and medium scale manufacturing industries has been increasing accounting for over three-fourths of the labor, production, capital and investment in 2010/11 which was not more than one-third in 1997/98 (see Table 7.8).

Table 7.8: Share of Private Sector in Selected Indicators (percent)

Year	Persons engaged	Wage and Salaries	Gross value of production	Value of Fixed Assets	New Capital Expenditure	Number of Establishments
1997/98	28	21	26	40	38	80
2004/05	50	39	46	59	46	87
2010/11	77	72	79	79	79	94

Source: CSA's LMSME Industries Survey, Various Editions

As measured by the ratio of imported intermediate inputs as a proportion of total raw material inputs, private manufacturing industries had an average import intensity of about 46 percent in 2010/11. There is also an increasing trend compared to the average value in 1997/98. This clearly shows that large and medium scale manufacturing industries in general and the private sector in

particular heavily depend on the rest of the world's economy. Consequently, the industrialization process has been hindered by shortage of foreign exchange.

Among other factors, low unit cost of production is highly correlated with firm size which measures economies of scale. Generally, given other factors constant, large size firms have the low costs of production and hence will be competitive both locally and internationally. In this regard, the ratio of gross value added to gross value of production of the private manufacturing industries had been in the range of 31-33 percent for 14 years.

Compared to public industries, private manufacturing industries have low value added to gross value of production which is an indication of high unit cost of intermediate consumption to produce a unit of output. Among others, size might have deprived the private sector from making use of economies of scale and low unit cost advantage.

Though private manufacturing industries have an increasing capacity utilization rate rising from 50 percent in 1997/98 to 69 percent in 2010/11, they are not still working at full capacity. Public manufacturing industries have a better utilization rate going as high as 82 percent in 2010/11. According to CSA's 2010/11 large and medium scale manufacturing survey, more than 40 percent of the manufacturing industries reported shortage of supply of raw materials as a first problem for not working at full capacity. More than 17% of all the manufacturing industries reported absence of demand for products as a first major reason for not working at full capacity. Demand problems could emanate from several factors including lack of competitiveness and/or lack of external markets.

Credit and foreign exchange rationing in recent years might also cause this underutilization of capacity by private manufacturing industries. The public manufacturing industries, on the other hand, have better capacity utilization.

Among others, preferential treatment in credit and foreign exchange allocation might have created the capacity utilization differential.

Table 7.9: Capacity Utilization and Import, Labor and Capital Intensity Indicators of Private Manufacturing Industries

Owner ship	Year	M/TCOST (Import intensity)	GVA/ GVO (cost effectiveness)	GVO/ GVO_FULL (capacity utilization)	RLS/TR	GVA/L (labor productivity)	GVA/K (capital Productivity)
	1997/98	39	31	50	76	2.0	6.3
Private	2004/05	47	34	56	92	3.5	10.2
	2010/11	46	33	69	93	10.1	30.6
	1997/98	46	47	66	96	3.3	7.0
Public	2004/05	44	46	66	91	5.1	11.1
	2010/11	52	52	82	96	15.2	29.3
	1997/98	43	43	61	91	2.9	6.8
Total	2004/05	46	38	64	92	4.3	11.2
	2010/11	47	43	70	94	12.8	29.8

Source: EEA staff own calculation based on CSA LMSME Industries Surveys

Value added to labor and capital ratios which measures factor productivities show that there is a significant improvement in both factors. Both labor and capital productivities in private manufacturing industries increased by fivefold between 1997/98 and 2010/11. In the recent survey-2010/11, the private sector has higher capital productivity compared to the public counterpart.

Chapter Eight

Policies and Strategies towards the Private Sector in Ethiopia

8.1 Economic Policies during the Imperial Era

Early periods of the Imperial regime were characterized by weak private sector where subsistent agriculture accounted for 75 percent of GNP and 90 percent of employment. In particular, the share of the industrial sector in the GNP was as low as 6.2 percent, and that of the manufacturing sector was 1.5 percent [First Five Year Development Plan, 1957]. As the documents of the three five year development plans of the Imperial regime show, the then government advocated market economy with state intervention in key sectors. While the Ethiopia government recognized the indispensable role of the private sector in the economy, it had a leading role in shaping the direction of the economy through planning and direct investments in key sectors.

One of the areas of concern of the government about the performance of the First Five Year Development Plan was the relatively weak participation of the private sector in the more productive sectors. Moreover, the Third Five Year Development Plan of the Imperial Government recognized the indispensable role of the private sector. It was argued that a need for more sophisticated plan in the manufacturing sector was partly motivated by the vital role of the private sector felt during the time. In the Third Five Year Development Plan, it was stated: "The growing maturity of modern factory industry, and the vitality demonstrated by the private sector, have made necessary a more sophisticated approach than heretofore to planning, for the Third Five Year Plan period."

In an attempt to induce the private sector to develop, the First Five Year Development Plan gave priority to infrastructure development where transport and power had a share of 35.6 percent of the total government budget. The major objective of the policy as articulated in the Plan was to lay foundations for further takeoff. Resource mobilization both from within the domestic economy and foreign sources, education, modernization of agriculture, and agro-industry were some of the other priority areas of the Plan.

The rationale for giving priorities to infrastructure development and agro-industry was that developments in the infrastructure and industry would help agriculture respond. It was believed that large scale commercial farming would lead to more linkages. The period witnessed much focus on coffee plantation and production.

The Plan targeted to accelerate growth of GDP from 1.5 percent before the plan to 3.7 percent (equivalent to a 2.1 percent growth in per capita GDP) by the end of the plan period. Agriculture was targeted to grow at a modest rate of 2.7 percent due to the subsistent nature of the sector while manufacturing industry was expected to grow at much faster rate. The result was encouraging: GDP grew by 3.5 percent, value-added in the agriculture grew by 2.2 percent, and most importantly manufacturing output has doubled over the plan period.

Nevertheless, the participation of the private sector in the manufacturing sector was not as significant as expected. The evaluation of the performance of the plan indicated that the service sector had dominated the investment made during the period. About 60 percent of the total investment in the country was directed to housing, transport, and communication. In particular, a significant part of monetary investment was channeled to housing. On the other hand, the direct productive sectors had relatively smaller shares. According to the evaluation of the Plan, probably one major possible explanation for the concentration of

investment in the housing sector was lack of entrepreneurial ability [Second Five Year Development Plan, 1962].

Based on the lesson learnt from the results of the First Five Year Development Plan, the Second Five Year Development Plan (1963-1967) gave emphasis to the development of industrial sector. It was a prelude to a 20 year development plan which targeted doubling income in 20 years (1983). The major sectors of priority were the most propulsive sectors such as mining, manufacturing, and power. Agriculture remained the leading economic sector in spite of its modest performance in terms of growth due to its large share in the GDP and employment. It was aimed that the industry sector should help agriculture grow fast. As a result the focus of the plan in this case was on agro-processing industries. The service sector was targeted to grow slower than in the previous plan period but fast enough to lubricate industry.

The Second Five Year Development Plan targeted GDP to grow by 4.3 percent, and value-added in the industrial sector to grow at more than 11 percent. The result was that manufacturing sector grew by 16 percent. The rapid expansion of the manufacturing, construction, and power subsectors helped the mostly non-agricultural monetized sector to grow faster at a rate of 7.5 percent per annum. This was four times as fast as the growth in the non-monetized sector. As a result, the share of the monetized sector increased from 46 percent of GDP in 1962 to 55 percent of GDP in 1968 [Third Five Year Development Plan, 1968].

Particular emphasis given to the industrial sector in the Second-Five Year Development Plan resulted in a substantial increase in industrial production as it grew by 12.5 percent per year during the plan period. This increased the share of the industrial sector in the GDP from 9 to 13 percent. Investments made in the sector were close to targets mostly due to "private decisions to meet

unanticipated market demands" and government's inducement to private investors [Third Five- Year Development Plan, 1968].

In the years ahead, it was difficult to sustain the gains in growth in the preceding two plan periods without a substantial change in the agriculture sector as the monetized sector covered only 5 million out of the 20 million people. Demand for the monetized part of the economy was critical. As a result, the Third Five Year Development Plan (1968-1973) gave priority to agriculture. The plan identified two major problems in the sector: "the problem of production and the problem of peasantry." The two tracks of the policy were dealing with commercial farming on the one hand and subsistence agriculture on the other. It was planned that commercial agriculture would grow by 5.7 percent, the subsistence agriculture by 1.8 percent, and overall agriculture by 3 percent per annum.

To meet the goal of fast growth in agriculture and to ensure balanced regional development, large scale farming projects were established in Setit Humera, Awash Valley, Southern Livestock Development, Chilalo, and Wolayita-Sodo agricultural units. Other sectors were expected to grow faster due to the maximized linkages.

The plan envisaged a significant participation of foreign private investors with policies ensuring the "close cooperation between foreign and local interests at every stage." It stated that "[the] farming enterprises may be public or private in ownership and operation, but the really important consideration is that the activities be commercially and financially sound." Following the footsteps of the government in those new areas of operations, the private sector started to engage in commercial farming as well as the manufacturing sectors. The private sector was targeted to contribute to 48.2 percent of the planned gross capital formation and 39.8 percent of the investments in the manufacturing sector.

A major obstacle for development of Ethiopia during the Imperial regime that has been cited by many (economic) historians so frequently was the land tenure system. An interesting issue that explains the intricate political economy of the period is the fact that the same problem was felt by the then government and clearly spelled out in the Third Five Years Development Plan:

> *The need for vigorous polices of land reform is…evident. Very little progress in agrarian reconstruction and development, particularly in peasant agriculture, can be made under the existing tenure and farm size. The immediate concern of land reform is to overcome the apathy, of the agricultural production, caused by traditional inequitable land tenure patterns, concentration of land in small group, insecurity of tenure, and exorbitant rent or share cropping arrangements.*
>
> Third Five- Year Development Plan, 1968, pp. 195

The evaluation of the performance of the Second Five Year Development Plan in the area of the manufacturing sector identified high dependency on imported raw materials more than what has been planned, static labor productivity, inadequate number of Ethiopian entrepreneurs (managers), and high concentration of the industries in and around Addis Ababa and Asmara as gaps that need to be addressed during the Third Five Year Development Plan. The Third Five Year Development Plan envisaged a policy of import substitution and use of locally available raw materials.

The Plan outlined a number of instruments of industrial development policy. The financial instruments include income tax relief and import duty relief to preferred industries. Industries which qualify for preferred status should be those which export their produce, meet internal demand with a minimum of imports, contribute to agricultural and mineral developments, contribute to new urban

industrial growth centers, and maximize the employment of indigenous human capital.

The other instrument of executing the industrial policy was direct government investment. The Plan identified basic manufacturing enterprises, commercial manufacturing enterprises, and small factory manufacturing enterprises. Basic manufacturing enterprises were exclusively meant for government investment. However, all or some of such enterprises could be offered to the public through the appropriate financial institutions if they became profitable.

Government was also justified to invest in commercial manufacturing enterprises in particular which can attract private sectors if private investment could not be forthcoming in a given period. Such investments were planned to be carried out through loans or equity participation with or without private partners.

Intervention of the government through investment in small factory manufacturing enterprises was required for those factories which could serve as seedbeds for the creation of domestic entrepreneurship and management but which faced initial growth problems.

The industry services scheme was the other instrument of the industrial policy. The service to industries included financial services, provision of land at lower cost, techno-economic services including economic and consulting services, management training services, industrial extension services, and product quality services.

Equalizing opportunity for small enterprises and integrating the industrialization with new urban growth centers were also targeted. The later instrument was designed to ensure balanced regional development in the country.

With such policy interventions, GDP was targeted to grow at annual rate of 6 percent so that per capita GDP would grow at 3.5 percent during the Third Five Year Development Plan. The operation of the plan was challenged by the student movement and later by the Revolution and culminated with an average annual GDP growth rate of 3.3 percent.

8.2 Economic Polices Under the Derge

The Derge's (1974-1991) ideology of command economy which emerged following the popular revolution had a clear strategy of abolishing private ownership. Nationalization of enterprises, excess residential houses, and urban land were implemented in the early periods of the regime. The system imposed a limit of 500,000 Birr capital on private investments. It also had confiscated the building of the Chamber of Commerce in apparent move to eradicate the symbol of free market. The modern private sector was thus discouraged.

The mid 1980s saw an eventual nationalization of the very subsistent agriculture when the Derge extended the showcase collectivization and villagization programs. That marks the peak of the intensification of the socialist ideology.

The last plan of the regime was the Ten Year Development Plan (1985-1994) that was launched in 1985. In general, the priority sectors were agriculture, industry, and water resource development.

The major strategy of the Plan was to ensure linkages among sectors notably between industry and agriculture; industry and mining. Major targets included capacity building such as irrigation, construction, electrification, and mechanization. The plan also emphasized resource inventory, conservation, and rehabilitation. Education had also got attention. The critical strategy that

underlined the abovementioned priorities was the intensification of the socialist production relations.

Gross domestic product was targeted to grow by 6.5 percent over the plan period (3.5 percent growth in per capita GDP). Agriculture, industry, and service sectors were planned to grow at 4.3 percent, 10.8 percent, and 6.9 percent, respectively.

The interventions compromised efficiency by violating the principle that people truly respond to incentive rather than to emotions. Such interventions coupled with the civil war led to overall deterioration of average welfare by 1 percent per annum as the 1.8 percent annual growth rate of real GDP did not even commensurate with the 2.8 percent population growth rate.

The system's favored industrialization strategy pushed the share of the value-added in the industrial sector to about 16 percent (Eritrea included) in its 17 years reign. The rise in the share was, however, partly due to the stagnation of the value-added in the agricultural sector.

As the socialist ideology appeared to have lost ground in many former communist countries notably the former Union of Soviet Socialist Republics (USSR) in early 1990s, the Derge declared mixed economy. That was, however, too late as the civil war reached its climax. By the time of departure of the regime in 1991, the legacy of socialism was that an average Ethiopian was worsened off by about 17 percent in terms of per capita income compared to its status in 1974-the last year of the Imperial regime.

8.3 Policies and Strategies Post 1991

By the time the Ethiopian Peoples Revolutionary Democratic Front (EPRDF) overtook power in 1991, capitalism was prevailing as a viable economic (and ideological) order in the rest of the world. The EPRDF government followed the policy of market economy under the generic name of the agricultural development-led industrialization policy (ADLI) that has been popularized since1995. The main tenet of the strategy was that agriculture should play the leading role. A GDP growth of 7-10 percent was targeted for the first five years since the launch of the policy. During the period, GDP grew by 5.1 percent where the service sector having contributed 62 percent of the growth. Agriculture grew by 2.8 percent during the period and has accounted for 27 percent of the growth.

The subsequent development plans of EPRDF emanated from the general strategic framework of the ADLI policy. As a continuation of ADLI, the first formal development plan under the name Sustainable Development for Poverty Reduction Policy (SDPRP) was introduced in around 2000. Priority areas were agriculture, education, and infrastructure. In around 2002, the notion of sectorally balanced growth strategy (*memegageb*) was introduced. Over the five years plan period since 2000, economic growth slowed down to a rate of 4.6 percent. Agriculture grew by 3.5 percent during the period and has accounted for 33 percent of the growth. The major source of growth was still the service sector accounting for 56 percent of the growth.

In around 2005, another five year development plan known as the Plan for Accelerated and Sustained Development to End Poverty (PASDEP) was launched. Sectors which the PASDEP had taken over from SDPRP include infrastructure, human capital (education and health), rural development, food security, and capacity building. What PASDEP targeted as 'new' directions include ensuring

high growth, commercialization of agriculture, fostering industry, urban development, and achieving millennium development goals (MDGs).

The major achievements under PASDEP were the high (11 percent) growth of the economy, good performances in the infrastructure sector in particular road, and expansion of education from primary to tertiary levels. It was a debatable issue for a while to reconcile the record high inflation rate of 19.2 percent (as opposed to the targeted 8 percent) with high growth in the agriculture sector for the period. Revisions in the national income account seemed to reconcile by giving the greater credit to the service sector in the overall growth. The other challenge which PASDEP faced was the quality dimension of education.

The fiscal year 2010/11 saw a new plan known as the growth and transformation plan (GTP). The major policy shift in the GTP is the emphasis given to the industrial sector. The GTP carried over most of the target areas of intervention under PASDEP but the focus on the industrial sector development seems to be real. In the infrastructure sector, the plan for a railway network is a new venture the plan embarked on. The government believed agriculture would continue to be the major source of growth under the GTP. From the political economy perspective, GTP explicitly emphasized the necessity and objective of creation of democratic and developmental state.

GTP seemed to have taken a lesson from past experiences. During the periods of operation before PASDEP, it was argued among stakeholders that the demand side of the economy had been neglected while the government was believed to have put much of its efforts on the small holder agriculture sector. The argument was partly supported by deflationary episodes during bumper harvest in which farmers were discouraged to boost production in subsequent years. Though PASDEP seemed to have partially learned from weaknesses of SDPRP in giving emphasis to the urban development and infrastructure, the resulting growth in

demand was not, however, matched by the growth in productive sectors namely agriculture and manufacturing sectors.

About 58 percent of the 11 percent GDP growth during PASDEP was accounted by services and construction sectors (a 10 percentage points increase from SDPRP). In particular, industry remained less vibrant hovering around 12 percent in the volume of GDP and a fall of its share in GDP growth from 17 percent during SDRP to 12 percent during PASDEP. While the expansion of demand during PASDEP was assuring for future growth, the sustainability of the economic growth heavily depended on the response of the productive sectors of the economy. GTP in this case seems to be a continuation of part efforts attempting to address the sustainability of the high growth. It also recognized the need for macroeconomic stability in achieving the goals.

Interestingly, the dominance of the service sector during the period of PASDEP is similar to the pattern of performance of the Ethiopian economy during the First Five Year Development Plan of the Imperial regime (1957-1961). As it has been indicated in Section 8.1, 60 percent of the total investment during the 1957-1961 period was directed to housing, transport, and communication. Correspondingly, the plans under ADLI share many aspects of the development plans of the Imperial regime. While part of the Plan for Accelerated and Sustained Development to End Poverty (PASDEP) was a lesson taken from past pitfalls, the Growth and Transformation Plan (GTP) appears to be a correction for the sustainability factor of PASDEP. The transition from the PASDEP to the GTP is in many ways similar to the shift from the First Five Year Development Plan to the Second Five Year Development Plan of the Imperial regime.

The GTP targets almost all sectors:

- Agriculture and rural development
- Industry

- Economic infrastructure (energy, road, and railway infrastructure)
- Social sector development (education, health, sanitation)
- Capacity building and good governance
- Crosscutting issues (gender, social security, population, culture and tourism, environment and climate change)

Nevertheless, industrial development and economic infrastructure are the real priorities. Education has also attracted the focus of GTP on the quality dimension. The plan targeted an 11.2 percent average growth rate of GDP in the base case scenario and a too ambitious 14.9 percent average growth rate of GDP in the high case scenario over the five years period. The performance of the last three years of the GTP period indicates that the economy is likely to grow at the rate of the base case scenario.

Table 8.1: Targeted Growth Rates and Sectoral Transformation by GTP

Sector	Targeted Growth in percent		Targeted Sectoral Transformation (Share in the GDP)		
	Base case scenario	High growth scenario	Baseline (2009/10)	2014/15 (Base case scenario)	2014/15 (High growth scenario)
Agriculture	8.6	14.9	41.6	38.8	41.2
Industry	20.0	21.3	12.9	15.6	14.8
Services	10.6	12.8	45.5	45.6	44.2
GDP	11.2	14.9	100	100	100

Source: Federal Democratic Republic of Ethiopia, Ministry of Finance and Economic Development, Growth and Transformation Plan, 2010/11-2014/15, November 2010, Addis Ababa.

The GTP targeted a total of 615.6 billion Birr in revenue over the five years plan period to cover a total expenditure of 691 billion Birr. About 81 percent of the total revenue was expected to be mobilized from domestic sources for the five

years plan period while the balance is expected in grants. Tax collection was expected to grow at a rate of 24 percent annually (roughly the same rate as the preceding five years). Grants are expected to grow at 33-35 percent for the first two years and 8 percent annually for the last three years (the average is 18 percent - the same as the rate for last five years).

The target in the government revenue and expenditure was normal since tax collection had been increasing at 25 percent per annum in the last five years preceding GTP. What was different in the new plan is the 569.2 billion Birr worth of investment in the major targets off the government traditional budget.

Table 8.2: Investment Projects of the GTP and Financing

	Millions of Birr	Share in Percent
Industry	193,561	34.0
Sugar	75,575	12.9
Chemical, pharmaceutical, cement	34,593	6.1
Metal engineering industry	20,466	3.6
Textile	15,945	2.8
Fertilizer complex industry	13,205	2.3
Energy	177,735	31.2
Transport	161,704	28.4
Railway	110,796	19.5
Telecommunication	21,670	3.8
Addis Ababa Housing Project	14,960	2.6
Total	569,630	100

Source: Federal Democratic Republic of Ethiopia, Ministry of Finance and Economic Development, Growth and Transformation Plan, 2010/11-2014/15, November 2010, Addis Ababa.

The sources of financing for this project are domestic and foreign borrowing (70 percent), and government enterprises (30 percent). The foreign currency

requirement of the project was estimated to be 55.4 percent of the total budget. In this regard, the policy made domestic resource mobilization a priority.

In many ways, the policy shift towards more vibrant productive sector namely industry and the efforts that are geared towards expanding infrastructure are commendable and encouraging. However, it might be argued that given the significant role of government in the industrial sector as a direct producer, there would be a crowding out effect on the private sector. On the other hand, there are counter arguments that since the role of the private sector in the manufacturing sector for the last twenty years had been modest, the intervention of the government may have little or no crowding out effect. Another argument in favor of government intervention is that most of the targeted sectors for investment by the government are the infrastructure sectors which eventually help the private sector develop.

The Ethiopian investment policy provides many opportunities in particular for those who invest in productive sectors such as agriculture and manufacturing industries (see Section 10.3.1). Nevertheless, possible reasons for the apparently low participation of the private sector in the manufacturing sector such as lack of capital, poor infrastructure in particular energy, lack of entrepreneurial capability, government policy, uncertainty, weak institutions, and completion policies are still major issues for research.

While the investment policy indicates that almost all except the telecommunication sector are open for Ethiopian investors, the existence of enterprises under endowment fund scheme casts doubt on the fairness of the completion in the economy. The recent requirement of private banks to buy government bonds (National Bank of Ethiopia or NBE bill) with 27 percent of the value of the loan the banks managed to disburse at a low interest rate of 3.1 percent had been a controversial measure among the business community.

Chapter Nine

The Role of the Private Sector in the drive for Industrialization

9.1 Theoretical Underpinning

9.1.1 Market and the Indispensable Role of the Private Sector

Most of the debate in the mainstream economics, after the emergence of macroeconomics as a discipline following the great depression of the 1930s, has been dominated by the issues of the role of government in the economy. The basic difference between the major schools of thought within the mainstream economics does not contend the importance of market and hence the indispensable role of the private sector in an economy. It rather debates sources of economic instability, extent of market failures, and whether government can help correct those market failures.

Nevertheless, the world had witnessed extreme cases of the role of government in the economy in line with the ideological divide between capitalism and socialism. While Keynesianism was believed to have argued in defense of capitalism, some proponents of socialist ideology found it as an insight against markets. At times when command economy was the rule in socialist countries wherein governments centrally plan the production and distribution of goods and services, some elements of planning were also adapted by market economies.

The core principle of command economy of representing all economic agents in planning their demand and supply on their behalf proved difficult. The twentieth century has seen capitalism as the only viable system. However, after the departure of socialism as an ideology, the current debate particularly in

development economics seems to have been influenced by its legacy of planning. This is notably pronounced in developing countries where the government has the challenge of breaking underdevelopment, beyond dealing with standard market failures such as provision of public goods and stabilization.

The theory of laissez-faire which was first developed by the Physiocrats and popularized by the classical economists is the basis for the fundamental principles in free-market economics. The prominent economist in the classical school - Adam smith – was an influential proponent of laissez-faire and he believed that individuals acting in their own economic self-interest will maximize the economic situation of society as a whole as if guided by an "invisible hand." Smith advocates private enterprise as the best stimulus to equitable distribution of wealth. In a free-market economy the government's function is limited to protecting private property, enforcing contracts, providing public good and performing regulatory roles (Colander and Landreth, 1994). Also, the neoclassical mainstream (which is the extension and refinement of the classical school), has constantly insisted that free markets are efficient and can promote growth everywhere.

Those who advocate free market economy (and hence private sector development) forward various arguments to support their view. The first major argument proposed by the classical and neoclassical school is the issue of self interest. In a typical free market economy the two economic agents, buyers (consumers) and sellers (firms) are assumed to be rational were they are largely driven by economic self-interest. According to the Classicals (specifically Smith), each agent will follow its own self-interest, and in promoting self-interest they will promote that of the society[36]. Economic agents do not intend that their personal market decisions result in social benefits. Rather they intend only to benefit themselves and social benefits are not deliberate. The seller for instance

[36] These self interested economic behaviors are related to maximize utility for the consumers and profit for the firm.

is driven not by altruistic motives but a desire to make profits. Nonetheless, the invisible hand ensures that personally and voluntarily decided self-interested outcomes will benefit the society as a whole thereby safeguarding the two social objectives of efficiency and social justice to be achieved (Hillman, 2009). Thus, governments should not interfere in this process and should therefore follow a policy of laissez-faire.

The second rational for market economy is its efficiency in allocating scarce resources. According to the classical (and neoclassical) schools "Market allocates scarce resources efficiently". Free markets are assumed to provide incentives to individuals to allocate resources, such as labor and capital, among the most productive uses, and to firms to produce goods and services that the public wants, using the most efficient means of production. Achieving efficiency requires that; (1) the market assigns goods among different buyers to achieve maximized total benefit, (2) the market assigns supply among different sellers to achieve minimized total costs and (3) the market also chooses a quantity that maximizes the social welfare. According to the classical economists (and their followers) competition ensures all the three to happen[37]. In addition, a competitive market-adjustment mechanism also ensures that the market moves to and remains at the efficient market equilibrium if there is any deviation from the efficient allocation point. In general the self-interested market behavior of buyers and sellers result in maximized total benefit and minimized total cost, respectively, which in general maximizes the social welfare (income).

The third rational for the indispensible role of market (and hence private sector) is the ability of markets to gather and analyze information. Relative to governments, markets have a better capability and advantage to gather and

[37] The arguments that a competitive market efficiently assigns goods among buyers to maximize buyers' total benefit and supply of goods among sellers to achieve minimized total cost is proofed formally using mathematical derivations in standard economics text books. However in this text we will stick to verbal discussion.

analyze all of the information in society. For instance, in his famous essay "*The Use of Knowledge in Society*" Hayek (1945) argues that centralized planning systems cannot adequately capture all of the everyday and local sorts of knowledge about production techniques, materials, demand etc. all the way up. Top-down coordination fails because information is too expensive to centralize, and the free market reigns supreme because it lets society have a kind of distributed ability to acquire knowledge. In relation to this, the fact that allocative efficiency both for buyers and sellers is achieved using marginal analyses serves as an additional supporting argument for emphasizing the role of the market. If the government is supposed to allocate resources efficiently (by replicating the market), it has to determine marginal utility of buyers and marginal cost of sellers appropriately. However, marginal benefit (utility) of buyers is determined by individual behaviors (i.e. it is private information of the buyer) which cannot be easily estimated by the government. Also marginal cost can only be appropriately known by the firm (seller) itself. When a government agency seeks to replace a market, we therefore have a case of asymmetric information. Thus, given the important role of information in determining efficient allocation of resources, governments can never ensure allocative efficiency by replacing the market (Hillman, 2009).

In economies where government takes the initiative to establish industries, privatization is the first step to move into market oriented economy where the private sector plays the leading role. The central argument used to support privatization and hence private sector development is the "inefficiency" of public enterprises. The theoretical literature traces the origins of performance differential in favor of private enterprise to the moral hazard created by the separation of ownership and control - the so called principal-agent problem. The principal-agent framework pointes out three issues on why public firms are likely to underperform private firms: diffusion of ownership, takeover and bankruptcy. First, where ownership is diffused, each shareholder has little personal incentive

to work for improved management. Moreover, competing authorities among public principals make it more likely that they will present complex poorly defined objectives to their agents. Second, the public firms are characterized by weak control and they are often insulated from market forces (Yeaple and Moskowitz, 1995). In private firms, even when there is weak control by principals, the market puts constraints on management behavior and shapes the performance of workers. However, in public firms such market constraints are absent. [38]

Regarding the issue of takeover for the private sector, even in cases in which ownership is diffused, the threat of takeover offsets much of the tendency towards inefficiency. This is because, if management performs poorly, shareholders will demonstrate their dissatisfaction by selling their share of ownership, thereby reducing the price of the firm's stock which will result in the replacement of the poorly performing incumbents. Thus, for private firms, the market provides an avenue, and incentives, for changing corporate governance and thereby enhancing the operating efficiency of the firm. However, there is no autonomous method for taking over a public firm and, if it has access to government funding the risk of bankruptcy will not be that much of a concern. That is, threat of bankruptcy facing private firms[39] does not put constraints on the management's pursuit of its own objectives as in public firms which have access to government funds (Yeaple and Moskowitz, 1995).

A range of additional explanations are forwarded on the relative inefficiency of public enterprises by economists, such as Vernon-Wortzel and Wortzel (1989),

[38] "In the public sector, not only is the market's constraints on management behavior absent, but there are incentives for decisions to be made on no-market grounds. The market constraint is missing because each citizen is an owner of a public firm, and therefore no one citizen feels much proprietary responsibility towards the firm."

[39] which constraints the ability of management to waste resource owing to the fact that the manager should cut costs down and keep the enterprise solvent so as to maintain his/her employment

Hanke (1987), and Hemming and Mansoor (1988) cited in Howard (2001). First, they argue that the performance of a state enterprise is not only a function of state ownership per se, but also a function of the type of management and the appropriate culture in the firm. Some state-owned enterprises function efficiently. Nevertheless, the organizational culture of state enterprises tends to be government oriented rather than customer oriented. This is reflected in political interference in day-to-day decision making, which in many cases prevents public sector managers from pursuing strategic planning.

Furthermore, the property rights theory suggests that public enterprises operating in competitive markets should be privatized. According to the theory, competition provides greater incentives to private managers to increase allocative and productive efficiency. The replacement of a public monopoly by a private monopoly may not necessarily lead to significant efficiency gains, but privatization can reduce political interference and enhance the quality of management. According to Hanke (1987) cited in Howard (2001:36), different forms of property ownership give rise to different economic incentives and different economic results. Private enterprises are free to use and exchange their private property rights, which give individual owners a claim on the assets of the enterprises. Private sector managers ultimately face the bottom line, which measures the profits or losses that owners claim. On the other hand, public managers and employers allocate assets that belong to taxpayers. Such managers do not bear the costs of their inefficient decisions, nor do they gain from efficient behavior. Only the politicians are ultimately accountable to the taxpayers. The political interference and property rights theories are generally strong in explaining the managerial drawbacks of public enterprises. In this regard, privatization is seen as a means of improving the efficiency of enterprises by limiting the scope of political interference.

9.1.2 Market failure as a Rational for Government Intervention

Although under ideal conditions it can be demonstrated that competitive markets ensure efficiency, markets can also fail to achieve efficiency in different circumstances. There are four important conditions under which the market fails to allocate resources efficiently: (1) Failure of competition (market power), (2) public goods, (3) externalities and (4) imperfect information. Market failure is the standard justification for government action in neoclassical welfare economics.

For markets to result in efficient allocation of resources there must be perfect competition, that is, there must be a large number of firms in which an individual firm has no power to determine the market price. If some firms have market power, the ability to affect prices, then allocation of resources will generally be inefficient. There are a variety of reasons why competition may be limited. Sometimes there is a "natural" monopoly where it is cheaper for a single firm to produce the entire output (Rosen, 1999). In this case, trying to increase competition by encouraging new entrants into the market creates a potential loss of efficiency since the new entrant would wastefully duplicate fixed costs (Hillman, 2009). Another form of monopoly is "legal" monopoly when the government gives a firm exclusive right to produce and supply a good. Monopoly could also arise when only one firm has access (ownership) to strategic raw materials, or exclusive knowledge of production techniques.

One criterion for the efficiency of competitive markets is the existence of well defined property right and private goods that yield exclusive personal benefit. However, in the case of some goods, individuals cannot be effectively excluded from the use of it and the use by one individual does not reduce availability to others. Such goods which benefit a number of people simultaneously are called public goods. The production of public goods results in positive externalities in a sense that once the public good is provided an individual cannot be excluded

from using it whether that individual contributes or not for its provision. The prospect of benefit without personally paying will thus result in what we call "free riding problem" which is the tendency of individuals to benefit from what others pay. The problem with free riding is that it will cause under provision of public goods as many individuals decide not to pay for the good assuming they will reap the benefit anyway if others decided to pay (Brown and Jackson, 1990). The incentive to free-ride on others' payments thus implies the fact that market-oriented behavior of individuals will not produce efficient results[40] and these calls for government intervention.

The third situation in which markets fail is the existence of externalities, a situation where one person's behavior or action affects the welfare of another in a way that the relevant costs and benefits are not reflected in market prices. Externalities create inefficient allocation of resources in a market because such kind of markets basically assumes economic agents to internalize all benefits and all costs that stem from their market decisions. Failure to internalize costs results in negative externalities while failure to internalize benefits results in positive externalities (Hillman, 2009). Externalities result in inefficiency in the allocation of resources and government intervention is needed to correct market failure which emanates from it.

Lastly, the existence of asymmetric information also causes market failure. In a competitive market, information is assumed to be perfect and costless where all market participants are equally and accurately informed about the market conditions. However, in the real world, some parties in a given transaction might have more or better information than others. For instance, people who face uncertainty about personal income would want insurance against having low future income. In this case, the insurer may need to monitor and determine

[40] As private costs exceed private benefits, the incentive to provide the good or service through the market will cease to exist

whether or not the purchaser has low income due to bad luck or due to lack of personal effort to be self-reliant. Since it is impossible to determine consumer behavior in this case or because it is too costly to do so, insurance markets for low income may not exist. In such situations, government intervention is needed to compensate for the societal loss of benefits that they would have gained, if the markets had existed (Hillman, 2009).

In general, even if the role of markets in allocating resources cannot be replaced by government, the existence of market failure introduces the possibility of the benefit of government intervention through public finance and policy.

9.1.3 The Role of Government in Stabilization

In addition to correcting market failure at micro level, governments also have a role in ensuring macroeconomic stability, expressed in avoiding inflation and unemployment and maintaining stability of the banking and financial system. Stabilization policy attempts to achieve an adequate trade-off between price stability, employment, balance of payments equilibrium and growth. Stabilization is vital in small, open economies which can be viewed as disequilibrium systems (Balassa 1982 cited in Howard, 2001). Disequilibrium in the macro economy is manifested by failure of the system of economic management to yield optimal results or equilibrium levels of major variables such as Gross National Output (GNP), savings, investment, money supply, income distribution or trade balance (Brown and Jackson, 1990).

The government therefore has to adopt policies to correct such disequilibrium. According to Howard (2001:26) there are two types of stabilization policies: demand management and supply-side policies. Demand-side policies attempt to reduce levels of domestic demand and spending. These include fiscal measures such as heavier taxation, and monetary policies such as credit restrictions and

higher interest rates. Supply-side policies are designed to increase the volume of output in the community. These comprise measures to improve the efficiency of capital and labor. Demand management policies are short term, whereas supply-side adjustments are more long term, since they attempt to increase supply capacity through tax incentives, the better use of technology and so forth.

9.1.4 The Role of Government in Economic Growth and Development

The role of government in developing countries is not limited to correcting market failure and stabilization. Governments in developing countries have an additional role – fostering economic growth and development. Proponents of the growth and development role of government such as Lewis, Rodan, Nurkse, Singer, Prebish, Hirshman and Leibenstein see the state as a catalyst for development by creating the appropriate institutions and incentives to stimulate the growth of a productive capitalist class. They view economic development as a growth process that requires the systematic reallocation of factors of production from a low-productivity, traditional technology, decreasing returns, mostly primary sector to a high-productivity, modern, increasing returns, mostly industrial sector.

Lewis (1955) cited in Howard (2001) observes that "institutions promote or restrict growth according to the protection they accord to effort, according to the opportunities they provide for specialization and according to the freedom of maneuver they permit". Rodan (1943) cited in Adelman (1999) puts forward the need for a government-financed series of interdependent investments, to take advantage of external economies and economies of scale and propel developing countries from a low level equilibrium trap, with no growth in per capita income, to a high-level equilibrium path, characterized by self sustained growth. Also, as discussed in Howard (2001), Tanzi (1991) regards economic growth as perhaps

the most important objective of government in developing countries. He articulates "developed countries do not have to concern themselves excessively with growth. To them stabilization and equity may be more worthwhile pursuits. For the developing countries, however, where per capita incomes are generally very low, growth must be the overriding objective".

However, proponents of the growth and development role of government also emphasize the fact that government should promote economic growth through crating an essential and favorable environment for the development of market economy and the private sector. Most classical development economists argue that, in the absence of private entrepreneurship, governments would have to continue to perform the entrepreneurial job while at the same time fostering the development of a team of private entrepreneurs willing and able to take over. Governments could foster the development of private entrepreneurs by artificially increasing the rates of return from private investment through direct government subsidies, by engaging in joint government-private ventures, and by subsidizing management training programs (Adelman, 1999).

Lewis also regarded the safeguarding of property rights as a condition for capital formation. He argues that without property "the human race would have made no progress whatsoever, since there would have been no incentive to improve the environment in which one lived" (Howard, 2001). Stiglitz (1996) also sees the role of government in developing countries as establishing infrastructure in its broadest sense to allow markets to fulfill their central role of increasing wealth and living standards. This broad based infrastructure includes six roles: promoting education, promoting technology, supporting the financial sector, investing in infrastructure, preventing physical degradation, and creating and maintaining a social safety net.

Moreover, according to Rodrik (2007) government planning and public investment alone cannot act as the driving force of economic development, however he emphasizes the fact that developing societies need to embed private initiative in a framework of public actions that encourages restructuring, diversification, and technological dynamism beyond what market forces on their own would generate. Rodrik calls for economic policies that take an intelligent intermediate stand between the two extremes where market forces and private entrepreneurship will be in the driving seat of the agenda while governments would also perform a strategic and coordinating role in the productive sphere beyond simply ensuring property rights, contract enforcement, and macroeconomic stability.

In general given the role of government in economic growth and development, successful intervention maintains respect for the power of market forces and private sector initiative. According to Knorringa and Helmsing (2008:1054) for development studies to have a future, it needs, among other things, to incorporate a more realistic and nuanced perception of how private sector actors operate. That is, rather than either falling into the trap of a one-dimensional enemy perception, or expecting the private sector to deliver development single-handedly, there is need to more directly and more critically engage with new private sector actors in civil society and with newly emerging private sector discourses on development.

9.1.5 Government Failure

The foregoing discussions emphasized the importance of government intervention as a means of correcting market failure, ensuring macroeconomic stability and stimulating economic growth and development. However, government can also be inefficient and we call this government failure. Government failure occurs when a government intervention causes a more

inefficient allocation of resources than would occur without the intervention. In some cases, markets may not meet the standard conditions of perfect competition which are required to ensure efficiency; however government intervention may make matters worse rather than better (see Chaudhuri, 1990, and Grand, 1991 and Keech and Munger, 2012). Government failure can be of different types and could emanate from different sources. Most government failures originate from short-sightedness, inflexibility, conflicting policies of government agencies, tendency by legislators to pursue their own self-interest and public policies that are popular but are not helpful for the people (Winston, 2006).

One of the best known areas of government failure is short-sighted regulation. A government regulation may focus on a very specific area of activity without considering some of the social or environmental effects of the activity. Regulations may also impose significant implementation costs on the economy. These costs include the administrative costs of monitoring the system as well as the compliance costs imposed on individuals. Regulation costs can be financed by taxes which make some individuals worse off in terms of a reduction in welfare. Therefore, by interfering with the market mechanism, governments may reduce the welfare of citizens. The failure of government regulation is often due to imperfect knowledge of the type of technology to apply in order to achieve the best results. Governments may apply inappropriate and costly technology because of lack of research on the part of the bureaucracy (Howard, 2001).

Voter ignorance and short-sightedness can also cause government failure. When voters are ignorant of the real benefits and costs of public policies, they may oppose beneficial projects and support costly and inefficient ventures. Voter ignorance may lead to overspending and over taxation. Voter ignorance persists because citizens do not have the time to carry out the type of research necessary to evaluate government projects. Additionally, many voters are myopic, preferring policies with short-run benefits. Politicians often present a package to

the electorate with short-run goals such as the reduction in unemployment or the lowering of inflation, even though these objectives may impose a heavier tax burden on the electorate in the short run. Again, overspending may distort resource allocation (Howard, 2001).

Tollison (1982) cited in Howard, (2001) analyses other causes of government failure stemming from the problems posed by special interest groups and lobbyists. These groups may be able to influence government to pass legislation or implement policies in their own interests rather than in the interests of the economy as a whole. Rent-seeking is an important activity of special interest groups. Rent can be defined as a return in excess of a resource owner's opportunity cost. Rent-seeking is a normal feature of economic activity in competitive markets. However, a government can create rents for certain interest groups by granting legal rights to certain firms or individuals to pursue specified activities or perform certain services.

9.1.6 Public- Versus Private- Led Industrialization

Industrialization plays a central role in the process of economic development. The experience of most of today's advanced nations shows that economic development requires structural change from low to high productive sectors and the industrial sector is a key engine for such structural change. It can be argued that the high, rapid, and sustained economic growth and development witnessed in the past have been associated with industrialisation, particularly growth in the manufacturing sector (Szirmai 2009).

The manufacturing sector offers special opportunities for capital accumulation in developing countries. Capital accumulation can be more easily realised in spatially concentrated manufacturing than in spatially dispersed agriculture. Since capital accumulation is one of the main sources of growth, an increasing share of the

manufacturing sector will have considerable positive contribution to economic growth. Moreover, the manufacturing sector offers special opportunities for economies of scale, and technological progress which are less available in agriculture or services. Linkage and spill-over effects are also stronger in manufacturing than in agriculture or service sectors (Szirmai 2009). These are some of the reasons why the expansion of the manufacturing sector has been so important in growth and development. In light of this, most developing countries are trying to improve the manufacturing sector by crafting supportive policies and taking various measures which are deemed to improve the sector.

The argument towards free market and government intervention regarding broad economic issues like allocative efficiency and economic development are also applicable to explain specific questions like "what brings industrialization?" Economists have held different views of the role of the private sector and government in industrialization. Some (especially the neoclassical main stream and their advocates like the World Bank (WB) and International Monetary Fund (IMF)) argue that fast and successful industrialization can be achieved through intense involvement of private sector while others say that industrialization especially in developing countries can be achieved through considerable government involvement. The latter underline the fact market failures are common in developing countries and the only way in which these countries could escape from their poverty trap is through strong government intervention. The former respond to this by implying that government failure is by far the "bigger evil" and ordinary in most developing countries, and markets could better guide the economy if allowed to do so (Bethuel, 2011).

Those who believe in the positive role of government in industrialization (structural-institutionalist scholars) bring the East Asian case as an example to support their argument. East Asian countries have become the most dynamic and successful economies in the world. They recorded tremendous economic growth

which exceeded the average of all developing countries since 1987. This growth has been driven by the production and export of manufactures and is the result of a broader industrial transformation (Martin and Paul, 1996). The structural-institutionalist scholars argue that interventionist state policies, rather than market liberalization, explain the economic success of Japan, South Korea, and Taiwan (Amsden 1989; Wade 1990 cited in Chu, 2000).

On the other hand mainstream economists, especially supporters of the neo-liberal agenda of the WB and IMF, first claimed that free markets are responsible for the East Asian growth. Later, when evidence of pervasive interventions emerged, it has said that interventions did not matter for they did not interfere with free markets in this case. The World Bank's influential study, *The East Asian Miracle,* is a good representation of the neoclassical side in the current debate so far. It acknowledges the frequent occurrences of sectoral intervention in the East Asian growth processes, even though it tries to argue that industrial policy was not effective. It conceded a little by saying that the intervention was not harmful, though still not helpful (Chu, 2000:4).

The neoclassical paradigm has forwarded three arguments to substantiate its view: 1) the East Asian governments did not intervene much, or 2) the degree of intervention was less than that of elsewhere, or 3) as argued in the World Bank (1993), the interventions did neither harm nor good. Though the first point was a popular argument earlier, it starts to lose its credibility after so much evidence of actual interventions has been documented. Thus, the neoclassical economists hold either the second or the third view, for they basically claim that those interventions which are market-friendly are effective, and those which are selective are not effective (Chu, 2000:4-5). In light of mounting institutional evidence, supporters of neo-liberalism are finding it difficult to sustain their position that state interventions especially "distortions" of market prices-are almost never helpful.

Despite the two extreme debates on the role of government and private sector on industrialization, almost none of the successful industrial countries followed either of these extreme strategies. They are mixed economies in which government plays an important role. The appropriate question to be asked is not whether government should play a role, but what role and how can it can be performed most effectively (Stiglitz, 1996: 155). For instance, the experiences of successful Asian countries have shown that both market and government play a role depending on industrial and technological development and specific circumstances of individual countries.

Though there was considerable government intervention in the East Asian development process, private small and medium scale industries (SMIs) also played a very important role[41]. The government in these economies helped private enterprises by crafting various appropriate policies including industrial policies. For instance, in Korea the government policies for industrialization include 1) export promotion (such as, at macro level, improving credit facilities for exporting firms and subsidized interest rate on export loans can be mentioned; whereas investment on exploring foreign markets, helping exporters to fill foreign orders both in quantity and quality and close consultation with the export industries and monitoring the performance of supported firms through "monthly export promotion expansion meetings were conducted at micro level), 2) promotion of the heavy and chemical industries and 3) government risk sharing with private industries (Kim, et al., 1995). Governments thus should target possible gaps that markets fail to address in terms, for instance, of ensuring enabling environment, contributing to skill development, acquisition and innovation of technology, and accessing market information. Competitive

[41] The manufacturing sectors in South-East Asian countries were dominated by SMIs and played a significant role in the industrialization process, accounting for 78-99 per cent of total manufacturing establishments, 17-71 per cent of industrial output and 39-65 per cent of total exports. Other studies showed that about 60 per cent of manufacturing firms were in the group of SMEs (Economic commission of Africa, 2012).

pressure arises from anywhere in the world because of shrinking economic distance, which may not be fully counteracted by private sector operators alone. As Lall (2004) indicates, globalization and government intervention do not contradict. The outcome depends not on whether government intervenes but how it does so.

Rodrik (2007) attempts to develop a framework for conducting industrial policy that maximizes its potential to contribute to economic growth while minimizing the risk that it will generate waste and rent-seeking. According to him the right model for industrial policy is strategic collaboration between the private sector and the government with the aim of uncovering the most significant obstacles to restructuring and determining what interventions is most likely to remove them. Thus the emphasis should be on how to design a setting in which private and public actors come together to solve problems in the productive sphere, each side learning about the opportunities and constraints faced by the other. The right way of thinking of industrial policy is as a discovery process—one where firms and the government learn about underlying costs and opportunities and engage in strategic coordination[42].

However, Rodrik also notes that conducting such industrial policy is not as such easy. First, the public sector is not omniscient, and indeed typically has even less information than the private sector about the location and nature of the market failures that block diversification. Governments may not even know what it is that they do not know. Consequently, the policy setting has to be one in which public officials are able to elicit information from the business sector on an ongoing basis about the constraints that exist and the opportunities that are

[42] Rodrik (2007) has linked the need for industrial policy to two key market failures that weaken the entrepreneurial drive to restructure and diversify low-income economies. One has to do with the informational spillovers involved in discovering the cost structure of an economy, and the other has to do with the coordination of investment activities with economies of scale.

available. It cannot be one in which the private sector is kept at arm's length and autonomous bureaucrats issue directives.

Second, industrial policy is open to corruption and rent-seeking. Any system of incentives designed to help private investors venture into new activities can end up as a mechanism of rent transfer to unscrupulous businessmen and self-interested bureaucrats. The natural response is to insulate policymaking and implementation from private interests, and to shield public officials from close interaction with businessmen. Note how this impulse—"keep bureaucrats and businessmen distant from each other"—is diametrically opposed to the previous one arising from the need for information flows. The critical institutional challenge, therefore, is to find an intermediate position between full autonomy and full embeddedness (Rodrik, 2007).

In general, viewed from the discussion above, successful industrialization can be achieved through resolute government action and of public-private collaboration. It is observed that industrial restructuring rarely takes place without significant government assistance through industrial policies, public research and development, sectoral support, export subsidies, preferential tariff arrangements, and other similar interventions which strength and promote the private sector. Thus, fast and successful industrialization calls for appropriate involvement of both parties in a way that builds and encourages a spirit of public-private partnership.

9.2 Country Experiences of the Industrialization Strategies

9.2.1 Introduction

The role of industrialization as an engine of economic growth (and development) cannot be overlooked in developing economies like Ethiopia. Economic history indicates that most of the now developed countries of the world broke the vicious circle of underdevelopment by industrialization (Szirmai, 2009). Industrialization provides increased employment opportunities in small and large scale industries. In an agrarian economy, industry absorbs underemployed and unemployed workers of the agricultural sector and thereby increases the income of the community. Similarly, industrial production creates job opportunities at higher skill levels and facilitates greater links across the services and agricultural sectors, between rural and urban economies, and between consumer, intermediate and capital goods industries.

Furthermore, industrialization is a source of technological advancement and innovation as well as productivity gains. The use of advanced technology increases the scale of production, reduces cost of production, improves quality of the product and helps in widening the market. Industrialization brings structural changes in the pattern of production and foreign trade of a country. It helps in increasing the export of manufactured goods and thus earning of foreign exchange. Likewise, the processing of raw materials at home curtails importing goods which in turn helps conserve foreign exchange. With such export orientation and import substitution effects, industrialization helps improve the balance of payments. Furthermore, the productivity growth potential is much higher in the manufacturing sector than in the agricultural sector, which is argued to contain a natural halt to productivity growth[43]. It is on the basis of these

[43] Examining sectoral productivity levels in 19 Latin American and Asian economies between 1950 and 2005, Szirmai (2009), for instance, found that the value added in manufacturing was consistently much higher than in agriculture.

arguments that virtually all the successful countries and emerging ones recognize the critical role of industrialization, and actively support their industries through appropriate policies and investments.

The now developed and industrialized countries of the world were once highly dependent on primary agriculture. Most of the contemporary industrialized countries transformed their economies from highly agricultural and poverty stricken to the key players in international technology and intensive manufactured exports in a matter of half a century. Therefore, the strategies and policies followed by these countries to develop their industrial sectors provide rich experiences to developing countries. Developing countries can examine strategies regarding the type and extent of state intervention, the role of the private sector, the criteria for identifying industries for government support and the type and nature of industrial policy. Apart from this, the early and newly industrialized countries of the world used coordinated trade policies which conform with their industrial development policies. This implies that developing countries need to coordinate their trade policies with that of their industrial development if they have to follow in the footsteps of the newly industrialized countries.

However, the extent of lessons to be learnt depends on the relative similarity and difference of the socio-economic structure of both adopting developing economies and the then economic structure of developed countries. Furthermore, the political environment of these two groups of countries might also differ. Needless to say, a country's political economy dictates the type, design and applicability of not only its industrial policy but also other macroeconomic policies. Furthermore, the political economy of a country creates differences in the scope of visions that the government could have with respect to its development strategy (EEA, 2005). Similarly there is also a difference in time dimensions. The international economic and political situation

in the past was very much different from the state of economic and political affairs prevailing today.

In general, although there is a limit to be imposed by structural and institutional differences prevailing in these countries, there are a lot of economic and other policy lessons to be drawn from the industrialization experiences of the early and newly industrialized countries. It is under such context that we examine the industrialization experiences of other countries and try to draw lessons for the industrial development of Ethiopia. With this objective, the rest of the paper is organized as follows. First the early industrialization experiences of Britain and USA are considered. Subsequently, the innovation and industrialization experiences of late industriazers such as Germany and Japan are examined. Then comes the industrialization experiences of the South East Asian Countries that are called the Newly Industrialized Countries (NICs) followed by emerging national economies (BRICS). The final chapter deals with the lessons to draw from the industrialization experiences of these groups of countries.

9.2.2 The Early Industrialization Experiences of Britain and USA

9.2.2.1 Great Britain

Amsden (1989) indentified three modalities of industrialization, which include industrialization through invention, innovation and copying. Britain adopted invention and innovation as the main driving forces of its industrialization. This was facilitated by favorable trade policy which was established well before the industrial revolution. Shafaedin (1998) indicated that three issues are worth mentioning regarding the trade policies of Britain during the industrial revolution. First, Britain used selective and gradual infant industry protection. The process which started with protection of woolen products, cotton products and iron, was extended later on to other metals, wrought leather, ship-building and fisheries, and subsequently to flax, and silk. The protection took the form of

quantitative restrictions and penalties on consumption. This strategic selection of cotton and iron products for protection made Britain the work-shop of the world. Indeed, the selection of the cotton and iron industry for protection was not only due to the availability of new machinery introduced owing to technological change but also to the availability of cheap labour (women and children) in general and skilled labour in particular, as well as its potential to act as a leading industry in production and export (Shafaedin, 1998).

Secondly, it was only after the Industrial Revolution had been well established and its industrial base was consolidated that Britain started to follow a free trade policy making some gradual tariff reduction. Significant tariff reduction took place in the 1850s and the 1860s after over two centuries of protection. At this time, Great Britain was in an advantageous position vis-à-vis other countries not only because of the development of its industrial base but also because of the destruction of the industrial basis of its competitors in Europe (Marshall, 1920, cited in Shafaedin, 1998). In the 1950s Britain was one of those countries advocating universal free trade policy.

It is argued that the advocacy of universal free trade by Britain in the 1950s was in the interest of its industrial development and part of its industrial development strategies because it would provide the country with export markets and access to raw materials. The free trade policy of Great Britain was followed both in the continent and elsewhere for over at least two decades. On the continent, the industrial base of European countries was damaged by World War II, so they needed foreign sources of supply. Moreover, to exploit foreign markets, Great Britain also advocated free trade, or enforced it, in other countries and in its colonies. The process of trade liberalization elsewhere helped her to increase exports and the output of her industrial sector. In short, Great Britain began its trade liberalization after over two centuries of protection, and even then liberalization only took place gradually over a period of almost 30 years.

Thirdly, as one can expect, prior protection of the domestic market was a vehicle for cost reduction necessary for international competition. In other words, it was the domestic market that allowed realization of increasing returns and export expansion. Although the importance of the domestic market for industrialization may appear theoretically less convincing, there is now considerable empirical evidence pointing to the importance of the domestic market as an outlet for the sale of products of the domestic industry. The dominant evidence comes from studies of Chenery, Robinson and Syrquim (1986) (cited in Murphy *et al*, 1989) which indicate that the dominant share of domestic demand in the growth of domestic industrial output of rapidly growing economies in the 1950s and 1960s. Britain's experience contrasts with those views that argue in favor of universal liberal trade policy, without taking into account the need for prior development of the supply capacity (Shafaedin, 1998).

Government intervention in the industrialization process of Britain was not limited to trade policy. To accelerate the development of industry, the government made several complementary policy interventions. Great Britain paid close attention to the development of agriculture at the early stages of industrialization and acceleration of development. Government policy towards agriculture played an important role, particularly in the promotion of production of staple foods at the early stages of industrialization (Shafaedin, 1998). While increases in demand for agricultural products created new opportunities for innovation, the government protected the sector from import competition. At the same time increases in farmers' incomes contributed to the expansion of their purchasing power to obtain industrial products, thus providing a more secure domestic demand for these products.

Yet, a more pervasive and rather important role played by the government in the industrialization of Britain was in the development of the necessary infrastructure and institutions. Development of infrastructure, roads, waterways and railways

played a significant role in the acceleration and consolidation of industrial production and exports. Two-thirds of the railway network available in the early 20th century had been built by 1820. Acceleration of industrial development after 1760 was also facilitated by the creation and development of necessary institutions. The Bank of England, established in 1694, was a tool for public borrowing. To finance the private sector for industrialization, small and provincial banks and banking houses were created and channeled savings from one part of the country to another to match demand. To encourage the habit of thrift among the working class, 'friendly societies' (savings clubs) were created and consolidated in the 1790s. Moreover, to finance investment, and facilitate proprietary capitalism, the stock exchange and finance houses were created (Lazonick, 1991). To encourage investment, the law of partnership was passed to promote a sense of cooperation. To guarantee against investment risks, insurance services were rapidly developed. Attempts were made to develop corporate sense, team work attitude and the sense of partnership necessary for the development of firms and efficient administration of resources.

9.2.2.2 United States

The United States underwent a rapid industrial expansion that moved the nation into the front ranks of the world economy in the last decades of the nineteenth century. Industrialization transformed the United States from an agricultural, commodity-exporting dependency of Great Britain into an independent, leading force in the international system (Bensel, 2000).

According to Bensel (2000), three great developmental policies underpinned American industrialization in the late nineteenth century: the political construction of an unregulated national market, adherence to the international gold standard, and tariff protection for industry. The national market gave rise in the United States to the modern multiunit business enterprise which was central

to the process of modernization in the Western world. Indeed, taking for granted the political preconditions for the national market in the United States, some have contended that American industrialization was inevitability, originating in the conjunction of a specific set of technological innovations and opportunities for large-scale production.

The federal government's adherence to the international gold standard which guaranteed exchange rate stability between the dollar and major foreign currencies, particularly the British pound also spurred industrial development in United States to a large extent. This guarantee removed a major source of uncertainty and risk from foreign investments in the United States and thus underpinned much of the relatively close integration of European and American capital markets. This encouraged a significant amount of the European investment in American railroad bonds and government securities. The rather important result of this close integration was the retention of the vast profit generated by industrial corporations. This wealth might have been transferred abroad had the risk associated with American investments not been limited by the operation of the gold standard and its accompanying discipline on central state fiscal policy.

The tariff protected American industry from foreign competition also aided rapid industrial expansion in the northern manufacturing belt. The industrialization of the United States is sometimes mistakenly regarded as an example of success where government stayed in the background. Yet, its intervention both in foreign trade and domestic economy was important. Not only the modern protectionist school of thought[44] was actually born in the United States, but it

[44]Hamilton initiated the debate on industrialization through infant industry protection in 1791 in his famous report to the Congress. Hamilton argued that since international trade is not free, Europe is more advanced in manufacturing and its industries enjoy governmental aids, which contributes to the destruction of new industries in other countries; that if the United States followed free trade, it would suffer from "unequal exchange" because competition with established manufactures of other nations on equal terms is impracticable.

was also the mother country and the bastion of modern protectionism (Bairoch, 1993, cited in Shafaedin, 1998). The protection of infant industries that started with a few light industries such as cotton cloth, iron, and wool expanded to include more commodities in the 1890s. These protectionist tendencies were the main contributory factors to the rapid expansion of manufacturing production during 1870-1890 and beyond. After these industries became mature and built the necessary capacity to compete with established foreign firms, the United States initiated two new processes (Shafaedin, 1998). The first was the use of reciprocity in international trade in order to secure foreign markets for exports of matured US industries. The second was the extension of protection to more sophisticated industries, or in a sense the introduction of the second round of import substitution.

Domestically, the agricultural exporting regions of the West and, particularly, the South were forced to buy manufactured goods from protected domestic producers with prices for products, such as wheat and cotton, set by an openly competitive world market. The terms of trade under this tariff policy were thus set heavily against the South and West. This tariff policy certainly abetted capital accumulation in the industrial sector by raising prices of manufactured goods and thus increasing profits, affecting negatively the mass consumer base for those products, particularly those in agriculture.

The identification of the tariff, gold standard, and national market as the fundamental underpinnings of American industrialization rests on their interrelated importance to both politics and economics. In strictly economic terms, a host of additional factors, such as private property, could also be nominated, but because these were not politically challenged in the late nineteenth century, they can be taken as background features of the national political economy. Thus, the three developmental policies were fundamental in that they met two conditions: they were central to the process of capital

accumulation and investment that spurred on industrial expansion, and they were strongly and persistently contested in national politics (Bensel, 2000).

The combination of maturity of most American industries and anti-protectionist pressure necessitated significant revision of the US trade policy, which brought about the Tariff Act of 1913. This act reduced overall tariff rates as well as those of manufactured goods (from 44 per cent to 25 per cent) and added a large number of products to the free list (Shafaedin, 1998). This represents the last of the first generation of industrial development strategies of USA, in a similar fashion that Great Britain had advocated free trade policy in the 1950s when its industries seemed mature and ready to face external competition.

Although the extent of the US Government's intervention in the domestic economy was less than its intervention in foreign trade, it never left non-trade issues to the operation of market forces. Government continuously intervened in the economy directly and indirectly. It played an enabling role through the provision of such public goods as law and order, the right to property, and the enforcement of contracts. More importantly, it intervened in the economy extensively to promote development and industrialization, particularly in areas of capital accumulation – physical, social, infrastructure and human – encouragement of technological development, organizational change and institutional build-up (Goldsmith, 1995). In addition to the provision of financial capital and the creation of the regulatory structure, the government invested directly in infrastructure. Direct involvement of the federal and local governments in investment in the railway network and engagement in research and development, as well as education and training are the major examples.

9.2.3 Experiences of Late Industrialization of Germany and Japan

9.2.3.1 Germany

It was not until 1800 that the Industrial Revolution in Germany began to take place, well over a century after the industrial development of England. This was partly because Germany did not become a unified political society until late in the nineteenth century (Edwards and Ogilvie, 1996). Before Industrialization, Germany was primarily agriculture based, which was dominated by relatively small farms. Like its predecessors, Germany not only developed its modern manufacturing industries through infant industry protection, but also applied relatively more pervasive interventions than the early industrializers. It began protecting its industries in the 1940s and it was further reinforced in the 1950s and early 1960s. Furthermore, to secure foreign markets for trusts and cartels, reciprocal trade treaties were signed with neighboring countries which benefited Germany from preferential treatment in exchange for preferential access to the highly protected German market (EEA, 2005).

The establishment of the German Customs Union was the focal point of Germany's Industrial Revolution (Fohlin, 1998). In 1834, trade barriers between German states were eliminated paving the way for bigger and more attractive market for producers. Mining areas boomed as demand for coal rose during this time, and this gave rise to higher incomes to the population. Development in railway technology was another factor that triggered German industrialization. The development of railway network enabled mining companies to easily and quickly transfer coal for use in the factories. The importance of railway to Germany also prompted German companies to research and build their own locomotives to ease their reliance on British technology. In effect, this allowed the steel, mechanical and electrical engineering industries to flourish and by the end of the century, German companies had overtaken their British counterparts as leaders in these fields.

The fact that Germany's Industrial Revolution came after that of Britain, has also benefited the late comer (Edwards and Ogilvie, 1996). Germany did not experience the industrial change until a century after Britain. This allowed the Germans to imitate and profit from lessons learnt from the British experience. In particular, Germany was soon copying the industrial processes used in factories, particularly textile and steel production. Germans borrowed English textile manufacturing, iron and steel production, steam engines and railways. Despite coming late, by the end of the century Germany was already way ahead of Britain in the Industrial Revolution curve and was able to outcompete England through its production of cheap and poor-quality goods, before, the 'made in Germany' label had become a strong trademark.

Although Germany is argued to have arrived at modernization faster than had its role model, Britain, because of its ability to adopt technologies developed in already industrialized countries, the scale of factories and firms needed to compete was so large as to require investment from beyond the typical entrepreneurs' circle of family and associates (Edwards and Ogilvie, 1996). This relative capital shortage is thought to have made it necessary for institutions capable of mobilizing a high volume of resources from disparate sources and also compensate for a shortage of entrepreneurship. It is at this critical juncture that the Germany universal banks supported the already developing Germany industry beginning from the late 1800s and early 1900s (Fohlin, 1998). A close relationship between universal banks and German industrial companies was widely regarded as a distinct feature of the German economy. Universal bank is one which engages in all forms of banking business, namely all activities comprising of commercial banking and all forms of investment banking. According to Gerschenkron (1968), German universal banks are the German investment bank's powerful invention, comparable in economic effect to that of the steam engine and were a substitute not only for the insufficiency of wealth at the disposal of entrepreneurs but also a substitute for entrepreneurial deficiencies.

Gerschenkron (1968) depicts universal banks as an intricate part of the industrialization process and believed that the universal banks provided the underpinnings and were even a necessary and sufficient condition for the German industrialization. These banks mobilized the financial resources that provided initial capital for new industrial ventures and helped guide them through their early years of growth which made industrialization possible. In particular, German universal banks financed industrial companies in two ways, current account credit and organization of issues of new securities. In this respect, the banks were the direct promoters of the spirit of the enterprise, the pace makers of industry and trade. Emphasizing this point, Kennedy (1987) argues that Germany was compensated for its deficiency in short term and high grade securities market by a superior ability to concentrate resources in areas strategic for rapid development at moments crucial to the evolution of new products and techniques. The universal banks made resources available to a large group of technologically progressive industries on scale unequalled in Britain. This accounts for the differences in the economic growth performances between Germany and Britain in the second half of the nineteenth century (Fohlin, 1998).

9.2.3.2 Japan

In the First World War, Japan fought with the allied powers and gained a seat as a permanent member of the League Council, together with the United Kingdom, France, and Italy. However, Japan was inclined towards bold militarism in the 1930s, started a prolonged war with China in 1937, and ended up in an unconditional surrender in the Second World War in 1945. The war caused total devastation, and Japan had to re-start from ruins. It took almost ten years to bring production back to the prewar level. But Japan achieved notable economic growth from 1955-73, which pushed the economy to full-scale industrialization, to become the second largest economy in the western world (Kimura, 2009).

After the Sino-Japan war and the Second World War, Japan was confronted by a number of bottlenecks hindering development and industrialization just like developing countries today. In particular, three of these economic development elements that were missing include macroeconomic stability, human resource development, and economic infrastructure. The macro-economy in the latter half of the 1940s was in chaos. Depression in the supply of goods due to decreased capital stock, inability of industries to produce military equipments, and shortages in raw materials and equipment were extremely serious. These problems, together with the loss of control over monetary discipline, induced the typical postwar hyperinflation. Consumer prices increased 80 folds and wholesale prices 61 folds in the period between the end of World War II and April 1949 (Kohama 2007). Similarly, according to some statistical figures, Japan was faced with a serious shortage of human resource development even in the postwar era. Economic infrastructure was also a serious bottleneck for Japan in the postwar years, just as it is in the developing countries today (Kimura, 2009).

How did, therefore, Japan succeed to emerge as one of the industrialized nations after the Second World War? To stabilize the macroeconomic conditions, Japan initiated policy-induced contraction with recessionary fiscal and monetary policies. Specifically, Japan imposed an economic stabilization plan which is the discipline of balanced government budget as well as a single foreign exchange rate regime. To overcome the human capital shortage problem, Japan invested in education which enabled it to achieve a respectable educational level in the mid 1970s. Indeed, the meaning of education in the 1940s and 1950s was perhaps different from the present because of changes in the industrial structure and cultural background. However, it can be at least claimed that the quantitative expansion of Japan's educational system until the mid-1970s was an important factor in the country's industrialization process. Furthermore, to finance investment in economic infrastructure, the government extensively utilized a fiscal investment and loan programme (FILP) (Kohama 2007).

With these established macroeconomic and physical infrastructure, Japan achieved sustained growth in per capita income between the 1880s and 1970 through industrialization. It moved along an income growth trajectory through expansion of manufacturing similar to the early industrializers such as Western Europe, Canada, Australia and the United States which attained high levels of income per capita by shifting from agrarian-based production to manufacturing and technologically sophisticated service sector activity (Mosk, 2010).

There are three distinctive features of Japan's development through industrialization that deserve mention (Mosk, 2010). First, it was Japan's high agricultural productivity which sustained substantial craft (proto-industrial) production in both rural and urban areas of the country prior to industrialization. Second, domestic investment in industry and infrastructure was the driving force behind growth in Japanese output. Both private and public sectors invested in infrastructure, national and local governments serving as coordinating agents for infrastructure build-up. In this respect it is important to note that Japanese growth and industrialization was investment led, in contrast to the export led growths of early and newly industrialized countries. Furthermore, investment in manufacturing capacity was largely left to the private sector although government deeply participated in the infrastructural and capacity building. The rising domestic savings made increasing capital accumulation possible.

Third, total factor productivity growth, achieving more output per unit of input, was rapid. Economies of scale, the reduction in per unit costs due to increased levels of output, contributed to total factor productivity growth. Economies of scale existed due to geographic concentration, growth of the national economy, and growth in the output of individual companies. In addition, companies moved down the 'learning curve', reducing unit costs as their cumulative output rose and demand for their product soared. Furthermore, the social capacity for importing

and adapting foreign technology improved and this contributed to total factor productivity growth.

9.2.4 Experiences of the Newly Industrialized Countries of Asia (NICs)

9.2.4.1 Singapore

Singapore initially had a weak tradition of local entrepreneurship, with only few light industries and less complex economic structure. However, its successful strategy to develop its industrial technological base along with its geographical location enabled Singapore to be a giant and complex service economy with a large industrial base (EEA, 2005). Singapore's industrial development is often stated as unique and non- transferable to other developing countries. This is because the uniqueness relies on the features of the economy which on one hand, should lead of necessity to export oriented strategy of industrialization, while on the other hand, the same features constitute the ingredients for the success of this strategy. As an entrepot economy, Singapore channelled the primary commodity export of South East Asia to Europe and served as a transit point for manufactures to this region (Linnemann et al, 1987).

On the eve of its self government, it was realized that the outlook of an entrepot economy was not promising and the only future source of economic growth and employment was industrialization. The appropriate strategy was thought to be import-substitution that targeted the Malaysian common market and protected the domestic market using import tariff and quantitative restrictions. The industrial policy also strongly leaned towards attracting foreign direct investment and ensure favorable investment climate. Yet, the Singapore's import substitution strategy terminated shortly afterwards when the Malaysian common market collapsed following the collapse of the Malaysian federation (Linnemann et al, 1987). During this period, manufacturing value added growth amounted to 9.5

percent, leading to an increase in manufacturing contribution to GDP from 12.7 percent in 1960 to 15.2 percent in 1965 (Linnemann et al, 1987).

With the political independence of Singapore and significant decline in the domestic market size, the industrial policy had to be re-considered and revised. In particular, given the limited size of the domestic market, export-oriented industrialization was being pursued vigorously in 1967. With it came numerous consistent policy measures to promote industrialization focusing on direct stimulation of private investment. To promote private investment, the foreign investors in particular, Singapore's government approach encompassed three major fields (Linnemann et al, 1987): (1) creation of industrial institutions and the development of industrial estates; (2) provision of tax incentives, financial assistance schemes and provision of specific export incentives and (3) accelerated manpower development and enforcement of labour discipline. The development of industrial estates and infrastructural provisions had been instrumental in attracting foreign investment into Singapore. In 1980, more than 19 estates were established and leased or purchased by government agencies. Tax holiday also forms another cornerstone in Singapore's industrial development. The switch in strategy also touched the labour market and the government started to actively intervene in skill development and educational system was re-oriented so that technical courses were offered at different levels. Similarly, to produce a disciplined labor force and ensure peaceful industrial relations, labour unions were brought under political control.

These comprehensive industrial policy measures did not fail to bear fruit in industrial growth. This was reflected on the unprecedented growth in real manufacturing growth. Between 1965 and 1973, annual average growth in real manufacturing growth reached 18.8 percent and the share of manufacturing in GDP approached one quarter in 1973. It is argued that a significant proportion of

this growth was contributed by the inflow of foreign direct investment in the export-oriented manufacturing industries.

In 1979, a new wave of industrial development strategy based again on export orientation was adopted. The need for the switch of the strategy was justified by the decline in productivity growth and increased competition from exports of the newly industrializing countries. Productivity became the new goal under the new strategy. Therefore, manufacturing needed to be restructured away from labour-intensive, low wage export processing production towards more sophisticated, skill intensive and higher value added production activities. Once again, the industrial policy was kept on changing to initiate the process of upgrading and reflect the changing industrial environment. This time the government took the lead by directing the flow of resources and promoting skill-intensive export through a set of policy measures. Singapore's technology acquisition policy was directed at consciously acquiring and subsequently upgrading the most modern technologies mainly based on direct investment. Furthermore, Singapore's approach to deliver the skill needs of the industrial sector is said to be exemplary. To provide the required skill, the government selectively developed an efficient, industrially targeted, higher technical educational structure and special workers training program (EEA, 2005).

9.2.4.2 South Korea

In the early 1960s, Korea was initially very much inclined towards the inward-looking development strategy, emphasizing promotion of import substitution industries. This plan was ambitious with a great emphasis on the import substitution of intermediate and capital goods that caused inflation and a serious foreign exchange crisis in 1963. Therefore, the government had to revise the plan shifting development strategy from import substitution toward export promotion. Therefore, Korea's development success was based on export-led

industrialization with an active role of government, beyond correcting the market failures. In this section we will explore how Korea's trade policy, incentive structure and government intervention created a dominant industrial sector in Korea.

During the early 1960s, Korea was a poor developing country with a small manufacturing sector and largely dependent on foreign aid. It had to cope with a formidable array of structural and institutional problems. It had seemingly few prospects to increase and maintain high growth rates (Park, 1990; Collins, 1990). In contrast to such dim prospects, its real GDP growth rate averaged nine percent with the growth rate of the manufacturing sector nearly averaging 19 percent. Although Korea was the fourth highly indebted country in the early 1980s and there was a rising concern about Korea's ability to meet its debt obligations, in 1986 its economy was booming again and it had begun to repay the principals in addition to meeting all the debt servicing obligations (Collins, 1990).

Trade policy played a crucial role in the industrialization and growth of South Korea. The Korean government actively promoted capital-skill-technology intensive heavy industries and manufactured exports using trade policy. It launched and sustained the export-led industrialization strategy, taking into consideration the initial conditions in industrialization organization and structure, capital markets and trade (Park, 1990). Selected large scale industries were promoted, subsidized and forcefully required to enter the export markets. Industries selling in the home markets were also extensively protected with a range of quantitative and tariff measures for a specified period to protect them from the foreign competition, on condition that they meet export targets. Manufacturing profitability was kept above the breakeven level only because losses on the export markets were more than compensated for by high profits on domestic sales. The Korean government, therefore, combined selective import replacement with forceful export promotion, protecting and subsidizing

targeted industries that were to form its future export advantage. In this respect, import replacement and export promotion strategies unified under the government's support umbrella were neither mutually exclusive nor substitutable, but rather complementary and reinforcing (EEA, 2005).

Korea's heavily-regulated financial system was also instrumental in promoting the industrialization program (Park, 1990). The low rate of saving and chronic current account deficits required continuous inflow of foreign lending, which was basically unavailable without government guarantees. It was also evident that the financial system could not direct resources to export oriented industries and there was a shortage of entrepreneurs and managers to undertake the development of export-oriented industries. Selective credit allocation and subsidies for industries were therefore deemed instrumental. This forced the government to support a few selected large producers in the targeted industries. With the missing market mechanism, government assumed the task of selecting and promoting the winners (Park, 1990). The banking system was used to channel domestic and foreign savings to these large firms as de facto partner and the government was drawn to participate in their business decisions. In addition, various institutions such as venture capital companies, banks, credit guarantee companies and the like were established to provide financial services.

Selection of large size firms for promotion was made for obvious reasons. Nagano (2005) argued that these large firms could internalize risks and constraints such as deficient markets for capital, skills and technology and others. They could also undertake the cost and risk of absorbing very complex technologies further developing it by their own research and development, set up world scale facilities and create their own brand names and distribution networks. There was also a rising protectionism in developed countries for labor-intensive products. This prompted the policy makers to improve the structure of export because Korea could no longer rely on labor-intensive light

industries for its continued high growth. Thus, the development policy was shifted from simply supporting the export activities toward promoting the industries that have high income and growth elasticity. However, Korea imposed strict discipline on large firms in terms of export performance (the need to achieve high productivity and efficiency) and vigorous internal competition.
With all the deliberate interventions, these large firms became successful exporters soon and the private industrial conglomerates called *chaebols* dominated the manufacturing sector. It should be noted here that Korea's export-oriented private industries could not have survived without government support and transformed the economy from agrarian to manufacturing (Park, 1990 and Collins, 1990).

9.2.4.3 Taiwan

Taiwan's industrialization and development model are virtually similar to that of South Korea, and include a range of policies and development planning, although it started to industrialize before South Korea (Lawrence, 2002 and EEA, 2005). Taiwan used complex sets of policies which were sometimes at odds to one another and encompassed infant industry protection, export promotion, strategically directed credits, support for indigenous skill and promotion of indigenous technological capability. Such development experience was the result of decades of careful economic planning, and has earned the nation a solid reputation as a successful model of development into a knowledge-based industrialized economy.

Taiwan's development miracle started in the 1950s and by the time the country was almost entirely a small-scale agricultural economy. The government of Taiwan recognized that the industry was inherently limited in its ability to expand and create jobs, and could not provide a foundation for modern industrial and technological development. Economic planners therefore created an institutional

policy framework that encouraged export promotion policies and sound financing for business creation. However, rather than focusing on heavy industry development and giant private conglomerates, as many other countries such as Korea did in the 1950s and 1960s, Taiwanese policies were tailored to the growth of small and medium enterprises (ICDF, 2003).

In nearly two decades the small and medium sized firms dominated the Taiwan economy. Consequently, a large number of small and medium sized firms started to produce and export a large share of Taiwan's manufactured exports. These firms produced about 30 percent of manufacturing value-added, and exported most of this to foreign markets. Furthermore, in 1986 more than 98 percent of Taiwan's firms had fewer than 300 employees and 48 percent of these employed 5 or less workers. In the foot wear industry, firms with 300 or less workers accounted for almost 60 percent of value added in Taiwan, whilst the same share was about 7 percent in Korea in 1976. Taiwan, just as Korea did, embarked on the export promotion of labor intensive manufactures. However, they choose to rely on experienced entrepreneurs instead of increasing returns technologies (Park, 1990).

But how the government of Taiwan structured and sequenced these small and medium size enterprises-based industrialization policies so that this 'begin at the beginning' approach proved successful? As we already noted Taiwan's industrial structure is largely dominated by small and medium enterprises. Such a strategy of relying on small and medium-size firms obviously raises problems related to the loss of economies of scale, marketing and collection and dissemination of information on foreign consumer's preferences and technological developments (Park, 1990 and EEA, 2005). Given the inability of small size firms for acquiring technological capability, the government directly involved in research and development activities and started to develop local research capacities. The

government also made joint venture arrangements with foreign companies to expand its high-tech activities (EEA, 2005).

Similarly, Taiwan's manufacturers responded swiftly to the international marketing problems that faced the small and medium enterprises due to the loss of economies of scale. They successfully sought out specialized products for which demand is relatively small and many technology intensive activities to which small firms are well adopted. This same marketing problem was also overcome by the presence of a large number of traders coming from the mainland. These traders subdivided large orders among small producers. They gave Taiwanese manufacturers access to orders of small volume that Korean manufacturers could not accept.

Taiwan's trade policy has also played a significant role in the industrial development of the nation. It started import substitution industrialization strategy as early as the 1950s to protect the domestic small and infant industries and only liberalized after 1964 when balance of payments position improved due to increase in exports (Rodrik, 1995). A range of quantitative restrictions and tariff measures were employed to give selected infant industries a breathing space to mature. Later, Taiwan switched to export promotion and the export incentives were put in place in the late 1950s. The system of commodity tax rebates for exportable production had been implemented. The manufacturers were allowed to retain up to 80 percent of the foreign exchange they earned from exports and use it for their own import needs. Relatively generous export credit programme was also started (Rodrik, 1995).

9.2.4.4 Hong Kong

Hong Kong, seemingly a barren rock with no natural resources, was for a century and a half a British colony. The British administration of Hong Kong came to an

end on 1 July 1997, and China's regained sovereignty began a new chapter. From a relatively unpopulated territory at the beginning of the nineteenth century, Hong Kong grew to become one of the most important international financial centers in the world. Hong Kong also underwent a rapid and successful process of industrialization from the 1950s onwards that captured the imagination of economists and historians in the 1980s and 1990s (Schenk, 2010). Its economy should be of particular interest to academic economists for two reasons. Firstly it is one of the few successful cases of industrialization and economic development among contemporary less developed countries; and, secondly it closely resembles, and is in fact a last remnant of the textbook model, laissez-faire economy (Riedel, 1973). In this sense, the industrialization and development experiences of Hong Kong is distinct from the early and new industrializers.

During the first one hundred years of Hong Kong's existence its wealth was derived from entrepot trade. This source of blessing was curtailed by the Korean War during the World War II which marked the end of this era. The massive influx of refugees had also foisted a burden upon the territory which could not have been supported by the entrepot trade. Therefore, Hong Kong had no alternative but to industrialize. Obviously, most countries attempting to industrialize adopt well defined strategies, such as import substitution and/or export promotion. However, neither of these concepts applies to Hong Kong. The growth of industry took place strictly within the framework of competitive free enterprise (Riedel, 1973). Economic decisions were coordinated only by the common goal of businessmen to make profits. The only strategy which was followed was to allow businessmen to have the full scope of freedom, with as little governmental intervention or red-tape as possible. Despite the lack of guidance, a distinct pattern to the industrialization process in Hong Kong was discernible.

Rapid economic growth in Hong Kong began with its economic transformation from an entrepot to an industrial city in the 1950s. What is worth noting is that

such an economic transformation was achieved without planning or even premeditation. In the 1960s and early 1970s, Hong Kong experienced a process of rapid industrialization accompanied by a high rate of income growth. During all this time, the role of the government was relatively unimportant, and the entire experience of rapid industrialization represented a series of successful self-adjustments to changes in the internal and external economic environment (Hsueh, 1979). Limited by its small internal market, Hong Kong had to adopt an outward-looking policy of export-oriented industrialization from the very beginning which proved to be successful not only in Hong Kong but also later in other Asian economies and Mexico.

Owing to changes in the world trade situation and internal events (such as the banking crisis in 1965 and the riots in 1967), the Hong Kong economy experienced considerable fluctuations in the level of economic activities. Nevertheless, the recovery after an economic setback was always rapid and remarkable. Furthermore, the process of economic growth was almost invariably accompanied by structural changes involving the inter-sectoral shift of resources. There were two phases of structural changes in Hong Kong in the past thirty years (Schenk, 2010). The first phase occurred in the 1950s and 1960s, during which there was a shift of resources to the manufacturing sector. The second phase began in the early 1970s, and the direction was toward the development of financial services. In 1980, for the first time, the contribution of financial services to GDP (26%) surpassed that of manufacturing (25%). It was due to the increased importance of the financial sector that the growth rates of Hong Kong were at the high level in 1980 and 1981 despite the Oil Crisis of 1979 (Chen, 2002).

The industrialization of Hong Kong is unusual in a variety of respects (Schenk, 2010). First, similar to the industrial development model of Taiwan, industrialization in Hong Kong was accompanied by increasing numbers of small and medium-size enterprises (SME) rather than consolidation. In 1955, 91

percent of manufacturing establishments employed fewer than one hundred workers, a proportion that increased to 96.5 percent by 1975. Factories employing fewer than one hundred workers accounted for 42 percent of Hong Kong's domestic exports to the U.K. in 1968. At the end of 2002, SMEs still amounted to 98 percent of enterprises, providing 60 percent of total private employment.

Second, until the late 1960s, the government did not engage in active industrial planning. This was because of an ideological sympathy for free market forces. Furthermore, the government was preoccupied with social spending on housing large flows of immigrants. This means that Hong Kong fits outside the usual models of Asian economic development based on state-led industrialization (Japan, South Korea, Singapore, Taiwan) or domination of foreign firms (Singapore) or large firms with close relations to the state (Japan, South Korea). Low taxes, lax employment laws, absence of government debt, and free trade are all pillars of the Hong Kong experience of economic development.

Chen (2002), however, argues that the reality was very different from the myth of complete laissez-faire. The government's programs of public housing, land reclamation, and infrastructure investment were ambitious. New industrial towns were built to house immigrants, provide employment and aid industry. The government subsidized industry indirectly through this public housing, which restrained rises in the cost of living that would have threatened Hong Kong's labor-cost advantage in manufacturing. The hand of government was much lighter on international trade and finance. Exchange controls were limited to a few imposed by the U.K., and there were no controls on international flows of capital.

9.2.5 Experiences of the Association of Emerging National Economies (BRICS)

Originally known as 'BRIC' before the inclusion of South Africa in 2010, BRICS, is the title of an association of emerging national economies: Brazil, Russia, India, China and South Africa. Except Russia, the BRICS members are all developing or newly industrialized countries, and yet distinguished by their large, fast-growing economies. The BRICS account for more than 40 per cent of the global population, nearly 30 per cent of the land mass, and a share in world GDP that increased from 16 per cent in 2000 to nearly 25 per cent in 2010 (BRICS, 2012). This share is expected to rise significantly in the near future. These countries can no longer be considered as 'peripheral feature' of world economy and are successfully moving towards the production of technology intensive products. With such rapid rise in GDP and industrialization, these emerging markets re-directed the global economic centers towards their own economies and strikingly dragged millions of their citizens out of the poverty trap.

It is argued that the BRICS experimented with the East Asian model of development. These economies, in particular, China, India and Brazil are forging ahead, lifting themselves out of poverty, and are doing so against all the strictures and nostrums of the Washington Consensus (Mathews, 2008). Despite the World Bank's East Asian Experience Report (1993) which offered less than deserved support to the East Asian experience and clearly rejected the idea that the model could be diffused around the world, the BRICS have done and are applying the lessons of East Asia. Since opening to the world and embarking on the new period of expansion (China since its 'open door' policy of 1979, India since its financial liberalization of the 1990s, and Brazil since the repudiation of a static 'import substitution' model and its opening to the world) these countries have absorbed some of the principal lessons of the East Asian experience and are

applying them to achieve growth rates and expansions of trade and investment unheard of by countries of such size and significance (Mathews, 2008).

Numerous strategies tried and tested in East Asia are currently parts and cornerstones of BRICS industrial and development strategies. Some of these include the developmental institutions including technology leverage agencies, investment-attracting vehicles, export-promoting vehicles and import–export banks, and high-tech knowledge acquisition and diffusion. In particular, these strategies are being applied in the manufacturing sector (as in contract manufacturing in China), the services sector (as in business process outsourcing (BPO) in India) and the agribusiness sector in Brazil (as in the rise of soy production and export, and now in bio-fuels) (BRICS, 2012).

However, the emerging economies have devised strategies to capitalize on their temporary advantages such as lower costs to compensate for the fact that they arrived late on the industrial development scene. The classic example of such approach in the BRICS is the way they strategically developed renewable energy industries. The BIRCS face an energy challenge that sets them apart from previous experiences of developing countries that relied on fossil fuel sources on their way to development. Unfortunate enough, this option is practically not available to them. It is therefore, required that these economies place their industries on the alternative energy sources. Furthermore, the BRICS compensated their shortcomings in technology and market sophistication through institutional innovation, under the guidance of development agencies, creating institutional solutions such as export processing zones to promote FDI in manufacturing activities; and public research institutions to act as agents of the development of national technological competence. In addition, the development of industries in these emerging economies is shouldered on well designed government interventions in the economy through institutional and other means (Mathews, 2008).

9.2.6 Lessons to Draw: Reflections on Ethiopia Industrial Policy

In the previous sections we have discussed the industrialization experiences of the once poor countries which had to depend on primary agriculture. These countries adopted industrial development strategies and policies ranging from those requiring strict state intervention to those pertaining to laissez-faire. Consequently, it is possible to draw lessons from the industrial development strategies and policies of these countries for the contemporary developing countries. The objective of this review, in fact, is to draw lessons for the industrial development strategies of Ethiopia. It is essential to evaluate the industrial policy of Ethiopia with respect to the type and extent of state intervention, the role of the private sector, the criteria for identifying industries for promotion and the type and nature of the trade regime.

However, there are fairly several issues that can limit the extent of lessons that one country can learn from the experiences of the early and newly developed countries. First, the extent of lessons to be learnt depends on the relative similarity and difference of the economic structure of developing economies and the then economic structure of developed countries. This implies that a given developing country will not have the luxury of adopting the industrial development strategy of Great Britain or South Korea as it is, for there are huge differences in structural dimensions of both groups. In addition, the difference in the political economy between the model and the learning country should be considered. It should not be underestimated that a country's political economy dictates the type, design and applicability of macroeconomic policies including its industrial policy. It has been also argued that the political economy of a country creates differences in the scope of visions that the governments could have with respect to their development strategies (EEA, 2005). Finally, the then international economic and political order was very much different from the state of economic and political affairs prevailing today. Therefore, the learning

countries should make up for the fact that they arrived late on the industrial development scene.

With these remarks of caution, there are several experiences that Ethiopia can draw from the industrialized countries and can replicate to successfully drive itself on the industrial development path. First, despite the orthodox thinking and the recommendation of international institutions, government intervention has proven to be crucial. All successful industrializations, including that of the present industrial leaders, the United States, Britain and Germany, have seen some form of government intervention. Although the optimal role of government is debatable, industrial development requires government involvement by setting several complementary policies. In particular, a more pervasive role of government in the industrialization may focus on the development of necessary infrastructure and institutions. Development of infrastructure, roads, waterways and railways played a significant role in the acceleration and consolidation of industrial production and exports in Britain.

Apart from infrastructural development, a government can support and accelerate the development of industry by developing the necessary institutions and policies. In this regard, a government should ensure macroeconomic stability and maintain fiscal discipline to remove risks and uncertainties associated with long term investment. It is vital that government desist itself from printing money or over-borrowing and spending (FSS, 2008). Monetary policy can be calibrated to maintain a stable macroeconomic environment. Any attempt to finance development through expansionary monetary and fiscal policies should ensure complementarity of capital and money by investing in more productive sectors. Governments can also promote private investment by making available industrial institutions and industrial estates as in the case of Singapore.

Second, whilst there are a few countries whose industrial development and sophistication was investment led, most of the economic histories of the now developed countries indicate that infant industry protection allied with export-promotion policies is the most viable industrialization strategy. This implies that the trade regime of a given country should be carefully tailored to the industrial development strategies and policies. The early industrialized countries such as Britain established favorable trade policies well before the industrial revolution and maintained them for over two centuries to give the domestic industries enough breathing space. The United States of America had also followed the same strategy, with even more pervasive government hand.

Ethiopia needs to strategically select key sectors and/or production activities for protection and promotion. Such protection of the domestic market has long been known to serve as a means of cost reduction necessary for international competition. There should however be a clear strategy to select industries for protection. Such protection should, as was the case for early and newly industrialized countries, start with strategic sectors such as light and labor intensive products and should be restructured away from labor-intensive, low wage export processing production towards more sophisticated, skill intensive and higher value added production activities once these industries build necessary capacity to compete with established foreign firms.

Furthermore, trade policy has to be carefully designed to actively promote manufactured exports. Successful industrialization calls for combined selective import replacement with forceful export promotion, protecting and subsidizing targeted industries that are to form the future export advantage of the country. In fact the choice between capital-skill-technology intensive heavy industries and small and medium scale industries for promotion depends on the availability of technology, capital and the objective function and commitment that the government is willing to make. However, given the shortage of capital and low

technological sophistication of Ethiopia, the Taiwan's style of 'begin at the beginning' strategy, where the industrial policy focuses on the growth of small and medium enterprises fits the need.

Third, the financial system in Ethiopia is believed to present a serious hurdle to entrepreneurs and investors. It is argued that the government's strong hand in the system has crowded out the participation of private sector and hence made the sector inefficient to concentrate resources in areas strategic for rapid industrial development. Such inefficient and/or missing financial market for the leading industrial sectors calls for government's selective credit allocation and subsidies. The scale of factories and firms needed to compete in the domestic and international market is so large that it requires investment from beyond the typical entrepreneurs' circle. Therefore, the Korean style of selecting and supporting selected producers in the targeted industries is proved to be a pragmatic strategy in developing countries such as Ethiopia, where credit constraints are a critical challenge. Although the government can use a wide range of approaches, the banking system can simply be used to channel domestic and foreign savings to the strategic sectors, as in the case of Korea. In a similar fashion, various institutions such as venture capital companies, banks, credit guarantee companies and the like can be established to provide financial services. The German style of establishing universal banks is also deemed to be an important strategy to circumvent credit constraints. Such banks engage in all activities comprising of commercial banking and all forms of investment banking and were a substitute not only for the shortage of capital at the disposal of entrepreneurs but also a substitute for entrepreneurial deficiencies.

Finally, Ethiopia lacks a labour force with high managerial skill with a strong sense of professional ethics that is deemed important for industrial development (FSS, 2008). This has made the task of producing goods and services capable of competing in the global market an impossible mission. Therefore, the

government may target accelerated manpower development and enforcement of labour discipline. This involves not only the formal education at all levels but also specialized training and on-the job-training. Therefore, apart from re-considering the education policy of the country in terms of quality, the government may promote technical and vocational schools which will provide adequate turnouts of engineers and technicians. Furthermore, well defined labor market policy and enforcement of labor discipline are critical to the industrial development of the country.

Chapter Ten

Opportunities and Challenges of Private Sector Development

10.1 Introduction

The importance of industrialization as a conduit for technological innovation and diffusion, a source of enhanced total factor productivity growth and inter and intra sectoral linkage effects has almost been acknowledged universally. It has been indicated that:

> *"From late 15th century England all the way up to the East Asian Tigers of recent renown, development has generally been taken as a synonym for industrialization. Rich countries figured out long ago, if economies are not moving out of dead-end activities that only provide diminishing returns over time (primary agriculture and extractive activities such as mining, logging, and fisheries), and into activities that provide increasing returns over time (manufacturing and services), then you can't really say they are developing"*
>
> *[Bowden, 2013 in Yumkella, 2013].*

Owing to this, the contribution of the manufacturing industry to GDP and export along with its internal composition is considered as one of the key indicators of the level of industrialization and economic development of countries across the globe. In the case of Ethiopia, review of the structure and growth trends of the macro economy clearly reveals that industrialization is at its infancy; so is the level of economic development. This has been, among other factors, because of

the policy turmoil that thwarted industrial development in general and the role of private operators in the sector in particular between 1974 and 1991.

Since 1991, the Ethiopian government has embarked on a series of reform measures including the removal of investment caps and other impediments on private sector development (PSD). Recent policy documents provide room for PSD in the economy with the exception of some sectors reserved for the public domain. Owing to these policy initiatives, private sector investment has been growing. Nonetheless, the contribution of the private sector has still remained to be insufficient given the country's growth ambitions, and the fact that it is lopsided towards the service sector. Investigating factors that affect the flow of private investment in the economy in general and the manufacturing sector in particular in the face of the global competition for the same is crucial. This is even more so in a country which envisages undergoing structural transformation gravitated towards the industrial sector and accelerating the rate of growth of the economy so as to join middle income countries within a short span of time.

The Ethiopian Economic Association (EEA) has also committed itself to contribute its share in this endeavor. However, given resource and time limitations, this paper is delimited to view the opportunities and constraints of PSD in the manufacturing sector. The manufacturing sector is selected for the following reasons. Firstly, the manufacturing sector is the crux of any economic development endeavor and no country has ever developed, though can become rich, without going through the process of industrialization. Secondly, cognizant of this, the country's Growth and Transformation Plan (GTP) envisages bringing about structural transformation in the economy through laying a basis for the industrial sector to take-over the leading role from the agricultural sector in the medium term. In a market-oriented economic policy setting, the private sector is expected to spearhead the pace of industrial development. In Ethiopia this is at a very low state of development with comparatively low contribution to the

economy. Moreover, PSD in the manufacturing sector in particular, though promising, has not been much as warranted in the policy and strategy papers. Thus, it is essential to examine as to why this has been happening in Ethiopia.

Some studies have been done on issues related to manufacturing sector development opportunities and challenges in Ethiopia. These include, among other things, EEA annual report series on the Ethiopian Economy, Athukorala and Worku (2003, 2006), Admit (2008), Altenburg, (2010), Sutton and Kellow (2010), Henok et al (2012), Bacry et al (2012) and Dinh et al (2012)). These reports followed different approaches and provided sets of opportunities and constraints with limited effort to establish causal links between them and PSD in the manufacturing sector. Some other studies (for instance, Hansson (2004), Addis Ababa Chamber of Commerce and Sectoral Associations (2008) and Bienen (2009)) have tried to address PSD in the context of the overall economy; with no particular focus on the manufacturing sector. In an attempt to fill in this gap, this paper assesses conditions for PSD in the manufacturing sector in particular with the help of a conceptual analytical guide for qualitative information which is discussed in more details in the following section. More specifically, this section discusses opportunities, internal firm level weaknesses and external policy related and structural constraints as well as the way forward for PSD in the manufacturing sector.

The study has benefited from numerous literatures on Ethiopia and others both on PSD and industrial development. These include: Key informant interviews and workshop discussions with representatives of government agencies such as the Ethiopian Leather Development Institute (ELDI), the Ethiopian Textiles Industry Development Institute (ETIDI), Ethiopian Electric Power Corporation (EEPC), the Ethiopian Investment Agency (EIA), Ministry of Finance and Economic Development (MoFED), Ethiopian Revenue and Customs Authority (ERCA), Development Bank of Ethiopia (DBE) and others; business associations such

Ethiopian Chamber of Commerce and Sectoral Associations (ECCSA), Ethiopian Manufactures Association (EMA), Ethiopian Leather and Footwear Associations (ELFA), Ethiopian Bankers Associations (EBA) and Organization of the Ethiopian Diaspora (OED), owners and managers of individual medium and large scale industrial firms from food, leather, chemical, plastic and metal sectors. Secondary data from MoFED, Central Statistical Agency, National Bank of Ethiopia, UNIDO, World Bank and other international sources are extensively used for the study. Albeit the information provided by the above mentioned stakeholders is vital, difficulties in accessing private sector operators and representatives of different agencies has been a serious problem, which has its own effect on diversity of views, experiences and lessons. The remaining part of the report is divided into the following. Section 10.2 briefly discusses the theoretical framework that intends to guide the overall assessment. Section 10.3 presents opportunities available for private sector investors in the manufacturing sector. Sections 10.4 and 10.5 discuss major internal firm level weaknesses and external constraints of PSD and also resultant effects on the performance of the manufacturing sector, respectively. Section 10.6 suggests some policy implications.

10.2 Overall Conceptual Framework

One may not be able to convincingly come up with underlying constraints holding back PSD in the industrial sector unless there is a possibility of engaging all potential private investors as subjects of research and explore reasons as to why they hesitate to engage in the sector. Nonetheless, the private sector is known to be a pool of rational economic agents that strive to maximize self-esteemed financial gains with objective functions to guide their investment decisions in a particular economic activity. Private actors are presumed to consider a stream of benefits $(B_{it}(Y_{it}(X_{it}(Z_{it}))))$ and costs $(C_{it}(X_{it}(S_{it}))$ of different economic activities or sectors in their objective functions and select the one that maximizes the sum of their net present value of financial benefits (

$\sum_{t=1,l\neq i}^{N}\pi_t^r = \sum_{t=1,l\neq i}^{N}[B_t^r(Y_t(Z_t)) - C_t^r(X_t(I_{it},S_t))]$). Benefit or commonly known as revenue (B_{it}) of any particular activity (i) is a function of the amount of output produced or the amount of services delivered at time t by the activity in question, (Y_{it}). The latter is in turn directly and implicitly determined by the amount and composition of inputs (X_{it}) and opportunities available (Z_{it}). On the other hand, stream of costs (C_{it}) are directly associated with expenditures on inputs (X_{it}); which are in turn likely to be driven up indirectly by policy bottlenecks and structural constraints (S_{it}) besides activity level internal weaknesses (I_{it}). The incentive for potential private investors to engage in the manufacturing sector is likely to decrease if the stream of costs of incumbent operators, given stream of benefits, is comparably too high as compared to operators in other economic or social activities. In the absence of a comprehensive assessment of all actual and potential private investors in competing sectors, assessing opportunities and constraints that affect stream of benefits and costs of incumbent industrial firms is considered to implicitly suggest possible underlying factors as to why PSD is relatively low in the manufacturing sector.

Opportunities could be broadly classified as enabling policy environment, natural resource and human power endowments, market and geo-political factors. Constraints or challenges of PSD could also be broadly divided into firm level internal weaknesses and external factors; which could be policy driven or structural in nature emanated mainly from the overall backwardness of the economy. Addressing internal weaknesses is mainly the responsibility of private sector operators themselves, though policy makers have a role to play where the capacity of the former is excessively limited. In a market economy setting, explicit interventions for PSD are required only wherever private sector underperforms

because of market failures or imperfections and/or existence of government distortions. In view of this, in a small developing country such as Ethiopia, the role of government is indispensible in addressing structural bottlenecks because of widespread market failures, and in curbing policy constraints.

Challenges external to private operators that require government interventions are likely to be enormous in a developing country such as Ethiopia. Rodrick (2007) assess different approaches of identifying and dealing with various development constraints[45]. Among these analytical approaches, identifying and tackling all challenges or distortions through a complete set of reforms is the most ideal. This is not, however, a pragmatic approach because of limitations in resources and institutional capabilities to come up with a complete list of opportunities and challenges, their economic implications and accordingly making various decisions based on them. The alternative approach for policy makers as social planners is to concentrate on identifying and addressing principal challenges holding back PSD. In a theoretical model that intends to diagnose binding constraints, Rodrick (2007) suggests for social planners to specify a social welfare function subject to the standard resource constraints and preexisting distortions or wedges in the economy to guide their interventions that maximize net social benefits.

[45] For detailed discussion, please refer Hausman et al (2007).

The objective function of the social planner can be specified as

$$\mu_i^s(\tau,...) - \mu_i^p(\tau,...) - \tau_i = 0 \qquad \textbf{(1);}$$

where $\mu_i^s(\tau,...)$ *and* $\mu_i^p(\tau,...)$ *represent net marginal valuations of activity* i *by society and by private agents and* $\tau = \{\tau_1, \tau_2, ..., \tau_k\}$ *distortions drive wedges between the social and private sector valuations of specific economic activities.*

If we denote the welfare of the average member of society by u*, the gain in welfare from marginally reducing one of the distortions is given by:*

$$\frac{du}{d\tau_i} = -\lambda_j + \sum_i \lambda_i \frac{\partial[\mu_i^s(\tau,...) - \mu_i^p(\tau,...)]}{\partial \tau_j} \qquad \textbf{(2)}$$

and $\lambda_i \geq 0, i = \{1,2,...,k\}$ *are Lagrange multipliers.*

In a general equilibrium setting, distortions in one activity also affect the first order conditions of other activities. Thus, (2) has two components: direct effect (λ_j) *or the marginal welfare benefit from reducing the distortion in market* j *and indirect effect or the interaction effects across distorted margins, or effects of the change in* τ_j *on the weighted sum of the gaps between social and private valuations, with the weights corresponding to own Lagrange multiplier of each distorted activity. The effect of reducing* τ_j *on the second term may either reduce or increase the wedge between private and social valuations. However, figuring out interactions across markets is a near-impossible task and a full list of reforms to address is impractical. Thus, the best approach is to focus on reforms where the direct effect* (λ_j) *is reasonably guessed to be large [Rodrick, 2007].*

10.3 Opportunities

10.3.1 Policy Environment

Overall Policy Framework

As indicated in the previous section, the Ethiopian manufacturing sector has not gone far despite a fairly long history. The sector had to traverse along turmoil of seemingly incongruous policy actions from a relatively conducive environment for inward-oriented local and expatriate investors in the Imperial regime into a policy that completely thwarted the role of private sector industrialization between 1974 and 1991. The incumbent government has embarked on a series of economic reform programs including opening up of the manufacturing sector to both local and foreign private operators by revoking the investment ceiling, subsequently relaxing other policy constraints and establishing different institutions facilitating and nurturing PSD.

The government has adopted Agricultural Development-Led Industrialization Strategy (ADLI) as an overarching development strategy that delimits the role of different stakeholders in the economy and guides the direction and speed of economic development in the country. ADLI provides due emphasis for the growth of the agricultural sector as a basis for industrial growth. Within the framework of ADLI, "Ethiopian Industrial Development Strategy" (EIDS) was launched in 2004, which outlines the priority areas and mechanisms of interventions to hasten the development of the industrial sector. EIDS gives special emphasis to local resource based labour intensive industries such as agro-processing including food processing, textile and clothing, leather and leather products, industrial groups producing inputs for the construction sector including cement, structural metals, wood, glass and similar enterprises producing inputs for construction activities and also SMEs. Export orientation is given due emphasis as a vehicle for industrialization. Both strategies recognize the private sector as an engine of growth although maintaining the role of government in

filling missing gaps in the economy and supporting and guiding the former in terms of facilitating access to market, technologies and similar other requisites for growth.

Medium Term Development Plans

Two medium term plans called Sustainable Development and Poverty Reduction Paper (SDPRP) and Plan for Accelerated and Sustained Development to End Poverty (PASDEP) were implemented between 2002/03 and 2009/10. Their main focus was on sectors whose growth elasticity is high for poverty reduction. Within the manufacturing sector, major emphasis was given to SMEs, the prime motive being the creation of employment opportunities for the growing urban youth.

The government has somehow shown policy direction changes in Growth and Transformation Plan (2010/11 and 2014/15). Firstly, equal treatment is promised for both import-substituting and exporting industries. Secondly, medium and high technology industrial groups such as metallurgy and chemicals are also given attention similar to agro-processing and construction industries. Thirdly, the government assumes a more direct role in industrial development in terms of establishing large scale sugar factories, chemical and metallurgy industries, notwithstanding controversies on the likely effect of these investments on PSD. Overall, the policy emphasis towards the growth of the manufacturing sector has improved in GTP compared to the previous two plan periods.

Specific Policy Measures to Encourage PSD

(a) Elimination of entry policy related barriers: Capital limits on private investment were uplifted. Investment regulations, business licensing and the process of access to land through lease have been streamlined and simplified. These measures are applicable for all forms of private investment in the economy.

Provision of investment incentives: Private investors are offered duty free importation of capital goods and spare parts regardless of their geographical or sector specific area of investment. However, in light of the development priorities of the country as identified on the basis of the comparative advantage, the level of development of investment areas, and market orientation of the final products, tax holidays are provided for three to five years for investors in the production sector. In the manufacturing sector, firms exporting at least 50% of their products, or supplying at least 75% of the products to an exporter as an input are eligible for income tax exemptions of 5 years with a possibility of extension. Exemption from income tax is also given for incumbent firms for up to two years if they expand their production capacities. Losses incurred during tax holiday period may be carried forward. Research and training expenses are not liable for taxation which is meant to encourage R&D and human capital formation.

(b) Removal of trade barriers: The other substantial measure affecting PSD in the manufacturing sector is in the area of trade policy. Quantitative restrictions on imports by way of quotas and import prohibitions were waived except on used-clothes and armaments. The maximum and the weighted tariff rate have been reduced from 230 and 41.6 percent in the 1980s and the beginning of the 1990s to the current 35 and 17.5 percent, respectively over a series of amendments. The tariff dispersion and number of tariff bands were reduced from 225 percent and 23, respectively, to 30 percent and 6 in that order during the same period. Ethiopia provides a 10 percent tariff cut for COMESA member states.

(c) Export promotion measures: In addition to introducing a managed floating exchange rate regime and removal of price caps on agricultural and industrial products, an Export Promotion Strategy (EPS) was launched in 1996 to boost and diversify export. EPS provides tariff drawback schemes and voucher or bonded warehouses for exporting firms. Exporters facing liquidity problems are

privileged to have access to credits through an export guarantee scheme to be paid back when export proceeds are collected. While the above support schemes are intended to maximize export performance, exporters are expected to bring back proceeds in foreign currency into the country. However they are allowed to retain 10 percent of the foreign currency for their own use under Currency Retention Scheme privilege.

(d) Tax and customs related reforms: Both personal income and business profit taxes have been reduced. A value added tax of 15 percent replaced sales and turn-over taxes. Introduction of taxpayer identification number, reengineering and automation of information flow and simplification of customs processing procedures are other major reforms in this particular area.

(e) Labour laws: Three different laws (Proclamations No. 42/1993, 88/1994 and 377/2003) were enacted to govern the relationship between workers and employers. These laws stipulate the rights and obligations of each party. Working conditions, fire and hire procedures, payment modalities and circumstances leading for lawful absence from work are put in place. Workers and employees have the right to form associations and engage in collective bargaining. The government endorsed a legislation and established offices to ensure that employees working in the private sector are also covered by social security as their public sector counterparts. All these measures are ought to ensure industrial peace.

(f) Antitrust laws: With the view to prevent anticompetitive business practices and encourage competition and economic efficiency, Trade Practices Proclamation has been introduced and an institution entrusted to implement the policy was also established.

10.3.2 Institutions Providing Support Services for Industrial Enterprises

Public sector organizations: The government offers support services to both private and state owned industries by way of addressing bottlenecks. These services are offered through the establishment of industrial group specific institutes such as the Ethiopian Leather Technology Institute, the Ethiopian Textile Industry Development Institute, Ethiopian Metal Sector Development Institute and similar others. The first two institutions have better experience and resources including human power to offer intended services. They also have networks with other more industrialized countries (such as India, South Korea and Japan) for the transfer of knowledge through training and benchmarking activities. The others have limited experiences, currently preoccupied in equipping themselves with the necessary facilities and acquiring human power. All these institutions are entrusted with the task of helping industries to reengineer production processes of firms to be more cost effective based on lessons learnt from within and abroad and provide training to address problems of shortages of skilled manpower.

The first two institutions, particularly, offer on job-training for technicians, entrepreneurs, technologists, supervisors, managers and teachers in Technical and Vocational Training Schools (TVTS). The Ethiopian Leather Institute also teaches regular students at the level of diploma and first degree (in collaboration with Addis Ababa University). The courses focus on hides and skins improvement, leather manufacturing technology, finishing technology, leather goods design and production. The institutions also work on creating market linkages, both forward and backward (networking and sub-contracting), by providing information, organizing exhibitions and similar other activities. Moreover, they get engaged in product and process development, quality control and effluent treatment as well as raw materials acquisition. Facilitating conditions

for investors to get faster access to land, power, telecommunication and other facilities are additional activities the organizations undertake. Nonetheless, their services are limited mainly to exporting firms, with only very limited support to import-substituting firms. The quality of their services has not also been adequate as some individual operators and business association members reveal because of constraints in skilled and experienced human power and other capacity related problems.

The Ethiopian Productivity Improvement Center and Ethiopian Competitiveness Facility provide support services in terms of improving productivity of workers and encouraging firm level innovation particularly of small firms. Ethiopian embassies abroad promote investment opportunities, collect and disseminate market information and create access to market networks.

Business Associations: There are business associations formed by individual enterprises. In this regard, there are industry specific associations such as the Ethiopian Textile and Garment Association and the Ethiopian Leather Association which are under the umbrella of the Ethiopian Chamber of Commerce and Sectoral Associations. There is also the Ethiopian Manufacturers Association with member enterprises from different industrial groups. These associations play their own roles for PSD in terms of organizing forums for discussion with policy makers on concerns of individual operators. In addition, they offer business advocacy, information on markets, technology, trade regulations and procedures and training on management and entrepreneurial skills for their members. However, these organizations do not have adequate capacities to offer services commensurate with the demands of their members. Financial resource limitations, lack of vision and strategic plan, human power and lack of dedication of members are some of the problems of these institutions.

10.3.3 Natural Resource Endowments and Investments Flows

Natural resource endowments: Ethiopia has vast arable land under cultivation and virgin areas waiting for developers that would potentially provide raw materials for agro-processing industries. It has also huge irrigable land, water reserves and a huge potential for large-scale cotton and sugar plantations. More specifically, while Ethiopia has about 2.6 million hectares of land suitable for cotton production, only around 73000 hectares was utilized for production under large scale farmers and small-scale operators up to 2006 [Sutton and Kellow, 2010]. Cotton is one of the export items of the country, albeit irregularity in its supply sometimes forces textile industries to import from abroad. Timber[46], bamboo and other items are adequately available for the establishment of integrated forest-based industries such as pulp and paper as well as chipboard, and the establishment of rubber industries.

Ethiopia is known for its livestock resource potential. According to CSA and MoFED (2011), the total cattle population of the country in sedentary farming areas, where the survey was made, is estimated to be about 53.4 million. Around 34 million (64 percent) are aged three and less than 10 years. The country is also endowed with 25.5 million sheep and 22.8 million goats. Three main types of skins–*bati, cabretta* and *sellallie*- make the finest leather in the world and are sold at premium prices in the international market whereas hides, on the other hand, are not regarded as attractive due to their poor quality and the small size of the zebu, the most common bovine in Ethiopia [Sutton and Kellow, 2010]. Skins and hides used to be exported in large quantities at the level of crust and wet blue. Since 2012, exporting of semi-processed hides and skins faces excessively high export tax with the purpose of adding value by exporting industrial products.

[46] However, timber costs are far higher in Ethiopia than in China or Vietnam, leading Ethiopia to import Asian furniture despite Ethiopia's enormous unexploited potential to supply domestic timber, especially bamboo [Dinh et al, 2012].

Regardless of this potential, rearing of livestock is not primarily meant for commercial purposes. Only around six percent of the farmers own ten or more than ten cattle and only 0.9 percent of the cattle aged three and less than 10 years are beef cattle exclusively reared for meat. The bulk of the cattle stock is composed of dairy or draught animals. Rearing of sheep and goats is also undertaken largely in very small scale with less than four percent of farmers holding 10 or more sheep or goats [CSA and MoFED, 2011].

The coverage of animal health services has been low. Only around 32.6 percent of cattle, 9 percent of sheep and 12.1 percent of goats were vaccinated in 2011. Around 17 percent of cattle, 19 percent of sheep and 21 percent of goats were afflicted with different diseases and only 33 percent of cattle, 9 percent of sheep and 12.2 percent goats were treated. The practice of preparing animal feeds such as alfalfa, hay, industrial by-products and the like is very low. The majority of the animals live on grazing (62 percent) and crops residue (27 percent) [MoFED, 2011].

Investment flows to the agricultural sector: The agricultural sector has attracted both domestic private investment and FDI. Between 1992 and 2013, 1270 local and 203 foreign projects were made operational at a cost of Birr 36 and 9 billion, respectively. Besides 421 local and 175 foreign owned agricultural development projects are under implementation with planned investment outlays of Birr 15 and 26 billion, respectively. Additional 7412 local and 1049 foreign investors have already taken investment licenses to invest Birr 56 and 74 billion, respectively, in the agricultural sector [Ethiopian Investment Agency, 2013]. These commercial farms produce food and non-food items, partly meant for raw materials for the industrial sector. To-date foreign owned farms largely target their production to own-home markets. Nonetheless, as rational economic agents, if they find adequate and secured domestic market, the possibility is likely to be high to exploit the opportunity. Thus, one source for raw materials for

agro-processing industries would be the growing number of large scale local and foreign owned commercial farms.

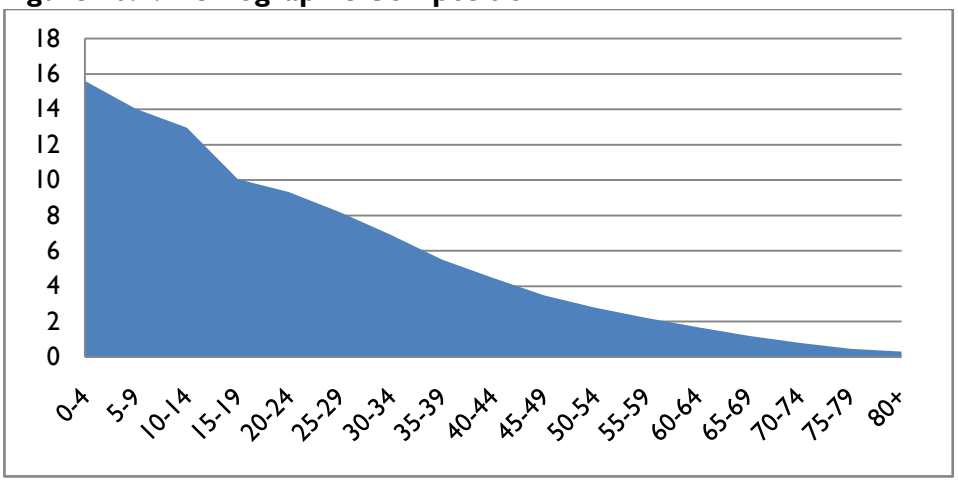
About 85 percent of the Ethiopian people are working in the agricultural sector. The mode of production has been largely subsistent. Nonetheless, if the extension services in terms of improved seeds and fertilizers, training of model farmers, scaling up of good practices witnessed in some farms and other interventions are consolidated and continue to be provided, they may yield surplus production for agro-processing industries.

Other natural resources: Various exploration activities have been undertaken by government and private investors to identify the country's potential minerals. They have, among other things, discovered tantalite, soda ash and phosphate rock, nickel, copper, zinc, platinum, marble, granite, and other inputs for non-metallic, metallic, industrial and chemical minerals.

10.3.4 Cheap Labour

Ethiopia is the second largest populous country in Sub-Saharan Africa. The country had and would have an estimated population size of 83.5 million (CSA, 2005). Figure 10.1 indicates that Ethiopia has still been at the early stage of demographic transition; with children and the youth constituting a large percentage of the total population. This is an indication of rapid and sustained growth of population. The growing population in turn enlarges the country's potential to provide cheap labour to support a growing manufacturing sector.

Figure 10.1: Demographic Composition



Source: Own Calculation Based on CSA (2005).

Human development at its rudimentary level, among other things, needs investment in both health and education. Besides investments in primary healthcare services, expansion of education has been given emphasis by the government. Accordingly, about 16.7 million children and 1.8 million students were at primary and secondary schools, respectively, in 2011. Despite this, human capital in terms of Human Development Index (HDI) is relatively weaker than even among neighbouring African countries.

Table 10.1: Human Capital Situation among Some African Countries

Country	Life Expectancy	Mean Years of Schooling+	HDI index
Egypt	70.54	6.49	0.620
Ethiopia	56.13	1.48	0.328
Kenya	55.56	6.95	0.470
Mauritius	72.10	7.18	0.701
Sudan	58.85	2.90	0.379
Tanzania	56.95	5.11	0.398
Uganda	54.14	4.72	0.422

Source: UNDP HDR (2010) (+ Adults Aged 25 Years and Above).

To curb shortages of skilled manpower and improve the size of human capital stock, students are being trained through tertiary and TVET institutions. In 2011, 371000 students were given practical training on different vocational and technical training and around 448000 and 20000 students were enrolled for undergraduate and post graduate studies, respectively. Furthermore, 75000 and 6000 students graduated with first and post graduate degrees, respectively, in 2010/11 academic year [Ministry of Education, 2011].

The government established more than 30 universities over the last twenty years in addition to tertiary education institutions formed by the private sector. Recently, the government enacted a policy that requires higher education institutions to assign about 70 percent of their students into science and technology streams, and about 40 percent specifically in technology related fields. When skilled human power inflow is added into the stock from the various educational centers, the nation would have immense human resources that could easily be converted into manufacturing sector labour force. Large and medium scale industries offer limited job opportunities. For instance, only 187000 persons were engaged in these industries in 2010 [CSA, 2011]. Given the actual absorption capacity of the sector to-date, it may not face serious skilled human capital shortages. Nonetheless, it is important to underscore the importance of the relevance and appropriateness of training programs for the demand of the manufacturing sector.

10.3.5 Market Opportunities

Local market opportunities: Ethiopia has a relatively large domestic market which has been expanding fast. The country's manufactured goods consumption increased by about 15.5 percent between the period 2001 and 2010 perhaps, among other things, because of a consistent growth of GDP and per capita income during the same period. Nonetheless, local industries have not shown a

strong move to tap growing local market opportunities. Domestic supply from medium and large scale industries grew only at a rate of 11.9 percent, whereas imports grew at a rate of 17.9 percent during the same period. This has rather further increased the share of foreign firms in the local market from about 56 percent in 2001/2002 to 69 percent in 2010/11.

Table 10.2: Manufacturing Goods Absorption in 000' USD

Year	Manufacturing Goods Supply			Growth Rates		
	Domestic supply	Imports	Total Absorption	Domestic industrial GVP	Imports	Total Absorption
2001	934.8	1180.5	2115.4			
2002	875.7	1176.8	2052.5	-6.3	-0.3	-3.0
2003	992.9	1719.9	2712.8	13.4	46.1	32.2
2004	1233.0	2034.6	3267.5	24.2	18.3	20.4
2005	1379.8	2947.1	4326.9	11.9	44.9	32.4
2006	1673.9	3567.8	5241.7	21.3	21.1	21.1
2007	1896.0	4438.7	6334.7	13.3	24.4	20.9
2008	2246.0	4980.6	7226.6	18.5	12.2	14.1
2009	2304.2	5485.0	7789.2	2.6	10.1	7.8
2010	2707.8	5908.7	8616.5	17.5	7.7	10.6
Average	1624.1	3344.0	4968.4	11.8	17.9	15.6

Source: Own Calculation based on CSA (Various Years) and World Development Report (2012).

Because of this inability of domestic industries to exploit local market opportunities, the country has been experiencing a negative trade balance in merchandize trade over the last several years. For instance, the total manufactured goods absorption or apparent consumption of the country has

been around 8.6 billion USD worth of products in 2010 of which local industries supplied only about 2.7 billion USD (31 percent). If illicit imports are considered, the contribution of local firms on country's manufactured goods supply would have been reduced further from the existing very low level.

This situation apparently indicates the existence of a reasonably large market which could attract many new entrants with an aggregate production capacity of as much as two folds of incumbent firms in the country. These new entrants could engage in substituting imports of semi-processed intermediate inputs, consumer industrial products and capital goods. Three main sources could be cited for the increase in the domestic market size.

(a) Increased population size: The population size with an immense potential for further growth (as shown in Figure 10.1 above) is one of the major sources of increased actual and potential internal market size. Recent growth of urban centers across the country and satellite towns in surrounding rural villages as well as expansion of education at all levels (primary, secondary and tertiary), infrastructure facilities such as roads, power and communication services facilitate information flow and increased use of industrial products.

(b) Increasing per capita income: A consistently positive rate of growth of GDP and also a persistent positive rate of growth of per capita income are also other sources of increasing demand for manufacturing goods in the local market.

Increasing per capita income usually leads into a more than a proportionate increase in demand because of the income elastic nature of industrial goods. Unless thwarted by unforeseen circumstances, the existing positive growth trend in the economy is likely to continue for the years to come.

Table 10.3: Increasing Trend of Per Capita Income

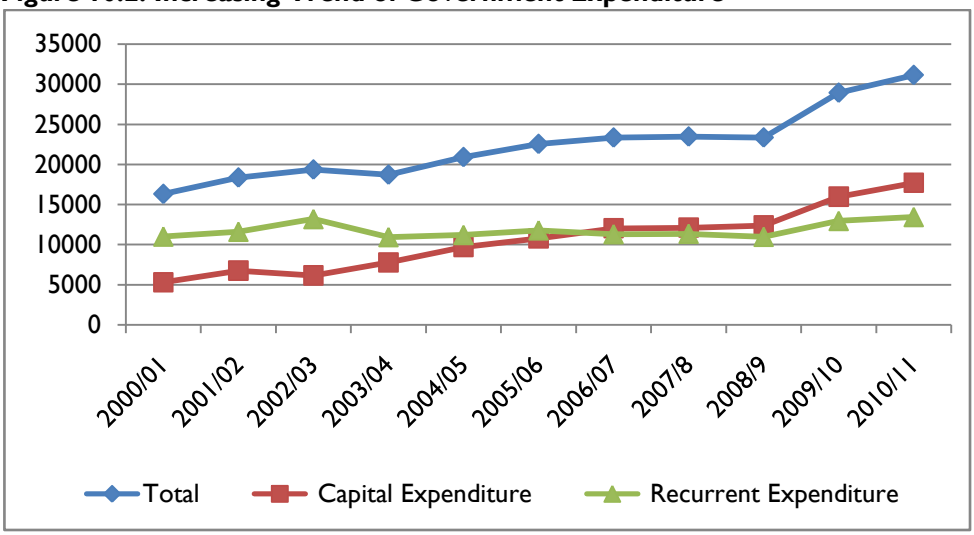
Year	GDP Annual Growth Rate	GDP Per Capita in US $				Annual Growth %
		Constant 2000	Current	PPP constant (2004)	PPP Current	
2003	13.6	137.8	138.6	582.5	563.8	10.8
2004	11.8	150.5	165.7	636.1	636.1	9.2
2005	10.8	163.0	199.6	688.9	711.2	8.3
2006	11.5	177.6	251.6	750.8	797.5	9.0
2007	10.8	192.5	335.4	813.7	883.4	8.4
2008	8.8	204.9	393.7	866.4	950.6	6.5
2009	9.9	220.5	357.9	932.2	1034.7	7.6
2010	7.3	231.6	374.2	979.2	1116.5	5.0

Source: World Development Report (2012).

(c) Increased government expenditure: Government expenditure could be either considered as an opportunity or a curse for private sector development depending on the nature of investment. Nonetheless, it is likely to offer market opportunities for manufacturing goods because of being a major source of formal employment in Ethiopia. The government also directly seeks industrial goods for different activities.

Figure 10.2 shows the increasing trend of public expenditure over the last ten years. In 2011, Ethiopia had the third highest public investment rate in the world with a public investment to GDP ratio of 18.6 percent [World Bank, 2013]. The rate of growth of recurrent expenditure, which mainly constitutes wage bills of public servants, does not show a significant change. This may restrain the demand for basic non-durable manufactured goods from public servants.

Figure 10.2: Increasing Trend of Government Expenditure

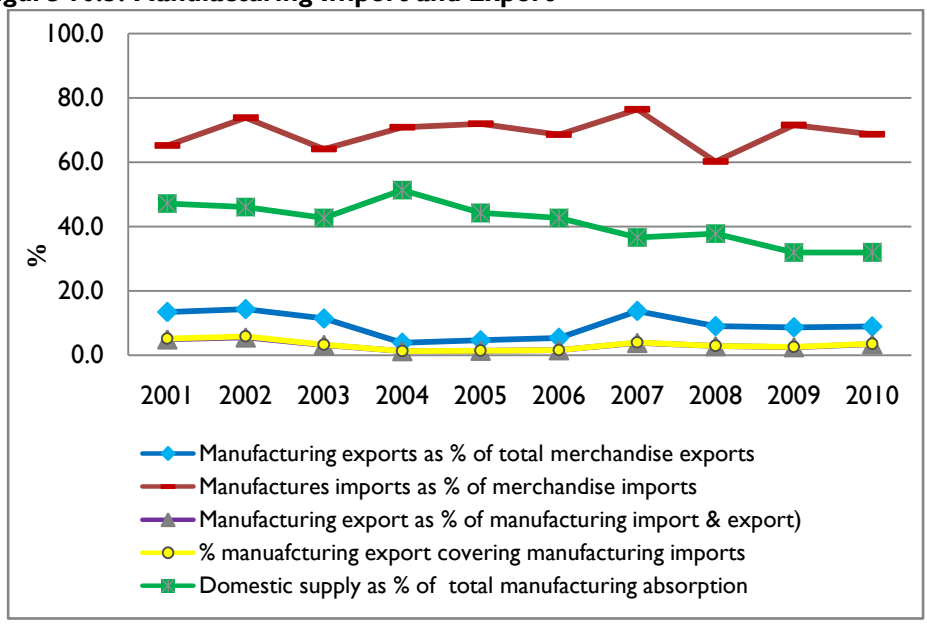


Source: Own Calculation based on MoFED (2012).

External Market: The share of manufactured export in the total merchandize export of the country has been one of the lowest in the world. Whereas around 70 percent of the global merchandize trade, 50 percent of low income countries and 33 percent of Sub-Saharan African countries was held by manufactured products, the contribution of the manufacturing sector to Ethiopia's total merchandize export remains to be less than 15 percent [World Bank, 2011].

Figure 10.3 indicates that the share of manufactured goods imports from total merchandize imports remained between 60 percent and 80 percent. Instead of playing a pivotal role in the export sector and inspiring growth in the rest of the economy through the supply of capital goods, the manufacturing sector remains to be the major source of the country's large trade deficits. On the other hand, manufacturing industries have a very wide window of opportunities not only to substitute imported goods for direct consumption but also intermediate and capital goods that enhance production capacities of the economy.

Figure 10.3: Manufacturing Import and Export



Source: Own Calculation based on CSA (Various Years) and World Development Report (2012).

A sustainable growth trend does not allow a country to uphold persistent foreign trade deficits. Cognizant of this, the government offers various incentives for export oriented industries to boost their production albeit the intervention has not yet brought about tangible effects. EU and USA offer preferential market opportunities for low income countries including Ethiopia. The African Growth Opportunity Act (AGOA) was issued by USA in May 2000 to expand Generalized System of Preferences (GSP) program to encourage exports from developing and least developed countries by reducing tariff rates of specified products. AGOA expands trade preferences to some African countries including Ethiopia, providing quota and duty-free entry for about 7,000 products. It also offers additional market access to textile and apparel products for eligible countries under the Agreement on Textiles and Apparel [USAID, 2011].

Given its excessively low base, Ethiopian export to the US has increased considerably over the last few years. Nonetheless, it still remains low compared to some other AGOA eligible countries because of the inability of firms to supply a specified quantity at a specified quality on regular basis. US government designed what is called VEGA AGOA+ to enable the country to tackle this problem and tap vast market opportunities. The program intends to support firms to identify right market opportunities, build trade capacity to successfully complete orders and facilitate access to finance needed to grow and develop new business. As a result of this intervention, export to the AGOA+ has increased to 10.3 million and 15 million in 2010 and 2011 respectively [USAID, 2011]. The US market is huge enough to accommodate new comers once they are able to satisfy basic requirements.

EU offers 30 Sub-Saharan African countries including Ethiopia under Everything But Arms (EBA) to have duty free market access for selected products. Following the conclusion of the EBA, Ethiopia and other Sub-Saharan African countries have been negotiating an Economic Partnership Agreement (EPA) with the European Union. The intention of EPA is to lay down the rules and conditions of the country's trade and economic relations with the European market in light of the principles of reciprocity.

10.3.6 Geographic, historic and geopolitical heritages

Some natural and strategic factors distinguish Ethiopia from other Sub-Saharan African countries. For instance, the country is strategically located for investors to service markets and customers in East and North Africa as well as Middle East and Europe. According to UNCTAD (2002) in Henok et al (2012), Ethiopia is endowed with unique history, culture and tradition and above all highly educated and dedicated elites, a resurgent private enterprise ethos, a generally friendly and helpful attitude to foreigners, and a capital city that hosts the headquarters of

regional and international organizations such as the African Union (AU) and the Economic Commission for Africa. These values in turn offer confidence for potential investors.

10.3.7 Improved infrastructures

Inefficiencies in logistics are often serious barriers on competitiveness of industrial firms. In order to curb these problems, various infrastructural development activities have been undertaken over the last twenty years. The investment focuses on new and expansion projects on roads, railways, shipping lines and airports which will be discussed in more detail in the subsequent sections.

10.4 Challenges

As indicated in Section 10.2, costs of private sector operators are implicit functions of internal weaknesses and external factors arising from distortions, inefficiencies in government bureaucracy and gaps in the policy packages and coordination problems. The government as a social planner has the responsibility of addressing problems external to firm level capabilities. However, the social planner faces administrative, (economic) and political limitations. Thus, its policy making capital is better deployed in alleviating binding constraints than in going after too many targets at all once [Rodrick, 2007]. The most vital one that it needs to deal with is to avoid distortions that directly or indirectly affect private sector operation. The second most important group of constraints is those associated with the acquisition of public goods. These are the kinds of goods whose markets are mostly distorted and thus normally require government interventions particularly in the context of developing countries such as Ethiopia. The third types of problems are largely structural in nature whose solution could be largely addressed if the government plays its coordination role. Before we

identify binding constraints requiring government interventions, let us first try to discuss major firm level weaknesses.

10.4.1 Internal weaknesses

Weak entrepreneurship and excessively small size: Private sector development in Ethiopia is one of the least in the world. World Bank (2012) indicated that gross fixed private capital formation in Ethiopia has been only 5 percent while the corresponding rate for low income countries is 16 percent. World Bank (2013b) also indicated that Ethiopia is among the lowest in terms of share of private investment in GDP. As it has been discussed in detail in the previous section, this has its own underlying cause- private sector unfriendly policy environment prior to 1991. Despite improvements in the overall policy framework, private investment flows to the manufacturing sector and the contribution of the manufacturing sector to GDP still remains low.

According to key informant respondents, for instance, from ECCSA and OED, investing in the manufacturing sector is more challenging than in many other areas such as hotels, wholesale and retail trade activities. Industrialization requires a critical mass of local entrepreneurs which exists in very limited number in the Ethiopian case. This is mainly because of the previous regime's anti-private sector policy and long-lasting lack of trust between government and private operators. Limited coverage of education and training on entrepreneurship until very recently restricted culture of innovation and investment in the manufacturing sector. Because of this, most industrial firms are small in size with limited scope for exploiting economies of scale.

According to CSA (2011), only half of the medium and large scale private industries which engaged ten persons and above were established with a paid up capital of Birr 500,000 or more. About 43 percent of these industries are under

sole ownership. Some 29 percent and 3.9 percent of private firms are private limited companies and share companies, respectively. About 31 percent of all private firms engaged 50 persons or more and held 81 percent of the total employment. 69 percent of private firms engaged an average of 19 persons per establishment as owner, family labour or employees. Some investors start own-account activities without any clear business idea because of lack of employment alternatives. Altenburg (2010) called these investors "necessity entrepreneurs" whose productivity tends to be far below the level of well-established medium-sized firms. Failure rates are high and owners frequently shift to other activities.

Against their expectation, Sutton and Kellow (2010), note that "small firms" sector has been not found to be incubator of middle and large scale industrial companies. Among 30 leading companies owned by private local entrepreneurs, 24 (80 percent) were set up by local traders because of their marketing networks and investment resources. Only 2 firms each were formed by local managers and small local firm owners. The industrial sector is more intricate and requires its own diverse entrepreneurial skills than trade. It requires more diverse skill composition of labour and organizational and managerial capabilities, which could rarely be acquired by traders. This is perhaps one of the causes for the low level of productivity and weak competitiveness of Ethiopian manufacturing firms.

Inadequate financial resources: About 3.1 percent of the large and medium scale industries which were unable to be fully operational and 7.7 percent of operational firms did not use their full capacity in 2010/11 because of working capital scarcity [CSA, 2012b]. Sutton and Kellow (2010) find also shortages of finance as a common problem especially among surveyed mid-size firms. Shortage of finance in turn restricts access to employ workers with required skill and experiences, buy modern technologies, raw materials and other intermediate inputs.

10.4.2 External Problems

10.4.2.1 Policy distortions and bureaucratic inefficiencies

Relative uneasiness of conditions for doing business: Various reform measures have been taken to ease conditions for doing business. Improvements in the efficiency of government machinery are necessary conditions. In the era of globalization, it is also imperative to assess the domestic conditions vis-à-vis other competing countries. Ethiopia's policy environment is less conducive for business compared to selected COMESA member countries, which are relatively better performing in the industrial sector.

Table 10.4: Doing Business Policy Environment of Selected COMESA Member Countries

Parameters	Egypt	Ethiopia	Kenya	Mauritius
Starting a business (rank)	26	163	126	14
Dealing with construction permits (rank)	165	53	45	62
Getting electricity (rank)	99	94	162	44
Registering property (rank)	95	112	141	60
Getting credit (rank)	83	104	12	53
Protecting investors (rank)	82	128	100	13
Paying taxes (rank)	145	103	164	12
Trading across borders (rank)	70	161	148	15
Enforcing contracts (rank)	152	50	149	58
Resolving insolvency (rank)	139	117	100	64
Total	109	127	121	19

Source: World Bank (2013a).

According to the World Bank (2013a), Mauritius is among the first 20 countries in the world with a favorable investment environment. Ethiopia, Egypt and Kenya are among the least rated countries in the world. Ethiopia is rated reasonably well in dealing with construction permits, payments of taxes, and enforcement of

contracts. Conversely, the country is rated among the most bureaucratic and unfavorable environment for business start-up in terms of procedures, time, cost and paid-up minimum capital per capita requirements. It is also less integrated with other countries and follows more restrictive rules in terms of cross border trade. The rate in the areas of registration of properties, protecting investors and getting access to credits has also been very low.

Distortions in the plain playing field: According to Altenburg (2010), Ethiopian industrial firms could be classified into five major ownership groups: (a) state owned firms, (b) endowment-owned firms, (c) firms of Ethiopian and Saudi-Arabian national, Sheik Mohammed Al Amoudi, (d) FDI and (e) independent Ethiopian entrepreneurs. The first four modes of ownership comprise relatively larger scale firms with a dominant role in the economy. Sutton and Kellow (2010) also indicated that both state owned and endowment companies play an important role in business. Group five include firms established by Ethiopians from the Diaspora, who emigrated during the Derge period. These investors are engaged in different economic activities including industries with capital and knowledge on international business opportunities acquired from countries they used to live in. There are also other local investors, who are engaged in industrial sector investment.

Based on World Bank (2009) and Admit (2008), Altenburg (2010) indicated that "independent Ethiopian entrepreneurs" suffer from unfair competition, alleging that state-owned, endowment-owned enterprises and FDI have better access to land, credit, foreign exchange and support services. World Bank (2009) in Altenburg (2010) further indicated that SOEs and endowment-owned firms are far less affected by problems in the local business environment. In the survey made by the World Bank (2009), local private firms identified factors affecting their competitive edge such as tax administration, customs and trade regulations, access to land, cost of finance and corruption as most relevant problems. These

same problems were rated much lower both by the state-owned and the endowment-owned firms.

Altenburg (2010: 29) also argues that

> *Allocation of resources for industrial policy is not fully transparent. For instance, it is not clear when firms are eligible to get preferential treatment in term of access to licenses, land, credit and foreign exchange. … Business and politics are still strongly entwined in Ethiopia.*

As opposed to the dominant neo-liberal economic thinking, private firms have not been technically more efficient than public enterprises as documented in Bacry et al (2012). In addition to long years of experience and established markets, perhaps informal incentive privileges of various forms explain why public firms become more efficient than otherwise.

Illicit or contraband trade and sub-standard goods supply: There are cases where domestic producers are threatened by sudden import surges with prices below cost of production. Beinen, (2009) indicated that Trade Practice Proclamation (Proclamation No. 329/2003) considered dumping as unfair competition. Nonetheless actions proposed to curb the problem are largely administrative measures and penalties; not anti dumping duty levies proportional to the margin of dumping so as to keep protecting industries as much as they legally deserve. Imports of inferior goods in quality and in unreasonably low prices also affect the competitive edge of local firms. For instance, Sutton and Kellow (2010) reported that the steel, engineering and assembling industrial group is affected by this problem; which is aggravated because of limited capacity of the government office that certifies quality standards because of lack of laboratory and technologists.

Tax and customs related problems: Taxes with a potential effect of increasing business costs and challenging the competitive capacities of compliant firms because of the creation of un-levelled playing field may need to be addressed as a matter of social justice. The World Economic Forum (2012) rated tax regulations the 6th on the list of top problematic factors for competitiveness in Ethiopia. Some business men consider the tax rates to be relatively overwhelming. There are implicit taxes; which benefit some group of firms. For instance, SMEs operated particularly by associations are offered preferential access to markets and credits which are considered by private operators as an implicit tax upon them. Key informant respondents (five of the ten private firms interviewed) say that firms which adhere to the rules of properly keeping books of accounts have no option than declaring and accordingly paying their taxes on time. Others may not necessarily do the same and this disturbs the competitive environment. Sutton and Kellow (2010) also found evidence that there are firms in the metallurgy sector, which operate illegally and evade taxes.

Bureaucratic inefficiency: Unlike other economic variables, policy instability, bureaucratic inefficiency and corruption levels could not be given cardinal values to indicate their intensity. Nevertheless, policy uncertainty or the anticipation of future policy reversals has been an important factor in development as in many instances triggering currency substitution, capital flight, exchange-rate crises, and the collapse of private investment [Agénor and Montiel, 2008]. The business community perceives policy uncertainty or instability as the 5th most problematic factor for doing business in Ethiopia. More damaging has been corruption and inefficient government bureaucracy which are perceived to be the second and third most severe challenges in doing business in Ethiopia [World Economic Forum, 2012]. In practice, policy reversals have been done less frequently in the last twenty years, but changes in directives and working procedures of government offices often create misunderstanding and discomfort among the business community.

The government has made a lot of efforts including, establishing an anticorruption institution, assigning anticorruption experts in government offices, and introducing civil service reform measures. Some businessmen, who wanted to be anonymous, indicate however that these measures have not brought about intended results. Often improvements in service delivery in most government offices do not last for long. Petty corruption in terms of lending for "service charges" of some form for civil servants, not legally binding has become more common than before to get required service on time. It is also indicated that most manufacturers complain about the Ethiopian Revenue and Customs Authority. These offices have limited capacity and are slow in processing cases [Sutton and Kellow, 2010].

A key informant from business associations indicated that he knew of a case wherein an investor who requested land in one city was told to consider changing the site of his project to another city. Provided that feasibility studies are made considering possible sites to be allotted in a specific geographical area, it is rarely possible to arbitrarily change it to a totally different city. Licensing has also become more stringent. A representative from ECCSA and a private operator who has a business plan to engage in a different firm indicated that investors are currently required to bring evidence from different offices, such as, competency certificate from the relevant institutions, bank accounts and land title deeds. These requirements are not bad by themselves, but institutions which are supposedly entrusted with providing certificates for competency on quality and safety standards have not been adequately organized. Informants also indicated that some of the requirements are excessively tough to be satisfied by small and medium sized firms and could be taken as a barrier on individual small scale industrial sector operators.

Restricted focus on some industrial groups: Policy priorities have been mainly agro-processing and construction industries, selected primarily based on static

comparative advantage of the country in terms of the available natural resources and labour. These industries are known as resource based and low-technology industries [Lall, 2001a, 2001b, 2004]. Although useful in the short-term perspective, these industries may not necessarily have the capacity to spur technological progress, improve dynamic efficiency and thus ensure long term competitiveness and faster growth of the industrial sector.

Comparative advantages are not static; they could be created. Countries that managed to create dynamic comparative advantages in medium and high technology as well as knowledge based industries managed to grow faster [Lall, 2004, WEF, 2012]. The government is investing on chemical and metallurgy sectors and also designing an industrial sector road map based on the experiences of primarily East Asian countries such as South Korea. To-date, however, it has not explicitly shown its policy support for PSD in medium and high technology industries such as the ones mentioned above.

In the face of globalization, export promotion may not be a sufficient condition for improving competitiveness in the international market. Instead, firms need to be capacitated to improve their productivity to be competitive both internally and externally on a sustainable basis. The government has shown its intention to consider both exporting and import substituting firms in equal terms. In practice, key informant interviews of government agencies, business associations and individual operators indicate that support services are provided to exporting firms. Particularly, firms which have confirmed export concessions rarely suffer from, for instance, shortages of power supply and working capital.

Rationing, most often than not, distorts resource allocations. It leads to economic inefficiency and at times to rent seeking activities. One could also challenge the rationale for giving priority for exporting firms. Import substituting firms become victims of the underlying scarcity whose effect is likely to lead into

foreign exchange drain because of their inability to compete with imports. Thus, the government should be impartial in terms of addressing constraints that affect productivity and competitiveness of firms regardless of market selections.

Lack of commitment for the industrial sector investment: Key informants indicated that investing on the industrial sector has been extremely challenging. It requires relatively huge investment, knowledge on both local and foreign market requirements, technology, skilled labour and infrastructure such as electricity, water and communication. Most of these requirements could not be made available through the interplay of market forces which require the government to go an extra mile to facilitate conditions for the emerging private sector. It was indicated in the interview with business associations, however, that delays in power connection, lack of access to finance to augment ongoing investment and scarcity of working capital and similar constraints hold back private investment in the manufacturing sector.

Because of these constraints and others, manufacturing projects usually take additional time beyond the planned accomplishment date. The condition causes for unanticipated cost over-runs which ultimately affect the very viability of these projects in terms of competitiveness. Lack of working capital partly emanates from long delays in accomplishing projects.

Service sector activities such as hotels are also given similar privileges as the manufacturing sector does in terms of, for instance, excise tax exemptions on capital goods. Furthermore, construction of hotels is not as complex as manufacturing industries. Market rivals for hotel industry operators are largely from within as they offer non-tradable services. Mostly hotels are usually situated in and around major cities with no large electric power demand and access roads. The inability to ensure some incentives offered for some activities, for instance,

duty drawback schemes for exporters make private entrepreneurs doubt the credibility of government actions.

Key informants also indicated that some private investors focus on optimizing incentive privileges offered for their personal gain instead of economic returns of their investments[47]. It is also argued that the service sector is relatively more favourable than the manufacturing sector for rent seeking behaviour. Operators in this sector have less incentive to engage in unlawful practices because of huge resource requirements and high risks associated with their investment. These and other factors motivate private investors to back off from the manufacturing sector. Incentives are forgone government revenues which need to be used in areas that will have larger linkage and spill-over effects in the economy at large. Key informants from both the business community and government agencies indicated that the government has improved its commitment to address challenges on the industrial sector since the enactment of GTP. This motivation needs to be institutionalized and made sustainable.

Indecision to join regional and global free trade arrangements: Ethiopia has not yet decided to join the COMESA Free Trade Area. It is also at the initial phase of acceding the World Trade Organization (WTO). If it decides to join the organization, the country will have to start trade negotiations, which set the floor for preferential trade agreements. There are two main reasons for the indecision. Firstly, there are fears that further joining multilateral trade blocks may lead to tariff reductions and opening up of sectors which remained closed. This may expose local industries which remain under excessively inward-oriented policy blanket. Secondly, Ethiopia enjoys market access in USA, EU and China. These

[47] Investment incentives are at times abused; an investor who is given a privilege of buying vehicles, construction materials and other goods for his/her industrial enterprise or otherwise may end up investing on sub-standard or second hand investment goods and divert the privileges into unintended purposes. For instance, construction materials meant for projects are sold for profit and luxury vehicles are bought for personal use.

market opportunities are more favorable than WTO most-favourable nation (MFN) principles [Bienen, 2009]. It is argued that withdrawal of existing preferential schemes is highly unlikely. Instead discussion is going on as part of the Doha agenda to convert unilateral preference schemes into multilateral and permanent schemes.

Ethiopian industries find themselves in a vicious circle. They are protected to be capacitated, before being exposed into the international market. A protective environment often leads operators to believe that their firms will not face credible threats forcing their firms to be more productive. Indecision on the exact time of joining freer trade regimes and take preemptive actions to prepare local firms may lead to unanticipated social costs in terms of large loss of jobs and closing down of many firms. Instead of letting time solves the indecision, a well articulated plan and subsequent actions should have been in order for a specified period of time before joining regional and global trade arrangements. Opportunities offered through EBA and AGOA should not be abused to support inefficient firms. Considering a step by step liberalization and joining into a less challenging trade regime such as COMESA may give room for the country to learn lessons to be considered in more demanding accession processes such as WTO.

10.4.2.2 Inadequate infrastructure services

Public investment on infrastructure and the provision of public goods complements or enhances prospects for private investment and raising productivity of capital [Agénor and Montiel, 2008]. Poor infrastructural services cause wide spread cost-over runs on manufacturing firms.

Poor logistic services: One of the critical factors that hinder competitiveness of the Ethiopian industrial sector has been high transaction costs associated with inefficient logistic services. Key informants from business associations and three

out of ten industrial firms importing intermediate inputs from abroad indicated that the process from loading to the final receipt of their goods is extremely inefficient. Sometimes firms face difficulties of tracing where their goods are found. Even if they trace the goods, the process of getting customs clearance is time consuming, which at times leads to high demurrage payments for inefficiencies they did not cause. The transport system is not efficient either. These inefficiencies normally make the cost of imported inputs unwisely more expensive than they should have been.

For instance, the price of steel is 30 percent higher in Ethiopia than in China due to poor trade logistics and high import tariffs (10%) [Dinh et al, 2012]. According to the Logistics Performance Index (LPI), which measures on-the-ground trade logistics performance, Ethiopia was ranked 141st among 155 economies in 2012. Its rank deteriorated from 123rd in 2010 even though a multimodal system has been introduced to address the problem [World Bank, 2012, Henok et al (2012) and World Bank, 2013].

Ethiopia's inland transportation is as expensive as some other Sub-Saharan African countries such as Rwanda, Uganda, and Zambia [World Bank, 2013]; even though it is nearer than these countries to the port. In addition, there is a high cost of obtaining foreign exchange in terms of, among other things, waiting for the National Bank's authorization for up to six months because of the time needed for verifications of the foreign currency requirements. Shipping costs are also relatively higher because of the need for compensating the below capacity loading of ships as they leave Djibouti because of very low export volumes. There are slight improvements in the time and associated costs required for exporting while logistic systems become worsening for imports since 2009 [World Bank, 2013].

The poor trade logistics in the country (or expensive, slow and unreliable transportation) is likely to wipe out the country's labour cost advantage (because of low wages) and cut it off from the higher-value and affect the time-sensitive segments of the market [Dinh et al, 2012].

Improved road and railway network helps to address logistics problems across the different processes on the supply chain. Ethiopia's road density is relatively very small. For instance, Kenyan and Egyptian road density per 100 km square was, respectively, 13.7 and 10.7 in 2010 [International Road Federation, World Road Statistics, electronic files). Ethiopian road density in 2010/11 was 5.6 km per 100 km square. The country intends to expand the road density to 12.4 km per 100 square km up to 2014/15; by constructing 15722 km of roads connecting the capital city with the regional states and 71522 km all weather roads connecting Woredas [MoFED, 2010]. If this plan is realized, it would significantly improve accessibility of input and output sources and reduce transaction costs.

Railway is the cheapest in land transport. Ethiopia has an old railway route connecting Addis Ababa with Djibouti. However, this route has become less functional in recent years. The government has initiated the construction of a total of 2395 kilometres of railway network connecting different parts of the country and neighboring countries and different ports. Of this network 1807.9 kilometers connect Addis Ababa with Dewele through Dire Dawa; Awash with Mekelle through Woldiya, Woldiya with Galafi through Semera and Addis Ababa with Bedele through Jimma to be completed up to 2015 [MoFED, 2010]. When high-speed road and rail corridors, expanded roads, multimodal links and new industrial parks become fully functional, they are likely to improve logistics problems in the future. The existing situation, however, contribute to the uncompetitive performance of Ethiopian firms. According to the World Bank (2013b), Ethiopia is generally considered as "logistically unfriendly" which creates a bad image for attracting foreign direct investment.

Inadequate power supply: Lack of connection, low supply of electricity and frequent power interruption have been serious problems in the manufacturing sector. Some key informants from individual enterprises, business associations and government agencies indicated that the severity of power shortage tends to be minimized compared to the situation in the recent past. Nonetheless, power still continues to be erratic with surges not appropriate for production and at times causing machinery and equipment breakages. Business associations revealed that there are many manufacturing firms waiting for electricity connection for quite a long time after application or get lower power than required. This forces some of them to operate far below capacity and some others to wait until they get the required level.

According to Ethiopian Electric and Power Corporation (EEPCo), at least 30 factories located in and around Addis Ababa, central, southern and eastern Ethiopia have been waiting to get electric power supply. Of these, 15 factories (50 percent) and 10 factories (33 percent) applied in 2003 and 2004, respectively. Of the remaining five factories, two of them submitted their applications in 2002 and three of them in 2005.

Table 10.5: Number of Factories that Applied and Waiting for Electric Power

Type of industry	Number of factors	Power required in Mega Watt
Food processing	1	0.55
Tannery, leather and shoe	6	1.912
Metallic industries	14	17.231
Textile and garment factories	8	0.748
Cement	1	Three general lines; amount not specified.
Total	30	20.441

Source: Ethiopian Electric Power Corporation (2013), Unpublished.

Most of the industries waiting for power supply are those which intend to produce steel, aluminum, welding, electrode and corrugated iron sheets. The total power required by the 30 factories is estimated to be around 20.4 mega watts, and about 76 percent of this power is requested by only four steel factories.

In 83 percent of the cases, EEPCo attributes the delays to lack of timely access to transformers and their accessories. According to EEPCo experts, power supply is not a serious problem currently, albeit slight fluctuations in demand on pick and off pick hours. The issue is rather the timely acquisition of transformers because of partly large amounts of foreign exchange requirements. In order to address this problem, an attempt is being made to locally produce transformers.

However, the scale of the problem is more severe than what EEPCo indicates. For instance, of the total number of 2145 large and medium scale industries covered in the survey, 1015 firms (47 percent) were not fully operational; about 26 percent of these firms attributed for their not being fully operational to lack of required amount of power supply [CSA, 2011]. These are perhaps newly entering and incumbent firms expanding their production capacities. Similarly, a World Bank Enterprise Survey in 2011, in World Bank (2013b) indicated that around 12 percent of all private enterprises and 21 percent of Chinese private firms in Ethiopia covered in its survey identified power supply problem as one of their serious constraints.

This is likely to bring about a huge economic loss for individual firms. Moreover, its cost implications to the country in terms of output, employment and government revenue foregone as well as foreign exchange drain by way of purchasing goods from abroad to fill in the supply shortfalls. Key informants from business associations and some of the owners of private enterprises perceived this problem as one of the factors that increase the cost of doing business, and one possible reason for investors to shy away from investing in the manufacturing sector.

Table 10.6: Percentage of Firms Not-being Fully Operational because of Shortages of Electricity and Water

Industrial Groups	Percentage	Industrial Groups	Percentage
Food & Beverage	21.1	Rubber & plastic	41.5
Textiles	71.4	Non-metallic minerals	14.4
Wearing apparel	9.09	Iron & steel	45
Tanning, footwear, luggage and handbags	42.3	Fabricated metal except machinery & equipment	33.3
Wood & cork	38.5	Machinery & Equipment	100
Paper, paper products and printing	31.2	Motor vehicles, trailers	60
Chemicals	32.0	Furniture	33.7
Total	**25.5**		

Source: CSA, Large and Medium Scale Industries and Electricity Survey (2011).

Most Sub-Saharan African countries, suffer from deficient infrastructural facilities and services including road, electricity, water and communication. Ethiopia is not an exception to this. The World Economic Forum (2012) rates Ethiopia 119th among 144 countries in this respect. One of the most important ingredients in the production process is power. Ethiopia is estimated to have a total capacity of generating 45,000 MW hydroelectricity besides its huge potential in other renewable energy sources such as solar, wind and geothermal. However, it managed to generate only around 3905.4 million KWH in 2009/10 or 8.7 percent of its potential [NBE, 2011]. Despite tremendous efforts, Ethiopia's per capita power consumption is still extremely low as compared to neighboring and other countries in Sub-Sahara Africa and elsewhere in the world.

Ethiopia's per capita electricity consumption was 3.4, 34.8, 9.8 and 1.8 percent of the per capita consumption levels of Egypt, Kenya, Sub-Saharan African and World average, respectively, in 2010. Ethiopia managed to improve the per capita power consumption by about 58 percent between 2005 and 2010. Nonetheless,

other countries also improved their per capita power consumption during the same period.

Table 10.7: Electric power consumption (KWH per capita)

Country and Regions	2005	2010
Egypt, Arab Rep.	1284	1608
Eritrea	54	52
Ethiopia	34	54
Kenya	137	156
Nigeria	128	136
Brazil	2017	2384
China	1784	2944
Sub-Saharan Africa	544	553
Low income countries	216	242
World	2660	2975

Source: International Energy Agency (IEA Statistics OECD/IEA, http://www.iea.org/stats/index.asp).

Between 2007/08 and 2011/12, the share of large industry low voltage and high voltage energy sales remained about 38 percent; and this grew only by about 9 percent per annum from 1140 GWH to 1590 GWH [EEPCo, 2012]. This electricity power was presumed to be largely used by the 2170 medium and large scale industries, which employed about 146689 permanent workers. For a country aspiring to undergo structural transformation towards industrialization from terribly low and excessively underdeveloped state to one which demands huge electric power consumption per each large industrial project requires investing on different sources of energy. A very simple exercise of estimating the power requirement of the industrial sector in the next few years suggests the need for an extra effort to improve energy production in the country.

According to the Ethiopian Investment Agency, between 1992 and 2013, 2122 public, foreign and domestic private industrial projects with a total number of 119766 permanent employees became operational. In addition, 1243 industrial projects, with total permanent employees of 91343, have been under implementation and 10967 other manufacturing projects are in the pre-implementation stage.

Scenario 1: As it is indicated above, not all operational industrial projects have been supplied with required power, though their energy requirements could not be appropriately estimated because of data limitations. Nonetheless, let us make a very simple assumption that all operational projects have power already. Let us further assume that only those projects, which are under implementation, will become operational in the next three years, those in the pre-implementation stage pending. Assuming that electric power usage per permanent employee is the same between those which are already operational and those under implementation, then additional 991 GWH energy is required in the next three years, implying a 16 percent increase in demand per year.

Scenario 2: If we relax the above assumption and add some 25 percent of the projects in the pre-implementation stage into the list of those which would become operational, then the additional energy requirement will increase into 2500 GMH. In order to address this power requirement, EEPCo needs to increase its sales for the manufacturing sector by about 31.5 percent.

Scenario 3: According to Mihret Debebe, Chief Executive Officer of EEPCo (2011), electricity demand elasticity to changes in GDP has been 2.15 percent. Because of the nature of the sector, this estimate is likely to significantly underestimate the elasticity of demand for the manufacturing sector. However, if we simply agree that this is equally applicable for the sector in question, energy sales to the manufacturing sector requires to grow at a minimum of 21.5 and

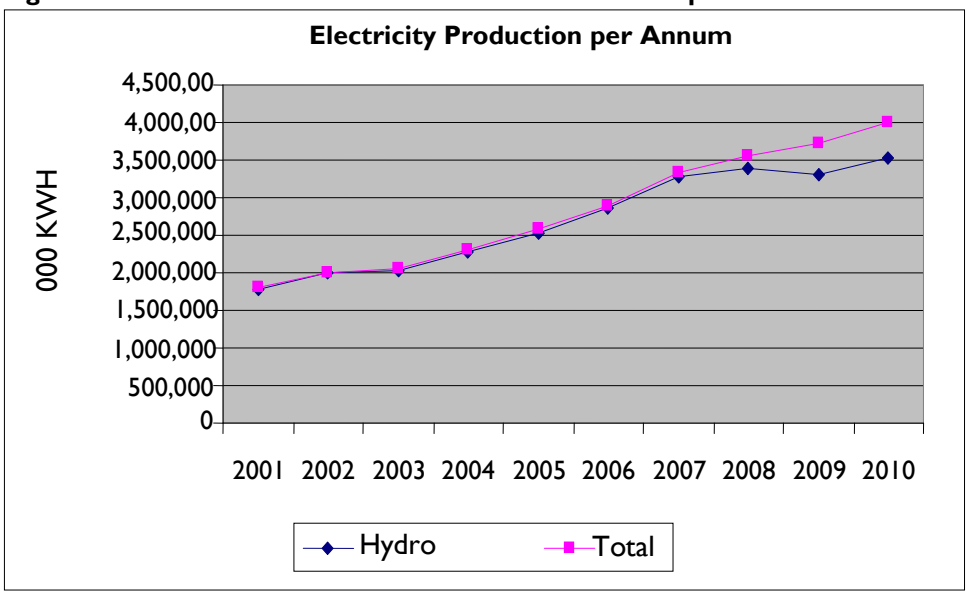
31.2 percent if manufacturing sector is to grow a minimum of 10 percent and 15 percent per annum, respectively.

Scenario 4: A country aspiring for a rapid pace of industrialization needs the establishment of relatively large scale steel foundries, other metallurgy, cement as well as medium and high technology and high power intensive industries[48]. Suppose 25 such factories with a power demand of 100 MW per establishment request power in the next three years, the additional power demand would become 2500 MW. This demand is over and above the amount of actual installed capacity of hydro, diesel, geothermal and wind power generating plants of EEPCo in 2012. If this is added to the actual power consumption of industries to-date, the additional power requirements of those which are still waiting for power and those less power intensive projects under implementation, the total energy demand of the manufacturing sector becomes enormous.

Cognizant of this situation, the government targets to generate 10000 MW at the end of 2014/15 fiscal year, an ambitious plan to make the base year's power production to be five fold. To this end, various energy generation projects are under construction including Gilgel Gibe 3 and Renaissance dams which if achieved would realize the plan. However, the actual experience between 2000 and 2010 does not guarantee the promise.

[48] For instance, one large scale industrial enterprise has already requested 300 MW power supply from EEPC [Capital, 30 April, 2013], which is exactly equivalent to the generation capacity of Tekeze hydro electric power plant. I

Figure 10.4: Electric Power Generation Trends in Ethiopia



Source: Own Calculation Based on CSA (2011).

Power production has increased by about eight percent per annum from 2001 to 2010, which is in effect lower than the rate of growth of GDP; let alone satisfying the anticipated growth of energy demand in the economy. Thus, all the above feasible scenarios of industrial growth potential in the country suggest that the existing trend of power production is far below supporting the ambitious industrialization drive.

Poor Communication Services: Ethiopia is among the lowest telecommunication service providers in the world. Table 10.8 clearly shows that Ethiopia lags by far behind some of its neighbouring and relatively industrialized countries such as Egypt and Kenya and also Sub-Saharan Africa and the world at large.

Table 10.8: Telecommunication Service Provisions per 100 Persons

Country/Region Name	Fixed broadband Internet subscribers		Mobile cellular subscriptions		Internet users	
	2005	2011	2005	2011	2005	2011
Egypt	0.190	2.206	18.4	101.1	12.8	38.7
Eritrea	0.000	0.003	0.9	4.5	1.8	6.2
Ethiopia	0.000	0.005	0.6	16.7	0.2	1.1
Kenya	0.015	0.102	12.9	67.5	3.1	28.0
Mauritius	0.430	8.939	52.3	99.0	15.2	35.0
Tanzania	0.004	0.008	7.6	55.5	4.3	12.0
Sub-Saharan Africa	0.029	0.209	12.0	53.3	2.3	12.7
Low income countries	0.004	0.116	4.7	41.7	1.1	6.0
World	3.454	8.607	33.9	85.5	15.8	32.7

Source: International Telecommunication Union, World Telecommunication/ICT, Development Report and Database and World Bank Estimates, 2012.

Internet services is very vital for e-commerce; but both coverage and service quality is inferior in the Ethiopian case. This is one of the weak links of the country in terms of accessing market and technology related information and making timely and learnt decisions. In GTP, telecommunication services are planned to be expanded substantially. Accordingly, fixed line telephone, mobile telephone and internet service subscribers will become 2.5, 5 and 20 fold, respectively, within a span of five years [MoFED, 2010]. The government has been also implementing projects to avail e-Government integrated services online including information and services on business registration, licensing, loans, penalties, investment regulations and processes, assortment of unemployed and others [MoCIT, 2011]. Unless efforts are redoubled to improve the communication services, the much aspired industrialization drive would not be possible in the age of globalization.

Low technological base: The World Economic Forum (2012) categorizes countries into three development stages using GDP per capita at market exchange rates and share of exports of mineral goods in total exports (not to be more than 70 percent to be grouped in a higher development stage). These are resource-driven, efficiency-driven and innovation-driven economies. Based on this criteria Ethiopia is labeled under the initial development stage with a rank of 121st among 144 countries. The three stages are not necessarily exclusively non-overlapping.

Key requirements for factor-driven economies are considered to be institutions, infrastructure, macroeconomic environment and health and primary education. In terms of these requirements Ethiopia is ranked globally as 118th.

Technology is the source of new goods and services, new comparative advantages and enhanced productivity compensating for possible labor inefficiencies and improving the competitive edge of the sector. The basic requirements for technology and innovation acquisition from elsewhere are higher education and training, goods and labour market efficiencies, financial market development, technological readiness and market size. These are also called major pillars for efficiency driven economic activities. In this respect Ethiopia is ranked 123rd. Ethiopia is labeled as 125th in terms of innovation and sophistication pillars including business sophistication and enabling environment for innovation and thus actual innovation activities. In all the three different sets of requirements, Ethiopia lags far behind the technology and knowledge driven industrialization.

Ethiopia is almost entirely dependent on imported technologies. The machinery and equipment industrial group is almost at very rudimentary stage, contributing about 0.4 percent to the gross value of production of large and medium scale industries of the country. The products of the machinery and equipment sub-

sector itself many not fully meant for capital goods markets for the industrial sector. Even the conditions for proper selection, acquisition and use have not been put in place.

Globalization eases access to modern machinery and equipment as well as mobility of human capital; but it is not a sufficient condition by itself. Technology has strong 'tacit' elements that require the user to invest in new skills, routines and organizational information which usually face market and institutional failures.

If entrepreneurs experiment with new products acquiring technologies from established producers abroad and adapt them to local conditions called "self discovery" and fail, they will bear full cost of the failure. If they become successful, they will share their discovery with other producers. This justifies the need for government intervention; but 'requires equating the social marginal cost of investment funds to the expected return of projects in new areas' (Hausmann and Rodrik, 2003).

The government provides incentives including tax holidays and tariff exemptions for importation of machinery and equipment. Sector specific government industrial development institutions are entrusted with the task of supporting industrial operators in terms of advice in technology selection and installation. Nonetheless, support by government institutions has been limited and the choice of technologies is terribly constrained by weak internal technical capabilities of individual operators. Key informants indicated that machinery and equipment are often selected by owners. The main source of information is rather their peers. More often than not, there has not been a proper search of available technologies in the international market, compatibility with domestic resource base, ability to produce standard high quality products and cost effectiveness. Instead, cost of the capital good is given due emphasis. The choice is also

constrained by inadequacy of financial capital and lack of access to suppliers' credit.

Technology is not only the hardware machinery and equipment per se. It needs to have a tacit element, which is normally supposed to be incorporated in human capital and organizational systems and working procedures of users. According to Lall (2004), tacit elements need to invest in new skills, routines and technical and organizational information. Such investments, however, face market and institutional failures (because of externalities and free-riders). Because knowledge is non-rival and non-excludable once it is acquired (Romer 1990), it makes it a risky venture for business firms to invest on up grading skills of their workers. A number of visited firms and both government institutions and business associations indicated that individual firms usually become reluctant to train workers since trained workers usually get employed elsewhere, start to operate by their own or request high wage increment. The optimal way is to look for trained and experienced labour force from elsewhere.

This makes government intervention to be indispensible. Key informants revealed that government industrial sector specific institutions have not been adequately capacitated to address the skill gaps of the manufacturing sector, in terms of, for instance, deployment of qualified and experienced instructors and adequacy of teaching facilities. Universities also work on producing skilled manpower for the industrial sector. The most important element is the relevance of the training on the ground. This requires, among other things, a strong linkage between higher education institutions and industrial enterprises, which has remained to be very weak. Industry–university linkage was initiated during the military regime only to fail without achieving tangible results. Recently, there is a move towards creating this linkage and individual university specific efforts are going on. Absence of institutionalized and sustained collaboration between universities and industrial

associations has not brought tangible results in producing educated human power that could be engaged without further training.

10.4.2.3 Structural problems requiring coordination

There are structural problems largely emanating from low level of economic development, but they may not necessarily require the government to directly engage in addressing them. What is required from the government is to simulate and coordinate private sector operators to simultaneously invest on inter-linked activities that curb these constraints and thereby maximize social benefits. Some of the key structural constraints for PSD in the industrial sector and industrialization are the following.

Shortages of raw materials and intermediate inputs: Shortage of raw materials and intermediate inputs has been reported as the most severe constraint of manufacturing sector performance. As it has been discussed above, a number of newly entrant medium and large scale industries have not been fully operational. Around 38 percent of these industries considered shortages of raw materials and intermediate inputs as the most severe problem in 2010. Equally important is the effect of shortages of inputs even among operational industries. Among industrial firms which reported underlying causes for under capacity utilization, 71 percent mentioned shortages of raw materials and intermediate inputs as the first severe bottleneck. When the situation is assessed among the different industrial groups, a puzzling picture appears in the scene.

ADLI and IDS clearly stipulate resource based and light technology industries are the country's priority because of their comparative advantage in terms of agricultural products and labour. Partly because of this policy direction and similar other policies enacted previously, the manufacturing sector is structurally lopsided towards agro-processing and light technology industries, such as food,

beverages, textile, garment, tannery, leather products and non-metallic mineral processing industries. Amazingly, these same industries are the ones which suffer most from shortages of raw materials and intermediate inputs as could be seen from Table 10.9.

Table 10.9: Rate of Capacity Utilization and Raw Material Shortage

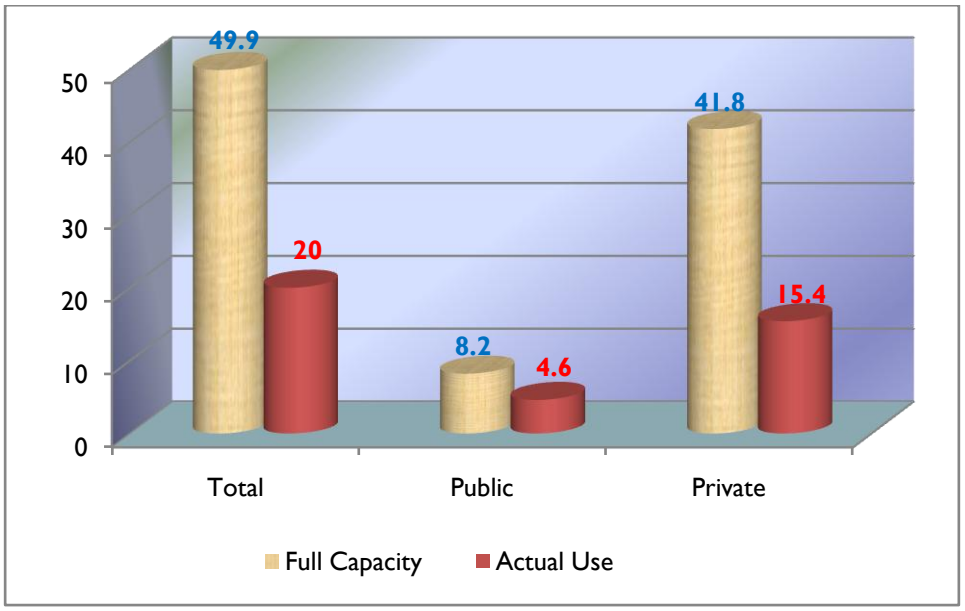
Industrial Groups	% Firms Affected by Shortages of RM
Food & Beverage	34.5
Textiles	14.3
Wearing apparel	72.7
Tannery, footwear and other leather products	38.5
Wood & cork	26.9
Paper and printing	70
Chemicals	24
Rubber & plastic	38.5
Non-metallic mineral	48.6
Iron & steel	20
Fabricated metal	25.9
Machinery & Equipment	60
Motor vehicles, trailers	0
Furniture	20.4
Total	38.3

Source: Own calculation based on CSA (2011).

According to CSA (2011), large and medium scale industries were able to make use of only about 40 percent of their raw material demand at full capacity production. Shortage of raw materials was more severe among private firms than state owned enterprises. As depicted in Figure 10.5, private sector operators acquired only 37 percent of the quantity of raw materials they needed to operate at full capacity. State owned firms managed to obtain about 56 percent. Private firms disproportionately suffer from shortages of raw materials, perhaps partly

because of the fact that several of them are new entrants, which require some time to acquaint themselves with the input market which involves several actors along the chain.

Figure 10.5: Actual use and Full Capacity Level Raw Material Consumption in Billion Birr



Source: Own calculation based on CSA (2011).

This huge gap between actual use and potential demand for raw materials is somehow created because of the inability of the country to make use of the market opportunities created by itself owing to poor inter and intra sectoral linkages.

Table 10.10: Import and Export Intensity

Industrial Groups	Import intensity		Export Intensity		Export/Import	
	Public	Private	Public	Private	Public	Private
Food & Beverage	0.30	0.24	0.002	0.03	0.03	0.19
Textiles	0.04	0.56	0.07	0.11	4.20	0.33
Wearing apparel	0.00	0.50	0.00	0.13	0.00	0.55
Tanner, Footwear and Leather products	0.25	0.36	0.53	0.34	3.20	1.58
Wood & cork	0.16	0.23	0.00	0.00	0.00	0.01
Paper and printing	0.53	0.62	0.00	0.00	0.00	0.00
Chemicals	0.47	0.72	0.04	0.01	0.15	0.02
Rubber & plastic	0.98	0.90	0.00	0.002	0.00	0.004
Non-metallic mineral	0.85	0.36	0.00	0.001	0.00	0.01
Iron & steel	0.98	0.75	0.00	0.02	0.00	0.05
Fabricated metals	0.74	0.88	0.00	0.02	0.00	0.04
Machinery & Equipment	0.00	0.85	0.00	0.02	0.00	0.04
Motor vehicles, trailers	0.97	0.99	0.00	0.00	0.00	0.00
Furniture	0.23	0.51	0.00	0.00	0.00	0.00
Total	0.50	0.51	0.014	0.037	0.08	0.13

Source: Own Calculation based on CSA (2011).

The manufacturing sector is very much external market dependent with respect to the acquisition of its inputs. On the contrary, it is almost entirely inward oriented for product markets. For instance, import intensity (share of the value of imported raw materials and intermediate inputs to the total cost of raw materials and intermediate inputs) was around 51 percent in 2010. This is not only substantial on its own but also disproportionately too much when it is seen in view of the sector being dominated by resource based and light technology industries.

As it can be observed from Table 10.10 above, all industrial groups rely on imports for their raw materials and intermediate inputs. The excessive dependence of chemical and metallic industries is because of weak interplay between the mining and manufacturing sectors. With the exception of cement, marble, glass, caustic soda and aluminum sulphate producers, almost no other industries use raw materials from the mining sector such as iron-ore. What makes it more difficult to give economic rationale is the reliance of agro-processing and light technology industries on imported inputs wherein the country is presumed to have a comparative advantage.

Ethiopia imports wheat, flour, hides and skins, vegetables, oranges, logs and many other agricultural raw materials and intermediate inputs of agro-processing industries. Imported inputs would have been much higher than the above quantities, had firms been allowed to import as much as they needed in the face of the huge gap between their demand and actual utilization. For instance, Sutton and Kellow (2010) indicated that lack of hard currency to purchase spare parts and inputs is cited as one of factors affecting competitiveness of tanneries.

What makes the situation of the manufacturing sector more disturbing is its inability to cover its foreign exchange requirements at least for the purchase of its raw materials and intermediate inputs, even if it lacks the capacity to be the source of its capital goods. As discussed above, it has to look for other sources to finance its foreign exchange requirements for the acquisition of imported input purchases. However, high import intensity and terribly low export intensity makes the industrial sector to be highly vulnerable to commodity export market instabilities and shocks, which forces the National Bank of Ethiopia to control the foreign exchange market. The World Economic Forum (2012) indicated that around 5.7 percent of sample business respondents considered foreign currency regulations as their first constraint for doing business. It could be because of this that even import intensive industries suffer from shortages of inputs. What could

be the underlying cause for inadequacy of raw materials and excessive dependence on foreign inputs?

Table 10.11: Imported inputs that would have been domestically available

Types of inputs	Unit	Quantity Consumed		Import Intensity
		Total	Imported	
Vegetables	Tons	1769	1477	83.5
Wheat	Tons	544367	29626	5.4
Flour	Tons	45613	4581	10.0
Milk Powder	Tons	221	221	100
Orange	Tons	872	481	55.2
Glucose	Tons	1379	1251	90.7
Malt	Tons	13776	5899	42.8
Raw Cotton	Tons	31711	226	0.7
Fabrics	"000" Meter	275	271	98.5
Polyester Fiber	Tons	2035	1324	65.1
Acrylic Fiber	Tons	19	19	100
Acrylic Yarn	Tons	26	18	69.2
Hides and skins	Tons	62866	2979	4.7
Chip wood	Pieces	153153	15535	10.1
Formica	Pieces	3823	3645	95.3
Log	Cube Meter	797782	440210	55.2
Plywood	Pieces	212310	127044	59.8
Veneer	Square Meters	5761	1253	21.7
Plunk	Cube Meter	102265	6614	6.5

Source: Own calculation based on CSA (2011).

(a)Weak inter-sectoral linkages: Some of the products listed above are primary products expected directed from the agricultural sector which the country is not expected to fall short of. The agricultural sector is predominantly peasant farming

oriented mainly for own consumption. Besides, scale limitations for commercial purposes, low productivity, irregularity in supply because of weather shocks, crop failures and animal diseases and other challenges constrain the performance of individual peasants. Coordination for mass transaction is neither easy for individual firms to supply for the industrial sector as it involves high transaction costs.

When we come to specific cases, Ethiopia has immense livestock resources. Besides, the quality of the country's skins is internationally recognized and fetches relatively high prices [Muthee, 2008]. However, the existing supply of hides and skins has failed to fully satisfy the requirements of the few leather industries in the country. For instance, rate of capacity utilization of this industrial group was as low as 53 percent in 2010 [CSA, 2011].

Key informants revealed that serious defects on hides and skins owing to poor animal husbandry, low take off rates, traditional slaughtering practices and inadequate slaughtering facilities, parasite infections and poor collection are the underlying causes of shortages of raw materials. Sutton and Kellow (2010) indicated that almost 80 percent of the total sheepskin is affected by disease called *ekek,* which could be identified once the skin passes through a certain level of processing. Lack of high quality leather is a serious problem for leather processing industries including those of footwear. Moreover, livestock are considered as a store of value, source of consumption and a vehicle for farming. Commercial animal husbandry has not been a common practice in Ethiopia. Despite the ever increasing prices for meat and meat products in the country, scarcity of hides and skins has been persisting for quite a long time, indicating the failure of the sector to react to market signals.

The other side of the problem has been the very limited use of livestock of the low land breeds. Somali region is estimated to possess around 32.4 percent of sheep and goat resources in the country [Sisay, 2007]. This resource is not used

for high value leather because of high natural fat deposit, very thin substance and low strength and too many defects. Because of this, the skin fetches very low prices. According to the Ethiopian Leather Institute experts, a study has been going on in collaboration with Indian experts and post graduate Ethiopian students to explore ways of using this huge resource with positive signs emerging.

Livestock development was one of the components of PASDEP (MoFED, 2006) and it is also part of GTP (MoFED, 2010). Areas of specific interventions such as Pastoral Community Development Project (PCDP) were also designed. As it has been argued by stakeholders, the actual support and interventions made by the government on the livestock to-date has been inadequate. Recently high taxes have been imposed on export of semi-processed hides and skins so as to encourage high value exports. The measure has created a linkage between industries which have the high level of technology for processing with those exporting their goods in a semi-processed level, and this is likely to provide a positive gain to the economy. However, exporting of live animals is still permitted which continues to constrain the supply of hides and skins for tanneries.

The textile sector also lacks supply of ginned cotton. The wearing apparel industry suffers from shortages of yarn as an intermediate input. The problem of cotton is somehow vicious. Fluctuating market prices for textile products reduces the demand for raw cotton and lead small-scale cotton producers shift to other crops (Sutton and Kellow, 2010). This condition constrains the supply of raw cotton in the following year. The Ethiopian Textile Industry Development Institute officials claim that currently the country is producing sufficient raw cotton, and it has began once gain to export surplus cotton. However, irregularity in supply and quality problems still remain to be the problem of the textile industry. Reasons of low quality are natural causes and poor harvesting

practices. Short staple fibers cause imperfections in yarn [Sutton and Kellow, 2010]. Failure to address the intermittent nature of the raw cotton supply may bring an additional burden on the textile sector aggravating the problem when giant textile industries, already established and being established, become fully operational.

Operators and a study by the Union of Ethiopian Textile Industries claim that the tariff rate does not discriminate between finished goods for final use and an intermediate input in the wearing and apparel enterprises. In addition to the tariff problem, as Sutton and Kellow (2010) indicated, lack of experience and information on sourcing causes shortages of fabrics even from abroad. Thus, this is one of the serious problems constraining the use of market opportunities offered by AGOA and EBA and also the ample domestic market opportunities.

In the food processing industries, inputs for flour factories is mainly sourced from small-scale and subsistence farmers; which suffer from poor and inconsistent raw materials supply in quality and quantity as well as storage limitations. Large margins earned by middle men inflate the prices of wheat and livestock facing food processors [Sutton and Kellow, 2010].

(b) Weak-intra industry linkages: Local industries have already demonstrated ability of producing malt, fabrics, polyester fiber, acrylic fiber, acrylic yarn, chip wood, formica, plywood and veneer. Gaps in the supply of inputs may defeat any would-be indigenous start-up (with cascading impacts on other potential start-ups that might depend on inputs from the first) [Henok, et al, 2012]. The existing shortage of inputs does not only affect incumbent firms but also affects the decisions of potential investors.

Low labour productivity: Some key informants from business associations, associations of the Diaspora and owners of private firms argued that labour

productivity is low compared to other countries. Consistent with this observation, Dinh et al, (2012) found that even in the better-managed wood product firms, labour productivity is extremely low. For instance a worker produces 4.5 chairs a day in China and 1.9 in Vietnam, and only 0.3 in Ethiopia. It takes about 78 minutes to produce one pair of shoe uppers in Ethiopia; while Chinese workers require only 30 minutes to do so [Sutton and Kellow, 2010]. Individual firms partly attribute this to lack of the required technical and vocational skills amongst the middle and lower level of managers and workers. According to the World Economic Forum (2012), inadequately educated workforce has been rated as the 8th most problematic factor for doing business in Ethiopia.

Human capital has been the single most important factor that enables East Asian countries to narrow down the huge development gap between them and the West. Human capital involves knowledge, abilities and skills acquired through a systematic learning process that properly mixes theory with practice. Nonetheless, investing on education is not like investing on any other material good. Investment returns on workers' education accrues mainly to the trainee and the society than individual firms. Because of this, educational institutions remain as the source of educated labour force, which more often than not do not offer practical exposure because of very limited interaction between industrial firms and these institutions. Sector specific industrial development institutes attempt to feed trained human power into individual firms. Officials of these institutes, individual firms and representatives of their associations argue that the effort is far from adequate as compared to the scale of the problem.

As one key informer indicated that exposure to the global competitive world, physical strength and dexterity of workers as well as the relationship between them and the management have their own effects on productivity. Ethiopia has been among the least exposed economies to global competition. Neither the

dexterity of workers could be considered high because of the same reason, inadequate nutrition during childhood and other cultural and sociological factors. Besides, poor work ethic and restrictive labour regulation have been considered as some of the problems behind low labour productivity in Ethiopia. For instance, labour law restricting lay-off regarding unproductive workers is reported to be one of the challenges of the garment industry [Sutton and Kellow, 2010]

Inadequate access to capital: In a discussion with different key informants, one of the constraints that come out very clearly is inadequate access to short term credits for working capital and investment. The government has already pledged to guarantee loans amounting to 70 percent of the total investment outlay, if a private operator puts around 30 percent of the total capital on the industrial project. In practice, however, Ethiopian industrial firms consider inadequate access to capital one of the limiting factors for using their productive capacities. For instance, around 3.1 percent of non-fully operational firms and 7.7 percent of firms operating below capacity attribute lack of working capital and absence of credit facility as their most severe constraint [CSA, 2012b].

Similarly, an enterprise survey conducted by the World Bank (2011) indicated that lack of access to finance affects the largest number of firms as compared to other constraints. It is also indicated in World Bank (2013b) that credit to the private sector operating in all sectors was equivalent to 14 percent of GDP, whereas the regional average was 23 percent in 2011. Moreover, private sector credit showed an increasing trend globally, whereas Ethiopia has experienced a decline of about 5 percentage points since 2004.

This problem could have exacerbated the situation more at least in the short run because of increased public expenditure on mega projects. Despite having paramount long term gains, projects for which loans are not acquired from foreign sources are likely to bringing inflationary pressure into the treasury,

competing for foreign exchange and causing possible crowding-out effect on private investment.

The other major cause for the problem, which is structural in nature, could be weak financial market development. Regardless of increased number and coverage of private local banks since 1991 and expansion of state owned banks, Ethiopia is ranked 129th among 144 countries [World Economic Forum, 2012]. Banking and insurance activities have still remained open only for local investors whose capacities are relatively low.

Direct intervention of government also plays a role in affecting access to loans. Specifically with regard to the industrial sector, banks claim that many private investors apply for long-term loans without proper and comprehensive feasibility studies that clearly demonstrate the financial viability of their projects. Private operators and key informants from business associations claim that even if investors apply for a loan for economically viable projects, they are sometimes denied access for inadequate reasons. Sometimes responses take a long time which affect the implementation period and thus the feasibility of the overall project because of changes in the stream of costs and benefits.

Some private operators, who do not properly maintain or get audited their books of accounts on time, mostly fail to acquire working capital and/or loans for expansion. It is also indicated in the interview that banks are not supposed to lend loans without the approval of the Ethiopian Tax and Customs Authority (ETCA) regarding properly maintaining books of accounts and paying their taxes on time. However, ETCA does not have the required personnel to check private operators' books of accounts on an annual basis, thus imposing such requirements restrain access to finance.

Moreover, the National Bank of Ethiopia (NBE) issued a directive in April 2011 requiring banks to purchase bonds equivalent to 27 percent of any new loan disbursed for customers. This bond will bear only three percent interest rate and a maturity of five years. This has affected the short, medium and long-term portfolio of loans. According to the World Bank (2013b), the directive encouraged private banks to buy government treasury bills instead of extending loans.

The severity of lack of access to finance is not the same across all firms. Smaller firms suffer most. Without easy access to finance, small firms remain small, low in productivity, and unable to upgrade technology or expand production [Altenburg, 2010 and Dinh et al, 2012]. As a coping mechanism, some firms which lack access to finance available from banks for large-scale projects requiring more than 20 - 30 million US dollars seek equity or technological partnerships with foreign companies [Sutton an Kellow, 2010], which would not otherwise been the case.

Inadequate public private dialogue: The role of the state is sought because of the presence of market and co-ordination failures in allocating resources efficiently [te Velde and Morrissey, 2005). On the other extreme, government and institutional failures are also prevalent. It is argued that:

> *The right model for industrial policy is … strategic collaboration between the private sector and the government … private and public actors come together to solve problems in the productive sphere, each side learning about the opportunities and constraints faced by the other …the government needs to maintain its autonomy from private interests. But it can elicit useful information from the private sector only when it is engaged in an ongoing relationship with it [Rodrik, 2004].*

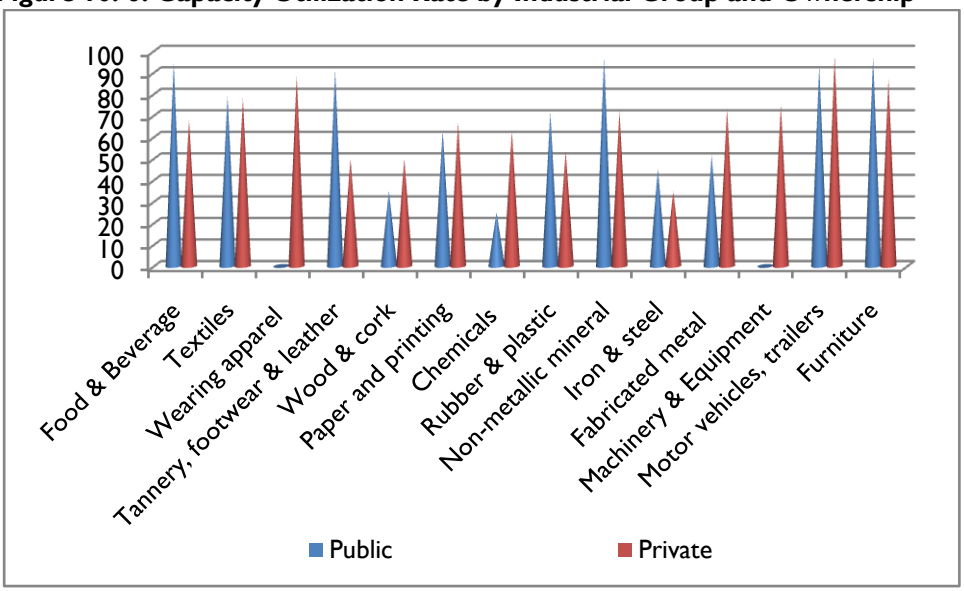
The private sector is represented by trade associations and government organises forums to discuss on constraints and policy issues. However, forums are often organized at the will of one party. They are not made on a regular, time and issue bound manner. Partly, this is because of the inability of business associations to mobilize adequate resources in terms of finance and human capital to enable them to undertake a policy discourse based on researches that could convince policy makers to make changes. On the part of the government, initiatives to engage business communities on policy discourse on a regular basis in an institutional manner have been very limited.

10.4.5 What do all the above problems brought about to the manufacturing sector?

The above mentioned firm level internal weaknesses, external policy related and structural challenges and above all the deliberate neglect of the engine of growth of the economy, the private sector, for the last many years and reluctance of the existing government to acknowledge the importance of industrialization and the indispensable role of PSD in the very process, has caused the low level performance of the manufacturing sector. This is reflected in below capacity operation, low productivity and also low level of competitiveness across the globe.

Low capacity utilization: In 2011, large and medium scale industrial firms covered by the survey ought to have produced about Birr 58.6 billion worth of goods as per their designed production capacity. However, actual production stood at only Birr 40 billion (68 percent). The short fall was about one billion dollar; this is likely to be the amount of foreign exchange the country could have already spent on the acquisition of imported manufacturing goods to compensate for the short-fall in production. Had they operated at full capacity, exporting firms would have also increased their proceeds by around 33 percent.

Figure 10. 6: Capacity Utilization Rate by Industrial Group and Ownership



Source: Own calculation based on CSA (2012b).

Privately owned firms are the ones affected more as compared to their stated owned counterparts.

Loss of government revenue and foreign exchange: Large and medium scale industries generated about Birr 6 billion in government revenue through indirect taxes (CSA, 2011). Had the industries produced at full capacity, government revenue would have increased by Birr 2.4 billion in the form of indirect tax. When direct taxes from profits and dividends as well as income taxes from employees are added, the amount that the government received would have become much higher. Above all, operating on or near the production capacity would have tremendously improved the competitiveness edge of firms and their market share both internally and globally. Increased sales in turn are likely to increase profits of private operators and also improve the incentive and capacity

of the same for further investment. Moreover, this would have attracted additional investors to the sector. These and other unaccounted for economic losses should be considered as the opportunity costs of efforts to be exerted in addressing constraints facing the manufacturing sector.

Low level of productivity and efficiency: It has also been seen in the previous sections that productivity is low among Ethiopian industries. Bacry et al (2012) also indicated that Ethiopian manufacturing industries have shown a very erratic TFP performance between 2000 and 2010. Moreover TFP tended to deteriorate since 2005 as compared to the previous five year period. In the same study, albeit exporting, import-intensive and relatively experienced firms to be more efficient than non-exporting, local resource-based and recently established industrial firms, the average technical efficiency level has been very low. This signifies the existence of many inefficient firms operating far below the frontier level of production.

Low productivity and competitiveness is ultimately reflected in the inability of firms to withstand foreign competition both internally and abroad. For instance, around 14.5 percent of large and medium scale industries attributed lack of demand (in effect inability to offer in competitive quality and price) to operate below their capacity in 2009/10 [CSA, 2011]. If industries fail to cope with the competition from abroad with an average of 17.5 percent tariff shield, the likelihood of penetrating into the international market is limited. Accordingly, the export intensity, the share of exports from the total manufacturing sector sales, was around 3 percent in 2009/10 [CSA, 2011].

Weak international competitiveness: Low investment, low capacity utilization, and low productivity are reflected international competitiveness. Using Competitive Industrial Performance Index UNDO rated Ethiopia as 101st country among 119 countries globally considered for comparison. In terms of

manufacturing value added per capita UNDO also rated Ethiopia 119th among 119th countries in 2009. Ethiopia with a comparable level of population, held 1/39 of Egypt's share in the global MVA. With different sets of measures, World Economic Forum (2012) reported Ethiopia to be 121st country among 144 countries in terms of overall competitiveness.

10.5 The Way Forward

Private sector development is at the center of any policy drive for a fast and sustainable pace of industrialization. Markets are powerful forces for private sector development, but they are not necessarily perfect. Selective government interventions are often required to make them efficient. Ethiopia is a factor-driven economy, where key prerequisites for markets to properly work such as institutions, infrastructure and communications, education and other fundamentals are inadequate [World Economic Forum, 2012]. This suggests for an active role of the government to improve the pre-requisites for a vibrant private sector in the industrialization drive.

Public investment stimulates PSD if it is geared to reduce transaction costs or create linkage effects and positive externalities. Otherwise it is likely to crowd-out private sector investment by reducing resources available to the private sector and/or produce marketable output that competes with private output [Agénor and Montiel, 2008]. Owing to the ambiguous effects of interventions, necessary precautions need to be made before any policy action is pursued. For instance, some government "supports" may tend to perpetuate inefficient operation of firms. In the process, the principal-agent model, with government as the principal, the firms as agents, and an optimal policy which aligns the agents' behavior with the principal's objectives, does not work very well. What is needed is a more flexible form of strategic collaboration between public and private

sectors, designed to elicit information about objectives, distribute responsibilities for solutions, and evaluate outcomes as they appear [Rodrick, 2004].

As discussed from the outset, the government may need to make its cost benefit analysis in its decision making process so that the marginal benefit of each intervention on private sector development in the industrialization outweighs its marginal cost. The interventions to be taken should around pave the way for opportunities to be properly tapped and challenges for PSD to be addressed so that a collaborative effort of both government and the private sector promotes the much aspired rapid pace of industrialization and structural transformation in the economy. Given the government's responsibility to make conditions for markets to properly work, the marginal benefits from addressing distortions and inefficiencies are likely to be their marginal costs. Addressing coordination failures has very important economic gains as compared to the likely cost associated with possible actions to do so. Provision of public goods is also the prime task of government. Infrastructural development needs large investment costs, but a commitment is required from the government to ensure a conducive environment for investment flow to the private sector. Given the above general premises, the following are some of the actions implied from the constraints observed in the PSD in the manufacturing sector.

10.5.1 Addressing policy and bureaucratic inefficiencies

The first and for most, the government should focus on removing inappropriate rules and regulations as well as inefficient service delivery to ease entry and smooth operation of private enterprises.

***Addressing tax related problems*:** Tax should not be a burden for tax compliant firms; there is a need to ensure that all firms of comparable size should keep books of accounts and become liable to pay comparable amounts of tax

regardless of mode of ownership or any other form, except those entitled not to pay in accordance with investment proclamations or any other regulations. Impartiality requires transparency and this must be adhered to in order to do away with rent-seeking behaviour similar to recent grand tax fraud cases that have been brought to court.

Need to improve level playing fields: In a market economic setting, the role of government is not to displace or create unnecessary competition with private sector operators. In this regard, engaging in economic activities which are and could easily be handled by private sector operators may affect them because of political assets of government to make economic decisions to its favour. Most importantly, there is a need to ensure that all existing industrial firms regardless of their mode of ownership are treated impartially in all government and non-government institutions in order to do away with unleveled playing field practices. Moreover, as argued in Bienen (2009), Ethiopia should improve its trade policies in line with antidumping or countervailing duties of multilateral trade regimes to address the effect of dumping or subsidized imports as well as possibilities of sudden import surges which may threaten domestic producers.

10.5.2 Reconsideration of policy directions

A deliberate move to promote the private sector in manufacturing requires the government to show its commitment on industrialization more than ever before as promised in the GTP.

(a) *Strengthen support institutions:* Because of the long lasting effect of anti-private sector policies that prevailed, most private sector operators do not have the managerial know-how to run their companies in the face of a rapidly changing global environment. To-date government offers enterprise development support through its own institutions. The support of these institutions focus on firms of

specific size (example Small and Micro Enterprises Development Agency) or industry group based support institutions. Thus, not only there is a need to capacitate already established institutions but also to set up similar others equipped with adequate human power, information technology, workshop and laboratory and other facilities to provide information on (a) alternative business opportunities (b) trade (input markets including possible local economic agents for networking and sub-contracting and foreign markets selling quality inputs with cheaper prices and export opportunities and conditions for market access) and (c) alternative technology choices and markets.

These institutions should also provide training on entrepreneurial, managerial and technical skills, advice and technical support on machinery installation, and help reengineer production lay-outs of old plants to improve quality and costs. Furthermore, access to finance is arguably constrained partially by the inability of private investors to either properly conduct by their own or cover the cost of the feasibility studies of their projects. Thus, the government may consider either making available bankable projects for private investment or provide consultancy service at subsided prices for potential private investors.

(b) Target on potential sources of industrialists: In addition to FDI, the government may target at least the following groups of potential local industrialists.

- ***Traders:*** Merchandize goods traders, who import goods, may need to be encouraged to look into ways of establishing firms producing similar items to substitute imports. Sutton and Kello (2010) indicated that local traders are the sources of large industrial companies. In this regard, market intelligence in terms of knowing what to produce, where to position the firm in relation to existing distribution networks, and how to develop new distribution channels plays an important role for firm success. Traders are likely to understand market conditions and opportunities, both domestic and international, and are better

situated to know how to tap the opportunities by satisfying the required pre-requisites. They also have better access to finance from their trading.

- ***Small and micro-enterprise operators:*** SMEs are potential sources of medium and large scale firms if guided to work in a market friendly manner. Some SMEs have graduated to medium scale industrial firms. However, whether, yesterday's SMEs with extensive support from government could be able to survive in a 'free market' setting or not is an empirical issue. The experience of Ethiopian small firms does not warrant the transfer of capabilities from typical small enterprises into medium (and large scale) enterprises. Middle sized companies require a range of skills that small scale enterprise owners may not be able to acquire. Nonetheless, a deliberate intervention in terms of improving entrepreneurial and management capabilities of SMEs before graduating into higher size level is very important.
- ***Ethiopian Diasporas:*** Nationals abroad are likely to have better exposure, knowledge and access to market and technologies. Global market exposure may have also created entrepreneurial capabilities and financial resources for people from the diaspora. Besides their own contribution, successful engagement of Ethiopians abroad in the process of industrialization could give a signal for FDI about conduciveness of the policy environment on PSD.
- ***Skilled and experienced industry sector workers****:* Senior workers who have demonstrated adequate technical and administrative skills and experience could also be supported to establish their own industrial firms. This could be made possible to enable them to come up with bankable industrial project ideas with their own seed capital as a sign of commitment and guarantee loans from financial institutions.
- ***Graduates of higher institutions:*** Progressive and well-performing graduates of higher education institutions particularly from science and technology and business education streams may come up with their own innovative and economically viable industrial project ideas. One way of

incubating these potential entrepreneurs is to encourage them to be organized and guarantee them access to finance.

Incubating private sector operators may lead into unintended rent-seeking bahaviour. The government may need to take preemptive measures to counteract this incidence. For instance, banks could retain ownership status of projects until the debt is settled in a specified period.

(c) Encourage entrepreneurs investing in medium and large technology industries: Market prices cannot reveal the profitability of resource allocations that do not yet exist. Information and coordination externalities blunt the incentives for productive diversification. Both are reasons to believe that diversification is unlikely to take place without directed government action [Rodrick, 2004].

ADLI and EIS are very much fixated towards agro-processing and construction industries. Other industries are almost left fully to the mercy of the market. Had markets worked well, industries which are presumed to have comparative advantages would have performed well without government support services. Equally important for the government to encourage are investors, who are engaged in industries, whose external effects are likely to be substantial for the whole industry and the economy at large. Metallurgy and chemical industries are found to have significant potential intra sectoral linkage effects [Kibre and Worku, 2006] and at the same time inadequate growth which exposed the country to be excessively import dependent.

Thus, there is a need to encourage local investors to engage in knowledge based industries; which spur technological spill-over and linkage effects in the industrial sector as a whole and beyond. As Rodrick (2004) argues, nationals aboard may be considered as valuable sources of "self-discovery" or knowledge-based

products that would bring substantial dynamism in the industrialization process given their entrepreneurial knowhow, skills and exposure to business in the developed world.

Taking note of the importance of improving the technological basis of the country, the government may also need to invest on metallurgy and engineering industries in a joint venture arrangement with private sector operators or by its own. The government in this respect should not nevertheless use its policy arms to displace the private sector, but rather nurture it through complementary interventions.

(d) Impartiality in supporting import-substituting and export oriented industries: Exporting based on competitiveness, without any actual or indirect support, is the only way of ensuring and improving foreign market access in a sustainable way. Help in removing constraints of import-substituting industries is tantamount to work on foreign exchange saving in the short-term and foreign exchange generation in the medium to long term perspectives through improving their competitiveness beyond the border. Thus, there is a need to be impartial in providing support in terms of training, access to inputs including electricity, finance foreign currency and other services.

(e) Need to take action on agendas of joining WTO and COMESA: It seems that the country still retreats from joining regional free trade areas and WTO accessions. The country benefits from preferential market access primarily from USA, EU and China. However, it does not only fail to properly tap this window of opportunity, but also has not been making preventive mechanisms if these non-binding unilateral opportunities are revoked. Protecting industries for an unlimited period could lead into feeding inefficient firms at the expense of productive sectors or economic agents. Joining COMESA and acceding to WTO is a matter of time. Letting time solve eventual decisions on trading partners for Ethiopia does not address the problem. In order to avoid the fear that domestic

firms are to be displaced by foreign competitors, there is no way other than pursuing a policy that nurtures the competitiveness of the private sector on the domestic market, prepare coping mechanisms for any eventuality and looking for options to diversify and expand exportable products in the international market.

10.5.3 Need for an improved coordination role

Improve linkages between agriculture and industry: The role of government is found to be indispensible because of widespread market failures manifested through recurring problems of shortages of agricultural raw materials. Cognizant of the mismatch between the demand for and the supply of agricultural raw materials for the industrial sector, there is a need to play a market coordination role. The government may help to provide information for agricultural sector operators (both subsistent and commercial farmers) about the substantial agricultural raw materials, actual and potential, requirements of the industrial sector. Small farmers need to be encouraged to form market cooperatives at their free will. Cooperatives and commercial farms may be linked through government agencies to engage in agreement for a certain period so that both sides get secured markets. Based on the available experiences to-date in some enterprises, agro-processing industries should be encouraged to invest on commercial farming; so as to satisfy their needs and help address the raw material requirements of others.

In addition to this overall direction, case specific intervention may be required. For instance, there is a serious problem of quality in raw cotton and also hides and skins. Improving cattle herding practices as well as encouraging use of better seed varieties and improving product handlings of cotton producers through the support of extension workers is one important venue for addressing acute shortages witnessed in the areas where the country is often considered to have a comparative advantage. According Dinh et al (2012), Ectoparasites—a disease

that affects Ethiopian hides—can be controlled by a modest program costing less than US$10 million, encouraging final goods export, etc. Modest, targeted reforms could enable Ethiopia's large animal herds to produce vast amounts of some of the best leather in the world.

Improve linkages among industries: The problem of depending excessively on foreign inputs could partly be addressed through coordinating the activities of industries having potential linkage effects. One option for this is to encourage the establishment of industrial zones by clusters of activities so that firms feed each other. This will help to easily exploit economies of scale and economies of scope among these inter-linked industries. This does not, however, mean that the government goes beyond limit and guarantee investors that if the expected complementarity fails it will recover the cost. The government focuses rather on playing an arbitrage role to link between seemingly complementary industries through networking or subcontracting.

Use unilateral trade offers as venue for learning for a more competitive trade regime through coordinated effort: the government tries to offer various incentives such as duty drawbacks, warehouses and similar others for exporting industries. As discussed above, there has been an apparent coordination failure among individual firms, operating across the vertical production chains. In the absence of well functioning markets, the government has to play a coordination role so as to create value chain amongst the firms to secure inward and outward markets. Doing so would also help maximize economic gains in the international market by ensuring an uninterrupted and increased supply as well as improved value added. The country should also be able to exploit bilaterally offered market opportunities by diversifying export items besides the traditional exports such as apparel and leather products. Among the mechanisms to ensure this is for government and the private sector to discuss the opportunities, constraints and the way forward. Coordination and complementing to each other would lead a win-win situation for seemingly

competitive firms than isolated efforts. Thus, industrial firms along the value chains and horizontally need to create a forum to facilitate either by business associations or government discussion on ways of making use of opportunities and crafting common wining strategies, plans and implementing manuals.

Strengthening linkages between higher institutions, TVET and Industrial firms: These institutions should take the following measures to become effective: First of all, they need to be equipped with the necessary workshop tools, laboratory equipment and accessories to impart the necessary skills to students. Secondly, internships or apprenticeships may need to become mandatory as part of the graduation requirements with assessments to be collaboratively made by both educational institutions and companies. Thirdly, industrialists may need to be involved as key stakeholders in the design and subsequent evaluation of curriculums. Fourthly, attempts need to be made to improve the quality of education during the process so as to bring graduates that can directly join industrial workers without substantive additional costs instead of mainly focusing on the sieving process to confer certificates at different levels.

10.5.4 Improve infrastructures and logistic services

Relatively poor, albeit improving infrastructure is one the serious hurdles of PSD. The government as public goods provider is to keep improving the infrastructural facilities roads, shipping lines, communication services. Various projects have been incorporated in GTP. Besides keeping on providing due emphasis in budgetary allocation albeit with caution not to crowd private sector investment, there is no way other than investigating possible causes of inefficiency and improving the pace of infrastructural project implementations.

Improve electricity supply: Industrialization without adequate electric power is absolutely impractical. Power availability is both a prerequisite for investment decision and a decisive factor of production in the manufacturing sector. Thus,

the government needs to ensure that electricity demand in the industrial sector does not outpace actual supply at least for the industrial sector. To ensure this, the following measures are suggested:

(a) Actual performances of EEPCo often lag behind its plans of implementing projects and generation of power from available plants. Thus, speeding up the implementation of projects and improving efficiency in the production and use of power should be given due emphasis.
(b) The opportunity cost of delays in availing transformers and fixing them should be seen in light of production, employment and government revenue losses and foreign exchange spent on imports to compensate supply short-falls attributable to industries waiting for power;
(c) Decisions with regard to the supply of power to neighboring countries should be seen beyond direct financial benefits and include its possible implications on the supply of power into the domestic economy.

Improve logistics: The degree of severity of inefficiencies in customer handling all the way from loading and unloading has rather worsened after the introduction of the multimodal system, which was intended to do-away with it. The government has been taking institutional reforms. As part of the whole reform package, consideration of the following components may be worthwhile: (a) speed up road and railway projects with close monitoring and supervision activities; (b) continue exerting efforts to diversify trade and outlets; (c) improve competition among land transport operators through encouraging the establishment of additional transport companies and addressing uncompetitive elements, if any, among operators; (d) improve automation of custom clearance process at different levels, improve efficiency, ensure accountability and impartiality through transparent operation; (e) ensure the use of a well researched and workable directives and working procedures; which would only be slightly mended with critical inputs from continuous scanning; (f) upgrade the capacities of workers through training and close follow-up to minimize rent-seeking and corrupt practices.

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Annexes

Annex 4.1: The Share of Enterprises and Employment by Scales of Employment, 2010/11

Industry group	Of the total enterprises in the category				Of the total employment			
	10-19	20-49	50 Above	TOTAL	10-19	20-49	50 Above	TOTAL
Total	37.4	28.2	34.4	100.0	5.8	10.0	84.2	100.0
Of Which:								
Food Products and Beverages	31.6	29.3	39.1	100.0	4.0	8.6	87.4	100.0
Tobacco Products			100.0	100.0			100.0	100.0
Textiles	8.1	13.5	78.4	100.0	0.3	1.2	98.5	100.0
Wearing Apparel, Except Fur Apparel	17.5	40.0	42.5	100.0	1.5	6.8	91.7	100.0
Tanning and Dressing of Leather								
Footwear, Luggage and Handbags	17.7	25.5	56.7	100.0	2.2	7.6	90.2	100.0
Chemicals And Chemical Products	14.3	24.7	61.0	100.0	1.0	6.1	92.8	100.0
Rubber And Plastic Products	17.9	28.3	53.8	100.0	2.6	8.3	89.0	100.0
Other Non-Metallic Mineral Products	54.3	30.6	15.2	100.0	15.0	18.8	66.2	100.0
Basic Iron And Steel	30.8	20.5	48.7	100.0	3.4	5.4	91.2	100.0
Fabricated Metal Products Except								
Machinery And Equipment	44.0	28.4	27.7	100.0	12.6	17.7	69.6	100.0
Machinery And Equipment N.E.C		33.3	66.7	100.0		10.1	89.9	100.0
Motor Vehicles, Trailers & Semi-Trailers	25.0	12.5	62.5	100.0	1.8	1.5	96.7	100.0
Furniture; N.E.C.	64.9	24.0	11.1	100.0	32.6	26.7	40.7	100.0

Source: CSA, Report on Large and Medium Scale Manufacturing and Electricity Industries Survey, (various issues)

Annex 4.2: the structure of Employment by sub-sectors, Share in %

Sub-sectors	SDPRP end year, 2004/05	2009/10	PASDEP period average	GTP First Year, 2010/11
Food Products & Beverages	29.04	32.48	30.69	38.68
Tobacco Products	0.64	0.53	0.71	0.77
Textile	18.97	11.55	13.39	7.75
Wearing Apparel, Except Fur Apparel	2.39	5.05	5.15	3.35
Leather and Leather Products	7.25	5.78	6.34	8.08
Wood & Products of Wood	1.43	1.76	1.74	2.30
Paper, Paper Products & Printing	6.88	5.40	6.32	5.81
Chemicals & Chemical Products	5.47	6.04	5.58	5.62
Rubber & Plastic Products	5.20	7.49	6.85	6.33
Other Non-Metalic Mineral Products	8.29	10.53	10.87	9.94
Basic Iron & Steel	1.61	2.17	1.54	2.84
Fabricated metals, Except Machinery & Equipment	3.51	5.39	4.22	3.48
Machinery & Equipment	0.20	0.46	0.24	0.37
Motor Vehicles	1.13	0.90	1.42	0.94
Furniture, NEC	8.00	4.46	4.94	3.73

Source: CSA, Report on Large and Medium Scale Manufacturing and Electricity Industries Survey, (various issues)

Annex 4.3: Cost of Raw Materials, Energy Consumed and Payments for Industrial and Non-Industrial Services

Industrial group	Raw materials	Energy	Industrial service	Cost of transport-ation	Non-industrial costs
Food products and beverages	64.92	5.26	3.32	4.63	21.86
Production, processing and preserving of meat, fruit and vegetables	80.93	2.51	1.11	10.68	4.78
Vegetable and animal oils and fats	83.16	5.06	2.49	6.77	2.52
Dairy products	79.88	3.22	4.52	8.11	4.27
Grain mill products	88.32	2.49	4.98	1.51	2.71
Prepared animal feeds	92.25	0.88	1.76	2.56	2.54
Bakery products	82.09	4.65	4.43	2.97	5.87
Sugar and sugar confectionery	27.43	4.66	0.97	2.83	64.11
Macaroni and spaghetti	87.18	4.37	3.45	1.91	3.09
Food products N.E.C.	86.53	2.25	1.78	2.67	6.77
Distilling, rectifying and blending of spirits	43.87	19.18	2.84	9.53	24.58
Wines	64.7	1.46	1.81	11.73	20.3
Malt liquors and malt	52.44	8.79	2.21	9.06	27.5
Soft drinks & production of mineral waters	67.24	7.76	6.16	4.2	14.64
Tobacco products	92.7	0.16	4.99	0.68	1.47
Textiles	80.96	8.02	1.51	1.84	7.67
Spinning, weaving and finishing of textiles	80.02	8.8	0.89	2.01	8.28
Cordage, rope, twine and netting	92.28	1.39	3.57	0.41	2.35
Knitting mills	2.11	0.22	94.15	0.05	3.5
Wearing apparel except fur apparel...	69.82	3.14	11.81	4.5	10.74
Tanning and dressing of leather; footwear, luggage and handbags	68.04	2.77	13.78	2.94	12.47
Tanning and dressing of leather, luggage and handbags	76.15	3.19	1.62	3.62	15.42
Footwear.	53.19	2	36.05	1.68	7.08
Wood and of products of wood and cork, except furniture.	66.38	13.46	4.02	5.21	10.94
Paper, paper products and printing	72.75	2.63	14.12	2.69	7.81
Paper and paper products...	79.81	6.06	4.41	2.81	6.91

Publishing and printing services.	69.44	1.03	18.66	2.63	8.24
Chemicals and chemical products	77.33	2.03	13.43	2.01	5.21
Basic chemicals, except fertilizers and nitrogen compounds	72.98	10.99	4.69	2.84	8.5
Paints, varnishes and mastics.	83.98	1.1	0.55	0.99	13.38
Pharmaceuticals, medicinal chemicals and botanical products.	70.89	4.36	8.99	5	10.76
Soap and detergents cleaning and Polishing, perfumes and toilet preparations	77.05	1.02	18.82	1.46	1.65
Chemical products N.E.C.	89.98	1.63	2.29	2.37	3.73
Rubber and plastic products.	78.53	4.97	9.23	1.47	5.8
Rubber products	36.84	24.28	18.87	0.64	19.37
Plastic products	83.03	2.89	8.19	1.56	4.33
Other non-metallic mineral products	43.13	35.6	4.08	8.96	8.22
Glass and glass products	87.5	6.95	1.06	0.42	4.06
Structural clay products	34.19	14.11	18.44	11.28	21.97
Cement, lime and plaster	37.77	41.69	2.45	9.98	8.11
Articles of concrete, cement and plaster	62.1	9.93	16.35	4.72	6.89
Non-metallic mineral products N.E.C.	47.41	16.02	9.41	9.67	17.48
Basic iron and steel.	89.4	4.36	1.34	1.4	3.49
Basic iron and steel.	89.4	4.36	1.34	1.4	3.49
Fabricated metal products except machinery and equipment	90.17	1.93	4.27	0.83	2.79
Reservoirs and containers of metal.	88.45	2.87	4.52	1.11	3.05
Cutlery, hand tools and general hardware	75.09	0.76	20.55	2.16	1.44
Other fabricated metal products	93.54	0.44	3.28	0.33	2.41
Machinery and equipment N.E.C.	90.39	1.84	0.95	1.9	4.92
Ovens, furnaces and furnace burners.					
Other general purpose machinery	90.39	1.84	0.95	1.9	4.92
Motor vehicles, trailers & semi-trailers	90.48	0.93	2.05	1.76	4.79
Parts and accessories for motor vehicles and their engines	90.48	0.93	2.05	1.76	4.79
Passenger cars, commercial vehicles, and buses					
Furniture; N.E.C	77.41	1.61	6.79	3.38	10.81
Total	71.24	6.66	5.81	3.57	12.73

Annex 4.4: Production of Major Manufactured Articles (2006/07-2010/2011)

Items	Unit						Growth			
		2006/07	2007/08	2008/09	2009/10	2010/11	2007/08	2008/09	2009/10	2010/11
FOOD										
Meat	TONS	271	271	356	4449	20910	0.0	31.4	1149.7	370.0
Milk Pasteurized	H.L.	134617	146291	160927	242564	220350	8.7	10.0	50.7	-9.2
Edible Oil	„	6640	5787	5704	10881	6055	-12.8	-1.4	90.8	-44.4
Macaroni and Pasta	„	38908	37079	28151	43691	50060	-4.7	-24.1	55.2	14.6
Biscuits	„	13994	29546	19259	193773	72867	111.1	-34.8	906.1	-62.4
Sugar	„	205464	297847	312372	283205	332728	45.0	4.9	-9.3	17.5
Tea	„	7220	6966	8746	9538	10017	-3.5	25.6	9.1	5.0
Molasses	„	34770	58646	56859	83730	31765	68.7	-3.0	47.3	-62.1
Beer	H.L	1733570	2137206	2513480	2938466	4015584	23.3	17.6	16.9	36.7
Mineral Water	„	453971	495227	571888	2173057	1343539	9.1	15.5	280.0	-38.2
TEXTILES	Lint	13101	7988	3857	9397	8852	-39.0	-51.7	143.6	-5.8

Items	Unit						Growth			
		2006/07	2007/08	2008/09	2009/10	2010/11	2007/08	2008/09	2009/10	2010/11
Cotton Fabrics	Cotton ('000 SQ.M	46817	29288	18053	22907	11711	-37.4	-38.4	26.9	-48.9
Cotton Yarn	„	10998	4229	3419	3093	9845	-61.5	-19.2	-9.5	218.3
Blanket (Woolen)	('000 SQ.M	1611	1141	448	387	1352	-29.2	-60.7	-13.6	249.4
Blanket (Waste Cotton)	PCS	-	4778	445086	1521134	346060		9215.3	241.8	-77.2
Blanket (Others)		397158	145710	145710	631656	695431	0.0	333.5	10.1	-100.0
Bed sheet	PCS	463169	346029	110570	56142	433882	-25.3	-68.0	-49.2	672.8
Wearing Apparel (Except Leather)	„	277255	586075	1109637	1175719	10823	111.4	89.3	6.0	-99.1
Wearing Apparel (Leather)	PCS	3775	6225	6414	2036	120352	64.9	3.0	-68.3	5811.2

LEATHER AND FOOTWEAR

Items	Unit						Growth			
		2006/07	2007/08	2008/09	2009/10	2010/11	2007/08	2008/09	2009/10	2010/11
Leather Shoes and Boots	PAIRS	1748518	1719413	1606725	956908	2127862	-1.7	-6.6	-40.4	122.4
Canvas and Rubber Shoes	„	107385	126125	214101	1287338	1135541	17.5	69.8	501.3	-11.8
Plastic Footwear	„	1.6E+07	15684111	13317179	17219546	20886016	-1.4	-15.1	29.3	21.3
Leather Sole	PAIRS	860	-	-	8892	65822				640.2
Leather Garment	('000 SQ.FT)	356	1673	1022	868	6067	369.9	-38.9	-15.1	599.0
Plastic Sole	PAIRS	2696625	2489780	3353423	2586186	3272920	-7.7	34.7	-22.9	26.6
Crust Hides and Wet Blue Hides	('000 SQ.FT)	17858	24802	24669	27932	44627	38.9	-0.5	13.2	59.8
WOOD										
Timber	CUB. M	7580	9162	24521	97379	167826	20.9	167.6	297.1	72.3
CHEMICAL										
Foam	CUB.M.	166480	210698	243958	48426	552602	26.6	15.8	-80.1	1041.1

Items	Unit						Growth			
		2006/07	2007/08	2008/09	2009/10	2010/11	2007/08	2008/09	2009/10	2010/11
Soap	TONS	35795	52458	58250	52879	214256	46.6	11.0	-9.2	305.2
Paints	('000 LTR)	10789	14840	15255	13047	14873	37.5	2.8	-14.5	14.0
Tyres	PCS	235134	316337	210374	72939	266494	34.5	-33.5	-65.3	265.4
Non-metallic mineral products										
Cement	TONS	1719633	1659127	1688014	1638613	2082366	-3.5	1.7	-2.9	27.1
Marble	SQ.M	208463	264539	114374	152421	143820	26.9	-56.8	33.3	-5.6
METAL										
Iron Bars	TONS	28910	6092	5894	16674	30279	-78.9	-3.3	182.9	81.6
Wires	„	3364	4111	6733	8792	7846	22.2	63.8	30.6	-10.8
Nails	„	21944	17004	4611	21520	10663	-22.5	-72.9	366.7	-50.5
Iron Sheets	„	604973	643903	785925	464304	147299	6.4	22.1	-40.9	-68.3
Metallic Door	SQ.M	17820	39107	15301	142935	29674	119.5	-60.9	834.2	-79.2
Metallic Window	SQ.M	24254	46490	21563	95525	483204	91.7	-53.6	343.0	405.8

Annex 5.1: Major Imports from COMESA (2010-2012)

No	2010	Value, in million birr	Share
1	Benzene regular and super and other petroleum oils and oils obtained from bituminous minerals	1,481.33	40%
2	Edible Palm Oil	190.90	5%
3	Petroleum coke, not calcined	158.10	4%
4	Wire of refined copper, maximum cross-sectional dimension >6mm	130.17	4%
5	Butanes, liquefied	93.87	3%
6	Co-axial cable and other co-axial electric conductors	89.33	2%
7	Apparatus for switching electrical circuits	83.48	2%
8	New Pneumatic Tyre, of rubber of the kind used on buses or lorries	43.79	1%
9	Grain sorghum	35.89	1%
10	Mixtures of Odoriferous substances of the kind used in non-alcoholic drinks or foods	178.12	5%
	Others	1,214.47	33%
	Total	3,699.43	
	2011		
1	Benzene regular and super and other petroleum oils and oils obtained from bituminous minerals	2,017.41	44%
2	Edible Palm Oil	211.55	5%
3	Petroleum coke, not calcined	253.02	5%
4	Wire of refined copper, maximum cross-sectional dimension >6mm	112.82	2%
5	Butanes, liquefied	253.02	5%
6	New Pneumatic Tyre, of rubber of the kind used on buses or lorries	53.22	1%
7	Plugs and sockets	130.45	3%
8	Edible Soya Bean Oil	159.92	3%
9	Grain sorghum	176.33	4%
10	Mixtures of Odoriferous substances of the kind used in non-alcoholic drinks or foods	132.36	3%
	Others	1,125.68	24%
	Total	4,625.77	
	2012		
1	Benzene regular and super and other petroleum oils and oils obtained from bituminous minerals	1,298.46	31%
2	Wire of refined copper, maximum cross-sectional dimension >6mm	385.02	9%
3	New Pneumatic Tyre, of rubber of the kind used on buses or lorries	144.14	3%
4	Polishes, creams and similar preparations for footwear or leather	39.98	1%
5	Ball point pens	74.74	2%
6	Onions and shallots, fresh or chilled	39.61	1%
7	Palmitic acid, stearic acid, their salts and esters	57.56	1%
8	Mixtures of Odoriferous substances of the kind used in non-alcoholic drinks or foods	206.61	5%
9	Other none bromomethane insecticides	51.00	1%
10	Plates	44.66	1%
	Others	1,864.57	44%
	Total	4,206.33	

Source: ERCA